

Using Rational RequisitePro®

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Preface

This guide provides a complete reference for the features and options available in Rational RequisitePro. RequisitePro, the premier requirements management tool, integrates a powerful multi-user requirements database utility with the familiar environment of Microsoft Word for Windows, enabling you to simultaneously work with a requirements database and requirements documents.

Audience

The *RequisitePro User's Guide* is designed to meet the diverse needs and responsibility levels of various types of users. Users may perform different roles that vary depending on the RequisitePro project they access. The roles listed below describe typical user functions; however, they may not correspond directly to RequisitePro security groups. RequisitePro administrators can create any number of security groups with specific permissions for creating, updating, and deleting projects, documents, and requirements.

Requirements viewers read documents, query the requirements database, and participate in discussion groups. These are common activities for all RequisitePro users.

Requirements contributors perform the common activities of requirements viewers; however, they have additional permissions to modify requirements attribute values.

Requirements authors use standardized templates to write or revise requirements documents and add, delete, or revise requirements in the project database. The templates are created by the project administrators.

Project administrators create and manage all elements of a project – including security, document types and requirement types – and set up cross-project traceability.

The *RequisitePro User's Guide* is organized to initially introduce activities that are common to all users who view and query requirements. It then moves to the skills needed for creating and managing requirements. Finally it addresses the advanced skills required for managing projects.

Refer to the following table which recommends reading based on your level of use in RequisitePro:

Type of User	Recommended Chapters															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Requirements Viewers	✓	✓	✓	✓	✓	✓										✓
Requirements Contributors	✓	✓	✓	✓	✓	✓		✓								✓
Requirements Authors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓
Project Administrators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

All readers should refer to Appendix A: *Keyboard Shortcuts and Mouse Actions*, Appendix B: *Customizing RequisitePro*, and the *Glossary*, which defines technical terms used in RequisitePro.

Other Resources



- **Online Help.** You can view online help within RequisitePro whenever you need assistance. To display the Help Contents: Click the Help button on the Tool Palette, click **Help > Contents and Index**, or press the F1 key. You can also click the Help button in any dialog box.
- **Let's Go RequisitePro.** This help interface that automatically appears when you start the application, providing prominent access to beneficial information about setting up RequisitePro projects and the Requirements Management process. Let's Go RequisitePro guides new users through the various "getting started" information available in RequisitePro, including online help and the Learning Project. For advanced users, it provides a single source for accessing pertinent, in-depth documentation, including whitepapers, the Rational Unified Process, and Web resources.

Let's Go RequisitePro automatically appears when you start RequisitePro, but you can disable it by clearing the check box on the **Tools > Options** dialog box or on the initial Let's Go RequisitePro splash screen. You can launch Let's Go RequisitePro at any time from the Help menu. Click **Help > Let's Go RequisitePro**.

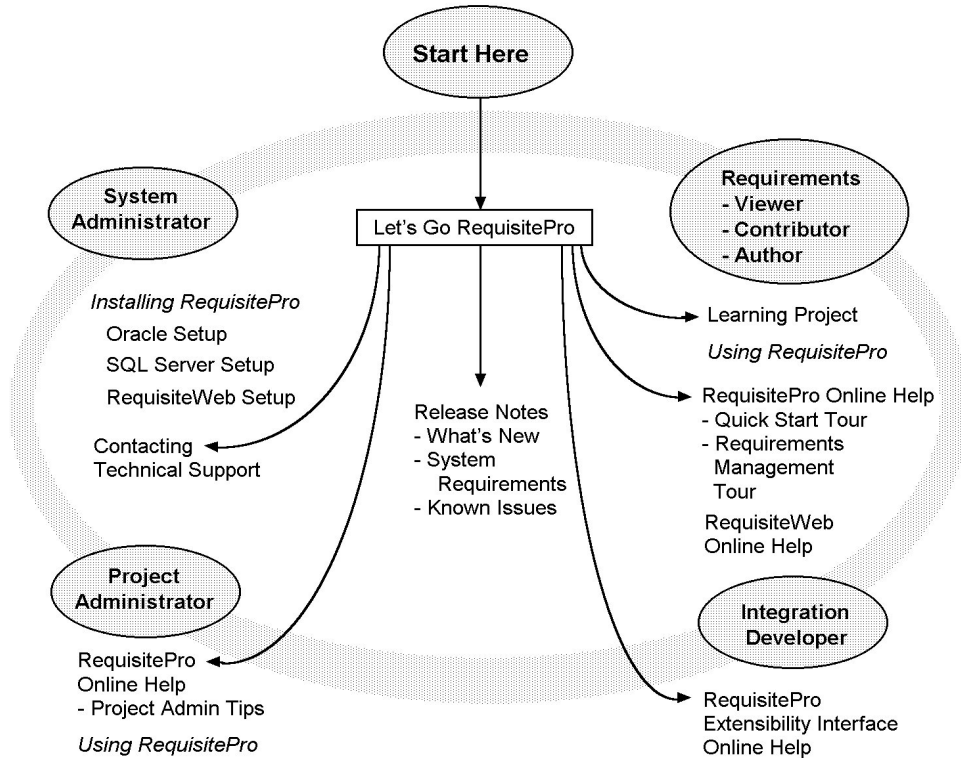
- **Getting Started Tours.** You can access three online help tours from either **Let's Go RequisitePro** or the **Getting Started** book in the help **Contents** tab: **Quick Start**, a basic tour through RequisitePro's project, document and requirements structure; **Requirements Management Tour**, an overview for using RequisitePro as part of a requirements management process; and **Project Administration Tips**, a guide for RequisitePro project administrators, who will be setting up and managing projects.
- **The Learning Project Tutorial.** The Learning Project is an online tutorial designed to help you quickly learn how to use specific RequisitePro features. The Learning Project automatically appears in the project list in the Open Project and Documents dialog box, where you can open the project and its documents. In the Select Document(s) list, select **Welcome to the Learning Project** and click **OK**.
- **Rational Training Services.** For more information on training opportunities, see the Rational University Web site: <http://www.rational.com/university>.

References

To learn more about requirements management, we recommend the following book:

- *Managing Software Requirements: A Unified Approach* by Dean Leffingwell and Don Widrig, Addison Wesley, 2000.

Documentation Roadmap



Contacting Rational Technical Support

If you have questions about installing, using, or maintaining this product, contact Rational Technical Support as follows:

Rational Technical Support Information

Location	Contact Information	Notes
U.S. and Canada	800-433-5444 781-676-2450 support@rational.com	When sending e-mail: – Specify the product name in the subject line, for example, “Rational Suite”. – For existing issues, include your case ID in the subject line.
Europe	+31 (0) 20 4546 200 support@europe.rational.com	
Asia Pacific	+61-2-9419-0111 support@apac.rational.com	

Location	Contact Information	Notes
World Wide Web	http://www.rational.com	Click the Technical Support link.

Please help our Technical Support staff deliver quality customer service by providing complete information. The *techsupport.html* file, which is located in the RequisitePro installation directory and is also available by clicking **Help > Contacting Technical Support**, contains a Customer Information Form. You can use this form to document problems, questions, or suggestions and to detail your company and system information. The form can be copied into your e-mail message.

Attach your *error.log* file (located in the RequisitePro installation directory in the bin folder) if you are getting an error message. Add any files, screen captures, and other information you feel are relevant.

Other Contacts

Joining the RequisitePro Users Mailing List

Rational has created an open e-mail list “req_forum@rational.com” for customers to exchange ideas on using RequisitePro. This list is monitored to ensure product questions and problems are being answered. To subscribe to the mailing list, go to the following Web site:

<http://www.rational.com/products/reqpro/usergroups>.

Contacting Rational Technical Publications

To send feedback about documentation for Rational products, please send e-mail to our technical publications department at techpubs@rational.com.

For technical problems and questions, please contact Technical Support.

C H A P T E R 1

Fundamentals of Requirements Management

This chapter is an excerpt from Rational's white paper *Applying Requirements Management with Use Cases*. To review the full version of this document, or many other Rational white papers, please visit our Web site at www.rational.com/support.

Applying Requirements Management with Use Cases

If you are new to or somewhat familiar with requirements management and are interested in requirements process improvement, this paper offers a framework with which to develop your own approach.

Software and System Development in the Age of Process

For most software and system development teams, the 1990s have been process-intensive when compared to the more freewheeling days of the past. Standards for measuring and certifying effective software development process have been introduced and popularized. Many books and articles on software development process and related material on business process modeling and re-engineering have been published. Increasing numbers of software tools have helped define and apply effective software development process. The global economy's dependence on software accelerated in the past decade, enabling development processes and improving system quality.

So how do we explain the high incidence of the software project failure today? Why are many, if not most, software projects still plagued by delays, budget overruns, and quality problems? How can we improve the quality of the systems we build as our businesses, national economies, and daily activities become increasingly dependent on them?

The answers, as always, lie in the people, tools, and processes applied to our profession. Requirements management is often proposed as a solution to the ongoing problems of software development, yet relatively little attention has been focused on improving the practice of this discipline.

This paper presents the elements of an effective requirements management process and highlights some of the obstacles to its successful implementation.

Requirements management applies equally to software-only projects and to projects in which software is only a part of the end result, or not included at all. For convenience, the paper will hereafter use the term “system” to mean any or all of these things. However, it is the abstract nature of software development, alone or in combination with hardware, that complicates requirements management, and is therefore the primary focus of this paper.

Why Manage Requirements?

Simply put, system development teams who manage requirements do so because they want their projects to succeed. Meeting their project’s requirements defines success. Failing to manage requirements decreases the probability of meeting these objectives.

Meeting your project’s requirements defines success.

Recent evidence is supportive:

- The Standish Group’s CHAOS Reports from 1994 and 1997 established that the most significant contributors to project failure relate to requirements.¹
- In December 1997, Computer Industry Daily reported on a Sequent Computer Systems, Inc. study of 500 IT managers in the U.S. and U.K. that found 76 percent of the respondents had experienced complete project failure during their careers. The most frequently named cause of project failure was “changing user requirements.”²

Avoiding failure should be sufficient motivation to manage requirements. Increasing the probability of a successful project and other benefits of managing requirements may be equally motivational. The Standish Group’s CHAOS report further established that managing requirements well was the factor most related to successful projects.

What is a Requirement?

The first step towards understanding requirements management is to agree on a common vocabulary. Rational defines a requirement as “a condition or capability to which the system [being built] must conform.” The Institute of Electronics and Electrical Engineers uses a similar definition.

Well-known requirements engineering authors Merlin Dorfman and Richard H. Thayer offer a compatible and more refined definition that is specific - but not necessarily limited - to software:

A requirement is a condition or capability to which the system must conform.

“A software requirement can be defined as:

- A software capability needed by the user to solve a problem or achieve an objective.
- A software capability that must be met or possessed by a system or system component to satisfy a contract, specification, standard, or other formally imposed documentation.”³

What is Requirements Management?

Since requirements are things to which the system being built must conform, and conformance to some set of requirements defines the success or failure of projects, it makes sense to find out what the requirements are, write them down, organize them, and track them in the event they change.

Stated another way, *Requirements Management is:*

- *a systematic approach to eliciting, organizing, and documenting the requirements of the system, and*
- *a process that establishes and maintains agreement between the customer and the project team on the changing requirements of the system.*

This definition is similar to Dorfman and Thayer’s and the IEEE’s definition of “software requirements engineering.” Requirements Engineering includes elicitation, analysis, specification, verification, and management of the software requirements, with “software requirements management” being the planning and controlling of all these related activities⁴. All of these activities are incorporated in the definition of requirements management presented here and taught by Rational Software. The difference lies mainly in the choice of the word “management” rather than “engineering.” Management is a more

appropriate description of all the activities involved, and it accurately emphasizes the importance of tracking changes to maintain agreements between stakeholders and the project team.

The Problems of Requirements Management

So what might be difficult about a process intended to ensure that a system conforms to the expectations set for it? When put into practice on real projects, difficulties come to light. Figure 1 displays the results of a 1996 survey of developers, managers, and quality assurance personnel. It shows the percentage of respondents who experienced the most frequently mentioned requirements-related problems.

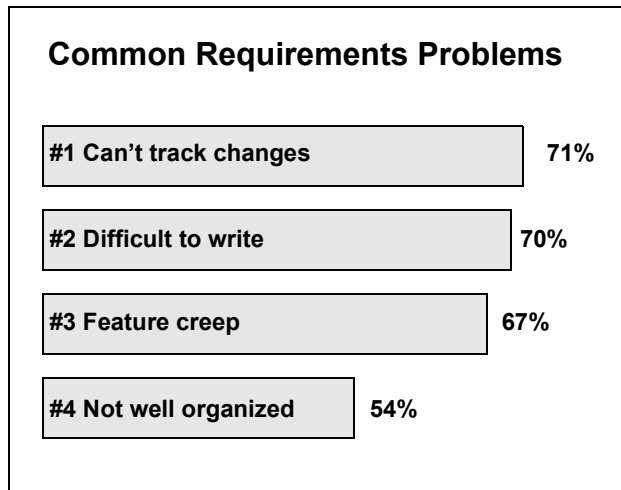


Figure 1

A more comprehensive list of problems includes:

- Requirements are not always obvious and have many sources.
- Requirements are not always easy to express clearly in words.
- There are many different types of requirements at different levels of detail.
- The number of requirements can become unmanageable if not controlled.
- Requirements are related to one another and to other deliverables of the process in a variety of ways.
- Requirements have unique properties or property values. For example, they are neither equally important nor equally easy to meet.
- There are many interested and responsible parties, which means requirements need to be managed by cross-functional groups of people.
- Requirements change.
- Requirements can be time-sensitive.

When these problems are combined with inadequate requirements management and process skills, and the lack of easy-to-use tools, many teams despair of ever managing requirements well. Rational Software has developed the expertise to instruct teams in requirements management skills and process. In addition, Rational RequisitePro is an accessible tool for automating effective requirements management.

Requirements Management Skills

To resolve the problems mentioned above, Rational encourages the development of key skills. These skills are presented below in what appears to be sequential order, but in an effective requirements management process they are applied continuously in varied order. Here they are presented in the sequence one would likely apply to the first iteration of a new project.

Key Skill 1: Analyze the Problem

Problem analysis is conducted to understand business problems, target initial stakeholder needs, and propose high-level solutions. These acts of reasoning and analysis find “the problem behind the problem.”

During problem analysis, agreement is gained on a statement of the real problems and the stakeholders are identified.

Initial solution boundaries and constraints are defined from both technical and business perspectives. If appropriate, the business case for the project analyzes return on investment that is expected from the system.

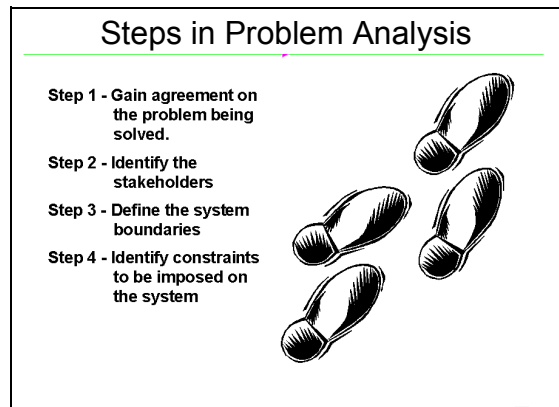


Figure 2

Key Skill 2: Understand Stakeholder Needs

Requirements have many sources. They may come from anyone with an interest in the outcome of the project. Customers, partners, end users, and domain experts are some sources of requirements. Management, project team members, business policies, and regulatory agencies can be others.

It is important to know how to determine who the sources should be, how to get access to those sources, and how to elicit information from them. The individuals who serve as primary sources for this information are referred to as “stakeholders” in the project.

If you are developing an information system to be used internally within your company, you may include people with end-user experience and business domain expertise in your development team. Very often you will start the discussions at a business-model level rather than at a system level. If you are developing a product to be sold to a marketplace, you may make extensive use of your marketing people to better understand the needs of customers in that market.

Techniques for eliciting requirements include interviews, brainstorming, conceptual prototyping, questionnaires, and competitive analysis. The result of requirements elicitation is a list of requests or needs that are described textually and graphically, and that have been given priority relative to one another.

Key Skill 3: Define the System

To define the system means to translate and organize the understanding of stakeholder needs into a meaningful description of the system to be built. Early in system definition, decisions are made on what constitutes a requirement, documentation format, language formality, degree of requirements, request priority and estimated effort, technical and management risks, and scope. Part of this activity may include early prototypes and design models directly related to the most important stakeholder requests.

Principle 55

WRITE NATURAL LANGUAGE BEFORE A MORE FORMAL MODEL

If you write the formal model first, the tendency will be to write natural language that describes the model instead of the solution system.

TO MAKE A LONG DISTANCE CALL, THE USER SHOULD LIFT THE PHONE. THE SYSTEM SHALL RESPOND WITH A DIAL TONE. THE USER SHOULD DIAL A “9”. THE SYSTEM SHALL RESPOND WITH A DISTINCTIVE DIAL TONE...

THE SYSTEM CONSISTS OF FOUR STATES: IDLE, DIAL TONE, DISTINCTIVE DIAL TONE, AND CONNECTED. TO GET FROM THE IDLE STATE TO THE DIAL TONE STATE, LIFT THE PHONE. TO GET FROM THE DIAL TONE STATE TO THE DISTINCTIVE DIAL TONE STATE, DIAL A “9.”

Note that in the latter example, the text does not help the reader at all.

- Alan M. Davis, 201 Principles of Software Development, 1995

We use the word “description” rather than “document” to avoid the perceived limitation inherent in the common use of the latter. A description may be a written document, electronic file, a picture, or any other representation meant to communicate system requirements.

The outcome of system definition is a description of the system that is both natural language and graphical. Some suggested formats for the description are provided in later sections.

Key Skill 4: Manage the Scope of the Project

The scope of a project is defined by the set of requirements allocated to it. Managing project scope to fit the available resources (time, people, and money) is key to managing successful projects. Managing scope is a continuous activity that requires iterative or incremental development, which breaks project scope into smaller, more manageable pieces.

Using requirement attributes, such as priority, effort, and risk, as the basis for negotiating the inclusion of a requirement is a particular useful technique for managing scope. Focusing on the attributes rather than the requirements themselves helps desensitize negotiations that are otherwise contentious.

It is also helpful for team leaders to be trained in negotiation skills and for the project to have a champion in the organization, as well as on the customer side. Product/project champions should have the organizational power to refuse scope changes beyond the available resources or to expand resources to accommodate additional scope.

Key Skill 5: Refine the System Definition

With an agreed-upon high-level system definition and a fairly well understood initial scope, it is both possible and economical to invest resources in more refined system definitions. Refining the system definition includes two key considerations: developing more detailed descriptions of the high-level system definition, and verifying that the system will comply with stakeholder needs and behave as described.

The descriptions are often the critical reference materials for project teams. Descriptions are best done with the audience in mind. A common mistake is to represent what is complex to build with a complex definition, particularly when the audience may be unable or unwilling to invest the critical thinking necessary to gain agreement. This leads to difficulties in explaining the purpose of the system to people both inside and outside the project team. Instead, you may discover the need to produce different kinds of descriptions

for different audiences. This paper includes suggested formats for detailed natural language, formal text, and graphical descriptions. Once the description format is established, refinement continues throughout the project lifecycle.

Key Skill 6: Manage Changing Requirements

No matter how carefully you define your requirements, they will change. In fact, some requirement change is desirable! It means that your team is engaging your stakeholders. Accommodating changing requirements is a measure of your team’s stakeholder sensitivity and operational flexibility - team attributes that contribute to successful projects. Change is not the enemy, unmanaged change is.

A changed requirement means that more or less time has to be spent on implementing a particular feature, and a change to one requirement may have an impact on other requirements. Managing requirement change includes activities such as establishing a baseline, keeping track of the history of each requirement, determining which dependencies are important to trace, establishing traceable relationships between related items, and maintaining version control.

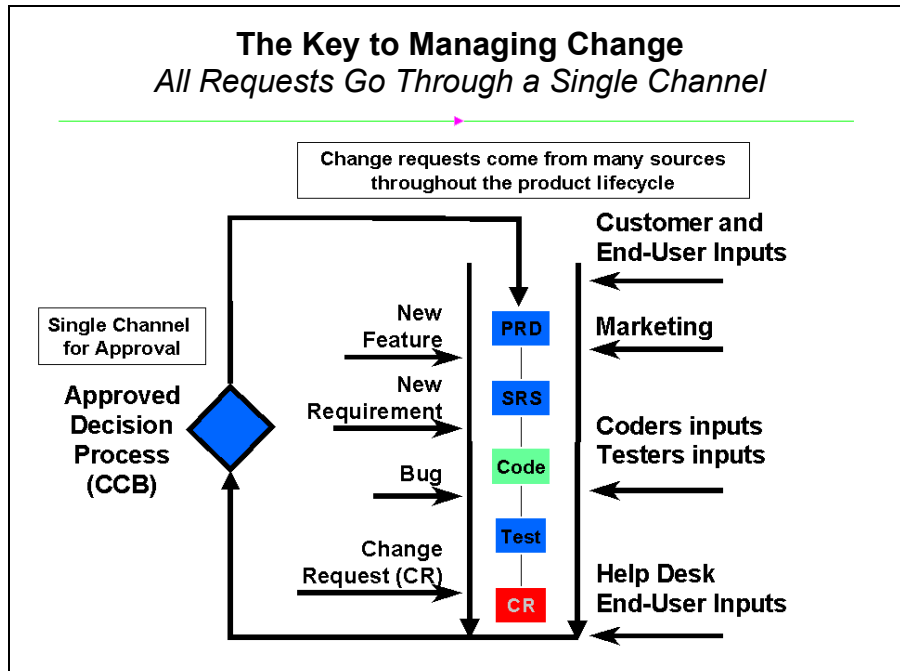


Figure 3

As Figure 3 illustrates, it is also important to establish a change control or approval process, requiring all proposed changes to be reviewed by designated team members. Sometimes this single channel of change control is called a Change Control Board (CCB).

Important Requirements Concepts

To apply requirements management skills to a project, certain requirements management concepts are useful for everyone on the project to understand. They include:

Requirement Types. The larger and more intricate the system, the more types of requirements appear. A requirement type is simply a class of requirements. By identifying types of requirements, teams can organize large numbers of requirements into meaningful and more manageable groups. Establishing different types of requirements in a project helps team members classify requests for changes and communicate more clearly.

Usually, one type of requirement can be broken down, or decomposed, into other types. Business rules and vision statements can be types of high-level requirements from which teams derive user needs, features, and product requirement types. Use cases and other forms of modeling drive design requirements that can be decomposed to software requirements and represented in analysis and design models. Test requirements are derived from the software requirements and decompose to specific test procedures. When there are hundreds, thousands, or even tens of thousands of instances of requirements in a given project, classifying requirements into types makes the project more manageable.

Cross-Functional Teams. Unlike other processes, such as testing or application modeling, which can be managed within a single business group, requirements management should involve everyone who can contribute their expertise to the development process. It should include people who represent the customer and the business expectations. Development managers, product administrators, analysts, systems engineers, and even customers should participate. Requirements teams should also include those who create the system solution – engineers, architects, designers, programmers, QA personnel, technical writers, and other technical contributors.

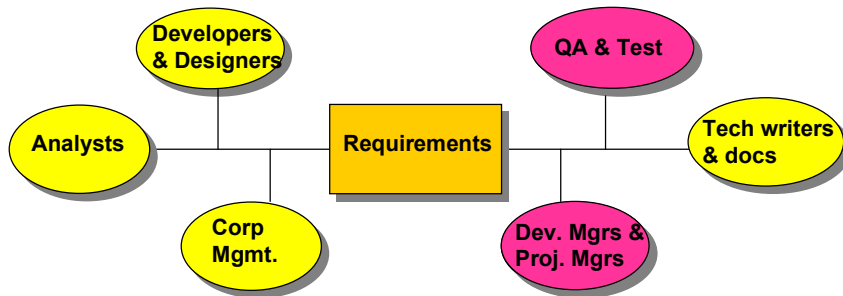


Figure 4

Often, the responsibility for authoring and maintaining a requirement type can be allocated by functional area, further contributing to better large project management. The cross-functional nature of requirements management is one of the more challenging aspects of the discipline.

Traceability. As implied in the description of requirement types, no single expression of a requirement stands alone. Stakeholder requests are related to the product features proposed to meet them. Product features are related to individual requirements that specify the features in terms of functional and non-functional behavior. Test cases are related to the requirements they verify and validate. Requirements may be dependent on other requirements or mutually exclusive.

In order for teams to determine the impact of changes and feel confident that the system conforms to expectations, these traceability relationships must be understood, documented, and maintained. While traceability is one of the most difficult concepts to implement in requirements management, it is essential to accommodating change. Establishing clear requirement types and incorporating cross-functional participation can make traceability easier to implement and maintain. For more information on different strategies for requirements traceability, see the white paper, *Traceability Strategies for Managing Requirements with Use Cases*.⁵

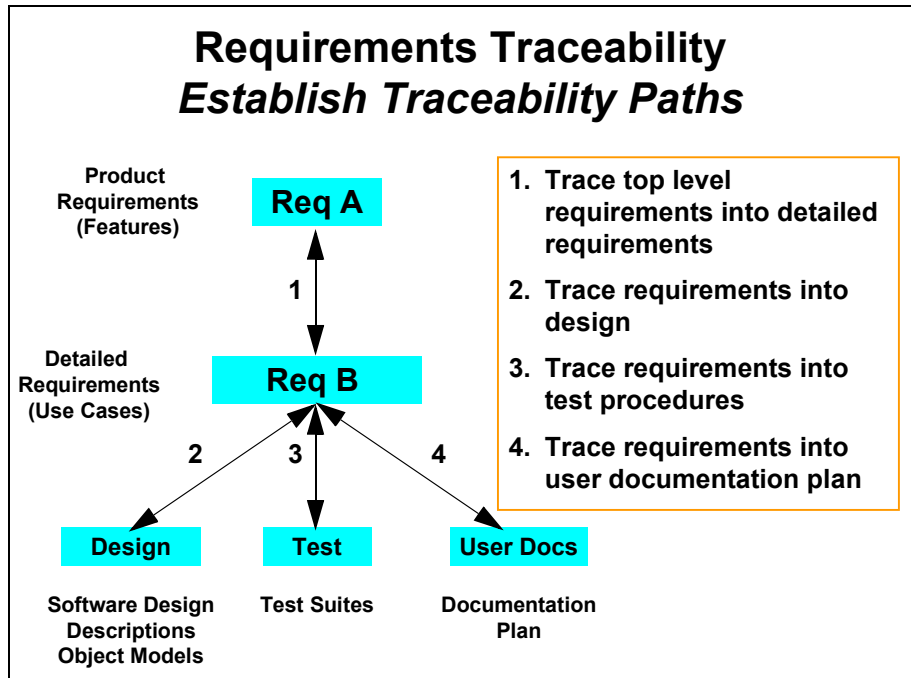


Figure 5

Multi-Dimensional Attributes. Each type of requirement has attributes, and each individual requirement has different attribute values. For example, requirements may be assigned priorities, identified by source and rationale, delegated to specific sub-teams within a functional area, given a degree-of-difficulty designation, or associated with a particular iteration of the system. To illustrate, Figure 6 displays attributes for a Feature Requirement Type from an example project in

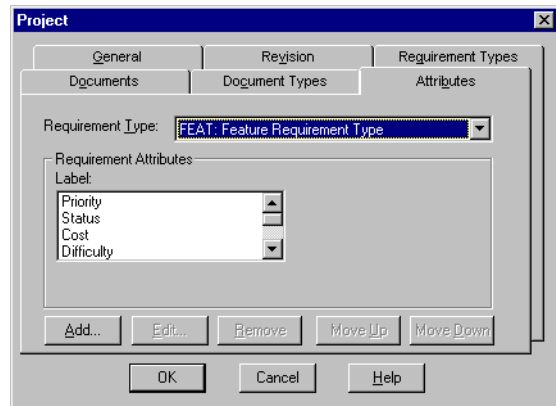
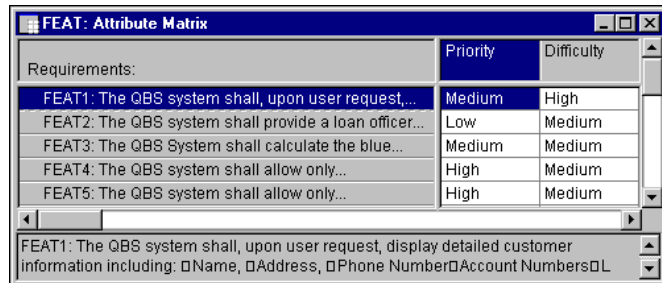


Figure 6

RequisitePro. As implied by the title of the screen, the requirement type and attributes for each type are defined for the entire project, ensuring usage consistency across the team.

In Figure 7, feature requirements are displayed for a specific project in RequisitePro. Note that even without displaying the entire text for each requirement, we can learn a great



Requirements:	Priority	Difficulty
FEAT1: The QBS system shall, upon user request,...	Medium	High
FEAT2: The QBS system shall provide a loan officer...	Low	Medium
FEAT3: The QBS System shall calculate the blue...	Medium	Medium
FEAT4: The QBS system shall allow only...	High	Medium
FEAT5: The QBS system shall allow only...	High	Medium

FEAT1: The QBS system shall, upon user request, display detailed customer information including: Name, Address, Phone NumberAccount NumbersL

Figure 7

deal about each requirement from its attribute values. In this case, its priority and difficulty – which may be assigned by different team members – will help the team begin to scope the project to available resources and time, taking into account both stakeholder priorities and a very rough estimate of effort reflected in the difficulty attribute value. In more detailed types of requirements, the priority and effort attributes may have more specific values (e.g., estimated time, lines of code, etc.) with which to further refine scope. This multi-dimensional aspect of a requirement, compounded by different types of requirements - each with its own attributes - is essential to organizing large numbers of requirements and to managing the overall scope of the project.

Change History. Both individual requirements and collections of requirements have histories that become meaningful over time. Change is inevitable and desirable to keep pace with a changing environment and evolving technology. Recording the versions of project requirements enables team leaders to capture the reasons for changing the project, such as a new system release. Understanding that a collection of requirements may be associated with a particular version of software allows you to manage change incrementally, reducing risk and improving the probability of meeting milestones. As individual requirements evolve, it is important to understand their history: what changed, why, when, and even by whose authorization.

Putting Requirements Management to Work

Requirements management employs the key skills and concepts presented above to identify and resolve the problems successfully.

To build a system that truly meets customers' needs, the project team must first define the problem to be solved by the system. Next, the team must identify stakeholders from whom business and user needs are elicited, described, and prioritized. From this set of high-level expectations or needs, a set of product or system features should be agreed upon.

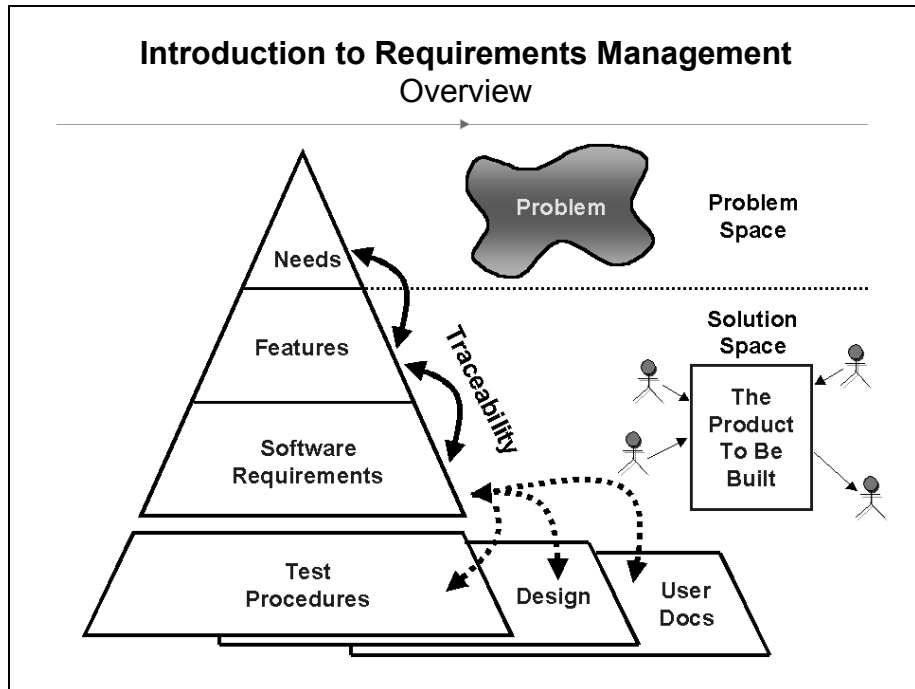


Figure 8

Detailed software requirements should be written in such a form as can be understood by both the customers and the development team. We have found that using the language of the customer to describe these software requirements is most effective in gaining the understanding and agreement. These detailed software requirements are then used as input for the system design specifications as well as for test plans and procedures needed for implementation and validation. Software requirements should also drive the initial user documentation planning and design.

Effective requirements management includes the following project team activities:

1. Agree on a common vocabulary for the project.
2. Develop a vision of the system that describes the problem to be solved by the system, as well as its primary features.
3. Elicit stakeholders needs in at least five important areas: functionality, usability, reliability, performance, and supportability.
4. Determine what requirement types to use.
5. Select attributes and values for each requirement type.
6. Choose the formats in which requirements are described.
7. Identify team members who will author, contribute to, or simply view one or more types of requirements.
8. Decide what traceability is needed.
9. Establish a procedure to propose, review, and resolve changes to requirements.
10. Develop a mechanism to track requirement history.
11. Create progress and status reports for team members and management

These essential requirements management activities are independent of industry, development methodology, or requirements tools. They are also flexible, enabling effective requirements management in the most rigorous and the most rapid application development environments.

A Few Words about Documents

The decision to describe requirements in documents deserves some thought. On the one hand, writing is a widely accepted form of communication and, for most people, a natural thing to do. On the other hand, the goal of the project is to produce a system, not documents. Common sense and experience teach that the decision is not whether but *how* to document requirements.

Document templates provide a consistent format for requirements management. Rational RequisitePro offers these templates and the additional feature of linking requirements within a document to a database containing all project requirements. This unique feature allows requirements to be documented naturally, making them more accessible and manageable in a database.

Sources

1. CHAOS, The Standish Group International, Inc., Dennis, MA, 1994, 1997
2. Computer Industry Daily, December 12, 1997
3. Dorfman, M. and R. Thayer, *Software Engineering*, IEEE Computer Society Press, Los Alamitos, CA, 1997 pp. 79
4. Dorfman, M. and R. Thayer, *Software Engineering*, IEEE Computer Society Press, Los Alamitos, CA, 1997 pp. 80
5. Spense, Ian and Leslee Probasco, *Traceability Strategies for Managing Requirements with Use Cases*, White Paper, Rational Software Corporation, 1998.

Recommended Reading

201 Principles of Software Development. Dr. Alan Davis.
McGraw-Hill, Inc. New York, NY. 1995.

Exploring Requirements Quality Before Design. Donald C. Gause and Gerald M. Weinberg. Dorset House Publishing Co., Inc. 1989.

Object-Oriented Software Engineering. Ivar Jacobson. The ACM Press.
Addison-Wesley Longman Limited. Essex, England. 1992.

Standards, Guidelines and Examples of System and Software Requirements Engineering. M. Dorfman and R. Thayer.
IEEE Computer Society. Los Alamitos, CA 1991.
Order from IEEE Customer Service
445 Hoes Ln.
P.O. Box 1331
Piscataway, NJ 08855-1331.
(800) 678-4333.

UML Distilled. Martin Fowler with Kendall Scott.
Addison-Wesley Longman, Inc. Reading, MA. 1997.

Visual Modeling with Rational Rose and UML. Terry Quatrani.
Addison-Wesley Longman, Inc. Reading, MA. 1997.

C H A P T E R 2

Introducing RequisitePro

This chapter covers key RequisitePro concepts. A complete glossary, *Rational RequisitePro Terms*, can be found at the end of this book.

Why Use RequisitePro?

Studies have shown that managing requirements is the most significant factor in delivering projects on time, on budget, and on target. RequisitePro helps projects succeed by giving teams the ability to manage all project requirements comprehensively, while facilitating team collaboration and communication.

Moving beyond conventional requirements management, RequisitePro combines both document-centric and database-centric approaches. By deeply integrating Microsoft Word with a multi-user database, RequisitePro organizes all your project requirements, providing traceability and change management throughout the project life cycle.

Team Collaboration, User Satisfaction

Requirements drive the entire project. RequisitePro's integration with other industry-leading tools optimizes the flow of requirements data throughout the project, promoting reuse and consistency, and ensuring that what is designed, tested, documented, and delivered meets the users' needs.

A product development team typically includes a large number of individuals with diverse roles, such as business analysts, project leaders, product marketing managers, development managers, QA managers, developers, testers and more. Giving each person on your team access to critical requirements information, and the ability to manage to those requirements, promotes team efficiency and effectiveness.

Web Component Allows Flexibility

In addition to the Windows client version of RequisitePro, RequisiteWeb offers a Web-based client for RequisitePro. RequisiteWeb allows users to access RequisitePro requirements information across the Internet or an intranet. By utilizing browsers -- Netscape Navigator or Microsoft Internet Explorer -- RequisiteWeb provides a thin client solution to access project documents and data. No Rational application-specific files need to be installed on the user's machine.

Through RequisiteWeb, users cannot only view the project, but they can contribute significantly. It includes the ability to:

- Read requirements documents
- Create and modify requirements in the database
- Modify requirement attributes in any requirement
- Modify traceability information in any requirement
- Create and participate in discussions
- Create and save views

Change Happens – Manage it

Change occurs in practically every development project, but it doesn't have to consume project resources or throw the project off course. With RequisitePro, you can manage inevitable change to ensure your entire team is current as requirements evolve. Traceability features in RequisitePro let you establish and maintain dependencies between different requirements. As change occurs, these traceability relationships are flagged as suspect, so you can understand how change impacts the entire project. For each requirement a change history is maintained, capturing the who, what, when, and why of the change.

Comprehensive Process Support

Whether your team follows a rigorous requirements management process, such as IEEE, SEI CMM or UML-driven use-case approaches, or is just beginning to define a formal process, RequisitePro can help you meet your objectives of delivering precise, quality software. RequisitePro provides industry standard project templates and attributes, and it can also import existing documents and be customized to support existing projects.

A Quick Tour of Key Concepts in RequisitePro

This section provides an overview of RequisitePro concepts and defines some terms that will help you get started.

Requirement

RequisitePro is a *requirements repository* that organizes requirements and provides traceability and change management throughout the project lifecycle. To talk about RequisitePro, we first have to decide what a requirement is.

Rational defines a requirement as “a condition or capability to which the system must conform.”

Later in this chapter we will discuss requirement types and attributes. (For more information on requirements, refer to Chapter 8: *Working with Requirements*.)

Project

A RequisitePro project includes a requirements database and its related documents. A project is usually created by a project administrator, who determines the project structure and sets up security permissions for the project’s users.

While all project users are encouraged to view and query requirements and to participate in discussions, a limited group of users create and manage requirements within a project.

(For more information on projects, refer to the following chapters: *Creating Projects*, *Working with Project Security*, *Managing Projects*, and *Working with Project Information*.)

Project Database

Each RequisitePro project has its own database, where all the requirements for a project are stored (An Oracle or SQL Server database may contain more than one project).

In the project database, requirements can be added, modified, or deleted. When requirements are changed in a document, the changes are updated in the database.

Often a project includes a variety of requirements documents, such as a product requirements document, a system requirements document, software and hardware specifications, user requirements, quality assurance procedures and test plans. Information from all project documents is stored in the project database. The database centralizes information, so that members of the project team can update requirements, manage priorities and test plans, and report the project's progress in one shared repository.

Project Version Control

RequisitePro's version control lets you trace change by archiving projects. Version control helps you keep a record of changes to project files during the development cycle. You can manage multiple versions of your projects, retrieving, modifying, and returning revisions to the archive in an organized and consistent manner. Directly from RequisitePro, you can use RequisitePro's Archive command or Rational ClearCase.

(For more information, refer to *Archiving Projects* on page 14-9.)

Project List

A RequisitePro project list is a personal library of accessible RequisitePro projects. Each user's list is unique. For example, a project administrator monitoring the progress of all the projects scheduled for completion this quarter could have an extensive list of projects, while some users might have just one project in their lists at a time.

Project administrators store new projects in their file systems – typically in the RequisitePro Projects directory. In the Open Projects and Documents dialog box, you can add or delete projects from your project list as you need them.

(For more information, refer to *Adding a RequisitePro Project to Your Project List* on page 3-3.)

The Tool Palette, Word Workplace, and Views Workplace

RequisitePro is composed of workplaces where distinct but interrelated work is done. The workplaces are launched from the Tool Palette as shown in the figure on the following page. All requirements information is stored in the database whether it is displayed in the Views Workplace and/or the Word Workplace.

Tool Palette

When RequisitePro is started, the Tool Palette is displayed. Menus on the Tool Palette contain RequisitePro commands, and provide access to project information, document information, requirements information, discussions, and views.

The icon buttons below the menu bar are shortcuts to frequently used menu commands. When you position your mouse over a button, a ToolTip appears, describing the button's function. Use the first button on the Tool Palette to open RequisitePro projects and documents.

Word Workplace

The Word Workplace is the place within RequisitePro where requirements are created and modified in a document. The Word Workplace contains requirement specifications in the form of RequisitePro documents and Word documents.

The Word Workplace looks like a Word document, but the menu bar has been modified to include a RequisitePro menu that allows you to manage requirements and documents. With a few exceptions, RequisitePro uses the same commands in the Word Workplace that are available in Microsoft Word. The File > Exit and Tools > Templates and Addins commands are disabled in the Word Workplace in order to prevent conflicts in handling RequisitePro documents.

Views Workplace

The Views Workplace is a window to the database. Requirements, their attributes, and their relationships to each other are displayed and managed in views. RequisitePro includes powerful query functions for filtering and sorting the requirements and their attributes in views.

All Views Workplace commands are located in the menu bar at the top of the Views Workplace. As in the Tool Palette, icon buttons are available to access one command at a time.

RequisitePro Components

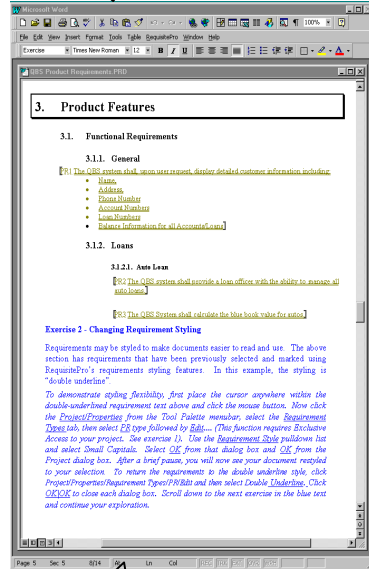
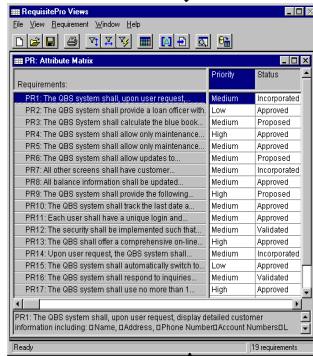
Tool Palette



Views
Workplace

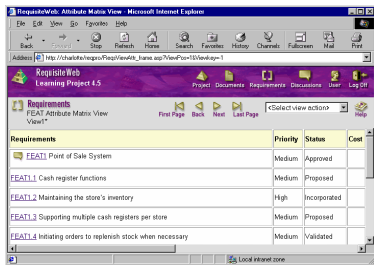


Word
Workplace

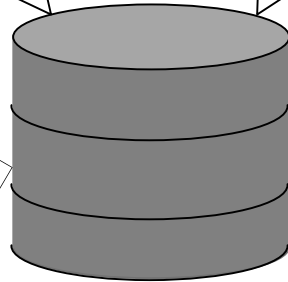


View
Requirements
Attributes and
Traceability

RequisiteWeb



Database



Author and View
Requirements
Documents

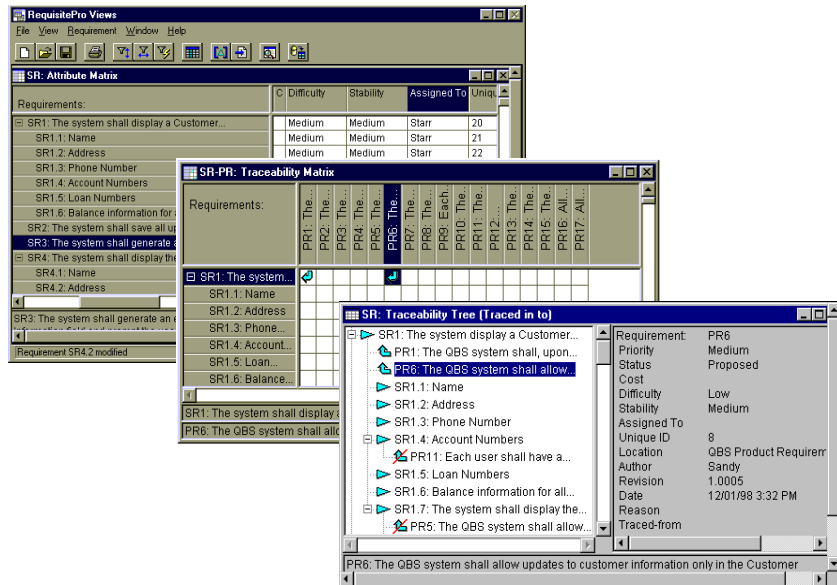
Store
Requirements

Views

In RequisitePro, a view is accessed in the Views Workplace. Views present information about a project, a document, or requirements graphically in a table (matrix) or in an outline tree. Views display the attributes assigned to requirements, such as *Status* and *Priority*, or the relationships between different types of requirements. (For more information, refer to Chapter 4: *Working in Views*.)

Three kinds of views can be created in the Views Workplace:

- The **Attribute Matrix View** displays all requirements of a specified type. The requirements are listed in the rows, and their attributes appear in the columns.
- The **Traceability Matrix View** displays the relationships (traceability) between two types of requirements.
- The **Traceability Tree** displays the chain of traceability *to* or *from* requirements of a specified type.



Top to bottom: Attribute Matrix, Traceability Matrix, Traceability Tree. Three views of the same requirements.

Documents

A requirements document is a specification that captures requirements, describes the objectives and goals of the project, and communicates product development efforts. Each requirements document belongs to a particular document type, explained below.

RequisitePro manages requirements directly in the project documents. When you build a requirements document, RequisitePro dynamically links it to a database, enabling you to manage requirements by updating and saving the documents. When saved, revisions are available to team members and others involved with the project.

With RequisitePro's version tracking, you can easily review the change history for a requirement, a document, or the whole project.

Documents are created in either Word or RequisitePro format. RequisitePro format makes proprietary modifications to the standard Word application that allows RequisitePro to exercise security controls over the document. As such, certain Word features are disabled, and that functionality is available instead through commands on the RequisitePro menu in the Word Workplace and the RequisitePro Tool Palette. For example, Word's **File > Open** command is executed in RequisitePro as **Document > Open** on the Tool Palette or **RequisitePro > Document > Open** in the Word Workplace.

Not all documents are requirements documents. Documents do not have to contain requirements to be included in a project. Any Word document, no matter where it resides in the file system, can be associated with a project and will be available in the document list when a project is opened. (For more information, refer to Chapter 7: *Working with Documents*.)

Document Types and Requirement Types

Document types and requirement types are two similar requirements management concepts and tools. Both serve as templates and define the appearance of two essential requirements management components, a document and a requirement. But where they differ is in their application.

Document Type

A document type identifies the type of document, such as a use-case or a software requirements specification, and helps ensure consistency across documents of the same type. A document type is a template that is applied to your documents. The template can include the default font for your document,

the available heading and paragraph styles, and the default type of requirements for the document. Or it could encompass both formatting conventions and an outline that helps you organize your requirements information. (For more information, refer to *Creating and Modifying Document Types* on page 15-2.)

All documents of the same document type share the same file extension (for example, .prd). You determine document types when you create or modify your project. Then, when you create a document, you can associate it with a document type already defined in your project. The new document inherits the style and functional attributes associated with the document type, making it consistent with other documents of the same type.

RequisitePro provides standard document templates that can be used “as is” or customized according to your specifications. Once you have defined the appearance of the document and the information to include, you can use the document as a standard for your organization.

There are several benefits to using standards:

- The template can be used as an example of the type of information to include and can serve as a comprehensive “to do” list so no information is overlooked.
- Expectations and procedures are clearly presented so new authors and team members spend less time learning to build the necessary requirements documents.
- Authors familiar with the template can create new documents quickly.
- Readers familiar with the template can quickly locate and review information.

Requirement Type

A requirement type is a template for your requirements. Requirement types are used to classify similar requirements so they can be efficiently managed. When you define a requirement type, you define a common set of attributes, display style, and tag numbering.

You can create your own requirement types appropriate for your project. (For more information, refer to *Creating and Modifying Requirement Types* on page 15-7.)

Requirement Attributes

Requirements in RequisitePro are classified by their type and their attributes. In RequisitePro, an attribute provides information to manage a requirement. Attributes can provide crucial information to help a team plan, communicate, and monitor project activities from the analysis and design phases through the test and release phases.

Attribute information may include:

- The relative benefit of the requirement
- The cost of implementing the requirement
- The priority of the requirement
- The difficulty or risk associated with the requirement
- The relationship of the requirement to another requirement

RequisitePro provides several default requirement attributes, such as Priority (high, medium, low), Status (proposed, approved, incorporated, validated), Cost and Difficulty. These attributes are suggestions. You can create and control attributes according to your needs. Whichever attributes you use, RequisitePro offers the flexibility to easily customize your project documents and databases to define, articulate, and manage the processes and culture of your organization.

You can use attributes to determine which requirements to implement in the next release. For example, you may decide that in the first release, you will only implement requirements evaluated as high risk, with high difficulty. If you have assigned risk and difficulty attribute values to each requirement, you can then easily query all requirements of high risk and high difficulty.

(For more information, refer to *Creating and Modifying Requirement Attributes* on page 15-10.)

Hierarchical Relationships

Hierarchical requirement relationships are one-to-one or one-to-many, parent-child relationships between requirements of the same type. Use hierarchical relationships to subdivide a general requirement into more explicit requirements.

Example:

Parent requirement:

The system shall display customer information.

Child requirements provided for detail:

Name

Address

Date of Birth

When working with hierarchical relationships, keep the following in mind:

- Each child requirement can only have one parent, but a requirement can be both a parent and a child.
- The parent and child requirements must be located in the same place, either in the same document or no documents.
- You create hierarchical relationships in the Word Workplace or the Views Workplace, using the Hierarchy tab in the Requirement Properties dialog box. (In the Views Workplace, you can also use Requirement menu commands to create hierarchical relationships.)
- When you delete a parent, you can choose to delete its children or assign them to another parent.
- You cannot create a traceability relationship between a parent and its own child.
- Hierarchical relationships are a type of change-managed relationship in RequisitePro. If a requirement is changed, the relationships with its children become *suspect*. You can view and manage suspect relationships using a Traceability Matrix or a Traceability Tree in the Views Workplace.

(For more information, refer to Chapter 9: *Working with Hierarchy*.)

Traceability Relationships

Traceability links requirements to related requirements of same or different types. RequisitePro's Traceability feature makes it easy to track changes to a requirement throughout the development cycle. Without traceability, each change would require a review of your documents to determine which, if any, elements need updating.

When working with traceability relationships, keep the following in mind:

- You can create a traceability relationship between requirements of the same or different types.
- You can create traceability relationships between requirements that exist in the same document, in different documents, or in the project database.

- You can create, view, and manipulate traceability relationships in the Word Workplace or in the Views Workplace.
- Traceability relationships are a type of change-managed relationship in RequisitePro. If either end-point of the connection is changed, the relationship becomes *suspect*. If you modify the text or selected attributes of a requirement that is *traced to* or *traced from* another requirement, RequisitePro marks the relationship between the two requirements “suspect.”
- Traceability relationships cannot have circular references. For instance, a traceability relationship cannot exist between a requirement and itself, nor can a relationship indirectly lead back to a previously *traced from* node. RequisitePro runs a check for circular references each time you establish a traceability relationship.

Note: You cannot create a traceability relationship between a parent and its own child, but you can create a traceability relationship between a parent requirement and a different parent requirement’s child.

(For more information, refer to Chapter 10: *Working with Traceability*.)

Traced to/Traced from Overview

There can be only one traceability relationship between any two requirements. The difference between calling the relationship *trace to* and calling it *trace from* is perspective.

For example, you might create a software requirement (Requirement A) that calls for a new command to be added to a particular menu in your application. In addition, in another requirements document, you might create a test requirement (Requirement B) associated with that menu item. You would thus create a traceability relationship in which the test requirement (B) is traced from the software requirement (A).

In this example, both of these statements are true:

- A is *traced to* B
- B is *traced from* A

Direct and Indirect Traceability Relationships

There are two types of traceability relationships: direct and indirect.

In a direct traceability relationship, a requirement is physically traced to or from another requirement. For example, if Requirement A is traced to Requirement B, and Requirement B is traced to Requirement C, then the relationships between A and B and between B and C are direct relationships. The relationship between A and C is indirect (inferred). Indirect relationships are maintained by RequisitePro; you cannot modify them directly.

