

User Manual

RMTrak Requirements Management Tool:
A Requirements Management Tool for Tagging, Tracing,
Allocating, and Verifying Project Requirements

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For updates to this tutorial, please visit www.RMTrak.com

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This publication is a condensed version of the *RMTrak Tutorial* help files. To view these files, download them from http://www.RMTrak.com or install RMTrak, and then from the Start menu, choose Programs, RMTrak, and then Getting Started.

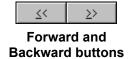
Introduction

The RMTrak User Manual will guide you through working with RMTrak and will demonstrate the power and simplicity of the RMTrak system. It follows the steps outlined in the Step-By-Step Guide.

RBC Product Development is dedicated to making you a successful, satisfied customer. If you have any questions or issues these files cannot answer, please do not hesitate to contact RBC Product Development

Navigation

Navigate from one topic to the next using the forward and backward buttons at the top of the tutorial window. These buttons will take your forward and backward within the predefined sequence of tutorial topics.



Additionally, this tutorial includes icons that point to related information.

You can begin the tutorial here.

Links

This text in each topic has links to other topics (as you'll see above). Feel free to use these links to browse through related material. When you're done, you can use the **Back** button at the top of the tutorial window to go back to the original page you were on; you can then continue browsing the tutorial using the **Continue** section at the bottom of the page.

Warnings

This tutorial uses this icon to help you find information:



This icon will direct you to warnings and important information. Be sure to read information beside this icon.

Sample Databases

The tutorial and RMTrak's sample files are based on a fictitious product called the Revolutionary Automated Teller Machine (RATM).

All of the documents and files used in this tutorial can be found in the C:\Program Files\RBC\RMTrak\Sample directory if RMTrak was installed to the default location, or in the <Drive:\Path>\Sample directory, where <Drive:\Path> is the mapped disk drive and folder path where RMTrak was installed.

Getting Help

The RMTrak Online Help System that is included with RMTrak contains additional information about all of the topics covered in this tutorial. The Online Help System is available through RMTrak from the **Help** menu or by pressing F1 at any RMTrak window or dialog.

RBC Product Development is dedicated to making you a successful, satisfied customer. If you have any questions, comments, or suggestions regarding RMTrak, please do not hesitate to contact us:



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Please check the RMTrak web site for updates or additions to RMTrak, its help files, and its tutorial: www.RMTrak.com

An Overview of RMTrak and RM Concepts

RMTrak is a tagging, tracing, allocation, and verification system, also known as a "requirements management tool," developed by RBC Product Development. If you have any questions, comments, or suggestions, please contact RBC Product Development

RMTrak was designed for product development companies but can easily be configured for any other type of company needing to tag, trace, allocate, and verify project requirements.

Requirements Management Tools

Product development companies frequently deal with requirements management: Clients, developers, and industry standards determine the many requirements necessary to complete a project. The product development company then needs to keep track of each requirement and when it's been successfully implemented and tested. Since large projects can have thousands of requirements, this is often a difficult and tedious chore. Requirement management tools provide a way to track your project's requirements and when each one's been completed.

RMTrak is a requirements management tool designed for beginner and advanced users alike; it allows you to manage your development project's requirements and generate different kinds of views and reports, depending on your needs. It also lets you keep track of whether your requirements passed or failed required tests.

Unlike other requirements management tools, RMTrak was designed with two primary features in mind: allowing its users to create their documents as they usually do while adjusting to their needs, and to keep important information in the documents themselves. Rather than require you to tag or create documents that conform to a standard, RMTrak is flexible and lets you configure your RMTrak project to match the information you'll be adding to it. The only difference is that your documents will now include tags—and their purpose is to mark the most important information within the documents. Because all of the relevant information is stored in the documents, you'll never have to worry about a database becoming corrupt or about losing your RMTrak database files. Recreating a RMTrak database is a cinch because it gets its information from the tags in your documents.

The tags you add to your documents are easy to create and, unlike other requirements management tools, RMTrak doesn't force you to make them a certain way: Although the tutorials, samples, and online help files offer suggestions, there's limitless different ways to format your tags and their syntax because RMTrak is highly configurable.

How It Works

RMTrak works with your companies' product development documentation (created in Microsoft® Word) with one adjustment: adding tags around each requirement listed in your documentation. With each document you create, you'll need to add tags around the individual requirements/tests—this will later allow RMTrak to recognize these items as traceable requirements. Because you can put tags in any chosen Microsoft® Word style, you can easily make these tags invisible to uninterested readers.

As you create documents with tagged requirements, you'll import them into RMTrak, which will load the requirements into a database from which you can generate reports based on the tags and their status. This way, you can generate reports based on which items successfully passed their tests and which requirements have been fulfilled for the project. As you continue to maintain the documents using Microsoft® Word and to manage their requirements using RMTrak, you'll continue to get a vivid picture of how your requirements stand and how your project is progressing.

What You Need to Know

If you're an executive or administrator who needs to use RMTrak to print reports or save views, you'll only need to know how to use RMTrak. This online help system and the RMTrak Getting Started Tutorial can help you.

If you or your project management team is creating the database and documents for your RMTrak project, you'll need to know these things:

- You'll need to know how to use Microsoft® Word for creating your documents. The Working with Microsoft® Word topic gives an overview of some handy features that will help you get the most out of the documents you import into RMTrak.
- Although RMTrak can be used to manage requirements for any type of project, it was
 especially developed for product development companies. Familiarity with product
 development and a defined product development process will be helpful if you want to use
 the default document types and attributes.

Document Design

To save time, you should consider using templates for each of your document types. Templates are documents that have been saved as a .dot file. Depending on your document's purpose, the templates' design and formatting might vary.

RBC Product Development recommends that each document follow a standard format, including an introduction, body and conclusion. A table of contents is also advisable for all documents, as it will allow your readers to see the topics covered by the document at a glance.

Additionally, you'll notice that the sample files included with RMTrak's installation each use a standard format. Although you do not need to copy these formats, if you are new to requirements management, you might find them helpful as templates. To use these documents as templates, re-save them with a .dot extension to your requirements management directory.

The opening section of a well-designed requirements management document should include:

- Purpose of the document (its message and contents)
- List of references (other documents referred to within the body of this document)—this
 establishes a link to other sources of information
- Table of revision history (the changes to the document should be recorded in this table, including revision number, description of revision, date revised and author of the revision)
- Any document-specific information (marketing analysis, pricing models, regulations required, financial targets, etc.)
- Definitions of the requirement tags that will be used in the document (give the words used with the project and document acronyms) and the definitions of any attributes that are related to the requirements included in the document.

The body of the document should be used for listing the requirements and their supporting information. Due to the flexibility of RMTrak, this text can be formatted in a way you prefer, such as in tables or regular text.

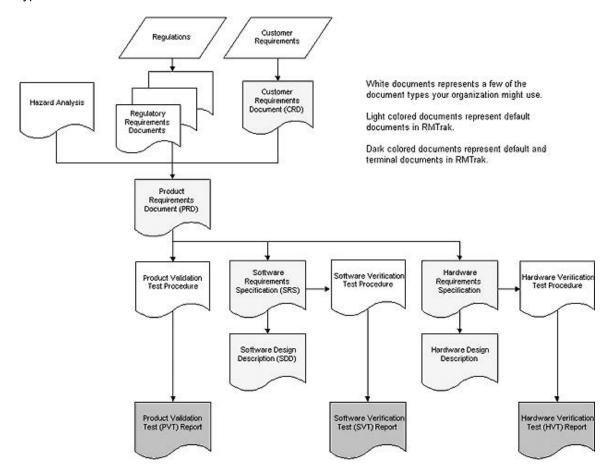
The conclusion of the document should include any notes or interpretations that should be drawn from the document. It is often useful to include any thoughts or notes that pertain to a document so they can be referenced during the project to fully understand and evaluate the decisions that were made as the project progressed.

The headers and footers of your documents can include company and product specific information. This could save time and confusion later. The sample files provided with RMTrak show headers and footers that might be helpful.

Document Hierarchy

Documents are usually ordered so requirements from one document flow down into the next document. With each lower layer, the information can become more detailed and specific.

One possible hierarchy is shown below. This particular hierarchy can be used in a regulated environment, such as Medical Device Design. This hierarchy reflects RMTrak's default document types and their terminal status.



As you create requirements and add their tags, RMTrak will recognize their relationship.

You'll have to tell RMTrak which documents are terminal by specifying this in the Document Types manager. This will become especially important when creating Childless Reports to determine which requirements you've neglected or forgotten.

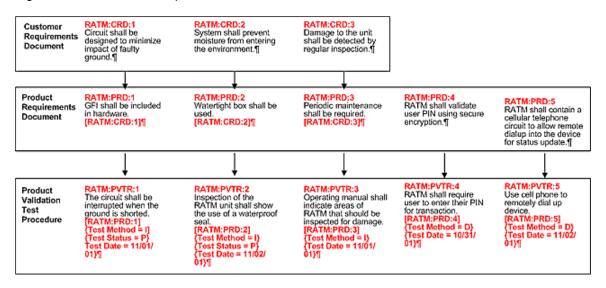
Parent-Child Relationships

The first document of your project may list many requirements. These requirements can go on to create many other requirements over the course of the project, and these requirements will be listed in subsequent documents.

Additionally, requirements will have their status updated in each relevant document. As a requirement's status is updated in each document, the next document's status of that "child" requirement is traced back to its previous document's predecessor, or "parent" requirement. In this way, requirements and their status have parent-child relationships.

And just like typical parents and children, a parent or child will have different roles to those around it—a requirement can be both a parent (to those that come after it) and a child (to those that come before it).

The following flow chart shows the relationship of some parent and child requirements. For example, RATM:CRD:1 is a parent to the RATM:PRD:1 child requirement. RATM:VTR:2 is a child tag to the RATM:PRD:2 requirement.



Note: This example only shows only a few requirements—in reality, this chart might include hundreds or more requirements. Also, the organization of these documents and their requirements might not be similar for your projects. Finally, notice that the PRD and VTP have initial tags only and do not come from parent tags in previous documents.

With RMTrak, as you create each new document, you'll need to place a tag in front of each requirement to show its position in the current document. You can also place a "parent tag" after it to show which requirement it originated from. Doing this allows you to trace requirements upward to the requirement that created this one.

In the following example, RATM:VTR:1 is the child requirement and [RATM:PRD:1] is the parent requirement:

```
RATM:VTR:1 The circuit shall be interrupted when the ground is
    shorted. {Test Method = I}[RATM:PRD:1] {
```

Parent tags will always be surrounded by brackets [].

Note: The sample above shows similar numbers tracing down in requirements. For example:

$$RATM:CRD:1 \rightarrow RATM:PRD:1 \rightarrow RATM:VTR:1$$

(The arrows show the direction of the parent-child relationship.)

In reality, these numbers might be different. It's possible to have a parent-child relationship of different numbers, depending on how you numbered each document's project requirements. For example:

```
RATM:CRD: 3 \rightarrow RATM:PRD: 25 \rightarrow RATM:VTR: 16
```

For information on how documents relate to each other, see the Document Hierarchy topic.

Childless Requirements

A childless requirement is a parent requirement that has no children requirements created from it.

For information on childless requirements, see the Childless Requirements topic.

Step-By-Step Guide

Basic use of RMTrak follows these steps:

- 1. Create a new database or open an existing database.
- 2. If desired, customize the project's default setup.
- 3. Create or edit your document in Microsoft® Word using tags.

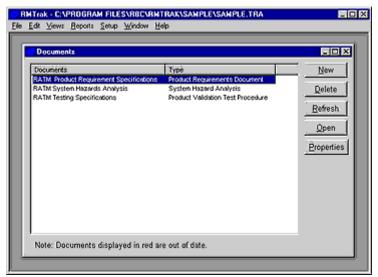
Be sure to:

- Write tags using appropriate syntax.
- Format tags to be either red and bold or to have the Microsoft® Word style you chose in RMTrak's tags setup.
- Format tags to end with either a paragraph mark or with the character you designated in RMTrak's requirements termination setup.
 - (1) Tip: Paragraph marks (¶), which are created by pressing ENTER on the keyboard, are also called "hard carriage returns." Line breaks (♣), which are created by pressing SHIFT+ENTER, are also called "soft carriage returns."
- If applicable, put the document number and revision number in either the document's properties or in the filename, depending on RMTrak's documents setup.
- If your document's type is not listed in the Document Types manager, you'll need to add it.
- 5. Import the document to your RMTrak project.
- 6. Repeat steps 3 5 as needed.
- 7. You can view the project's requirements, allocation, and tracing in a number of different ways according to your needs.
- 8. You can generate reports for the documents according to your needs.

As you modify your documents, you'll need to edit their document properties or refresh the document.

Working In the Main Documents Manager

Whether you create a new database or open an existing one, the main window you'll work from is the Documents manager.



Documents manager

The documents that have been imported into the database are alphabetically listed (by document title) in this window. RMTrak constantly scans the documents to see which are out of date, but does this slowly so it does not cause you any problems

The documents in the list are divided in two ways:

Documents This is the name of the document. You can specify a name from

the Modify Document Dialog or by specifying it in the document's

properties.

Type This is the document type. Document types can be associated

with a document from the Modify Document dialog available from the **Properties** button. Document types are determined in the Document Types manager available from the **Setup** menu.

Additionally, if RMTrak has been set up to recognize document numbers or revisions, these will also be shown.

The Document manager allows you to add, delete, refresh, open, and edit document properties by clicking on a document in the list then clicking its corresponding button:

New Opens the New Document dialog and starts the process of adding

a new document to the database

Delete Deletes a selected document from the database. This action will

delete all records associated with the document.

Refresh Updates the database's information with information from the

document.

Open Opens the document in Microsoft® Word. Double-clicking the

document in the Documents manager list will also perform this

action.)

Properties Opens the Modify Document dialog and allows you to modify the

document's Title, Path and Type, while the Number, and

Revision fields are read-only (to change the Number, or Revision,

you'll need to re-import the document).



Warning: If you click the Delete button, the document's information will be removed from your RMTrak database.

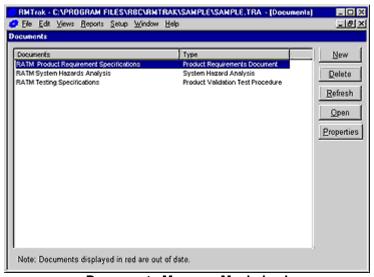
Maximizing the Documents Manager Window

When you start RMTrak, the Documents Manager only fills part of the RMTrak window.



Documents Manager

If you have long document names, or many documents, you might find it helpful to maximize the window to fill the entire screen. Click the **Maximize** button in the upper right corner of the Documents Manager. This will make the Documents Manager fill the entire RMTrak window.



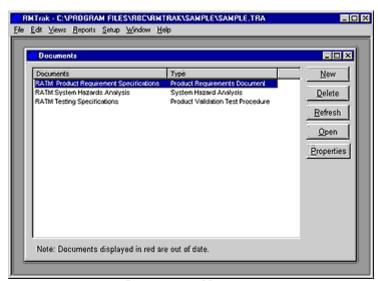
Documents Manager Maximized

If the window is not maximized, you can also adjust its size by clicking its lower right corner and dragging it to the desired height and width.

You can also adjust the width of the **Documents** and **Type** column headers.

Column Headers

When you open the Documents Manager, there are initially two adjustable column headers, **Documents** and **Type**.



Documents Manager

Documents

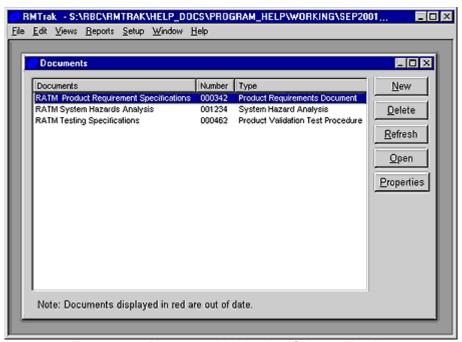
This is the name of the document. You can specify a name when you import the document or RMTrak can recognize it from your document's properties.

Type

This is the document type. Document types are set when a document is first imported into the database. They can also be set from within the Modify Document Dialog, which is available from the **Properties** button.

Document types can be configured from within the Document Types manager, which is available from the **Setup** menu.

If you have configured RMTrak's Documents Setup to recognize numbers, sliding the left side of the **Type** column header to the right will review another column header: **Number**.



Documents Manager with Number Column Header

Number

This is the number of the document. RMTrak will recognize the document's number from the document's filename or properties, depending on how you configured RMTrak's Documents Setup.

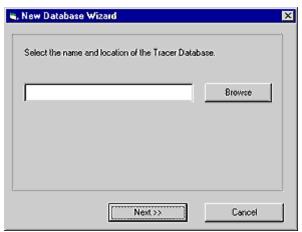
You can adjust the width of these column headers by clicking on the edge of a column header and dragging it to the width you prefer.

Creating or Opening a **Database**

Creating Databases

Creating a database is the first step to working with a new project in RMTrak. RMTrak uses the database to store the requirements tagged within the Documents you'll add to your project.

To create a new database in RMTrak, from the File menu, click New. This will start the New Database Wizard.



New Database Wizard

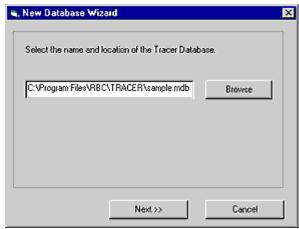
The first part of the New Database Wizard allows you to select a location to save the file:

- 1. Click Browse.
- 2. Select the folder on your computer you want to save the new database to, then type a
 - If the database is to be shared by more than one person, it is recommended that the database be stored on a network drive that is accessible to all users.



A Warning: RMTrak currently cannot support multiple simultaneous users. This means that only one person at a time can have the project open within RMTrak.

3. When you are finished, click Open. The New Database Wizard will reappear with the location of the file you selected.



New Database Wizard

4. Click Next.

The next part of the New Database Wizard allows you to select a method of creating the database.



New Database Wizard

You have three choices:

New (Default)

This option allows you to create a new database with the default settings: tags recognized as any red and bold text, requirements terminated by paragraph marks (¶), and document numbers and revisions disabled.

Tip: Paragraph marks (¶), which are created by pressing ENTER on the keyboard, are also called "hard carriage returns." Line breaks (♣), which are created by pressing SHIFT+ENTER, are also called "soft carriage returns."

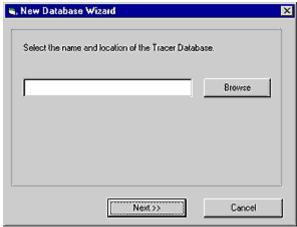
New (Custom)

This option allows you to create a new database with your own customized settings.

The New Database Wizard will change to reflect the database type you choose. The next three sections of the tutorial will detail each of these options.

Creating New (Default) Databases

To create a new database in RMTrak that uses default settings, from the **File** menu, click **New**. This will start the New Database Wizard.



New Database Wizard

- 1. Click Browse.
- 2. Select the folder on your computer you want to save the new database to, then type a name.

If the database is to be shared by more than one person, it is recommended that the database be stored on a network drive that is accessible to all users.



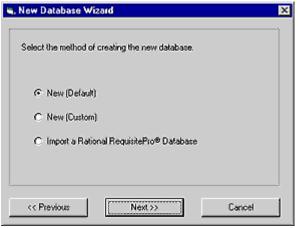
Warning: RMTrak currently cannot support multiple simultaneous users. This means that only one person at a time can have the project open within RMTrak.

3. When you are finished, click **Open**. The New Database Wizard will reappear with the location of the file you selected.



New Database Wizard

4. Click **Next**. The New Database Wizard will ask you to select a method for creating the new database.



New Database Wizard

Choose New (Default) then click Next.
 RMTrak will create your database at the file location you selected and immediately open it for you.

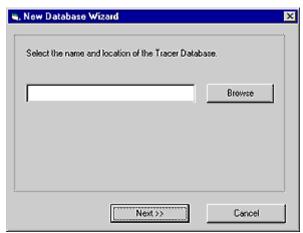
You can customize this database's settings at any time by using RMTrak's Setup menu.

- Note: When you choose to create a default database, the documents you add to the database will need to have tags that are red and bold and have paragraph marks (¶) after them. Document numbers and revisions should be stored in the document file name; the format for filenames must be NNNNNNrevR.R.doc, where NNNNNN represents the document number, rev represents the abbreviation for "revision," R.R represents the revision number (which can be done in pointed increments or whole numbers), and .doc represents the Microsoft® Word file extension. The version and revision numbers can be any whole number or integer that does not contain spaces. For example, 3486rev3.4.1.doc and 112386rev21.4 are both valid file names.
- ① Tip: Paragraph marks (¶), which are created by pressing ENTER on the keyboard, are also called "hard carriage returns." Line breaks (♣¹), which are created by pressing SHIFT+ENTER, are also called "soft carriage returns."

If you want to change the default settings for this project, you may do so now. Otherwise, you can begin working with documents for this project.

Creating New (Custom) Databases

To create a new database in RMTrak that uses your own customized settings, from the File menu, click New. This will start the New Database Wizard.



New Database Wizard

Step 1: Select a file location:

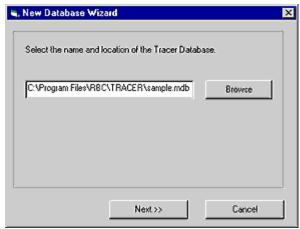
The first two parts of the New Database Wizard allow you to specify a file location and to choose to create a new, customized database:

- 1. Click Browse.
- 2. Select the folder on your computer you want to save the new database to, then type a
 - If the database is to be shared by more than one person, it is recommended that the database be stored on a network drive that is accessible to all users.



Warning: RMTrak currently cannot support multiple simultaneous users. This means that only one person at a time can have the project open within RMTrak.

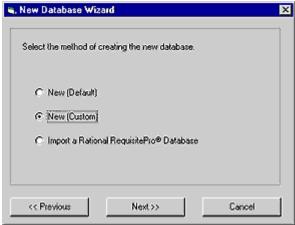
3. When you are finished, click **Open**. The New Database Wizard will reappear with the location of the file you selected.



New Database Wizard

4. Click Next.

The New Database Wizard will ask you to select a method for creating the new database.



New Database Wizard

5. Choose New (Custom) then click Next.

Step 2: Specify a tagging and tracing option:

The next part of the New Database Wizard allows you to specify how tagging and tracing information will be identified.



New Database Wizard

You have two choices:

Red/Bold Text This option will set up RMTrak to recognize tags within your

Documents as being any text that is both red and bold.

Microsoft® Word

Style

This option will set up RMTrak to recognize tags within your Documents as being formatted in a specific Microsoft® Word style. (Microsoft® Word allows you to format text to have "styles," such as Body Text, Heading 1, Heading 2,

and customized styles.)

Select either the Red/Bold or Microsoft® Word Style option. If you choose Microsoft® Word Style, a dialog box will appear. Type the name of the Microsoft® Word style exactly as it appears in Microsoft® Word. When you are finished, click Next.

Step 3: Specify a requirements termination option: Specify how requirement text will be terminated.



New Database Wizard

You have two choices:

First hard carriage return following tag

This option specifies that the tags in your documents will each end with a paragraph mark (¶).

(1) Tip: Paragraph marks (¶), which are created by pressing ENTER on the keyboard, are also called "hard carriage returns." Line breaks (♣¹), which are created by pressing SHIFT+ENTER, are also called "soft carriage returns"

First occurrence of ____ following tag

This option specifies that the tags in your document will each end with a specific character of your choice (where represents the specific character).

Select either the First hard carriage return following tag or First occurrence of ____ following tag option. If you choose the latter option, you will need to type in the space provided the character exactly as it will appear in your documents.

If you need help choosing a character, you can click the **Char Map** button to bring up the Microsoft® Windows® character map. When you are finished, click **Next**.

Step 4: Specify a document number option: Specify how the document number will be determined.



New Database Wizard

You have three options:

Do not use document numbers

This option specifies that you will not track document numbers.

Document number stored in an Microsoft® Word document property

This option specifies that you will place document numbers in a customized property in Microsoft® Word's document Properties listings.

This option specifies that you will place document option specifies that you will place document

stored in the filename (NNNNNrevR.R.doc)

This option specifies that you will place document numbers in the filename. If you want to specify document numbers in the filename, the format must

be NNNNNNrevR.R.doc, where NNNNNN represents the document number, rev represents the abbreviation for "revision," R.R represents the revision number (which can be done in pointed increments or whole numbers), and .doc represents the Microsoft® Word file extension.

Note: The version and revision numbers can be any whole number or integer that does not contain spaces. For example, 3486rev3.4.1.doc and 112386rev21.4 are both valid file names.

Select one of the above options. If you choose Document number stored in an Microsoft® Word document property, you will need to type in the space provided the custom name of the Microsoft® Word property exactly as it will appear in the Microsoft® document Properties listings for your documents. When you are finished, click Next.

Step 5: Specify a document revision option: Specify how the document revision will be determined.



New Database Wizard

You have three options:

Do not use document revision

This option specifies that you will not track document revisions.

Document revision stored in a Microsoft® Word document property

This option specifies that you will place document revisions in a customized property in Microsoft® Word's document Properties listings.

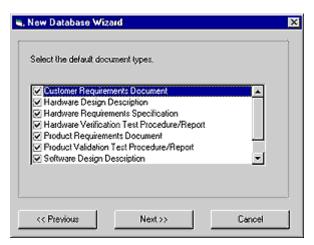
Document revision is stored in the filename (NNNNNNrevR.R.doc)

This option specifies that you will place document revisions in the filename. If you want to specify document revisions in the filename, the format must be NNNNNNrevR.R.doc, where NNNNNN represents the document number, rev represents the abbreviation for "revision," R.R represents the revision number (which can be done in pointed increments or whole numbers), and .doc represents the Microsoft® Word file extension.

Note: The version and revision numbers can be any whole number or integer that does not contain spaces. For example, 3486rev3.4.1.doc and 112386rev21.4 are both valid file names.

Select one of the above options. If you choose Document revision stored in an Microsoft® Word document property, you will need to type in the space provided the custom name of the Microsoft® Word property exactly as it will appear in the Microsoft® Word document Properties listings for your documents. When you are finished, click Next.

Step 6: Select default document types: Select which of RMTrak's default document types you want to use.



New Database Wizard

Place a checkmark by the types of documents you will be creating for this project. If you will not be creating any of these documents, uncheck each default document type. (You can later create your own document types from RMTrak's Define Document Types option in the setup menu.) When you are finished, click Next.

Step 7: Select default attributes:

Select which of RMTrak's default attributes you want to use.



New Database Wizard

Place a checkmark by the types of attributes you will be using for this project. If you will not be using any of these attributes, uncheck each default attribute type. (You can later create your own attribute types from RMTrak's Define Attribute Types option in the setup menu.) When you are finished, click **Next**.

You're Finished!

RMTrak will create your database at the file location you selected and immediately open it for you. You can customize this database's settings at any time by using RMTrak's Setup menu.

Once you've created your database, you're ready to begin adding documents to it.

Importing Rational RequisitePro® Databases

To create a new database in RMTrak that uses default settings, from the **File** menu, click **New**. This will start the New Database Wizard.



New Database Wizard

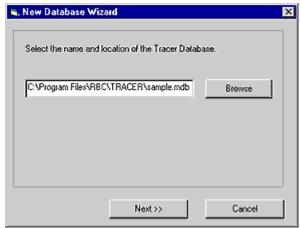
- 1. Click the Browse button.
- 2. Select the folder on your computer you want to save the new database to, then type a name.

If the database is to be shared by more than one person, it is recommended that the database be stored on a network drive that is accessible to all users.



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3. When you are finished, click **Open**. The New Database Wizard will reappear with the location of the file you selected.



New Database Wizard

4. Click Next.

The New Database Wizard will ask you to select a method for creating the new database.



New Database Wizard

- 5. Choose Import a Rational RequisitePro® Database then click Next. You will be asked to select the Rational RequisitePro® database located on your computer.
- 6. Click the Browse button.
- 7. Locate the Rational RequisitePro® database then click **Open**. The New Database Wizard will reappear with the location of the file you selected.
- 8. Click Next.

The Rational RequisitePro® Import Utility will import the database's information into a new RMTrak database.

9. RMTrak might require further steps before it can import your project. Follow the directions on the screen to complete any further steps. If you need additional help, please contact RBC Product Development

RMTrak builds the database from the settings of your Rational RequisitePro® database. If you want to change the settings for this project, you may do so after RMTrak has opened the database. Otherwise, you can begin working with documents for this project.

Opening Existing Databases

To open an existing database from within RMTrak:

- 1. From the File menu, choose Open.
- 2. Browse to find the location of your file, then click Open. RMTrak will open the database.



Warning: RMTrak currently cannot support multiple simultaneous users. This means that only one person at a time can have the project open within RMTrak.

You can also open RMTrak by double-clicking your project's .tra database file located on your computer or server.

Changing Project Setup **Options**

You can change the settings of your project at any time.

Setup options are available from the **Setup** menu:

Attributes You can insert attributes into your documents to assign information

to a requirement. The setup option for attributes allows you to

customize which attributes are allowed.

Document Types

Depending on your purpose for using RMTrak, you might be using different types of documents. RMTrak's default document types are set up with the names of typical product development documents. By keeping RMTrak's list of document types accurate.

you ensure that the information RMTrak provides you in its views

and reports are meaningful and beneficial to you.

Tag **Filters** To allow more than one project to share documents, RMTrak has a tag filter to allow you to keep tag and requirements that belong to

another project from entering the database.

If the tag filter is set to recognize a type of tag, only requirements matching the tag type will be loaded into the project database.

RMTrak's default settings do not have any tag filters.

Options

RMTrak lets you adjust the formatting/identification and requirements termination of tags, as well as the document and revision numbering, of your project at any time. The initial settings are determined when you originally created the database.

The options you set up for the project will affect all of your project's documents.

Defining Attributes

Attributes are used to specify information about a requirement. By adding attributes to your tags, you can trace requirements' information, such as implementors, test dates, and test status.

RMTrak's default attributes include attributes common to product development requirements. These default attributes can be added to, edited, or deleted at any time using the Attributes Manager available from the **Setup** menu. If your company wants to add attributes such as risk, cost, importance, etc., RMTrak lets you do this easily.

Default attributes:

Implementor

Type: Enum (Multiple) Rule: HW;SW;QA

This attribute can be used to show that the requirement's Implementor is one or more of the Hardware, Software, and/or Quality Assurance divisions within the company. This attribute is especially helpful for tags within Software Requirement Specifications. To avoid repetitive typing, these values have been given acronyms.

Test Date

Type: Date

This attribute can be used to show the requirement's test date. This attribute is especially helpful for tags within test requirement documentation.

Test Method

Type: Enum (Single)

Rule: I;A;D;T

This attribute can be used to show that the requirement's test method is either Inspection, Analysis, Detection, or Test, which are common product development test methods. This attribute is especially helpful for tags within test requirement documentation. To avoid repetitive typing, these values have been given acronyms.

Test Status

Type: Boolean

This attribute can be used to show that the requirement's test status is either T (for True/Passed) or F (for False/Failed). RMTrak marks passed requirements as "closed" for its reports and views. This attribute is especially helpful for tags within test requirement documentation. To avoid repetitive typing, these values have been given acronyms.

Tester

Type: Enum (Single) Rule: HW;SW;QA

This attribute can be used to show that the requirement's tester is either the Hardware, Software, or Quality Assurance division within the company. This attribute is especially helpful for tags within test requirement documentation. To avoid repetitive typing, these values have been given acronyms.

Define Attributes

To define attributes, use the Attributes manager available from the **Setup** menu.



Attributes manager

The Attributes manager allows you to add, edit, and delete attributes by clicking an attribute in the list then clicking its corresponding button:

New Opens the Attribute Edit dialog so you can add an attribute to the

list.

Delete Deletes the attribute from the database.

Properties Opens the Attribute Edit dialog so you can edit an attribute (i.e.

Name, Type, Rule, etc.) of an attribute.

Done Closes the Attributes manager.

If you click the **New** or **Properties** button, the Attributes Edit dialog will appear.



Attributes Edit dialog

The Attribute Edit dialog has these fields:

Name This is the name of the attribute, which appears whenever the

attribute is referenced. Attribute names are limited to 50

characters.

Type This is the data type of the attribute. For more information about

data types, see the Attributes' Data Types and Rules Syntax topic

available from RMTrak's Help menu.

Rule

This is the rule used to validate the value assigned to an attribute. The application makes sure that only valid values are assigned to an attribute. You'll only need to specify a rule if you've selected Enum (Single) or Enum (Multiple) from the data Type dropdown list. For more information about rules, see the Attributes' Data Types and Rules Syntax topic available from RMTrak's Help menu. Attribute rules are limited to 200 characters.

Persistent

This check box determines whether the attribute is persistent. Persistent attributes are stored in the database, whereas nonpersistent attributes are stored in the document. If the **Persistent** check box is checked for an attribute, the attribute's values can be assigned to requirements from within RMTrak's Allocation view. This eliminates the need to specify the attribute in your documents' tags.



🔼 Warning: If you use Persistent attributes, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the information you stored in it would also be lost. If you want to retain RMTrak's document-centric benefit of leaving important information in the documents rather than in the database, do not use persistent attributes.

Applying Attributes to Requirements

See the Applying Attributes to Requirements topic.

Defining Document Types

Depending on your company's needs, you might use many different types of documents with RMTrak. You can apply a document type to your document by using the Modify Document dialog, available by clicking the **Properties** button in the main Document manager.

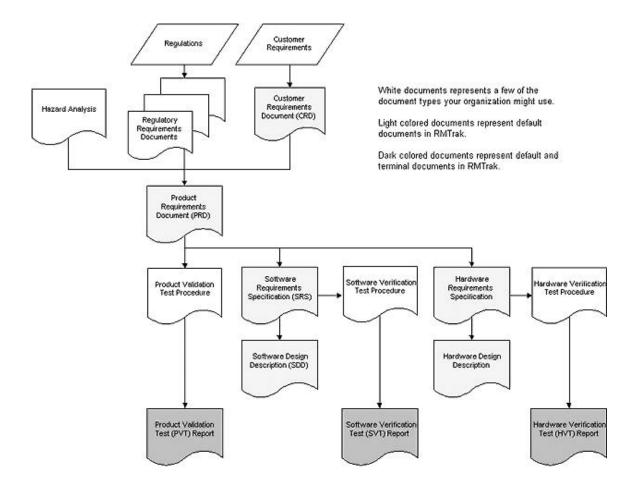
Default Document Types

RMTrak's default document types include those common to product development. These default document types can be added to, edited, or deleted at any time using the Document Types manager available from the **Setup** menu. By keeping RMTrak's list of document types accurate, you ensure that the information RMTrak provides you in its views and reports are meaningful and beneficial to you.

Default document types included with RMTrak's default installation:

- Customer Requirements Document
- Hardware Design Description
- Hardware Requirements Specification
- Hardware Verification Test Procedure (Terminal)
- Product Requirements Document
- Product Validation Test Procedure (Terminal)
- Software Design Description
- Software Requirements Specification
- Software Verification Test Procedure (Terminal)
- System Hazard Analysis

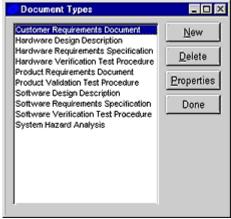
The diagram below shows a standard hierarchy of documents that includes these document types. Your own hierarchy might differ from this one.



Define Document Types

You can add, edit or delete RMTrak's default document types at any time.

To define document types, use the Document Types manager available from the **Setup** menu.