Suspect Relationships

A hierarchical relationship or a traceability relationship between requirements becomes suspect if RequisitePro detects that a requirement has been modified. If a requirement's text is modified, all its immediate children and all **direct** relationships traced *to* and *from* it are suspect.

When you make a change to a requirement, the suspect state is displayed in a Traceability Matrix or a Traceability Tree. Changes include modifications to the requirement text, requirement type, or attributes.

For more information about parent-child relationships or traceability relationships that are marked suspect, refer to *Suspect Relationships* on page 9-10 and *Suspect Relationships* on page 10-9.

Introducing RequisitePro

C H A P T E R 3

Getting Started

This chapter explains the basics of opening the RequisitePro application and accessing RequisitePro projects.

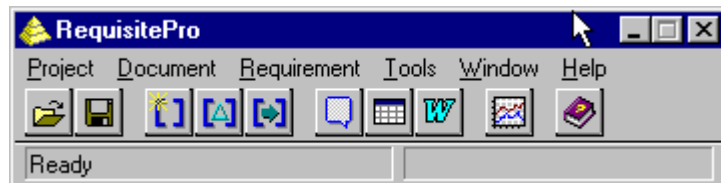
Launching RequisitePro

You can start RequisitePro in one of two ways:

- On the **Start** menu, click **Programs**. Click the installed Rational Windows Suite and/or RequisitePro version, and then click **RequisitePro**.
- In Windows Explorer, double-click any file name with the **.rqs** extension.

Using the RequisitePro Tool Palette

The Tool Palette is the central interface for accessing and working with RequisitePro projects. When RequisitePro is launched, the Tool Palette appears:



- Menus on the Tool Palette contain RequisitePro commands and provide access to project information, requirements information, and views.
- The icon buttons below the menu bar are shortcuts to frequently used menu commands. When you position your mouse over a button, a ToolTip appears, describing the button's function.

RequisitePro's default state is to display the Tool Palette on top of other applications on your desktop. If you have changed the desktop to display other applications on top, you can view the RequisitePro Tool Palette as follows:

- In the Views Workplace, click **Window > Show Tool Palette**.
- In the Word Workplace, click **RequisitePro > Window > Show Tool Palette**.
- To display the Tool Palette when it is behind other applications, press **Alt-Tab** to display opened applications, and then select the RequisitePro icon.
- To always keep the Tool Palette on top of all applications, change options in the Options dialog box. On the Tool Palette, click **Tools > Options**. Select **Always On Top** in the Tool Palette pane, so that a check mark appears in the check box.

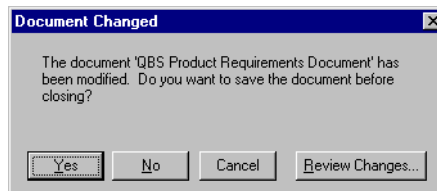
Exiting RequisitePro

When you exit RequisitePro, the application closes the current project, prompting you first to save any changes you made to the project's requirements documents.

1. On the Tool Palette, click **Project > Exit**.

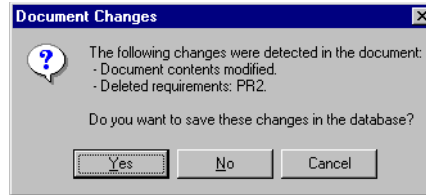
If you did not modify any requirements document, a dialog box appears, asking you to confirm that you want to exit. Click **Yes**.

If you modified one or more requirements documents, and have not yet saved those changes, the **Document Changed** dialog box appears.



2. Do one of the following:
 - To save the changes you made without reviewing the changes, click **Yes**. If you made changes to a requirement's text, the **Change Description** dialog box appears and asks you to enter the reason for the changes before saving.
 - To close the document and exit RequisitePro without saving the changes, click **No**.

- To cancel the exit process, click **Cancel**.
- To review changes to the document, click **Review Changes**.
If you made changes to a requirement's text, the **Change Description** dialog box appears and asks you to enter the reason for the changes.
The **Document Changes** dialog box appears, listing each modification to the document.



3. Do one of the following:
 - To save the changes you made, click **Yes**. RequisitePro saves the changes in the document and in the database.
 - To close the document and exit RequisitePro without saving the changes, click **No**.
 - To cancel the exit process, click **Cancel**.

Working with Projects

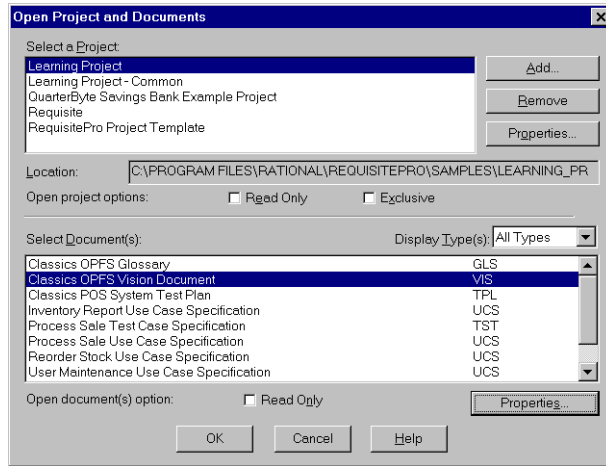
Adding a RequisitePro Project to Your Project List

When you click **Project > Open** and the Open Project and Documents dialog box appears, you will notice there are names of projects listed in the Select a Project field.

A RequisitePro project list is a library of accessible RequisitePro projects. Each user's project list is unique. All projects are stored in the file system. Using the Open Project and Documents dialog box, you select projects from the file system for your own project list. You can add or remove projects from your list as you need them.

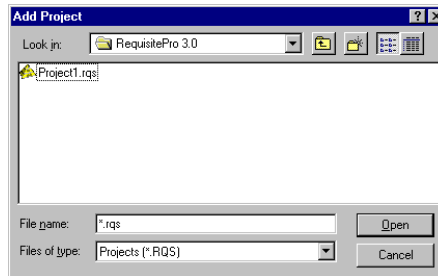
Before you can access a project, you must add it to the project list on your machine:

1. On the Tool Palette, click **Project > Open**.
The **Open Projects and Documents** dialog box appears.



Note the list of projects in the Select a Project field.

2. Click **Add**. The **Add Project** dialog box appears:



3. Locate the project file you want to add to the list (it has a .rqs extension).

Note: If this project is included in a Rational Administrator repository using the Universal Naming Convention, be sure to locate the file using UNC to identify the project path (Browse through the Windows Network Neighborhood).

4. Highlight the project and click **Open**.

5. Click **OK**. RequisitePro adds the project to the Select a Project field. You can now open the project and use its associated requirements and documents.

Removing a Project from the Project List

Removing a project from the project list does not delete the project files, but removes the project from the listing. It remains in the file system and can be added to your project list again.

To remove a project from the project list:

1. On the Tool Palette, click **Project > Open**.
The **Open Project and Documents** dialog box appears.
2. Highlight the project name in the Select a Project list and click **Remove**. RequisitePro removes the project.

Note: You can retrieve a project you removed by clicking the **Add** button. (Refer to *Adding a RequisitePro Project to Your Project List* on the previous page.)

3. Click **OK**.

Opening a Project and Documents

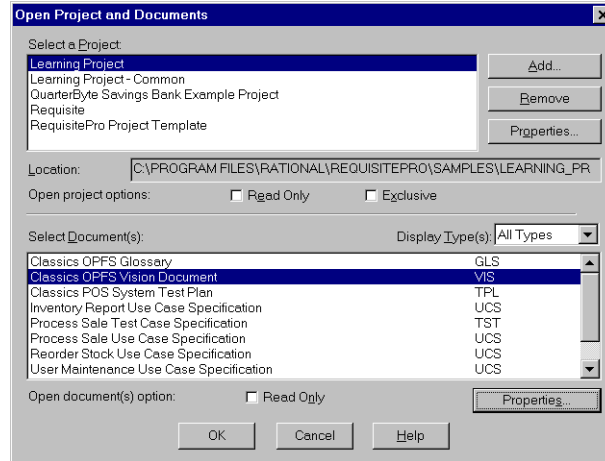
When you open a project, you can open a document at the same time. Or, you can choose to open just the project without selecting a document. RequisitePro displays all documents associated with the project, regardless of where they are stored on the file system.

To open a project and a document:

1. On the Tool Palette, click **Project > Open**
(or click the **Project** button).



The **Open Project and Documents** dialog box appears:



2. Highlight the project to open in the **Select a Project** list box.
3. When documents are created, they are assigned a *document type*. The Select Documents list displays documents by type. To see a different selection of documents, choose another document type from the **Display Types** drop-down menu.
4. Highlight the document to open in the **Select Documents** list box. This list includes all documents you have either created in the project or imported into the project, regardless of whether the documents contain requirements. You can use a multiple select action (Ctrl-click, Shift-click, or drag) to open more than one document.
5. Select the user access options. If you want to be the only user who has access to the project and documents, mark the **Exclusive** check box. To open all selected documents in read-only mode, mark the **Read Only** check box.
6. Click **OK**.

Depending on the security set on the project, one of two dialog boxes appears:

- If security is set on the project, refer to *Accessing a Secure Project* on page 3-8.
- If no security is set on the project, but your user name has not been identified in the project, the Project Logon dialog box appears.

Do one of the following:

- Accept the displayed name; or

- Click the down arrow and select a user name from the list; or
- Type a new user name that will be added to the project.

Click **OK**.

The project opens, and the new name is added to the project.

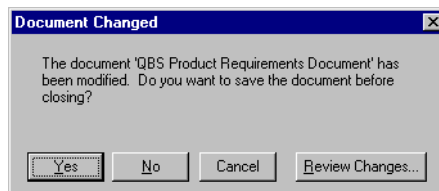
Closing a Project and Documents

The **Close** command closes a project and its documents and any open views.

1. On the Tool Palette, click **Project > Close**.

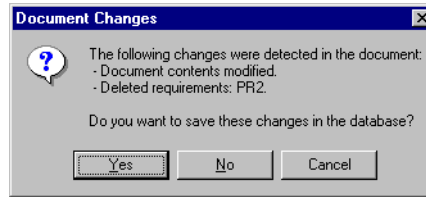
If you made no changes, the **Project Close** dialog box appears and prompts you to close the project and its documents or keep it open. Click **Yes** to close the project and its documents.

If you modified but did not save a document, the **Document Changed** dialog box appears.



2. Do one of the following:
 - To save the changes to the document, click **Yes**. If you made changes to a requirement's text, the **Change Description** dialog box appears and asks you to enter the reason for the changes before saving.
 - To close the project without saving the document changes, click **No**.
 - To cancel the close project procedure, click **Cancel**.
 - To review document changes, click **Review Changes**. If you made changes to a requirement's text, the **Change Description** dialog box appears and asks you to enter the reason for the changes.

The **Document Changes** dialog box appears, listing each modification to the document.



3. Do one of the following:
 - To save the changes to the document, click **Yes**.
 - To close the project without saving the document changes, click **No**.
 - To cancel the close project procedure, click **Cancel**.

Accessing a Secure Project

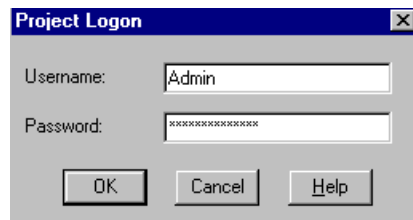
Project administrators can enable security for a project, requiring users to log on and provide a password. The project administrator sets up security and assigns a user name and password to each member of the team.

Logging on to RequisitePro

To log on and to access a secured RequisitePro project:



1. On the Tool Palette, click **Project > Open** (or click the **Project** button). The **Open Project and Documents** dialog box appears.
2. Highlight a project in the list to open and click **OK**. If RequisitePro detects that security is enabled, the **Project Logon** dialog box appears:



3. Type your name in the **Username** text box and your password in the **Password** text box. Click **OK**. You are now ready to use the project.

Modifying Your Password, User Name, or E-mail Address

Once you are in a project you can modify your password, user name, or e-mail address. If you are a RequisitePro administrator or a member of a group with project security permissions, you also have the ability to change the password, user name or e-mail address for other users. See *Editing User Information* on page 13-5.

A valid e-mail address is necessary for receiving RequisitePro discussion messages via e-mail. For more information, see *Configuring E-mail for Discussions* on page 6-2.

1. Open a project and log on. The RequisitePro Tool Palette appears.
2. Click **Project > Security**.
The **Edit User** dialog box appears.
3. If you are a RequisitePro administrator or a member of a group with project security, the **Project Security** dialog box appears instead. Click the “Enable security for this project” check box. Select a user group and a user name, and click the **Edit** button.

Then the **Edit User** dialog box appears:

To change your password:

1. Type your password in the **Old Password** text box that appears in the dialog box (This step applies only to users who don't have project security permissions).
2. Type your new password in the **New Password** text box.
Passwords are case sensitive and limited to 14 alphanumeric characters.
3. Confirm the new password by typing it again in the **Verify** text box.
4. Click **OK**. Your new password is in place and ready for use.

To change your user name (for users with project security permissions):

1. Highlight your current name in the Username field.
2. Type a new user name. User names are limited to 20 alphanumeric characters and are not case sensitive.
3. Click **OK**. Your new name is in place and ready for use.

To change your e-mail address:

1. Highlight your current e-mail address in the E-mail field.
2. Type a new e-mail address.
3. Click **OK**. Your e-mail address is in place and ready for use.

C H A P T E R 4

Working in Views

RequisitePro views use tables and outline trees to display requirements and their attributes or the traceability relationships between different requirement types. RequisitePro includes powerful query functions for filtering and sorting the requirements and their attributes in views.

The Views Workplace is an environment for analyzing and printing requirements, whether they are located in documents or not. You can have multiple views open at one time. The Views Workplace provides scroll bars to view all requirements and attributes in the table or tree. The number of requirements in the current view appears in the lower right corner of the views window.

You can create three kinds of views in the Views Workplace:

- The Attribute Matrix view displays all requirements and their attributes within a specified type.
- The Traceability Matrix view displays the relationships between requirements of two types.
- The Traceability Tree view displays the chain of traceability through the project requirements.

In the Views Workplace, you can do the following:

- Create and modify requirement attributes, requirement text, and traceability relationships
- Sort and filter view information
- Save a view's query and display setup
- Save view information to other formats
- Print views

Accessing Functions and Navigating in Views

- All Views Workplace commands are located in the menu bar at the top of the Views Workplace. Unless stated otherwise, this manual refers to the commands in the Views Workplace when working with views.
- To navigate in a view quickly, use the ARROW keys, the PAGE UP or PAGE DOWN keys, and the HOME and END keys. For more information, refer to *Mouse Actions and Shortcuts in the Views Workplace* in Appendix A.
- Use the right button on the mouse as a shortcut to commands that are specific to requirements and attributes. Move the mouse over the requirements and attribute labels and click the right button to access these shortcut menus. For more information, refer to *Mouse Actions and Shortcuts in the Views Workplace* in Appendix A.
- The full text of the selected requirement is displayed in the text pane at the bottom of the view. To resize a text pane, position the mouse on the upper border and drag upward.

Viewing Current Data

While a view is open, other users may add, delete, or modify requirements that are displayed in your view. These changes are not automatically reflected in your open view.



To update the data displayed in the view for requirements that were modified by other users, click **View > Refresh All** (or the **Refresh** button) in the Views Workplace. The **Refresh All** command affects all open views and automatically updates the data in each view.

The **View > Query Now** command in the Views Workplace reruns a view's query criteria against the database and updates your requirement set. (For more information on queries, refer to *Querying and Searching* on page 5-1.)


Requirements that have been deleted or no longer match the query are removed from the view. New requirements that match the query are added to the view.

Query Now does not refresh the data for requirements that are already in your view.

Note: If there are many requirements in the database, **Refresh All** can take some time to complete. If you just need to see a fresh requirement set, without updating the text and attributes for each requirement, use **Query Now**.

Traceability in the Views Workplace

The Traceability Matrix and Traceability Tree views display traceability relationships, and the Traced-to or Traced-from attributes appear in the Attribute Matrix. Traceability relationships are displayed as suspect when you make a change to a requirement. For more information about traceability relationships between requirements, refer to *Working with Traceability* on page 10-1.

- Arrows are used to indicate direct traceability relationships in the Traceability Matrix and Traceability Tree views. If the arrow points from A to B, then the following two statements are true: A is traced to B *and* B is traced from A.
- In the Traceability Tree and Traceability Matrix views, suspect traceability relationships are marked as lines through the arrows.  In an Attribute Matrix, an (s) appears after the requirement tag in the Traced-to or Traced-from column.
- A requirements relationship is indirect if the relationship is derived by traversing the requirements relationships. An arrow outlined by a dotted line, lighter in color than a direct relationship arrow, indicates an indirect traceability relationship in the Traceability Tree and the Traceability Matrix.

Hierarchy in the Views Workplace

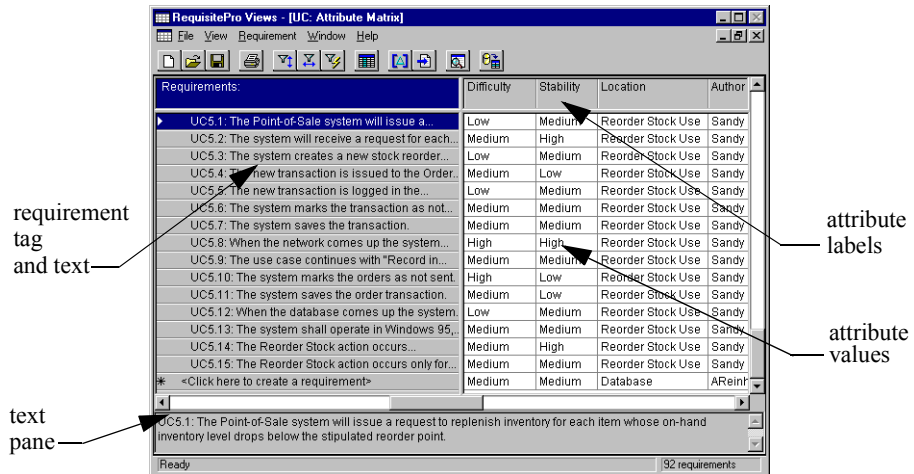
All views display hierarchical relationships, and you can use the Traceability Matrix and Traceability Tree to display hierarchical relationships that are marked suspect. For more information about hierarchical relationships between requirements, refer to *Working with Hierarchy* on page 9-1.

- You can create hierarchical relationships in the Views Workplace by using Requirement menu commands or editing the requirement properties in the Hierarchy tab of the Requirement Properties dialog box.
- When you modify a parent requirement, RequisitePro marks the relationships between the parent and all its immediate children as suspect.
- When you modify a child requirement, the relationship with its parent is not marked as suspect.

- When a child requirement is assigned to a new parent, all hierarchical relationships between the new parent and its immediate children are automatically marked suspect. The relationships between the children and their children are not marked as suspect.
- In the Traceability Tree, you can manually mark a hierarchical relationship as suspect or clear a suspect relationship.

The Attribute Matrix

This view displays requirements and their attributes for a specific requirement type. Requirements are arranged in rows and listed by tag number. Attributes are arranged in columns. The Attribute Matrix *displays* all requirements, but only database requirements can be *created* in this view.



Requirements

In this view, a requirement is displayed in a single row, showing the requirement tag followed by requirement text. When requirement text exceeds the width of the row, the last character is followed by an ellipsis (...), signifying the presence of additional text. An arrow marker at the beginning of a row indicates a selected row. An * and <Click here to create a requirement> marks the beginning of the empty row at the bottom of the matrix, where you can insert a new requirement. A pencil icon at the beginning of a row indicates the requirement information you are entering, which has not yet been saved.

The row height and width can be changed.

Attributes

Attribute labels are listed at the top of each column. Corresponding attribute values are listed beneath the attribute labels. Query information is displayed here as well.

If there are suspect traceability relationships, an **(s)** appears after the requirement tag in the Traced-to or Traced-from column.

Columns can be resized.

Text Pane

The text pane displays the description of a requirement in its entirety. This field is located at the bottom of the matrix and is blank when a requirement is not selected. “Multiple requirements selected” appears in the text pane if you have selected more than one requirement. Graphics or OLE objects in requirements are displayed as small rectangular symbols. The default size of the text pane is two lines, but its height can be increased to as many lines as you need.

The Traceability Matrix

This view displays and manipulates the relationships between two requirement types. The requirements can be of the same type or different types. Use this view to create, modify, and delete traceability relationships and to view indirect relationships. The Traceability Matrix also shows traceability relationships that are marked suspect. If you display a Traceability Matrix of requirements of the same type, it shows hierarchical relationships that are marked as suspect.

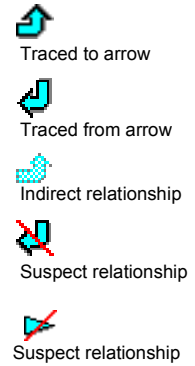
In this view, a requirement is *traced to* or *traced from* another requirement. For example, requirement B is *traced from* requirement A if it was directly or indirectly derived from requirement A. If requirement A is the basis of several other requirements, Requirement A is *traced to* these requirements.

An arrow pointing from one requirement to another indicates that a direct traceability relationship exists between the requirements. A dotted line arrow indicates an indirect relationship.

Rows and columns can be resized. The intersection between a row and column is called a *cell*.

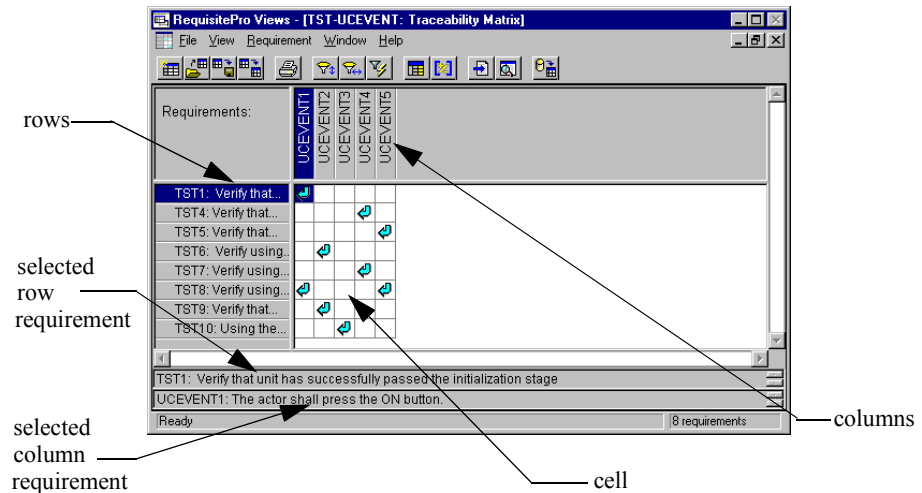
Cells

- If the intersection is blank, no relationship exists.
- If an arrow points upward to a column requirement, the requirement is *traced to* that requirement
- If an arrow points down toward a row requirement, the requirement is *traced from* that requirement
- If a dotted line arrow is displayed, an indirect relationship exists.
- If an arrow with a red diagonal line through it is displayed, the traceability relationship is suspect.
- If a triangle with a red diagonal line through it is displayed, the hierarchical relationship is suspect.



Text Panes

The Traceability Matrix displays two text panes. These panes let you review the requirements in each area, so you can easily create, modify, and delete traceability relationships. The default size of each pane is set to one line and can be resized. The top text pane displays the complete text of the currently selected row requirement and the bottom pane displays the text of the currently selected column requirement. “Multiple requirements selected” appears in the text pane if you have selected more than one requirement.

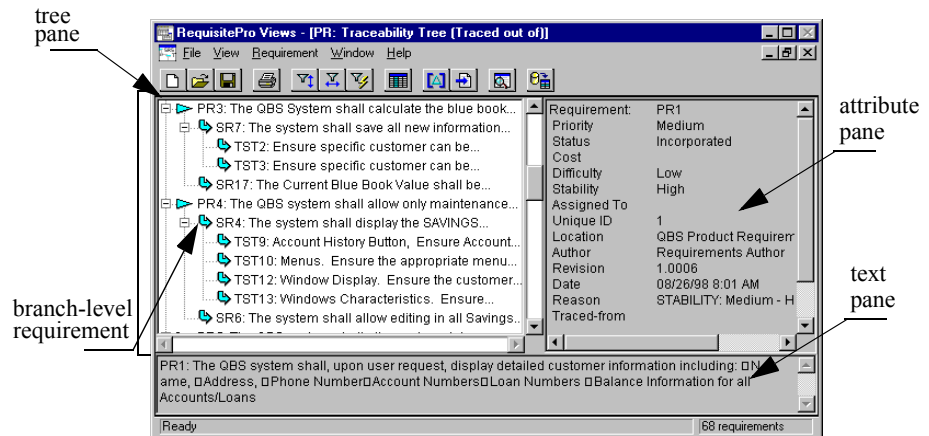


The Traceability Tree

The Traceability Tree provides a graphical view of relationships to or from requirements of one specific requirement type, including direct, indirect and suspect traceability relationships. Although direct and suspect relationships are modified in this view, RequisitePro permits read-only access to indirect relationships.

In addition, the Traceability Tree displays hierarchical relationships and shows parent-child relationships that have been marked as suspect.

Requirement text appears at the bottom of the view and associated attributes to the right of the view of the currently selected requirement.







When creating a Traceability Tree, you can choose one that displays all requirements *traced to* the requirements the tree is based on, or one that shows all requirements *traced from* the requirements the tree is based on.

Tree Pane



Select a specific requirement type on which to base the view. Traceability relationships for root-level requirements are indented and preceded by an arrow. Child requirements are indented below their parents and preceded by a triangle. The pane on the right side of the view displays requirement attributes.

Note: To resize the tree pane, click the border between the tree and attribute panes. Press the left button on the mouse and drag it left or right to the desired size. This does not affect the length of the lines set in the **Row/Column Sizing** dialog box.

-  If the arrow points toward a branch-level requirement, the root is *traced to* this requirement.
-  If the arrow points away from the branch-level requirement, the requirements on the branches are *traced from* the requirement.
-  If an arrow with a red diagonal line is displayed, the traceability relationship is suspect.
-  If a triangle with a red diagonal line is displayed, the hierarchical relationship is suspect.

Attribute Pane

This pane displays the attributes associated with the currently selected requirement. To display the attributes of a particular requirement, click the requirement in the tree pane. This is a read-only text box and cannot be edited.

If you have more than one requirement selected, the pane displays the attributes for the first requirement selected.

Text Pane

The text pane is located in the lower section of the Traceability Tree. To display the full text of a particular requirement, click the requirement in the tree pane. To adjust the height of the pane, click its upper border and drag the pane to the desired size.

“Multiple requirements selected” appears in the text pane if you have selected more than one requirement.

Working with Views

This section presents the fundamentals of working in the Views Workplace, including the following:

- Creating a view
- Expanding and collapsing in the Views Workplace
- Saving a view
- Opening a saved view
- Closing a view
- Renaming a view
- Duplicating a view
- Printing a view
- Deleting a view

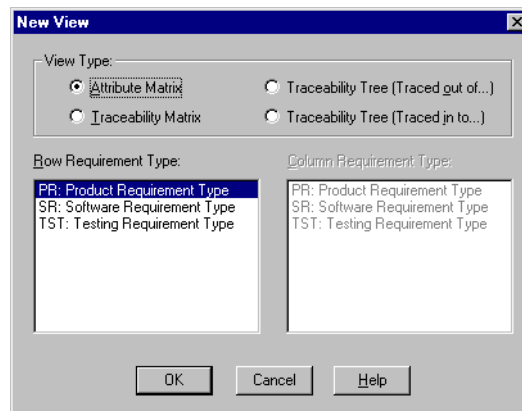
Creating a View



1. On the Tool Palette, click **Window > Show Views** (or the **Show the views workplace** button). The Views Workplace opens.



2. In the Views Workplace, click **File > New View** (or the **New View** button). The **New View** dialog box appears:



3. Select a view type to display.
4. Select a requirement type to display in the view. The Traceability Matrix requires both row and column requirement types.

5. Click **OK**. The view is displayed.

Note: The Traceability Matrix displays more than one requirement type. The Attribute Matrix displays a single requirement type, and the Traceability Tree displays a single requirement type at the root level. Only requirements associated with the selected requirement types appear in the view.

Expanding and Collapsing in the Views Workplace

The **Expand All** and **Collapse All** commands on the **View** menu are used to expand and collapse hierarchical relationships in all views and traceability relationships in the Traceability Tree. An expanded view shows the root requirement and all its sub-level requirements. Collapse the view to show just the root level requirements.

The **Expand All** command expands all relationships in a view. When you select this command in a Traceability Tree, a requirement that has a traceability relationship with a root requirement appears as a branch of the root requirement. This command also expands all parent requirements, displaying all children, in all views.

The **Collapse All** command collapses all relationships in a view. When you select this command in a Traceability Tree, a requirement that has a traceability relationship with a root requirement is no longer displayed. This command also collapses all parent requirements, hiding all children, in all views.

To expand the Traceability Tree or hierarchical relationships:

- Click the **View** menu and choose **Expand All**.

To collapse the Traceability Tree or hierarchical relationships:

- Click the **View** menu and choose **Collapse All**.

Saving a View

When you save a view, the layout of the view and the query criteria are also saved. The data within the view is not saved as part of the view, but is part of the database instead. Thus, when you open a saved view, current information is displayed in a saved view format.

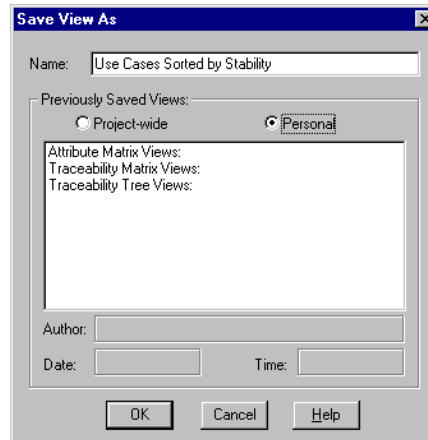
Note: The saved view is *not* a snapshot of requirement information for a particular date. The way to save the results of a query is to print the view. For more information on queries, refer to *Querying and Searching* on page 5-1.

A view must be active in the Views Workplace to be saved. To make an open view active and display the view in the active color, click the title bar of the view or select it from the Windows menu.

To save a view:



1. In the Views Workplace, click **File > Save View As.** (or the **Save** button). The **Save View As** dialog box appears:



2. Click the **Name** text box and type a name of up to 64 characters.
3. Make the view available to all users (**Project-wide** availability) or for your own use (**Personal**) by marking the corresponding button.

Note: Only the author or a member of the Administrators group can modify project-wide views.
4. RequisitePro populates the following fields, which cannot be edited:
 - The **Author** text box displays the name of the RequisitePro user who saved the view.
 - The **Date** text box displays the date the view was saved.
 - The **Time** text box displays the time the view was saved.
5. Click **OK** to save the view.

RequisitePro organizes views by view type in the **Previously Saved Views** list box in the **Open View** dialog box. When a view is saved, it is added to this list.

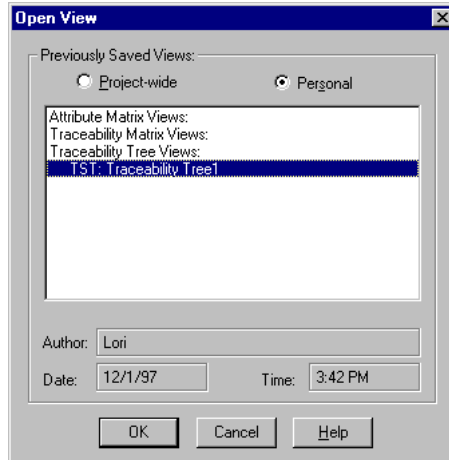
Opening a Saved View

To display a saved project-wide or personal view:

1. In the Views Workplace, click **File > Open View** (or the **Open a previously saved view** button).



The **Open View** dialog box appears:



2. Choose a project-wide or personal view by marking the corresponding button. A list of saved views appears.
3. Highlight the desired view from the list. The author, date of creation, and time of creation appears below the list.

Note: You can select more than one view to open by using Ctrl-click or Shift-click.

4. Click **OK**. RequisitePro displays the selected view(s).

Closing a View

1. In the Views Workplace, click **File > Close View**.

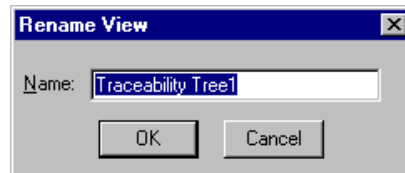
Note: If the **Prompt for save** option is activated (the check box is marked in the Tools > Options dialog box), and you have changed any of the view's properties, a dialog box appears asking if you want to save the view. Click **Yes** or **No**.

2. RequisitePro closes the view.

Renaming a View

Renaming can be used to change the name of an open view window. You might want to give a view a longer, descriptive name before you print the view, so that the new name appears on the printed page. You can still retain the original name in the file system. Renaming a view does not save the renamed view to the database until the view is saved again.

1. In the Views Workplace, click **View > Rename**.
The **Rename View** dialog box appears.



2. Type a new name for the view in the **Name** text box and click **OK**.

Note: Use the **Save** option on the **File** menu to save the renamed view.

Duplicating a View

Duplicating a view opens another window with the same view properties as the active window. This is especially useful for creating copies of the view with different sorting and filter options.

To duplicate a view:

- Click **View > Duplicate**.
- RequisitePro renames the view with the suffix 2; for example, “Product Requirement Description View2.”

Printing a View

In the Views Workplace, you can print any active view. When you print a view, you can choose to print the entire matrix or selected items.

To print an open view:

1. If you want to print only a selected requirement or relationship, click the requirement(s) or relationship(s) in the matrix. (Use a multiple select action to select multiple requirements or relationships.)
2. Click **File > Print**.
The **Print** dialog box appears.
3. If you are printing selected requirements or relationships, click **Selection**.
4. Make any other necessary changes to the Print dialog box, and then click **OK**.



Note: Use the **Print** button on the Views Workplace toolbar to print directly to the default printer. In this case, the entire view is printed using the default printer selections.

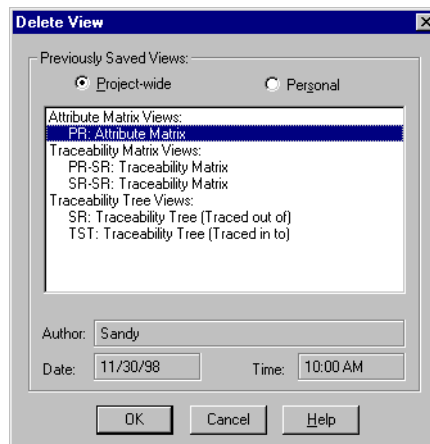
Tip: You can also export a view to a CSV and use another application, such as Excel, to open the data and arrange it for printing. See *Exporting a View as a CSV File* on page 11-18 for more information.

Deleting a View

A personal view can only be deleted by the person who created it. A project-wide view can be deleted by the person who created it or by a member of the Administrators Group.

To delete a view:

1. Click **File > Delete View**.
The **Delete View** dialog box appears.



2. Choose a project-wide or personal view to delete by clicking the corresponding button. A list of saved views appears.
3. Highlight the desired view from the list. The author, date of creation, and time of creation appear below the list.

Note: You can select more than one view to delete by using Ctrl-click or Shift-click.

4. Click **OK**. RequisitePro deletes the selected view(s).

Customizing Views

Customizing a view defines its look and content. You can:

- adjust the size of rows and columns;
- filter and sort data according to query criteria;
- select specific view properties to display.

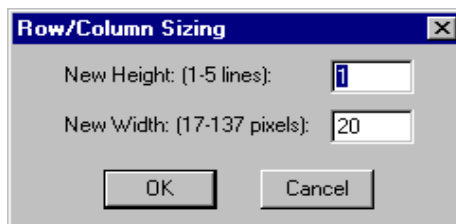
Once a view is defined, it can be saved for future use. Saving a view saves the view properties that were customized. When a saved view is opened, it displays in the state in which it was saved.

Adjusting Row Height

Adjusting row height affects *all* rows in the view.

1. Click **View > Row/Column Sizing**.

The **Row/Column Sizing** dialog box appears.:



2. Type the number of lines to display for each requirement. The maximum number of lines depends on a monitor's display resolution.
3. Click **OK**. The view is modified according to your specifications.

Shortcut: Click and hold the mouse on any border in the requirement area, then drag the row up or down according to the desired height. If the row height is already set at one line, RequisitePro will not let you drag the row *up* to less than one line. The Traceability Tree does not have a shortcut.

Adjusting Column Width

1. Click **View > Row/Column Sizing**.
The **Row/Column Sizing** dialog box appears, as shown above.
2. Type the number of pixels (in the Attribute Matrix) or lines (in the Traceability Matrix) to display for each requirement or attribute. Parameters for column widths in different views follow.
 - *Attribute Matrix*: To set a different width for each column, drag the column to the desired width. To set an equal width for all columns, use the **View** menu, **Row/Column Sizing** dialog. The maximum screen height varies based on your screen's resolution.
 - *Traceability Matrix*: RequisitePro determines the maximum width based on your screen's resolution.
 - *Traceability Tree*: The column width is represented by the amount of indentation or each branch. RequisitePro dynamically changes the maximum number of pixels allowed in these columns according to the width of the requirement pane and the size of the view. Any change to the column width affects all of the columns in this view.
3. Click **OK** to commit these changes.
Shortcut: Click and hold the mouse on any border in the attribute label area or the requirement area (the gray area at the top of each column) in an Attribute or Traceability Matrix. Drag the width left or right to the desired size. The Traceability Tree does not have a shortcut.

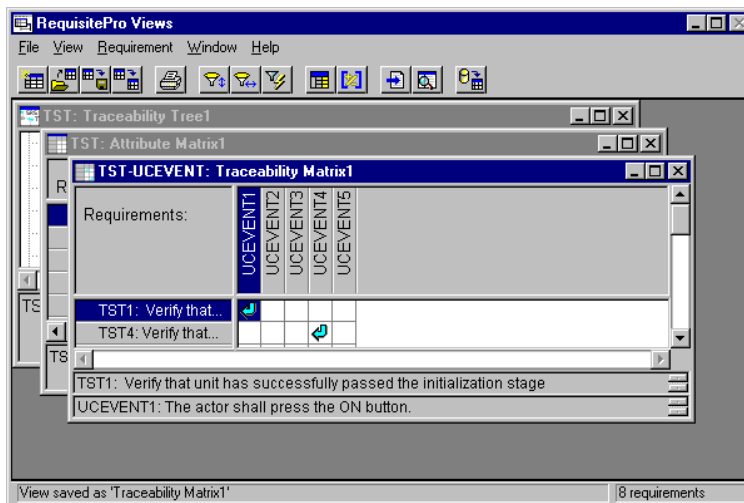
Resizing and Arranging Views

Use the menu commands or the buttons on the toolbar in the Views Workplace to define the size and arrange the order of a view.

Creating Cascaded Views

This feature overlaps views. Each view is displayed to the right and slightly below the preceding view. If many views are open, RequisitePro may overlap the first cascade of views with a second cascade until all open views are arranged.

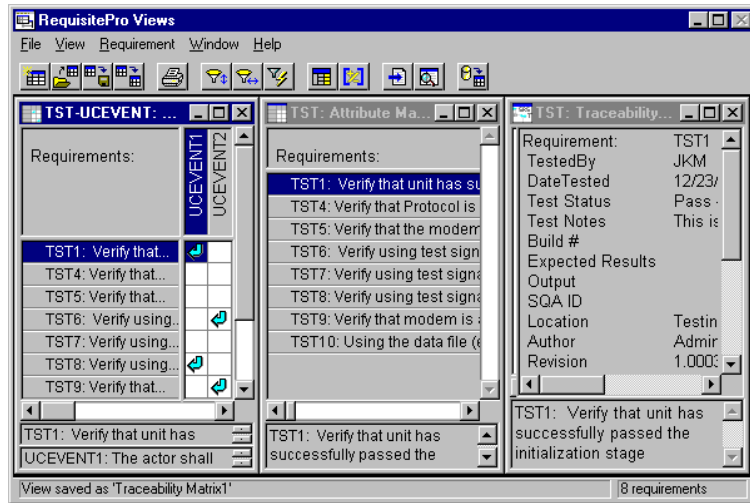
Click **Window > Cascade**. RequisitePro cascades the views.



Creating Tiled Views

This view arranges open views next to each other without overlap.

Click **Window > Tile**. RequisitePro tiles the views.



Arranging Icons

This feature arranges the icons for all minimized views from left to right, beginning at the bottom left corner of the Views Workplace.

Click **Window > Arrange Icons**. RequisitePro arranges the minimized views.

Displaying View Properties

Use the **Properties** command to display properties associated with an active view. Each view displays distinct properties. These properties affect how the view appears and not the information contained therein.

1. Click **View > Properties**. Click the following properties to display them in the view. If they are marked on the menu with a check mark, they appear in the active view.
 - Attribute Matrix:
 1. **Show Buttons** displays a button to the left of requirements and any hierarchical relationships. The button is used to expand or collapse the requirement.
 2. **Show Discussions** displays a red triangle to the right of the requirement text, indicating there are one or more discussions associated with a requirement.
 3. **Show Text** displays the first line of the requirement text.
 - Traceability Tree:
 1. **Show Buttons** displays a button to the left of requirements and any traceability and hierarchical relationships. The button is used to expand or collapse the requirement.
 2. **Show Discussions** displays an icon indicating there are one or more discussions associated with a requirement.
 3. **Show Lines** displays lines in the Traceability Tree that connect relationships.
 4. **Show Images** displays traceability relationships with arrows.
 5. **Show Root Images** displays an arrow at the root of hierarchical requirements.
 6. **Show Text** displays the first line of the requirement text.
 7. **Show Trace To** and **Trace From** display arrows in the direction of either *trace to* or *trace from* relationships, depending on your selection.

- Traceability Matrix:
 1. **Show Buttons** displays a small box or button to the left of requirements with children.
 2. **Show Discussions** displays an icon indicating there are one or more discussions associated with a requirement.
 3. **Show Expand Indicators** displays an icon next to each requirement that has one or more child requirements. The box contains a + or a -, indicating whether or not the requirement or discussion is displayed in an expanded or collapsed state.
 4. **Show Text** displays the first line of the requirement text (You can define the number of lines displayed using the View > Row/Column Sizing command).
 5. **Show Trace To** and **Trace From** displays arrows in the direction of either *trace to* or *trace from* relationships, depending on your selection.
 6. **Show Indirect** displays both direct and indirect traceability relationships.

Saving View Properties as Default

The **Save As Default** command saves a view layout and any properties displayed as the default when opening views of that type. This command is available for all view types. To save a view and its displayed properties as the default for views of that type:

- Click **View > Properties > Save As Default**.
- RequisitePro saves the view, layout, and properties for views of that type.

Note: Use the **Reset Default** command to reset any view properties that have been changed back to the saved default settings.

C H A P T E R 5

Querying and Searching

Creating and Using Queried Views

Once you have created a view, you can save it as is, or you can refine the view by querying (filtering and sorting) its information in a variety of ways.

You can filter requirements in views by limiting the values of one or more attributes or by limiting traceability. You can query requirements displayed in rows in an Attribute Matrix or Traceability Matrix, columns in a Traceability Matrix, or root requirements in a Traceability Tree.

Querying (Filtering and Sorting) Overview

Filtering restricts the information being displayed. Sorting determines the order in which information is displayed. For example, in an Attribute Matrix, you may want to view only those requirements assigned to you (filter criteria) and order requirements information from highest to lowest priority (sort criteria).

You filter and sort requirements by applying query criteria to the attributes. These criteria limit the values of the attributes and/or limit the traceability relationships. You can create a singular attribute query, so that you can see the results of each query criteria. Or you can create a query that filters and sorts all at once for several attributes.

Note: You cannot query hierarchical requirement relationships that are suspect. Parent requirements are automatically grouped with child requirements in unsorted and unfiltered views.

Note: RequisitePro does not automatically update views after you have queried. If other users have been changing data while a view is open, you can use **Query Now** or **Refresh All** to reflect those changes in your open view. Refer to *Viewing Current Data* on page 4-2 for more information.

Note: If you use Oracle and SQL Server databases, the following query restrictions apply in an Attribute Matrix only:

Cross-project traceability queries (queries for “trace to” or “trace from” relationships) are not supported between projects in the following database types:

- SQL and SQL (across servers)
- Oracle and SQL Server
- Access and Oracle
- Access and SQL Server

Cross-project traceability queries are supported between projects in the following database types:

- SQL and SQL (between projects on the same server)
- Oracle and Oracle
- Access and Access

Filtering

Filtering data is a process by which you can limit the amount of information displayed in a view in the Views Workplace. You specify the criteria for filtering the information. You can filter requirements by specifying distinct criteria for any or all of their attributes. For example, instead of displaying all requirements, you might apply a filter such that only requirements having a high priority are displayed.

Sorting

By default, the sort order in a view is ascending by requirement tag. When you create a query that includes multiple query criteria, you can sort the criteria to determine the order in which the requirements are displayed in a view. You can also modify the sort order after you have created a query. For example, you might sort requirements by priority, high to low. Then, within priority, you might sort by date.

Working with Queries

Use the **Query** command to extract data from the database and present it for use in any of the three views. You can save, open, edit, print, and export queried views.

Queried views range from simple to complex. When querying most attributes in a view, you choose one requirement type at a time. If you base a query on the *Trace to* or *Trace from* attributes, you have the ability to select more than one requirement type for targets.

You control the query. To ensure the information in a queried view is current, especially if other users are working in the database being queried, refresh the database with new data (click **View** > **Refresh** the **Refresh** button), then reapply the query criteria.



- By default, the Attribute Matrix view displays all attributes for any requirement type and all requirements of that type. You can display only the most necessary attributes when querying this view.
- The Traceability Matrix view displays two requirement types and the interrelationships between them.

Note: When an Attribute Matrix view or a Traceability Matrix view is queried, a filter and/or a sort is applied to the row and/or column requirements in the view.

- The Traceability Tree view displays all requirements of one type (root) and all requirements related to/from them.

When a Traceability Tree view is queried, the filter and/or sort criteria are applied to the root requirements in the view.

Creating Queries

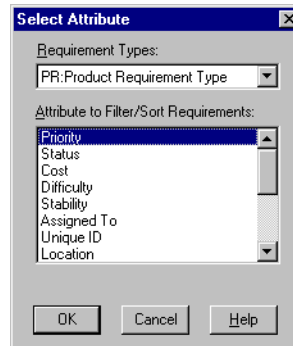
1. In the Views Workplace, open an Attribute Matrix, Traceability Matrix, or Traceability Tree view (For more information on views, refer to Chapter 4: *Working in Views*.)
2. Click the **View** menu in the Views Workplace.

The command displayed in the View menu depends on the active view:

- To query row requirements in an Attribute or Traceability Matrix, select **Query Row Requirements**.
- To query column requirements in a Traceability Matrix, select **Query Column Requirements**.

- To query the root requirements in a Traceability Tree view, select **Query Root Requirements**.

The **Select Attribute** dialog box appears.



Note: Both requirement attributes you have created and system attributes created by default in RequisitePro are included in the list.

3. Select the attribute that you want to use to query, and click **OK**.

The **Query Requirements** dialog box appears. Depending on the type of attribute you selected (list-type or entry-type), the box contains a specific set of criteria for you to define.

4. For list-type attributes, select one or more values.

For entry-type attributes, mark an option (i.e. **includes**, **equal to**) and type in the value.

Tip: When querying on a date, enter the date in the same format as specified for your computer under Regional Settings in your Microsoft Windows Control Panel.

5. Enter a Sort Order: **None**, **Ascending**, or **Descending**.

Note: To temporarily sort attribute values in ascending or descending order in an Attribute Matrix, you can right-click on the attribute label and select **Sort Ascending** or **Sort Descending** on the shortcut menu.

This sorting does not change an existing filter, and the sort order will be reset if you create or modify a query.

6. Enter When Traced criteria, if applicable. The When Traced option is only available when trace to or trace from attributes are queried. For hierarchical requirements, traceability queries automatically include the parent if the child participates in a traceability relationship (You cannot query for suspect hierarchical relationships).

Note: You cannot create a traceability query between two external requirements.

7. Click **OK**. The **Query [Row/Column/Root] Requirements** dialog box reappears.
8. To add other query criteria, click **Add** and repeat steps 3 through 7.
Note: The logical operator *and* is assumed between multiple attributes.
9. Click the **Retain Hierarchical Display** check box to include the parents of child requirements that match the filter criteria, even though the parents do not match.

Note: The query engine ignores hierarchical relationships, unless you mark the **Retain hierarchical display** check box. (For more information on parent-child requirements, refer to *Working with Hierarchy* on page 9-1.)

10. When the query is built, click **OK** in the dialog box. RequisitePro updates the view with the query results.

Note: To run the query again, click the **View** menu and click **Query Now**. (For more information on **Query Now**, refer to *Viewing Current Data* on page 4-2.)

Modifying Queries

After you have created a query, you can make changes to the query criteria. With the view open, do the following:

1. To open the **Query [Row/Column/Root] Requirements** dialog box (depending on your displayed view), click the **View** menu and choose **Query Row Requirements**, **Query Column Requirements**, or **Query Root Requirements**.
2. Select the query criteria you want to modify and click **Modify**.
3. The **Query Requirements** dialog box appears. (The dialog box that appears depends on whether the attribute is a list-type or entry-type.) Follow steps 4-10 above in *Creating Queries*.

Deleting Queries

1. In the Views Workplace, click the **View** menu and choose **Query Row Requirements**, **Query Column Requirements**, or **Query Root Requirements**.
The **Query [Row/Column/Root] Requirements** dialog box appears (depending on your displayed view).
2. In the **Query Criteria** list, select the query criteria you want to delete.
Note: The order of this list determines the order in which RequisitePro filters and sorts the criteria. Be aware that deleting a query from the list may affect the results of subsequent queries.
3. Click **Remove**. Click **OK** to close the dialog box.

Searching for Requirements in the Database, Documents, and Views

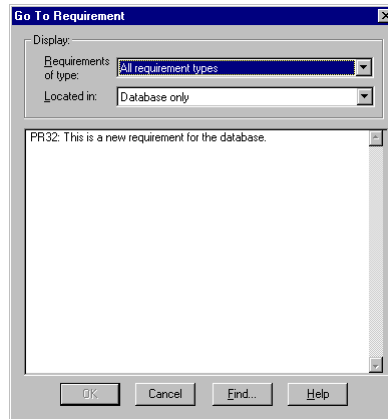
RequisitePro provides two methods for finding requirements:

- The **Go To** command launches a global search of the database, quickly finds a requirement, and displays it in its location (document or view).
- The **Find Requirement** command launches a search for a requirement in the active view or document.

Using Go To to Search the Database for a Requirement

1. Do one of the following:
 - On the Tool Palette, click **Requirement > Go To**.
 - In the Word Workplace, click **RequisitePro > Requirement > Go To**.

The **Go To Requirement** dialog box appears:



2. Select the requirement type from the **Requirements of Type** list box. If you do not know the requirement type, select *All Requirement Types*.
3. Select the location of the requirement from the drop-down list in the **Located in** edit box. Choose *All locations*, *Database only*, or a specific document from the list.

Note: Click the **Find** button to open the **Find Requirement** dialog box, which you can use to locate a specific tag number and/or requirement text.

4. Highlight the requirement and click **OK**. RequisitePro performs one of the following operations:
 - If the requirement is in an unopened document, RequisitePro opens the document and highlights the requirement.
 - If the requirement is in an open document, the Word Workplace appears with the document active and the requirement highlighted.
 - If the requirement is in the database only, the Requirement Properties dialog box appears so you can examine or modify its description, attribute values, or traceability relationships.

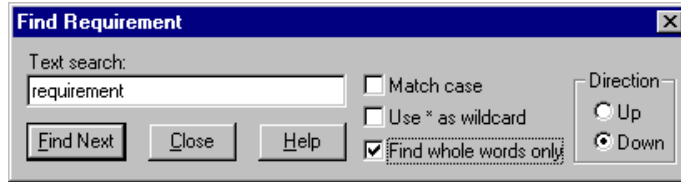
Using Find Requirement to Search an Active Document or View

1. Do one of the following:
 - To search in a document, click **Requirement > Find** on the Tool Palette, or click **RequisitePro > Requirement > Find** in the Word Workplace.



- To search in a view, click **Requirement > Find** (or the **Find requirement** button) in the Views Workplace.

The **Find Requirement** dialog box appears:



2. Type the text of the requirement in the **Text Search** field.
3. The next step is to establish a search parameter. The dialog box offers three different ways to search for text:
 - Mark the **Match case** check box for a case-sensitive search.
 - Mark the **Use * as wildcard** check box for a wildcard search. The asterisk matches 0 or more characters.
 - Mark the **Find whole words only** check box for an exact word match.
4. Mark the **Up** or **Down** button to specify a direction to search the view or document.
5. Click **Find Next** to launch the search. RequisitePro searches the current view or document for the requirement that satisfies the parameters established in the dialog box.
 - If the requirement is found, RequisitePro highlights the requirement and displays it in context.
 - If the search is performed in a view and all requirements in the view are not expanded, RequisitePro expands the requirements in the view to display the results of the search.
 - If the requirement is not found, RequisitePro returns to the requirement from which the search began.