Document Types manager

The Document Types manager allows you to add, edit, and delete document types by clicking a document type in the list then clicking its corresponding button:

Opens the Define Document Type dialog so you can add a New

document type.

Delete Deletes the document type.

Properties Opens the Edit Document Type dialog so you can edit the

properties (i.e. name, corresponding attributes, etc.) of a document

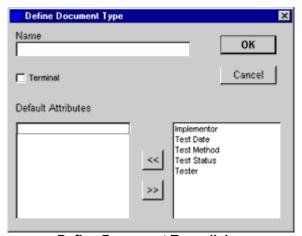
type.

Done Closes the Document Types manager.

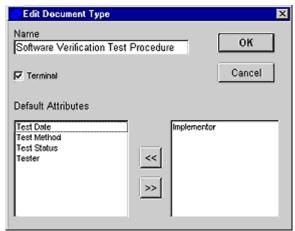
Note: If your document types have long names and are cut off on the right side of the window, you can adjust the size of the window by dragging the lower right corner of the Document Types manager to the desired length and width

Adding or editing document types will affect the list of document types available from the Document Types manager.

If you click the New or Properties button in the Document Types manager, which is available from the Setup menu, the Define Document Type dialog or Edit Document Type dialog appears.



Define Document Type dialog



Edit Document Type dialog

Note: In the Default Attributes area of the Define Document Type Dialog and the Edit Document Type dialog, the left side shows available attributes; the right side shows attributes selected for this document type.

The Define Document Type dialog and Edit Document Type dialog have these fields:

Name This is the name of the document type. Document type names are

limited to 50 characters and may include spaces.

Default These are the default attributes available for this document type. **Attributes**

> The list in the left pane shows the default attributes for this document type. The list in the right pane shows the list of available attributes.

This list can be modified from the Attributes manager.

Terminal This check box shows whether the document type is the final,

terminal document in your document hierarchy.

Defining the Tag Filter

To allow more than one project to share documents, RMTrak has a tag filter. The tag filter allows you to keep tags and requirements that belong to another project from entering the database. The tag filter works similarly to a search string in a word processor. RMTrak's default settings do not have any tag filters.

Thanks to RMTrak's tag filter, it's easy to list requirements of different projects within the same document, and yet not have them be confused in reports and views. RMTrak's tag filter allows each project to only recognize document tags that were intended for it, ignoring any tags intended for another project. This lets you use a document for more than one project without hassle or confusion.

How It Works

When you import a document into the Documents Manager that has tags around its requirements, RMTrak, by default, imports all of the requirements tagged within the document. If you use documents for more than one project, this could confuse your views and reports with information from two projects. By adding tags to the tag filter, you're telling RMTrak which tags are intended for this project so RMTrak knows to ignore all others.

For example, a document could have information about separate products. In the below example, a project called the Revolutionary Automated Teller Machine (RATM) has three divisions: RATMN (RATM Network), RATM (the machine), and RATMW (RATM Wireless). Both the RATMN and the RATMW includes the RATM requirements, but the RATMN and RATMW have separate requirements. In the document, this can be shown as follows:

```
Requirements for the RATM:
     RATM: PRD:1 The system will dispense money.
     RATM: PRD:2 The system will use encryption when
     transferring PINs.
Additional requirements for the wireless system only:
     RATMW: PRD: 3 The system will have wireless access.
Additional requirements for the network system only:
     RATMN: PRD: 4 The system will have network access.
```

If you imported a PRD with these tags into RMTrak, RMTrak would, by default, trace all of the tags. But because you don't want the RATMW and RATMN tags in the same project, you need a way to tell RMTrak that for one project you'd like to include the RATMN and RATM tags, and in another project you'd like to include the RATMW and RATM tags.

RMTrak makes this easy to do with its tag filter. After creating two separate projects in RMTrak (one for RATMN and another for RATMW), you'd need to tell the tag filter of each project which tags it should recognize.

In the RATMN project, you would add these tags to the tag filter:

```
RATM: *
RATMN: *
```

This tells RMTrak that the RATMN reports and views should only recognize tags within the imported documents if they begin with RATM: or RATMN: (and ignore all other tags).

In the RATMW project, you would add these tags to the filter:

RATM: * RATMW: *

This tells RMTrak that the RATMW reports and views should only recognize tags within the imported documents if they begin with RATM: or RATMW: (and ignore all other tags).

This will make sure that both projects include the general requirements, but don't include the specific requirements of the other related project.

Tag Filter Syntax

To have the tag filter keep a tag or requirement from another database from being recognized in your current project, you can define the tag filter using the Tag Filter manager (available from the Setup menu in RMTrak).

When you define a tag in the tag filter, use the first part of the tag, followed by its colon, followed by the rest of the appropriate part of the tag. If you want to use every kind of tag of that type, use an asterisk (*) to match zero or more characters.

For example, to tell RMTrak only accept RATM tags for a project and to filter out any other kind, you'd type:

RATM: *

Defining the Tag Filter

To define the tag filter, use the Tag Filter manager from the **Setup** menu.

- To add a tag to the tag filter, type the tag in the first field provided while using correct tag filter syntax, then click New.
- To remove a tag from the tag filter, find it in the list, click it, and then click **Delete**.



Tag Filter Manager

The Tag Filter manager allows you to add and delete tags from the tag filter by either typing the tag in the first field provided or selecting it from the list, then clicking its corresponding button:

New Adds a tag to the tag filter.

Note: The order in which you add the tags does not make any difference.

Delete Deletes the tag from the tag filter.

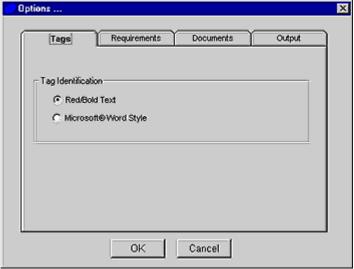
Note: This button will not become available until you have selected a tag filter from the list.

Done Closes the Tag Filter manager.

Defining Options

RMTrak lets you adjust the formatting/identification and requirements termination of tags, the document and revision numbering, and the output format of your project at any time.

The initial settings are determined by how you originally created the database. You can change these default options at any time by using the Options manager, which is available from the **Setup** menu.



Options Manager showing Tags tab

The Options manager allows you to choose which options you want to have set up for your project, and overrides any initial options you set up when you originally created it.

To select an option, click its name from the Options manager (available from the **Setup** menu in RMTrak). When you are finished, click **OK**. The Options manager has four tabbed sections:

TagsLets you choose tag identification as either red/bold text or a Microsoft® Word style.

Requirements Lets you choose requirement termination as either a hard

return or a special character.

Documents Lets you choose document and version numbering as being

placed in the filename, the Microsoft® Word properties, or

neither.

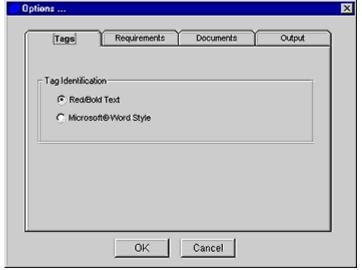
Output Lets you choose to output reports in either HTML or

Microsoft® Word format.

These tabbed sections are further described below.

Tags

When you select the **Tags** tab, the Tags setup options appear.



Tags setup options

Red/Bold Text

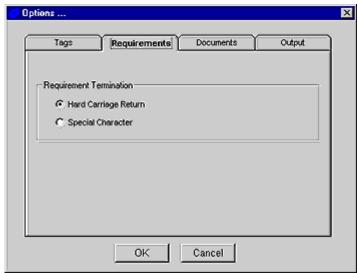
This option will set up RMTrak to recognize tags within your Documents as being any text that is both red and bold.

Microsoft® Word Style

This option will set up RMTrak to recognize tags within your Documents as being formatted in a specific Microsoft® Word style. (Microsoft® Word allows you to format text to have "styles," such as Body Text, Heading 1, Heading 2, and customized styles.) If you choose this option, a dialog box will appear. You'll need to type the name of the Microsoft® Word style exactly as it appears in Microsoft® Word.

Requirements

When you select the **Requirements** tab, the Requirements setup options appear.



Requirements setup options

Hard Carriage Return

This option specifies that the tags in your documents will each end with a paragraph mark.

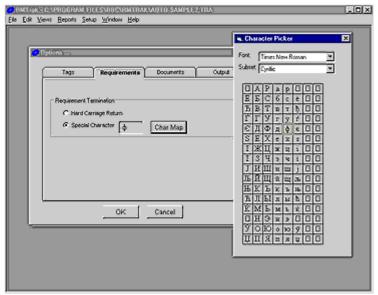
Tip: Paragraph marks (¶), which are created by pressing ENTER on the keyboard, are also called "hard carriage returns." Line breaks (+1), which are created by pressing SHIFT+ENTER, are also called "soft carriage returns."

Special Character

This option specifies that the tags in your document will each end with a specific character of your choice.

If you choose this option, you will need to type in the space provided the character exactly as it will appear in your documents, or paste it from the clipboard.

If you need help choosing a character, you can click the Char Map button to open the Character Picker (double-click a character to pick it).



Requirements setup options –
Choosing a special character to terminate requirements

Documents

When you select the **Documents** tab, the Documents setup options appear.



Documents setup options

This tab has two sections: **Document Number** and **Document Version**.

The **Document Number** section includes these options:

None

This option specifies that you will not track document numbers.

Contained in the filename

This option specifies that you will place document numbers in the filename. If you want to specify document numbers in the filename, the format must be NNNNNNrevR.R.doc. where NNNNNN represents the document number, rev represents the abbreviation for "revision," R.R represents the revision number (which can be done in pointed increments or whole numbers), and .doc represents the Microsoft® Word file extension.

Note: The version and revision numbers can be any whole number or integer that does not contain spaces. For example, 3486rev3.4.1.doc and 112386rev21.4 are both valid file names.

Contained in the document properties

This option specifies that you will place document numbers in a customized property in Microsoft® Word's document Properties listings. If you choose this option, you will need to type in the space provided the custom name of the Microsoft® Word property exactly as it will appear in the Microsoft® document Properties listings for your documents.

The **Document Version** section includes these options:

None

This option specifies that you will not track document revisions.

Contained in the filename

This option specifies that you will place document revisions in the filename. If you want to specify document revisions in the filename, the format must be NNNNNNrevR.R.doc. where NNNNNN represents the document number, rev represents the abbreviation for "revision," R.R represents the revision number (which can be done in pointed increments or whole numbers), and .doc represents the Microsoft® Word file extension.

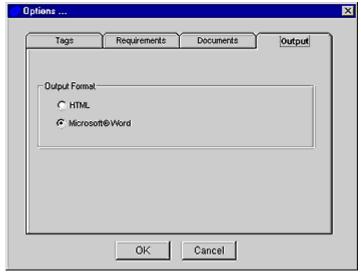
Note: The version and revision numbers can be any whole number or integer that does not contain spaces. For example, 3486rev3.4.1.doc and 112386rev21.4 are both valid file names.

Contained in the document properties

This option specifies that you will place document revisions in a customized property in Microsoft® Word's document Properties listings. If you choose this option, you will need to type in the space provided the custom name of the Microsoft® Word property exactly as it will appear in the Microsoft® Word document Properties listings for your documents.

Output

When you select the **Output** tab, the Output setup options appear.



Output setup options

HTML

Selecting HTML will output reports in a Web page format.

Microsoft® Word

Selecting Microsoft® Word will output reports in Microsoft® Word documents.

Changing Tag Identification

By default, RMTrak recognize tags if they are formatted in red, bold text. You can change RMTrak's project setup to instead recognize tags as any text formatted in a specific Microsoft® Word style.

- Note: This change will affect all documents in the project.
- 1. From the **Setup** menu, choose **Options**.
- 2. Choose the Tags tab.



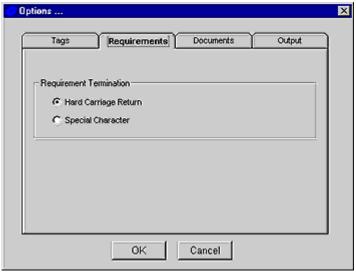
Tags setup options

- 3. In the Requirements Termination setup, choose **Microsoft® Word Style**. A blank field will appear.
- 4. In the blank field, type the name of the Microsoft® Word style you'll be using. Be sure to spell it exactly as it appears in Microsoft® Word. For example, *TagRequirement*.
 - (i) Tip: If you are unfamiliar with Microsoft® Word styles or how to create/edit one, see the Working with Microsoft Word topic.
- 5. Click **OK**. RMTrak will return you to the **Options** window.
- 6. Click **OK** to save your changes.

Changing Requirements Terminators

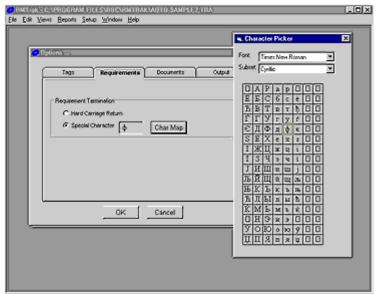
You can set up RMTrak to recognize a special character as the primary requirements terminator. This is especially helpful when you want to have multiple paragraphs or table cells in your requirements description.

- Note: This change will affect all documents in the project.
- 1. From the **Setup** menu, choose **Options**.
- 2. Choose the **Requirements** tab.



Requirements setup options

- 3. In the Requirements Termination setup, choose **Special Character**.
- 4. Click **Char Map**. The Character Picker window will appear.
- 5. Choose the character you want to end requirements descriptions with (for example, ~).



Requirements setup options – Choosing a special character to terminate requirements

- 6. Click **OK**. RMTrak will return you to the **Options** window.
- 7. Click **OK** to save your changes.

Changing Number/Version Identification

You can change how RMTrak recognizes a document's number and/or version when you import documents:

- Note: This change will affect all documents in the project.
- 1. From the **Setup** menu, choose **Options**.
- 2. Choose the **Documents** tab.



Documents setup options

- 3. In the **Document Number** section, choose how you want RMTrak to recognize document numbers.
- 4. In the **Document Version** section, choose how you want RMTrak to recognize document versions.
- Click **OK**. RMTrak will return you to the **Options** window.
- 6. Click **OK** to save your changes.

Changing Output Format

You can set up RMTrak to output reports in either HTML (Web) or Microsoft® Word format.

- Note: This change will affect all documents in the project.
- 1. From the **Setup** menu, choose **Options**.
- 2. Choose the Output tab.



Output setup options

- 3. Choose HTML or Microsoft® Word.
- 4. Click **OK**. RMTrak will return you to the **Options** window.
- 5. Click **OK** to save your changes.

Creating Documents

Working with Documents

The document types and analyses your company already uses to document project/product requirements can be directly imported into RMTrak as they're created.

Tag Your Documents As You Create Them

As you create documents for your project, simply place tags around each requirement. If you don't want the tags to interfere with your document's appearance or normal use, RMTrak allows you to apply a Microsoft® Word style to your tags. This allows you to format your documents to have a specific style, including invisibility.

Note: If you apply a Microsoft® Word style to your tags, make sure you have this option chosen in RMTrak's Document Setup.

Import Each Document After You Create It

It's important to import your requirements documentation as you create each document. This allows you to view the status of your project's requirements before proceeding with the next step of the project.

When you import the document into RMTrak, RMTrak will recognize its tags and place the document's requirements in its database. You can then assign a document type to the document. This lets RMTrak knows the document's type and place in the hierarchy, and therefore how the documents relate to each other.

Note: For convenience, the list of document types already lists common product development document types—but you can add, delete, or edit these to match your company's needs.

Document Naming Conventions

When you create or edit a document, you will need to save the file.

• If you have configured RMTrak's Documents Setup to get the document number and/or revision from the filename, the document's filename must be formatted:

NNNNNnrevR.R.doc

where *NNNNNN* represents the document number, *rev* represents the abbreviation for "revision," *R.R* represents the revision/version number (which can be whole numbers or real numbers with up to two places to the right of the decimal), and *.doc* represents the Microsoft® Word file extension.

For example, the filename 343rev2.1.doc would have the file number 343 and the version number 2.1.

- Note: The version and revision numbers can be any whole number or integer that does not contain spaces. For example, 3486rev3.4.1.doc and 112386rev21.4 are both valid file names.
- If you have configured RMTrak to not recognize document numbers or revisions, or have configured RMTrak to get the document number and revision from RMTrak's Documents Setup, you can name the document any acceptable Microsoft® Word filename.
 - Note: The naming convention you use must be maintained for all documents within a project. You should also consider naming all of the documents in your organization (that will be used in RMTrak projects) with the same format; this will eliminate confusion and save time.

Creating Documents

You need not create documents specifically for RMTrak; rather, your company can continue to create the project/product requirements documents you always have, with these changes:

- Create the documents in Microsoft® Word.
- Place tags around each requirement in the documents. (These tags can be made invisible by applying a Microsoft® Word style to them.)
- Configure RMTrak's setup options to match how you create your documents. These setup options include how you'll tag, where you'll keep document numbers and revisions, the types of attributes you'll use, the document types you'll import, and more.
- Give the documents filenames that use the appropriate document naming conventions, depending on how you configured RMTrak's setup options.

Rather than giving you many restrictions, RMTrak lets you set your own restrictions. You need only configure RMTrak to recognize your documents. For this reason, creating documents has two steps, which can be performed in reverse order if preferred:

- Create a new RMTrak database for your project with setup options matching how you create your documents.
 - Note: You can change these options after you've created the database by using the **Setup** menu.
- 2. Create documents that match RMTrak's setup options.

You can open the sample documents installed with RMTrak to see examples of RMTrak documents.

Incrementing Document Versions

If you change the content of your documents, including its requirements, you should save it as a new, incremented version. This will distinguish it from previous versions and help you track changes made to documents over time. For example, if your product development team reviewed a document and determined it needed changes, you could re-save the document to a new name and archive the old document. RMTrak cannot do this for you; you will need to do this manually using Microsoft® Word.

Increment Document Number and Saving New File

If you change the contents of a document, you should save it to a new name that reflects its version. If you have configured RMTrak's Documents Setup to recognize document numbers in the file name, be sure to follow document naming conventions for every file.

For example, if you make changes to the file:

343rev1.doc

You should save the file to the name:

343rev2.doc

This will show the file is now in its second version. (If you're using the partial increments, you can use 343rev1.1.doc instead of 343rev2.doc).

You can then archive the 343rev1.doc file and change the document in RMTrak:

Update Document Version In RMTrak

When you increment document versions (for example, from version 1.2 to 1.3), RMTrak will automatically recognize the new version and update its database with the new information—provided the new file is kept in the same folder location as the previous version, and provided you have set up RMTrak to recognize document numbers and revisions.

Note: If you've incremented your document to another version and you have RMTrak set up *not* to recognize document numbers and revisions or keep the file in a new location, you'll need to manually modify its properties and/or change its file location.

Additionally, if you have configured RMTrak's Document Types manager to recognize file names, RMTrak will recognize if a document's version was inversely incremented (for example, 343rev3.doc added after 343rev6.doc) and notify you.

If you have made changes to a requirement, RMTrak will mark its child requirements as suspect. This lets you create a Suspect report to quickly find out which requirements might also need to be changed.

Opening Documents

To open a document in your project's RMTrak database, highlight the document in the Documents manager then click the **Open**.

Note: To modify the document, you'll need to first make sure it's not open within RMTrak. Remember that if you make any modifications to the document, you'll need to refresh it in the RMTrak database.

Putting Document Information In Filenames

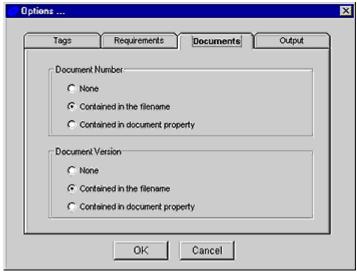
RMTrak can import the number and version of a document from your document's filename, provided you:

- Choose **Contained in the filename** from RMTrak's Documents Setup
- Use the correct document naming conventions for your filename
- Note: If desired, you can place document information in the document's properties instead of its filename.

Configure RMTrak's Documents Setup

To adjust RMTrak's Documents Setup:

- 1. From the **Setup** menu, choose **Options**.
- 2. Select the **Documents** tab.
- 3. In the Document Number and/or Document Version section(s), choose Contained in the filename.
- 4. Click **OK** when you're finished.



Documents setup options

For more information about setting RMTrak's documents setup options, please see the Changing Project Setup topic.

Getting RMTrak to Recognize the Document Information In Filename

RMTrak will recognize the document information you've placed in the filename whenever you:

- Import the document
- Edit the document's properties
- · Refresh the document

Putting Document Information In Properties

RMTrak can import the number and version of a document from your document's customized document properties, provided you:

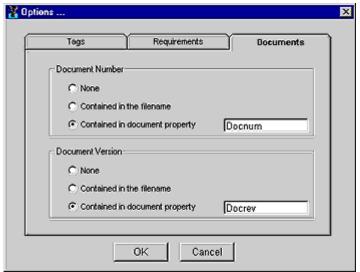
- Choose **Contained in the document property** from RMTrak's Documents Setup and type the document property name exactly as it appears in your documents
- Add the custom document properties to your documents.
- Note: If desired, you can place document information in the document's filename instead of its document properties.

Configure RMTrak's Documents Setup

To adjust RMTrak's Documents Setup:

1. From the **Setup** menu, choose **Options**.

- 2. Select the **Documents** tab.
- 3. In the **Document Number** and/or **Document Version** section(s), choose **Contained in** the document property.
- 4. Click **OK** when you're finished.

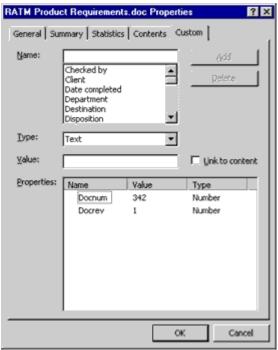


Documents setup options

Adding Custom Document Properties to Your Documents

You can add custom document properties to your documents by using the **Custom** tab:

- 1. In Microsoft® Word, from the File menu, choose Properties.
- 2. Click Custom.
- 3. Add the custom properties you desire (for example, Number or Version) by typing each the appropriate information in each field then clicking **Add**.
 - **Name** The name of the custom property you are creating. For example, Docnum or Docrev (for "document number" and "document revision").
 - Note: Remember that it doesn't matter what you call the custom property as long as its spelling exactly matches what you provide in RMTrak's Documents setup options.
 - **Type** The type of custom property you are creating. (RMTrak recommends **Text**).
 - **Value** The value of the custom property you are creating. For example, 1.2.
- 4. When you're finished, click OK.



Custom Properties for RATM Product Requirements.doc sample file

Note: If you need additional help creating custom properties, please consult Microsoft® Word Help.

In the example above, the custom properties are called Docnum and Docrev, but you can name your custom properties anything you like, as long as you've configured RMTrak's Document Setup with matching property names. Remember that document versions can be whole numbers (1, 2, 3, etc.) or real numbers with up to two places to the right of the decimal (1.35, 2.63, 9.65, etc.).

Getting RMTrak to Recognize the Document Information In Document Properties

RMTrak will recognize the document information you've placed in the document properties whenever you:

- Import the document
- Edit the document's properties
- · Refresh the document

Working with Microsoft® Word

If you are not familiar with the functionality and options of the Microsoft® Word program, RBC Product Development recommends you take some time to look at the help files and tutorials the program provides. The documents in the sample RMTrak database show some of the formatting options available. Using program options like auto text, auto-generated table of contents, headers and footers, etc., can increase efficiency and clarity in your documents and save you time. Additionally, RMTrak installs macros that can help you with your requirements management documents. Because RMTrak is designed to work with Microsoft® Word, the more you are able to get from Microsoft® Word, the better your requirements management process will be.

Formatting Text To Be Bold and Red

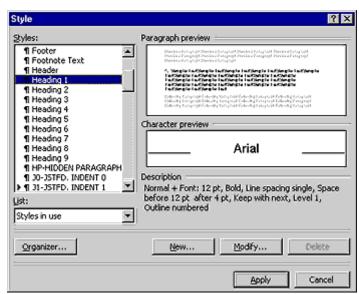
One option for formatting text is to format your tags to be bold and red, in Microsoft® Word, highlight the tag then:

- 1. From the Format menu, choose Font.
- 2. From the Font style list, choose Bold.
- 3. From the **Font color** list, choose **Red**.
 - Note: If you're not sure which color is red, place your mouse over each color without clicking, and its name will pop up. Choose the color that says "Red."
- Click OK.

Creating and Applying Microsoft® Word Styles

To format your tags to be a Microsoft® Word style, you'll first need to create a new style:

1. From the **Format** menu, choose **Style** The Style window will appear.



Style window

- 2. Click New.
- 3. Type the name of the style exactly as you have (or will) type it in the Tags Setup for RMTrak (for example, RMTrak Tags).

- 4. To assign its font properties, click **Format** then choose **Font**. Assign font properties you want to give to the tags. If you want the tags to be invisible, select the **Hidden** check box in the **Effects** section. When you are finished, click OK.
- 5. To assign its paragraph properties, click **Format** then choose **Paragraph**. Assign paragraph properties you want to give the tags.
- 6. When you are finished, click **OK**.
- 7. Click Close. The style will appear in the **Style** drop-down list (to the left of the **Font** drop-down list).

You can also use the TagConvert macro.

Once you've created a style, you can apply it to your tag at any time by highlighting the tag, then selecting the style from the Style drop-down list. (This list usually appears to the left of the **Font** drop-down list.)

Turning Hidden Text Off and On

If you create a Microsoft® Word style that is invisible (or have merely formatted paragraph text to be invisible, you can enable or disable your ability to see the hidden text at any time: In Microsoft® Word:

- 1. From the **Tools** menu, choose **Options**.
- 2. Click the View tab.
- 3. In the **Formatting Marks** section, check or uncheck the **Hidden Text** check box.
- 4. Click OK.

Paragraph Marks

You can create a paragraph mark (¶), also called a "hard carriage return," by pressing ENTER on your keyboard.

You can create a line break (+1), also called a "soft carriage return" by pressing SHIFT + ENTER on your keyboard. If your document uses a hard carriage return as a tag terminator. you'll need to use line breaks frequently within tags and requirements.

To see paragraph marks, you'll need to make sure Microsoft® Word has the paragraph marks option turned on:

Turning Paragraph Marks Off and On

If you use paragraph marks (¶) as tag terminators in your document, you'll need to make sure you can see them:

- 1. In Microsoft® Word, from the **Tools** menu, choose **Options**.
- 2. Click the View tab.
- 3. In the **Formatting Marks** section, check the **Paragraph marks** check box.
- 4. Click OK.

Paragraph marks will look like ¶; line breaks will look like ♣, and spaces will appear as a single dot.

Creating Custom Document Properties

You can add custom document properties. For detailed instructions, see the Putting Document Information In Document Properties topic.

Macros and Tag Menu

When you install RMTrak, you can also install a Tag.dot template. The purpose of this template is to create a Tag Menu and macros you can access and use from any Microsoft® Word document. To remove the Tag Menu and macros, you'll need to remove the Tag.dot file from your Microsoft® Word Startup directory.

Macros that install with RMTrak:

Tag2Text	Converts selected text to non-red/non-bold text.
Text2Tag	Converts selected text to red/bold text.
TagIndex	Puts a tag index at the cursor location. If a tag index already exists in the document, Microsoft® Word asks if you want to delete it.
TagMatrix	Puts a tag matrix at the cursor location. If a tag matrix already exists in the document, Microsoft® Word asks if you want to delete it.

TagInsert Displays a dialog box and then inserts a tag at the cursor location.

TagRenumber Renumbers all of the tags in a document so that they are sequential.

TagAbout Displays a dialog box list information about the tag macros.

TagConvert Converts red/bold text to a Microsoft® Word style.

To use these macros:

- 1. In Microsoft® Word, from the **Tools** menu, choose **Macro**, then **Macros**. (A shortcut for these steps is to press ALT+F8). The Macros window will appear.
- 2. Choose a macro from the list then click **Run**.

You can assign shortcuts to macros using this procedure:

- 1. In Microsoft® Word, from the Tools menu, choose Macro, then Record New Macro.
- 2. Use the Record Macro window to record the chosen macro. If you need help doing this, please consult Microsoft® Word Help.

Macros will only work with tags that use RMTrak's recommended tag format:

[Project Title or Acronym]:[Document Title or Acronym]:[Tag Number]

For example:

RATM:PVTR:1

Tag Menu

RMTrak also installs a Tag Menu you can access from any Microsoft® Word document. The Tag Menu is available in Microsoft® Word's menu bar under the word Tags.



Tag Menu

The Tag Menu provides shortcuts to a few of the macros RMTrak installs, including:

Tag Menu Option	Corresponding Macro	Explanation
Insert Tag	TagInsert	Displays a dialog box and then inserts a tag at the cursor location.
Insert Matrix	TagMatrix	Puts a tag matrix at the cursor location. If a tag matrix already exists in the document, Microsoft® Word asks if you want to delete it.
Insert Index	TagIndex	Puts a tag index at the cursor location. If a tag index already exists in the document, Microsoft® Word asks if you want to delete it.

Renumber TagRenumber Renumbers all of the tags in a document so that

they are sequential.

About TagAbout Displays a dialog box list information about the tag

macros.

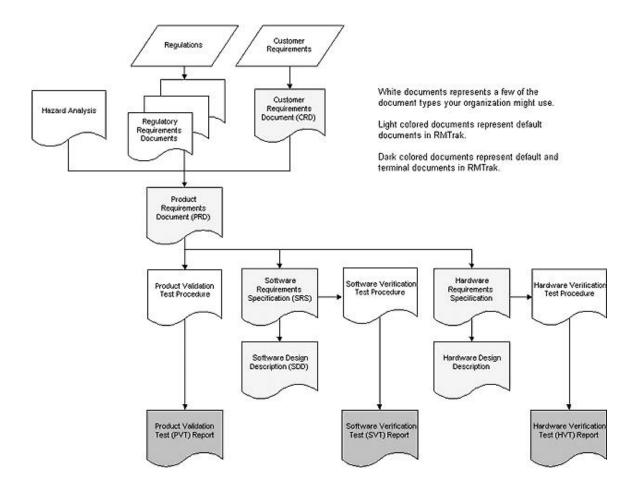
Terminal Requirements and Documents

Terminal requirements, not to be confused with Tag Termination, are requirements that do not have any children requirements; these requirements usually give the requirement's status, including whether it has passed its tests, and are typically listed only in terminal documents. Terminal documents are documents that list terminal requirements and which do not have any children documents.

Terminal Documents

A "terminal document" is a document whose document type has been marked **Terminal** in the Document Types manager. Terminal documents do not have any children documents and usually include test results.

For example, in the following documents and their tags, the dark blue documents would be considered terminal documents because no other documents follow them.



Terminal documents are usually test-type documents where the document's purpose is, among other things, to provide a checklist of requirements' progress and status.

Make a Document Terminal

Designating a document as terminal allows RMTrak to recognize the document's relationship to other documents. You should designate a document as Terminal if the document has no children documents.

To tell RMTrak a document is terminal:

- 1. Apply a document type to the document using the Add Document dialog or the Modify Documents dialog.
- 2. Edit the document type in the Document Types manager so it is **Terminal**.

Childless Requirements

Terminal requirements will also be childless requirements; however, RMTrak will not include these requirements in a Childless Report, which is intended to show requirements that should have requirements tracing back to them.

Tag Identification

RMTrak recognizes tags through their syntax and their formatting, which can be either bold and red, or a specific Microsoft® Word style.

Tags Setup

The method RMTrak uses to identify tags depends on how you've set up its Tags Setup. This setup is available from RMTrak's **Setup** menu by choosing the **Tags** tab.

When you select the **Tags** tab, the Tags setup options appear.



Tags setup options

The Tags Setup section has these two options:

Red/Bold	If RMTrak is set up with this option, RMTrak will recognize tags
Text	within your documents as being any text that is both red and bold.

Microsoft® **Word Style** If RMTrak is set up with this option, RMTrak will recognize tags within your documents as being any text that is formatted in a specific Microsoft® Word style. If you choose Microsoft® Word **Style**, a dialog box will appear. You'll need to type the name of the Microsoft® Word style exactly as it appears in your documents.

For more information on how RMTrak recognizes requirements, see the Requirement Identification topic.

Requirements Identification

When you import documents into RMTrak, RMTrak recognizes the documents' requirements by the tags you put around each requirement. Tags can consist of any unique, memorable set of letters or numbers you create. We recommend you organize your tags consistently by placing the project acronym at the start of each tag, then the document name's acronym, and then the requirement's number, all separated by colons.

For example, a requirement using RMTrak's default settings could look like:

RATM: SHA: 1 Circuit shall be designed to minimize impact of faulty ground. ¶

(1) Tip: This example is the Number 1 Requirement listed in the Revolutionary Automated Teller Machine (RATM) project's System Hazards Analysis (SHA) document. The number of the tag (1) is an arbitrary number and doesn't have significance other than being a unique identifier for the requirement. The final paragraph mark (¶) is a requirements terminator that lets RMTrak know you have finished writing about that requirement.

The method RMTrak uses to identify requirements depends on the requirement's termination.

For more information on how RMTrak recognizes requirements, see the Tag Identification topic.

Requirements Termination

"Tag termination" refers to RMTrak's ability to determine the end of a tag/requirement so it can go on to look for another one in the document.

RMTrak recognizes the end of requirements when it encounters:

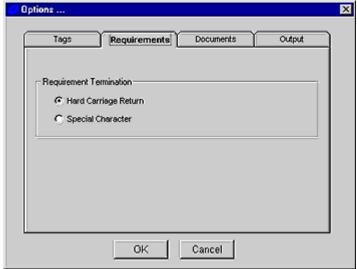
- A requirements terminator. Requirements terminators can be the end of a paragraph (¶)
 or a character you specify in RMTrak's project settings
- The start of a new tag—if it's not in brackets ([])
- The end of the document

If RMTrak cannot find a requirement terminator, or if there appears to be multiple or conflicting tags, RMTrak will automatically recognize the next bold, red RATM tag, if it is not in brackets ([]), to be the start of a new requirement.

Tip: You can configure RMTrak to recognize requirements in a specified Microsoft® Word style instead of bold, red formatting. You can also configure RMTrak to recognize any special symbol or character instead of a paragraph mark (¶). To do this, from RMTrak's **Setup** menu, choose **Options**.

Requirements Termination Setup

The method RMTrak uses to identify tags' termination depends on how you've set up its Requirements Setup. When you select the **Requirements** tab, the Requirements setup options appear.



Requirements setup options

The Requirements Setup section has these two options for determining tag termination:

Hard Carriage Return

If RMTrak is set up with this option, RMTrak will recognize a tag's termination as being a paragraph mark (¶).

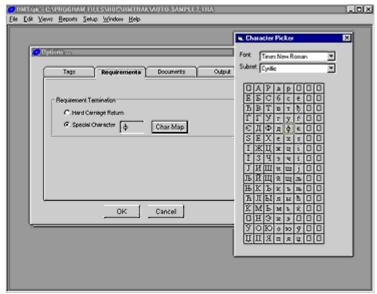
Tip: Paragraph marks (¶), which are created by pressing ENTER on the keyboard, are also called "hard carriage returns." Line breaks (♥), which are created by pressing SHIFT+ENTER, are also called "soft carriage returns."

Special Character

If RMTrak is set up with this option, RMTrak will recognize a tag's termination as being specific character of your choice.

If you choose this option, a field appears. You will need to type in this field the character exactly as it will appear in your documents, or paste it from the clipboard.

If you need help choosing a character, you can click the Char Map button to open the Character Picker (double-click a character to pick it).



Requirements setup options -Choosing a special character to terminate requirements

Adding Tags to Your Document

Overview of Tagging

RMTrak works with your current documentation (created in Microsoft® Word) with one adjustment: adding tags around each requirement. Additionally, you can place attributes around requirements.