Shortcuts from a View to a Requirement in a Document

When you are working in the Views Workplace, you can switch to the Word Workplace to view a requirement within a document.

In the Views Workplace, highlight the requirement to display and do the following:

- Press the right button on the mouse and choose **Go To** from the shortcut menu that appears, or
- Double-click the requirement.

Note: This shortcut works only if the default **Double-click to go to document** option is marked in the **Tools > Options** dialog box.

RequisitePro opens the Word Workplace and highlights the requirement in the document.

Reviewing a Project with Cross-Project Traceability

Sometimes, when you open a project, RequisitePro connects to an external project and displays both projects. In this case, the projects have been connected to one another, and cross-project traceability relationships may exist. You can review the requirements in both projects and their change-managed relationships in the Views Workplace.

Cross-project traceability creates traceability relationships between requirements that reside in different projects. This feature establishes connectivity among projects that were divided into subprojects or projects that relate to each other or share a set of requirements. (For more information on cross-project traceability, see *Setting Up and Modifying Cross-Project Traceability* on page 15-14.)

Results of Cross-Project Traceability

Once cross-project traceability relationships are established, the following can occur:

- External requirement types can be queried for display in views.
- If a requirement that is traced to requirements in other projects is deleted, RequisitePro updates the other projects to reflect the change. If the traceability relationship in the external project cannot be deleted, the relationship is updated when connectivity is established between the projects.

- If a requirement modification causes the relationship to become suspect, and the requirement is *traced to* or *traced from* requirements in other projects, RequisitePro updates the projects to reflect the suspect link. If the traceability relationship in the external project cannot be modified, the relationship is updated when connectivity is established between the projects.
- If a link between an internal and external requirement is marked as suspect, cleared as suspect, or created or removed by the user, RequisitePro updates both the internal and external projects to reflect the change.
- RequisitePro checks for circularity when external relationships are created. The circular check references internal requirements and first-level external requirements.

Displaying External Requirements

Requirements in the current project are distinguished from requirements in external projects by the project prefix. External requirements appear as follows:

- The **Traceability** tab in the Requirement Properties dialog box displays only the relationships that are related to the current project. The **General** tab displays external requirement information as read-only.
- The **Find Requirement** dialog box displays a list of requirement types for the current project and each externally mapped project.
- The **New View** dialog box displays requirement types from the current project and any external projects. If the Attribute Matrix view is selected, only the internal requirement types are available for selection. A full Attribute Matrix view of external requirements is not provided because of performance considerations.
- The **Attribute Matrix** displays all internal and external traceability relationships in the Trace-to-from columns.
- The **Traceability Matrix** displays all internally and externally mapped requirements of a single requirement type in the rows and columns.
- The **Traceability Tree** displays all internal and external requirements *traced to* or *traced from* a requirement. The first level cross-project traceability level displays. So, if an internal requirement is *traced to* an external requirement, the external requirement is displayed in the tree. Other requirements the external requirement traces to do not appear.

Displaying Requirement Relationships in Exported Views

Requirements in exported views with cross-project traceability appear as follows:

- An exported CSV file indicates that a *traced to/from* requirement exists as displayed in the view.
- An exported Microsoft Word file indicates a *traced to/from* requirement exists as displayed in the view.

For more information on exported views, refer to *Exporting Requirements* on page 11-18.

RequisitePro Extensibility Interface

For advanced querying capabilities, the RequisitePro Extensibility Interface provides a fully documented COM-based API, giving customers and third-party solution providers direct access to the requirement data.

The Extensibility Interface includes complete documentation for the RequisitePro Query Engine and the associated query language syntax. The Query Engine provides a programmatic interface and utilizes objects to retrieve RequisitePro project data for requirements and discussions. You can optimize queries to load only necessary information, enhancing the performance of your application.

Launch the documentation for the RequisitePro Extensibility Interface by clicking **Help > Extensibility Interface Reference**.

Requirement Metrics

Requirement Metrics provides project administrators and analysts with the capability of reporting statistics on RequisitePro requirements text, attributes, relationships, and revisions. These report results are displayed in Microsoft Excel and can be manipulated using Excel's charting capabilities.

You begin by creating one or more filters. A filter creates criteria for retrieving requirement information. For example, you would use an Attribute Count Filter to determine how many requirements in the project have a priority with the value "High". You then combine one or more filters to produce a query. A query combines the criteria from multiple filters to analyze requirements. The filters that compose a query are joined with the AND statement. Finally, you combine one or more queries to produce a report.

There are two types of reports that are available in Requirement Metrics:

- A **static** report uses static filters and shows results about the project at the present time.
- A **trend analysis** report uses time-sensitive filters that analyze changes in requirement text, attributes, traceability, and hierarchical relationships. Trend analysis reports require that you specify an increment for displaying revisions.

Access Requirement Metrics with the **Tools > Metrics** command on the Tool Palette.

For more information, refer to *Using Requirement Metrics* on page 14-3.

C H A P T E R 6

Working with Discussions

Discussions let you address comments, issues, and questions to a group of participants that you define. Discussions can be associated with one or more specific requirements, or refer to the project in general. A discussion item is either the initial discussion topic or a response. A participant can respond to either the initial discussion text or to another response.

Understanding Discussions

Viewing Discussions

All project users can read discussion items in RequisitePro, whether they are discussion participants or not. Any participants who have an e-mail address specified in their user information can read discussion items via e-mail. See *Configuring E-mail for Discussions* on page 6-2 for more information.

When a user opens a project, RequisitePro displays an icon on the Tool Palette status bar to indicate that there are new discussions or responses associated with that project or its requirements.

Responding to Discussions

When a user responds to the discussion, the response is added to the project in RequisitePro. In addition, the response is sent to all participants who have an e-mail address specified in their user information.

If you are the discussion author or a project administrator, you can restrict the discussion to participants. In this case, all project users can still read discussion items, but only participants can respond to the discussion.

Configuring E-mail for Discussions

RequisitePro offers the capability of communicating with a group of discussion participants regarding comments, issues, and questions related to one or more requirements, or related to the project in general. When enabled for e-mail, this feature will automatically generate an e-mail copy of any discussion item you enter (a new discussion or a reply) and send it to all discussion participants with valid e-mail addresses.

Discussion e-mail is enabled and configured in several ways:

- Enter an e-mail address in Project Security on the Project menu.
- Configure an notification e-mail service on the Tools menu.
- Configure participation and notification mail for all users with e-mail addresses using the Rational E-mail Reader application.

Entering E-mail Addresses in Project Security

All RequisitePro users can add or edit their own e-mail addresses within RequisitePro; however, only project administrators (who have administrator permissions) can add or edit other users' information.

See the procedure *Modifying Your Password, User Name, or E-mail Address* on page 3-9 for information on entering your own e-mail address in Project Security. Administrators can use the same procedure for entering or modifying all users' e-mail addresses.

Configuring Notification E-mail for Discussions

Use the E-mail Setup option to configure an e-mail service for your notification e-mail to other discussion participants. When you initiate or reply to a discussion item from within the RequisitePro **Discussions** dialog box, this feature automatically sends copies of the discussion items to the RequisitePro database and to all participants with a valid e-mail address in their RequisitePro user information.

Note: The E-mail Setup option is not required if your system administrator has configured participation and notification e-mail using the Rational E-mail Reader. See *Configuring E-mail Using the Rational E-mail Reader* on the following page.

To configure your notification e-mail:

1. On the Tool Palette, click **Tools > E-mail Setup**.
The **E-mail Setup** dialog box appears.
2. Click the **Enable E-mail Notification** check box to automatically generate notification e-mail (messages from you to other discussion group participants) when you create or reply to a discussion item in RequisitePro. Clear the check box to disable notification e-mail messages.
3. Click the down-arrow at the **E-mail Provider** field and select the e-mail protocol that is used on your LAN:
 - SMTP/POP3
 - MAPI
4. For **SMTP/POP3**, type the following:
 - your SMTP server name
 - your e-mail address, such as “yourname@yourcompany.com”
 - your name as it should appear in discussion group notices
5. For **MAPI**, type your MAPI profile.
6. Click **OK**.

Configuring E-mail Using the Rational E-mail Reader

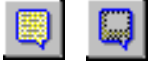
The Rational E-mail Reader offers full e-mail integration with RequisitePro by associating an e-mail handler with each RequisitePro project. The Rational E-mail Reader application allows discussion participants to reply to the discussion items using their e-mail, as well as from within RequisitePro. Initial discussion items and replies are automatically stored in the RequisitePro database and sent to discussion participants via e-mail. Participants can reply to the discussion items using their e-mail, as well as from within RequisitePro.

Discussion participants must have an e-mail address specified in their RequisitePro user information in order to receive discussion-related e-mail.

To configure e-mail using the Rational E-mail Reader, refer to *Configuring E-mail for Discussions* in the “Rational RequisitePro Installation” chapter of the *Rational RequisitePro Installation Guide*. This configuration is typically performed by a system administrator.

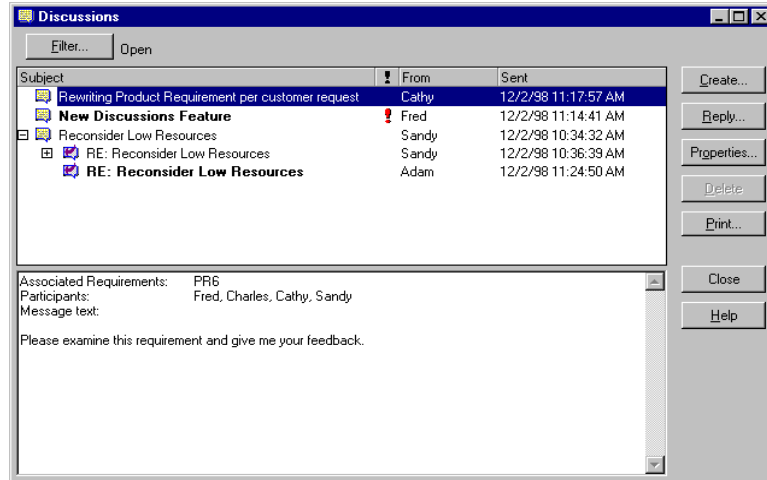
Creating Discussions

You can create a new discussion at any time.

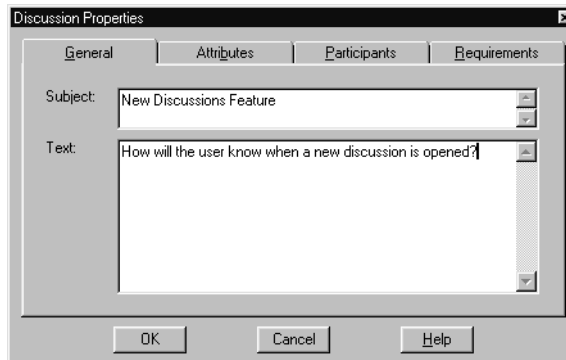


1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).

The **Discussions** dialog box appears:

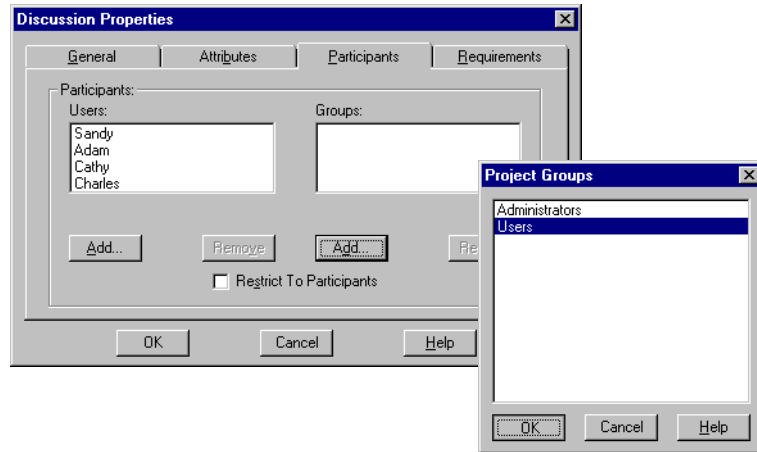


2. Click **Create**. The **Discussion Properties** dialog box appears:

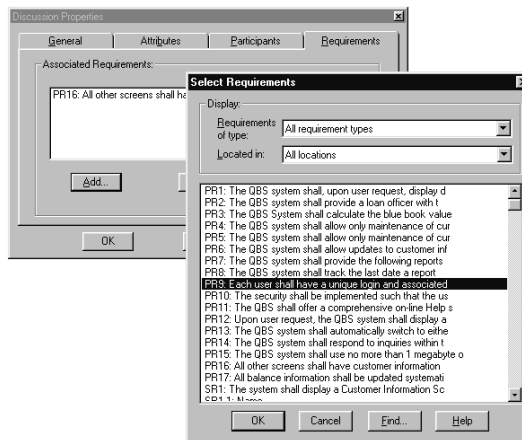


3. Click the **General** tab.
4. Enter a subject (required). The subject should be brief, but descriptive enough to inform other users of the discussion's contents.

5. Enter text. The text you enter will become the first item in the discussion. Open the discussion by raising an issue, making a comment, or asking a question.
6. Click the **Participants** tab. Add users and groups. (See *Creating and Modifying Discussion Participants Information* on page 6-15.)



7. Click the **Requirements** tab and add requirements. (See *Creating and Modifying a Discussion's Requirement Information* on page 6-17.)



Note: If you have filtered or displayed only discussions associated with specific requirements, those requirements are automatically listed on the **Requirements** tab. (See *Displaying, Filtering, and Sorting Discussions* on page 6-11.)

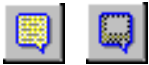
8. Click **OK**.



The discussion is opened and the message is sent to all participants who have an e-mail address specified in their user information. An icon on the Tool Palette also notifies users that there is a new discussion associated with that project.

Viewing and Modifying Discussion Properties

To view discussion properties:



1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).

The **Discussions** dialog box appears

2. Select a discussion and click the **Properties** button.

Note: Only the originator of the discussion and an administrator can modify a discussion's properties.

The **Discussion Properties** dialog box lets you do the following:

- Use the **General** tab to view the discussion subject and text, or enter subject and text when you are creating a new discussion.
- Use the **Attributes** tab to view the discussion's author, the date and time the discussion was created, and the discussion's current priority and status. Only the priority and status can be modified.
- Use the **Participants** tab to view or modify listings of the discussion's participants, divided by users and groups, and whether or not the discussion is restricted to participants.
- Use the **Requirements** tab to determine which requirements are associated with a discussion. Note that a discussion does not need to address any requirements specifically. However, if a specific requirement is addressed, it should be associated using this tab.

Notifying Participants about a New Discussion

When you create a new discussion, you do not have to do anything to notify participants about the discussion, provided that you have:

- entered a subject and topic text in the **Discussion Properties** dialog box at the **General** tab, and
- specified participants in the **Discussion Properties** dialog box at the **Participants** tab.

Note: In a new discussion, the discussion author is automatically included as a participant.

After you have completed these two tasks and clicked **OK** in the **Discussion Properties** dialog box, RequisitePro adds the discussion to the project and sends an e-mail message to each participant for whom an e-mail address has been specified in the participant's user information. The message contains the subject and text you entered at the General tab.



Participants can also read the discussion and its responses in RequisitePro. When a user opens a project, RequisitePro displays an icon on the Tool Palette to indicate that there are new discussions or responses associated with that project and/or its requirements.

Reading Discussions

The **Discussions** dialog box helps you keep track of which discussion items you have read and which you have not.



1. On the Tool Palette, click **Project > View Discussions**. (or the **Show Discussions** button).

The **Discussions** dialog box appears.

2. In the discussions list, click a discussion.

An expand/collapse indicator is displayed to the left of discussions with responses. Unread discussion items are shown as bold text. Items you have read are shown as normal text.

3. Click an item to read it. The item's text displays in the lower portion of the dialog box.

After approximately 5 seconds, RequisitePro changes the item from bold to normal text, indicating that it has been read. If you select another item before approximately 5 seconds elapse, RequisitePro leaves the previously selected item bold, indicating that it is still unread.

4. To manually mark an item as read or unread, right-click the item and select **Mark Read** or **Mark Unread** on the shortcut menu that appears.

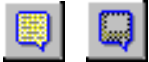
Responding to Discussions

You can respond to a discussion either in RequisitePro or in your e-mail application.

Note: If you are not a discussion participant, you can respond to the discussion only if the **Restrict To Participants** check box is cleared in the **Discussion Properties** dialog box at the Participants tab. Only the discussion author and members of the Administrators group can modify this option.

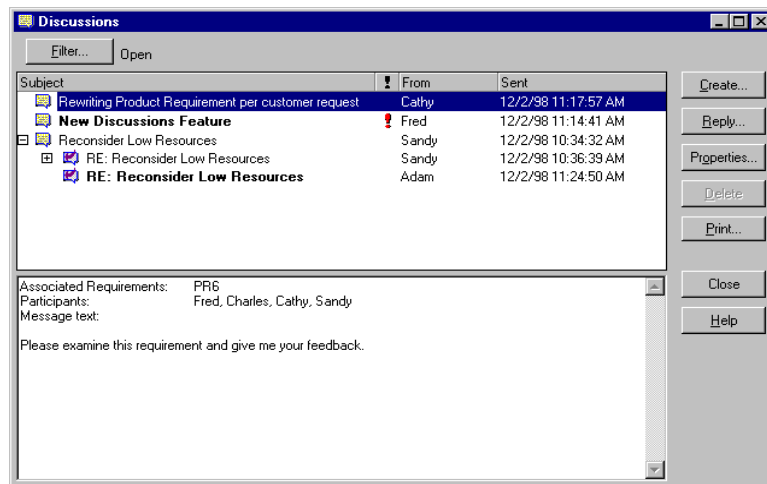
Responding to Discussions in RequisitePro

To respond to a discussion using the **Discussions** dialog box in RequisitePro:



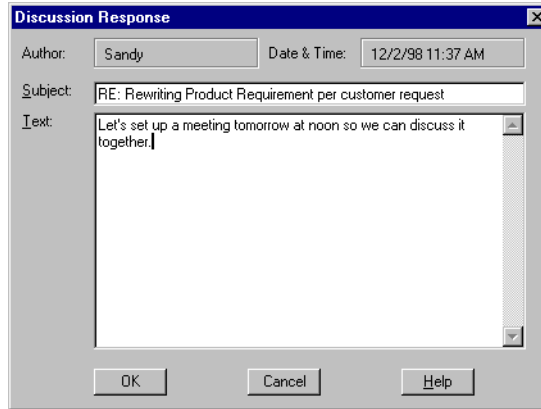
1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).

The **Discussions** dialog box appears:



2. In the discussions list, click a discussion or response to a discussion. The discussion text appears in the lower portion of the **Discussions** dialog box.
3. Click **Reply**.

The **Discussion Response** dialog box appears:



The default subject is “RE: [previous discussion item's subject].” You can change the subject.

4. Enter the text of your response.

The text automatically wraps at the end of each line you type. You can use Ctrl-C to copy selected text from another application or document, and Ctrl-V to paste it into the response text box. Text formatting, such as bold and underline, is not available in the **Discussion Response** dialog box. You cannot attach files to the response.

5. Click **OK**. The **Discussions** dialog box is displayed again. RequisitePro updates the associated project and discussion, and then sends your response to all participants who have an e-mail address specified in their user information.

Responding to Discussions Using E-mail

You can respond to a discussion using your e-mail application. Depending on whether your system administrator has enabled participation e-mail using the Rational E-mail Reader, one of two conditions apply:

- If participation e-mail is enabled, your reply is delivered to all discussion participants and stored in the RequisitePro database. It is then accessible from within RequisitePro.
- If participation e-mail is not configured, your reply is delivered to the recipients you select, but it is not stored in the RequisitePro database.

To respond to a discussion using your e-mail application:

1. In your e-mail application, open the message containing the discussion item to which you wish to reply.
2. Select the reply option.
3. Use the default recipient provided.

Note: If participation e-mail is enabled, messages will arrive from an e-mail handler that is specific to a RequisitePro project. In this case, simply reply to the sender. If participation e-mail is not enabled, you can reply to all recipients; however, in this case, your message will not be stored in the RequisitePro discussion. You can add recipients in either case.

4. Use the default subject provided. Do not modify the subject.
5. Enter the text of your response. Do not type below the line: “Text below this line is not included in the discussion response.” In addition, do not delete this line or anything below it.

RequisitePro uses this line to indicate which text is your response and which text is already included in the discussion. If you delete the line, your reply includes both your new text and any text that was below the deleted line.

Note: Attachments are not supported in discussions. Any attachments you include will not be added to the discussion in the RequisitePro database.

6. Send the e-mail message. The message is sent to RequisitePro, which updates the associated project and discussion, and then sends your response to all participants who have e-mail.


Note: Discussion replies cannot be modified after they have been sent. This prevents conflicts when the reply text is included in another reply. If you want to add an explanation regarding your message, you can do so by creating another reply.

Displaying, Filtering, and Sorting Discussions

Displaying Discussions Associated with a Single Requirement

You can open the **Discussions** dialog box to display only the discussions associated with a specific requirement. Or, you can open the **Discussions** dialog box to display all open discussions.

To display only discussions associated with a requirement:

1. Select a requirement.
2. Open a discussion.
 - In the Views Workplace, select a requirement and then do one of the following:
 - Click **Requirement > Discussions**.
 - Click the **Discussions** icon  to the right of the requirement.
 - Right-click the requirement, and then click **Discussions** in the shortcut menu that appears.
 - In the Word Workplace, select a requirement and then do one of the following:
 - Click **RequisitePro > Requirement > Discussions**.
 - Click **Requirement > Discussions** on the Tool Palette.
3. The **Discussions** dialog box appears, showing only those discussions associated with the specified requirement.

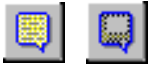
Note: To display all discussions, do one of the following:

- click **Filter**, clear the **Requirement** check box, and then click **OK**, or
- close the dialog box, and click **Project > View Discussions** on the Tool Palette.

Filtering Discussions

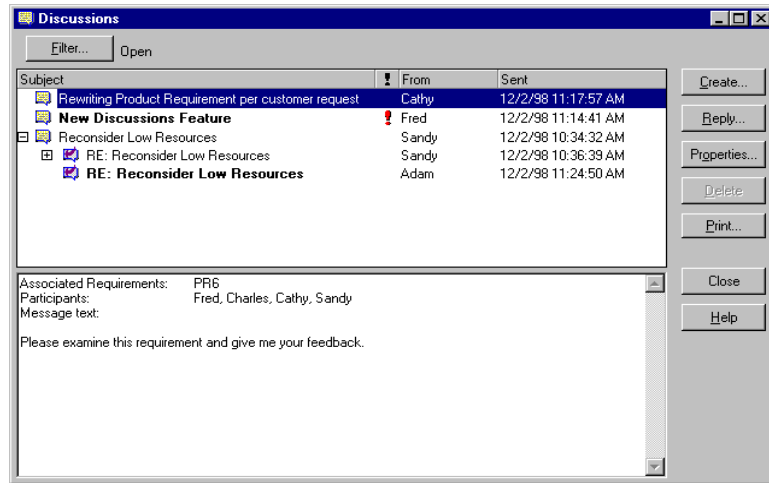
You can specify which discussions you wish to view in the **Discussions** dialog box, based on text, requirement, users, priority, and status.

To filter discussions, do the following:

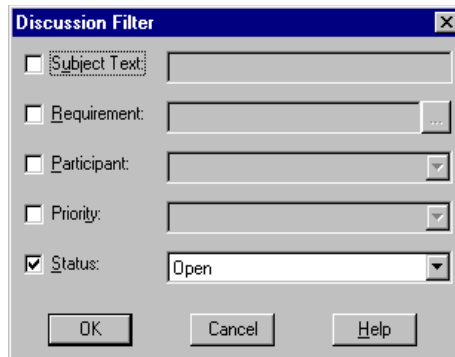


1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).

The **Discussions** dialog box appears, showing all open discussions:



2. Click **Filter**. The **Discussion Filter** dialog box appears:



3. To display discussions containing specific text in their subjects, select the **Subject Text** check box, and then enter the text in the text box.

Use % in the text if you want RequisitePro to find discussions using the wildcard character % to match one or more characters in the search text. For example, if this check box is selected and you enter the text **%document%**, RequisitePro finds discussions containing *document*, *documents*, *documented*, *undocumented*, etc.

4. To display discussions with which one or more requirements are associated, mark the **Requirement** check box, and then enter the requirements by which you wish to filter (separated by commas) in the text box. For example, enter **PR1, SR22, TST114** to include all discussions with which the requirements PR1, SR22, or TST114 are associated.

Note: Alternatively, click the adjacent ... button to open the **Select Requirements** dialog box, which you can use to select requirements by name.

5. To display discussions for which a particular user is a participant, select the **Participant** check box, and then select the desired user name in the list.

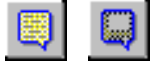
Note: You can select the name of a user who is a member of a group. RequisitePro will find discussions for which that group's members are participants, including the selected user.

6. To display discussions with a specific priority, select the **Priority** check box, and then select **High**, **Medium**, or **Low** in the list.
7. To display open or closed discussions, select the **Status** check box, and then select **Open** or **Closed** in the list.
8. Filter by more than one option by repeating any of steps 3 - 7 above.
9. Click **OK**.

The **Discussions** dialog box is displayed again, showing only the discussions that match the filters set above. The filter settings are displayed next to the **Filter** button in the dialog box.

Sorting Discussions

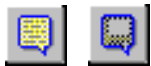
In the **Discussions** dialog box, you can change the sort order in which discussions appear.



1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).
The **Discussions** dialog box appears.
2. In the discussions list, click the column heading by which you want to sort the discussions.
For example, to sort discussions alphabetically by subject, click the **Subject** column heading.
3. To reverse the sort order, click the column heading again.

Printing Discussions

You can print discussion items. The printout shows the discussion item's subject, text, author, and creation date and time. The printout also shows information about the associated discussion, including the discussion's priority, status, requirements, and participants.



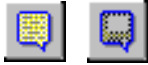
1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).
The **Discussions** dialog box appears.
2. In the discussions list, click one or more discussion items. (Use a multiple select action to select more than one item.)
3. Click the **Print** button. A **Print** dialog box appears.
4. Click **OK**.

Modifying Discussions

Viewing and Modifying Discussion Attributes

The **Attributes** tab in the **Discussion Properties** dialog box shows the discussion's author, the date and time the discussion was created, and its current priority and status. These properties can be modified by the discussion author and project administrators only.

To modify discussion attributes:



1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).
The **Discussions** dialog box appears.
2. Select a discussion, and then click **Properties**.
Alternatively, click **Create** to create a new discussion.
3. Click the **Attributes** tab.
4. Click the down arrow at the **Priority** field and select a priority from the drop-down list.

Note: You can only change a discussion's priority if the discussion is open.
5. If you are modifying a discussion, change **Status** to **Open** or **Closed**. (You cannot change the status of a new discussion.)

Creating and Modifying Discussion Participants Information

The **Discussion Properties** dialog box, **Participants** tab lets you determine which users and groups are included in the discussion, and whether or not the discussion is restricted to participants.

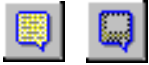
Any user can view the **Participants** tab, but only the discussion author and project administrators can modify its options, with the following two exceptions:

- If the **Restrict To Participants** check box is cleared, you can add yourself to the Users list.
- Regardless of whether or not the **Restrict To Participants** check box is selected, you can remove yourself from the Users list.

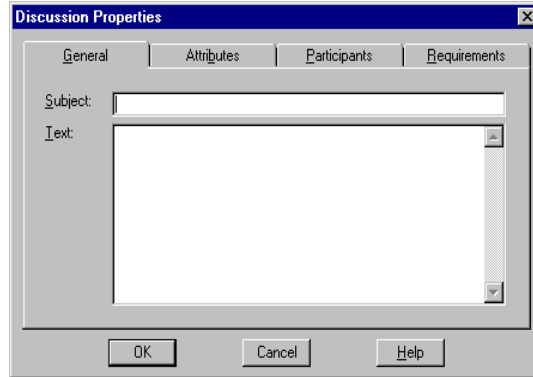
Note: However, if you are a member of a group that participates in the discussion, you cannot remove yourself from the group. A RequisitePro administrator must remove you from the group.

The options in this dialog box can be modified only if the discussion is open.

To modify participants information:



1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button). The **Discussions** dialog box appears.
2. In the discussions list, click an open discussion and click **Properties**; or click **Create** to create a new discussion. The **Discussion Properties** dialog box appears:



3. Click the **Participants** tab.
4. To add a user, click **Add** below the Users list. The **Project Users** dialog box appears:



5. Select a user from the list, then click **OK**. (Use a multiple select action to select more than one user.)

Note: For a new discussion, the discussion author is automatically included as a participant.

6. To add a group, click **Add** below the Groups list. The **Project Groups** dialog box appears:



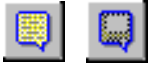
7. Select a group from the list, then click **OK**. (Use a multiple select action to select more than one group.)
 Note: If a user is a member of a group and you add the group to the Groups list, you do not need to add the user individually to the Users list.
8. To remove users, click the user names in the Users list, then click **Remove** below the **Users** list.
9. To remove groups, click the group names in the Groups list, then click **Remove** below the **Groups** list.
10. To restrict the discussion to participants only, select the **Restrict To Participants** check box. Only participants will be able to respond to the discussion, although all users can read it in RequisitePro.
11. Click **OK** to close the dialog box.

Creating and Modifying a Discussion's Requirement Information

The **Discussion Properties** dialog box, **Requirements** tab lets you determine which requirements are associated with a discussion. Note that a discussion does not need to address any requirement specifically. However, if a specific requirement is addressed, it should be associated using this tab.

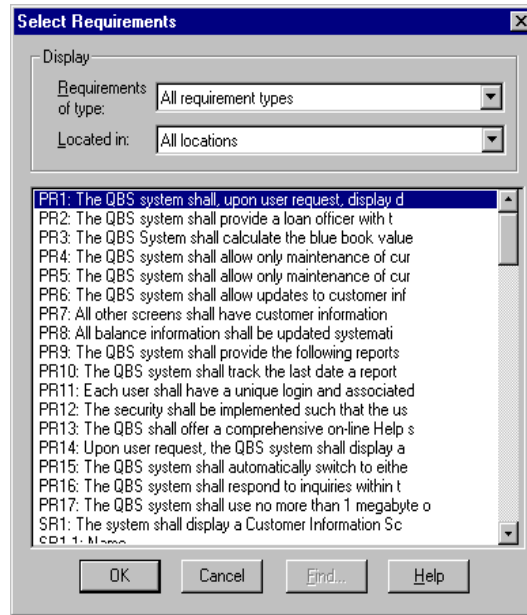
Any user can view the **Requirements** tab, but only the discussion author and members of the Administrators group can modify its options. The options in this dialog box can be modified only if the discussion is open.

To modify a discussion's requirement information:



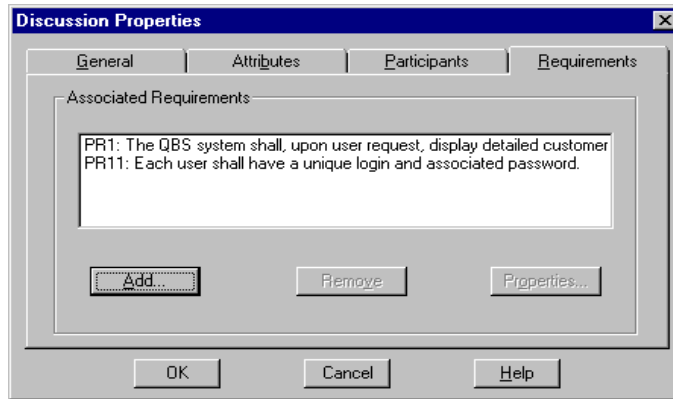
1. On the Tool Palette, click **Project > View Discussions** (or the **Show Discussions** button).
The **Discussions** dialog box appears.
2. In the discussions list, select an open discussion and click **Properties**, or click **Create** to create a new discussion. The **Discussion Properties** dialog box appears.
3. Click the **Requirements** tab.
4. To add a requirement, click **Add**.

The **Select Requirements** dialog box appears:



5. Select a requirement type from the Requirements of type list.
Note: Requirements with pending tag numbers do not appear in this list.
6. Select a location from the “Located in” list.
7. Select a requirement from the list. (Use a multiple select action to select multiple requirements.)
8. To locate a specific requirement, click **Find**.
9. When you have finished selecting requirements, click **OK**.

The **Discussion Properties** dialog box reappears with the specified requirement shown in the Associated Requirements list:



10. To remove a requirement, click the requirement in the **Associated Requirements** list, then click **Remove**.
11. To display a requirement's properties, click **Properties**. The Requirement Properties dialog box appears, showing the selected requirement's properties.
12. Click **OK**. To close the **Discussion Properties** dialog box, click **OK**.

Creating and Modifying a Requirement's Discussion Information

You can view and create discussions from within the Requirement Properties dialog box at the **Discussions** tab.

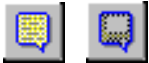
1. Do one of the following to open the Requirement Properties dialog box:
 - In the Word Workplace, select the requirement in an opened document and click **RequisitePro > Requirement > Properties**.
 - In the Word Workplace, select the requirement in an opened document. On the Tool Palette, click **Requirement > Properties**.
 - In the Views Workplace, select the requirement in a view. Click **Requirement > Properties**.
2. Click the **Discussions** tab. A list of all discussions associated with the requirement is displayed.
3. To create a new discussion associated with this requirement, click **Create**.
4. To read a discussion item, select the discussion, and then click **View**.

5. To view the properties for a selected discussion, select the discussion and click **Properties**.

Note: If the requirement is not saved in the database yet, the **Create**, **View**, and **Properties** buttons are disabled, regardless of how you accessed the Requirement Properties dialog box. Save the document containing the requirement, then open the dialog box again.

Closing Discussions

If you are the discussion author or a project administrator, you can close a discussion if it is no longer needed. Closed discussions are filtered out of the **Discussions** dialog box by default. A discussion must be closed before you can delete it.



1. On the Tool Palette, click **Project > View Discussions** (or click the **Show Discussions** button).
The **Discussions** dialog box appears.
2. In the discussions list, click the open discussion.
3. Click **Properties**. The **Discussion Properties** dialog box appears.
4. Click the **Attributes** tab.
5. Click the down arrow at the **Status** field and select **Closed** from the drop-down list.
6. Click **OK**. The **Discussions** dialog box reappears. When the discussion is selected, the **Delete** button is enabled, indicating that the discussion is closed and can be deleted.

Deleting Closed Discussions

If you are the discussion author or a project administrator, you can delete a closed discussion. A discussion must be closed before you can delete it.



1. On the Tool Palette, click **Project > View Discussions** (or click the **Show Discussions** button).
The **Discussions** dialog box appears.
2. In the discussions list, click a closed discussion.
3. Click **Delete**. A message appears, asking you to confirm the deletion.
4. Click **Yes**.

C H A P T E R 7

Working with Documents

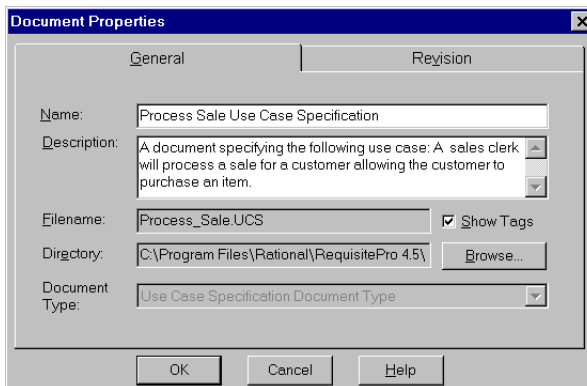
A RequisitePro requirements document is a Microsoft Word file *created in* RequisitePro and integrated with the project database. Requirements created outside of a project document can be imported or copied into a project document.

When you create a new project document, RequisitePro associates the document with the project that is open. This association is used to update the database and synchronize the revision numbering of the project and document. The document's name, location, document type, and revision information are stored in the project database.

Creating a Project Document

To create a document in a project:

1. On the Tool Palette, click **Document > New**; or in the Word Workplace, click **RequisitePro > Document > New**. The Document Properties dialog box appears:



2. Type the name of the document in the **Name** field (64 characters maximum).
3. Type a brief description of the document's purpose or contents in the **Description** field.
4. In the **Filename** field, enter, modify or view the name of the document. The file name defaults to be the same as the name you typed above in step 2. You do not need to give it an extension; RequisitePro assigns an extension according to the Document Type selected.
5. Click the **Show Tags** check box to display requirement tags in the new document. Clear this box to hide the tag text. Selecting this check box sets options in Microsoft Word to ensure that the requirement tags are visible both on your display and in the printed document. The check box "Hidden Text" is marked in both the View tab and the Print tab in the Microsoft Word Tools > Options dialog box.
6. Type a location for the file in the **Directory** field, or click **Browse** to select a directory.
7. Click the down arrow at the **Document Type** list and select a document type to assign to the new document.
8. Click **OK**. The new document is open and ready to be edited.
Note: The document must be saved for the requirements to be committed to the database.

Saving a Project Document

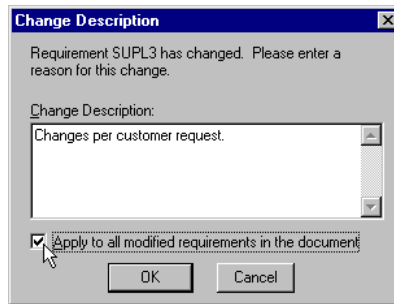
When a document is saved in RequisitePro, all modifications to the document properties, such as its logical name, revision number, label and change description, are saved to the project database. New requirements and changes made to existing requirements are committed to the database and are retained in the document. Requirements that were deleted from the document are deleted from the database.

To save a project document:

1. Do one of the following:
 - click the **Save the current document** button on the Tool Palette; or
 - click **Document > Save** on the Tool Palette; or
 - in the Word Workplace, click **RequisitePro > Document > Save**.



If a requirement in the document was modified, the **Change Description** dialog box appears and prompts you to type a reason for the change:



2. Type an explanation of the modifications in the **Change Description** field.
3. Click the **Apply to all...** check box, if the change description applies to all requirements that were changed in the document.
4. Click **OK**.

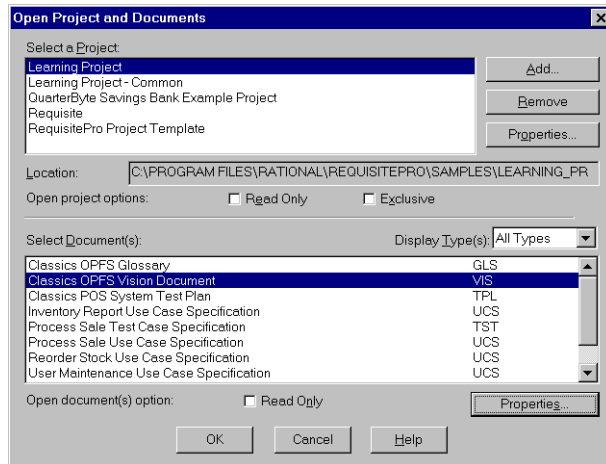
Opening a Document After a Project is Open

To open a project document:



1. Do one of the following:
 - on the Tool Palette, click the **Open a project and documents** button, or
 - click **Document > Open**, or
 - in the Word Workplace, click **RequisitePro > Document > Open**.The **Open Project and Documents** dialog box appears.

The **Open Project and Documents** dialog box displays a list of projects available in your project list.



Beneath the Projects list box, a second list box displays the documents that are associated with project you select. You can click the **Properties** button to view a read-only version of the Document Properties dialog box for the selected document in the list.

2. Select a project from the project list. A list of the project's documents appears in the document list. This list includes all documents you have either created in the project or imported into the project, regardless of whether the documents contain requirements.

Only one project can be open at a time. If you try to open another project and its documents while working in a project, RequisitePro prompts you to save any modifications, closes the current project and its associated documents before opening the new project and documents.

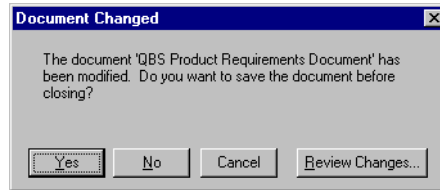
Note: For more information on options for controlling access by other users when the project and documents are open, refer to *Controlling User Access to a Document* on page 14-1.

3. Select one or more documents to open and click **OK**. RequisitePro launches Word and opens the documents.

Closing and Saving a Project Document

To close a project document:

1. On the Tool Palette, click **Document > Close**, or in the Word Workplace, click **RequisitePro > Document > Close**. If modifications were made to the document that were not saved, the **Document Changed** dialog box appears:



2. Do one of the following:
 - To accept the modifications and save the document, click **Yes**.
 - To abandon the modifications and leave the document as is, click **No**.
 - To return to the document without closing, click **Cancel**.
 - To review changes to the document, click the **Review Changes** button. The **Document Changes** dialog box lists changes, as described below.

Note: If you changed one or more requirements in the document, the **Change Description** dialog box appears (whether you selected **Yes** or **Review Changes** above). You have the option to record reasons for changing each requirement.

Reviewing and Changes Before Closing a Document

When closing a document that has been modified, the **Document Changed** dialog box presents you the option of reviewing the changes.

To review modifications to a document:

1. Follow steps 1 and 2 above and click the **Review Changes** button. If you have changed one or more requirements in the document, the **Change Description** dialog box appears. You have the option to record reasons for changing each requirement. Then the **Document Changes** dialog box lists all modifications to the document.
2. Click **OK** to save the changes once you have reviewed them.

Changing the Location of a Project Document

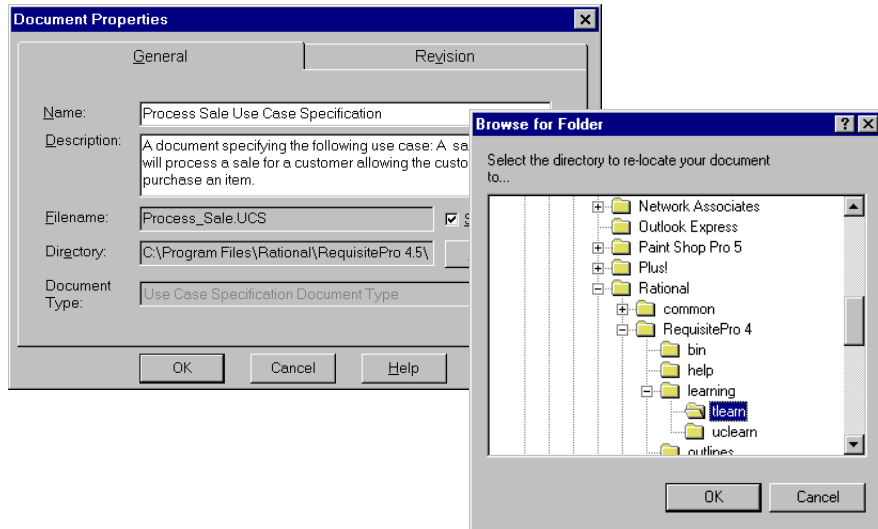
New documents are stored in the project directory by default. Documents can be created in or moved to any directory on the file system. All documents associated with the project are included in your project list regardless of where they are stored.

To change the location of a project document:

1. On the Tool Palette, click **Document > Properties**, or in the Word Workplace, click **RequisitePro > Document > Properties**.

The Document Properties dialog box appears. On the **General** tab, the document file name and location appear in the Directory edit box.

2. Click **Browse** to change the location of the file. The **Browse for Folder** dialog box appears:



3. Select a new location for the document. Click a folder to open it.
4. Click **OK** to accept the location and close the **Browse for Folder** dialog box.
5. Click **OK** to close the Document Properties dialog box.

Modifying Document Information

To modify information in an open project document:

1. Open the Document Properties dialog box, in one of the following ways:
 - In the Word Workplace, click **RequisitePro > Document > Properties**.
 - On the Tool Palette, click **Document > Properties**.
2. Modify the document's information:
 - On the **General** tab, you can change the name of the document, its description, and the directory in which it is stored. You cannot change its logical name or its document type.
 - On the **Revision** tab, you can enter a Change description. All other fields are populated by RequisitePro.
3. Click **OK** to close the Document Properties dialog box.
4. To save your changes to the document, do one of the following:
 - In the Word Workplace, click **RequisitePro > Document > Save**.
 - On the Tool Palette, click **Document > Save**.

Working With Microsoft Word

Saving a RequisitePro Document as a Word Document

RequisitePro includes an option to save a project document as a Microsoft Word document that is independent of the project. This allows you to attach the document to e-mail or share the document with someone outside of your work group.

When you choose this option, RequisitePro makes a copy of the active requirements document and saves it as a Word file. The resulting Word document retains the look and feel of the original requirements document and even includes bookmarks and tags used by RequisitePro to identify requirements.

To save a project document as a Word document:

1. Do one of the following to open the Save As dialog box:
 - On the Tool Palette, click **Document > Save As**.
 - In the Word Workplace, click **RequisitePro > Document > Save As**.

2. Specify a destination for the new copy of the document.
3. Accept the default name in the **File name** field, or type a file name and .doc extension for the document.
4. Click **Save**.

Managing Microsoft Word Documents

While working in RequisitePro, you can create, open, modify, save, and close Word documents that are independent from RequisitePro. Use the standard **File** menu commands to manage these Word documents (The Save As and Exit commands are disabled in the Word Workplace in order to prevent conflicts in handling RequisitePro documents).

Note: RequisitePro documents are associated with projects, managed from the **Document** menu on the Tool Palette or the **RequisitePro** menu in the Word Workplace, and saved in RequisitePro format by default.

Closing Microsoft Word

To close Word without closing RequisitePro, click the **Window** menu on the Tool Palette and choose **Close Word**.

Tips for Using Word in RequisitePro

Do Not Use

Do not use the Microsoft Word **File > Versions** feature. The Word logic of identifying a base version with subsequent revisions conflicts with RequisitePro's document revision history features. Version changes in Word can conflict with the RequisitePro requirements database. In addition, multiple versions greatly increase your document file size.

Do not use the **Cut** command in Microsoft Word to cut requirement text. When you use the Word Cut command, it is possible the requirement could be deleted from the project. In addition, if you cut a requirement from a document using the Cut command in Word, you cannot paste the requirement into the project database.

Do not use the **fast saves** option in Word. Remove the check mark in the **Allow fast saves** check box in Microsoft Word's Options dialog box.

Use With Caution

While you can use Word's **automatic paragraph numbering** (the Format > Bullets and Numbering command) within requirement text in a requirements document, this feature can produce inconvenient and unexpected results. Automatic numbering changes caused by the addition or deletion of paragraphs require you to confirm changes to all subsequent numbered requirements in the document. This also adds a revision history entry for each requirement, resulting in cluttered revision history list. Changes in autonumbering can also impact the requirement tag numbering.

If you are using Word 2000 and choose to clear the **Trust all installed add-ins and templates** check box on the Tools > Macro > Security dialog box, you must click **Enable** at the Microsoft Word message box each time you open the RequisitePro Word Workplace.

Improving Word Performance

The following tips can improved Microsoft Word's performance with RequisitePro documents:

- **Create small RequisitePro documents.** Since large documents can take significant time to open, close and manipulate, documents less than 5 MB or about 50 pages are optimal.
- **View documents in Normal mode.** Documents in Page Layout mode are constantly being repaginated.
- **Open documents selectively.** Many Word documents open at once decreases performance.

Working with Word Styles

If you press Enter after a marked requirement in a document, the requirement style (such as double underline) and color are carried to the next line. Press **Ctrl** and the **Spacebar** before typing, and the Word style is reset to Normal.

Using Word Options for “Hidden” Requirements

You can set options in the Microsoft Word **Tools > Options** dialog box to affect how requirements are displayed in RequisitePro documents:

- If you clear the Bookmarks check box, you will not see the bookmarks around the requirement in RequisitePro documents.

- The requirement tag in a RequisitePro document is hidden text in Microsoft Word. If you clear the Hidden text check box, you will not see the tag in the text of the requirement in the RequisitePro document.

Note: When editing a RequisitePro document offline, note that Microsoft Word turns off the bookmarks and hidden text features by default. Before editing the requirement text in an offline document, we recommend marking the hidden text and bookmarks for display.

For information about setting color and style for requirements, refer to the *Creating and Modifying Requirement Types* on page 15-7.

Editing a Requirements Document Outside of RequisitePro

To edit a document in Word outside of RequisitePro and merge it back in later, use RequisitePro's offline authoring feature rather than the Save As command.

Creating a Word Document from a RequisitePro Requirements Document

Use the **Document > Save As** command to save a copy of your requirements document with a .doc file extension. The resulting Word document will not appear in the project documents list.

Managing External Word Documents

To manage a Microsoft Word document that is not part of a RequisitePro project, use the File menu commands in the Word Workplace.

Disabled Word Commands

The **File > Save As** and **File > Exit** commands are disabled in the Word Workplace in order to prevent conflicts in handling RequisitePro documents. On the RequisitePro Tool Palette, use the **Window > Close Word** command to close the Word Workplace.

The **Tools > Templates and Addins** command is disabled to prevent deletion of the RequisitePro template, which is required for proper functioning of RequisitePro.

Working With Documents Offline

Offline authoring lets requirements authors and project administrators use a document outside of RequisitePro (i.e., offline).

When you take a document offline, RequisitePro creates a copy of the document in the directory you specify. The original is still stored in RequisitePro, but it is changed to a read-only document. Other users can view the document in RequisitePro, but they cannot edit it until you bring it back online.

When you take a document offline, RequisitePro includes Microsoft Word macros in the document. These macros allow you to add and delete requirements in the offline document.

Note: In Word 2000, you may need to adjust your macro security levels to use the Requirement > Create and Delete menu commands in offline authoring. Word 2000 defaults to the highest level for macro security. This setting prevents the enabling of the RequisitePro offline authoring macros. Reset the macro security in Word 2000 to medium on the Security dialog box, which is available by clicking Tools > Macro > Security.

Do not rename documents while they are offline. The original file name is necessary for recognizing the offline document within RequisitePro. When you bring the document back online, RequisitePro replaces the read-only document with the modified document. Alternatively, you can elect to cancel the offline process. In this case, RequisitePro restores the original document, removing its read-only state, so all requirements authors and members of the Administrators group can again modify it within RequisitePro.

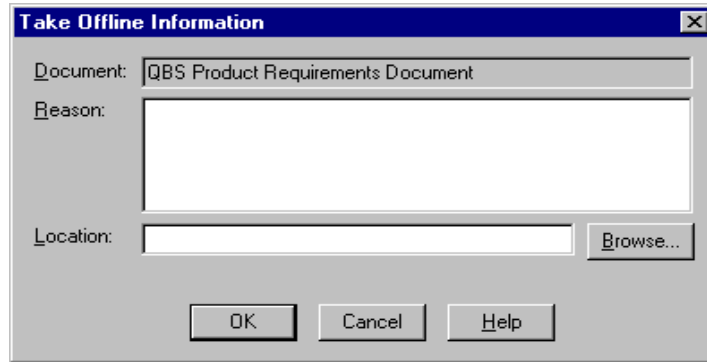
Taking Documents Offline

Before taking a document offline, make sure all changes made to requirement text outside the document (such as in the Attribute Matrix, or in RequisiteWeb) have been saved in the document.

1. To take a document offline, do one of the following:
 - In the Word Workplace, click **RequisitePro > Document > Offline Documents**.
 - Or, on the Tool Palette, click **Document > Offline Documents**.
2. In the Display Types list, select a document type.

3. Click the document you want to take offline. (Use a multiple select action to select more than one document.)
4. Click **Take Offline**.

The **Take Offline Information** dialog box appears:



5. In the **Reason** text box, type a reason for taking the document offline.
6. In the **Location** field, enter the directory path where you want to store the document. Or, click **Browse** to locate the directory.
7. Click **OK**.

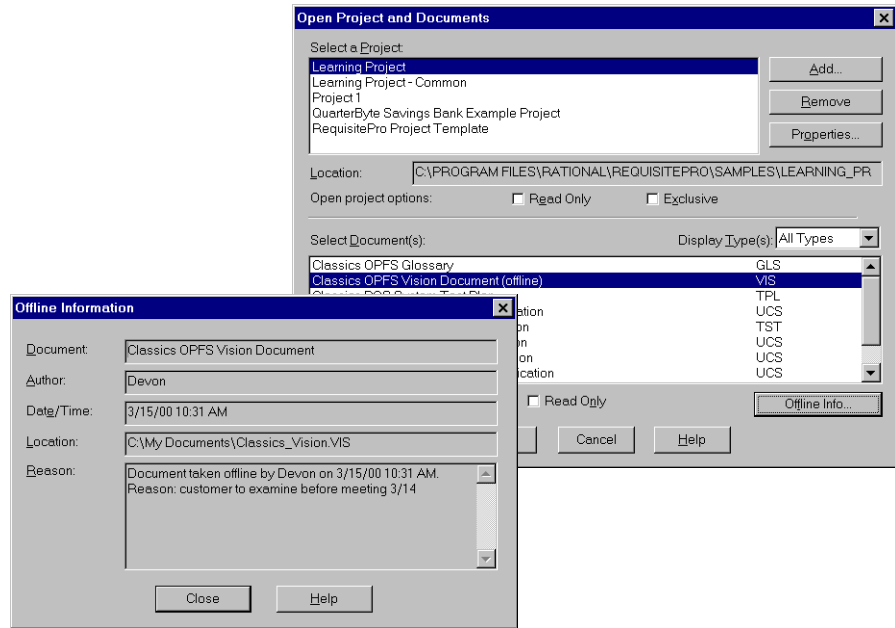
Determining Whether a Document is Offline

To check whether a document is offline:

- Open the **Open Project and Documents** dialog box:
 - On Tool Palette, click **Document > Open**; or
 - In the Word Workplace, click **RequisitePro > Document > Open**.
- In the Select Documents list, offline documents are followed by the word “(offline).”