Tags and tagged attributes allow RMTrak to recognize your document's requirements so you can generate reports and views to trace their relationships and status.

To add tags to your document:

- 1. Create a document and use it to document your project's requirements.
- 2. As you discuss each requirement, place tags around each requirement. You can use the **Tag** menu that RMTrak installs into Microsoft® Word to help you.

See the Syntax and Structure topic for help on how to write tags, attributes, parent tags, and terminators.

Syntax and Structure

The tags you place around the requirements in your document will need to be structured so RMTrak can recognize your requirements.

The structure of a tagged requirement is:

Initial Tag Requirement Description (Attribute) [Parent Tag] Terminator

An example of a requirement using correct syntax:

```
RATM:PVTR:1 The circuit shall be interrupted when the ground is shorted. 
 \{ \text{Test Method} = I \} [ \text{RATM:PRD:1} ]
```

The structure of the initial tag, requirement text, attribute(s), parent tag(s), and terminator can be arranged in any order—so long as the requirement begins with the initial tag.

Each part of the structure is described below:

Initial Tag Syntax

Each requirement in each document will need a unique, initial tag. Each requirement's initial tag must be placed at the beginning of the requirement.

We recommend you organize your tags consistently by placing the project acronym at the start of each tag, then the document name's acronym, and then the requirement's number, all separated by colons. Syntax should be consistent for every document. The initial tag may not contain any spaces.

[Project Title or Acronym]:[Document Title or Acronym]:[Tag Number]

Example:

```
RATM: SHA: 2 Circuit shall be designed to minimize impact of faulty ground.
```

(i) Tip: The above example is the Number 2 Requirement listed in the Revolutionary Automated Teller Machine (RATM) project's System Hazards Analysis (SHA) document. The number of the tag (2) is an arbitrary number and doesn't have significance other than being a unique identifier for the requirement.

Requirements Description Syntax

Project requirements are any description and can be in any format or style. You can also place them in tables or multiple paragraphs.

Example: The circuit shall be interrupted when the ground is shorted.

Attribute Syntax

The syntax for an attribute is an opening curly bracket, the name of the attribute including any spaces, an equals sign, the value of the attribute, and then a closing curly bracket. Attributes may contain spaces.

```
Example: {Test Method = I}
```

Attributes are optional and might not be present in the project's first document. They're intended for status updates or to add further information to a requirement. RMTrak's default attributes use acronyms.

Note: Attributes are set up in RMTrak's project settings. For RMTrak to recognize these attributes and track/trace them in views and reports, the project will need to be configured in RMTrak to include a Test Method attribute, a Test Pass attribute (with T and F as possible attributes), a Tester attribute, and a Test Date attribute. To edit attributes in RMTrak, from the Setup menu, choose Attributes.

You can add multiple attributes to a project. RMTrak will recognize attributes, regardless of their placement, as long as they occur before the start of a new requirement.

You can list attributes separately or within the same curly brackets, separated by commas.

Example of attributes listed separately:

```
RATM:PVTR:1 The circuit shall be interrupted when the ground is shorted.
{Test Status = P} {Test Date = 11/01/01} {Test Method = D} {Tester =
QA} [RATM:PRD:1] ¶
```

Example of attributes listed together:

```
RATM:PVTR:1 The circuit shall be interrupted when the ground is shorted.
{Test Status = P, Test Date = 11/01/01, Test Method = D, Tester = QA}
[RATM:PRD:1] {
```

Parent Tag Syntax

Parent tags are similar to regular tags, but show which previous requirement led to this one. Parent tags are placed in brackets ([]).

```
Example: [RATM: PRD:1]
```

Parent tags won't be present in the project's first document. This example tag shows that this requirement originated from the first requirement of the Product Requirements Document (PRD).

You can add multiple attributes to a project. RMTrak will recognize attributes, regardless of their placement, as long as they occur before the start of a new requirement.

Example:

```
RATM:PVTR:1 The circuit shall be interrupted when the ground is shorted.
{Test Status = P} {Test Date = 11/01/01} {Test Method = D} {Tester =
QA} [RATM:PRD:1] ¶
```

Terminator Syntax

A terminator can be a paragraph mark (¶) or a symbol of your choice, provided you configure the symbol in RMTrak's project setup.

The format of the terminator can be red and bold or be a Microsoft® Word style, provided you configure the style in RMTrak's project setup.

(i) Tip: Paragraph marks (¶), which are created by pressing ENTER on the keyboard, are also called "hard carriage returns." Line breaks (♣¹), which are created by pressing SHIFT+ENTER, are also called "soft carriage returns."

If RMTrak cannot find a requirement terminator, or if there appears to be multiple or conflicting tags, RMTrak will automatically recognize the next bold, red RATM tag, if it is not in brackets ([]), to be the start of a new requirement.

(i) Tip: You can configure RMTrak to recognize requirements in a specified Microsoft® Word style instead of bold, red formatting. You can also configure RMTrak to recognize any special symbol or character instead of a paragraph mark (¶). To do this, from RMTrak's **Setup** menu, choose **Options**.

Attributes

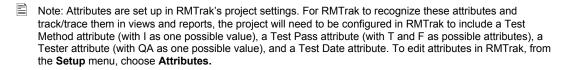
Attributes are used to specify information about a requirement. By adding attributes to your tags, you can trace requirements' information, such as implementors, test dates, and test status, within RMTrak. RMTrak recognizes a requirement's attributes by the attribute tags placed around it in curly brackets.

For example, a requirement with attributes using RMTrak's default settings might look like:

```
RATM: VTP:1 The circuit shall be interrupted when the ground is shorted.
   {Test Method = I} {Test Pass = T} {Tester = QA} {Test Date = 5/17/00}
   [RATM: PRD:1] ¶
```

In the above example, items provided in the curly brackets are tagged attributes. They show:

- The requirement was tested using the Inspection (I) test method.
- It is true (T) that the requirement passed its tests.
- The requirement was tested by the Quality Assurance (QA) department.
- The requirement was tested on 5/17/00.



The presence of an attribute in a tag is optional. Additionally, tags might not be present in the project's first document. Attributes are intended for status updates or to add further information to a requirement.

Persistent Attributes

In the Attributes manager, which is available from the **Setup** menu, you can designate an attribute as Persistent. If the Persistent check box is checked for an attribute, the attribute's values can be assigned to requirements from within RMTrak's Allocation view. This would eliminate the need to specify the attribute in your documents' tags.



🔼 Warning: If you use Persistent attributes, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the information you stored in it would also be lost. If you want to retain RMTrak's document-centric benefit of leaving important information in the documents rather than in the database, do not use persistent attributes.

Tags Across Multiple Paragraphs

RMTrak has an efficient way of handling requirements that are spread across multiple paragraphs: If you place part of a requirement's text in one paragraph, but place its attribute tags in another paragraph, RMTrak will still recognize the attributes that accompany the requirement.

For example, you could have a Verification Testing Process (VTP) document with the following requirement.

Example:

RMTrak would completely ignore the paragraphs after the first paragraph symbol (¶), but would still recognize the final attribute tags, resulting in RMTrak recognizing following requirements.

```
RATM:VTP:1 The circuit shall be interrupted when the ground is
    shorted. {Test Method = I} {Test Pass = T} {Tester = QA} {Test
    Date = 5/17/00} [RATM:PRD:1] ¶

RATM:VTP:2 Inspection of the RATM unit shall show the use of a
    water proof seal. {Test Method = I} {Tester = HW} [RATM:PRD:2]
    {Test Pass = T} {Test Date = 5/17/00} ¶
```

(1) Tip: The paragraph symbol (¶) can be created by pressing ENTER on your keyboard. To see the paragraph symbol, you need to change Microsoft® Word's settings to see hidden text: From the Tools menu, choose Options, choose the View tab, and then check the Paragraph Marks check box. Click OK.

Requirements Descriptions Across Multiple Paragraphs

A complication occurs if you try to place requirements description within separate paragraphs but you *don't* want RMTrak to ignore the text that's in the separate paragraphs.

To do this, you'd need to change RMTrak to no longer recognize paragraph marks as the end to requirements descriptions. You can do this by setting up RMTrak to recognize a special character as the primary requirements terminator.

You can then use the special character to let RMTrak know where requirements description ends.

Example:

```
Test Procedures and Results for RATM:VTP:1 ¶

The circuit shall be interrupted when the ground is shorted. {Test Method = I} {Tester = QA} [RATM:PRD:1] ¶

Expected Result: GFI is used and trips when the ground is interrupted. ~

Actual Result: Expected results were observed. ¶

Test Procedures: . . . (several paragraphs) ¶

{Test Pass = T} {Test Date = 5/17/00} ¶

Test Procedures and Results for RATM:VTP:2 ¶

Inspection of the RATM unit shall show the use of a water proof seal. {Test Method = I} {Tester = HW} [RATM:PRD:2] ¶

Expected Result: Watertight box is used. ~

Actual Result: Expected results were observed. ¶

Test Procedures: . . . (several paragraphs) ¶

{Test Pass = T} {Test Date = 5/17/00} ¶
```

Note: The special character (here, the ~) tells RMTrak where to end requirements descriptions for the requirements.

From the above example, RMTrak would recognize these requirements:

```
RATM:VTP:1 The circuit shall be interrupted when the ground is
    shorted. GFI is used and trips when the ground is
    interrupted. {Test Method = I} {Test Pass = T} {Tester =
    QA} {Test Date = 5/17/00} [RATM:PRD:1] ¶

RATM:VTP:9 Inspection of the RATM unit shall show the use of a
    water proof seal. Watertight box is used. {Test Method = I}
    {Tester = HW} {Test Pass = T} {Test Date = 5/17/00}
    [RATM:PRD:2] ¶
```

RMTrak would recognize the additional text occurring before the special symbol you chose (\sim), and would ignore any text occurring after it, but would still recognize the attributes at the end of the row.

Mixing Requirements Terminators In Paragraphs

Because RMTrak recognizes the end of a requirement when it encounters a new one or when it reaches the end of a document, it's easy to mix requirements terminators. This can be beneficial if you have requirements in which you want to use the paragraph tag (or special character) as requirement terminator but some occurrences in which you do not.

For example, if the ~ symbol were left out for RATM:VTP:9 (as shown below), RMTrak would still recognize its first paragraph (to the first paragraph mark) as being its requirements description. This is because it's followed by a new requirement (RATM:VTP:10):

Example:

```
1. Test Setup: RATM: VTP:1 The circuit shall be interrupted
   when the ground is shorted. {Test Method = I} {Tester = QA}
   [RATM: PRD:1]
   Expected Result: GFI is used and trips when the ground is
   interrupted. ~
   Actual Result: Expected results were observed.
   Pass/Fail: {Test Pass = T} {Test Date = 5/17/00}
2. Test Setup: RATM: VTP: 9 Inspection of the RATM unit shall
   show the use of a water proof seal. {Test Method = I}
   {Tester = HW} [RATM:PRD:2]
   Expected Result: Watertight box is used.
   Actual Result: Expected results were observed
   Pass/Fail: {Test Pass = T} {Test Date = 5/17/00}
3. Test Setup: RATM: VTP: 10 Unit shall be tested with
   Multimeter to verify the fuses are in series and of the
   rated value.
   {Test Method = T} {Tester = QA} [RATM:PRD:5]
   Expected Result: Circuit will be open when fuses are not
   present and closed when fuses present. ~
   Actual Result: Expected results were observed
   Pass/Fail: {Test Pass = T} {Test Date = 5/17/00}
Note: The special character (here, ~) tells RMTrak where to end the requirements descriptions for
   RATM:VTP:1 and RATM:VTP:10 but not RATM:VTP:9. This leaves RMTrak to interpret RATM:VTP:9's
   requirement description by first recognizing the beginning of RATM:VTP:10, and then backtracking to collect
   RATM:VTP:9's first paragraph.
```

```
RATM:VTP:1 The circuit shall be interrupted when the ground is
    shorted. GFI is used and trips when the ground is
    interrupted. {Test Method = I} {Test Pass = T} {Tester =
    QA} {Test Date = 5/17/00} [RATM:PRD:1] ¶

RATM:VTP:9 Inspection of the RATM unit shall show the use of a
    water proof seal. {Test Method = I} {Tester = HW} {Test
    Pass = T} {Test Date = 5/17/00} [RATM:PRD:2] ¶
RATM:VTP:10 Unit shall be tested with Multimeter to verify the
```

```
fuses are in series and of the rated value. Circuit will be open when fuses are not present and closed when fuses present. {Test Method = T} {Tester = QA} {Test Pass = T} {Test Date = 5/17/00} [RATM:PRD:5] ¶
```

Notice that the text for RATM:VTP:1 and RATM:VTP:10 both include the text from the second column, but RATM:VTP:9 does not.

Similarly, if the ~ symbol were left out for RATM:VTP:10, RMTrak would still recognize its requirements description because the requirement was followed by the end of the document.

Tagging In Tables

Tags In Individual Table Cells

RMTrak sees table cell borders as paragraph marks. This means that RMTrak treats requirements in individual table cells as separate paragraphs. This makes most tagging in tables simple and easy.

For example, you could have a Systems Hazard Analysis (SHA) document with requirements that were each placed in individual table cells and RMTrak would easily recognize these requirements.

Example:

#	Potential Hazard	Potential Cause	Mitigation (safety requirement)	Responsibility
1	User gets shocked.	Faulty ground in circuit	RATM:SHA:1 Circuit shall be designed to minimize impact of faulty ground.	Hardware
2	User gets shocked.	Water got inside the box.	RATM:SHA:2 System shall prevent moisture from entering the environment.	Mechanical
3	User gets shocked.	Membrane panel is damaged.	RATM:SHA:3 Damage to the unit shall be detected by regular inspection.	Labeling

```
RATM:SHA:1 Circuit shall be designed to minimize impact of faulty ground.
RATM:SHA:2 System shall prevent moisture from entering the environment.
RATM:SHA:3 Damage to the unit shall be detected by regular inspection.
RATM:SHA:4 System shall allow for maintenance without risk of electrical shock.
```

Tags Across Multiple Table Cells

If you place part of a requirement's text in one cell, but place its attribute tags in another or cell, RMTrak will still recognize the attributes that accompany the requirement.

For example, you could place some or all of the attribute tags in separate cells and RMTrak would still recognize the attributes, regardless of any other cells between them.

Example:

<pre>RATM:VTP:1 The circuit shall be interrupted when the ground is shorted. {Test Method = I} {Tester = QA} [RATM:PRD:1]</pre>	Expected Result GFI is used and trips when the ground is interrupted.	Actual Result Expected results were observed.	Pass/Fail {Test Pass = T} {Test Date = 5/17/00}
RATM:VTP:9 Inspection of the RATM unit shall show the use of a water proof seal. {Test Method = I} {Tester = HW} [RATM:PRD:2]	Watertight box is used.	Expected results were observed	{Test Pass = T} {Test Date = 5/17/00}
RATM:VTP:10 Unit shall be tested with Multimeter to verify the fuses are in series and of the rated value. {Test Method = T} {Tester = QA} [RATM:PRD:5]	Circuit will be open when fuses are not present and closed when fuses present.	Expected results were observed	{Test Pass = T} {Test Date = 5/17/00}

RMTrak would completely ignore the text after the first cell border but would still recognize the attributes in the last column as being part of the requirements.

```
RATM:VTP:1 The circuit shall be interrupted when the ground is shorted.
   {Test Method = I} {Test Pass = T} {Tester = QA} {Test Date = 5/17/00}
   [RATM:PRD:1] ¶

RATM:VTP:9 Inspection of the RATM unit shall show the use of a water proof seal. {Test Method = I} {Tester = HW} {Test Pass = T} {Test Date = 5/17/00} [RATM:PRD:2] ¶
```

```
RATM:VTP:10 Unit shall be tested with Multimeter to verify the fuses are in
   series and of the rated value. {Test Method = T} {Tester = QA} {Test Pass = T}
   {Test Date = 5/17/00} [RATM:PRD:5] ¶
```

i Tip: RMTrak reads table cells one row at a time, from left to right.

Requirements Description Across Multiple Table Cells

A complication occurs if you try to place requirements description within separate cells but you don't want RMTrak to ignore the text that's in the separate cells.

To do this, you'd need to change RMTrak to no longer recognize cell borders (or paragraph marks) as the end to requirements descriptions. You can do this by setting up RMTrak to recognize a special character as the primary requirements terminator.

You can then use the special character to let RMTrak know where requirements description ends.

Example:

Test Setup	Expected Result	Actual Result	Pass/Fail
<pre>RATM:VTP:1 The circuit shall be interrupted when the ground is shorted. {Test Method = I} {Tester = QA} [RATM:PRD:1]</pre>	GFI is used and trips when the ground is interrupted.	Expected results were observed.	{Test Pass = T} {Test Date = 5/17/00}
<pre>RATM:VTP:9 Inspection of the RATM unit shall show the use of a water proof seal. {Test Method = I} {Tester = HW} [RATM:PRD:2]</pre>	Watertight box is used. ∼	Expected results were observed	{Test Pass = T} {Test Date = 5/17/00}
RATM: VTP:10 Unit shall be tested with Multimeter to verify the fuses are in series and of the rated value. {Test Method = T} {Tester = QA} [RATM: PRD:5]	Circuit will be open when fuses are not present and closed when fuses present.	Expected results were observed	{Test Pass = T} {Test Date = 5/17/00}

Note: The special character in the above image (here, the ~ placed in the second column) tells RMTrak where to end requirements descriptions for the requirements in each row.

```
RATM:VTP:1 The circuit shall be interrupted when the ground is shorted. GFI
is used and trips when the ground is interrupted. {Test Method = I} {Test
Pass = T} {Tester = QA} {Test Date = 5/17/00} [RATM:PRD:1] ¶
```

```
RATM:VTP:9 Inspection of the RATM unit shall show the use of a water proof
    seal. Watertight box is used. {Test Method = I} {Tester = HW} {Test Pass
    = T} {Test Date = 5/17/00} [RATM:PRD:2] ¶
RATM:VTP:10 Unit shall be tested with Multimeter to verify the fuses are in
    series and of the rated value. Circuit will be open when fuses are not
    present and closed when fuses present. {Test Method = T} {Tester = QA}
    {Test Pass = T} {Test Date = 5/17/00} [RATM:PRD:5] ¶
```

RMTrak would recognize the additional text occurring before the special symbol you chose (~), and would ignore any text occurring after it, but would still recognize the attributes at the end of the row.