To learn more about an offline document:

- Click the document in the Select Documents list, and then click **Offline Info** button.
- The **Offline Information** dialog box appears, showing the document name, the user who took the document offline, offline date and time, location, and reason the document was taken offline.



Modifying Offline Documents

You modify an offline document in the same manner as you would any other Microsoft Word document. All Word features and options are available for your use when editing a RequisitePro offline document. In addition, you can add and delete RequisitePro requirements in an offline document.

When you open the offline document in Word, make sure that you enable the Word macros. These macros allow you to add and delete requirements in the offline document.

You can modify requirement text in an offline document. When you bring the document back online and open it in RequisitePro, RequisitePro prompts you to enter a reason for the changes to the requirement text.

Note: Microsoft Word turns off the bookmarks and hidden text features by default. Before editing the requirement text in an offline document, we recommend marking the hidden text and bookmarks for display. Click **Tools > Options** in Microsoft Word to open the Options dialog box, and mark the **hidden text** and **bookmarks** check boxes on the Views tab.

Note: Do not rename documents while they are offline. The original file name is necessary for recognizing the offline document within RequisitePro.

Creating Requirements in Offline Documents

Mark requirement text in an offline document in the same way you would if the document were online. The RequisitePro macro stylizes the requirement text with a double underline and notifies you that a requirement was created. When you bring the document back online, RequisitePro gives the requirement a number and default attributes. You can then modify the requirement in the Requirement Properties dialog box.

To mark text as a requirement in an offline document:

1. Highlight the information to define the requirement.
2. Click **RequisitePro > Requirement > Create**.

Deleting Requirements in Offline Documents

Delete a requirement in an offline document in the same way you would if the document were online. When you delete a requirement, RequisitePro does not remove the requirement text from the document, but it is no longer recognized as a requirement. RequisitePro removes the requirement color and style settings and replaces them with the document default style.

When you bring the document back online, RequisitePro notifies you regarding the requirements you have deleted, and asks you if you want to update the online document with the changes. If you decline, RequisitePro does not bring the document back online.

To delete a requirement in an offline document:

1. In the offline document, click anywhere in a requirement.
2. Click **RequisitePro > Requirement > Delete (Unmark)**.
3. To undo a delete operation, click **Edit > Undo**. Click **Undo** until the requirement is completely restored.

In an offline document, you can delete only one requirement at a time.

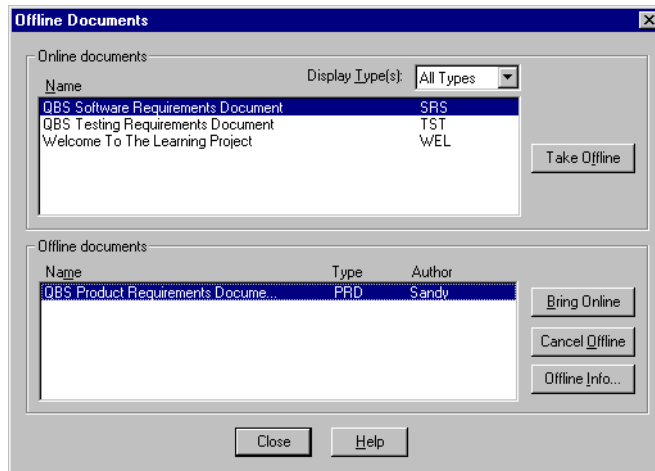
Bringing Offline Documents Back Online

If you are the offline author or an administrator, you can bring an offline document back online.

1. Do one of the following:

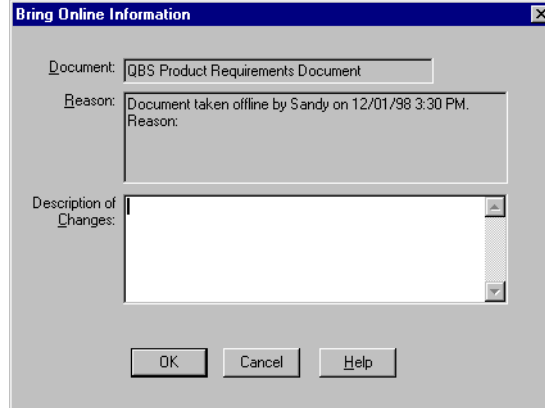
- In the Word Workplace, click **RequisitePro > Document > Offline Documents**, or
- On the Tool Palette, click **Document > Offline Documents**.

The **Offline Documents** dialog box appears:



2. In the Offline documents list, select the document you want to bring back online. (Use a multiple select action to select more than one document.)

3. Click **Bring Online**. The **Bring Online Information** dialog box appears:



4. In the Description of Changes box, enter a description of the changes made to the currently selected document while it was offline (if any).
5. If you are bringing multiple documents back online and the changes apply to all subsequent documents, select the **Apply to All** check box. If you do not select the Apply to All check box, the Bring Online Information dialog box appears for each subsequent document you bring online in this session, and you must enter changes for each document individually. You can select Apply to All for any document you bring online in the session to apply the changes to all subsequent documents. For example, if you are bringing back online four documents named Doc1, Doc2, Doc3, and Doc4, and you do not select Apply to All while entering information for Doc1, but you do select Apply to All while entering information for Doc2, the Bring Online Information dialog box does not appear for Doc3 or Doc4.
6. Click **OK**.

Note: A Microsoft Word warning message states that the document you are bringing online contains macros. Click the **Enable Macros** button.

If you have deleted requirements in an offline document, RequisitePro notifies you how many requirements you have deleted, and asks if you want to update the online document with the changes.

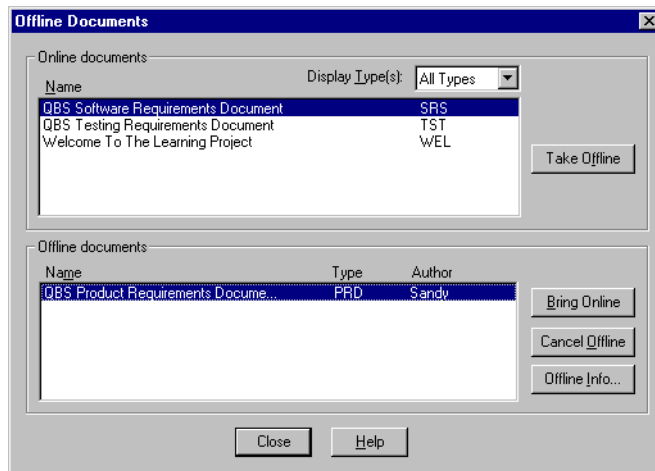
7. Click **Yes** to accept updating the document, or click **No** to decline updating the document. If you decline updating the document, RequisitePro does not bring the document back online.

Bringing Documents Online Without Saving Changes

If you are the offline author or a member of the Administrators group, you can bring a document back online without saving any changes you made while it was offline.

- To open the **Offline Documents** dialog box, do one of the following:
 - In the Word Workplace, click **RequisitePro > Document > Offline Documents**.
 - On the Tool Palette, click **Document > Offline Documents**.

The Offline Documents dialog box appears.



- In the Offline documents list, select the document you want to bring back online without saving offline changes to them. (Use a multiple select action to select more than one document.)
- Click **Cancel Offline**. A message appears, asking you to confirm the deletion of the offline changes.

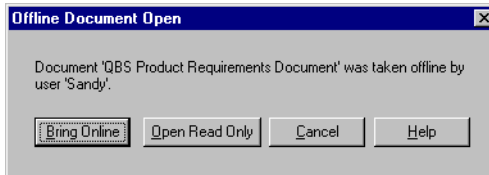
If you are bringing multiple documents back online, this message appears only once for all documents.
- Select the **Remove offline document files** check box to delete the offline documents from the directory in which they were stored.
- Click **Yes**. The online version of the documents are restored.

Reading Offline Documents

You can read a document that another user has taken offline. RequisitePro displays the document in read-only mode in the state it was in before the other user took it offline.

If you are the offline author or a member of the Administrators group, when you open the document in RequisitePro, you can choose to bring it back online or open it in the state it was in before it was taken offline.

1. To open the **Open Project and Documents** dialog box, do one of the following:
 - On Tool Palette, click **Document > Open**; or
 - In the Word Workplace, click **RequisitePro > Document > Open**.
2. Click the offline document in the Select Document(s) list that you want to open.
3. Click **OK**. The **Offline Document Open** dialog box appears, identifying the user who took the document offline:



4. Do one of the following:
 - If you are the offline author or an administrator, click **Bring Online** to bring the document back online, or **Open Read Only** to open it in the state it was in before you took it offline.
- Note:** You cannot access the Bring Online button if you are not the offline author or an administrator.
- If another user took the document offline, click **Open Read Only** to open the document for reading.

Using Word Master Documents

Using master documents in Microsoft Word can be very helpful for viewing and printing a collection of smaller subdocuments as one document. All subdocuments within the master document can be printed with consistent page numbering. Master documents are a feature of Microsoft Word. You should not attempt to create, import, or manage master documents from within RequisitePro.

Consider the following guidelines when using master documents:

- Archive the project before creating subdocuments. (For information on archiving projects, refer to *Archiving Projects* on page 14-9.)
- The master document should not be a RequisitePro document; the subdocuments can be RequisitePro documents. This prevents redundant requirements and broken traceability links.
- Do not edit requirement text in the subdocuments outside of RequisitePro.
- Do not edit the subdocuments in RequisitePro while viewing the master document in Microsoft Word.

To prepare RequisitePro documents to be used as subdocuments, save them in Word format:

1. On the Tool Palette, click **Project > Properties**.
2. On the **General** tab of the Project Properties dialog box, clear the check box **Save documents in Requisite format**.

Note: This removes all project security from these requirements documents and they can be modified outside RequisitePro, so only clear this check box when you are preparing subdocuments for viewing or printing from a Microsoft Word master document.

3. Open and save the documents in the project that you want to use as subdocuments.

Important: After viewing and printing the master document in Microsoft Word, open the Project Properties dialog box again and select the check box **Save documents in Requisite format**. Open the subdocuments and save them. This reestablishes project security for those documents.

For more information on using master and subdocuments, refer to the Microsoft Word documentation.

C H A P T E R 8

Working with Requirements

A requirement is a condition or capability to which your project must conform. Requirements are written to be meaningful to the user of the system. Each requirement includes visible behavior and benefit. In RequisitePro, requirements are located in a requirements document or directly in the database. The Word Workplace is used to define requirements, and the Views Workplace is used to analyze them, but you can create requirements in either workplace.

A requirement's text, attributes and relationships can be modified in both the Views and Word Workplaces. Requirement viewers can read the information in context and add information that supports and justifies the requirements.

Using the in-view editing feature, you can edit and create requirements directly within an Attribute Matrix view. Simply click on a selected requirement in the view to start editing the requirement text in place. You can also create requirements from Traceability Tree and Traceability Matrix views using the Requirement Properties dialog box.

When you create a requirement in a document, RequisitePro places hidden text at the beginning of the description to hold the requirement's *tag*. This hidden text is underlined with a dotted line. If information is typed in this tag area, it is formatted as hidden text and is visible only when Microsoft Word's **Hidden Text** feature is turned on. To reformat the text to normal, use Word's **Format > Font** feature. The *text* of the requirement should be in normal text only.

Extended editing of documents allows you to change requirement text outside a document: from a view, from RequisiteWeb, from the RequisitePro Extensibility Interface, or from integrated tools. You can update requirement text without having to open the document. This allows multiple people to simultaneously edit requirements within a single document. All changes are tracked in the database.

Creating Requirements

All requirements that are created in RequisitePro are stored in the project's database. Once created, a requirement can be modified, moved and copied within the project and traced to and from other requirements in the same project or across projects.

When a requirement is created, RequisitePro stores the following information in the database.

- *The requirement's description.* In a document, this may include any combination of text, graphics, or OLE objects. In the project database, the requirement description is limited to text.
- *Attribute values.*

Creating a Requirement in a Document

When you create a requirement in a document, RequisitePro performs the following operations:

- The selected information is bracketed with bookmarks.
- The following information is associated with the new requirement:
 - *Requirement tag identifier.* A requirement tag is comprised of a prefix and a number
 - *Color and style format.* If the requirement type has color and style, the new requirement is formatted with these settings.
 - *Requirement attributes.* The new requirement is associated with the attributes established for the requirement type.
- For hierarchical relationships, the requirement is assigned a parent based on the parent you select in the Requirement Properties dialog box, Hierarchy tab. (For more information on parent-child relationships, refer to *Working with Hierarchy* on page 9-1.)

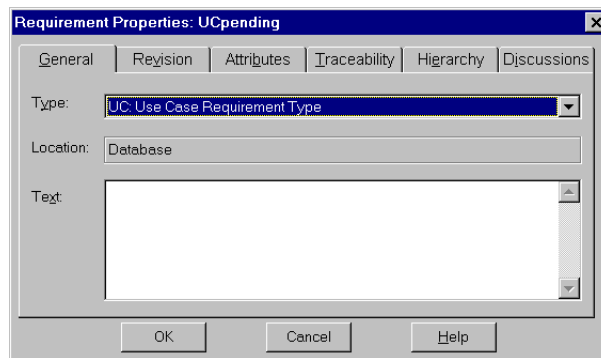
Note: The requirement and its attribute values are not saved to the project database until you save the document.

To create a requirement in a document:

1. Open a requirements document and type the text of the requirement in the document.
2. Highlight the information (text, graphics, OLE objects) that will become part of the requirement. (If you don't highlight text, you will be prompted to enter text for the requirement.)
3. Do one of the following:
 - Click **RequisitePro > Requirement > Create** in the Word Workplace.
 - Click **Requirement > Create** on the Tool Palette.
 - Right-click and select **Create Requirement** from the shortcut menu.
 - Or, click the **Create requirement** button on the Tool Palette.



The Requirement Properties dialog box appears:



4. Click the down arrow in the **Type** field and select a requirement type with which to associate the requirement. The **Tag** text at the beginning of the requirement text automatically includes the *Pending* tag.
5. Click **OK**.
6. To save your changes, click **RequisitePro > Document > Save** in the Word Workplace or **Document > Save** on the Tool Palette. RequisitePro saves the document, updates the database, and assigns a requirement number to the requirement (in place of the *Pending* tag).

Note: If you press Enter after a marked requirement, the requirement style (such as double underline) and color are carried to the next line. Press Ctrl and the Spacebar before typing, and the Word style is reset to Normal.

Using Fast Create

Use RequisitePro's **Fast Create** feature to create a requirement without opening the Requirement Properties dialog box.

1. Highlight the text in the document that will become the requirement. (If you don't highlight text, the Requirement Properties dialog box opens. Refer to *To create a requirement in a document*: on page 8-3.)
2. Press the **Shift** key and click the **Create a requirement** button on the Tool Palette.
RequisitePro bypasses the Requirement Properties dialog box and creates the requirement based on the default requirement type chosen for the requirements document.



Creating Multiple Requirements

Use the **Requirement > Block Create** command to create multiple requirements from a block of selected text in a document. When you select this command, the Requirement Block Create wizard guides you through creating the requirements step-by-step. You specify the keywords to use for the requirements and indicate whether the requirements are in sentences or a paragraph.

RequisitePro uses three methods to distinguish individual requirements in the highlighted block of text:

- *Key words* – RequisitePro searches for a specific word, such as “shall” (the default), or any word you specify in each sentence or paragraph (according to the options you select).
- *Text delimiters* – RequisitePro searches for text contained within specific text delimiters, such as <>, { }, [], BEGINREQ ENDREQ. You can designate text to become a requirement by surrounding the text with any delimiters you choose. We recommend you use a different character on each end of the text, such as open and close brackets [].
- *Word style* – RequisitePro searches the text for specified style settings, such as “Heading 1” or “Body text” or highlighted text. The styles in your current document template are loaded into the Styles box.

To create multiple requirements from a block of text:

1. Create or open a requirements document and type the text of the requirements.
2. Highlight the information (text, graphics, OLE objects) that will become requirements.
3. On the Tool Palette, click **Requirement > Block Create**.
The **Requirement Block Create** dialog box appears.
4. Click the down arrow at the **Requirement Type** field and select a requirement type with which to associate the block of requirements.
5. Click the **Set Defaults** button to open the Set Requirement Defaults dialog box, where you can enter default attributes, hierarchy, traceability and a change description for the requirements you create.
6. Click on one of the following options to indicate a method of distinguishing each requirement in the block of text:
 - **Keywords** – Type keywords in the **Keywords** field and click **Add** to add the keywords to the requirements criteria field. Select the **Match case** check box to make the keyword match the case of the text you enter in the Keyword box OR select the **Use * as wildcard** check box if you want to use the * as a wildcard character in the Keyword field.

Note: If you want to create requirements from the selected text for each **sentence** or for each **paragraph** without parsing based on a keyword, enter only an * and mark the **Use * as wildcard** check box.

 - **Text delimiters** – Type a beginning and end delimiter in the indicated field and click **Add**.
 - **Word styles** – Select a style from the styles list and click **Add**.

Note: The dialog box changes to include specific options for each of the above choices.
You can use more than one criteria to differentiate the individual requirements. Add keywords, text delimiters, and Word styles to the search list by clicking each button in turn. Keep in mind that RequisitePro searches the document in the order listed above: keywords first, text delimiters second and word styles last.
7. Select a source, **sentence** or **paragraph**, from which RequisitePro will search for keywords to differentiate the requirements.

8. When you have finished adding requirements criteria, click **Create**.
RequisitePro checks the highlighted text for the selected criteria and reports any text that matches your criteria in the **Requirement Found** dialog box:
 - Click **Yes** to accept the proposed requirement.
 - Click **No** to reject the proposed requirement.
 - Click **Yes to All** to accept all proposed requirements.
9. When all proposed requirements have been reviewed, the **Status** dialog box appears.
10. Click **Close**.

Troubleshooting While Creating Requirements

If you experience problems while creating requirements in a project document, check for the following conditions to identify and solve the problem:

- *Verify the highlighted selection does not contain hidden text at the beginning or the end of the selection.* Because RequisitePro uses hidden text to delineate requirements, it prevents the creation of a requirement with hidden text at its beginning or end.
- *Verify the highlighted selection is not inside or overlapping another requirement.* Requirements cannot be nested or overlap one another.

Creating a Requirement in a View

You can create requirements in any view. In a Traceability Matrix or a Traceability Tree, you can enter data in the Requirement Properties dialog box. In an Attribute Matrix, you can insert a new requirement directly into the matrix and set requirement attributes before saving it.

When you create a requirement in the database, RequisitePro performs the following operations:

- The following information is associated with the new requirement:
 - *Requirement tag* identifier. A requirement tag is composed of a prefix and a number.
 - *Requirement attributes*. The new requirement is associated with the attributes established for the requirement type.

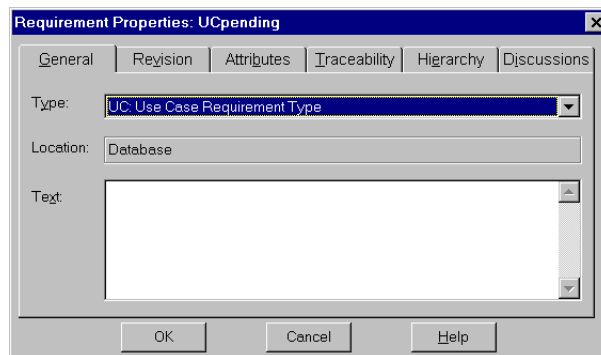
- Using the **Requirement > Create** command in a view creates a requirement at the root level (it has no parent). To create child or sibling requirements, refer to *Creating Child Requirements in a View* on page 9-2 and *Creating Peer Requirements* on page 9-3.

Creating Requirements in a Traceability Tree or Traceability Matrix

You create requirements in a Traceability Tree or Traceability Matrix by using the **Requirement > Create** menu command and entering data in the Requirement Properties dialog box.

1. In the Views Workplace, open a Traceability Tree or Traceability Matrix based on the requirement type for the requirement you want to create.
2. Click **Requirement > Create**; or
Right-click and select **Create** from the shortcut menu.

The **Requirement Properties** dialog box appears:



RequisitePro populates the **Type** and **Location** fields:

- The new requirement inherits the requirement type displayed in the view. Select another requirement type from the **Type** list to change the requirement's type.
 - The **Location** text box indicates the requirement is located in the database only and not in a document.
3. Type the new requirement in the **Text** box and click **OK**.

RequisitePro creates a requirement tag based on the requirement type's prefix. A sequential number is assigned to the requirement based on the numbering scheme assigned to that requirement type.

Creating Requirements in an Attribute Matrix

In an Attribute Matrix, you can create a requirement in the database by directly inserting the requirement into the matrix.

1. Open an Attribute Matrix based on the requirement type for the requirement you want to create.
2. Do one of the following to create a requirement in the matrix:
 - Select the last row (marked **<click here to create a requirement>**) and double-click or press the SPACEBAR.
 - Click **Requirement > Create**.
 - Press the INSERT key.

The Text Edit drop-down box appears.

Note: The **In-view requirements creation (without dialog box)** check box must be marked in the Options dialog box if you want the **Requirement > Create** and INSERT key options to create requirements directly in the matrix in the Text box. Otherwise, the Requirement Properties dialog box appears (See page 7).

3. Enter text describing the requirement.

Note: If you are planning to use this project in conjunction with MS Project, limit the text description of the requirement to 255 characters; this will accommodate the length limitation of a task description in MS Project.

4. Do one of the following to save the information:
 - Press the TAB key.
 - Click in another cell.
 - Press ENTER key (**Note:** check settings in the Options dialog box. The **ENTER key inserts new line** check box must be cleared if you want to use the ENTER key to save requirement information in the Attribute Matrix).

RequisitePro creates a new empty row (marked with an * and **<click here to create a requirement>**) below the row you are editing and moves the cursor over to the first attribute cell for the new requirement you are inserting. A pencil icon appears at the beginning of the row, indicating the requirement is in edit mode and changes are not yet saved.

5. Select or enter an attribute, and tab to other attribute columns to make any changes from the default attribute values.

6. Tab to the next row, or click outside the row, when you are finished setting information about the new requirement.
RequisitePro creates a new requirement and assigns the next available tag to the requirement.
7. Enter data for a new requirement or press ESC to cancel the edit mode in the Attribute Matrix.

Revising Requirement Properties

Use the Requirement Properties dialog box to view or modify requirement information, including attribute values, traceability relationships, hierarchical relationships, discussions, and change descriptions. (For more information, refer to Chapter 6: *Working with Discussions*, Chapter 9: *Working with Hierarchy*, and Chapter 10: *Working with Traceability*.)

Opening the Requirement Properties Dialog Box

From a requirements document:

1. Place the cursor inside the text of the requirement.
2. Do one of the following to open the **Requirement > Properties** dialog box:
 - In the Word Workplace, click **RequisitePro > Requirement > Properties**.
 - Right-click and select **Requirement Properties** from the shortcut menu.
 - On the Tool Palette, click **Requirement > Properties**.
 - Or, click the **Display properties** button on the Tool Palette.



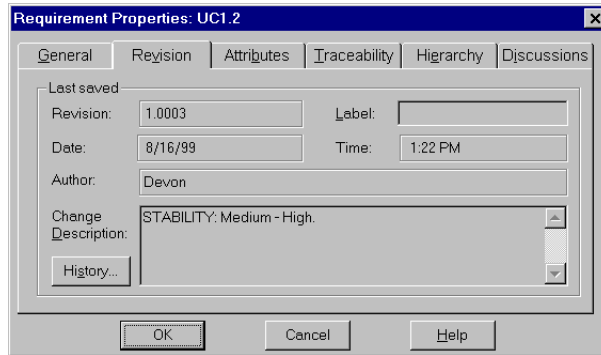
From a view:

1. Click the requirement to highlight it.
2. Do one of the following to open the Requirement Properties dialog box:
 - In the Views Workplace, click **Requirement > Properties**.
 - Right-click and select **Properties** from the shortcut menu.
 - Click the **Display properties** button on the Views Workplace toolbar.



Accessing Revision Information

Use the **Revision** tab in the Requirement Properties dialog box to record and monitor revision information about the requirement.



- RequisitePro automatically generates an internal revision number for the requirement in the **Revision** text box whenever a requirement is modified and saved. This text box is read-only.
- If a change has been made, click the **Label** text box to associate a logical name with a revision number. This step is optional. Any specific revision can be named in this text box, using any combination of 20 alphanumeric characters, such as *Beta Release*. The label is added to the requirement's change history. Once applied, it cannot be changed or removed.
- Use the **Change Description** text box to record changes made to a requirement. This text box can contain up to 2,048 characters. This step is optional.
- The **Date, Time, and Author** text boxes are populated by RequisitePro and cannot be modified.
- Click the **History** button to display the requirement's change history.
- Any modifications made to requirements are pending until the document is saved. When a requirement is committed to the database, its status changes from *Proposed changes...* to *Last Saved*.

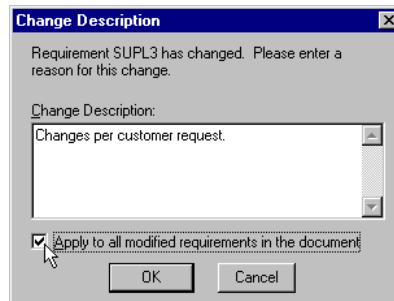
Recording Requirement Changes in Documents

When you modify a requirement's text in a document, you must describe the reason for the change.

After you have modified the requirement's text, make sure the cursor is still in the requirement and then do the following:

1. To open the **Change Description** dialog box, do one of the following:
 - In the Word Workplace, click **RequisitePro > Requirement > Annotate Change**.
 - On the Tool Palette, click **Requirement > Annotate Change**.
2. Type the reason for changes.
3. Click **OK**.

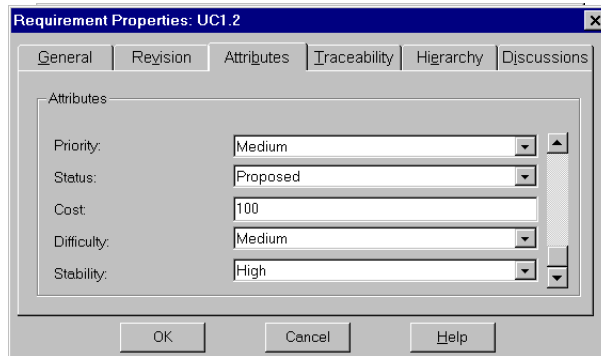
If you attempt to close a document that contains requirement changes without annotating the changes, RequisitePro displays the **Change Description** dialog box, scrolls to the requirement, and prompts you to record a rationale for the change.



Modifying Attribute Values

Attributes and their corresponding list of default values are defined by the requirement type of the requirement. Use the **Attributes** tab in the Requirement Properties dialog box to assign values to the attributes for a requirement.

1. Open the Requirement Properties dialog box by following one of the options on page 8-9.
2. Click the **Attributes** tab. The attributes for the requirement are displayed.



3. Enter attribute values:
 - For list-type attributes, select a value in the list.
 - For entry-type attributes, enter a value in the text box.

Note: To move between fields, use the scroll bar or the Tab key.
4. Click **OK**.

Modifying Attribute Values from an Attribute Matrix

You can use shortcuts for changing the attribute values or requirement text in an Attribute Matrix.

1. In an Attribute Matrix, do one of the following:
 - Double-click an attribute value or requirement text.

(Note: Make sure the **Double-click to go to source** check box in the Options dialog box is cleared if you want this option for editing directly in the Attribute Matrix. If the **Double-click to go to source** check box is marked, double-clicking will open the Requirement Properties dialog box or a document (if the requirement resides in a document).

- Click an attribute value or requirement text, and then press the SPACEBAR.
- 2. For list-type attributes, select a value in the list. (For multiple value list-type attributes, select one or more values in the list.)

For entry-type attributes and requirement text, enter data in the text box.

Note: In order to modify the requirement text, you must open the project exclusively and close any open documents that may contain the requirements you are editing. The **Enable Extended Editing of documents** check box must be marked in the Project Properties dialog box: Documents tab.

- 3. Press the TAB key to move to other rows that can be edited.
- 4. To accept the changes, click outside the row or press ENTER.

Note: To cancel the editing process without saving changes, press ESC.

Note: You can also use a multiple select action in an Attribute Matrix to select more than one attribute value, and then right-click and select **Set Value** from the shortcut menu. The Set Value dialog box appears, allowing you to select a value to use for all selected requirements.

Associating Requirements with New Types

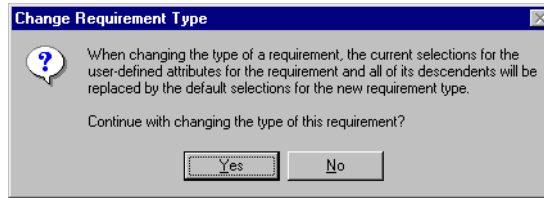
When you change a requirement's type, several things can happen:

- Any attribute values associated with the requirement will be changed to the default attribute values of the new requirement type.
- If the requirement is a parent, the requirement type is also changed for all of its child requirements.
- If the requirement is a child, the requirement is moved to the root for the new requirement type, and the requirement no longer has a parent.

For more information on parent and child requirements, see Chapter 9, *Working with Hierarchy*.

Associating a Single Requirement with a New Type

1. Open the Requirement Properties dialog box by following one of the options page 9.
2. Click the **General** tab.
3. Click the down arrow in the **Types** field and select a new requirement type.
A dialog box appears, explaining the change process.



4. Click **Yes**. The requirement type is changed in the Requirement Properties dialog box.
5. Click **OK**.

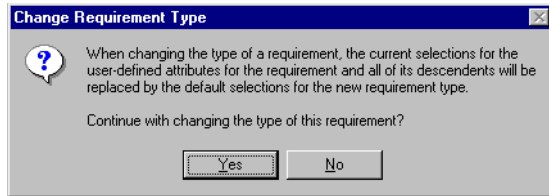
Associating Multiple Requirements with a New Type

When you change the requirement type, several things can happen:

- Any attribute values associated with the requirements will be changed to the default attribute values of the new requirement type.
- If the requirements are parents, the requirement type is also changed for all of their child requirements.
- If the requirements are children, they are moved to the root for the new requirement type, and the requirements no longer have a parent.

Note: Resetting attribute values is a separate procedure after you change the requirement type and save the document.

1. In the Views Workplace, open an Attribute Matrix and use a multiple select action to select multiple requirements.
If any of the requirements you want to change are located in documents, the documents must be opened in RequisitePro before you begin the following procedure.
2. Click **Requirement > Change Type**.
A dialog box appears, explaining the change process.



3. Click **Yes**. The **Change Requirement Type** dialog box appears.
4. In the **New Requirement Type** list, click the down arrow and select a new requirement type.
5. Click **OK**.

The requirements and their children are removed from the Attribute Matrix. When you display a matrix of the new requirement type, the requirements and their children are added at the end of the matrix by default. For requirements in documents, you must save the open document to commit requirements to the database.

Relocating Requirements

You can move or copy requirements within the same requirements document, between documents, and between a document and the database. Requirements are moved by using RequisitePro's **Cut**, **Copy**, and **Paste** commands.

Caution: Do not use the Microsoft Word Cut, Copy, and Paste commands to move requirements. When you use the Word Cut command, it is possible the requirement could be deleted from the project. In addition, if you cut a requirement from a document using the Cut command in Word, you cannot paste the requirement into the project database.

Note: The RequisitePro **Cut/Paste** commands move the original requirements. The **Copy/Paste** commands create new requirements. If pasted in a document, new pending requirements are inserted. If pasted in a database, new requirements are created in the database.

Cutting or Copying from a Document

To cut or copy from a requirements document:

1. Place the cursor in a requirement.
2. Click **Requirement** on the Tool Palette, or on the **RequisitePro** menu in the Word Workplace, and click **Cut** or **Copy**.
RequisitePro cuts or copies the requirement (and its child requirements) from the requirements document.

Pasting the requirement in a document:

You can move or copy the requirement to a new position in the current document or to another requirements document.

1. Open or click the destination document and place your cursor in the location where you want to paste the requirement.
2. On the Tool Palette, click **Requirement > Paste**.
RequisitePro inserts the requirement (and its child requirements) in the specified location.

Pasting a cut requirement into the database:

You may want to remove a requirement from a document and locate it only in the database. You can paste a requirement into an Attribute Matrix view if it is based on the same requirement type as the cut requirement. A requirement cannot be pasted into a Traceability Matrix or a Traceability Tree view.

1. Open or create an Attribute Matrix view based on the same requirement type as the cut requirement.
2. In the Views Workplace, click **Requirement > Paste**. RequisitePro pastes the requirements into the database.

Cutting or Copying in a View

In order to move a requirement in the database to a document, you can cut it from an Attribute Matrix and paste it into a requirements document.

- Use the RequisitePro **Cut** command to move a requirement, with all of its relationships, into a document.
- Use the RequisitePro **Copy** command to make a copy of a database requirement and paste it into a document. This option creates a new requirement when you save the requirements document. Copying a requirement duplicates its text and its attributes, but not its traceability relationships.

Note: For hierarchical requirements, RequisitePro copies the requirement as a peer requirement at the same level in the parent/child hierarchy. (For more information, see *Working with Hierarchy* on page 9-1).

To cut or copy a requirement from the database:

1. In the Views Workplace, open an Attribute Matrix containing the requirement.
2. Select a requirement that is not already located in a document. (Use a multiple select action to select multiple requirements.)
3. Click **Requirement > Cut** or **Requirement > Copy**.

To paste the requirement into a requirements document:

1. Open the requirements document and click the location to paste the requirement.
2. In the Word Workplace, click **RequisitePro > Requirement > Paste**. Or, on the Tool Palette, click **Requirement > Paste**. RequisitePro inserts the requirement (and its child requirements) in the specified location.

Rules for Relocating Requirements

Consider the following rules when moving requirements using the RequisitePro Cut, Copy, and Paste commands:

Requirement Location	Function	Requirement Destination	
		Paste to Database	Paste to Document
Document	Cut	Removes the requirement from the document but saves it in the database. ¹	Relocates the requirement in the document. ²
	Copy	Creates a new requirement in the database.	Creates a new requirement in the document.
Database	Cut	Not Applicable	Relocates the requirement in the document. ³
	Copy	Creates a new requirement in the database.	Creates a new requirement in the document. ³

¹ If you cut a requirement from a document and do not paste it into the database, it is removed from both the document and the database when you save the document.

² For parent-child requirement hierarchies: When pasting from a document to the same document, you can only cut and paste a root requirement or a leaf (the lowest-level child requirement). When pasting from a document to a different document, you can move a root requirement and all its children. For more information about parent-child requirements, refer to *Working with Hierarchy* on page 9-1.

³ For parent-child requirement hierarchies: When pasting from the database to a document, you can only move a root requirement. For more information about parent-child requirements, refer to *Working with Hierarchy* on page 9-1.

- *Do not use Microsoft Word's Cut/Paste commands.* We recommend you do not use Word's **Cut** command to cut requirement text for two reasons. The risk of not capturing the entire requirement (including its bookmarks

and tag) and accidentally deleting the requirement from the project database is greater in Word. In addition, a requirement cannot be moved from a document into the project database with Word's Cut command.

- *Using the buffer with the RequisitePro Cut command.* Requirements you cut using RequisitePro's **Cut** command go into a proprietary cut buffer. You should paste a requirement to its new location before cutting or copying another requirement. If requirements are in the buffer and you cut or copy another requirement, the first requirements are placed back in their original location in the database. If you want to cut or copy multiple requirements, you can do so in the Attribute Matrix only.

Note: The buffer used in RequisitePro is not the Windows Clipboard. Any information currently on the Windows Clipboard is preserved when you cut or copy a requirement in RequisitePro.
- *Avoid losing OLE objects.* If you move a requirement that includes an OLE object from a requirements document into the project database, the OLE object is lost. RequisitePro does not currently support OLE objects in its database. Because the loss of the object is considered a change to the requirement description, the requirement's direct traceability relationships become suspect.

Refreshing Requirement Color and Style in a Document

A specific color and style distinguishes requirements that belong to a specific requirement type. For example, you might mark all requirements that belong to the requirement type *feature* with a dark green requirement color and a double underline style. This helps you easily recognize all *feature* requirements regardless of their location. Refreshing the color and styles of requirements is useful for restoring requirements to their proper state when their color and style have been overwritten.

To refresh requirement color and style in a requirements document:

1. Highlight the requirements to refresh.
2. Do one of the following:
 - In the Word Workplace, click **RequisitePro > Document > Refresh Requirements**.
 - On the Tool Palette, click **Document > Refresh Requirements**.

RequisitePro checks the color and style settings of the requirements in the document and, if necessary, resets them to the proper settings for the requirement type.

Note: To remove color and styling and convert the requirement back to plain text, see *Unmarking Requirements in a Document* on page 8-22.

Rebuilding Requirement Tags in a Document

When a requirement is created in a document, the requirement information is bracketed by bookmarks and assigned a requirement tag. Mark the **Show Tags** check box in the Document Properties dialog box to ensure that the requirement tags are visible both on your display and in the printed document.

Tags can be accidentally corrupted or deleted while editing a requirements document. Use the **Rebuild Tags** command to rebuild a requirement tag that is partially or completely deleted or corrupted. RequisitePro rebuilds the affected tags, then provides a list of rebuilt requirement tags.

To rebuild requirement tags in a document:

1. Highlight the requirement tags to rebuild.
2. Do one of the following
 - In the Word Workplace, click **RequisitePro > Document > Rebuild Tags**.
 - On the Tool Palette, click **Document > Rebuild Tags**.

RequisitePro rebuilds the requirement's tags.

Renumbering Requirements

Use the **Renumber Requirements** command to renumber all requirements of a specified type in a project. This feature is useful to eliminate the “holes” in a numbering scheme that result when you delete or move requirements. You can renumber one or several requirement types in one operation. Requirements are renumbered in the database and in requirements documents. You can select which requirement type you want to renumber and the order in which you want the documents processed (Requirements in documents are renumbered in the order in which they appear in the document).

The project must be opened in exclusive mode to use this command. If security is enabled, you must have project structure permission to renumber requirements.

To renumber all requirements in a project:

1. On the Tool Palette, click **Project > Renumber Requirements**.

The **Renumber Requirements** dialog box appears:



2. In the **Requirement Type** list, select the requirement type that you want to renumber.
3. Click the **Renumber Requirements of this type** check box to mark the type.

Note: To renumber requirements of more than one requirement type, repeat steps 2 and 3.
4. In the **Initial Requirement Number** text box, enter the initial requirement number that you want to set. The default number is 1.
5. To change the order of renumbering for database requirements and documents, select Database or a document name. Click the **Move Up** and **Move Down** buttons to put the database and documents in the order in which you want them to be processed. The requirements in the first item listed (the database or a document) are renumbered first, followed sequentially by the requirements in the second item, and so on.

Note: A document appears in the Order of Processing list only if it contains requirements of the selected type.
6. Click **OK**.

Deleting Requirements

In general, we recommend against deleting any requirements after you archive a project, since deleting a requirement deletes the complete information related to that requirement including its history.

RequisitePro does provide a Delete Requirement function that should only be used prior to archiving a project, when you are getting familiar with the tool. Once the project is archived, if a requirement is to be deleted, use a requirement attribute (for instance: Deactivated, Retired, or Inactive) to indicate that a requirement is no longer valid.

When you delete a requirement that is linked to requirements that reside in other projects, the other projects are updated to remove the relationships to/from the deleted requirement.

Note: Deleting a requirement causes its history and traceability relationships to be permanently removed from the project database.

Unmarking Requirements in a Document

You have the option of leaving the text in a document when you delete a requirement:

- Use the Delete (Unmark) or Block Delete (Unmark) command to delete requirements from the document where they reside and from the project database without disrupting the text of the document. The requirement text, graphics, or OLE objects are not removed from the document, but they are no longer recognized as a requirement. The color and style settings of the requirement are removed and replaced with the document default style.
- The Delete (Remove) command deletes the requirement text from the requirements document, as well as removing it from the database.

To unmark a requirement in a document:

1. In the requirements document, click in the requirement text or highlight a contiguous block of requirements.
2. Do one of the following:
 - In the Word Workplace, click **RequisitePro > Requirement > Delete (Unmark)**.
 - On the Tool Palette, click **Requirement > Delete (Unmark)**.

Note: To delete multiple requirements, use the **Block Delete (Unmark)** command.

A message appears, asking you to confirm the deletion.

3. Click **Yes**. The RequisitePro formatting is removed and the requirement text is converted to the default text style.

Note: If you do a Block Delete of a parent requirement with child requirements, the Delete Requirement dialog box appears, asking what you want to do with the remaining child requirements. If you click Cancel, then it cancels the entire Block Delete process.

4. To save your changes, do one of the following:
 - In the Word Workplace, click **RequisitePro > Document > Save**.
 - On the Tool Palette, click **Document > Save**.

The requirement is removed from the database.

Note: To undo an unmark operation, use the **Edit/Undo** option in Word repeatedly until the styling, bookmarks and tags reappear.

Deleting Requirements from the Database

You can delete a requirement from the database in the Views Workplace, provided the requirement is not located in a document. (Check the Location attribute in an Attribute Matrix; requirements have a location listed as “Database” or the file name of the requirements document.)

When you delete a requirement that is linked to requirements that reside in other projects, the other projects are updated to remove the relationships to/ from the deleted requirement. Unlike cut requirements, which are placed into a buffer for pasting within RequisitePro, a deleted requirement is completely removed from the database.

Note: Deleting a requirement causes its history and traceability relationships to be permanently removed from the project database.

1. In the Views Workplace, open the Attribute Matrix containing the requirement.
2. Select the requirement in the matrix. (Use a multiple select action to select more than one requirement.)
3. Click **Requirement > Delete**. A message asks you to confirm the deletion.
4. Click **Yes**.

C H A P T E R 9

Working with Hierarchy

Hierarchical requirement relationships are parent-child relationships that reflect direct dependencies between requirements. In addition, these associations provide powerful tools for change management. With hierarchical requirements, you can support a requirement with a number of sub-requirements by establishing a parent requirement and creating child requirements of that parent.

Like traceability relationships (see *Working with Traceability* on page 10-1), hierarchical relationships are a type of change-managed relationship in RequisitePro. If a requirement is changed, the relationships with its children become *suspect*. You can view and manage suspect relationships using a Traceability Matrix or a Traceability Tree in the Views Workplace.

Creating Child Requirements

A child requirement is any requirement that has a parent. Hierarchical relationships are created in a requirements document or in a view. The parent and child requirements must both reside in the same document or in no documents. The parent requirement and all of its children must be of the same requirement type.

These relationships are created using the **Hierarchy** tab in the Requirement Properties dialog box, directly in a requirements document using the **RequisitePro > Requirement** menu commands in the Word Workplace, or directly inserted in an Attribute Matrix.

Creating Child Requirements in a View

1. In the Views Workplace, open the view containing the requirement that you intend to be a parent.
2. Click the requirement. (You can only create a child for one requirement at a time.)
3. Click **Requirement > Create Child**.

Note: You cannot create a child in a view if the currently selected requirement (which will become the child's parent) is located in a document.

In an Attribute Matrix, a new row appears directly following the last requirement with the selected parent, and the Text Edit box appears, allowing you to add information. See *Creating Requirements in an Attribute Matrix* on page 8-8 for more information.

In a Traceability Matrix and a Traceability Tree, the Requirement Properties dialog box appears. Click the following tabs to define the child requirement, and enter the appropriate information:

- General
- Revision
- Attributes
- Traceability
- Discussions

Note in the Hierarchy tab that the parent requirement is pre-defined as the requirement you selected in step 2. (If you want to, you can change the parent.)

4. Tab to the next row or click outside the row in an Attribute Matrix, or click **OK** in the Requirement Properties dialog box.

RequisitePro creates the child requirement in the database. RequisitePro generates a requirement tag for the child requirement based on the parent requirement's number.

Note: After creating child requirements, review saved views to make sure both child and parent requirements are displayed. You can modify the query on a saved view and mark the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes. Refer to *Modifying Queries* on page 5-5.

Creating Child Requirements in a Document

You can create child requirements in a requirements document by assigning a parent. The assignment is committed to the database when the document is saved.

1. In a requirements document, highlight the requirement that you intend to be a child requirement.
2. To open the Requirement Properties dialog box, do one of the following:
 - In the Word Workplace, click **RequisitePro > Requirement > Properties**.
 - On the Tool Palette, click **Requirement > Properties**.
 - On the Tool Palette, click the **Display the properties...** button.



3. Click the **Hierarchy** tab.
4. Select a parent from the **Parent** list box.

Note: The default is the last parent selected in the document.
5. Click **OK**.

The requirement changes to a pending child requirement of the parent you selected.

Note: To save the new parent-child relationship in the database, click **Document > Save** on the Tool Palette or on the RequisitePro menu in the Word Workplace. RequisitePro generates a requirement tag for the child requirement based on the parent requirement's number.

Note: After creating child requirements, review saved views to make sure both child and parent requirements are displayed. You can modify the query on a saved view and mark the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes. Refer to *Modifying Queries* on page 5-5.

Creating Peer Requirements

Requirements have a peer relationship when they are at the same level in the requirement hierarchy. For example, two requirements are peer requirements when they are children of the same parent. All requirements at the root level are peer requirements of one another.

When a requirement is created in a document, it is automatically placed at the same level as the requirement above it. Refer to *Creating a Requirement in a Document* on page 8-2. To create peer requirements in a view, refer to the following section.

Creating Sibling Requirements in a View

In the Views Workplace (an Attribute Matrix, a Traceability Tree, or a Traceability Matrix), the automatic creation of a requirement is at the root level. Refer to *Creating a Requirement in a View* on page 8-6. To create a peer requirement of a requirement that has a parent, use the **Create Sibling** command.

To create a sibling requirement:

1. In the Views Workplace, open the view containing the requirement you have chosen for a sibling.
2. Select the requirement.
3. Click **Requirement > Create Sibling**.

Note: You cannot create a sibling in a view if the parent of the siblings resides in a document.

In an Attribute Matrix, a new row appears directly following the last requirement with the same parent, and the Text Edit box appears, allowing you to add information. See *Creating Requirements in an Attribute Matrix* on page 8-8 for more information.

In a Traceability Matrix and a Traceability Tree, the Requirement Properties dialog box appears. Click the following tabs to define the child requirement, and enter the appropriate information:

- General
- Revision
- Attributes
- Traceability
- Discussions

Note in the Hierarchy tab that the parent requirement is pre-defined as the parent of the requirement you selected in step 2. (If you want to, you can change the parent.)

4. Tab to the next row or click outside the row in an Attribute Matrix, or click **OK** in the Requirement Properties dialog box.

RequisitePro creates the sibling requirement in the database. RequisitePro generates a requirement tag for the new requirement based on the parent requirement's number.

Note: After creating sibling requirements, review saved views to make sure both child and parent requirements are displayed. You can modify the query on a saved view and mark the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes. Refer to *Modifying Queries* on page 5-5.

Changing Parent Requirements

In a requirements document or an Attribute Matrix or Traceability Tree, you can assign single or multiple hierarchical requirements to a different parent. When you assign a requirement to a new parent, its entire sub-tree of children is also moved to that parent.

When children are assigned to a different parent, all hierarchical relationships between the new parent and its immediate children are marked suspect. The relationships between the children and their children are not marked as suspect. (See also *Suspect Relationships* on page 10-9.)

Note: After creating new child requirements, review saved views to make sure both child and parent requirements are displayed. You can modify the query on a saved view and mark the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes. Refer to *Modifying Queries* on page 5-5.

Assigning a New Parent to a Single Requirement

You can reassociate a hierarchical requirement with a new parent of the same requirement type using the **Hierarchy** tab in the Requirement Properties dialog box.

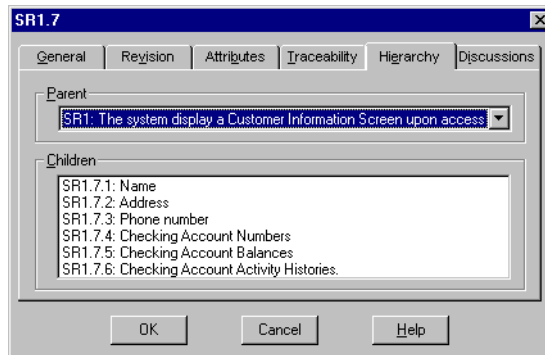
Note: To change parents of requirements located in documents from the Views Workplace, the document must be opened (and you must have the ability to edit it) before you begin the following procedure.

To assign a new parent:

1. Do one of the following:
 - In the Word Workplace, click anywhere in the requirement text. Click **RequisitePro > Requirement > Properties**.
 - In the Word Workplace, click anywhere in the requirement text. On the Tool Palette, click **Requirement > Properties**.
 - In the Views Workplace, open a view and select the requirement. From the Views Workplace toolbar, click **Requirement > Properties**.

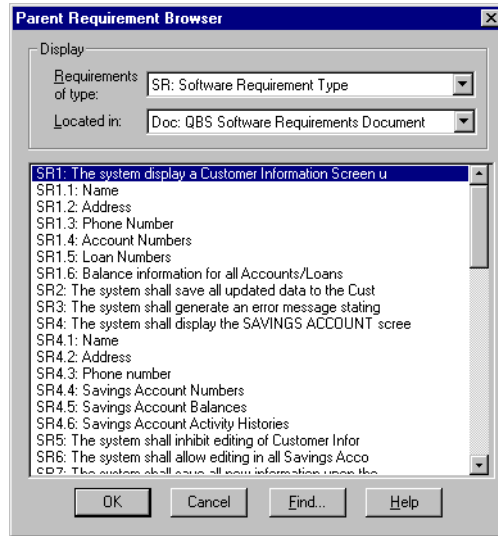
The Requirement Properties dialog box appears.

2. Click the **Hierarchy** tab.



3. Select a parent from the **Parent** list.
4. If the parent is not displayed in the list, select **<choose parent...>**.

The **Parent Requirement Browser** dialog box appears:



5. Select a parent requirement from the list. To locate a specific requirement, click the **Find** button.
6. After selecting the parent requirement, click **OK**.
7. In the Requirement Properties dialog box, click **OK**.

The requirement changes to a child requirement of the parent you selected. New requirement tags are generated for the child requirement and its subtree of children, based on the new parent requirement's number.

Note: For requirements in documents, you must save the open document to commit requirements to the database.

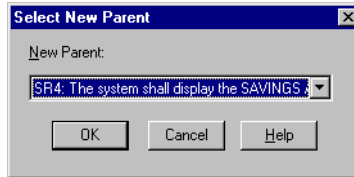
Assigning a New Parent to Multiple Requirements

In an Attribute Matrix, you can reassociate more than one hierarchical requirement with a new parent of the same requirement type. All selected requirements are assigned to the same new parent.

Note: If any of the requirements you want to change are in documents, the document must be opened (and you must have the ability to edit it) before you begin the following procedure.

To assign a new parent to more than one requirement:

1. In the Views Workplace, open an Attribute Matrix and then select the requirements.
2. Click **Requirement > Change Parent**.
The **Select New Parent** dialog box appears:



3. In the **New Parent** list, select a parent.
4. If the parent is not displayed in the list, select **<choose parent...>**. The **Parent Requirement Browser** dialog box appears, as shown on the previous page.
5. Select a parent requirement from the list. To locate a specific requirement, click the **Find** button.
6. After selecting the parent requirement, click **OK**.
7. In the **Select New Parent** dialog box, click **OK**.

The requirements become child requirements of the parent you chose. A new requirement tag is generated for the child requirements and their subtrees of children, based on the new parent requirement's number.

Note: For requirements in documents, you must save the open document to commit requirements to the database.

Deleting Hierarchical Requirements

In general, we recommend against deleting any requirements after you archive a project, since deleting a requirement deletes the complete information related to that requirement including its history (Refer to *Deleting Requirements* on page 8-22).

To delete requirements that are located in documents, go to the Word Workplace. To delete requirements that are located only in the database, go to an Attribute Matrix in the Views Workplace.

When you delete a requirement that is *traced to/from* requirements that reside in other projects, the other projects are updated to remove the relationships.

Unlike cut requirements, which are placed into a buffer for pasting within RequisitePro, a deleted requirement is completely removed from the database.

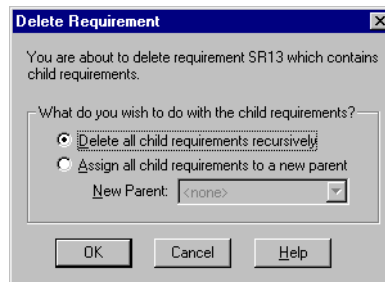
To delete a hierarchical requirement:

1. Do one of the following:
 - In the View Workplace, open the Attribute Matrix and click the requirement to delete. (Use a multiple select action to select multiple requirements.) Click **Requirement > Delete**.
 - In the Word Workplace, open the document and highlight the requirement to delete.
Click **RequisitePro > Requirement > Delete (Remove)**, or
On the Tool Palette, click **Requirement > Delete (Remove)**.