Mixing Requirements Terminators In Tables

Because RMTrak recognizes the end of a requirement when it encounters a new one or when it reaches the end of a document, it's easy to mix requirements terminators. This can be beneficial if you have requirements in which you want to use the cell border as a requirement terminator but some occurrences in which you do not.

For example, if the ~ symbol were left out for RATM:VTP:9 (as shown below), RMTrak would still recognize its first paragraph (in the first cell) as being its requirements description. This is because it's followed by a new requirement in the next row.

Example:

Test Setup	Expected Result	Actual Result	Pass/Fail
RATM:VTP:1 The circuit shall be interrupted when the ground is shorted. {Test Method = I} {Tester = QA} [RATM:PRD:1]	GFI is used and trips when the ground is interrupted. ∼	Expected results were observed.	{Test Pass = T} {Test Date = 5/17/00}
<pre>RATM:VTP:9 Inspection of the RATM unit shall show the use of a water proof seal. {Test Method = I} {Tester = HW} [RATM:PRD:2]</pre>	Watertight box is used.	Expected results were observed	{Test Pass = T} {Test Date = 5/17/00}
<pre>RATM:VTP:10 Unit shall be tested with Multimeter to verify the fuses are in series and of the rated value. {Test Method = T} {Tester = QA} [RATM:PRD:5]</pre>	Circuit will be open when fuses are not present and closed when fuses present.	Expected results were observed	{Test Pass = T} {Test Date = 5/17/00}

Note: The special character (here, the ~ placed in the second column of the first and third row only) tells RMTrak where to end the requirements descriptions for RATM:VTP:1 and RATM:VTP:10 but not RATM:VTP:9. This leaves RMTrak to interpret RATM:VTP:9's requirement description by first recognizing the beginning of RATM:VTP:10, and then backtracking to collect RATM:VTP:9's first paragraph.

From the above example, RMTrak would recognize these requirements:

```
RATM:VTP:1 The circuit shall be interrupted when the ground is shorted. GFI
   is used and trips when the ground is interrupted. {Test Method = I} {Test
   Pass = T} {Tester = QA} {Test Date = 5/17/00} [RATM:PRD:1] ¶

RATM:VTP:9 Inspection of the RATM unit shall show the use of a water proof
   seal. {Test Method = I} {Tester = HW} {Test Pass = T} {Test Date =
        5/17/00} [RATM:PRD:2] ¶

RATM:VTP:10 Unit shall be tested with Multimeter to verify the fuses are in
   series and of the rated value. Circuit will be open when fuses are not
   present and closed when fuses present. {Test Method = T} {Tester = QA}
   {Test Pass = T} {Test Date = 5/17/00} [RATM:PRD:5] ¶
```

Notice that the text for RATM:VTP:1 and RATM:VTP:10 both include the text from the second column, but RATM:VTP:9 does not.

Similarly, if the ~ symbol were left out for RATM:VTP:10, RMTrak would still recognize its requirements description because the requirement was followed by the end of the document.

Importing Documents Into Projects

Once you've created your database, adjusted its settings, and created a Microsoft® Word Document, you'll be ready to import the document into RMTrak:

- 1. Add the document to RMTrak using the New Document dialog, which is available by clicking **New** in the main Documents manager
- 2. Add the document's properties. This can also be done from within the New Document Dialog.

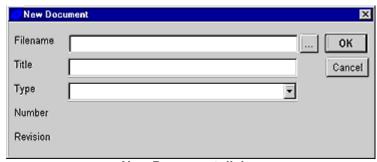
Should you need to ever edit the document's properties, you can do so at any time without reimporting the document: use the Modify Document dialog, which is available by clicking **Properties** in the main Documents manager.

Any time you make changes to your Microsoft® Word document, you can refresh the document in RMTrak without re-importing it; use the **Refresh** button in the main Documents manager.

Adding Documents

To add your document to the Document manager:

Step 1: Click New. The New Document dialog will appear.



New Document dialog

The New Document Dialog allows you to import new documents and add its properties simultaneously. If you've configured RMTrak to recognize document numbers and revisions from your document properties or filenames, RMTrak will import all of the New Document dialog's information for you, with exception to **Type**, which you'll need to select.



The New Document dialog has these fields:

Filename

This is the document's filename and location. To import a file and retrieve its file filename, click the browse button (...) to the right of the field to bring up the Add Document dialog for locating files. If you change the location of the file after importing it into RMTrak, you'll need to open the Modify Document dialog and change its file location so RMTrak can still recognize the file location. Filenames are limited to 250 characters.

The **Filename** field in the example above shows S:\. The path in this example uses a mapped drive. If you add documents to RMTrak and use mapped drives, remember that each person to use the RMTrak project will also need to have the same mapped drives. Although documents can be located anywhere, it is recommended you organize their folders within the same directory.

Note: If documents are placed in the same directory as the database file (.tra), RMTrak will use relative path names and mapping will not be an

Title

This is the name of the document. If you specified the revision in the document's properties. RMTrak will recognize it and place it in this field for you when you import the document through the **Filename** field above; otherwise, you can specify it here. Document titles are limited to 50 characters.

Type

You can use this drop-down menu to choose a document type. Available document types are determined in the Document Types manager available from the Setup menu.

Number

This is the document number. If you specified the number in the document's properties, RMTrak will recognize it and place it in this field for you when you import the document through the Filename field above; otherwise, you can specify it here. Document numbers must be valid integers (1, 2, 3, etc.).

Note: The **Number** field will not appear if **None** is chosen in the Documents Setup.

Revision

This the document version number. Document types are determined in the Document Types manager available from the **Setup** menu. If you specified the version in the document's properties, RMTrak will recognize it and place it in this field for you when you import the document through the **Filename** field above; otherwise, you can specify it here. Document version numbers must be valid integers (1, 2, 3, etc.) or real numbers with up to two places to the right of the decimal (1.35, 2.63, 9.65, etc.).

Note: The **Revision** field will not appear if **None** is chosen in the Documents Setup.

Step 2: Once the New document dialog is open, you can add your file by clicking the browse button (...) to the right of the **Filename** field. When you choose a file, RMTrak will read and display the document's filename and location in the **Filename** field and the document's title in the **Title** field.

Step 3: If you have added the document's number and/or revision to the document's filename or document properties, and have selected the corresponding option from the Document Setup, these options will appear in the **Number** and **Revision** fields. The **Number** option and **Revision** fields will not appear if **None** is chosen in the Documents Setup.

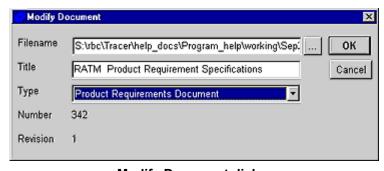
Step 4: When you are finished, click Done.

Adding documents will affect the list of documents available in the Documents manager.

Editing Documents Properties

The Modify Document dialog allows you to modify the document's **Path** and document **Type**, while the Title, Number, and Revision fields are read-only (to change the Title, Number, or Revision, you'll need to re-import the document).

Step 1: From the Documents manager, highlight the name of document then click **Properties**. The Modify Document dialog will appear.



Modify Document dialog

The Modify Document dialog allows you to edit a document's properties.

Note: The Modify Document dialog will be helpful if you need to update a document's file location or document type. If RMTrak gets the Title, Number, or Revision from your document's properties or filename, please do not attempt to change these in RMTrak—make any changes to these items within Microsoft® Word.

The Modify Document dialog has these fields:

Filename

This is the document's filename. RMTrak gets the filename from the location of the file you originally added. If you change the location of the file after adding it into RMTrak, you'll need to open the Modify Document dialog and change its file location so RMTrak can still recognize the file location. You can click the browse button (...) to the right of the field to bring up the Add Document dialog for locating files. Filenames are limited to 250 characters.

The **Filename** field in the example above shows S:\. The path in this example uses a mapped drive. If you add documents to RMTrak and use mapped drives, remember that each person to use the RMTrak project will also need to have the same mapped drives. Although documents can be located anywhere, it is recommended you organize their folders within the same directory.

Note: If documents are placed in the same directory as the database file (.tra), RMTrak will use relative path names and mapping will not be an issue.

Title

This is the name of the document. If you specified the revision in the document's properties or filename, RMTrak will recognize it and place it in this field for you when you add the document; otherwise, you can specify it here. Document titles are limited to 50 characters.

Type

You can use this drop-down menu to specify your document's type. Available document types are determined in the Document Types manager available from the **Setup** menu.

Number (Read-only)

This is the document number. If you specified the number in the document's properties or filename, RMTrak will recognize it and place it in this field for you when you add the document. Document numbers must be valid integers (1, 2, 3, etc.).

Revision (Read-only)

This is the document version number. Document types are determined in the Document Types manager available from the **Setup** menu. If you specified the revision in the document's properties or filename, RMTrak will recognize it and place it in this field for you when you add the document. Document version numbers must be valid integers (1, 2, 3, etc.) or real numbers with up to two places to the right of the decimal (1.35, 2.63, 9.65, etc.).

Step 2: Choose or type the correct information. When a document is added to or refreshed in the database, the entire document is scanned by the program and all of its requirements are placed within the New Document dialog fields. You can manually add any information that RMTrak did not read and display.

If your document has changed its location, you can update RMTrak by clicking the browse button (...) to the right of the Filename field. When you choose a file, RMTrak will read and display the document's filename and location in the Filename field and the document's title in the **Title** field.

Note: If you've incremented your document to another version (for example, from version 1.2 to 1.3), instead of refreshing the document, you'll need to modify its properties and change its file location.

If you have added the document's number and/or revision to the document's filename or document properties, and have selected the corresponding option from the Document Setup, these options will appear in the **Number** and **Revision** fields. The **Number** option and **Revision** fields will not appear if **None** is chosen in the Documents Setup.

If your document has not changed its location but you want to update RMTrak with a new title, number, or revision kept in the document's filename or Microsoft® Word style, you do not need to change its information in the Modify Document dialog. If you highlight the document in the Documents manager then click Refresh, RMTrak can refresh your document's properties with this new information.

Adding documents will affect the list of documents available in the Documents manager.

Refreshing Documents

After modifying and saving a document in Microsoft® Word, you'll need to refresh it in your project's RMTrak database. In the Documents manager, documents that are displayed in red need to be refreshed.

When you increment document versions (for example, from version 1.2 to 1.3), RMTrak will automatically recognize the new version and update its database with the new informationprovided the new file is kept in the same folder location as the previous version, and provided you have set up RMTrak to recognize document numbers and revisions.

Note: If you've incremented your document to another version and you have RMTrak set up *not* to recognize document numbers and revisions or keep the file in a new location, you'll need to manually modify its properties and/or change its file location.

To refresh the document, select the document then click **Refresh**. RMTrak will open and scan the document. Any new or changed requirements will be updated in your project's RMTrak database.

When a document is refreshed in the database, the program scans the entire document and all of its requirements are placed within the New Document dialog fields. You can manually add any information that RMTrak did not read and display.

If RMTrak discovers that a requirement has changed, it will mark all of its children requirements as suspect. This allows you to create Suspect reports to quickly find out about any other requirements that might have been affected by the change, so you can change them too, if necessary.

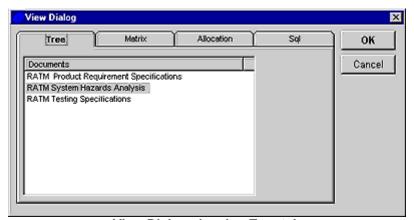
Document Status and Relationships

Working with Views

To work with and create views, you'll need to use the View Dialog and the View Manager. This topic discusses both.

View Dialog

The View Dialog, which is available by choosing **New** from the **View** menu, shows the different views available and lets you create new views. Views let you organize requirements in different ways so you can better understand their relationships, attributes, and status.



View Dialog showing Tree tab

The View dialog has these buttons:

OK Once you have highlighted the document and attributes (if

available) you want to use in your view, clicking **OK** will

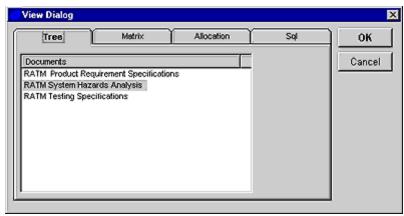
create the view.

Cancel Clicking this button will close the View dialog.

The parts of the window will depend on which tabs you've clicked.

Tree Tab

Click **Tree** in the View dialog to display the options for creating a Tree view.



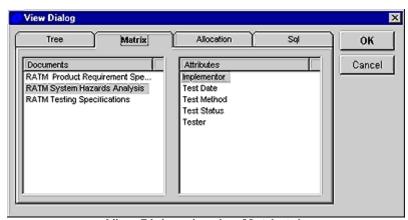
View Dialog showing Tree tab

Documents This is a list of all documents that have been imported into the project's database.

Select a document name (then click **OK**) to create a Tree view showing that document's requirements.

Matrix Tab

Click **Matrix** in the View dialog to display the options for creating a Matrix view.



View Dialog showing Matrix tab

Documents This is a list of all documents that have been

imported into the project's database.

Attributes This is a list of Enum (Single) and Enum (Multiple)

attributes available with this project. You can alter this list from the Attributes Manager. Your documents might not have any/all these attributes in their

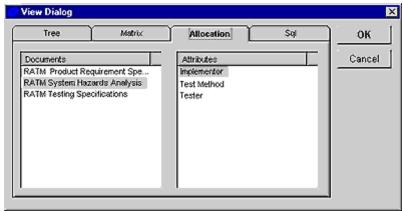
documents.

Select a document name and any attributes (then click **OK**) to create a Matrix view showing that document's requirements.

(i) Tip: Press CTRL or SHIFT as you select to select multiple attributes.

Allocation Tab

Click **Allocation** in the View dialog to display the options for creating an Allocation view.



View Dialog showing Allocation tab

Documents This is a list of all documents that have been

imported into the project's database.

Attributes This is a list of attributes available with this project.

You can alter this list from the Attributes Manager. Your documents might not have any/all these

attributes in their documents.

Select an attribute and any documents (then click **OK**) to create a Allocation view showing how that attribute is allocated within the document.

SQL Tab

Click **SQL** in the View dialog to display the window for typing SQL commands.



View Dialog showing SQL tab

Blank You can type your SQL commands in this window. Window Click **OK** to generate your query.

Type your SQL command in the window (then click OK) to create an SQL view showing your results.

The View Manager

Once you've created a view, you can save your views, open saved views, and delete views using the View manager. When you open, save, or delete a view, the View manager opens and lists your saved views.

The View Manager appears when you select the **Save As**, **Open**, or **Delete** options from the **View** menu.



View Manager

The View manager has these buttons:

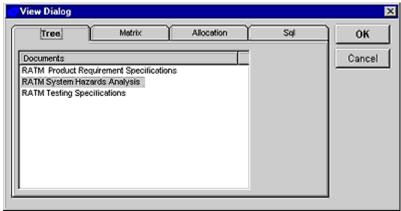
OK Saves, deletes, or opens a view, depending on your previous actions.

Cancel Cancels saving, deleting, or opening a view.

Creating New Views

RMTrak's View manager lets you create new Tree, Matrix, or Allocation, or SQL views:

From the Views menu, choose New.
 The View dialog will appear.



View dialog showing Tree tab

- 2. In the appropriate tab, select a document and its attributes (if available).
- 3. Click OK.
- 4. If a message appears saying "Trace table is out of date. Do you want to rebuild it?" click **Yes**.

For information particular to creating each view, see these topics:

- Tree View
- Matrix View
- Allocation View
- SQL View

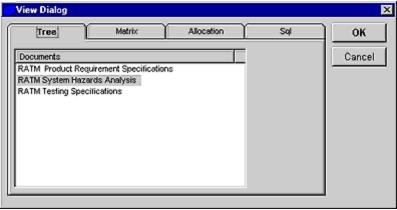
Tree View

A Tree view provides a means of viewing the hierarchical relationship between parent/child requirements in a tree-like structure.

(i) Tip: You can see this view in a tabular format by creating a Trace Report.

To create a Tree view:

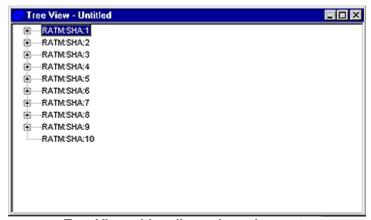
1. From the **Views** menu, choose **New**. The Tree tab will appear.



View Dialog showing Tree tab

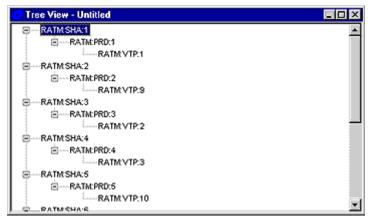
- 2. In the **Tree** tab, select a document.
- 3. Click OK.
- 4. If a message appears saying "Trace table is out of date. Do you want to rebuild it?" click

The tree view displays your document's requirements. Requirements that have a plus (+) sign by their name have hidden sub-requirements.



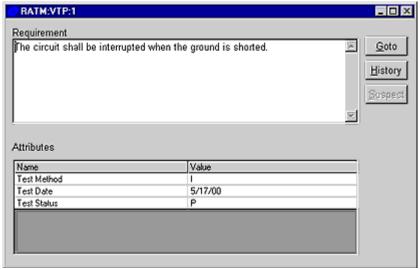
Tree View with collapsed requirements

To reveal these sub-requirements, click the plus sign (+). Similarly, to hide these subrequirements, clicking the minus (-) sign.