A dialog box appears, asking you to confirm the deletion.

2. Click **Yes** to delete the requirement.

If the requirement has children, the **Delete Requirement** dialog box appears:



Note: If you are deleting multiple requirements in the Attribute Matrix, the **Delete Requirement** dialog appears for each parent requirement.

3. Do one of the following:
 - Select the **Delete all child requirements recursively** option to delete the requirement and all its children. This option removes all traceability and hierarchical relationships.
 - Or, select the **Assign all child requirements to a new parent** option to delete the requirement and save its children. This option reassigns all children to a new parent you select in the list. When the children are reassigned, all hierarchical relationships between the new parent and its immediate children are marked suspect.
4. When you have made your selection, click **OK**.

If you are working in the Views Workplace, the requirement is deleted immediately when you click the **Delete** button. If you are working in the Word Workplace, save the requirements document to commit the deletion to the database.

Suspect Relationships

A relationship between requirements becomes questionable or *suspect* if RequisitePro detects a requirement has been modified. In the Views Workplace, you can manually mark a hierarchical relationship suspect or clear a suspect relationship.

- When you modify a parent requirement, RequisitePro marks the relationship between the parent and all its immediate children suspect.
- When you modify a child requirement, RequisitePro does not mark the relationship between the child and its parent suspect, although the child's relationship with other requirements is marked suspect.
- When children are reparented, all hierarchical relationships between the new parent and its immediate children are automatically marked suspect. The relationships between the children and their children are not marked as suspect.

Displaying Suspect Hierarchical Relationships



You can display suspect hierarchical relationships using the Traceability Matrix and the Traceability Tree views. In the Views Workplace, the suspect relationship is identified by a red diagonal line through the requirement icon.

Auto Suspect

The Auto Suspect command monitors a requirement's change history and displays a suspect signal when requirements are changed. Use the **Project > Auto Suspect** command to enable or disable automatic checking for changes that affect the traceability or hierarchical relationships between requirements in the project.

If Auto Suspect is disabled, RequisitePro does not monitor changes in requirements, and does not mark relationships as suspect. There are times when this mode is desirable. For example, when you are revising spelling mistakes in your documents and do not want those revisions to cause your relationships to become suspect, you can disable Auto Suspect.

With Auto Suspect enabled, RequisitePro constantly monitors requirements for changes that may affect traceability or hierarchical relationships. If there is a change in a requirement, the state of the requirement's relationships is automatically changed to suspect. If you have cross-project traceability active, requirements in external projects are also monitored.

Auto Suspect is enabled by default. If you disable Auto Suspect, it is automatically re-enabled the next time the project is opened. Or, enable it with the **Project > Auto Suspect** command.

Clearing Suspect Relationships

You can reset a parent-child relationship that has been marked suspect by manually clearing it in the Traceability Matrix or Traceability Tree:

1. Do one of the following:
 - In a Traceability Matrix, select one or more intersection points in the matrix where a traceability link has been created.
 - In the Traceability Tree, select one or more requirements to modify.
2. In the Views Workplace, click **Requirement > Clear Suspect**.

C H A P T E R 10

Working with Traceability

In RequisitePro, traceability is a dependency relationship between two requirements. Traceability is a methodical approach to managing change by linking requirements that are related to each other.

Like hierarchical relationships (see *Working with Hierarchy* on page 9-1), traceability relationships are change-managed relationships in RequisitePro. If either end-point of the connection is changed, the relationship becomes *suspect*.

RequisitePro makes it easy to track changes to a requirement throughout the development cycle, so you don't need to review all your documents individually to determine which elements need updating. You can view and manage suspect relationships using a Traceability Matrix or a Traceability Tree in the Views Workplace.

This chapter addresses traceability between requirements in the same project. For information about cross-project traceability, see *Setting Up and Modifying Cross-Project Traceability* on page 15-14.

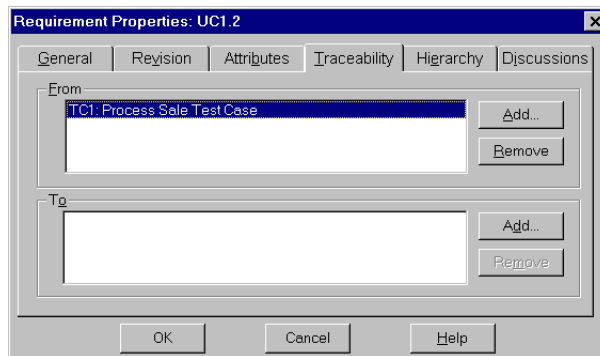
Creating Traceability in the Word Workplace

Use the Requirement Properties dialog box or the **RequisitePro > Requirement** menu command in the Word Workplace to trace a requirement to or from other requirements in a document. A common traceability relationship is one in which one requirement is derived from another.

Creating a Traceability Relationship in a Requirements Document

To create a traceability relationship in a requirements document:

1. Place the cursor in the text of the requirement.
2. Open the Requirement Properties dialog box by doing one of the following:
 - Click **RequisitePro > Requirement > Properties** in the Word Workplace.
 - Click **Requirement > Properties** on the Tool Palette.
 - Click the **Display properties** button on the Tool Palette.
3. Click the **Traceability** tab on the dialog box.

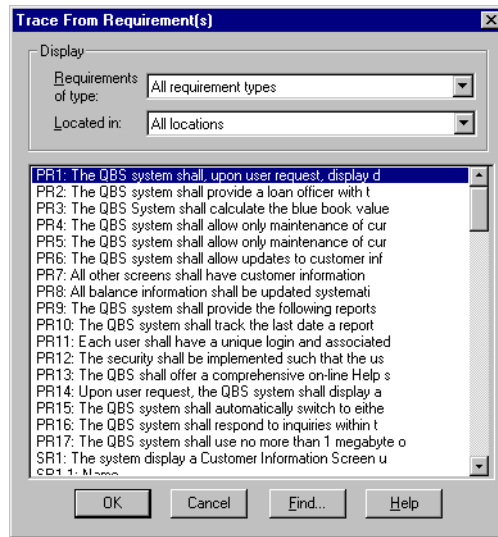


The **From** field lists requirements from which the selected requirement is traced. The **To** field list requirements to which the selected requirement is traced. An **(s)** after the requirement tag represents a suspect relationship.

Note: Double-click a requirement to view a read-only version of its dialog box.

4. Click the **Add** button adjacent to the **To** or **From** field.

The **Trace To Requirement** or the **Trace From Requirement** dialog box appears.



5. From the **Requirements of type** list box, select the requirement type with which the requirement is associated.
6. If you know the location of the requirement (document or database), select it from the **Located in** list box. If not, select **All locations**.
7. Highlight a requirement to *trace to* or *trace from* in the list box and click **OK**. RequisitePro adds this requirement to the **To** or **From** field on the **Traceability** tab.
8. Click **OK**.

Creating Traceability Using the Requirements Menu

To create traceability using the Requirements menu:

1. In a requirements document, place the cursor in the text of the requirement.
2. In the Word Workplace, click **RequisitePro > Requirement**, or on the Tool Palette, click **Requirement**. Then click either the **Trace To** or the **Trace From** command.

The **Trace To Requirement(s)** dialog box or the **Trace From Requirement(s)** dialog box appears.

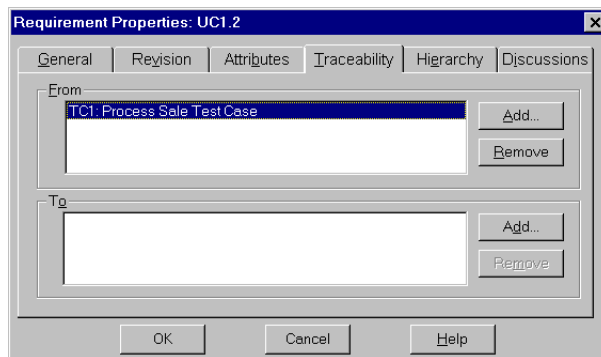
3. From the **Requirements of type** list box, select the requirement type with which the requirement is associated.
4. Select the location (document or database) of the requirement from the **Located in** list box if you know it, otherwise set the list box to **All locations**.
5. Highlight a requirement to *trace to* or *trace from* in the list box and click **OK**. RequisitePro creates a traceability relationship between the two requirements.

Creating Traceability in the Views Workplace

You can create traceability relationships in the Attribute Matrix, the Traceability Matrix, and the Traceability Tree. (For more information on navigating in the Views Workplace, refer back to *Working in Views* on page 4-1)

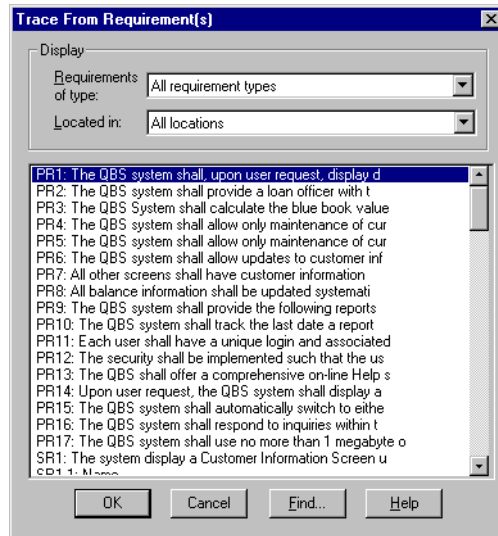
Creating Traceability Relationships in an Attribute Matrix

1. Create an Attribute Matrix, or open an existing one and select a requirement.
2. Click **Requirement > Properties**.
The Requirement Properties dialog box appears.
3. Click the **Traceability** tab.



4. Click the **Add** button adjacent to the **To** or **From** field.

The **Trace To Requirement(s)** or the **Trace From Requirement(s)** dialog box appears.



5. From the **Requirements of type** list box, select the requirement type with which the requirement is associated.
6. Select the location (document or database) of the requirement from the **Located in** list box if you know it, otherwise select **All locations**.
7. Highlight a requirement to *trace to* or *trace from* in the list box and click **OK**. RequisitePro adds this requirement to the **To** or **From** field on the **Traceability** tab.
8. Click **OK** on the Requirement Properties dialog box.

Creating and Deleting Traceability in a Traceability Matrix

To create a traceability relationship:

1. Open a Traceability Matrix and select the cell that intersects the two requirements for which you want to create a traceability relationship. (Use a multiple select action to select more than one cell.)
2. In the Views Workplace, click **Requirement > Trace To** or **Requirement > Trace From**.
An arrow displays in the cell, signifying the relationship.



Trace To



Trace From

To delete the traceability relationship:

1. Highlight the arrow in a Traceability Matrix cell. (Use a multiple select action to select multiple cells.)
2. Click **Requirement > Delete Trace**, or press the Delete key on the keyboard. A dialog box appears asking you to confirm the deletion.
3. Click **Yes**.

To apply traceability to a row or column:

1. Select the rows or columns to fill in a Traceability Matrix.
2. Click the **View** menu in the Views Workplace, and then click:
 - **Select All Rows in Selected Columns**, or
 - **Select All Columns in Selected Rows**.For example, if you selected a column in step 1, click **Select All Rows in Selected Columns**. All of the rows are selected. The intersection cells of the selected column and all of the rows are also selected.
3. Optionally, use a multiple select action to clear the requirements you do not want to assign to the traceability state.
4. Click **Requirement > Set Traceability**. The **Set Traceability** dialog box appears.
5. Select a **Traceability Function** from the list.
6. Click **OK**. For lengthy operations, the status bar shows the progress of the operation.

Creating Traceability Relationships in the Traceability Tree

There are two methods for creating traceability relationships in the Traceability Tree:

- Using drag and drop
- Using **Requirement** commands

Drag and Drop

1. Open a Traceability Tree and select the requirements (displayed by their tags) to or from which you want to create a traceability relationship. (Use a multiple select action to select more than one requirement.)
2. Press the Ctrl key and hold down the right mouse button, dragging up or down the Traceability Tree until the cursor is on the requirement with which you want to create a traceability relationship to or from the selected requirements, and then release the mouse button. A shortcut menu appears.
3. Do one of the following:
 - To delete the traceability relationship between the selected requirements and the requirements to or from which they were traced, and create a traceability relationship between the selected requirements and the requirement the cursor was on when you released the mouse button, click **Move Here**.
 - To maintain the traceability relationship between the selected requirements and the requirements to or from which they were traced, and create an additional traceability relationship between the selected requirements and the requirement the cursor was on when you released the mouse button, click **Copy Here**.
 - To cancel the operation, without moving, deleting, or creating any traceability relationships, click **Cancel**.

Tip: To copy or move a traceability relationship, you can also press the Ctrl key (to copy) or the Alt key (to move) and hold down the left mouse button, dragging up or down the Traceability Tree until the cursor is on the desired requirement, and then releasing the mouse button. Note that if you use this method to copy a traceability relationship, you are not given the option to cancel before the copy occurs. You are given the option to cancel when you use this method to move a traceability relationship.

Requirements Commands

1. Select the requirements (displayed by their tags) to or from which you want to create a traceability relationship. (Use a multiple select action to select more than one requirement.)
2. Click **Requirement > Trace To** or **Requirement > Trace From**. (The command available depends on the type of Traceability Tree in the active window.)
The **Trace To Requirements** or **Trace From Requirements** dialog box appears.
3. Select the requirements in the list. (Use a multiple select action to select more than one requirement.)
4. Click **OK**.

Troubleshooting Failed Multiple Select Actions

In the Views Workplace, when you select more than one relationship or requirement in a view, and then perform an operation on the multiple selection (such as creating traceability or deleting), the operation may fail for one or more requirements or relationships.

For example, the operation may fail if you do not have rights to perform the operation on the requirements or relationships, or if some of the requirements are located in documents and the operation is permitted only for requirements in the database.

RequisitePro notifies you of such failures, providing an exception log (separate from the error log file) that shows the requirements or relationships for which the operation failed, and the reason for the failure.

1. In a view, perform the desired operation on a selected group of requirements or relationships.
 - If the operation is successful, the modifications are shown in the view, and no dialog box appears.
 - If the operation fails for one or more requirements or relationships, or if you stop the operation before it is completed by pressing the **Esc** key, the **Exception Report** dialog box appears, providing the number of requirements or relationships for which the operation failed.
2. Click **Details** to learn more about the failed operation. The dialog box is expanded, showing the reason for the failure.


3. To copy the text in the text box, select the text and press **Ctrl-C**. You can then paste the text into a text document.
4. Click **Close**.

Suspect Relationships

A relationship between requirements becomes questionable or *suspect* if RequisitePro detects a requirement has been modified. If a requirement's text is modified, all *direct* relationships *to* and *from* it are suspect.

You can define attributes that, when modified, cause traceability relationships to become suspect. You also can manually mark requirement relationships as suspect in the Views Workplace.

Displaying Suspect Traceability Relationships

The *suspect* state is reflected in the Requirement Properties dialog box as well as in views. In the Traceability Tree and Traceability Matrix views, suspect traceability relationships are marked as lines through the arrows.  In an Attribute Matrix, an **(s)** appears after the requirement tag in the Traced-to or Traced-from column.

On the Traceability tab of the Requirement Properties dialog box, an **(s)** displayed after the requirement tag in the **To** and **From** fields represents a suspect relationship. In the Views Workplace, the suspect relationship is identified by a red diagonal line through the traceability arrow.

Auto Suspect

The Auto Suspect command monitors a requirement's change history and displays a suspect signal when requirements are changed. Use the **Project > Auto Suspect** command to enable or disable automatic checking for changes that affect the traceability or hierarchical relationships between requirements in the project.

If Auto Suspect is disabled, RequisitePro does not monitor changes in requirements, and does not mark relationships as suspect. There are times when this mode is desirable. For example, when you are revising spelling mistakes in your documents and do not want those revisions to cause your relationships to become suspect, you can disable Auto Suspect.

With Auto Suspect enabled, RequisitePro constantly monitors requirements for changes that may affect traceability or hierarchical relationships. If there is a change in a requirement, the state of the requirement's relationships is automatically changed to suspect. If you have cross-project traceability active, requirements in external projects are also monitored.

Auto Suspect is enabled by default. If you disable Auto Suspect, it is automatically re-enabled the next time the project is opened. Or, enable it with the **Project > Auto Suspect** command.

Clearing Suspect Traceability Relationships

You can reset a requirement relationship that has been changed to a suspect state by manually clearing it. The relationship is reset to its previous state, *traced to* or *traced from*. Suspect relationships are cleared in the Traceability Matrix view or Traceability Tree in the Views workplace.

To clear one or more suspect relationships:

1. Do one of the following:
 - In a Traceability Matrix, select one or more intersection points in the matrix where a traceability link has been created.
 - In the Traceability Tree, select one or more requirements to modify.
2. In the Views Workplace, click **Requirement > Clear Suspect**.

C H A P T E R 11

Importing Requirements and Documents

Use the Import Wizard to import requirements from a Microsoft Word document or a comma-separated value (CSV) file into a project.

The import process is recommended for:

- Importing non-project documents into the active project.
- Importing new requirements into an existing project.
- Updating existing requirement attributes with new information.

The Import Wizard can import requirements and attributes into your project from several sources:

- Requirement documents created in other RequisitePro projects.
- Microsoft Word documents created outside of RequisitePro.
- Any database that supports export of data in CSV format, such as SQL Server, Oracle, Excel, or Access.

Before You Begin

Project Setup

You will be importing an external document or CSV file into a RequisitePro project. If the project administrator has not already set up a project, you will need to create one now (refer to *Creating Projects* on page 12-1). Minimally, the project must have at least one requirement type and one document type defined.

Import Logs

RequisitePro creates a log file each time you import a file. The log file is a written record of the import process. The log file records these operations: matching of requirement types, how conflicts were resolved, attribute mappings, the success or failure of search criteria, canceled operations, value errors, and whether or not the import was successful. The log file is saved in the directory where the project is stored, and is named import#.log, where # is a number representing sequential order of creation. If a log file is deleted, the next one created will receive the old number to fill in the gap.

Importing RequisitePro Documents

To successfully import RequisitePro documents from one project to another, you must first save the documents in Microsoft Word format. The resulting Word document retains the appearance of the original requirements document, including the bookmarks and tags that are used in RequisitePro.

About RequisitePro format

When the **Save documents in RequisitePro format** check box on the **Documents** tab of the Project Properties dialog box is marked, all documents within the project will be saved in RequisitePro format.

Documents saved in RequisitePro format cannot be modified and saved in Word outside of RequisitePro. This allows RequisitePro projects to be secure.

When this option is cleared, documents will be saved in Word format.

Documents that are saved in Word format can be modified in Word outside of RequisitePro, and are not secure.

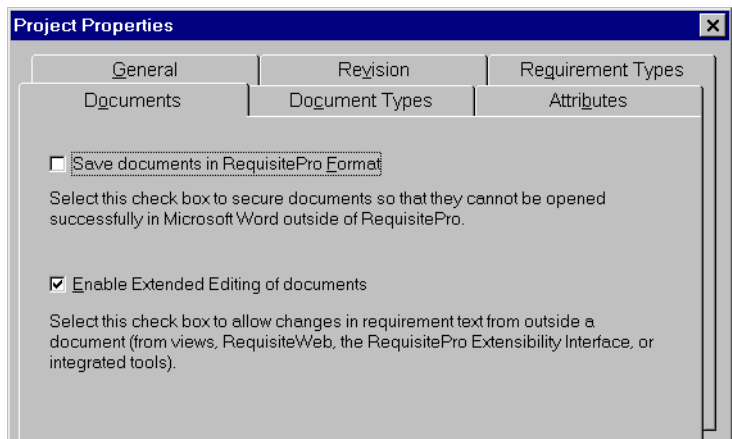
To ensure that the documents are once again brought under RequisitePro control after they are imported into a new project, mark the **Save documents in RequisitePro format** check box on the Project Properties dialog box for that project. If security is not an issue for a particular project, you can clear the check box.

Converting All the Documents in a Project to Word

If you want to import all the documents from one project into another, they can all be converted to Microsoft Word format at once.

To convert all documents to Word at once:

1. Open the project.
2. On the Tool Palette, click **Project > Properties**. The Project Properties dialog box appears.
3. On the **Documents** tab, clear the **Save documents in RequisitePro format** check box.



4. Click **OK**. When the project is closed, all documents will be converted to Word format, but will remain in the RequisitePro system. The documents will retain their RequisitePro extensions.

The newly formatted documents are ready to import into another project. Follow the instructions in *Importing from Word* on page 11-5.

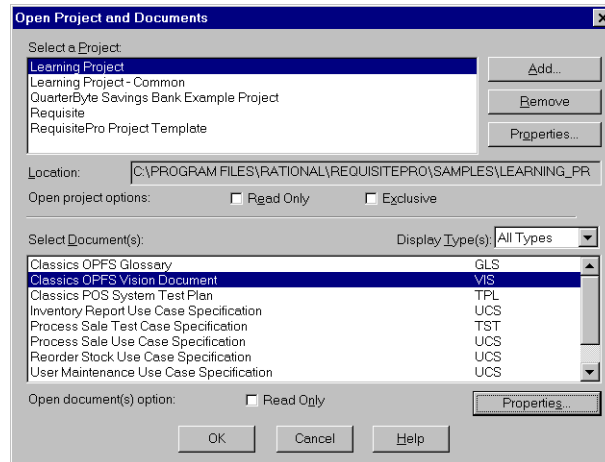
Converting an Individual Document to Word

To import a single document from an existing project:

1. Open the project:
 - On the Tool Palette, click **Project > Open**.
 - Or, click the **Open project** button.



The **Open Project and Documents** dialog box appears:



2. Select a project and document and click **OK**. RequisitePro opens the document.
3. On the **Document** menu, click **Save As**. The **Document Save As** dialog box displays the file name with its extension changed to **.doc**:
4. Click **Save**. The document is converted from RequisitePro format to Word format.

The file management system automatically saves the new Word document (*.doc) into the same folder as the project.

The new Word document is ready to import into another project. Follow the instructions in the *Importing from Word* section, beginning on page 11-5.

Saving or Removing Bookmarks

Bookmarks in a RequisitePro document are requirement indicators. They appear as heavy square brackets, to distinguish them from the square bracket character normally found in Microsoft Word. When you create a requirement in a RequisitePro document, RequisitePro automatically inserts bookmarks that surround and specify the text of the requirement.

When a document is imported, the Import Wizard finds strings of text in the document (that is, the Wizard *parses* the document) and imports them into the project as requirements. In the import process, you define the criteria that the Wizard uses to parse the text. The criteria can be keywords, text delimiters, or Word styles.

If RequisitePro detects bookmarks in the document being imported, the **Remove Bookmarks** information box appears (This information box appears after you have responded to the Document Properties dialog box at the beginning of a Word import.)

- Click **Yes** to remove bookmarks and include all the document's text in the parsing process.
- Click **No** to leave the bookmarks in place. RequisitePro recognizes any bookmarks that were previously created in a RequisitePro document and brings that text into the new document as new requirements. The bookmarked text is ignored in the parsing process.

Importing from Word

Use the Import Wizard to import requirements from a Microsoft Word document into a RequisitePro document, or to import a Microsoft Word document in its entirety into a RequisitePro project.

The document you are importing must be in Word format. If your document was created in an application other than Word, refer to the Microsoft Word documentation to save the file in Word format.

Turn off Word's spelling, grammar and background repagination options (in the Options dialog box) before importing a Word document.

Note: If you are importing a Word document that uses a template other than Word's normal.dot template or an existing RequisitePro outline, you should set up that template as a RequisitePro outline prior to importing the document. RequisitePro will overwrite any unrecognized formatting with the normal.dot formatting.

If you have customized the formatting within the Word document, you should save the document as a Word template and copy it to the RequisitePro outlines directory. Then create document types based on that outline in the project into which you plan to import the document. Refer to the Microsoft Word documentation for help in creating Word templates. Refer to the RequisitePro online help topic “Creating outlines” for help in managing RequisitePro outlines.

Importing Word Documents and Requirements

To use the Import Wizard to import Word documents:

1. On the Tool Palette, click **Project > Open**.
The **Open Project and Documents** dialog box appears.
2. Select the project into which you will be importing the Word document.
3. Click the **Project** menu and choose **Import**. The Import Wizard opens, and the **Select a Source** screen appears.
4. Select the **Microsoft Word Document** option.
5. Type the path and name of the Word document you want to import, or click **Browse** to select a file.
The **Browse** command displays the **Open** dialog box. Navigate to the desired document and click **Open**. (If the desired document is not found in the list, try changing the file type to All files.) The **Open** dialog box closes and the selected document is loaded into the Import Wizard.
6. Click **Next** to continue. The **Select Import Content** screen appears.
7. Designate the import content by clicking the appropriate option. Select **Requirements and document**, **Requirements only**, or **Document only**.

Depending on your choice, you will take one of three paths. The following table demonstrates the trade-offs between the different import options:

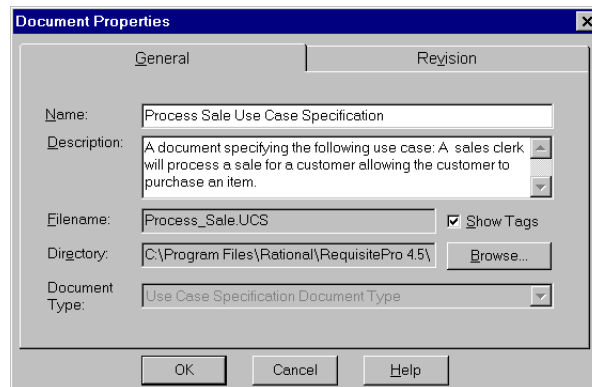
	Requirements and Document	Requirements only	Document only
Requirement definition	Automatic	Automatic	Manual
Requirement destination	New document	Database or New document or Existing document	New document

Importing Both Requirements and the Document

If you select the **Requirements and Document** option on the Select Import Content screen, the Import Wizard imports the entire document and the requirements created by parsing the text. The Word document is imported into a new RequisitePro requirements document, and requirements are automatically generated in the new document. The **Requirements and document** option works well if your document already contains a well-defined requirement structure. The Import Wizard parses the document for requirements based on key words, text delimiters, or Word styles.

1. Select the **Requirements and Document** option on the Select Import Content screen and click **Next**.

The Document Properties dialog box appears.



2. Complete the following information:
 - Type the document **Name** (any length up to 64 characters).
 - Type the **Filename** (RequisitePro will assign an extension according to the Document Type selected).
 - Mark the **Show Tags** check box if you want to display requirement tags in your document.
 - Select a **Document Type** from the list.
 - Click the **Revision** tab to enter a change description or create a user-defined label (optional). Revision number, date, time, and author are generated by the system and cannot be edited here.

3. Click **OK** to continue.

Note: If the document type you selected is associated with an outline (or template) that contains special formatting and text, the **Outline has text** dialog box appears. You must indicate if you want to preserve the text and formatting from the outline for this document type. Click **Yes** to retain the style settings and text from the document outline. Click **No** to import the basic Word document only.

The **Requirement** screen appears

4. Select a type for the new requirements in the **Requirement Type** list. The Wizard provides a default requirement type by matching it to the document type you selected earlier.

Note: Occasionally, you may want to include requirements of multiple types in a single document. For example, any sentence containing the word “shall” could become a product requirement, and any sentence containing the word “will” could become a software requirement. As you create search criteria in the step below, you can use the **Requirement Type** list to select which requirement types you want to apply.

5. Click the **Set Defaults** button to open the Set Requirement Defaults dialog box, where you can enter default attributes, hierarchy, traceability and a change description for the requirements you create.
6. Mark one of three methods for differentiating or *parsing* the Word document. The Import Wizard finds strings of text in the Word document and imports them into the project as requirements.

- *Keywords* - Import Wizard searches the Word document for a specific word, such as “shall” (the default). Type keywords in the **Keywords** field and click **Add** to add the keywords to the requirements criteria field. Select the **Match case** check box to make the keyword match the case of the text you enter in the Keyword box OR select the **Use * as wildcard** check box if you want to use the * as a wildcard character in the Keyword field. Enter the word and click **Add**.

Note: If you want to create requirements from the selected text for each **sentence** or for each **paragraph** without parsing based on a keyword, enter only an * and mark the **Use * as wildcard** check box

- *Text delimiters* - Import Wizard searches the Word document for text contained within specific text delimiters, such as <>, {}, []. When you have entered both the starting and ending delimiters, click **Add**.
- *Word style* - Import Wizard searches the Word document for specified style settings, such as “Heading 1” or “Body text” or highlighted text. Select the appropriate styles and click **Add**.

Note: You do not need to limit the search to one criteria only. You can add keywords, text delimiters, and Word styles to the search list by marking each button in turn. Use **Remove** to delete a criteria from the search list.

7. Click **Next** to continue.
RequisitePro parses the document using the differentiation methods you selected. When a requirement is located, the **Requirement found** dialog box appears.
8. Indicate whether the text found is a valid requirement: Click **Yes** or **No** for each. Choose **Yes to all** to automatically accept all requirements found in the document.
Each requirement is added to the **Requirements to import** box on the Import Wizard screen. Each new requirement begins with a pending tag, followed by the initial text of the requirement.
9. When you are satisfied with your selection, click **Next** to continue.
The Import Wizard displays the final **Status** screen.
10. Click **Commit** to accept the import or click **Cancel** to cancel the import in its entirety.

Importing Requirements Only

Select **Requirements only** at the Select Import Content screen if you want to extract requirements from a document without importing the rest of the text. If your document already contains a well-defined requirement structure such as keywords, styles, or delimiters, this option automatically creates your requirements during the import process. The Import Wizard parses the document for requirements, based on key words, text delimiters, or Word styles. It creates requirements from the text it finds and leaves the rest of the document behind. You have flexibility in the location of the new requirements. You can create requirements in the current project (directly in the database), in an existing RequisitePro document, or in a new document.

1. Select the **Requirements only** option on the Select Import Content screen and click **Next**. The **Select a Destination** screen appears.
2. Choose one of the following destinations for the imported requirements:
 - Select **Current project database** to import the requirements into the database of the open project.
 - Select **New RequisitePro document** to import the requirements into a new document you define. (The Document Properties dialog box appears and prompts you for information about the new document before proceeding to the next step.)
 - Select **Existing RequisitePro document** to choose from a list of existing project documents. (If the document you choose is not already open, RequisitePro opens it for you.)
3. Click **Next** to continue. The **Requirement** screen appears.
4. Follows step 4-9 above in *Importing Both Requirements and the Document*.

Note: At step 7, when the Requirements to import dialog box appears, you have the following options:

- If you want to read the full text of the requirement, click the **View** button.
- To remove a requirement from the list, select it and click the **Remove** button. (It is saved in an **Add requirements** box.) Click **Add** to view the box.

Importing the Document Only

The Import Wizard imports the entire document into a new RequisitePro document without parsing the text. Choose **Document only** if your requirement structure is not defined or you want to manually create the requirements after importing. No requirements are created during the import process. This option gives you the most flexibility in creating requirements in documents.

1. Select the **Document only** option on the Select Import Content screen and click **Next**. The Document Properties dialog box appears.
2. Complete information about the new document. (See step 2 above in *Importing Both Requirements and the Document* on page 11-7.)

Note: If the document type you selected is associated with an outline (or template) that contains special formatting and text, the **Outline has text** dialog box appears. You must indicate if you want to preserve the text and formatting from the outline for this document type. Click **Yes** to retain the style settings and text from the document outline. Click **No** to import the basic Word document only.

The Import Wizard displays the final **Status** screen.

3. Click **Commit** to accept the import, or click **Cancel** to cancel the import in its entirety.

Note: If you are importing a RequisitePro document from one project to another, this process includes an extra dialog box (Refer to *Saving or Removing Bookmarks* on page 11-5).

Importing a CSV File

RequisitePro can import requirements and attributes into your project from any database that supports export of data in CSV format, such as SQL Server, Oracle, Excel, or Access.

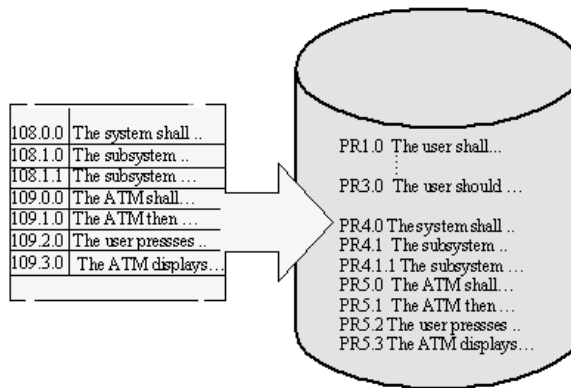
The CSV import process is recommended for:

- Importing requirements from a non-RequisitePro database into the active project.
- Updating existing requirement attributes with new information.

A CSV (comma-separated value) file is a data file consisting of fields and records, stored as text, in which the fields are separated from each other by commas. If the data in a field contains a comma, the field is further surrounded with quotation marks. Using a comma-delimited file format allows data to be shared between database systems that use different formats.

Requirement Numbers

When a new requirement is added to the database, it is assigned a new root requirement number. If a requirement has a tag or a number in the external CSV file, that number is not preserved. RequisitePro will recognize a hierarchical numbering scheme and will import lower-level requirements as children of a higher-level requirement.



Requirements in a CSV file are renumbered when they are imported into the project database.

Preparing a CSV File for the Import Wizard

The CSV file and RequisitePro must be configured properly to successfully import all information:

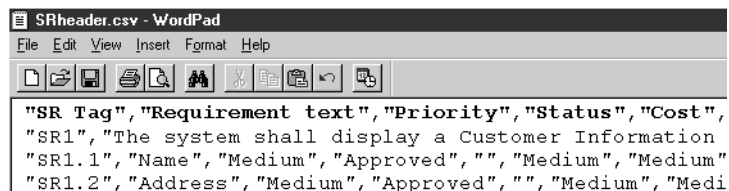
- The CSV file must contain a header in RequisitePro format. RequisitePro uses the following header format:
<Tag>, “Requirement text”, <Attribute 1>, <Attribute 2>, <Attribute 3>.
The requirement type specified in the <Tag> field, determines the default requirement type that will be assigned during the import process. You can change this requirement type assignment in the Import wizard.

- All attributes that are included in the CSV file must exist in the corresponding RequisitePro requirement type in the current project. If the attributes don't match, the default values for the requirement type are inserted during the import process. See *Creating and Modifying Requirement Attributes* on page 15-10.
 - All list-type attribute values in the CSV file must exactly match the predefined list-type attribute values in the RequisitePro requirement type definition. Edit the attribute values in the CSV file or modify the list-type values in your RequisitePro project. See *Working with Requirement Attribute Values* on page 15-13.
- Note:** Multiple-value list attributes appear in a CSV file in quotes, separated by commas (e.g. "Chris, Sarah, John").
- If the CSV file contains null values (blank spaces) for any list-type requirement attributes, those attributes will be assigned the default value as defined in the Project Properties dialog box (Project > Properties). To retain a null value, remove the default setting in RequisitePro before importing the CSV file. You can reassign the default value after the import process is complete. See *Working with Requirement Attribute Values* on page 15-13.
 - All requirements in the CSV file will be converted to the requirement type specified in the import process (in the header <Tag> field, by default). If the CSV file contains requirements with different requirement type tags, such as "PR1" and "SR2", those requirements will be renumbered with the assigned requirement tag, and some hierarchical relationships may be lost.

Defining a Header for a CSV File

RequisitePro uses the following header format:

<Tag>, Requirement text, <Attribute 1>,<Attribute 2>, <Attribute 3>...



```

SRheader.csv - WordPad
File Edit View Insert Format Help
"SR Tag", "Requirement text", "Priority", "Status", "Cost",
"SR1", "The system shall display a Customer Information
"SR1.1", "Name", "Medium", "Approved", "", "Medium", "Medium"
"SR1.2", "Address", "Medium", "Approved", "", "Medium", "Medi
  
```

A sample CSV file with a correctly formatted header row.

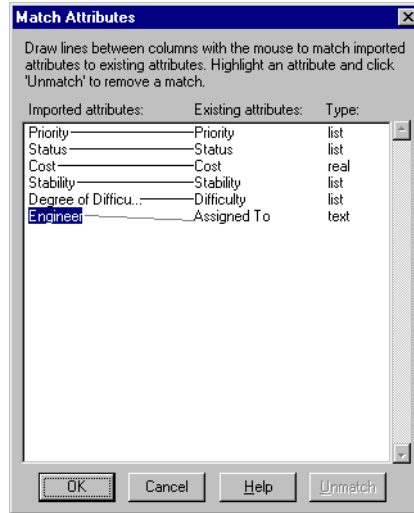
1. To begin creating a header, type a tag that describes a requirement type, such as PR, SR, TST, or any other tag you created in your project, followed by a comma. The word *tag* can be added in the header, but is not required. For example, *SR* and *SR tag* are both acceptable.
 - The tag field in the header is used to set the default Requirement Type used in the import. If the tag field does not match any requirement type in the project, the **Match Requirement Type** screen appears, prompting you to choose one manually.
 - The first column in the CSV file must be the tag column. The tag column cannot contain any empty cells. If a cell is empty, type in any character to fill it.
 - If the tag column in the CSV file contains numbers, the numbers will not be preserved. Imported requirements will be added to the project's requirements list and renumbered accordingly. Hierarchical relationships will be retained.
 2. The literal string *Requirement text* must be the second field of the header, followed by a comma.
 - The second column in the CSV file must be the text of the requirements.
 3. For the remaining fields in the header, type a heading for each column in the CSV file, separated by commas. The column headings in the header can be anything you like, but if you use names (i.e. labels) of attributes as they appear in your project you will save yourself some time later.
 - RequisitePro will look at the header in the CSV file and try to match the column heading to an attribute in the project. During the import process you will be asked to review the attribute matching and make corrections.
 - The columns under the attribute headings must contain attribute values.
- Note:** As an alternate to typing the CSV header, you can copy a header from another CSV file. Exporting an existing RequisitePro file to a CSV file will create a tag in the correct format. Open an Attribute Matrix of the requirement type you plan to import and use the **File > Export > Export to CSV** command. Then copy the header from the newly exported file and paste it into the file you plan to import. (For more information, refer to *Exporting a View as a CSV File* on page 18.)

Using the Import Wizard to Import a CSV File

Open a project, then do the following:

1. On the Tool Palette, click **Project > Import**, or from the Views Workplace, click **File > Import**. The Import Wizard opens, and **Select a Source** screen appears.
2. Complete the following information:
 - Click the **CSV** button to import requirements from a comma-separated value text file.
 - Type the name of the CSV file to import, or click **Browse** to select a file from the list. (The **Browse** command displays the **Open** dialog box. Navigate to the desired document and click **Open**. The **Open** dialog box closes and the selected document is loaded into the Import Wizard.)
3. Click **Next** to continue. The **Match Requirement Types** screen appears. The Import Wizard, by default, selects the RequisitePro requirement type that matches the requirement types in the CSV file that you are importing. You can override the default selection.
4. Click **Next** to continue. The **Match Attributes** screen appears.
5. Click **Match Manually** to check that RequisitePro mapped the attributes correctly. The **Match Attributes** dialog box appears.
6. Complete the following information:
 - If you want to change the mapping, click and hold the mouse while dragging a new line from an imported attribute to an existing attribute.

- If RequisitePro could not make a match, the imported attribute will be listed but will have no line connecting it to an existing RequisitePro attribute. You can make the match manually if you recognize an attribute with the same meaning. Requisite Pro will ignore any attributes left unconnected. Only matched attributes are imported.



When you are satisfied with the attribute matching, click **OK** to return to the Wizard.

7. Click **Next** to continue. The **Select A Resolution** dialog box appears.

When attribute values in the imported requirements conflict with the values in existing requirements, RequisitePro can resolve the conflict in one of two ways:

- add the imported requirements as new requirements in your document or database
- overwrite your existing attribute values with those in the imported CSV file.

Depending on your choice, you will take one of two paths: *Defining New RequisitePro Requirements* on page 11-17 or *Updating Attributes of Existing Requirements* on page 11-18.

Defining New RequisitePro Requirements

The Wizard imports the text of the requirements as written in the CSV file. You can accept or delete the requirements before importing.

1. In the **Select A Resolution** dialog box, select **Define new RequisitePro requirements** and click **Next**. The **Requirements to Import** screen appears.
2. Review requirements in the list and revise the list as needed:
 - Click **View** to read the full text of the requirement. The **Edit Imported Requirements** dialog box appears. Select a requirement from the list. The full text of the requirement displays in the text pane at the bottom of the dialog box. To make changes to any of the list-type attribute values, double-click on the cell and select a new value from the drop-down list. To make changes to entry-type attribute values, select the value and type the new value. Click **Accept for Import**.
 - Click **Remove** to remove a selected requirement. (A requirement that was removed is not entirely deleted. It is moved into the **Add requirements** dialog box.)
 - Click **Add** to review a list of requirements you have removed. If you would like to add a requirement back into the list, select it and click **OK**.
3. Click **Next** to continue. The **Select A Destination** screen appears.
4. Choose a destination for the new imported requirements:
 - Select **Current project database** to bring the requirements into the database of the open project.
 - Select **New RequisitePro document** to create a new document (based on the document type of your choosing) and bring the requirements into the new document. The Document Properties dialog box appears and prompts you to record the document name, filename, and document type.
 - Select **Existing RequisitePro document** to choose from a list of existing project documents. If the file you choose is not open, RequisitePro opens it for you.
5. Click **Next** to continue. The final **Status** screen appears.
6. Click **Commit** to accept the import or click **Cancel** to cancel the import in its entirety.

Updating Attributes of Existing Requirements

The new imported requirement attributes overwrite the requirement attributes in the open project. The text of the imported requirements will not be imported. You can accept or delete the requirements before importing.

1. In the **Select A Resolution** dialog box, select **Update attributes of existing requirements** and click **Next**.
The **Requirements to Import** screen appears. The list box shows tag numbers, followed by the comment:
[text will not be imported].
2. Review requirements in the list and revise the list as needed:
 - Click the **View** button to access the **Edit Imported Requirements** dialog box. Only tag numbers are displayed, as the text will not be imported. (To view the text of the requirements associated with the tag numbers, refer back to the Attribute Matrix in the Views Workplace.)
 - Click the **Remove** button to remove requirements from the list and store them in an **Add requirements** dialog box.
3. Click **Next**. The Import Wizard displays the final **Status** screen.
4. Click **Commit** to accept the import, or click **Cancel** to cancel the import in its entirety.

Exporting Requirements

Requirements are exported from RequisitePro in the Views Workplace.

- An Attribute Matrix can be exported as a CSV file or as a Microsoft Word document.
- A Traceability Matrix can be exported as a CSV file only.
- A Traceability Tree can be exported as a CSV file or as a Microsoft Word document.

Exporting a View as a CSV File

As described above in *Importing a CSV File* on page 11, a CSV file is a data file consisting of fields and records, stored as text, in which the fields are separated from each other by commas. If the data in a field contains a comma, the field is further surrounded with quotation marks.

To export a view as a CSV file:

1. Open the Attribute Matrix, the Traceability Matrix, or the Traceability Tree that you want to export.
2. In the Views Workplace, click **File > Export > Export to CSV**. The **Export to CSV** dialog box appears.
3. Complete the following information:
 - Choose a location to save the exported file in the **Save in** drop-down list.
 - Type a name for the exported file in the **File name** text box.
 - Do not modify the **.csv** file selection in the **Save as type** text box.
4. Click **Save**.

RequisitePro exports the View as a comma separated value file (*.csv), which is readable by such applications as SQL Server, Oracle, Excel, and Access.

Exporting a View as a Word Document

To export a view as a Word document:

1. Open an Attribute Matrix or a Traceability Tree that you want to export.
2. In the Views Workplace, click **File > Export > Export to Word**. The **Export to Word** dialog box appears.
3. Complete the following information:
 - Choose a location to save the exported file in the **Save in** drop-down list.
 - Type a name for the exported file in the **File name** text box.
 - Do not modify the **.doc** file selection in the **Save as type** text box.
4. Click **Save**.

RequisitePro exports the View as a Word document (*.doc), then opens Word and displays the exported View as a Word document table.

Note: When a Traceability Tree is exported to a Word document, RequisitePro creates a new document based on a template created especially for this export (*treeprtdot*). You can modify this template and its styles to suit your needs. Heading styles 1-9 can be modified, but they must be retained.

Importing Requirements and Documents

C H A P T E R 12

Creating Projects

Project administrators create and manage all elements of projects. This chapter provides instructions for performing the following tasks:

- Creating a project using a blank project database
- Creating a project using the Project Wizard
- Creating a project using an existing project as a template
- Converting earlier versions of RequisitePro projects to the latest release

RequisitePro Project File Types

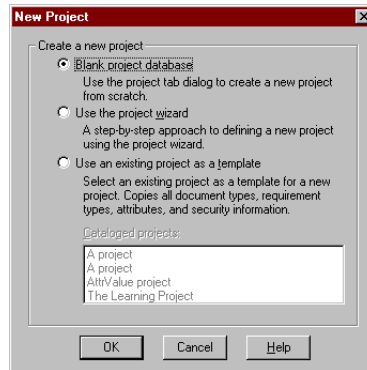
When you create a RequisitePro project, the following types of files are created:

File Extension	Definition
.def	An outline's definition file.
.doc	A Word document.
.dot	A Word template.
.hlp	A Windows application help file.
.txt .mnu	Plain text menu files used to add commands to Tool Palette menus.
.rqs	A text file for project information.

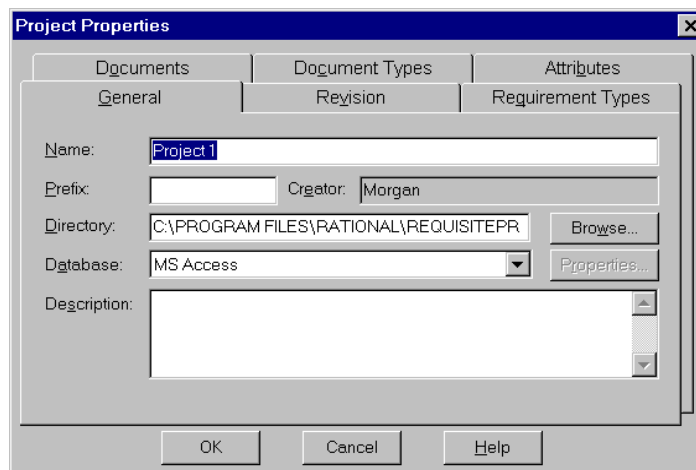
Creating a Project Using a Blank Project Database

This feature is intended for use by knowledgeable users who want the most flexibility when creating a new project. To use this feature effectively, it is important that you know how to work with each of the tabs in the Project Properties dialog box.

1. On the Tool Palette, click **Project > New**.
The **New Project** dialog box appears.



2. Select **Blank Project database** and click **OK**.
The Project Properties dialog box appears, with the **General** tab in front.



3. Click the **Name** text box and type a unique name of up to 64 characters, or accept the default name provided by RequisitePro. The first eight characters of the project prefix are used to identify the project if the project is used for cross-project traceability. RequisitePro automatically populates the **Creator** text box with your RequisitePro user's name. This text box is read-only and cannot be edited.
4. In the **Directory** text box, specify a path for RequisitePro to store the project. Accept the default or click **Browse** to select a directory. The path cannot exceed 256 characters. Once the project is created, you cannot change this field.

Note: You can later relocate a project by moving the project directory to another location in the file system. To access the project in its new location, users must add it to their project lists.

5. In the **Database** field, click the down arrow to select a database for storing the project. You have the option to create projects in Microsoft Access, Microsoft SQL Server, or Oracle.
6. If you select the Microsoft SQL Server or Oracle database, click **Properties** to configure your access to that database.

Note: For more information on configuring SQL Server or Oracle, see the guide *Installing Rational RequisitePro*.

If you have installed the Oracle Setup and the SQL Server Setup under the Custom / Full installation process, you can access the following instructions in your RequisitePro Help directory:

- Configuring Oracle for RequisitePro (oraclesetup.html)
- Configuring SQL Server for RequisitePro (sqlsetup.html)

If the directory specified does not exist, the **Project** message box appears, prompting you to create the directory. Click **Yes** to create the directory.

7. Use the other tabs in the Project Properties dialog box to create settings and record more information about the project. See Chapter 15, *Working with Project Information*, for further instructions about using the tabs in the Project Properties dialog box.
8. Click **OK** in the Project Properties dialog box to create the project.

Recording Revision Information About the Project

Use the Revision tab in the Project Properties dialog box to view information about the most recent revision of the project. Enter optional information about the most recent revision, and access the project's revision history.

Open the Project Properties dialog box by clicking **Project > Properties**, and click the **Revision** tab.

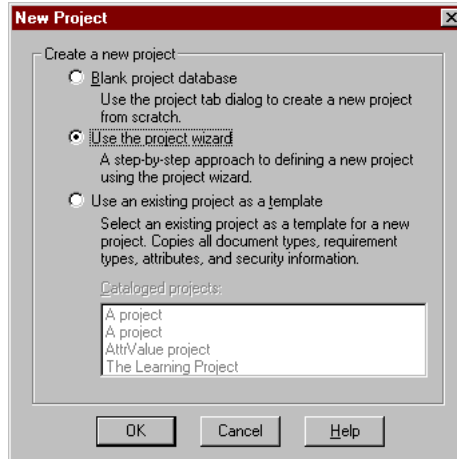
- The **Revision** text box contains the revision number. This read-only text box cannot be edited unless the project is archived using RequisitePro's **Archive** command (or checked into ClearCase). You can only override the revision number when the project is archived. The new revision number that you use must be greater than the existing number and must be expressed in an N.m format, for example, 2.5.
- The **Label** text box contains a descriptive name for the revision. This field is optional and only available if changes have been made to project properties.
- The **Date** text box is read-only and displays the date the project was modified.
- The **Time** text box is read-only and displays the time the project was modified.
- The **Change Description** text box displays changes made to the project. You can type information into the field if changes have been made to project properties in other tabs of the dialog box. Otherwise, the field is read-only.
- The **History** button opens a dialog box that displays the change history of the project.

Creating a Project Using the Project Wizard

The Project Wizard simplifies the process of creating a project by guiding you through each step of the procedure.

1. On the Tool Palette, click **Project > New**.

The **New Project** dialog box appears.



2. Select **Use the project wizard** and click **OK**. RequisitePro starts the Project Wizard and the **Welcome** screen appears.
3. Click **Next**. The **Project** screen appears.
4. Complete the information:
 - In the **Name** text box, type a name for the project, or accept the default name provided by RequisitePro.
 - In the **Description** text box, type a description of the project (this step is optional).
 - In the **Directory** text box, specify a location for storing the project. By default, RequisitePro creates a directory name that matches the name in typed in the **Name** text box above. Accept the default path or click **Browse** and select a directory from the **Browse for Folder** dialog box.
 - In the **Database** field, click the down arrow to select a database for storing the project. You have the option to create projects in Microsoft Access, Microsoft SQL Server, or Oracle. If you select the Microsoft SQL Server or Oracle database, click **Properties** to configure your access to that database.

Note: For more information on configuring SQL Server or Oracle, see the guide *Installing Rational RequisitePro*.

If you have installed the Oracle Setup and the SQL Server Setup under the Custom / Full installation process, you can access the following instructions in your RequisitePro Help directory:

- Configuring Oracle for RequisitePro (oraclesetup.html)
 - Configuring SQL Server for RequisitePro (sqlsetup.html)
5. Click **Next** to continue.

If the directory specified does not exist, the **Project Properties** message box appears, prompting you to create the directory. Click **Yes** to create the directory and go to the **Document Type** information screen. Click **No** to close the message box and return to the **Project** screen to select another directory.
 6. Read the information on the **Document Type** information screen, and click **Next** to continue. The **Create the First Document Type** screen appears.
 7. Complete the information:
 - In the **Name** text box, type a name for the document type, or accept the default provided by RequisitePro.
 - In the **Tag** text box, specify a tag to label requirements created in this document type, or accept the default provided by RequisitePro.
 - In the **Description** text box, type a description of the document type.
 - To indicate that any requirements created in the document must contain the word “shall,” mark the **Requirements must contain the word “shall”** check box.

Note: This step is optional. Once you have created the project, you can assign any “must contain” word, or change a “shall” to a different word.

 - Select an outline to be used with the document type. See *Using RequisitePro Outlines* on page 15-4 for more information on outlines. If you choose the default selection, **None**, RequisitePro uses the *normal.dot* Word template.
 8. Click **Next** to continue.

The **Defined Document Types** screen appears.
 9. Do one of the following if needed:
 - To add more document types, click **Add**, and repeat step 7 above.
 - To edit a document type, click **Edit**. Complete the information in the **Edit a document type** screen and click **Next**.
 - To remove a document type, click **Remove**.

10. Click **Next** to continue. The **Document description** screen appears.
11. Read the information in the pane and click **Next** to continue. The **Create the First Document** screen appears.
12. Complete the information:
 - In the **Description** text box, type a description of the document.
 - In the **Document Type** list, select a document type.
 - To create a RequisitePro document from an existing Microsoft Word document, type the document name in the **Document to import** text box, or click **Browse** to find the document.
13. Click **Next** to continue. The **Documents Defined** screen appears.
14. Do one of the following:
 - To add more documents, click **Add** and repeat step 12.
 - To edit a document, click **Edit**.
 - To remove a document from the list, click **Remove**.
15. Click **Next** to continue.