Tree View with expanded requirements

If you double-click on a tag in this view, it will bring up its properties.



Tree View showing properties of RATM:VTP:1 tag

This window has these buttons:

Goto Clicking this button will open your Microsoft® Word document and

go to this tag.

History Clicking this button will show your tag's creation/modification

history.

Suspect If your requirement is Suspect, clicking this button will clear the

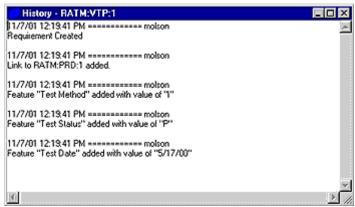
requirement of being "suspect" in the database. You should only clear a requirement of being suspect if you have verified the

requirement is still correct.

A

Warning: If you rely on the information provided with the History feature, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the History information would also be lost.

If you select the History button, the tag's creation/modification history will display.



Tree View showing History of RATM:VTP:1 tag

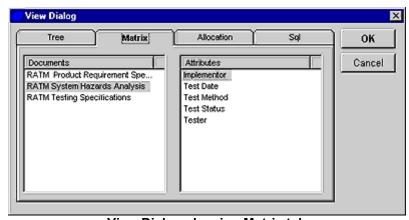
Note: The creation/modification history shown in a Tree View shows when requirements were created or modified in your project's RMTrak database, not when they were created/modified in the document.

Matrix View

The Matrix view shows the relationships between requirements and their selected attributes.

To create a Matrix view:

- 1. From the Views menu, choose New.
- 2. Select the Matrix tab.



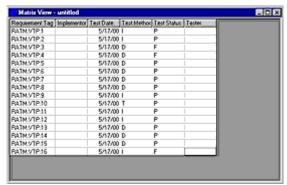
View Dialog showing Matrix tab

3. In the **Documents** pane, select a document. In the **Attributes** pane, click the attributes you want to see.

You can select multiple attributes by pressing the CTRL or SHIFT key as you select attributes.

- 4. When you are finished, click **OK**.
- 5. If a message appears saying "Trace table is out of date. Do you want to rebuild it?" click **Yes**.

RMTrak will build a view that displays the tags and their attributes for the document and attributes you selected.



Matrix View for RATM Testing Specifications document and all attributes

In the Matrix view, each row of the table represents a separate requirement and each column represents a particular attribute.

(i) Tip: You can sort each column in the Matrix view by clicking its column header.

Allocation View

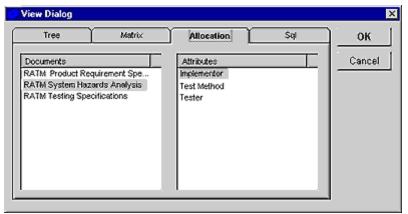
The Allocation view displays which values are assigned to your requirements' attributes.

Note: Attributes show the status of a requirement. RMTrak's attributes are defined using the Attributes manager.

Creating an Allocation view

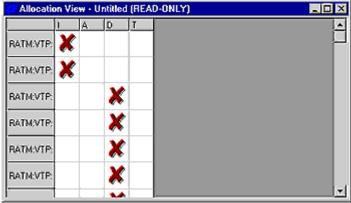
To create an Allocation view:

- 1. From the **Views** menu, choose **New**.
- 2. Select the **Allocation** tab.



View Dialog showing Allocation tab

- 3. In the **Documents** pane, select a document. In the **Attributes** pane, click the attribute you want to see.
- 4. If a message appears saying "Trace table is out of date. Do you want to rebuild it?" click **Yes**.



Allocation View

When an Allocation view is created, each row in the view represents an individual requirement, and each column represents the possible values the attribute can have. An X in a cell indicates the requirement's attribute is associated with that particular value. If the views says (READ-ONLY) at the top, this is because the attribute is not Persistent. Persistence can be adjusted in the Attribute Edit dialog.

Using the Allocation View to Manage Values

If the attribute has the following settings (set within the Attributes manager), you can use the Allocation view to change, or *allocate*, the values assigned to each requirement in the document.

- The attribute's **Type** is set to **Enum (Single)** or **Enum (Multiple)**
- The attribute's **Rule** lists the possible values of the attribute, separated by semicolons (;)

- The attribute's **Persistent** checkbox is checked
- Note: This step is crucial—checking the Persistent checkbox lets the attribute be controlled from the Allocation view rather than from the document.

The ability to allocate a requirement's values within the Allocation view eliminates the need to assign the attributes to the requirement from within the document by using tagged attributes.

The ability to change the attributes in the Allocation view differs by whether **Enum (Single)** or **Enum (Multiple)** is chosen in the Attributes manager:

- If the attribute's **Type** is set to **Enum (Single)**, you can assign a requirement *one* of all of the attribute's possible values from those listed within the Rules field.
 - For example, if the attribute's Type is Enum (Single) and the Rule is set to HW;QA;SW, you can assign a requirement using that attribute the value HW or QA or SW. You may only choose one of these values to apply to your requirement.
- If the attribute's **Type** is set to **Enum (Multiple)**, you can assign a requirement any/all of the attribute's possible values from those listed within the Rules field.
 - For example, if the attribute's **Type** is **Enum (Multiple)** and the **Rule** is set to HW;QA;SW, the attribute's value (listed within the document or the Allocation view) can be HW, QA and/or SW, or any combination of choices.



Marning: If you use Persistent attributes, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the information you stored in it would also be lost. If you want to retain RMTrak's document-centric benefit of leaving important information in the documents rather than in the database, do not use persistent attributes.

Changing the Values Of Persistent Attributes within the Allocation View

To change a requirement's Persistent attribute values from within the Allocation view, simply double-click the correct cell. Depending on whether the attribute's values were set to Enum (Single) or Enum (Multiple), you may or may not be able to select multiple values for the requirement.

Notes: If an attribute is Persistent, you will not need to add this attribute's values to your tags.

Changes made within the Allocation view are automatically saved when the Allocation view window is closed.

Saving Views and Opening Saved Views

To save this view, while the view window is open, from the Views menu, choose Save as. Type a name for the view then click OK.

You can then view your saved view by choosing **Open** from the **View** menu. When you open a saved view, RMTrak updates the information from the documents, provided they have have been refreshed in the main Documents manager.

SQL View

A SQL (Structured Query Language) view is similar to a matrix view except that the table is defined using an SQL String. This allows you to access any field in the database quickly and easily.

SQL is a syntax that is used to retrieve information from a database. If you are familiar with SQL, you can create SQL queries by clicking the **Views** menu, choosing **New**, then selecting the **SQL** tab.



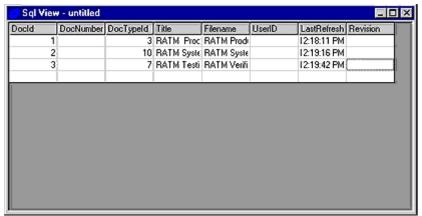
View Dialog showing SQL tab

To enter SQL commands, type your SQL commands in this window then click **OK**. For information on SQL syntax, see the SQL Syntax topic, available in RMTrak's online help files, which can be accessed through RMTrak's **Help** menu.



View Dialog showing SQL tab with typed command

When you click **OK**, your query's results will show in the SQL View window.



SQL View

(i) Tip: You can sort each column in the Matrix view by clicking its column header.

To learn more about the SQL View and RMTrak's database schema, please consult RMTrak's online help files available from RMTrak's **Help** menu.

Saving Views

RMTrak's View manager lets you save views:

1. While the view window is open, from the **Views** menu, choose **Save as**. The View Manager will appear.



View Manager

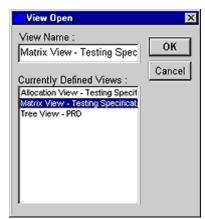
2. Type a name for the view then click **OK**.

Saved views are available to all users of the RMTrak project.

Opening Saved Views

RMTrak's View manager lets you view your saved views:

1. From the **View** menu, choose **Open**. The View Manager will appear.



View Manager

2. Choose the document you want to open then click **OK**.

When you open a saved view, RMTrak updates the information from the documents, provided they have been refreshed in the main Documents manager.

Deleting Views

RMTrak's View manager lets you delete a saved view:

1. While the view window is open, from the Views menu, choose Delete. The View Manager will appear.



View Manager

- 2. Highlight the name of the view you want to delete then click **OK**.
- 3. Click Yes.

Creating Reports

To create a report, from the Reports menu, select the report you want to create. For more specific information pertaining to each type of report, please choose one of the following topics:

- Change Reports
- Childless Requirements Reports
- Closure Reports
- Orphan Requirements Reports
- Requirements Summary Reports
- Suspect Reports
- Trace Reports
- Unallocated Requirements Reports

You can choose whether RMTrak generates reports in HTML or Microsoft® Word format.

Orphans Reports

Orphan Reports are used to identify any orphan requirements in your RMTrak project.

As projects progress, a document's requirements will change status as they are tested, validated, verified, and closed. As a requirement's status is updated in each document, the next document's status of that requirement, or "children" requirement, is traced back to its previous document's predecessor, or "parent" requirement. In this way, requirements and their status have parent-child relationships.

An orphan requirement is requirement that lists a parent requirement that doesn't exist in the RMTrak database.

For example, the child/defined requirement below lists the parent requirement [RATM:PRD:11].

```
RATM:VTR:11 The circuit shall be interrupted when the ground is shorted. ← {Test Method = I} [RATM:PRD:11]¶
```

However, if RATM:PRD:11 doesn't actually exist anywhere but here, as a "parent" reference, RMTrak will mark this requirement as an orphan (meaning its parent doesn't actually exist).

If a requirement is an orphan, this might be because:

Cause of Orphans

Fix

 The document containing the parent requirement has not been loaded into the database. Make sure you've imported all your documents into RMTrak.

2) There is a typo in either the parent tag or the defined/child tag.

Create an Orphans Report to see which requirements are orphans, then manually fix the problem in your documents.

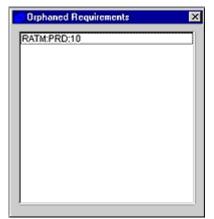
You can determine if your project has orphan requirements by creating an Orphans Report.

Creating Orphan Reports

To create an Orphan Report:

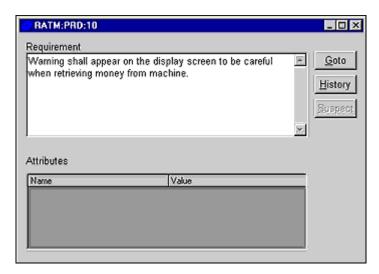
- 1. From the **Reports** menu, choose **Orphans**.
- If a message asks "The orphans table is out of date. Do you want to rebuild it?" Click Yes.

The Orphans Requirements manager will appear and list all of your project's orphan requirements.



Orphans Requirements manager

If you double-click an orphan requirement in this list, a window will appear showing your requirement's properties.



Orphans Report showing RATM:PRD:10 properties

This window has these buttons:

Goto Clicking this button will open your Microsoft® Word document and go

to this tag.

History Clicking this button will show your tag's creation/modification history.

Suspect If your requirement is Suspect, clicking this button will clear the

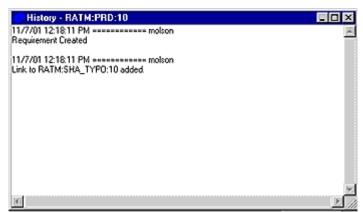
requirement of being "suspect" in the database. You should only clear a requirement of being suspect if you have verified the

requirement is still correct.



Warning: If you rely on the information provided with the History feature, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the History information would also be lost.

If you select the **History** button, the requirement's creation/modification history will display.



Orphans Report showing RATM:PRD:10 creation/modification history

Note: The creation/modification history shown in an Orphan Report shows when requirements were created or modified in your project's RMTrak database, not when they were created/modified in the document.

Childless Reports

into the database.

A childless requirement is a child requirement that has no requirements tracing back to it and is not contained in a terminal document.

If a requirement is childless, this might be because:

Cause of Childlessness Fix 1) The document containing the child requirement has not been imported documents into RMTrak.

2) You have incorrectly misidentified or misspelled the requirement in its parent document.

If your development team has forgotten or neglected a requirement, your final project will not fulfill all of its initial requirements. To fix this problem, create a Childless Report to see which document the requirement was last included in, then edit the next document in your project's hierarchy to include the requirement.

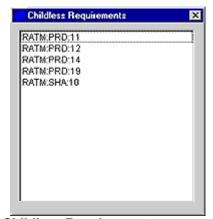
You can determine if your project has childless requirements that are not supposed to be childless (because further action *is* necessary) by running a Childless Report. RMTrak will display every requirement that is not part of a terminal document. For this reason, you should create a Childless Report. After importing each document. This will keep your development team from missing any requirements as it moves along the development process.

Creating Childless Reports

To create a Childless Report:

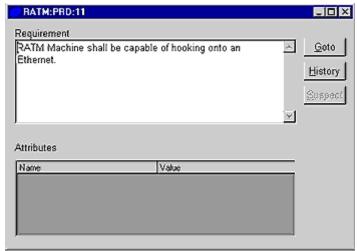
- 1. From the **Reports** menu, choose **Childless**.
- If a message asks "The childless table is out of date. Do you want to rebuild it?" Click Yes.

The Childless Requirements manager will appear and list all of your project's childless requirements.



Childless Requirements manager

If you double-click a childless requirement in this list, a window will appear showing your requirement's properties.



Childless Report showing RATM:PRD:11 properties

This window has these buttons:

Goto Clicking this button will open your Microsoft® Word document and go

to this tag.

History Clicking this button will show your tag's creation/modification history.

Suspect If your requirement is Suspect, clicking this button will clear the

requirement of being "suspect" in the database. You should only clear a requirement of being suspect if you have verified the

requirement is still correct.

A

Warning: If you rely on the information provided with the History feature, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the History information would also be lost.

If you select the **History** button, the requirement's creation/modification history will display.



Childless Report showing RATM:PRD:11 creation/modification history

Note: The creation/modification history shown in a Childless Report shows when requirements were created or modified in your project's RMTrak database, not when they were created/modified in the document.

Suspect Reports

Suspect requirements are requirements whose parent requirement has changed.

How a Changed Parent Requirement Makes Its Children Requirements Become Suspects

If you modify or change a parent requirement, the child requirements might also need to be modified. For example, if a requirement in the Product Requirements Document says:

Internal temperature control shall be activated if temperature rise is >15 degrees ambient.

you might determine late in the project that this is incorrect and change it to:

Internal temperature control shall be activated if temperature rise is >16 degrees ambient.

Unfortunately, this will make later requirements, such as one in the Product Validation Testing Procedures, inaccurate:

When temperature is increased by 15 degrees above the ambient, the system will shut down.

If your project has thousands of requirements, this one could easily be overlooked, and you could forget to change this one to match the new number 16.

RMTrak helps you keep track of this type of problem by marking the children of changed requirements as "suspect." RMTrak does this to ensure that you are aware of the modifications and review each child requirement carefully to see if they also need changing.

Finding Suspect Requirements

There are two ways to find and view suspect requirements in RMTrak:

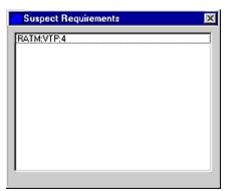
- Create a Suspect Report to view a list of all suspect requirements.
- Create a Tree view, Orphan Report, Childless Report,, or Unallocated Report. Suspect requirements will be designated with an S symbol. If you double-click the suspect requirement, a window will open showing its properties. Click Suspect to remove the tag's suspect status.

You should create a Suspect Report after modifying it then refreshing it in RMTrak to see if any parent tags have changed. If any parent tags have changed, RMTrak will list them in its Suspect Report; you should then find the parent tags in the document and ensure that they have not been incorrectly or unnecessarily modified.

Creating a Suspect Report

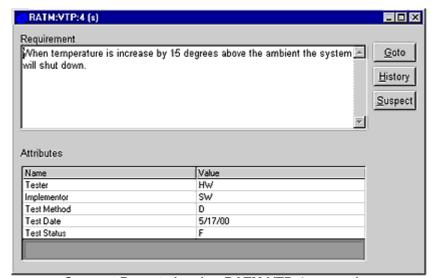
To create a Suspect Report:

- 1. From the **Reports** menu, choose **Suspect**.
- 2. If a message asks "The suspect table is out of date. Do you want to rebuild it?" Click Yes.
- 3. If any documents have suspect requirements, they will be listed in the Suspect Requirements manager.



Suspect Requirements manager

If you double-click an suspect requirement in this list, a window will appear showing your requirement's properties.



Suspect Report showing RATM:VTP:4 properties

This window has these buttons:

Goto Clicking this button will open your Microsoft® Word document and go

to this tag.

History Clicking this button will show your tag's creation/modification history.

Suspect If your requirement is Suspect, clicking this button will clear the

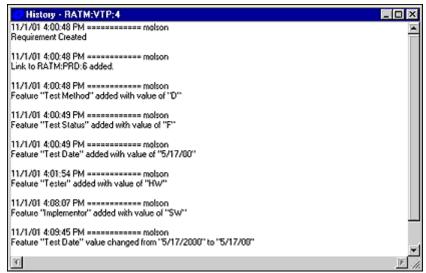
requirement of being "suspect" in the database. You should only clear a requirement of being suspect if you have verified the

requirement is still correct.



Warning: If you rely on the information provided with the History feature, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the History information would also be lost.

If you select the **History** button, the requirement's creation/modification history will display.



Suspect Report showing RATM:VTP:4 creation/modification history

Note: The creation/modification history shown in a Suspect Report shows when requirements were created or modified in your project's RMTrak database, not when they were created/modified in the document.

Removing the "Suspect" Status from the Requirement

Once you have ensured that the "suspect" requirement in question was correctly and necessarily modified, you can let RMTrak know to update its database of the new, correct parent tag by simply highlighting the document in the main Documents manager then clicking the **Refresh** button.

You can also create a Tree view. Suspect requirements are designated with the letter s in the Tree view. If you double-click the suspect requirement in the Tree View, a window will open showing its properties. Click the Suspect button to remove the tag's suspect status.



Warning: If you have a report or view open, removing a requirement's suspect status will not update the report or view. To see an updated report or view, you will need to re-create it.

Unallocated Reports

When you add attributes to the Attributes manager, which is available from the **Setup** menu, you give it a name, a data type, and a rule. If you've chosen the data type Enum (Single) or Enum (Multiple), the attribute's rule will consist of a list of values that you can apply to the requirement in its tag.

When you put the attribute and its tags around the requirement in its document, you also list the value. For example, in the following example, the attribute {Test Method = I} has the value I; however, this value could have been I, A, D, or T (Inspection, Analysis, Detection, or Test) since I;A;D;T is listed as this attribute's rule (in the Attributes manager).

```
RATM: PVTR:1 The circuit shall be interrupted when the 
ground is shorted. {Test Method = I} [RATM: PRD:1] ¶
```

If you neglect to give the attribute its related value, as in the following example, RMTrak will notice this and consider it an "unallocated requirement."

```
RATM: PVTR:1 The circuit shall be interrupted when the 
ground is shorted. {Test Method} [RATM: PRD:1] ¶
```

Because the test method above doesn't specify which test method it used (I, A, D, or T), its test method is missing, or this requirement has an unallocated attribute. If this requirement has an unallocated attribute, its requirement will also be unallocated.

RMTrak will also consider any requirement that does not have an attribute applied to be an unallocated requirement. For example, in the following requirement's tags, no attribute is listed. This requirement is therefore considered "unallocated."

```
RATM:PVTR:1 The circuit shall be interrupted when the 

ground is shorted. [RATM:PRD:1]¶
```

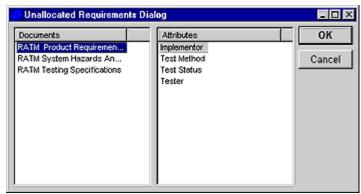
You should create an Unallocated Requirements Report after adding each document. RMTrak can then help you determine if you've neglected to add attributes to a requirement or values to an attribute.

Creating an Unallocated Requirements Report

To create an Unallocated Requirements Report:

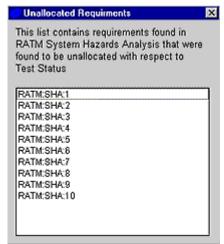
- 1. From the Reports menu, choose Unallocated.
- 2. If a message asks "The unallocated table is out of date. Do you want to rebuild it?" Click **Yes**.

The Unallocated Requirements Dialog will appear.



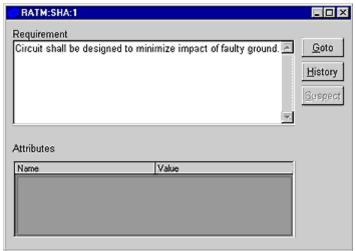
Unallocated Requirements Dialog

- 3. In the **Documents** pane, select a document.
- 4. In the **Attributes** pane, select an attribute.
- Click **OK**.
 RMTrak will generate a list of the attribute for that document and any matching unallocated requirements.



Unallocated Requirements

If you double-click an unallocated requirement in this list, a window will appear showing your requirement's properties.



Unallocated Report showing RATM:SHA:1 properties

This window has these buttons:

Goto Clicking this button will open your Microsoft® Word document and

go to this tag.

History Clicking this button will show your tag's creation/modification

history.

Suspect If your requirement is Suspect, clicking this button will clear the

requirement of being "suspect" in the database. You should only clear a requirement of being suspect if you have verified the

requirement is still correct.

A

Warning: If you rely on the information provided with the History feature, you might want to periodically save your database to a different name (leaving the previous named version as a "backup" copy). Otherwise, should you lose the database, the History information would also be lost.

If you select the **History** button, the requirement's creation/modification history will display.



Unallocated Report showing RATM:SHA:1 creation/modification history

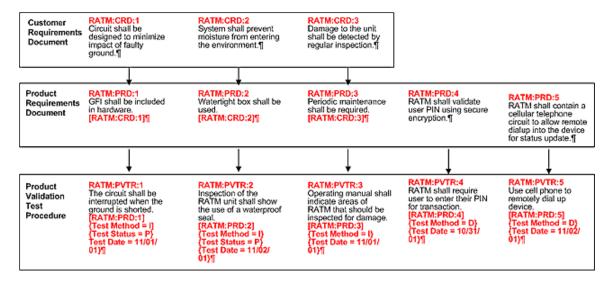
Requirements Summary

A Requirements Summary Report shows a requirement's text associated with all of its derived requirements' text. This is helpful for reviewing your project's tracing of a requirement and all of its derivatives.

A Requirements Summary Report shows how a requirement is related to all of its child requirements. With the Requirements Summary report, you can follow the traceability of the requirements from a broad level to specific testing results. Such traceability is important when reviewing a solution to ensure it is correct and complete.

The Requirements Summary Report is also useful for making sure all of your child requirements match the scope and function of their parents.

For example, the flow chart below shows how requirements and how they relate to each other.



This project's Summary Report, which is created for two documents at a time (or one parent-child level), would have this information for the CRD and PRD documents:

Requirements Summary Report

```
RATM:CRD:1 Circuit shall be designed to minimize impact of faulty ground.
RATM:PRD:1 GFI shall be included in hardware.
RATM:CRD:2 System shall prevent moisture from entering environment.
RATM:PRD:2 Watertight box shall be used.
RATM:CRD:3 Damage to the unit shall be detected by regular inspection.
RATM:PRD:3 Periodic maintenance shall be required.
```

Creating Requirements Summary Reports

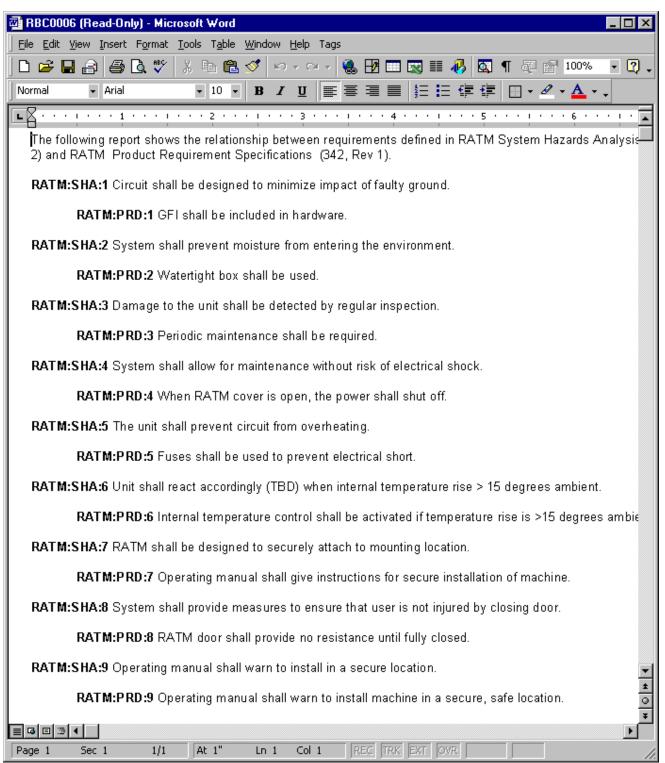
To create a Requirements Summary Report:

1. From the **Reports** menu, choose **Requirements Summary**. The Requirements Summary dialog will appear.



Requirements Summary dialog

- 2. In the **Parent** pane, select the document of a parent tag.
- 3. In the **Child** pane, select the document of a child tag (if available).
- When you're finished, click **OK**. RMTrak will generate a Requirements Summary report.



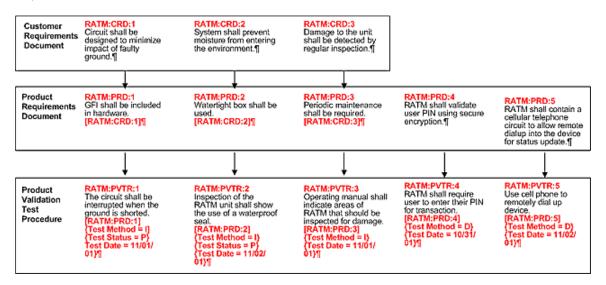
Requirements Summary Report

Closure Report

RMTrak can create reports to show you your project's closed requirements.

A Closure Report shows the closure status of the requirements contained in a document. A requirement is considered closed if all the tests that trace, directly or indirectly, back to it have passed.

For example, in the requirements below, you can see that the RATM:VTR:1, RATM:VTR:3, and RATM:VTR:5 requirements have passed their tests, but RATM:VTR:2 and RATM:VTR:4 requirements have not.



Additionally, because parent requirements are closed when their children are closed, in the above example, the RATM:CRD:1, RATM:PRD:1, RATM:CRD:3, RATM:PRD:3, and RATM:PRD:5 requirements would also be closed.

The following diagram illustrates this closure relationship (where red requirements are closed and black requirements are still open; arrows show direction of parent-child relationship).

```
RATM: CRD: 1 \longrightarrow RATM: PRD: 1 \longrightarrow RATM: VTR: 1

RATM: CRD: 2 \longrightarrow RATM: PRD: 2 \longrightarrow RATM: VTR: 2

RATM: CRD: 3 \longrightarrow RATM: PRD: 3 \longrightarrow RATM: VTR: 3

RATM: PRD: 4 \longrightarrow RATM: VTR: 4

RATM: PRD: 5 \longrightarrow RATM: VTR: 5 \longrightarrow RATM: VTR
```

You should create a Closure Report after adding each document, especially toward the end of your project. You can then see which requirements have been completed and which ones are still "open."

Parent-Child Closures

In addition to closed requirements, if a parent requirement's children are each found to be closed, the parent requirement will also be shown as closed.

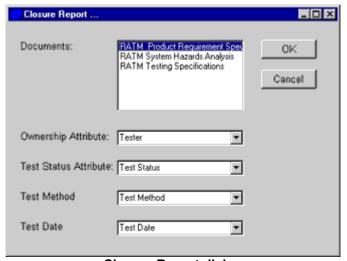


Warning: Make sure all of your project's documents have been imported into the RMTrak project. RMTrak cannot recognize requirements of documents that have not been imported. If a parent requirement has an open child requirement listed within a document that has not been imported, RMTrak might still list the parent requirement as closed (if the children requirements of the imported documents are closed).

Creating Closure Reports

To create a Closure Report:

- 1. From the Reports menu, choose Closure Report.
- 2. If a message asks "The closure table is out of date. Do you want to rebuild it?" Click **Yes**. The Closure Report dialog will appear.



Closure Report dialog

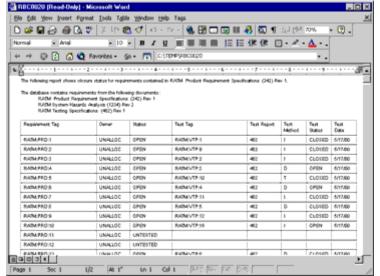
- 3. Select a document. From the drop-down lists, select which types and names of attributes RMTrak should check for when creating a closure report.
 - (i) Tips: Selecting **<None>** tells RMTrak that it should not include that attribute type in closure reports, and/or your requirements do not use that type of attributes.

If selecting an attribute (anything other than **<None>**), be sure to select the correct attribute for its type. For example, if your organization uses a customized test method attribute called "Method," be sure to select **Method** in the **Test Method Attribute** drop-down list (and not in any other drop-down list).

Documents using RMTrak's default attributes may have the following selections.

- Ownership Attribute: Tester or <None>
- Test Status Attribute: Test Status or <None>
- Test Method Attribute: Test Method or <None>

- Test Date Attribute: Test Date or <None>
- 4. When you've finished, click **OK**. RMTrak will generate a read-only report in Microsoft® Word of the requirements and show you which requirements are closed and which ones are still open.



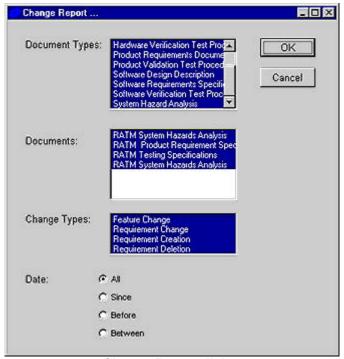
Closure Report

Closure Reports will be especially helpful toward the end of a project when you need to determine which requirements have not yet passed their tests successfully.

Change Reports

The Change Report allows you to view the attribute and requirement changes and the requirement creations and deletions that have occurred within the database.

Step 1: To create a Change Report, from the **Reports** menu, choose **Change Report**. The Change Report dialog will appear.



Change Report dialog

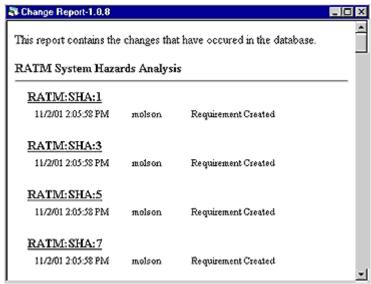
The Change Report dialog has these fields:

Document Types	A list of the document types available for this project. This list can be altered in RMTrak's Document Types manager.
Documents	A list of imported documents.
Change Types	Types of change you want to focus on for your report: Feature Change, Requirement Change, Requirement Change, Requirement Creation, Requirement Deletion.
Date	The date you'd like to specify for the report: All, Since, Before, Between. If you select Since, Before, or Between, fields will appear so you can type the dates.

Step 2: Select the document types, documents, and change types you want to use in the report. You can select multiple items by pressing CTRL or SHIFT as you select items. RMTrak, by default, has all items selected.

Step 3: Choose date(s) you'd like to focus on for your report.

Step 4: When you are finished, click **OK**. RMTrak will generate a read-only report of changes that have occurred with the document's requirements.



Change Report

Trace Report

RMTrak can create reports to show you your project's requirements tracing.

A Trace Report shows you how one document's requirements traced from other, previous document's requirements.

i Tip: You can also view requirements tracing in the Tree View.

Creating Trace Reports

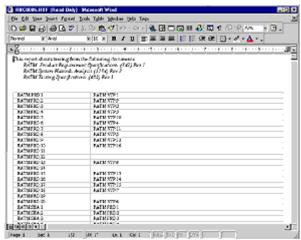
To create a Trace Report:

- 1. From the **Reports** menu, choose **Trace Report**.
- 2. If a message asks "The closure table is out of date. Do you want to rebuild it?" Click **Yes**. The Trace Report dialog will appear.



Trace Report dialog

- 3. Select the document(s) you want to trace requirements for. You can select multiple documents by pressing CTRL or SHIFT as you select. RMTrak, by default, selects all documents for you.
- 4. When you've finished, click **OK**. RMTrak will generate a read-only report in Microsoft® Word that shows which requirements trace from other, previous requirements.



Trace Report

Printing Reports

To print a report, when the report window is open, from the **File** menu choose **Print** or **Print to File**. This method works for both HTML and Microsoft® Word output formats.

Adding In Reports

If your company desires custom reports, contact RBC Product Development For more help on using the Report Manager, please see the online help system available from RMTrak's **Help** menu.

Frequently Asked Questions

What Are Requirements?

Requirements are statements made about a product/project's requirements.

For example, the statement "The circuit shall be interrupted when the ground is shorted" is a requirement about a product's circuit.

The goal of RMTrak is to recognize your document's requirements, trace their position in your documentation and relationship to other requirements, and to track their status—such as who's working on the requirement, how and when they're testing it, and whether it has passed its tests.

What Are Tags?

When you import documents into RMTrak, RMTrak recognizes the documents' requirements by the tags you put around each requirement.

There are different types of tags.

- Initial tags (also called "child" tags) are placed at the beginning of requirements and can consist of any unique, memorable set of letters or numbers.
- Parent tags are brackets ([]) enclosing the initial tag
 of the requirement in a previous document that led to
 this requirement.

What Are Attributes?

Attributes track information about a requirement, such as who tested it, when they tested it, and more. By placing attributes with a requirement, RMTrak can help you track this information about each requirement, and help you easily generate status reports.

For example, the {Test Method = I} in the following requirement is an attribute (showing that the requirement was tested with the I (Inspection) test method:

RATM:PVTR:1 The circuit shall be interrupted
 when the ground is shorted.
 {Test Method = I} ¶

How Does RMTrak Recognize Tags?

RMTrak recognize tags based on their syntax and based on any properties you configured in the project setup, which is available by choosing **Options** from the **Setup** menu.

How Does RMTrak Recognize Requirements?

When you import documents into RMTrak, RMTrak recognizes the beginning of a requirement by the initial tag preceding it.

RMTrak recognizes the end of a requirement when it encounters:

- A requirements terminator. Requirements terminators can be the end of a paragraph (¶) or a character you specify in RMTrak's project settings
- The start of a new requirement (signaled by another initial tag)
- The end of the document

When RMTrak encounters one of the above, it knows the requirement is complete, and then it backtracks to find the requirement's description, attributes, and parent tag(s), if available.

How Does RMTrak Recognize Attributes?

RMTrak recognizes attributes by the brackets placed around them ([]). As long as an attribute is located somewhere after the initial tag, and somewhere before the next requirement's initial tag, RMTrak will find the attribute and associate it with the its requirement.

What Are Paragraph Marks?

A paragraph mark (\P), which is also called a "hard carriage return," can be created by pressing ENTER on your keyboard.

You can a line break (♣¹), also called a "soft carriage return" by pressing SHIFT + ENTER on your keyboard. (If your document uses a paragraph mark as a tag terminator, you'll need to use line breaks frequently within tags and requirements.)

To see paragraph symbols, you'll need to make sure Microsoft® Word has the paragraph marks option turned on:

- 1. In Microsoft® Word, from the **Tools** menu, choose **Options**.
- 2. Click the View tab.
- 3. In the **Formatting Marks** section, check the **Paragraph marks** check box.
- 4. Click OK.