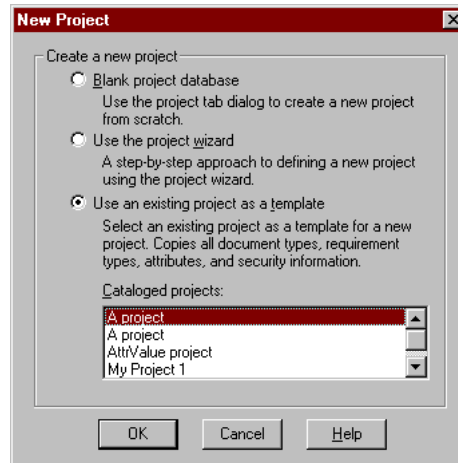
The **Congratulations** screen appears.
16. Click **Finish** to complete the process.

Creating a Project Using an Existing Project as a Template

When you use an existing project as a template, RequisitePro creates the new project using the same structure and database type as the existing project. Document types, requirement types, view definitions, attributes, user and group permissions are all copied. Documents, requirements, history information, and traceability relationships are not copied.

Note that you can copy the basic structure of another project but make modifications to requirement types, document types and attributes.

1. On the Tool Palette, click **Project > New**.
The **New Project** dialog box appears.



2. Click **Use an existing project as a template**.
3. In the projects list, select the name of the project to use as a template.

Note: You can use the **RequisitePro Project Template**, which provides standard document types and requirement types for your new project. This project template is located in your project list (and at the following location: <install drive>\Program Files\Rational\common\OutOfTheBox\requirements\rstemplate.rqs).

4. Click **OK**.
RequisitePro opens the project, duplicates the project structure and opens the Project Properties dialog box with the **General** tab displayed in front.
5. In the **Name** text box, type a name for the project, or accept the default name provided by RequisitePro.
6. In the **Description** text box, type a description of the project (this step is optional).
7. In the **Directory** text box, specify a location for storing the project. Accept the default or click **Browse** and select a path from the **Browse for Folder** dialog box.
8. In the **Database** field, click the down arrow to select a database for storing the project. You have the option to create projects in Microsoft Access, Microsoft SQL Server, or Oracle.

Note: For more information on configuring SQL Server or Oracle, see the guide *Installing Rational RequisitePro*.

If you have installed the Oracle Setup and the SQL Server Setup under the Custom / Full installation process, you can access the following instructions in your RequisitePro Help directory:

- Configuring Oracle for RequisitePro (oraclesetup.html)
 - Configuring SQL Server for RequisitePro (sqlsetup.html)
9. If you want to modify the cloned project properties, use the other tabs in the Project Properties dialog box to change settings and record more information about the project. See Chapter 15, *Working with Project Information*, for further instructions about using the tabs in the Project Properties dialog box.
 10. Click **OK**. The project is added to your project list and ready for use.

Converting RequisitePro Projects to the Latest Version

If you try to open a project created in a RequisitePro release earlier than version 4.0, the Project Conversion Wizard automatically appears and guides you through the project conversion. Projects created in version 4.0 and later are automatically converted to the latest version without running the wizard.

Note: You cannot open projects that were created in versions of RequisitePro earlier than 2.0, including Requisite Baseline.

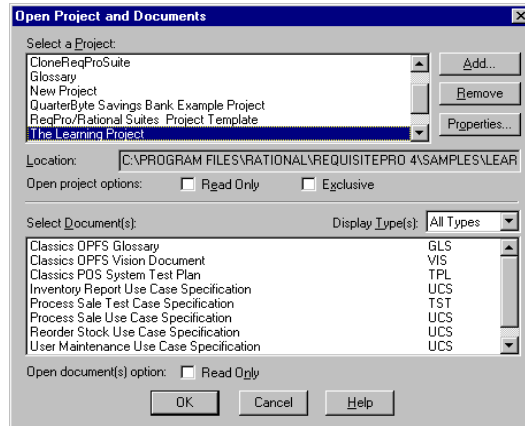
Prior to conversion, the project is archived in its original form in a backup subdirectory in the project directory. You can use this archive to open the project in the earlier version of RequisitePro. You cannot open RequisitePro 2000.02.10 versions of projects in earlier versions of RequisitePro.

Conversion includes the following:

- Conversion to 32-bit format (versions 2.0 and 2.1).
- Conversion to allow for the new features in RequisitePro version 2000.02.10:
 - In-View editing
 - Extended editing
 - Traceability security
 - Requirement authoring via the Web

To convert to RequisitePro version 2000.02.10:

1. On the Tool Palette, click **Project > Open**.
The **Open Project and Documents** screen appears.



2. Select the project to open and click **OK**.
If the project was created in a RequisitePro release earlier than version 4.0, the **Project Conversion Wizard Introduction** screen appears.
3. Click **Next**.
The **Project Archive** screen appears.
4. In the **Archive Location** text box, specify the location for the archived project.
RequisitePro makes a copy of the project and its documents and stores it in the archive directory before converting the project to RequisitePro version 2000.02.10.
5. If you started the conversion process from the command line, the **Project Selection** screen appears, prompting you for the location of the project to convert. In the **Selected Project** text box, specify a location for the project.
6. Click **Archive** to continue.
RequisitePro archives the project.
The **Project Conversion** screen appears.
7. Click **Convert** to convert the project.
The Congratulations screen appears.
8. Click **Exit** to complete the process.

When you run the Project Conversion Wizard from within RequisitePro, the converted project opens when you click Exit.

Note: If the converted project is connected to an external project that is in a previous project format, the converted project opens; however, the connection to the external project is disabled. Open the external project and convert it to the current format in order to re-establish a connection for cross-project traceability.

C H A P T E R 13

Working with Project Security

Because RequisitePro allows multiple users to access the same project documents and database simultaneously, project security is crucial. You can enable or disable security in a project, depending on the needs of the group. With security enabled, users belong to groups. RequisitePro administrators assign group-specific permissions. The permissions determine the amount or kind of access users have to projects.

Any RequisitePro user can create a new project. When you create a new project, you are considered the project administrator and are automatically placed in the Administrators group. After you create the project, you (and other project administrators) can define other users and groups.

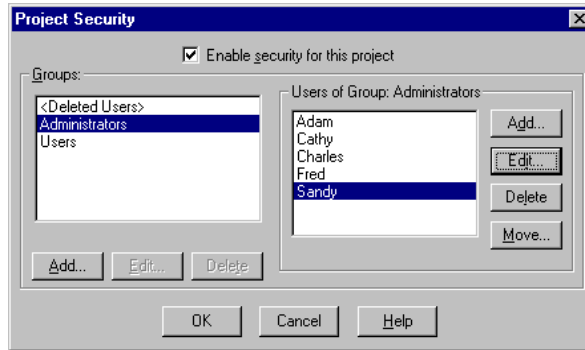
If security is not enabled, any user can open the RequisitePro project. When first opening an unsecured project, RequisitePro allows you to log on as one of the following: the user name specified in the Options dialog box (click **Tools > Options**) **Default Project Logon** field; your Windows logon name; or as a user name of your choice. The user name is added to the Administrators group list for the project.

If security is enabled, the Project Logon dialog box appears each time you or another user opens the project. The project administrator who enabled security can assign passwords for other users.

Setting Security

To enable or disable security for a project:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears.



2. Click the **Enable security for this project** check box. Mark the check box to enable security; clear the box to disable security.
3. Select groups and users by following the steps in the next section.
4. Click **OK**.

Creating and Modifying Groups and Users

RequisitePro provides three default security groups: *Deleted Users*, *Administrators*, and *Users*. Remember that all security permissions are assigned at the group level only, and a user can be in only one group.

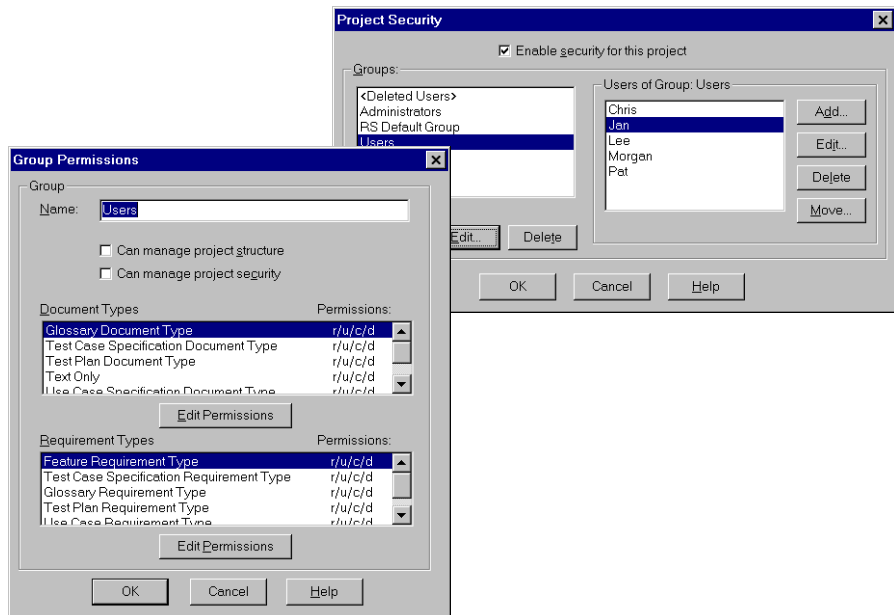
- *Deleted Users*. This group contains users who have been deleted from other groups, have no permissions, and cannot log on to RequisitePro. This group is maintained by RequisitePro for project history.
- *Administrators*. Members of this group have full permissions to work in a project. They can change a project structure, create and modify data, and set and maintain security permissions. You can add and remove users from this group, but you cannot modify Administrators group permissions.
- *Users*. By default, members of the **Users** group have full permissions to create and modify all documents, requirements, attributes, and traceability. You can modify **Users** group permissions to limit the type of permissions granted for each document type and requirement type.

You can add and delete groups, add users to groups, move a user to a different group, and edit a user's information, such as user name, password, and e-mail address.

Creating a New Security Group

To create a new security group:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. Click **Add** below the **Groups** list box.
The **Group Permissions** dialog box appears.



3. In the **Name** text box, type a name for the group.
4. Set the group permissions and click **OK**.
For more information on setting and editing group permissions, see *Assigning Permissions to a Security Group* on page 13-6.
5. Click **OK** to save and close the **Project Security** dialog box.

Deleting a Security Group

If all users have been removed from a group, you can remove the group.

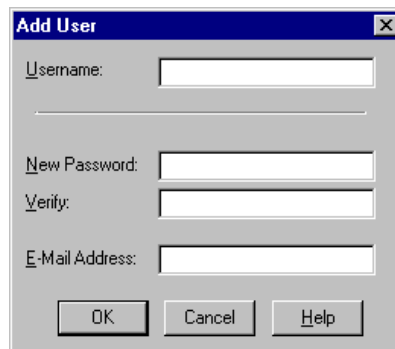
To delete a group:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Groups** list box, select the group to delete.
3. Click **Delete**. RequisitePro prompts you to confirm the deletion.
4. Click **OK**.
5. Click **OK** in the **Project Security** to save and close.

Adding a User to a Security Group

To add a user to a group:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Users of Group** list, select the group to add the user to, and click **Add** next to the **Users of Group** list. The **Add User** dialog box appears.



3. In the **Username** text box, type the user's name (up to 20 alphanumeric characters, not case sensitive).
4. In the **New Password** text box, type the user's password
Note: This field and the Verify field below are encrypted, displaying a symbol for each of the 14 maximum possible characters.

Remember: Passwords are case-sensitive (for example, Mycomputer, MYCOMPUTER, and mycomputer are treated as different passwords).

5. In the **Verify** text box, type the password again.
6. In the **E-Mail Address** text box, type the user's e-mail address.
This e-mail address is necessary for participating in RequisitePro discussions via e-mail. For more information, see *Configuring E-mail for Discussions* on page 6-2.
7. Click **OK**. RequisitePro adds the new user to the group.
8. Click **OK** to save and close the **Project Security** dialog box.

Editing User Information

To edit user information:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Groups** list, select the security group to which the user belongs.
3. In the **Users of Group** list, select the user name.
4. Click **Edit** next to the **Users of Group** list.
The **Edit User** dialog box appears.
5. Edit the user name, password, or e-mail address.
6. Click **OK**.
7. Click **OK** to save and close the **Project Security** dialog box.

Deleting a User from a Security Group

When you delete a user from a security group, RequisitePro moves the user to the <Deleted Users> group. All records associated with the user are maintained. If you reinstate a user with the same name as a deleted user, RequisitePro prompts you to confirm whether it is the same person before RequisitePro reinstates the user.

To delete a user:

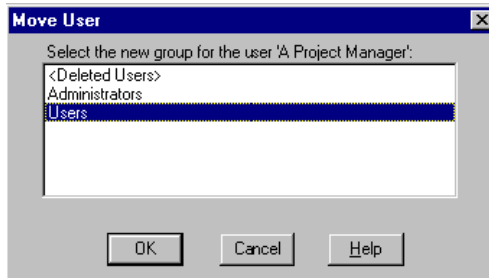
1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Groups** list, select the group containing the user.

3. Select the user in the **Users of Group** list.
4. Click **Delete** below the **Groups** list. A dialog box appears, prompting you to confirm deletion of the user.
5. Click **Yes** to move the user from the current group to the **<Deleted Users>** group.
6. Click **OK** to save your changes and close the **Project Security** dialog box.

Moving a User to Another Security Group

To move a user to another security group:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Groups** list, select the group containing the user.
3. Select the user in the **Users of Group** list.
4. Click **Move**. The **Move User** dialog box appears.



5. Select the group to move the user to.
6. Click **OK**.
7. Click **OK** to save your changes and close the **Project Security** dialog box.

Assigning Permissions to a Security Group

Each security group has its own set of permissions, and all members of the group share the same permissions. The following list shows all possible permissions that can be assigned to a group:

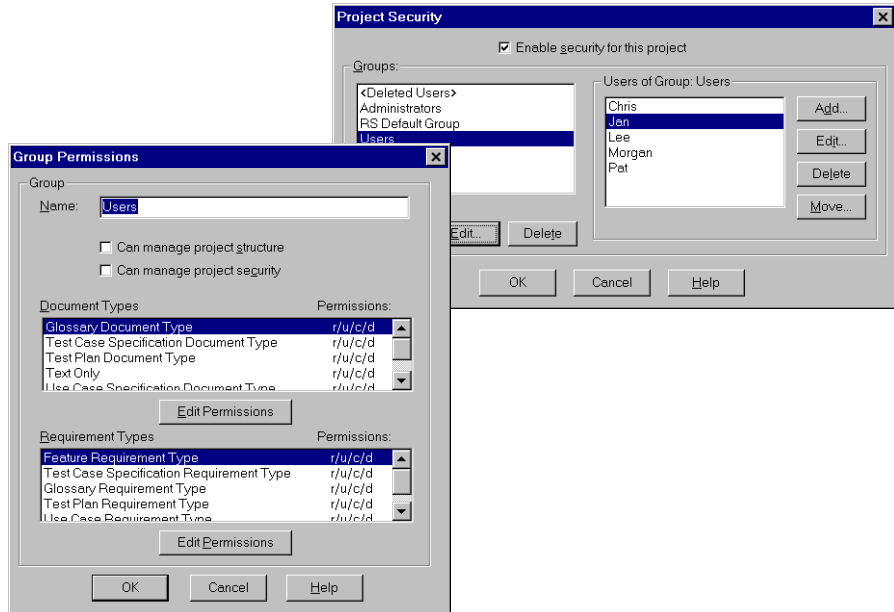
- *Project permissions*: access the project, manage project structure, manage project security.

- *Document type permissions:* read, update, create, delete documents.
- *Requirement type permissions:* read, update, create, delete requirements.
- *Attribute permissions:* read, update attributes.
- *Attribute value permissions:* read, update attribute values.
- *Traceability permissions:* set and clear suspect relationships, create and delete traceability relationships.

Members of the Administrators group and groups with project security permissions can create group accounts, assign permissions to the groups, and add, move, edit, and delete users in groups.

To assign permissions:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Groups** list, select the group.
3. Click **Edit** below the **Groups** list.
The **Group Permissions** dialog box appears.



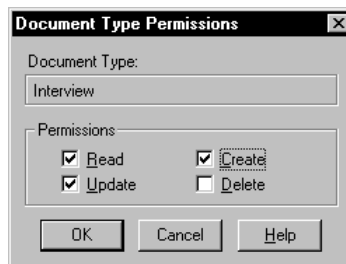
Note: The Administrators group has full permissions. You cannot edit this group’s permissions, although you can add and remove users from the Administrators group.

4. To assign project structure modification permissions to the group, mark the **Can manage project structure** check box. Groups with these permissions have complete access to all tabs and information in the Project Properties dialog box for this project. To remove a group's permissions, clear the check box.
5. To assign project security permissions to the group, mark the **Can manage project security** check box. Groups with these permissions can change group and user permissions for this project. To remove a group's permissions, clear the check box.
6. Assign document, requirement, traceability, attribute and attribute value permissions, as described in the following sections.
7. Click **OK**.

Assigning Document Type Permissions

To assign document-type permissions to a group:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Groups** list, select the group.
3. Click **Edit** below the **Groups** list. The **Group Permissions** dialog box appears.
4. In the **Document Types** list, select the document type for which you want to assign permissions.
5. Click **Edit Permissions** below the **Document Types** list.
The **Document Type Permissions** dialog box appears.



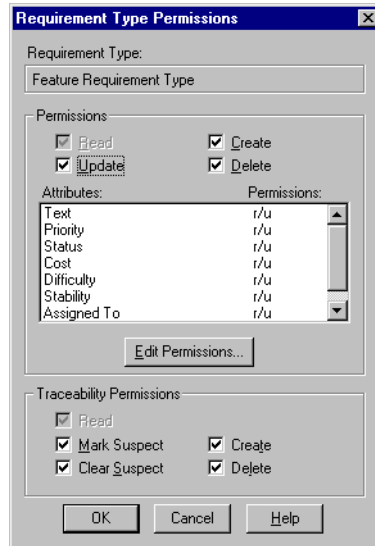
6. Assign document permissions by marking the corresponding check box. Groups can have read, update, create, and delete permissions. To remove a permission assigned to a group, clear the check box that corresponds to the permission. If you do not want the group to have any permissions for this document type, clear all selections.
 - **Read** permissions: Members of the group can view documents of this type. If **Read** is the only permission selected, members of the group cannot modify documents of this type.
 - **Update** permissions: Members of the group can modify documents of this type. If **Update** is selected, **Read** is also automatically selected.
 - **Create** permissions: Members of the group can create documents of this type. If **Create** is selected, **Read** and **Update** are also automatically selected.
 - **Delete** permissions: Members of the group can delete documents of this type. If **Delete** is selected, **Read**, **Update**, and **Create** are also automatically selected.
7. Click **OK** to save the modifications.

Assigning Requirement Type and Traceability Permissions

To assign requirement-type and traceability permissions to a group:

1. On the Tool Palette, click **Project > Security**.
The **Project Security** dialog box appears (make sure the **Enable security for this project** check box is marked).
2. In the **Groups** list, select the group.
3. Click **Edit** below the **Groups** list. The **Group Permissions** dialog box appears.
4. In the **Requirement Types** list, click the requirement type for which you want to assign permissions and click **Edit Permissions**.

The **Requirement Type Permissions** dialog box appears.



5. Assign requirement type permissions by marking the corresponding check box. Groups can have read, update, create, and delete permissions for a requirement type. To remove one of the other permissions assigned to a group, clear the check box that corresponds to the permission.
 - **Read** permissions: Members of the group can view all requirements of this type. If **Read** is the only permission selected, members of the group cannot modify requirements of this type. This permission is automatically selected, and the box cannot be cleared.
 - **Update** permissions: Members of the group can modify all requirements of this type.
 - **Create** permissions: Members of the group can create requirements of this type. If **Create** is selected, **Update** is also automatically selected.
 - **Delete** permissions: Members of the group can delete requirements of this type. If **Delete** is selected, **Update** and **Create** are also automatically selected.
6. To add permissions for traceability relationships to and from requirements of the selected type, select check boxes for the following:
 - **Read** permissions: Members of the group can view all traceability relationships between requirements of this type. This permission is automatically selected and the box cannot be cleared.

- **Mark Suspect** permissions: Members of the group can set suspect traceability relationships to and from requirements of this type. If the Clear Suspect check box is marked, this check box is automatically marked.
 - **Clear Suspect** permissions: Members of the group can clear suspect traceability relationships to and from requirements of this type.
 - **Create** permissions: Members of the group can create traceability relationships to and from requirements of this type. If the Delete check box is marked, this check box is automatically marked.
 - **Delete** permissions: Members of the group can delete traceability relationships to and from requirements of this type.
7. If desired, select a requirement attribute and click **Edit Permissions** to assign attribute permissions to the security group. For more information, see the following section.
 8. Click **OK** in each dialog box to save the modifications.

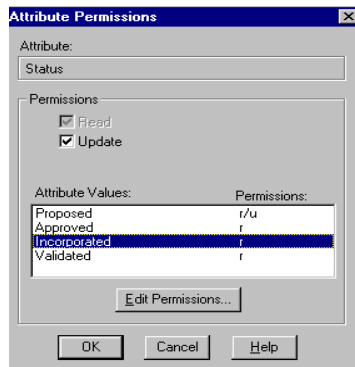
Assigning Attribute Permissions

To assign permissions for an attribute or requirement text:

1. Select the requirement type, as described in steps 1 through 9 in *Assigning Requirement Type and Traceability Permissions* on page 13-9.
2. In the **Requirement Type Permissions** dialog box, select the attribute (or Text) for which you want to set permissions.
3. Click **Edit Permissions**.

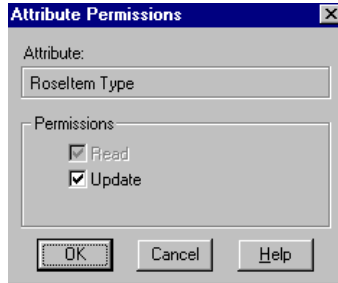
The **Attribute Permissions** dialog box appears.

- **For list-type attributes**, the dialog box pictured below appears.



The **Read** permission check box is automatically marked and cannot be cleared. To allow users to modify attributes of the selected type, mark the **Update** check box and refer to the section on page 12 for more information on assigning permissions to modify specific *attribute values*.

- For **entry-type attributes** or **Text**, the dialog box pictured below appears.



The **Read** permission check box is automatically marked and cannot be cleared.

4. Mark the **Update** check box to give members of the group permissions to modify the attributes. Clear the box to allow default **Read** permissions only.
5. Click **OK**.
6. Click **OK** in the **Requirement Type Permissions** and **Group Permissions** dialog boxes.

Assigning Permissions for Attribute Values

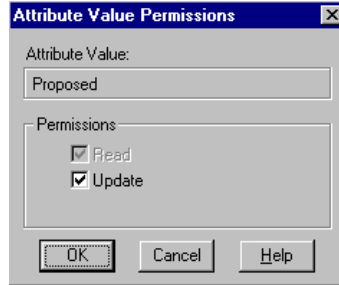
For list-type attributes, you can assign permissions for specific attribute values:

1. Select an attribute, as described in steps 1 through 3 in *Assigning Attribute Permissions* on page 11.
2. Mark the **Update** check box in the **Attribute Permissions** dialog box for a list-type attribute.

The attribute values in the list box and the **Edit Permissions** button are enabled.

3. Select an attribute value in the list and click **Edit Permissions**.

The **Attribute Value Permissions** dialog box appears.



The **Read** permission check box is automatically marked and cannot be cleared.

4. Mark the **Update** check box to give members of the group permissions to modify the attribute value. Clear the box to allow default **Read** permissions only for the attribute value.
5. Click **OK**.
6. Repeat steps 3 and 4 to set or remove group permissions for other attribute values.
7. Click **OK** in the **Attribute Permissions, Requirement Type Permissions**, and **Group Permissions** dialog boxes.

C H A P T E R 14

Managing Projects

This chapter provides instructions for the following tasks for managing projects:

- Controlling user access to a project and its documents
- Renumbering requirements
- Printing project summaries and reports
- Using Requirement Metrics
- Archiving projects
- Removing a project's revision information
- Removing documents and requirements from a database
- Moving projects
- Copying projects
- Converting a database

Controlling User Access to a Document

When opening projects and documents, you have several options for controlling access by other users when the project and documents are open:

- Exclusive access limits access to the project and documents to the user who opens the project. Exclusive access is needed to renumber requirements, change tag prefixes, change requirement color and style, remove an attribute, remove revision information and propagate a revision number.
- Read-only access lets a user open a project for viewing only.
- Document read-only access lets a user open a document for viewing only.

For information on setting up read-only, create, and delete permissions for projects and requirements documents, refer to chapter 13, *Working with Project Security* on page 13-1.

Protecting Documents

When you protect a document for revisions, you can electronically distribute the document or make it available in a shared directory for reviewers to suggest changes. You can then merge the revisions in one document.

Use the commands on the Microsoft Word **Tools** menu in the Word Workplace to track changes and protect RequisitePro documents:

- Track Changes
- Protect Document

Note: Use RequisitePro's offline authoring feature to edit a document in Word outside of RequisitePro. Or, to make a copy of a requirements document, use the **Document > Save As** command. (Refer to *Working With Documents Offline* on page 7-11 and *Saving a RequisitePro Document as a Word Document* on page 7-7.)

Renumbering Requirements

If the project is opened in exclusive mode, you can renumber all requirements of one or more specified types in the requirements document and database. This feature is useful to eliminate the “holes” in a numbering scheme that result when you delete or move requirements.

For more information, refer to *Renumbering Requirements* on page 8-20.

Printing Project Summaries and Reports

Printing a Project Summary in RequisitePro

1. On the Tool Palette, click **Project > Print Summary**.
2. Verify that the correct printer is selected.
3. Click **OK**.

Using Rational SoDA with RequisitePro

RequisitePro is integrated with SoDA, Rational's software documentation automation tool.

Using SoDA and RequisitePro, you can:

- Modify and generate SoDA reports and documents from an open RequisitePro project.
- Create a report that consolidates RequisitePro requirements information and Rose modeling information.
- Create a use case report that includes all use case requirements and Rose use case diagrams.

Before you begin the following procedure, make sure the current version of SoDA for Word is installed and a RequisitePro project is open.

1. On the Tool Palette, click **Project > Generate SoDA Report**. The **SoDA** dialog box appears, showing a list of templates for use with RequisitePro.
2. Select a template from the list and click **OK**. SoDA for Word appears. The **SoDA** menu is active and the selected template is open.
3. Use the template to create a SoDA report from the open RequisitePro project. Refer to the SoDA documentation for more information about generating SoDA reports.

Refer to SoDA documentation for more information about generating SoDA reports.

Note: Do not begin generating a second SoDA report while the progress indicator is active.

Using Requirement Metrics

Requirement Metrics provides project administrators and analysts with statistics concerning a RequisitePro project's attributes, relationships, requirements and revisions. These statistics are displayed in Microsoft Excel.

You can use Requirement Metrics to retrieve information that is vital for evaluating:

- the progress of a project
- priorities, workloads, and deadlines
- the addition of new requirements
- changing or unstable requirements

- approved and incorporated features

You begin by creating one or more filters. A filter creates criteria for retrieving requirement information. For example, you would use an Attribute Count Filter to determine how many requirements in the project have a priority with the value “High”. You then combine one or more filters to produce a query. A query combines the criteria from multiple filters to analyze requirements. The filters that compose a query are joined with the AND statement. Finally, you combine one or more queries to produce a report.

There are two types of reports that are available in Requirement Metrics:

- A **static** report uses static filters and shows results about the project at the present time.
- A **trend analysis** report uses time-sensitive filters that analyze changes in requirement text, attributes, traceability, and hierarchical relationships. Trend analysis reports require that you specify an increment for displaying revisions.

Your report can address the following questions by using the corresponding sample queries:

Question	Query
How many requirements were created since the last release?	<ul style="list-style-type: none">• Requirements Creation filter• Options/Time Period > 10/15/99
How many High Priority requirements do I have?	<ul style="list-style-type: none">• Attribute Value filter• Priority = High
How many requirements went from Low Priority to High Priority in the last month?	<ul style="list-style-type: none">• Attribute Value Change filter• Priority Before = Low• Priority After = High• Options/Time Period/Last Month
How many requirements contain text that has changed more than three times since the last iteration?	<ul style="list-style-type: none">• Requirement Text Change filter• Number of changes > 3• Options/Time Period > 10/15/99
What is the level of detail associated with my requirements?	<ul style="list-style-type: none">• Children filter: > 0 children

How stable is the organization of my requirements?

- **Parent Change** filter

- Before = Select All

- After = Select All

Are my associations with other requirements stable?

- **Traceability Change** filter: Select All

- Relationship = Trace To and From

- Action = Added or Removed

The Requirement Metrics main window is the primary user interface for the application. This window allows you to select a requirement type for your report, choose filters and filter criteria, build queries and add them to your report. As you add filters to your queries, you limit the requirements in your report to only those requirements that match your filter criteria.

Access Requirement Metrics with the **Tools > Metrics** command or the **Metrics button** on the Tool Palette. For more information, refer to the online help included with Requirement Metrics.



Main Window Query Pane

The Query pane in the Requirement Metrics main window provides features for selecting multiple filters in order to build a single query. The query concatenates the filters when it is added to the Report pane, below.

The Query pane contains the following fields and controls:

Choose a Requirement View

Select one of the predefined views, which are designated by angle brackets <> around their names, or select a saved view from the RequisitePro project.

Note: Saved views for external projects are not supported in the list of saved views.

Types: Indicates each filter type included in your query. All queries include the Base filter, which returns all requirements of the selected requirement type.

Criteria: Displays the criteria you have selected for each filter in the query.

Add Filter: Presents the Add Filter dialog box, which allows you select another filter to add to the query.

Delete Filter: Removes the selected filter from the query.

Add to Report: Combines all the filters you've selected into a single query and adds it to the Report's query list, below.

Main Window Report Pane

The Report pane in the Requirement Metrics main window provides features for managing the queries that you have added to your report.

The Reports pane contains the following fields and controls:

Names: Displays the label for each query in the report. To change the label text, click the query once, click once more, and then type a label.

Criteria: Summarizes the filter criteria contained in each filter.

Move Up: Moves the selected query up in the list of queries. The order of the queries determines the order in which they appear in the report.

Move Down: Moves the selected query down in the list of queries.

Delete Query: Removes the selected query from the report.

Create: Run the report with the displayed query criteria.

Creating a Filter and Query

1. Select a view from the Choose a RequisitePro View drop-down list. This can either be a view that you have previously created in the Views Workplace, or it can be a predefined view that includes all the requirements of a requirement type. The view defines the requirement type that the filter uses.
2. Next click the Add Filter button. The Add Filter dialog box appears and displays a list of possible filters.
3. Select a filter and click OK.

Tip: You can also select a filter by double-clicking on it.

An appropriate dialog box for the filter appears.

4. When you have finished making your selections, click OK to add the filter to the filter list.
5. Add more filters to the list until your query is complete.

Adding a Query to a Report

When you add the query to the report, Requirement Metrics builds all filters in the filter list into a single query and adds that query to the report's list of queries. Filters are joined in the query with the "AND" logical operator.

1. Click Add to Report button The query is added to the report's list of queries with a default label.
2. To change this label, select the query in the list, then single-click the query again. The cursor changes into edit mode over the label.
3. Type your new label and press Enter to save the changes.
4. To rearrange the order of the queries in the query list, select a query and click Move Up or Move Down. The order to the queries determines the order in which they appear in the report.
5. Click the menu command Options > Output Requirements Detail to display the requirement tags, text, and attribute values (when applicable) in the report.

A separate worksheet is created in Microsoft Excel for each query in the report.

Setting the Time Controls

When you add any time-sensitive filters to the report, the Options > Time Period command is enabled. You can use this feature to filter for a relative time period, such as “last week”, or you can select a specific beginning and/or ending date for the report.

In addition, if the report consists of only time-sensitive queries, you can show revisions in intervals of days, weeks, months, quarters, or years. This option enables you to create a Trend Analysis report.

To set the time controls:

1. Click the Time Controls button on the toolbar. The Report Time Period dialog box appears.
2. Do one of the following:
 - Click Relative Time Period and select a relative time period from the drop-down list.
 - Click Specific Time Period, and select an operator (such as “>”) and a date from the drop-down lists. When you select the “Between” operator, you must select a beginning and ending date.
3. For reports with only time-sensitive filters, mark the Trend Intervals check box and select an interval from the drop-down list.

Note: The check box is not enabled if you select “Any Time” as your relative time period. This is because there is no end date associated with this selection.

4. Mark the Show Cumulative Counts check box to show the cumulative number of requirements for each time interval.

Running the Report

After you have added queries to the report, you are ready to run it.

Do one of the following:

- Click the Create button.
- Click the File > Create Report menu command.

The program opens Microsoft Excel and presents the requested statistics in a new workbook. The results are also presented in a default graph. To reformat the graph, use Microsoft Excel's Graph Wizard.

Saving the Report

After you have added queries to your report, you can save it for repeated use. You can open and edit saved reports in Requirement Metrics or run them from the Windows command line.

1. To save the current report, click the File > Save Report As menu command.

The Save As dialog box appears.

2. Browse to a directory and type a file name for the report. Click Save.

Requirement Metrics saves the report, including all queries and settings, to a *.rqm file.

Opening and Editing a Saved Report

1. To open a saved report, click the File > Open Report menu command.

The Open dialog box appears.

2. Browse to a directory, select a saved report (with a .rqm extension), and click Open.

Note: When editing saved reports, if you change any of the requirement types or attributes, the saved report may become obsolete. An error message appears if you try to run an obsolete report.

Running from the Command Line

You can run Requirement Metrics from the command line outside of RequisitePro. Click the Start button on the taskbar and choose the Run command.

The command line syntax is:

```
rqmetricsgui.exe ReportFile [user:=Username] [pass:=Password]
[save:=Filename]
```

If any element of an argument contains any spaces, then you must enclose the entire argument in double quotes.

Include the full path of the `rqmetricsgui.exe`. Typically this is “C:\Program Files\Rational\RequisitePro\bin\rqmetricsgui.exe”.

The `ReportFile` argument should include the path and file name of the `.rqm` file you want to run.

The argument **user:=Username** is required for all projects that have project security set. If this project has security enabled, you must use a valid user name for the project. If this is not a secured project, you must first successfully log into the project (this adds your user name to the project). You can now use the same user name to run Requirement Metrics from the command line. (Your current user name is specified in your Tools > Options dialog box in RequisitePro.)

The optional argument **pass:=Password** specifies the password needed for the user name. If either of these arguments is incorrect, you cannot access the project or run the report you requested.

The optional argument **save:=Filename** specifies a name for an output file in Excel format. This is useful for uninterrupted batch processing.

Note: If an Excel file with the file name already exists, Requirement Metrics overwrites the file.

Archiving Projects

In RequisitePro, you can archive projects using either the **RequisitePro Archive** command or Rational ClearCase.

You can use a variety of configuration management tools, such as PVCS Version Manager or Microsoft Visual SourceSafe, to archive your RequisitePro projects. If your project uses a Microsoft Access database, first

use the RequisitePro Archive command to create an archive directory and files; then archive this directory (and files) using your configuration management tool. Be sure to include all project documents in your archive.

Note: When archiving a project that uses cross-project traceability, be sure to archive the other projects at the same time so that you can recreate a complete set of projects when you restore the archive.

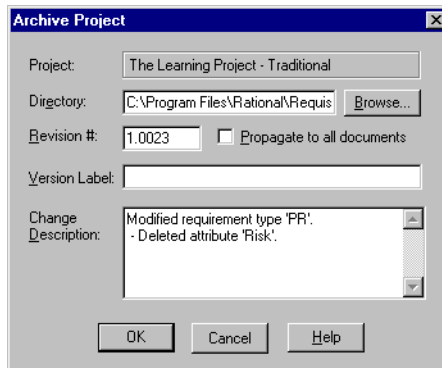
For special instructions for archiving projects that use Oracle or SQL Server databases, refer to *Archiving and Backing up Enterprise Database Projects* on page 14-12.

Archiving Projects with the Archive Command

Using the Archive command in RequisitePro, you can store a project and make a backup copy of a project.

To archive projects with RequisitePro's Archive command:

1. On the Tool Palette, click **Project > Archive > RequisitePro Archive**. The **Archive Project** dialog box appears:



2. Select the directory where you want the backup copy stored. Click **Browse** to open the Browse for Folder dialog box. Navigate to a directory, select a folder, and click **OK**.

You return to the Archive Project dialog box.

Note: To add a new subdirectory to an existing directory path, click at the end of the Directory field and type a forward slash (/) and a new subdirectory name.

3. If you want to enter a new revision number for the project, type it in the **Revision #** text box. The number must be greater than or equal to the current revision number (in the form xxxx.yyyy).
4. To apply the revision number to the requirement documents, select the **Propagate to all documents** check box.
 Note: If security is enabled, you must have project structure permission to propagate the revision number. You must also have the project opened exclusively.
5. If you want to track a version number for this archive, enter the a name for the archived version in the **Version Label** text box and a description for it in the **Change Description** text box.

Note: To retrieve a project archived with the Archive command, add the archived project to your project list (click **Project > Open** and then click the **Add** button) and then open the project in RequisitePro.

Archiving Projects with Rational ClearCase

Integration with Rational ClearCase works at the project level by making a RequisitePro Access database and associated documents a part of an existing ClearCase Versioned Object Base (VOB).

Note: For special instructions for archiving projects that use Oracle or SQL Server databases, refer to *Archiving and Backing up Enterprise Database Projects* on page 14-12.

Setting Configurations to Use ClearCase

Before archiving RequisitePro projects using integration with ClearCase, you must set a default ClearCase view. Create a target VOB in ClearCase, or check with your ClearCase administrator to learn which VOB and view your team will be using.

Set the default ClearCase view in RequisitePro:

1. From the RequisitePro Tool Palette, click **Tools > Options**.
2. In the Options dialog box, fill in the **ClearCase View** field with the target VOB location (drive, viewname, vobname, directory).
 Use UNC naming conventions for a shared drive. This step defines the view to which the RequisitePro database and documents will be copied during the archive functions.
3. Click **OK**.

Archiving Projects with ClearCase

1. On the Tool Palette, click **Project > Archive > Rational ClearCase**. The Archive with ClearCase dialog box appears.
2. Select the directory where you want the backup copy stored. Click **Browse** to open the Browse for Folder dialog box. Navigate to a directory, select a folder, and click **OK**.
You return to the Archive Project dialog box.
3. To add a new subdirectory to an existing directory path, click at the end of the **Directory** field and type a forward slash (/) and a new subdirectory name.
4. If desired, enter a new revision number for the project.
5. To apply the revision number to the requirement documents, select the **Propagate to all documents** check box.

Note: If security is enabled, you must have project structure permission to propagate the revision number. You must also have the project opened exclusively.

6. If desired, enter a name for the archived version in the **Version Label** text box and a description for it in the **Change Description** text box.

Archiving and Backing up Enterprise Database Projects

A small initial investment of your time in designing, performing and testing backup or archive operations will benefit your organization. Following these steps will guide RequisitePro project administrators, database administrators (DBAs) and system administrators in archiving or backing up SQL Server or Oracle projects so that no data is lost and that archives of your projects can be created quickly and dependably.

Concepts described in this section require intermediate DBA skills. The RequisitePro project administrator will need to forward this information to the DBA, who can ensure that the data is copied from the database to a location that can be backed up by the system administrator. It is recommended that the RequisitePro project administrator verify that the process is working correctly and make corrections or enhancements to the process for site-specific configuration issues.

Backups and Archives

A backup provides a way to recover a project in the event of a failure such as media failure, user error, or other catastrophic event. Backup operations must occur on a regular basis. Regular backups generate a large amount of data and for this reason, backup media is cycled relatively quickly (6-8 weeks). Backups have a limited ability to re-create how your project looked several months prior.

By contrast, archive operations happen infrequently and are by designed to be kept long term. An archive is a 'snapshot' in time of a RequisitePro project (a.k.a. requirements artifacts). It provides an official standard on which subsequent work is to be based, and to which only authorized changes can be made. After an initial archive is established every subsequent change to an archive is recorded as a delta until the next archive is set.

RequisitePro tightly couples information in documents to information stored in a database. Parts of the requirement information are stored in the documents (requirement text and contextual information) while other parts (attributes, traceability relationships, discussions, etc.) are stored in the database. Together the database and the documents make a complete requirement set. For that reason, it is very important that you treat the project documents and the project database as a unit. You cannot mix and match projects documents with different databases. You also should avoid archiving the documents and database at different times.

Logical Backups

A logical backup (import/export) of a database exports the database objects independent of the physical location of those objects. In other words, a logical backup exports the data stored in a table regardless of the location of the table (tablespace or datafile, or otherwise). The Oracle Export Utility can create a file that contains all the objects in a particular schema. The file that is created can then be imported to the same schema to recover from a failure, or to a different instance or schema for archiving purposes.

Similarly, SQL Server can export all the database objects to another SQL Server. Unlike the Oracle Export Utility, the SQL Server Import/Export Utility cannot export all the database objects to a file. However, all the objects residing in a SQL Server database can be stored in a backup file giving a similar result to the Oracle Export Utility. To create a backup file in this manner, use the Enterprise Manager for SQL Server and select the database that contains RequisitePro data in the left pane and select the Backup database

option in the right pane. On the SQL Server Backup dialog box make sure to select “Database - Complete” for this type of backup. The resulting Backup file will contain all of the objects stored in the RequisitePro database.

Advantages of logical backups:

- Logical backups are highly recommended before any upgrade to new version of Oracle, SQL Server or RequisitePro. Prior to an upgrade, a logical backup will provide the latest data in the event of a failure. Oracle may require a logical backup if the newer database format is not compatible with the older database format. For SQL Server, we recommend creating a physical backup (Database - Complete) through the SQL Server Enterprise Manager.
- Oracle only: Logical backups can be used to detect block corruptions. If a corrupt block is detected during an export the export will fail. The corrupt blocks will need to be repaired before a successful export can be obtained.
- Logical backups can be used to provide a test or development copy of your RequisitePro projects. The test or development copy can be used to test a new release of RequisitePro, or train new users.
- Oracle only: Logical backups can be used to in conjunction with COALESCE to defragment extents.
- Logical backups can be used to significantly alter your database structure such as moving the RequisitePro Oracle schema from one Oracle tablespace to another or using a different Oracle schema name. It can also be used to move RequisitePro data to a different database in SQL Server.
- Logical backups are very useful when changing database servers.

Disadvantages of logical backups:

- The biggest disadvantage of logical backups is the amount of time they take to perform. For large RequisitePro schemas or databases, it may take several hours to perform a complete a logical backup. For high-availability databases that are used around the clock in different parts of the world, the time it takes to perform a logical backup can have a serious implication on the database usability. For Oracle, consider using a combination of incremental, cumulative and complete logical backups to provide flexibility to your users. SQL Server users might not be as affected by a logical backup as Oracle users are.

- Ideally sessions should be restricted during a logical backup. The following sequence of commands will allow you to put your database in restricted mode during a logical backup. For Oracle, the following example demonstrates how to put the database in restricted mode during an export.

```
SVRMGR> shutdown immediate
```

```
SVRMGR> startup restrict open
```

```
exp userid=reqpro/reqpro...
```

```
SVRMGR> alter system disable restricted session;
```

SQL Server databases can be put in single user mode by right clicking on the database and selecting Properties. Once the RequisitePro Database Properties dialog box appears, select “Single user” under “Access” on the “Options” tab.

Image Backups

Image backups (physical backups) are an alternative to logical backups for backing up a RequisitePro databases. However, they cannot be used if you want to archive RequisitePro databases. Unlike logical backups, image backups make physical copies of the database files. Image backups are by nature more tightly coupled to the database and its current operating state. For example, Oracle keeps track of the current log sequence file number that is being used and a backup must contain all the redo log files necessary to build the database back to the correct log sequence file number. Image backups should not be used if the RequisitePro projects share an instance with data from any other application.

Offline image backup (or cold backups) refers to making physical copies of the database files while the database is shutdown. Offline image backups can be used with RequisitePro data as long as whenever an offline image backup is created, a backup of the RequisitePro project file(s) and documents is also created.

Online image backup (or hot backups) refers to making a copy of the database files (offline image backup) and then making copies of the redo logs for Oracle or the transaction logs for SQL Server. For Oracle, the database will need to be running in ARCHIVELOG mode to create online image backups. For SQL Server, an administrative task will need to be established to backup the transaction log for the SQL Server database that contains RequisitePro data.

Verify that no one is using RequisitePro while you are performing an online image backup to ensure that the data stored in the database matches the project documents.

Database Considerations

When using RequisitePro, the physical database can use one of three commercial databases: Microsoft Access, Oracle or SQL Server. The various options to archive RequisitePro projects vary depending on the database used.

In a Microsoft Access-based RequisitePro project, there is only one RequisitePro project per physical Access database (.mdb file). Access-based projects can be archived or backed up by using the RequisitePro **Project > Archive** command. Projects that participate in cross-project-traceability should be archived or backed up at the same point in time to maintain consistent traceability links between them.

Archiving an Oracle Project

In Oracle-based RequisitePro projects, the project administrator has the option to store either one or many RequisitePro projects in the same Oracle instance or schema.

Sharing a Oracle instance with applications other than RequisitePro:

RequisitePro projects can potentially share an Oracle instance with other applications at your site. The primary advantage of sharing the same instance between applications is that it reduces the amount of database administration required. However, RequisitePro data must be synchronized with the RequisitePro documents it is not recommended to share the instance used for the RequisitePro project with other applications. If it is necessary to share an instance, the only way that you can backup your RequisitePro data is through logical backups. Image (physical) backups will not work in a shared instance because anytime the data for one application needs to be recovered; the data for all applications will need to be recovered. This could create a situation where an application independent of RequisitePro, would need to restore RequisitePro data that is older and/or not in sync with the RequisitePro documents associated with your project.

All RequisitePro Projects in one schema: Putting all the RequisitePro projects in one Oracle schema is the most effective way to store your projects. Because all the projects are stored together, all projects are backed up together. However, if a project needs to be restored, all projects stored in that schema,

will need to be restored together. This can potentially cause problems: work done on another project can be lost because the restore operation will overwrite the project with the restored backup from a week ago.

One RequisitePro project per schema: Each project can be stored in its own individual schema. This maximizes flexibility, but also requires the most amount of administrative work. Projects stored in their own individual schema can be backed up and restored without affecting other projects. Storing each project in its own schema is not recommended if you use cross-project traceability. Projects that utilize cross-project traceability need to be in sync with each other. Restoring a project that participates in cross-project traceability while not restoring all the projects that participate in cross-project traceability would be detrimental to all projects involved.

Storing external projects in the same schema: Projects that utilize cross-project traceability need to be in sync with each other. Restoring one project while not restoring all the projects linked with cross-project traceability would be detrimental to all projects involved. This is the best compromise to the above situations. Storing all related projects will minimize the administration required and project corruption due to desynchronizing. It is recommended that you put the set of project files linked with linked with cross-project traceability in one directory structure. This will not only keep these projects in sync, but after the database export file is created, it can be copied to the root directory of all the projects and the backed up at once. In this directory structure, each project will need to be stored in a separate subdirectory of the root directory.

Archiving a SQL Server Project

In Microsoft SQL Server-based RequisitePro projects, the project administrator has the option to store either one or many RequisitePro projects in the same SQL Server database.

Storing all RequisitePro projects in one SQL Server database: Putting all the RequisitePro projects in one SQL Server database is the most effective way to store your projects. Because all the projects are stored together, all projects are backed up together. However, if a project needs to be restored, all projects stored in that SQL Server database will need to be restored together. This can potentially cause problems: work done on another project can be lost because the restore operation will overwrite the project with the restored backup from a week ago.

One RequisitePro project per SQL Server database: Each RequisitePro project can be stored in its own SQL Server database. This maximizes flexibility, but also requires the most amount of administrative work. The advantage of this solution is that projects stored in their own SQL Server database can be backed up and restored without affecting other projects. However, storing each project in its own SQL Server database is not recommended if you use cross-project traceability.

Storing cross-project traceability projects in the same SQL Server database: Projects that utilize cross-project traceability need to be in sync with each other. Restoring a project that participates in cross-project traceability while not restoring all the projects that participate in cross-project traceability, could create inconsistent traceability links. Storing cross-project traceability projects in the same SQL Server database is the best compromise to these situations. It will minimize the administration required and minimize project corruption due to de-synchronizing cross-project traceability projects. It is recommended that you put the set of project files that communicate via cross-project traceability in one directory structure. This will not only keep these projects in sync, but once the database export file is created, it can be copied to the root directory of all the cross-project traceability projects and be backed up as a package. To organize project files participating in cross-project traceability, you can store each project in a subdirectory of a common directory.

Verifying the Success of the Archiving or Backup Operations

Before it becomes necessary to archive or restore a project, it is a good idea to practice. It would be unfortunate to realize that the restoration process is not working correctly when you need to restore project data. To what extent you practice restoring an archive or backup depends on your situation.

To be 99% sure the operation is working correctly we recommend an archive or backup for production and development. On a nightly basis, backup or archive the production server in the manner described above. Once the archive or backup “package” is created, it is immediately restored to the development server. If the operation fails, the problem is remedied and the process is started again. The development server can then act as a test bed for attempting project modifications before they are attempted on production data. The development server could also be used as a “hot backup” server, which can be accessed quickly in the event of a production server failure. We strongly recommend you verify the success of the backup and archive operations on a regular basis.

Restoring Enterprise Database Projects from an Archive

To restore a project from an archive, follow these steps:

1. Create a directory to hold the project.
2. If the **RequisitePro Archive** command was used, copy all the files from the archive directory to this new directory.
3. If the **ClearCase Archive** command was used to archive the project check all the files out into this directory. Also, you may want to use the “-ptime” option when checking out the files. This will preserve the time stamp of the original files and RequisitePro will not prompt you for modifications outside of the product. The “-ptime” option is only available in ClearCase 4.0.
4. If the project is Microsoft Access-based, you can start using the project from this new location.
5. If the project is Oracle-based or SQL Server-based, you will need to restore the file containing the logical backup through the SQL Server Enterprise Manager or the Oracle Import Utility. Depending on how you are restoring the project, you may need to create database objects such as an instance, tablespaces, a user, a SQL Server database or a role.
6. On Oracle-based or SQL Server-based projects, modifications to the project information file may be required based on changes in instance name, server name, and user name. These changes can be performed by using the **Project > Open** command, then adding the project, and with the project selected, clicking the **Properties** button.
7. Once the Oracle-based or SQL Server-based project is opened, references to document that were not located in the original project directory (before the project was archived) will need to be updated to reflect the new location. The references can be updated by opening the document in RequisitePro, and when the Locate document dialog box appears use the **Browse** button to open the document in the new directory.

Note: Be aware that any changes that you make to an archived project cannot be merged into any other project.

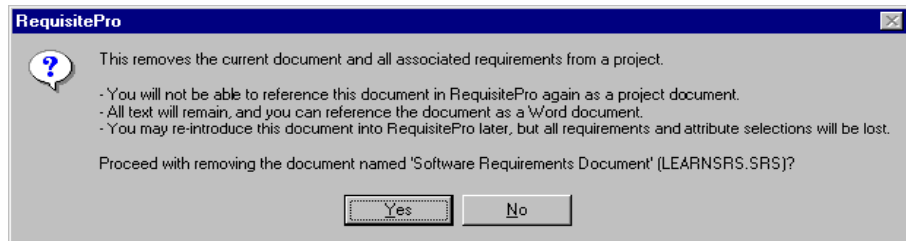
Removing Documents and Requirements from a Project Database

When a document and its requirements are removed from the project database, the requirement formatting and the requirements are deleted (although the text remains) and the document can only be referenced outside RequisitePro as a Word document. The project must be opened exclusively to perform this operation (for more information about the exclusive option, refer to *Opening a Project and Documents* on page 3-5).

To remove documents and requirements:

1. Open the document in RequisitePro.
2. Do one of the following:
 - In the Word Workplace, click **RequisitePro > Document > Remove**.
 - On the Tool Palette, click **Document > Remove**.

A confirmation dialog box appears.



3. To remove the document, click **Yes**. To cancel the operation, click **No**.

Moving Projects

If you are using an Access database for your RequisitePro project, you can move the project to a new location, such as a different server.

To move the project:

1. Remove the project from your list of projects. Click **Project > Open**, select the project name in the Select a Project field and click **Remove**.
2. Copy the project files to your new location using Windows Explorer.
3. Add the project in its new location to the list of projects. Click **Project > Open**, and click **Add** at the Select a Project field.

4. Rename the original project directory and all directories that contain project documents. This way you have a backup in case anything goes wrong. You can delete this directory once you are comfortable that the move was successful.

Note: If you want to save a copy, of the original directory, don't delete it. See *Copying Projects* below.

5. Open your project in RequisitePro. The first time you open a project document that is not stored in the project directory, you will be prompted to locate the document. Select it from the new location.

Note: If you have documents that are not stored in the project directory, when you open a document, you may be prompted to find it, and select it from the new location.

If you are using an Oracle or SQL Server database for your RequisitePro project, consider the following:

Do you need to move an individual project or are you moving the entire Oracle or SQL Server database?

- If you need to move the database, you should consult your database administrator.
- If you need to move an individual RequisitePro project, consult Rational Technical Support.

Copying Projects

Do not attempt to copy or move a RequisitePro project by copying the project directory from one location to another. In this case, internal unique identifiers may cause conflicts if the project uses cross-project traceability.

If you are using an Access database for your RequisitePro project, there are two types of copying functions you can perform:

- You can move a project to another location and keep a backup copy. Refer to *Moving Projects* on page 14-20.
- You can create a new project that uses an existing project as a template. Document types, requirement types, attributes, user and group permissions, and views are all copied to the new project. Refer to *Creating a Project Using an Existing Project as a Template* on page 12-7.

You can also split a project. Before you begin, we strongly recommend you archive your original project.

1. Use the Project > Archive command to make a physical copy (B) of your RequisitePro project (A).
2. Open your copy (B) in RequisitePro and change the project name under the General tab of the Project Properties dialog box.
3. You can then delete requirements in each project to be left with one copy of each requirement in each project. See deleting requirements for more information.

Note: When performing any of the above procedures, note that you cannot merge the two copies of projects back together into one project.

If you are using an Oracle or SQL Server database for your RequisitePro project, do not attempt to create a copy of the project. In this case, copying the project directory does not copy the project database. Both copies of the project will continue to point to the same enterprise database instance. Conflicts between document and requirement updates will result.

Converting a Database

The Database Type Conversion Wizard is included with RequisitePro. It enables you to convert a RequisitePro project from one database type to another.

In most cases, the wizard is used to convert a project that uses a Microsoft Access database to an enterprise database (Oracle or Microsoft SQL Server); however, the wizard also supports the conversion of a project from an enterprise database to Access.

The Database Type Conversion Wizard requires that the following conditions be met prior to performing the database type conversion. The wizard displays messages to alert you if any conditions are not met.

- The project must be saved in the current version of RequisitePro.
- You must have administrator permissions for the project.
- You must have log on and write permissions for the target database.
- Your database administrator must supply you with the user name and password, a server name, and a schema name in order to access the enterprise database.

Note: For more information on configuring SQL Server or Oracle, see the guide *Installing Rational RequisitePro*.

If you have installed the Oracle Setup and the SQL Server Setup under the Custom / Full installation process, you can access the following instructions in your RequisitePro Help directory:

- Configuring Oracle for RequisitePro (oraclesetup.html)
- Configuring SQL Server for RequisitePro (sqlsetup.html)

Caution: It is strongly recommended that you archive or backup both the source and the destination database and related documents before continuing with the database type conversion (Refer to *Archiving Projects* on page 14-9).

To start the Database Type Conversion Wizard:

Note: Prior to running the wizard, you must open RequisitePro once. You can then close RequisitePro or leave it open. Be sure that the project you want to convert is not open in RequisitePro when you begin the conversion.

- Open the Database Type Conversion Wizard in Windows Explorer. The executable, **rqdbtypewiz.exe**, is located in the Rational\RequisitePro\bin\ directory.
- The Database Type Conversion Wizard introduction screen appears. Each screen of the wizard includes a Help button. To view step-by-step instructions about using the screen, click the Help button in that screen.

C H A P T E R 15

Working with Project Information

Project administrators can modify information about a project, including:

- Document types
- Requirement types
- Requirement attributes
- Attribute values
- Cross-project traceability

Working with Document Types

You can create document types and modify existing document types. If you no longer need a document type, you can delete it.

A document type defines descriptive and operational information associated with a requirements document. The document type serves as a template for each document you create of that type.

The document type defines the document's file extension, such as .prd; all documents of the same document type share the same file extension. The document type identifies a default requirement type; each new requirement you create in the document will be based on the default requirement type unless you indicate otherwise. The document type also identifies an outline (or template) for the document, which controls its page layout, heading and paragraph styles, and a default font.

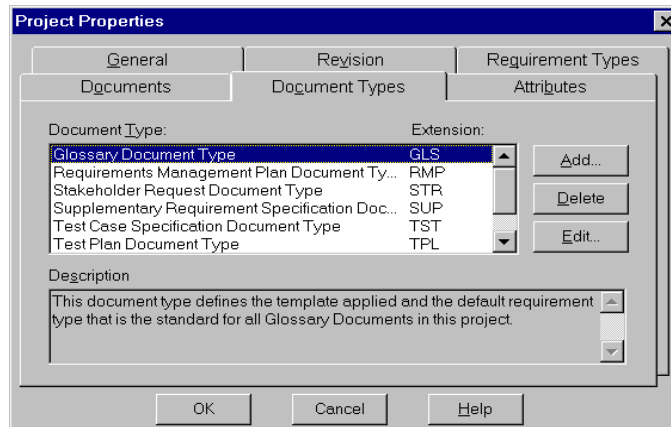
When you create or modify your project, you determine the document types to use in the project. Each document in your project must be associated with a document type. More than one document can be associated with the same document type.

When you create a document, you associate it with a document type that you have already defined in your project. The document type defines the characteristics of the documents associated with the document type. This makes all documents of the same type consistent.

To help you define a common format for your document types, you can choose outlines included with RequisitePro to associate with new or existing document types.

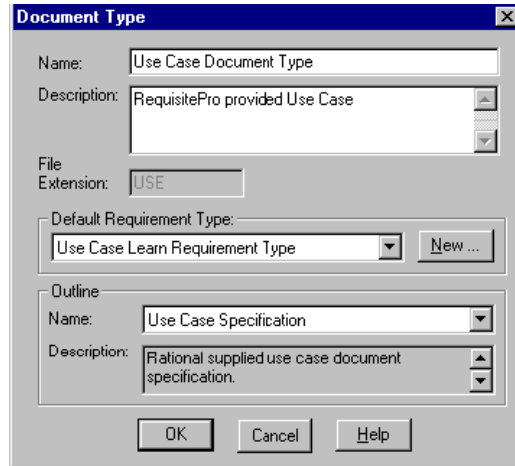
Creating and Modifying Document Types

1. On the Tool Palette, click **Project > Properties**. The Project Properties dialog box appears.
2. Click the **Document Types** tab.



3. Do one of the following:
 - To add a new document type, click **Add**.
 - To modify an existing document type, select the requirement type in the list, and then click **Edit**.

The **Document Type** dialog box appears.



4. In the **Name** text box, type a unique name for the document type.
5. In the **Description** text box, type a description.
6. In the **File Extension** text box, type a file extension. Enter a three-character text string, or, if long file names are supported, a longer extension. The file extension is applied to all documents associated with the document type.
7. Select a requirement type in the **Default Requirement Type** list. The default requirement type is used to specify the type of requirement that is created when Fast Create is used.
8. In the **Name** text box below **Outline**, select an outline to associate with the document type. See *Using RequisitePro Outlines* on page 15-4 for more information on available outlines. If you use the default selection, **None**, Microsoft Word's *normal.dot* template is used.

Note: If you select a new outline, the new outline applies to new documents only. Existing documents are not affected by the change.

9. Click **OK**. The new or modified document type appears in the list box.
10. Click **OK** in the Project Properties dialog box.

Note: You can edit the .dot files associated with your document types to include your company name and other information specific to your organization. You can enter the company name, etc. in the Microsoft

Word **File** > **Properties** dialog box. Then in the document itself, right-click on the **Company-Name** field, and select **Update Field**. To create your own outline, see the next section.

Deleting Document Types

If no documents of a particular document type exist in a project, you can delete the document type.

1. On the Tool Palette, click **Project** > **Properties**. The Project Properties dialog box appears.
2. Click the **Document Types** tab.
3. In the **Document Type** list, select the document type you want to delete.
4. Click **Delete**.

Using RequisitePro Outlines

Outlines are templates that are useful for maintaining consistency across documents of the same type. Outlines can help you quickly create user-needs documents, specifications, and test plans.

Every new document in RequisitePro includes default formatting information. New documents are based on document types, which include a default file extension, a default requirement type, and an associated outline. You can assign outlines to a document type in the Project Properties dialog box: Document Types tab.

RequisitePro includes the following outlines that can be used when creating document types in your project:

- Product Requirements Outline
- Software Requirements Outline
- Test Design Outline
- Functional Test Case Specification

RequisitePro also includes these Rational Unified Process templates for requirements management:

- RUP Requirements Management Plan
- RUP Glossary
- RUP Vision Document
- RUP Stakeholder Requests

- RUP Use Case Specification
- RUP Use Case Software Requirements Specification
- RUP Software Requirements Specification (Non-Use Case)
- RUP Supplementary Specification
- RUP Test Plan

RequisitePro includes these additional templates for business modeling:

- RUP Business Glossary
- RUP Business Rules
- RUP Business Vision
- RUP Business Use Case Specification
- RUP Business Use Case Realization Specification
- RUP Supplementary Business Specification

You can edit the .dot files associated with your document types to include your company name and other information specific to your organization. You can enter the company name, etc. in the Microsoft Word **File > Properties** dialog box. Then in the document itself, right-click on the **Company-Name** field, and select **Update Field**. To create your own outline, see the next section.

Creating Your Own Outlines

1. Start Microsoft Word outside of RequisitePro.
2. Create a new template. (See the Word documentation for more information about creating templates.)
3. Move the new template and help file to the RequisitePro **Outlines** directory.

Note: Templates are automatically stored in the RequisitePro Outlines subdirectory. You can set a second location for additional templates, such as those shared on a network or used by a particular project: Use the **Tools > Options** command on the Tool Palette to specify a secondary location for the outlines. Type the full path and subdirectory name in the **Outline Path** field, and click **OK**.

4. In a text editor, create a new text file containing the following three lines of information, separated by carriage returns (<CR>):

- The outline's full name, up to 64 characters
Important: Be sure that this logical name is unique in the Outlines directory.
- A description of the outline, up to 256 characters
- The Word template's DOS filename

For example:

```
Acme Enterprises Standard Software Requirement Specifications<CR>
Standard outline used for Software Requirements Specifications at
Acme Enterprises<CR>
acme_srs.dot
```

In the **Outlines** directory, save the text file, using the same file name as the template and the extension .def (for example, **acme_srs.def**).

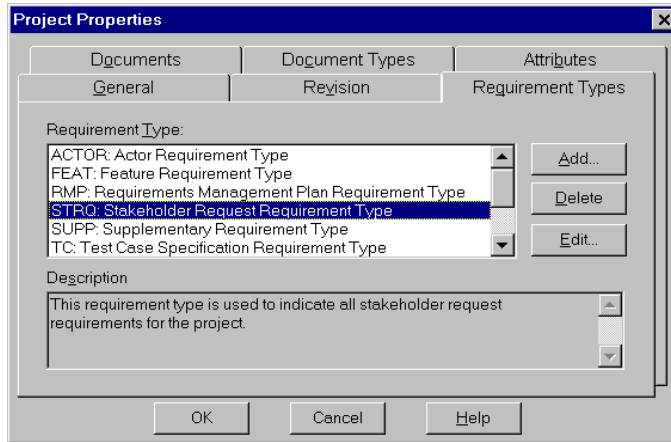
Working with Requirement Types

You can create requirement types and modify existing requirement types. If you no longer need a requirement type, you can delete it.

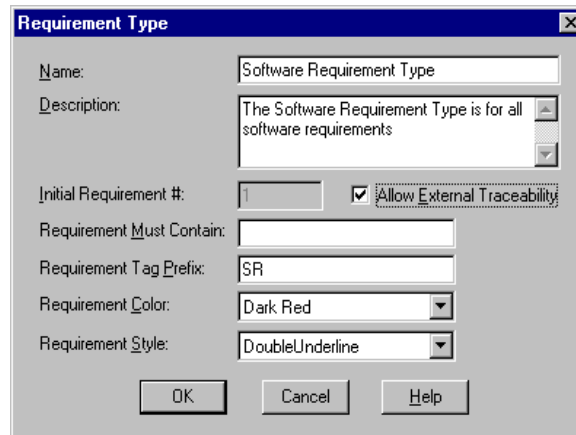
A requirement type defines descriptive and operational information associated with a requirement. A requirement type serves as a template for all requirements of the same type and is useful for ensuring consistency and classifying or grouping similar requirements in a project. Requirement types can specify: the initial numbering of the requirements; required terms, such as “must” or “shall”; a standard prefix, such as PR; and color and text formatting. Each requirement type has a unique set of user-defined attributes.

Creating and Modifying Requirement Types

1. On the Tool Palette, click **Project > Properties**.
The Project Properties dialog box appears.
2. Click the **Requirement Types** tab.



3. Do one of the following:
 - To add a new requirement type, click **Add**.
 - To modify an existing requirement type, select the requirement type in the list, and then click **Edit**.
4. The **Requirement Type** dialog box appears.



5. In the **Name** text box, type or edit a name for the requirement type.

6. In the **Description** text box, type or edit a description.
7. To enable external traceability between requirements of this type in this project and other projects, select the **Allow External Traceability** check box.
8. To specify the starting number for the first requirement of the defined type, click the **Initial Requirement Number** text box and type a positive integer to start this sequence. RequisitePro automatically numbers requirements when they are created.

The default value for this text box is 1. The initial number sequence can be modified any time *before* the first requirement of this type is created. Once the first requirement of this type has been saved, you must use the Renummer Requirements dialog box to change the sequence.

9. In the **Requirement Must Contain** text box, type a single word or phrase that must be included in every requirement of this type that is created. This field is optional and is not case-sensitive.

Note: Exclusive access to a project is necessary to modify the values in the following three steps for an existing requirement type. These options can be modified at any time.

10. In the **Requirement Tag Prefix** text box, type or edit a *tag prefix*. Examples of tag prefixes are SR, PR and TST.
11. In the **Requirement Color** list, click the down arrow and select a color. The color is assigned to a requirement of this type when it is displayed in a document. The default color is blue.
12. In the **Requirement Style** list, click the down arrow and select a style. The style is assigned to a requirement of this type when it is displayed in a document. The default style for this text box is **Double Underline**. You can also select **Normal** (no styling) or **Small Capitals**.
13. Click **OK**. In the Project Properties dialog box, **Requirement Types** tab, RequisitePro displays the new or edited requirement type with its tag prefix and logical name. For example, *TEST: Test Plan*.
14. Click **OK** to close the Project Properties dialog box.

Deleting Requirement Types

You can delete a requirement type if there are no requirements of this type in the project and if document types do not reference it as a default. You must

have the project opened in exclusive mode to delete requirement types.

1. On the Tool Palette, click **Project** > **Properties**. The Project Properties dialog box appears.
2. Click the **Requirement Types** tab.
3. Select the requirement type you want to delete.
4. Click **Delete**.
5. Click **OK**.

Working with Requirement Attributes

Use the **Attributes** tab in the Project Properties dialog box to add an attribute. You can also use this tab to modify an existing attribute.

The following table shows suggested attributes that can be helpful for defining your requirements in RequisitePro. These attributes are suggestions, not rules. You can use these suggested attributes, which are provided with RequisitePro, or you can define and use any attributes that are appropriate for your project and business.

Attribute	Use to identify requirements by
Priority	Importance to the project. Helps team members prioritize their efforts and use their time more effectively.
Status	Progress. <ul style="list-style-type: none"> • If a requirement's status is <i>Proposed</i>, the requirement is currently being discussed by the project team. • If a requirement's status is <i>Approved</i>, the requirement has been discussed and agreed upon. • If a requirement's status is <i>Incorporated</i>, the requirement has been added to the appropriate specification.
Authors	Individual or team that created or changed the requirement's text or attributes.
Responsible Party	Individual or team responsible for ensuring the requirement is satisfied.

Attribute	Use to identify requirements by
Rationale	Text of or reference to an explanation. For example, the reference might be to a page and line number of a product requirement specification, or to a minute marker on a video tape of an important customer interview.
Cost	Cost to implement the requirement. The attribute value for this attribute can be logical (high, medium, low) or numerical.

Note: The list of requirement attributes above provides examples. Other common attributes include *Difficulty*, *Stability*, *Risk*, *Security*, *Safety*, *Release Implemented* and *Functional Area*.

In addition to the attributes mentioned above, RequisitePro maintains system attributes for all requirement, including *date*, *version* and *relationship to other requirements*.

You can create and control attributes according to your needs. Regardless of the attributes you use, RequisitePro offers the flexibility to easily customize your project documents and databases to define, articulate and manage the processes and culture of your organization.

You cannot delete requirement attributes if requirements of the requirement type already exist, or if the requirement type is the default of a document type.

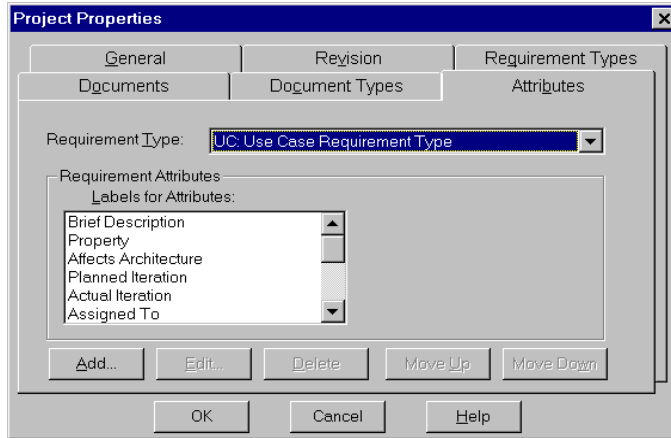
Creating and Modifying Requirement Attributes

Use the **Attributes** tab in the Project Properties dialog box to describe the characteristics or properties of a requirement type.

1. On the Tool Palette, click **Project > Properties**.
The Project Properties dialog box appears.

2. Click the **Attributes** tab.

The attributes for the selected type are displayed in the same order as in the Requirement Properties dialog box

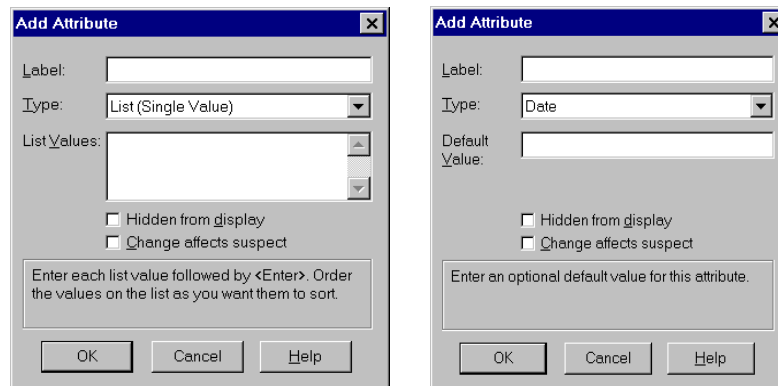


3. To reorder attributes, select the attribute in the **Labels** list and then click the **Move Up** or **Move Down** button.
4. For list-type attributes, to designate a value as the default value, select the attribute in the **Label** box. In the **Values per Attribute** box, select the value and click **Default**.
5. To add an attribute, click **Add**.
The **Add Attribute** dialog box appears.
6. In the **Type** list, select a type. The following data types are supported:

Data Type	Allows	Example
List (Single Value)	A set of values from which a single value can be selected. Each List value can be up to 20 characters in length.	<i>High, Medium or Low</i>
List (Multiple Value)	A set of values from which more than one value can be selected. Each List value can be up to 20 characters in length.	<i>Sue, Bob, John</i>
Text	A text string.	<i>John Smith</i>
Integer	Whole numbers in the field.	<i>5 or 1500</i>
Real	Real numbers in the field.	<i>1.345 or 6.7</i>
Date	A date in the format defined by the user's Windows setting.	<i>mm/dd/yy</i>

Data Type	Allows	Example
Time	A time in the format defined by a user's Windows setting.	10:00 AM

The dialog box changes, depending on the type you select. If you select **List (Single Value)** or **List (Multiple Value)**, the dialog box contains a **List Values** text box. If you select one of the other types, the dialog box contains a **Default Value** text box.



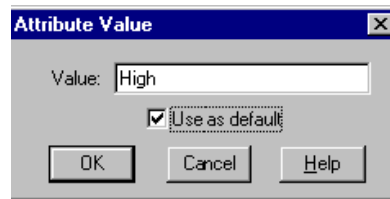
7. In the **Label** text box, type a name.
8. If the data type is a list-type, in the **List Values** text box, type the values.
9. If the data type is an entry-type, enter a default value (optional). If a new requirement is created and a value is not specified for the attribute, RequisitePro uses the default value.
10. To hide attributes of the selected requirement type from general RequisitePro users in the Views Workplace and in the Requirement Properties dialog box, select the **Hidden from display** check box.
11. To ensure traceability relationships are marked as *Suspect* when attributes are changed, mark the **Change Affects Suspect** check box. When this check box is selected, RequisitePro monitors all requirements (based on this requirement type) and ensures that the status of all relationships labeled *Traced to* and *Traced from* for this requirement is changed to *Traced-Suspect* if the attribute value is changed.
12. Click **OK**. The new or edited attribute appears in the **Attributes** tab of the Project Properties dialog box.
13. Click **OK** to close the Project Properties dialog box and save the changes.

Working with Requirement Attribute Values

You can add and edit the values assigned to a particular list-type attribute. Or, you can delete an attribute value.

Modifying Attribute Values

1. On the Tool Palette, click **Project > Properties**. The Project Properties dialog box appears.
2. Click the **Attributes** tab.
3. In the **Requirement Type** list, select the requirement type.
4. In the **Labels for Attributes** list, select a single or multiple-value list-type attribute.
5. In the **Values per Attribute** list, select the value that you want to edit.
6. Click **Edit**. The **Attribute Value** dialog box appears.



7. In the **Value** text box, modify the value.
8. To use the value as the default value, mark the **Use as default** check box.
9. Click **OK**. The changes to the attribute values appear in the **Attributes** tab of the Project Properties dialog box.
10. Click **OK** to close the Project Properties dialog box.

Deleting Attribute Values

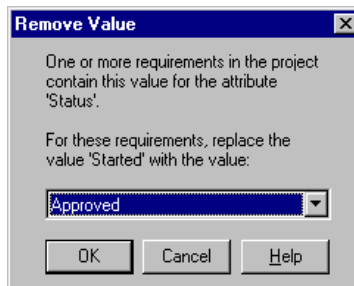
To delete attribute values, you must have the project opened exclusively.

1. On the Tool Palette, click **Project > Properties**. The Project Properties dialog box appears.
2. Click the **Attributes** tab.
3. In the **Requirement Type** list, select the requirement type.
4. In the **Labels for Attributes** list, select the list-type attribute.

5. In the **Values per Attribute** list, select the value that you want to delete.
6. Click **Delete**.

If the value is not assigned to any requirements in the project, the value is deleted.

If the value is assigned to any requirements in the project, the **Remove Value** dialog box appears:



- In the list, select a value to use as a replacement for the removed value.
 - Click **OK**. The value is removed from the **Values per Attribute** list.
7. Click **OK** to close the Project Properties dialog box.

Setting Up and Modifying Cross-Project Traceability

Cross-project traceability enables direct traceability relationships between requirements in different RequisitePro projects. This RequisitePro feature eliminates duplication by allowing reuse of requirements among various teams working on related projects. Often a set of requirements is common to multiple projects. These requirements can be created in their own RequisitePro projects and traced to system-specific requirements located in their respective RequisitePro projects.

Projects must be created prior to setting up cross-project traceability. You can configure projects to automatically connect to external projects when a project with externally traced requirements is opened. You can also connect external projects manually.

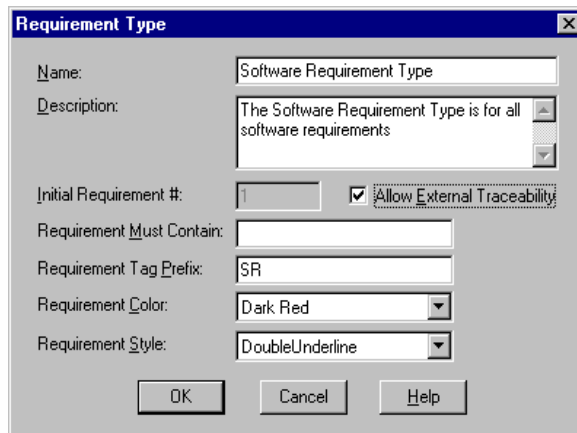
After you connect an external project, all externally traced requirement types are available for traceability relationships. External requirement types are displayed in the RequisitePro dialog boxes used to create traceability relationships. External requirements are identified with a project prefix set in the **General** tab of the Project Properties dialog box for the external project.

Marking Requirement Types for Cross-Project Traceability

To allow cross-project traceability for requirements in a project, you must do the following:

- Assign a project prefix so you can distinguish between requirements in different projects.
 - Manually mark requirement types in the project as externally available. Only requirements of these types will be available for cross-project traceability.
1. On the Tool Palette, click **Project > Properties**. The Project Properties dialog box appears.
 2. If it is not already displayed, click the **General** tab.
 3. If the project does not have a prefix, enter a prefix for the project (up to 8 characters). The prefix is stored in uppercase letters. You can change it at any time.
 4. Click the **Requirement Types** tab.
 5. In the **Requirement Type** list box, select the requirement type to mark for external traceability.
 6. Click **Edit**.

The **Requirement Type** dialog box appears.



7. Mark the **Allow External Traceability** check box.
8. Click **OK**.

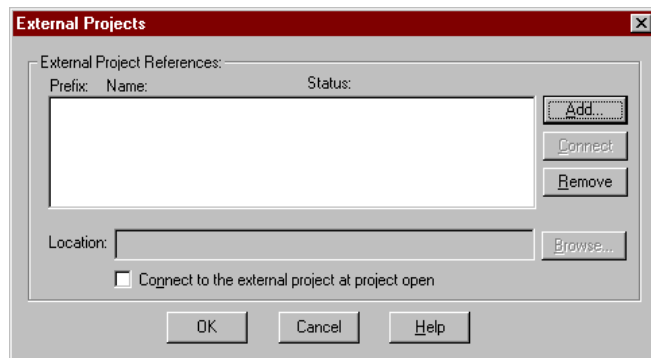
RequisitePro marks the requirement type for cross-project traceability.

9. Repeat steps 5 through 8 for any other requirement types.
10. Click **OK** to close the Project Properties dialog box.

Connecting Projects

Once the requirement types in the external projects have been marked for external traceability, connect the external projects to the currently open project.

To view external projects, click **Project > External Projects**. The **External Projects** dialog box appears.



It displays the following:

- *Prefix* - an identifier for the project. In an external project, the project prefix appears before the requirement tag, separated from the tag by a decimal. For example, if a requirement's tag is PR234 and the project's prefix is GLOBAL, then the external requirement is displayed as GLOBAL.PR234. The prefix can be up to 8 characters, and must be uppercase letters. You can change the prefix at any time in the **General** tab of the Project Properties dialog box.
- *Name* - the name of the external project.
- *Status* - indicates whether the project is currently connected or disconnected.
- *Location* - indicates the location of the project.

To add a project as an external project:

1. In the External Projects dialog box, click **Add**. The **Add External Project** dialog box appears.
2. Locate the project and click **Open**.
3. To automatically open the external project when the current project is opened, click the **Connect to the external projects at project open** check box.

Note: In this case, when you open the project, one of several conditions apply:

- If neither project is secured, you are not required to log on to the project.
 - If the project is secured and your user name and password are different than those used to log on to the secured project, the **Project Logon** dialog box appears. Log on to the project as you normally would. (If your user name and password are the same in both projects, you will not be required to log on multiple times.)
 - If the project is not secured and the external project is secured, the **Project Logon** dialog box appears. Log on to the project as you normally would.
4. To connect other external projects, repeat the above steps.
 5. To remove a project from the **External Projects** dialog box, select the project and click the **Remove** button.

Note: If you remove a project with requirements that participate in external traceability, RequisitePro warns you about deleting the references.

If the external project is not accessible, RequisitePro warns you the current project will be updated and the external project will contain invalid references until it is opened and synchronized.

If an external project is moved, an error message appears, indicating that the project cannot be found.

6. Select the project from the **External Project References** list, and click **Browse** to relocate the project. Locate the project and click **Open**.

Note: The **Browse** button is only active when a project has been moved or cannot be located.

Disconnecting Projects

You can disconnect external projects when they are not needed or are unavailable. For example, you may want to disconnect projects when you are working in a distributed mode and the database is unavailable.

If you are not currently working on traceability relationships, disconnecting will increase system performance. A project must be disconnected before you can relocate it.

1. On the Tool Palette, click **Project > External Projects**. The **External Projects** dialog box appears.
2. Select the project and click **Disconnect**. This temporarily disconnects the project.
3. To reconnect the project, select the project and click **Connect** (the **Disconnect** button automatically changes to a **Connect** button when you select a disconnected project, and the **Connect** button automatically changes to a **Disconnect** button when you select a connected project).

Results of Disconnecting an External Project

When you disconnect an external project:

- Requirements display in the traceability matrix and attribute matrix with a label marking them as disconnected external requirements.
- You cannot create traceability relationships with requirements in the disconnected project.
- You cannot change traceability relationships with requirements in the disconnected project.
- If you delete a requirement or its traceability state changes to *Suspect*, external requirements relationships are updated with the new state.
- Any changes to requirements in the external project are updated in the disconnected project when the project is opened. You can see these changes, but you cannot update them.

Relocating an External Project

To relocate an external project, you must first disconnect it.

1. On the Tool Palette, click **Project > External Projects**.
The **External Projects** dialog box appears.
2. Select the project, and then click **Disconnect**.
3. In File Manager or Windows Explorer, move the project's **.rqs** file to the new location.
4. In the **External Projects** dialog box, in the **External Project References** listing, select the project.
5. Click **Browse**.
6. Click **Open**.

C H A P T E R 16

Integrating with Other Products

RequisitePro is integrated out-of-the-box with several tools:

- Microsoft Project
- Rational ClearQuest
- Rational Rose
- Rational TestManager
- Rational SoDA
- Rational ClearCase
- Rational Unified Process
- Rational Synchronizer

In addition, RequisitePro is included in all Rational Suite products as part of the Rational Team Unifying Platform, which also includes: Rational ClearQuest, Rational SoDA, and the Rational Unified Process.

Using Microsoft Project with RequisitePro

The MS Project Integration Wizard manages traceability from requirements in RequisitePro projects to tasks in Microsoft Project schedules. You can use the wizard to:

- Create tasks from requirements and establish traceability relationships from those requirements to the tasks.
- Add or remove traceability from requirements to existing tasks.

After you have established traceability you can:

- Refresh MSPT requirement information within RequisitePro that links to the traced tasks in Microsoft Project.

- Review suspect traceability relationships between requirements and tasks in a RequisitePro Traceability Tree or Traceability Matrix.
- Analyze the impact on the requirements, the tasks, the project, and the schedule as changes occur.

Tips for using MS Project with RequisitePro

Follow these guidelines when using the MS Project integration:

- Create a task from any requirement that generates tasks you wish to track in MS Project. For example, if a Feature requirement needs to have a document, go through a review, for approval, you might want to generate a task for this requirement.
- If you follow the Rational Unified Process, a use case is probably the main item that should appear in your schedule. It may also make sense to trace each alternative flow, and/or each individual step in a use case. Supplementary requirements are also candidates for the schedule, but the process associated with a supplementary requirement is highly dependent on the nature of the requirement - e.g. performance constraints have one set of tasks, usability constraints have a different set of tasks.
- Whatever level of requirements are handed off to the development team is the level that should appear in the schedule.
- Map the requirements that have activities associated with them. For example, if you have a parent requirement and all the children are approved for a release, you might want to generate a task linked to the parent. If only one of the children is approved, just link the child. If the children are sufficiently weighty, then you may want to bring over the parent and children as a task hierarchy.
- If you have a requirement attribute to designate a product release number, you might want a schedule just for requirements assigned to the same release number.
- If you have an “assigned-to” requirement attribute, you might want to generate a schedule for everything assigned to each developer.

Requirements

Software Requirements

Microsoft Project 98 must be installed on your system in order to use the MS Project Integration Wizard. If not, the Start Microsoft Project and Integration Wizard options are disabled on your RequisitePro Tools menu.

Security Requirements

In order to initially integrate a RequisitePro project with Microsoft Project using the wizard, you must have RequisitePro administrator permissions.

In order to use the MS Project Integration Wizard in subsequent sessions:

- You must have create and delete permissions for the MSPT requirement type.
- You must have attribute update permissions for all attributes associated with the MSPT requirement type.

MSPT Requirement Types

Requirements and tasks are linked using a special requirement type, the MSPT requirement type. This requirement type is a place holder in a RequisitePro project that represents a task in a schedule. The MSPT requirement type is linked to a task in a schedule. It contains, as requirement attributes, the Microsoft Project file name and a unique ID of the task it represents.

The MSPT requirement type also includes default attributes that are based on task fields in Microsoft Project. These default attributes are Cost, Duration, Finish, Milestone, Priority, Resource Names, and Start.

You can also map Microsoft Project fields to RequisitePro attributes for the MSPT requirement type in the **.rqs** file of your RequisitePro project. For more information about the MSPT requirement type, see *Working with the MSPT Requirement Type* on page 16-8.

Starting the Wizard and Adding the MSPT Requirement Type

You can start the MS Project Integration Wizard from within RequisitePro or run it as an independent application. These instructions explain how to start the wizard from within RequisitePro.

Note: Make sure that you have closed any open dialog boxes in Microsoft Project before you use the MS Project Integration Wizard.

To start the MS Project Integration Wizard:

1. On the Tool Palette, click **Tools > Microsoft Project Integration Wizard**. The introduction screen appears.
2. Click **Next**. The **Select Project Files** screen appears.
3. Select a project. The list displays all projects in your RequisitePro project list.
4. Do one of the following:
 - Enter the name and path of an existing Microsoft Project schedule.
 - Click **Browse** to locate, select, and open an existing schedule in Microsoft Project.
 - Click **New** to create a new schedule. The **Project Info** dialog box appears. When you are finished creating the new schedule, click **OK** in the **Project Info** dialog box. A dialog box appears, prompting you to save the new project. After saving the schedule, the wizard minimizes Microsoft Project, returns to this screen, and adds the new schedule name to the Microsoft Project Schedule text box.
5. Click **Next**. If the project you selected has security enabled, the **Logon** dialog box appears. Log on as you would to a secured RequisitePro project.

The wizard checks the project and searches for the MSPT requirement type. If the wizard does not find the MSPT requirement type, the wizard adds it and displays the **MSPT Info** screen. Click **Next**.

The wizard opens the project and schedule and displays the **Select an Action** screen.

Creating Tasks from Requirements

The following instructions assume the wizard is started and the **Select An Action** screen is displayed. Use this feature to select requirements in RequisitePro in order to create new tasks in Microsoft Project that are linked to the RequisitePro requirements.

Note: The first time the “Select An Action” screen appears after you select a new schedule, only the first option is available. After tasks have been created, the other options become available.

1. Select the option “**Select requirements to create tasks, or add and remove traceability to existing tasks.**”
2. Click **Next**.

3. In the **Requirement Type** list, select a requirement type.
 4. Click one of the following:
 - **All requirements of selected type.**
 - **Requirements of this attribute value.**
 - In the **Attribute** list, select the attribute.
 - In the **Value** box, select a value and an operator.
 - To search for requirements containing specific phrases (for example, the word “shall”), enter the string in the **Requirement Text Search** box. You can use partial strings, but wildcard searches are not supported.
 5. Click **Next**. The screen displays the Task Traceability Tree for the requirements that you filtered in the previous screen.
 6. Select one or more requirements and select **Create Tasks**.
 7. Click **Next**. At the next screen, click **Finish**.
- Note: Each time you make a change to a schedule, a dialog box appears, prompting you to save with or without a baseline. We recommend saving with a baseline for each change. See the Microsoft Project documentation for more information about baselines.
8. Click **Exit** to close the wizard, or click **Another Action** to return to the “Select an Action” screen where you can create more tasks, add or remove traceability, and refresh requirement information from Microsoft Project.

Adding or Removing Traceability

The following instructions assume the wizard is started and the **Select An Action** screen is displayed and that you have created tasks in Microsoft Project that are linked to requirements in RequisitePro.

You have two options for modifying traceability in the MS Project Integration Wizard. You can:

- select a RequisitePro requirement and link it to a Microsoft Project task, or
- select a Microsoft Project task and link it to a RequisitePro requirement.

Both options are covered in the two procedures below.

Selecting Requirements to Modify Traceability

At the **Select An Action** screen:

1. Select the option “**Select requirements to create tasks, or add and remove traceability to existing tasks.**”
2. Click **Next**.
3. In the **Requirement Type** list, select a requirement type.
4. Click one of the following:
 - **All requirements of selected type.**
 - **Requirements of this attribute value.**
 - In the **Attribute** list, select the attribute.
 - In the **Value** box, select a value and an operator.
 - To search for requirements containing specific phrases (for example, the word “shall”), enter the string in the **Requirement Text Search** box. You can use partial strings, but wildcard searches are not supported.
5. Click **Next**.

The screen displays the task traceability tree for the requirements that you filtered in the previous screen.

To remove traceability between the selected task and requirement:

1. Select one or more tasks and then click **Remove traceability**, and click **Finish**. The traceability between the selected tasks and requirement is removed. Note that the tasks remain in the Microsoft Project schedule.
2. Click **Exit** to close the wizard, or click **Another Action** to return to the “Select an Action” screen where you can create more tasks, add or remove traceability, and refresh requirement information from Microsoft Project.

To add traceability between the selected requirements and a task:

1. Select a requirement and click **Add Traceability**. Traceability is created for one requirement at a time.
2. Click **Next** to advance to the next screen and select a task.
3. Do one of the following:
 - If you are satisfied with the current task selection, click **Finish**.
 - To change the selection, click **MS Project** to display the schedule and select one or more tasks. Return to the Integration Wizard and click **Refresh Task List** to refresh the task display. Then click **Finish**.

Selecting Tasks to Modify Traceability

At the **Select An Action** screen:

1. Select the option “**Select tasks to add or remove traceability**” and click **Next**.

The Select Tasks screen appears.

2. Do one of the following:
 - If you are satisfied with the current task selection, click **Next**.
 - To modify the selection, click **MS Project** to display the schedule and select one or more tasks. Return to the Integration Wizard and click the **Refresh Task List** to refresh the task display. Then click **Next**.

This screen displays the Task Traceability Tree for the tasks you selected in the previous screen and the requirements from which the tasks are traced.

3. Do one of the following:
 - To display the task in the Microsoft Project schedule, select a task and click **Go to Task**. In the schedule, you can view the task or make modifications. When you are finished, return to the Integration Wizard.
 - Select a requirement and the **Remove traceability** option. Then click **Finish**. The traceability between the selected task and requirement is removed.
 - Select a task and the **Add Traceability** option. Then click **Next**. The Select a Requirement Type screen appears. Continue to the step 4.
4. In the **Requirement Type** list, select a requirement type.
5. Click one of the following:
 - **All requirements of selected type.**
 - **Requirements of this attribute value.**
 - In the **Attribute** list, select the attribute.
 - In the **Value** box, select a value and an operator.
 - To search for requirements containing specific phrases (for example, the word “shall”), enter the string in the **Requirement Text Search** box. You can use partial strings, but wildcard searches are not supported.
6. To go to the next screen of the wizard, click **Next**. The screen displays the requirements that you filtered in the previous screen.

7. Select a requirement. To display the requirements without tasks, select the **Show only requirements with no tasks** check box.
8. Click **Finish**.

Refreshing MSPT Requirement Information from Tasks

The following instructions assume the **Select An Action** screen in the MS Project Integration Wizard is displayed and that you have created tasks in Microsoft Project that are linked to MSPT requirements, which represent the tasks in RequisitePro. Traceability should be established between your product requirements and the MSPT requirements.

When the values in the Microsoft Project task fields are changed, you need to use the refresh feature in the MS Project Integration Wizard to update the corresponding attribute values in the MSPT requirements. The resulting changes to the MSPT attribute values cause the traceability relationships between your product requirements and the MSPT requirements to be marked as suspect. This suspect condition alerts you of changes in the Microsoft Project schedule.

You can then view the suspect relationships in a Traceability Matrix that includes your product requirements and the MSPT requirements; or you can review the changes to the MSPT attribute values using an Attribute Matrix of the MSPT requirement type.

To refresh the MSPT requirements from the Microsoft Project tasks:

1. At the Select an Action screen, select the option “**Refresh MSPT information from MS Project tasks**” and click **Next**.
The **Update** screen displays the list of changes to occur when RequisitePro is updated with a Microsoft Project tasks.
2. To proceed with the integration, click **Finish**.

Working with the MSPT Requirement Type

Viewing the MSPT Requirement Type

You can view the MSPT requirement type in a view in RequisitePro.

1. In the Views Workplace, click **File > New View**, or click the **New View** icon.
2. Select one of the following views:

- Select an **Attribute Matrix** and the MSPT requirement type to review the changes to the MSPT attribute values.
 - Select a **Traceability Matrix**. Select the requirement types for your product requirements (in the row requirements) and the MSPT requirements (in the column requirements). The traceability is displayed between the requirement types.
 - Select a **Traceability Tree**. Select the product requirement type and expand the display to view the traceability relationships to the MSPT requirements.
3. Click **OK**.

Mapping Fields to Attributes for the MSPT Requirement Type

Unlike other requirement types, you cannot add a new attribute to the MSPT requirement type using the Attributes tab on the Project Properties dialog box. You can, however, create attributes for the MSPT requirement type in the **.rqis** file for the RequisitePro project in which you are working. For example, if the name of the project you are working on is “blueproject,” then you use the **blueproject.rqis** file to create new attributes for the MSPT requirement type.

If security is enabled, you must have project structure permission to map a field to an attribute for an MSPT requirement type.

To map fields to attributes:

1. Refer to *Microsoft Project Field IDs* on page 16-10 to locate the task field which you want to map to an attribute for the MSPT requirement type.
2. In a text editor, open the **.rqis** file for the project with which you are working.
3. In the [MSProjectMappings] section of the **.rqis** file, enter the following:
field ID=attribute name
where field ID is the field ID listed in *Microsoft Project Field IDs* on page 16-10 and attribute name is the label you want to give the attribute in RequisitePro.
4. Save the **.rqis** file.

The MS Project Integration Wizard will create an attribute for the MSPT requirement type based on the information entered.

Microsoft Project Field IDs

Use the following Microsoft Project field IDs to map attributes for the MSPT requirement type in RequisitePro to corresponding constants in Microsoft Project. Add your entries to the [MSProjectMappings] section in <project name>.rqs file using a text editor.

Use the following format:

field ID=attribute name

where field ID is the numeric constant listed below and the attribute name is the label you want to give the attribute in RequisitePro. Field IDs shown in bold are already provided as default attributes for the MSPT requirement type.

Actual Cost = 7	Actual Duration = 28	Actual Finish = 42
Actual Start = 41	Actual Work = 2	Baseline Cost = 6
Baseline Duration = 27	Baseline Finish = 44	Baseline Start = 43
Baseline Work = 1	BCWP = 11	BCWS = 12
Confirmed = 110	Constraint Date = 18	Constraint Type = 17
Contact = 112	Cost = 5	Cost1 = 106
Cost2 = 107	Cost3 = 108	Cost Variance = 9
Created = 93	Critical = 19	CV = 83
Delay = 20	Duration = 29	Duration1 = 103
Duration2 = 104	Duration3 = 105	Duration Variance = 30
Early Finish = 38	Early Start = 37	Finish = 36
Finish1 = 53	Finish2 = 56	Finish3 = 59
Finish4 = 62	Finish5 = 65	Finish Variance = 46
Fixed Cost = 8	Fixed (Duration) = 34	Flag1 = 72
Flag10 = 81	Flag2 = 73	Flag3 = 74
Flag4 = 75	Flag5=76	Flag6 = 77
Flag7 = 78	Flag8 = 79	Flag9 = 80
Free Slack = 21	Hide Bar = 109	ID = 23
Late Finish = 40	Late Start = 39	Linked Fields = 98
Marked = 71	Milestone = 24	Name = 14
Notes = 15	Number1 = 87	Number2 = 88
Number3 = 89	Number4 = 90	Number5 = 91
Objects = 97	Outline Level = 85	Outline Number = 102

% Complete = 32	% Work Complete = 33	Predecessors = 47
Priority = 25	Project = 84	Remaining Cost = 10
Remaining Duration = 31	Remaining Work = 4	Resource Group = 113
Resource Initials = 50	Resource Names = 49	Resume = 99
Resume No Earlier Than = 101	Rollup = 82	Sheet Notes = 94
Start = 35	Start1 = 52	Start2 = 55
Start3 = 58	Start4 = 61	Start5 = 64
Start Variance = 45	Stop = 100	Subproject File = 26
Successors = 48	Summary = 92	SV = 13
Text1 = 51	Text10 = 70	Text2 = 54
Text3 = 57	Text4 = 60	Text5 = 63
Text6 = 66	Text7 = 67	Text8 = 68
Text9 = 69	Total Slack = 22	Unique ID = 86
Unique ID Predecessors = 95	Unique ID Successors = 96	Update Needed = 111
WBS = 16	Work = 0	Work Variance = 3

Deleting Attributes for MSPT Requirement Types

To delete an attribute for an MSPT requirement type, you must have project structure permission to remove a requirement type (if security is enabled).

To delete attributes:

1. Open the RequisitePro project file (projectname.rqs) with a text editor.
2. In the project file, under the heading [MSProjectMappings], locate the requirement attribute that you want to delete. Attributes are listed with the Microsoft Project field ID, followed by an equal sign (=), and the attribute name; for example, 5=Cost.
3. Delete the entire line that contains the attribute. Save and close the project file.
4. In the RequisitePro Tool Palette, click **Project > Open**.
5. Select the project, check the Exclusive check box, and click **OK**. Log on to the project, if necessary.
6. On the Tool Palette, click the **Tools > Microsoft Project > Integration Wizard**.
7. Click **Next**. Be sure that the current RequisitePro project and related Microsoft Project are selected. Click **Next**.

8. Select the option “Refresh MSPT information from MS Project tasks.” Click **Next**.
9. After the processing is complete, click **Finish**. Click **Exit** and **Yes** at the confirmation prompt.

Using Rational ClearQuest with RequisitePro

If you have ClearQuest or any Rational Suites product installed on your PC, you can launch ClearQuest directly from the RequisitePro Tools menu (click **Tools > Rational ClearQuest**).

ClearQuest is a Windows change request management product designed for the dynamic and evolving nature of software development. ClearQuest offers a flexible approach to track and manage all the change activities that are associated with an organization. With it, team members can customize and define queries, fields, activities, and states specific to their environment. This expanded level of customization makes the process of managing change easy for a team to implement, deploy, and maintain.

If you have Rational Suite AnalystStudio, you can collect enhancement requests and defects in ClearQuest and associate them with new or existing requirements in RequisitePro. From RequisitePro, you can use custom requirement attributes to associate a requirement with one or many ClearQuest records. Refer to *Getting Started with Rational Suite AnalystStudio* and the *Using Rational ClearQuest and RequisitePro for Analysts* white paper for more information on this integration. For information on configuring this integration, refer to the book *Configuring Rational Suites* on the Rational Suites documentation CD.

Using Rational Rose with RequisitePro

Rational Rose offers powerful tools for object-oriented analysis, modeling, design, and construction. As the world’s leading visual modeling tool, Rational Rose enables system analysts to start modeling requirements with use cases and actors and enables developers to define and communicate a software architecture.

You can open Rose directly from RequisitePro by clicking **Tools > Rational Rose**, and you can associate Rose use cases with RequisitePro requirements and documents using Integrated Use Case Management.

Integrated Use Case Management

Rational's integrated management of use cases between Rational Rose and RequisitePro allows you to start or work in either environment, according to your process.

Integrated Use Case Management allows you to manage use cases using attributes, such as Priority, Risk, Status, and Iteration, by associating Rose use cases with RequisitePro documents and requirements. You can easily navigate from Rose use-case models to RequisitePro use-case documents and requirements and vice versa.

Use-case management in RequisitePro adds depth and relational information to your Rose use cases with support for:

- textual definitions of use cases in a Microsoft Word documents;
- detailed descriptions of flows of events, special requirements, preconditions and postconditions;
- hierarchical (parent/child) relationships between use-case names and actions within the use-case flow of events;
- traceability to and from other use cases, associated design features, and test plans.

We recommend that you initially develop your use cases in Rose and then detail and manage them in RequisitePro using Integrated Use Case Management. This approach accomplishes associations between Rose and RequisitePro with several easy menu selections.

To associate a Rose model or package with a RequisitePro project, open the model or package in Rose and use the commands on the **Tools > RequisitePro** menu. Refer to online help in Rose for more information on Integrated Use Case Management.

Refer to *Getting Started with Rational Suite AnalystStudio* for more information on Integrated Use Case Management.

Using Rational Robot's TestManager Component with RequisitePro

If you have **Rational Robot** installed, you can launch the **TestManager** component directly from the RequisitePro **Tools** menu (click **Tools > Rational TestManager**).

Rational Robot is part of Rational TeamTest, Rational Suite TestStudio, and Rational Suite PerformanceStudio. The TestManager component is an information management tool for software development and testing professionals, designed to help track software testing information through all phases of the software development, test, and revision cycles. You can use TestManager to plan testing strategies, and to track information related to test execution. TestManager has features that can be used by all members of the software development and testing team and lets you manage the software quality assurance process from the beginning of product development all the way through product delivery.

The integration between RequisitePro and TestManager is set up through a shared Rational Repository using Rational Administrator. Test requirements defined in TestManager are stored in a shared RequisitePro database. Once you have opened **TestManager**, you can click **File > Open Requirements** to view RequisitePro requirements. You can set the requirement type by clicking **View > Select Requirement Type**.

Using Rational SoDA with RequisitePro

RequisitePro is a supported domain for Rational SoDA. This allows you to create reports that extract information from various data sources, including a RequisitePro database.

Using SoDA and RequisitePro, you can:

- Use SoDA to modify and generate SoDA reports and documents from an open RequisitePro project.
- Use SoDA and RequisitePro to create a report that consolidates RequisitePro requirements information and Rose modeling information.

For more information, refer to *Printing Project Summaries and Reports* on page 14-2.

Using Rational ClearCase with RequisitePro

You can archive RequisitePro projects with Rational ClearCase using the **Project > Archive > Rational ClearCase** command on the Tool Palette.

For more information, refer to *Archiving Projects with Rational ClearCase* on page 14-11.

Using the Rational Unified Process with RequisitePro

The Rational Unified Process is an online knowledge base of proven software-development principles. As a software engineering process, RUP provides a disciplined approach to assigning tasks and responsibilities within a development organization. Its goal is to ensure the production of high-quality software that meets the needs of its end users, within a predictable schedule and budget. The Rational Unified Process captures many of the best practices in modern software development in a form that can be tailored to a wide range of projects and organizations. Many activities in the Rational Unified Process are supported by software-engineering tools. Tool Mentors provide descriptions on how Rational Software tools can be used to support particular steps and activities.

The RequisitePro Project Template provides a basic project structure that uses the Rational Unified Process. The project template provides requirement types, suggested attributes, default attribute values, and related document types.

Using the Rational Synchronizer with RequisitePro

The Rational Synchronizer automates the creation and updating of items in your project. The Synchronizer works with items in RequisitePro (such as, requirements), items in **Rose** (such as actors), and items in **TestStudio** (such as scripts). The Synchronizer uses either predefined or user-defined rules to determine which items to create or update. You can use the Synchronizer to update items in Rational Products that are not linked by other integrations listed above.

For example, your project may contain a rule that says “For every actor requirement in RequisitePro, create a corresponding actor in Rose, if one does not already exist.” When requirements change, this rule communicates changes accurately and promptly to the team that is working on design and analysis in Rose.

With Rose, the Rational Synchronizer allows you to automatically create Rose items (such as actors and classes) from existing requirements, and maintain the Rose items and their matching RequisitePro requirements in sync.

The Synchronizer is shipped with RequisitePro but the option to install it is not checked by default when you are installing RequisitePro. You must select the **Custom / Full** option and then mark the **Rational Synchronizer** check box. Once it is installed, you can launch the Synchronizer from RequisitePro by clicking **Tools > Rational Synchronizer**.

A P P E N D I X A

Keyboard Shortcuts and Mouse Actions

Dialog Box Shortcuts

You can use keyboard combinations to move to tabs, fields, and buttons in a RequisitePro dialog box. To use a dialog box shortcut, press the ALT key while simultaneously pressing the underlined letter in a dialog box tab, field, or button. For example, in the Project Properties, Document Properties, or Requirement Properties dialog box, press **ALT-G** to open the General tab.

Menu Shortcuts

You can use combinations of keyboard shortcuts to open a menu in the Tool Palette or Views Workplace. To use a menu shortcut, press the ALT key while simultaneously pressing the underlined letter in the menu. For example, to open the Requirement menu, press **ALT-R**. Once a menu is displayed, you can select a command by pressing the underlined letter in the command.

Selecting Multiple Items in RequisitePro

You can use mouse actions and combinations of keyboard and mouse actions to select more than one item in various RequisitePro lists.

The following are referred to as multiple select actions in RequisitePro documentation:

- **SHIFT-click**: To click the mouse button while holding down the SHIFT key.
- **CTRL-click**: To click the mouse button while holding down the Control key.

- **Drag:** To hold down the right mouse button while moving the mouse and then releasing the button.

You can use the actions in the following ways:

- To select *adjacent* items, use **SHIFT-click** or **drag**.
- To select *nonadjacent* items, use **CTRL-click**.

The **anchor** is the first item you click when using multiple select actions to select a range of items. In RequisitePro, the term “anchor” is generally used to mean the first cell you click in a view in the Views Workplace. You use the anchor to select a range of cells. For example, if you click the cell in row 1, column 1 of a Traceability Matrix, that cell becomes the anchor. If you then SHIFT-click the cell in row 10, column 3 of the matrix, all of the cells in rows 1 through 10, columns 1 through 3, are selected. To reset the anchor, click anywhere outside the range. The cell you click is the new anchor. You can also use an anchor to select a range of items in documents and in certain dialog boxes that support multiple select actions.

Mouse Actions and Shortcuts in the Views Workplace

You can use keyboard shortcuts and mouse actions to quickly move around and select information in the Views Workplace. The keyboard shortcuts and mouse actions differ in each view.

The following tables provide specific shortcuts for selecting items in an Attribute Matrix, a Traceability Matrix, or a Traceability Tree.

Attribute Matrix Mouse Actions and Keyboard Shortcuts

Mouse Actions

If you want to	Do this
Select the requirement in the row in which you click. (This action also clears all selected items and sets the selected row as the anchor. Clicking in cell also changes the selected column to the column in which you clicked.)	Click row label OR Click cell
Select the requirements between the anchor row and the row in which you SHIFT-click. (This action clears any rows that are not in the range.)	SHIFT-click row label OR SHIFT-click cell in selected column
Set the selected row as the anchor, while keeping previously selected items selected. OR Clear a previously selected row while keeping others selected.	CTRL-click row label
Switch the column selection to the column in which you click. (Clicking in cell also selects the row in which you clicked.)	Click column label OR CTRL-click column label OR CTRL-click in cell
Select a range of requirements (This action clears any rows that are not in the range.)	drag

Keyboard Shortcuts

If you want to	Do this
Move to the right one column.	TAB OR RIGHT ARROW
Move to the right one column when viewing requirement data.	TAB
Move to the left one column.	SHIFT-TAB OR LEFT ARROW
Move down one row. (This action clears all selected items and sets the selected row as the anchor.)	ENTER OR DOWN ARROW
Commit the new or modified requirement to the database when in edit mode.	ENTER OR TAB (when cursor is in last column of a requirement's row)
Move up one row. (This action clears all selected items and sets the selected row as the anchor.)	SHIFT-ENTER OR UP ARROW
Activate the field for data entry, in the currently selected cell. (This action is only available when a single cell is selected.)	SPACEBAR
Cancel the edit mode in the currently selected cell. (This action is only available when a single cell is selected.)	ESC
Move to the top of the view and select the first row. (This action sets the first row as the anchor and clears all other selected items.)	HOME

Mouse Actions and Shortcuts in the Views Workplace

If you want to	Do this
<p>Move to the top of the view and select all items between the anchor row and the first row of the view.</p> <p>(This action clears all other selected items.)</p>	SHIFT-HOME
<p>Move to the top of the view, without changing the selection or the anchor.</p>	CTRL-HOME
<p>Move to the bottom of the view and select the last row.</p> <p>(This action sets the last row as the anchor and clears all other selected items.)</p>	END
<p>Move to the bottom of the view and select all items between the anchor row and the last row of the view.</p> <p>(This action clears all other selected items.)</p>	SHIFT-END
<p>Move to the bottom of the view, without changing the selection or the anchor.</p>	CTRL-END
<p>Move up one page in the view, while changing the anchor.</p> <p>(This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or selects the first row if the view is positioned on the top page. The newly selected row is the new anchor.)</p>	PAGE UP
<p>Move up one page in the view, without changing the anchor.</p> <p>(This action selects all rows between the anchor and the row that is in the same vertical position as the anchor was when its page was displayed, or selects all rows from top to anchor if the view is positioned at the top of the page.)</p>	SHIFT-PAGE UP
<p>Move up one page in the view, without changing the selection or the anchor.</p>	CTRL-PAGE UP

Keyboard Shortcuts and Mouse Actions

If you want to	Do this
<p>Move the view one page left.</p> <p>(This action selects the column that is in the same horizontal position as the previously selected column was when its page was displayed, or selects the first column if the view is positioned on the far left page.)</p>	ALT-PAGE UP
<p>Move down one page in the view, while changing the anchor.</p> <p>(This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or selects the last row if the view is positioned on the bottom page. The newly selected row is the new anchor.)</p>	PAGE DOWN
<p>Move down one page in the view, without changing the anchor.</p> <p>(This action selects all rows between the anchor and the row that is in the same vertical position as the anchor was when its page was displayed, or selects all rows from the bottom to the anchor if the view is positioned at the bottom of the page.)</p>	SHIFT-PAGE DOWN
<p>Move down one page in the view, without changing the selection or the anchor.</p>	CTRL-PAGE DOWN
<p>Move the view one page right.</p> <p>(This action selects the column that is in the same horizontal position as the previously selected column was when its page was displayed, or selects the last column if the view is positioned on the far right page.)</p>	ALT-PAGE DOWN
<p>Expand the selected row requirement to show its children in the view.</p>	SHIFT-PLUS SIGN
<p>Collapse the selected row requirement to hide its children in the view.</p>	MINUS SIGN
<p>Select every row in the view.</p>	CTRL-A
<p>Cut text of any non-list attribute.</p>	SHIFT-DELETE

If you want to	Do this
Copy text of any non-list attribute.	CTRL-INSERT
Paste text of any non-list attribute.	SHIFT-INSERT

Traceability Matrix Mouse Actions and Keyboard Shortcuts

Mouse Actions

If you want to	Do this
Select a cell. (This action clears all other selected cells.)	Click cell
Select all cells in the rectangle formed by the anchor cell and the clicked cell.	SHIFT-click cell
Set the cell as the anchor, while keeping previously selected cells selected. OR Clear a previously selected cell while keeping others selected.	CTRL-click cell
Select the cell in the clicked row and the anchor column. (This action clears all other selected cells and sets the selected cell as the anchor.)	Click row label
Select the cells in all rows between the clicked row and the anchor row, in all selected columns. (This action clears any rows and columns that are not in the range.)	SHIFT-click row label
Select all cells that intersect with selected columns, without clearing previously selected cells.	CTRL-click row label
Select the cell in the clicked column and all selected rows.	Click column label

Keyboard Shortcuts and Mouse Actions

If you want to	Do this
Select the cells in all columns between the clicked column and the anchor column, in all selected rows.	SHIFT-click column label
Select all cells that intersect with selected rows, without clearing previously selected cells.	CTRL-click column label

Keyboard Shortcuts

If you want to	Do this
Move to the right one column.	TAB OR RIGHT ARROW
Move to the left one column.	SHIFT-TAB OR LEFT ARROW
Move down one row.	ENTER OR DOWN ARROW
Move up one row.	SHIFT-ENTER OR UP ARROW
Display a shortcut menu for the currently selected cells.	SPACEBAR
Close the shortcut menu for the currently selected cells.	ESC
Move to the top of the view and select all cells in the selected columns in the top row. (This action clears all other selected rows and sets the top row as the anchor.)	HOME

Mouse Actions and Shortcuts in the Views Workplace

If you want to	Do this
<p>Move to the top of the view, without changing the anchor.</p> <p>(This action selects all cells in selected columns between the top row to the anchor row.)</p>	SHIFT-HOME
<p>Move to the top of the view, without changing the selection or the anchor.</p>	CTRL-HOME
<p>Move to the bottom of the view and select all cells in the selected columns in the last row.</p> <p>(This action clears all other selected rows and sets the last row as the anchor.)</p>	END
<p>Move to the bottom of the view, without changing the anchor.</p> <p>(This action selects all cells in selected columns between the bottom row to the anchor row.)</p>	SHIFT-END
<p>Move to the bottom of the view, without changing the selection or the anchor.</p>	CTRL-END
<p>Move up one page in the view, while changing the anchor.</p> <p>(This action selects the selected columns and the row that is in the same vertical position as the previously selected row, or selects the top row if the view is already on the top page. The newly selected row is the new anchor.)</p>	PAGE UP
<p>Move up one page in the view, without changing the anchor.</p> <p>(This action selects all rows between the anchor and the row that is in the same vertical position as the anchor was when its page was displayed.)</p>	SHIFT-PAGE UP
<p>Moves up one page in the view, without changing the selection or the anchor.</p>	CTRL-PAGE UP

Keyboard Shortcuts and Mouse Actions

If you want to	Do this
<p>Move the view one page left, while changing the anchor.</p> <p>(This action selects the selected rows and the column that is in the same horizontal position as the previously selected column was when its page was displayed, or selects the first column if the view is positioned on the far left page.)</p>	<p>ALT-PAGE UP</p>
<p>Move the view one page left, without changing the anchor.</p> <p>(This action selects the cells in selected rows and the columns between the anchor column and the column that is in the same horizontal position as the anchor column was when its page was displayed, or selects the first column if the view is already on the far left page.)</p>	<p>ALT-SHIFT-PAGE UP</p>
<p>Moves left one page in the view, without changing the selection or the anchor.</p>	<p>ALT-CTRL-PAGE UP</p>
<p>Move the view down one page, while changing the anchor.</p> <p>(This action selects the selected columns and the row that is in the same vertical position as the previously selected row was when its page was displayed, or selects the last row if the view is already on the bottom page. The newly selected row is the new anchor.)</p>	<p>PAGE DOWN</p>
<p>Move down one page, without changing the anchor.</p> <p>(This action selects all rows between the anchor and the row that is in the same vertical position as the anchor was when its page was displayed.)</p>	<p>SHIFT-PAGE DOWN</p>
<p>Move down one page in the view, without changing the selection or the anchor.</p>	<p>CTRL-PAGE DOWN</p>

Mouse Actions and Shortcuts in the Views Workplace

If you want to	Do this
<p>Move the view one page right, while changing the anchor.</p> <p>(This action selects the selected rows and the column that is in the same horizontal position as the previously selected column was when its page was displayed, or selects the last column if the view is already on the far right page.)</p>	<p>ALT-PAGE DOWN</p>
<p>Move the view one page right without changing the anchor.</p> <p>(This action selects the selected rows and the columns between the anchor column and the column that is in the same horizontal position as the anchor was when its page was displayed, or selects the last column if the view is already on the far right page.)</p>	<p>ALT-SHIFT-PAGE DOWN</p>
<p>Moves right one page in the view, without changing the selection or the anchor.</p>	<p>ALT-CTRL-PAGE DOWN</p>
<p>Expand the selected requirement to show its relationships. Preserve the previous row selection.</p>	<p>PLUS SIGN</p>
<p>Collapse the selected requirement to hide its relationships.</p>	<p>MINUS SIGN</p>
<p>Select every cell in the view.</p>	<p>CTRL-A</p>

Traceability Tree Mouse Actions and Keyboard Shortcuts

Mouse Actions

If you want to	Do this
Select the clicked item. (This action clears all selects items and sets the selected row as the anchor.)	Click row
Select the items between the anchor row and the row in which you click. (This action clears any rows that are not in the range.)	SHIFT-click row
Set the selected row as the anchor, while keeping previously highlighted text selected. OR Clear a previously selected row while keeping others selected.	CTRL-click row
Copy a selected row's requirement to a new position	CTRL-click row, then drag OR Right-click, then drag, and select Copy here from context menu
Move a selected row's requirement	ALT-click row, then drag OR Right-click, then drag, and select Move here from context menu

Keyboard Shortcuts

If you want to	Do this
Move down one row	DOWN ARROW
Move up one row	UP ARROW
Display a shortcut menu for the currently selected requirements.	SPACEBAR
Close the shortcut menu for the currently selected requirements.	ESC

Mouse Actions and Shortcuts in the Views Workplace

If you want to	Do this
<p>Move to the top of the view and select the first row.</p> <p>(This action sets the first row as the anchor and clears all other selected items.)</p>	HOME
<p>Move to the top of the view, without changing the anchor.</p> <p>(This action selects all items between the anchor row and the first row of the view.)</p>	SHIFT-HOME
<p>Move up one page in the view, without changing the selection or the anchor.</p>	CTRL-HOME
<p>Move to the bottom of the view and select the last row.</p> <p>(This action sets the last row as the anchor and clears all other selected items.)</p>	END
<p>Move to the bottom of the view, without changing the anchor.</p> <p>(This action selects all items between the anchor row and the last row of the view.)</p>	SHIFT-END
<p>Move down one page in the view, without changing the selection or the anchor.</p>	CTRL-END
<p>Move up one page in the view, while changing the anchor.</p> <p>(This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or selects the top row if the view is positioned on the top page. The newly selected row is the new anchor.)</p>	PAGE UP
<p>Move down one page in the view, while changing the anchor.</p> <p>(This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or selects the last row if the view is positioned on the bottom page. The newly selected row is the new anchor.)</p>	PAGE DOWN

Keyboard Shortcuts and Mouse Actions

If you want to	Do this
<p>Move to the top of the view and select the first row.</p> <p>(This action sets the first row as the anchor and clears all other selected items.)</p>	HOME
<p>Move to the top of the view, without changing the anchor.</p> <p>(This action selects all items between the anchor row and the first row of the view.)</p>	SHIFT-HOME
<p>Move up one page in the view, without changing the selection or the anchor.</p>	CTRL-HOME
<p>Move to the bottom of the view and select the last row.</p> <p>(This action sets the last row as the anchor and clears all other selected items.)</p>	END
<p>Move to the bottom of the view, without changing the anchor.</p> <p>(This action selects all items between the anchor row and the last row of the view.)</p>	SHIFT-END
<p>Move down one page in the view, without changing the selection or the anchor.</p>	CTRL-END
<p>Move up one page in the view, while changing the anchor.</p> <p>(This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or selects the top row if the view is positioned on the top page. The newly selected row is the new anchor.)</p>	PAGE UP
<p>Move down one page in the view, while changing the anchor.</p> <p>(This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or selects the last row if the view is positioned on the bottom page. The newly selected row is the new anchor.)</p>	PAGE DOWN

Mouse Actions and Shortcuts in the Views Workplace

If you want to	Do this
<p>Move up one page in the view, without changing the anchor.</p> <p>(This action selects all rows between the anchor and the row that is in the same vertical position as the anchor was when its page was displayed, or selects all rows from the top to the anchor if the view is positioned at the top of the page.)</p>	SHIFT-PAGE UP
<p>Move down one page in the view, without changing the anchor.</p> <p>(This action selects all rows between the anchor and the row that is in the same vertical position as the anchor was when its page was displayed, or selects all rows from the bottom to the anchor if the view is positioned at the bottom of the page.)</p>	SHIFT-PAGE DOWN
<p>Move up one page in the view, without changing the selection or the anchor.</p>	CTRL-PAGE UP
<p>Move down one page in the view, without changing the selection or the anchor.</p>	CTRL-PAGE DOWN
<p>Expand the item to show its relationships.</p>	PLUS SIGN
<p>Collapse the item to hide its relationships.</p>	MINUS SIGN
<p>Highlight every item in the view.</p>	CTRL-A

Keyboard Shortcuts and Mouse Actions

A P P E N D I X B

Customizing RequisitePro

Configuring RequisitePro

You can use the **Tools > Options** command on the Tool Palette to configure the appearance and behavior of RequisitePro.

1. On the Tool Palette, click the **Tools > Options**.
The **Options** dialog box appears.
2. Type or mark the following options as needed:

Tool Palette

- **Show Buttons:** Mark this check box to display the Tool Palette buttons.
- **Show Status:** Mark this check box to display the status line on the Tool Palette. This displays project and document status as you work in RequisitePro.
- **Show Tool Tips:** Mark this check box to display a button definition when you hold the pointer over a button on a RequisitePro toolbar.
- **Always on Top:** Mark this check box to display the Tool Palette and open dialog boxes in the foreground of your screen, regardless of how many applications you have open.
- **Let's Go RequisitePro at startup:** Mark this check box to display the Let's Go RequisitePro splash screen each time you start RequisitePro.

Views

- **Prompt for save:** Mark this check box if you want RequisitePro to prompt you to save changes to display options and view properties when you close an unsaved view. Changes to requirements and other data within the view are not affected.

- **Double-click to go to source:** Mark this check box for the option to double-click on a requirement in a view to access its source. For requirements located in documents, the appropriate document opens. Otherwise, the Requirement Properties dialog box opens. If this check box is cleared, double-clicking expands and collapses the requirement hierarchy.
- **ENTER key inserts new line (multi-line only):** Mark this check box if you want to use the ENTER key to create a new line in an Attribute Matrix.
- **In-view requirements creation (without dialog box):** Mark this check box if you want to create requirements directly in the Attribute Matrix using the Requirement > Create command or the INSERT key. If this check box is cleared, the Requirement Properties dialog box appears when you click Requirement > Create or the INSERT key.
- **Font:** Lists the font displayed in the Views Workplace.
- **Change:** Click this button to change the font.

Traceability

- **Warn on remove:** Mark this check box if you want Requisite Pro to warn you when you remove requirement traceability.
- **Changes logged in history:** Mark this check box to display changes to requirement traceability on the revision history list in the Requirement Properties dialog box.

Default Project Logon

- **Username:** Type your RequisitePro user name. This is used as your default logon name for all RequisitePro projects.

Microsoft Word

- **Version:** Click the down arrow to select your preferred version of Microsoft Word when you have more than one version installed. The option “<Use Default>” uses the current version of the application, which is recorded in the Windows registry.

Directories

- **Outline Path:** Defines a secondary location for accessing document type outlines. If RequisitePro is installed locally on your PC, the default path is ...RequisitePro\outlines. Use this option to define an alternate location for outlines, for example, a directory on the server for shared outlines.

- **ClearCase View:** Defines the directory for ClearCase archiving in RequisitePro. This needs to be a shared view for all RequisitePro users.
 - **Working Path:** Displays the working directory for RequisitePro. Write permission must be enabled for this directory in order for RequisitePro to create new projects and write temporary files.
3. Click **OK**.

Customizing Tool Palette Menus

The **Add-in** option on the Tool Palette **Tools** menu allows you to add your own customized menu items to any menu on the RequisitePro Tool Palette. These menu options can be used to start external applications, such as e-mail or the Windows Notepad, directly from RequisitePro. In addition, you can configure an option to open an individual file with the application of your choice.

You can add either a project-wide menu item for use by all members of the project team or a menu item that appears only when you open RequisitePro on your PC. The Add-in option prompts you to specify an external menu file that defines your customized menu options.

To add custom menu items:

1. On the Tool Palette, click **Tools > Add-ins**.
The **Add-ins** dialog box appears.
2. Click the **Add** button to add a customized menu option. The **Add-in** dialog box appears.
3. Type a name for the menu option. This name identifies the menu file on your add-ins list.
4. Click the **Browse** button. The **Select a RequisitePro Menu File** dialog box appears.
5. Select a file type to display: All Files, Menu Files, or Text Files.
6. Navigate to a menu file and click **Open**.
7. Leave the **Active** check box as marked.
8. Mark one of the following:
 - **Local** to apply the menu items to your Tool Palette only.
 - **Project** to apply the menu items to the Tool Palette of all users who access the project.
9. Click **OK** to close the Add-in dialog box.

10. Click **OK** to close the Add-ins dialog box.

The options defined in the menu file are added to the specified Tool Palette menu.

Creating A Menu File

Using any text editor, you can create a file to add menu options to any RequisitePro Tool Palette menu. The entries will appear on the RequisitePro menu in the order in which you specify them.

As you add menu entries, you will specify:

- Keywords that determine items on the menu (a submenu, a menu option, a separator)
- Menu actions that execute an application or open a specific external file, such as a readme file.

Pay close attention to the syntax rules that apply to your entries to the menu file. For example, the syntax of the menu specifications includes opening and closing braces {...}.

Note: Rational Rose users may be familiar with creating menu specification files for extending the Rose Tools menu. RequisitePro menu files use the same syntax with a subset of the Rose functions.

Menu File Template

Create your menu file in a text editor, based on the following template. Save your file with a .TXT extension or a .MNU extension to help locate the file easily in your file structure.

```
Menu <RequisitePro menu name>
{
  Separator
  Option <menu item>
  {
    Exec <command line>
    Status <status text>
  }
  Menu <submenu name>
  {
    Option <menu item>{
      Exec <command line>
      Status <status text>
    }
    Option <menu item>
    {
      Exec <command line>
      Status <status text>
    }
  }
}
```

Key Words

Use the following table to define the key words to copy into the menu file:

Keywords and Variables	Definitions and Valid Entries
Menu	keyword to specify the Tool Palette menu or submenu to which you want add the menu items
Separator	keyword to place a separator in the menu
Option	keyword to specify the name of the item as it will appear on the menu
Exec	keyword to identify the command line to be run when the menu item is chosen
Status	keyword to identify the text for the status line of the Tool Palette
<RequisitePro menu name>	Project, Document, Requirement, Tools, Window, or Help
<menu item>	user-defined text for an item on the menu or submenu
<submenu name>	user-defined text identifying the name of the submenu
<command line>	user-defined text identifying the commands to execute when the menu item is chosen
<status line>	user-defined text identifying the text for the status line of the Tool Palette

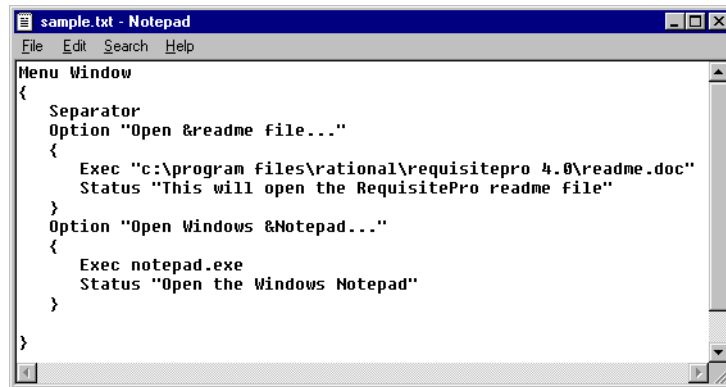
Notes

1. Menu names, submenu names, option names, and statuses need double quotes if they include more than one word.
2. Separators can be in menus or submenus.
3. Can include more than one menu item in a file.
4. Add an ampersand (&) directly before a character in the menu name to create a underlined letter signifying an access key in the menu option.
5. You can create a maximum of five levels of submenus (indented one below another).

Sample Menu File

The following example shows a simple menu definition file. After you create a menu file, reference using the Add-ins option on the Tool Palette Tools menu. This feature allows you to add customized menu options to the RequisitePro menus.

The following menu file instructs RequisitePro to add the options “Open readme file” and “Open Windows Notepad” to the Tool Palette Window menu.



```
sample.txt - Notepad
File Edit Search Help
Menu Window
{
  Separator
  Option "Open &readme file..."
  {
    Exec "c:\program files\rational\requisitepro 4.0\readme.doc"
    Status "This will open the RequisitePro readme file"
  }
  Option "Open Windows &Notepad..."
  {
    Exec notepad.exe
    Status "Open the Windows Notepad"
  }
}
}
```


GLOSSARY

Rational RequisitePro Terms

The terms that follow are used throughout the RequisitePro User's Guide. Most are specific to RequisitePro.

Active document: The current document in the Word Workplace, which has processing focus. The Word Workplace is the Microsoft Word implementation within RequisitePro where you view, create, and modify project documents. You can have many documents open at one time; however, only one of these documents is active.

Active view: The current view in the Views Workplace, which has processing focus. You can have many views open at one time; however, only one of these views is active. See also *Views Workplace*.

Actor: Someone or something outside the system that interacts with the system.

Add-in command: An option on the Tool Palette Tools menu that allows you to add your own customized menu options to any Tool Palette menu. These menu options can be used to start external applications, such as e-mail or the Windows Notepad, directly from RequisitePro. In addition, you can configure an option to open an individual file with the application of your choice.

Administrators group: A group of users with full permissions to work in a project. They can change a project structure, create and modify data, modify and delete project-wide views, and set and maintain security permissions. Users can be added and removed from this group, but this group cannot be deleted. Administrator group permissions cannot be modified.

Analyst: See *System analyst*.

Anchor: The first item you click when using multiple select actions to select a range of items. In RequisitePro, the term "anchor" is generally used to mean the first cell you click in a view in the Views Workplace. You use the anchor to select a range of cells. For example, if you click the cell in row 1, column 1 of a Traceability Matrix, that cell becomes the anchor. If you then Shift-click the cell in row 10, column 3 of the matrix, all of the cells in rows 1 through 10, columns 1 through 3, are selected. To reset the anchor, click anywhere outside

the range. The cell you click is the new anchor. You can also use an anchor to select a range of items in documents and in certain dialog boxes that support multiple select actions. See *Multiple select actions*.

Archiving: The process of maintaining a database of all the source code and related files in a software development project to keep track of changes made during the project.

Attribute: Descriptive information that provides important details about a requirement or discussion. See also *Requirement attribute*.

Attribute label: The name of the requirement attribute, such as risk, priority or author. Also referred to as *requirement attribute label*.

Attribute Matrix: A spreadsheet-like table View that displays requirements in rows and the attributes that describe the requirements in columns. You can add or change values in the attribute fields. Also referred to as *Requirement Attribute Matrix*.

Attribute type: A set of descriptive and operational information associated with a requirement attribute when the attribute is created. Attribute values can be list-type or entry-type. For list-type attributes, you select a textual attribute value from a drop-down list. For entry-type attributes, you type in a value, such as a number, text string, date, or time. Also referred to as *requirement attribute type*.

Attribute value: Information assigned to a requirement attribute. Attribute values can be text or numbers. For example, the attribute *priority* can be assigned the values Low, Medium and High. Also referred to as *requirement attribute value*.

Author: The user responsible for creating or modifying a document or requirement.

Author (version information): User responsible for the changes associated with a given revision.

.bak file: A backup of a document file. A new .bak file is created in the same directory each time a document is saved and contains a version of the document before it was saved. You can delete .bak files at any time; they will be created again next time the original documents are saved.

Baselining: See *Archiving*.

Bookmark: A marker inserted at a specific point in a document to which the user may return for later reference. In Microsoft Word, a bookmark is a location or selection of text named for reference purposes. Bookmarks are implemented in RequisitePro documents to designate requirement text. Bookmarks are designated by square brackets, as in the following: [example].

Change description (version information): Textual information that specifies the justification or reasoning behind the changes associated with a given revision of a project, document, or requirement. See also *Version information*.

Change-managed relationship: A connection between two requirements that implies dependency or a logical relationship. RequisitePro tracks two types of change-managed relationships: *hierarchical relationships* and *traceability relationships*. Changes to either of the requirements can cause a “suspect” condition in the relationship. See also *Suspect relationship*.

Child requirement: A requirement that participates in a hierarchical relationship with a parent requirement. A child can have only one parent requirement. See also *Parent requirement*, *Hierarchical requirement*.

Circular traceability relationship: A relationship between a requirement and itself, or an indirect relationship that leads back to a previously traced-from node. Traceability relationships cannot have circular references. RequisitePro checks for circular references each time you establish a traceability relationship. RequisitePro also checks for circularity when you create an external relationship. The circular check only references internal requirements and first-level external requirements.

ClearCase: See *Rational ClearCase*.

ClearQuest: See *Rational ClearQuest*.

CMM: The Software Engineering Institute’s Capability Maturity Model, a framework for effective software process developed at Carnegie-Mellon. CMM for Software describes increasing levels of process maturity, from an ad-hoc, immature process to a mature, disciplined one.

Collapse indicator: See *Expand/collapse indicator*.

Concurrency: A condition in which two or more users can access the same project at the same time. See also *Exclusive access*.

Cross-project traceability: A RequisitePro feature that allows you to establish traceability relationships between requirements that reside in different projects. See also *External traceability*.

CSV file: A comma-separated value text file, commonly used to exchange files between database systems that use different formats. Sometimes called comma-delimited files, CSV files can be imported into RequisitePro.

Ctrl-click: See *Multiple select actions*.

Current project: The project that is open, or active. A user can have only one RequisitePro project open at a time. Also referred to as the *active project* or the *open project*.

Database: A collection of data stored in a repository. By using specific commands, you can search and sort a database for the retrieval of specific information. RequisitePro stores your projects in a database. Use the views and queries in the RequisitePro Views Workplace to search the project database. See also *Project database*.

.def file: A file, located in the RequisitePro outlines directory, that specifies information about a particular outline used by RequisitePro.

Deleted Users group: A security group of users who have been deleted from other groups, have no permissions, and cannot log on to RequisitePro. This group is maintained by the project administrator for project history.

Dialog box: An interactive window displayed on the screen that solicits a response from the user.

Dialog box shortcut: See *Keyboard shortcuts*.

Directory: A catalog for file names and other directories. A directory is an organization of files (or folders) grouped for the user's convenience. The topmost directory is called the root directory. The directories within a directory are called subdirectories.

Discussion: A RequisitePro feature that lets you address comments, issues, and questions to a group of discussion participants. Discussions can be associated with one or more specific requirements, or refer to the project in general.

Discussion item: A discussion item is either the initial discussion topic or a response. A response can be either to the initial discussion text or to another response.

.doc file: A DOS file name extension for Microsoft Word documents. Do not use the .doc file name extension as a file name extension for document types.

Document: Any Microsoft Word document, whether it is part of the RequisitePro project or outside the project, whether it contains requirements or not. See also *Requirements document*.

Document properties: Specific items of information about a RequisitePro document. Documents have attributes associated with them such as author, date and time of last revision and file name.

Document type: Defines descriptive and operational information associated with a requirements document. The document type serves as a template for each requirements document you create of that type.

The document type defines the document's file extension, such as .prd; all documents of the same document type share the same file extension. The document type identifies a default requirement type; each new requirement you create in the document will be based on the default requirement type unless you indicate otherwise. The document type also identifies an outline (or template) for the document which controls its page layout, default text, paragraph styles, etc.

Document version: A revision of a RequisitePro document, identified in the document properties revision history. A new version is created when a document is changed and saved. See *Revision*.

.dot file: A DOS file name extension for Microsoft Word template files. Do not use the .dot file name extension as a file name extension for RequisitePro document types. You can edit the .dot files associated with your document types to include your company name and other information specific to your organization. You can enter the company name, etc. in the Microsoft Word **File > Properties** dialog box. Then in the document itself, right-click on the Company-Name field, and select **Update Field**.

Drag: See *Multiple select actions*.

Drop-down menu: A list that appears below a menu bar or field when the user clicks the down arrow. The menu remains open without further action until the user closes it or chooses a menu item.

Enhancement request: A type of stakeholder request that specifies a new feature or functionality of the system. Certain RequisitePro requirement types have attributes that associate the requirement with specific records in Rational ClearQuest. By default, the feature (FEAT) requirement type includes an Enhancement Request attribute that can associate the feature requirement with enhancement request records in ClearQuest. Other associations can be created using the ClearQuest/RequisitePro Integration Setup. Refer to *Getting Started with Rational Suite AnalystStudio* for more information.

Entry-type attributes: Entry-type attributes are numeric, text, time, or date values that are entered by project users. An entry-type attribute can be configured with a default value which users can accept or replace as they create

or modify requirements. For example, you could format the entry-type attribute “Cost” to accept integer values and have a default value of 20. You define attributes in the Attributes tab of the Project Properties dialog box. Requirement attributes can be of entry or list-type. See also *Attribute types*, *Attribute values*. Compare *List-type attributes*.

Exclusive access: A condition by which access to a RequisitePro project and its documents is only available to the user who opens the project. Exclusive access is required to change a variety of project characteristics. You set access when you open a project. See also *Concurrency*.

Expand/collapse indicator: A small box displayed in one of the following locations: next to a requirement in a view, indicating that the requirement has one or more child requirements; or next to a discussion item in the Discussions dialog box, indicating that the discussion item has responses. The box contains a + or a -, indicating whether or not the requirement or discussion is displayed in an expanded or collapsed state.

Export: To move information from one system or program to another. You can export requirements from a RequisitePro view to Microsoft Word documents and to CSV files.

Extension: See *File name extension*.

External project: A project containing requirements used to establish traceability relationships with requirements in a currently open project.

External requirement: A requirement residing in an external project. You can create traceability relationships between requirements in different projects.

External traceability: Traceability relationships between requirements in two different projects. See also *Traceability*.

File name extension: A DOS file name extension (for example, .prd). File name extensions are used in RequisitePro to indicate document type and can contain a maximum of 20 characters.

Filtering: A process by which you can change the amount of information displayed in a view in the Views Workplace. You specify certain criteria on which to filter information. You can filter requirements by specifying certain distinct criteria for any or all of their attributes. For example, instead of displaying all requirements, you might apply a filter such that only requirements having a high priority are displayed. See also *Sorting*, *Queried view*.

Graphic: Electronic line art or bitmapped artwork. You can use graphic formats such as Enhanced Metafile (.emf), Joint Photographic Experts Group (.jpg), Portable Network Graphics (.png), Windows Bitmap (.bmp, .rle, .dib), and Windows Metafile (.wmf) in your RequisitePro documents.

Group: A list of users, defined in project security and organized by the operations they have privileges to perform. For example, members of the Administrators group can create group accounts and add users to groups.

Hidden text: A Microsoft Word feature used to hide text within a document. Hidden text is delineated with a dotted underline. In RequisitePro, a requirement within a document begins with a requirement tag formatted in hidden text style. You can hide the tags for improved readability. On the Microsoft Word menu bar, click Tools, then Options, and then click the View tab. Clear the Hidden text check box and click OK.

Hierarchical requirement: A requirement that is included within an ordered relationship with other requirements of the same type. Use hierarchical relationships to subdivide a general requirement into more explicit requirements. Child requirements provide additional detail for their parent requirement. For example:

Parent requirement: The system shall display customer information.

Child requirements provided for detail: Name, Address, Date of Birth.

Each child requirement can only have one parent, but a requirement can be both a parent and a child. If a parent requirement is changed, the relationships with its children become suspect.

Icon: A graphical representation of a RequisitePro command or process. When used in RequisitePro on toolbars in the Tool Palette and Views Workplace, icons are typically referred to as buttons.

IEEE: (“I triple E”) Institute of Electronics and Electrical Engineers, the hardware and software standards body, sets standards for such measurable items as acceptability criteria, performance benchmarks, and configuration management.

Import: To bring information from one system or program into another. In RequisitePro, you can import documents and requirements, from Microsoft Word files and from CSV files.

Integrated Use Case Management: A Rational integration between RequisitePro and Rose that allows you to associate use cases in Rose with RequisitePro documents and requirements. You can easily navigate from Rose use-case models to RequisitePro use-case documents and requirements and vice versa.

Internationalization: The process of developing a program core whose feature and code designs don't make assumptions based on a single language or locale and whose source code base simplifies the creation of different language editions of a program.

Keyboard shortcuts: A *dialog box shortcut* is a keyboard combination you can use to move to tabs, fields, and buttons in a RequisitePro dialog box. To use a dialog box shortcut, press the Alt key while simultaneously pressing the underlined letter in a dialog tab, field, or button. For example, in the Project Properties, Document Properties, or Requirement Properties dialog boxes, press Alt-G to open the General tab.

A *menu shortcut* is a keyboard combination you can use to open a menu in the Tool Palette or Views Workplace. To use a menu shortcut, press the Alt key while simultaneously pressing the underlined letter in the menu. For example, to open the Requirement menu, press Alt-R. Once a menu is displayed, you can select a command by pressing the key for the underlined letter in the command.

Keyword: Words that are used to help specify and define requirements. Many organizations use words such as “shall,” “must,” or “will” in their requirements, making it easier to separate a requirement from surrounding text in the document. Keywords are a part of the definition of a requirement type. You enter keywords in the Requirement Must Contain field in the Requirement Type dialog box. See also *Requirement type*.

Label (version information): A string that contains user-defined revision information, up to 20 characters. You can use a revision label for noting requirement, document, or project/archive version information.

Leaf tag: The last (rightmost) number in a requirement's tag number. For example, the leaf tag number for Requirement PRD201.7.9 is 9. See also *Root tag*.

Licensed user: A RequisitePro user. Each user that is associated with a license of RequisitePro is a licensed RequisitePro user. See also *User*.

List-type attributes: Requirement attributes are either list-type or entry-type. List-type attributes are sets of descriptive values (for example, Status, which may contain the list values Proposed, Approved, In progress, and Complete). You can assign single values or multiple values for list-type attributes. You define attribute values in the Attributes tab in the Project Properties dialog box. See also *Attribute types*, *Attribute values*. Compare *Entry-type attributes*.

Matrix: An arrangement of rows and columns used for organizing related items in the Views Workplace. See *Attribute Matrix*, *Traceability Matrix*.

Menu: A list of options from which a user can make a selection in order to perform a desired action. In RequisitePro, menus are available from the menu bar found above the buttons on the Tool Palette and in a View window. The Word Workplace includes a RequisitePro menu with access to document, requirement, and window commands.

Menu file: A text file with specific syntax that is used to add menu commands to any RequisitePro Tool Palette menu. Menu files typically have an MNU or TXT file extension. Menu files are referenced using the Add-ins command on the Tools menu. The commands appear on the RequisitePro menus in the order in which they are specified in the menu file.

Menu shortcuts: See *Keyboard shortcuts*.

Metrics: See *Requirement Metrics*.

Multiple select actions: Mouse actions and combination keyboard/mouse actions that you use to select multiple items in RequisitePro. Use *Ctrl-Click* to select multiple items that are not adjacent to each other. Hold down the Ctrl key and click the mouse. (You can also use Ctrl-click to clear a selected item.) Use *Shift-click* to select a range of items. Hold down the Shift key and click the mouse. Use *Drag* to select a range of items. With one item selected, drag the mouse. Release the mouse when the range is selected.

Multiple value list: An attribute type that supports one-to-many associations. You can use a multiple value list when you want to assign a requirement more than one value for a specific attribute.

For example, you might create an attribute type called Owner, with multiple values Bob, John, and Sue, representing different users working on the same project. For this attribute, you might then assign only the values Bob and Sue to a particular requirement, indicating that Bob and Sue are responsible for this particular requirement, but John is not.

Offline author: A user who takes a RequisitePro document offline.

Offline authoring: A RequisitePro feature that lets users read and modify a document in Microsoft Word outside of RequisitePro (i.e., offline). When you take a document offline, RequisitePro creates a copy of the document in the directory you specify. The original is still stored in RequisitePro, but it is changed to a read-only document. Other users can view the document in RequisitePro, but they cannot edit it until you bring it back online.

OLE: Object linking and embedding. You can create an OLE object in one application (original application) and insert it into files in other, source applications. If you modify the OLE object in its original application, the

changes are automatically reflected in any files containing the OLE object in a source application. You can only modify an OLE object in its original application. You can use OLE objects in RequisitePro requirements documents.

Open project: See *Current project*.

Outline: A reference document or template used to create documents in RequisitePro. An outline can include formats, page layout information, attributes, attribute definitions and system defaults. An outline is useful for maintaining consistency across documents of the same type. An outline is stored in a .def file. It includes the outline's full name, a description of the outline, and the associated Microsoft Word template's DOS filename. See also *Template, Document type*.

Parent requirement: A requirement that participates in a hierarchical relationship with one or more child requirements. A parent can reside at the root level, or it can be nested in the hierarchy with a parent of its own. In either case, parents reside above their children in the hierarchy. See also *Child requirement, Hierarchical requirement*.

Parse: To break information into component parts so that a program can act upon it. Used by the Import Wizard to separate requirements in a document.

Peer requirement: A requirement that is at the same hierarchical level as another requirement. For example, two requirements are peer requirements when they are children of the same parent. In addition, all requirements at the root level are peer requirements of one another. See also *Parent requirement, Child requirement, Hierarchical requirement*.

Pending requirement: A newly created requirement in a document or a view that has not yet been saved in the database.

Pending tag number: A tag number for a newly created requirement in a RequisitePro document. The requirement maintains the pending tag number until the document is saved. See also *Requirement tag*.

Permissions: The RequisitePro privileges granted to a group of RequisitePro users. RequisitePro administrators or members of a group with project security permissions can assign permissions to groups. Also referred to as *privileges* or *rights*. See also *Security*.

Project: A RequisitePro project. A project includes a database, documents, document types, requirements and their attributes, requirement types, requirement traceability, discussions, and user and group security. Within RequisitePro, you create a project first. You then create requirement documents and requirements in each document.

Project database: The requirements database managed by RequisitePro. All requirements in the project are stored in the project database, including those created in requirement documents. Changes you make to requirements in the documents are reflected in the project database. Microsoft Access, Oracle and Microsoft SQL Server databases are available to user for RequisitePro projects. See also *Database*.

Project directory: A directory that contains information for a single RequisitePro project. You define the project directory when you create a new project (By default, RequisitePro creates a directory name that matches what is typed in the Name text box in the Project Wizard). For projects that use the Microsoft Access database, the database is stored in the project directory. The project directory does not store the database for projects that use an Oracle or SQL Server database. Requirements documents for the project may be stored in another directory. The project directory path can contain up to 256 characters. See also *Directory*.

Project prefix: An identifier used for requirements in cross-project traceability. In an external project, the prefix is displayed before the tag requirement, separated from the tag by a period. For example, if a requirement's tag is PR234 and the project's prefix is GLOBAL, then the external requirement is displayed as GLOBAL.PR234. The prefix can be up to 8 characters, and must be uppercase letters. You can change the prefix at any time in the Project Properties dialog box, General tab.

Project properties: The characteristics that make up a project, such as document types, requirement types, requirement attributes, the date a project was created, the user who created it, and the file location where the project is stored.

Project summary report: A report that displays the project's entire structure in report form. The requirement types (and their attributes, including multiple value lists), document types, and document details are included in the printout.

Query: A method for filtering and sorting requirements in views by limiting the values of one or more attributes or by limiting traceability, and specifying the order in which the filtered requirements display.

For example, you might create a query such that only requirements having a high or medium priority are displayed. Within that filter, you might sort requirements first by priority, and then by cost.

Rational ClearCase: A version control product by Rational, which can be used to store backup copies of RequisitePro projects. Alternately, projects can be archived directly from RequisitePro using the RequisitePro Archive command.

Rational ClearQuest: Rational's change-request management software. ClearQuest offers a flexible approach to track and manage all the change activities that are associated with an organization, such as defects and enhancement requests. In RequisitePro, the terms *ClearQuest* and *Rational ClearQuest* are used interchangeably.

Rational Rose: Rational's visual modeling tool for designing and visualizing object-oriented and component-based applications. RequisitePro is integrated with Rose through Integrated Use Case Management.

Rational TestManager: Rational's information management tool for software development and testing professionals, designed to help track software testing information through all phases of the software development, test, and revision cycles. In RequisitePro, the terms *TestManager* and *Rational TestManager* are used interchangeably.

Rational Unified Process: Rational's online knowledge base of proven software-development principles. RUP captures many of the best practices in modern software development in a form that can be tailored to a wide range of projects and organizations. RUP includes Tool Mentors, which provide descriptions on how Rational Software tools can be used to support particular steps and activities.

Read-only access: An option by which a RequisitePro project or document is restricted to viewing only.

Renumbering: The process of assigning new numbers to requirements. The renumber feature is useful for eliminating "holes" in a numbering scheme, can result when you delete requirements. To renumber requirements, you must open the project in exclusive mode. In addition, if security is enabled, you must have project structure permission to renumber requirements. To renumber requirements in documents, all documents that contain requirements of that type must be open.

Reparenting: The process of reassociating a hierarchical requirement with a new parent of the same requirement type. When you reparent a requirement, the entire sub-tree of children is also moved to the new parent. The reparented requirements are renumbered as if they were newly created for the new parent. See also *Child requirement, Parent requirement, Hierarchy*.

Report: A formatted and organized presentation of data. In RequisitePro, you can use Requirement Metrics and the RequisitePro Extensibility Interface to create reports using data in the requirements database.

Repository: A collection of data; a database.

Requirement: A condition or capability to which the system being built must conform.

Requirement attribute: A descriptive field of information associated with a requirement. RequisitePro requirement attributes are either system attributes (defined by RequisitePro) or user-defined (defined by the project owner). See *Attribute*.

Requirement attribute label: The name of the requirement attribute, such as risk, priority, or author. See *Attribute label*.

Requirement Attribute Matrix: See *Attribute Matrix*.

Requirement attribute type: See *Attribute type*.

Requirement attribute value: See *Attribute value*.

Requirement location: The location where a requirement was created or the location to which it was last moved. The location can be either a specific requirements document or the project database.

Requirement Metrics: A RequisitePro feature for compiling statistics on RequisitePro requirements text, attributes, relationships, and revisions. These report results are displayed in Microsoft Excel and can be manipulated using Excel's charting capabilities. Two types of reports are available: static reports (which show results about the project at the present time) and trend analysis reports (which use time-sensitive filters that analyze changes in requirement text, attributes, traceability, and hierarchical relationships).

Requirement tag: The unique identifier of each requirement in a project. A requirement tag is composed of a tag prefix and a unique numerical value, such as "PR100.1.2." The tag prefix is always the requirement type, as defined in the Project Properties dialog box. The numerical value is generated by RequisitePro. The tag prefix can contain a maximum of 20 characters. Each requirement type in your project has a different tag prefix (for example, FEAT,

SR, TST) that you determine when you create a new project or add a new requirement type. When you add a requirement to a requirements document or database, RequisitePro assigns the requirement the appropriate tag prefix, dependent on its requirement type, and an incremental numerical value. See also *Leaf tag*, *Root tag*, *Pending tag number*.

Requirement type: A set of descriptive and operational information associated with a requirement when the requirement is created. A requirement type serves as a template for all requirements of the same type and is useful for classifying and grouping similar requirements in a project. Each requirement type can its own set of user-defined attributes. See also *Requirement attribute*.

Requirement version: A requirement attribute that shows the version of the requirement. As a requirement evolves, it is helpful to identify the version numbers (and history) of requirements changes.

Requirements document: A document created in Microsoft Word or RequisitePro that captures requirements and is used to communicate product development efforts. Each requirements document addresses a particular requirement type. A RequisitePro requirements document differs from a Word document in that you can access requirement attributes and other information directly from within the requirements document. Also referred to as a *document* or a *RequisitePro document*.

Requirements management: A systematic approach to eliciting, organizing, documenting, and managing the changing requirements of a software application.

RequisitePro document: A Microsoft Word document that is part of a RequisitePro project. Most Word functionality is available within RequisitePro documents.

RequisiteWeb: Rational's Web interface that allows clients to access RequisitePro requirements information across the Internet or an intranet. By utilizing browsers -- Netscape Navigator or Microsoft Internet Explorer -- RequisiteWeb provides a thin client solution to access project documents and data. No Requisite application-specific files need to be installed on individual machines.

Response: An answer to a discussion item. You can respond to the initial discussion topic or to other, previous responses. In RequisitePro, the terms "response" and "discussion response" are used interchangeably.

Revision: A distinct version of a project, document, or requirement. A revision is identified by a unique internal revision number, generated by RequisitePro.

Revision number: The number identifying a revision. Revision numbers are automatically incremented each time you or another user changes and saves a project, document, or requirement.

Root requirement: A requirement at the uppermost level of the requirements hierarchy. A root requirement does not have a parent requirement. See also *Parent requirement*, *Child requirement*, *Hierarchical requirement*.

Rose: See *Rational Rose*.

.rqs file: A text file, created and updated automatically by RequisitePro, that stores project-specific information. Every RequisitePro project has an .rqs file, which resides in the project directory. Do not modify any section of this file, except the [MSProjectMappings] section, as described in RequisitePro Online Help.

RUP: See *Rational Unified Process*.

Security: Prevention of system use, potential harm, or data loss by unauthorized individuals. In RequisitePro, users are given specific permissions that determine the amount or kind of access they have to projects. If you are a RequisitePro administrator or a member of a group with project security permissions, you can assign permissions. See also *Permissions*.

Shift-click: See *Multiple select actions*.

SoDA: Rational's Software Documentation Automation tool.

Sorting: The process of establishing a specific order for the information in a RequisitePro View. You can sort requirements using one or many requirement attributes. For example, you might sort requirements first by priority (high, medium, or low). Then, within priority, you might sub-sort by unique ID number. See also *Filtering*, *Query*.

.~sr file: A text file created for each user who accesses a project. When a project is opened, a file will be written to the project directory with a unique system generated file name and an extension of *.~sr. This file simply records the user ID, the type of access the user has to the project and a session ID. The exclusive lock file name will always be exclusive.~sr. All other file names will begin with a prefix that indicates the type of project access reflected by the user in the project: RO indicates "read only" access, and RW indicates "read/write" access.

Suspect relationship state: A state applied to a traceability or hierarchical relationship when a change occurs to one or both of the requirements in the relationship. A suspect relationship state indicates that, because of the modification to one or both requirements, the relationship may need

modification as well. When suspect relationships are displayed in an Attribute Matrix, an **(s)** appears after the requirement tag in the Traced-to or Traced-from column. See also *Change-managed relationship*, *Traceability Matrix*.

System analyst: An individual who leads and coordinates requirements elicitation and use-case modeling by outlining the system's functionality and delimiting the system.

Tag: See *Requirement tag*.

Tag prefix: The prefix for a requirement type. The prefix can be up to 20 characters. A tag is a unique identifier assigned to each requirement you create. The tag prefix is defined as a part of the requirement type.

Template: A reference file used to create new Microsoft Word documents. A template can include formats, page layout information, attributes, and attribute definitions. Templates are used in RequisitePro for requirements specification standards. In both Word and RequisitePro, templates use the file extension .dot. A Word template is part of a RequisitePro outline, which also includes the outline's full name and a description of the outline. Outlines are stored in .def files. In RequisitePro, the terms *template* and *Word template* are used interchangeably. See also *Word template*, *Outline*.

TestManager: See Rational TestManager.

Tip revision: The current version of a project. If a project is not open, a tip revision is the most recent version of the project.

Tool Palette: The main interface for accessing and working with RequisitePro projects. Tool Palette buttons provide quick access to project information, requirements information, and views. You also use the Tool Palette menu commands to perform requirements management operations in a RequisitePro project.

Trace to/trace from relationship: A relationship between two requirements that implies the source, derivation, or dependencies between the requirements. The trace to/trace from state appears in a Traceability Matrix or Traceability Tree when you create a relationship between two requirements.

For example, you might create a software requirement (Requirement A) that calls for a new command to be added to a particular menu in your application. Creating this requirement might cause you to create a test requirement (Requirement B) associated with that menu item. You would thus create a traceability relationship in which the test requirement (B) is traced from the software requirement (A). There can only be one traceability relationship between any two requirements.

Traceability: A relationship between two requirements that implies the source, derivation, or dependencies between the requirements using the “trace to” and “trace from” features.

Traceability Matrix: A view that illustrates the relationships between requirements of the same or different types. You use this matrix to create, modify, and delete traceability relationships and view indirect relationships and traceability relationships with a suspect state. You can also use the Traceability Matrix to filter and sort the row requirements and column requirements separately. See also *View*.

Traceability relationship: See *Trace to/trace from relationship*.

Traceability Tree: A view that displays all internal and external requirements traced to or from a requirement (depending on the direction of the tree). The traceability tree only displays the first level cross-project traceability. For example, if an internal requirement is traced to an external requirement, the external requirement displays in the traceability tree, but other requirements that the external requirement is traced do not displayed in the tree. Also referred to as a *Tree view*. See also *View*.

Tree view: See *Traceability Tree*.

Type: See *Requirement type*.

Use case: A sequence of actions that a system performs, yielding an observable result of value (a work output) to a particular actor (someone or something outside the system that interacts with the system).

User: See *Licensed user*.

User information: A RequisitePro user’s user name, password, and e-mail address. If you are a member of a group with project security permissions, you can edit another user’s information. In addition, a user can edit his or her own user information.

Users group: A security group that can, by default, read documents and requirements, create views, and participate in discussions. Administrators can modify Users group permissions.

Version information: Unique, identifying information associated with a project, document, or requirement each time it is modified. The internally generated revision number, combined with information about the author, date, time, and reason for modification, constitute version information. See also *Revision*.

View: A window in the Views Workplace that displays requirements, the attributes assigned to requirements, and the relationships between requirements. A view displays information in spreadsheet-like tables or in outline trees. In RequisitePro, the terms *view* and *view window* are used interchangeably. See also *Attribute Matrix*, *Traceability Matrix*, *Traceability Tree*.

Views Workplace: An area in RequisitePro where you analyze and print requirements information. The workplace displays and manages three types of views: Attribute Matrix, Traceability Matrix, and Traceability Tree.

Wildcard character: A keyboard character that can be used to represent one or many characters. Typically the asterisk (*) represents one or more characters and the question mark (?) represents a single character. For example, the file specification *.* (pronounced star-dot-star) uses the asterisk wildcard to mean “any combination of file name and extension.” When filtering the subject of discussions, the percent symbol (%) is the wildcard character used to represent one or more characters.

Web: See *RequisiteWeb*.

Word application: Microsoft Word. The word processor used to author requirement documents and edit requirements in RequisitePro documents. The integrated implementation of Word in RequisitePro is referred to as the Word Workplace.

Word document: A document created in Microsoft Word or RequisitePro that is saved in Word format. See also *RequisitePro document*.

Word Template: See *Template*.

Word Workplace: A Microsoft Word window within RequisitePro where you view, create, and modify documents. RequisitePro uses the Word functionality to provide powerful features for viewing, editing, and formatting documents. You can open several documents at a time, apply character styles, and insert objects into your documents. The Word Workplace includes a RequisitePro menu for managing RequisitePro requirements and documents from within Word. Also referred to as *Word window*.

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