Rational® RequisitePro®

User's Guide

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WINDOWS

Rational®
the software development company

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Contents

Preface

This manual provides a complete description of the features and options available in Rational RequisitePro, a requirements management tool that integrates a powerful multi-user requirements database utility with the familiar environment of Microsoft Word for Windows. The program allows you to work simultaneously with a requirements database and requirements documents.

Audience

Rational 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.

Rational RequisitePro User's Guide is organized to 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, and it addresses the advanced skills required for managing projects.

The following table indicates which chapters will be most relevant for various types of RequisitePro users:

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 **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 provides 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 two tutorials, Rational RequisitePro Tutorial and Quick Tour. For advanced users, it provides a single source for accessing pertinent, in-depth documentation, including white papers, 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 by clicking **Help > Let's Go RequisitePro**.

- **Getting Started Tours.** You can access two online Help tours from either Let's Go RequisitePro or the Getting Started book in the help **Contents** tab: 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 RequisitePro tutorials.** RequisitePro includes two self-paced tutorials to get you started with the program: Rational RequisitePro Tutorial and Quick Tour. Both can be opened from either the Let's Go RequisitePro help screen (available from **Help > Let's Go RequisitePro**) or the Windows **Start** menu (click the RequisitePro program group).

- **Rational Documentation Web site**. You can order documentation for Rational products from www.rational.com/documentation.

- **White papers and technical notes**. Rational offers complementary white papers on current trends in requirements management and a list of recommended reading materials for some perspectives on how you can achieve your development goals using requirements management principles. For free copies of these materials, visit the Rational Web site at http://www.rational.com.

- **Rational Developer Network**. The Rational Developer Network provides the guidance you need to implement and deepen your knowledge on Rational tools and best practices. It includes immediate access to white papers, artifacts, codes, discussions, training, and documentation. For more information, see http://www.Rational.net.

  From RequisitePro, you can open the Rational Developer Network by clicking **Help > Rational on the Web > Rational Developer Network**. Rational Developer Network is also available in Let's Go RequisitePro.

- **Rational Training Services.** Rational University offers requirements management classes and tool training for RequisitePro users. For more information on training opportunities, see the Rational University Web site at http://www.rational.com/university.

Reference

Information about requirements management is provided in Dean Leffingwell and Don Widrig, *Managing Software Requirements: A Unified Approach* (Addison Wesley, 2000).

Documentation Roadmap

START HERE

Let's Go RequisitePro

Release Notes
- What's New
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Enhanced RequisitePro Environment

SYSTEM ADMINISTRATOR

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- RequisiteWeb Setup

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REQUIREMENTS
Viewer / Contributor / Author

RequisitePro Quick Tour

RequisitePro Tutorial

RequisitePro User's Guide

RequisitePro Online Help
- Requirements Management Tour

RequisiteWeb Online Help

PROJECT ADMINISTRATOR

RequisitePro Online Help
- Project Admin Tips

RequisitePro User's Guide

INTEGRATION DEVELOPER

RequisitePro Extensibility Interface Online Help

RequisitePro Integrations With Other Rational Products

Integration	Description	Where it is Documented
RequisitePro-ClearQuest	You can use ClearQuest to track and manage change requests and to associate requirements with Clear-Quest enhancements or defect records.	• *Getting Started: Rational Suite AnalystStudio* • *Rational Suite Administrator's Guide* • *Rational Suite Installation Guide* • *Rational ClearQuest Administrators Guide*
RequisitePro-ClearCase	You can archive RequisitePro projects in ClearCase.	• *Rational RequisitePro User's Guide* • RequisitePro online Help
RequisitePro-UCM	RequisitePro administrators can create baselines of RequisitePro projects in UCM and create RequisitePro projects from baselines.	• *Rational RequisitePro User's Guide* • RequisitePro online Help • *Rational Suite Administrator's Guide* • *Using UCM with Rational Suite*
RequisitePro-Rose	You can associate RequisitePro requirements and documents with Rose use cases and models.	• Rational Rose online Help • RequisitePro online Help • Integrated Use Case Management online help (available from Rose or RequisitePro Help) • *Getting Started: Rational Suite Analyst-* • *Studio*
RequisitePro-SoDA	You can create reports that extract information from a RequisitePro project.	• *Rational SoDA User's Guide* • SoDA online Help • *Rational RequisitePro User's Guide* • RequisitePro online Help
RequisitePro-TestManager	You can reference RequisitePro requirements from TestManager to ensure traceability between RequisitePro requirements and test assets managed by TestManager.	• *Rational TestManager User's Guide* • Rational TestManager online Help • *Rational Suite Administrators Guide*
RequisitePro-Rational Unified Process	You can launch Extended Help from the RequisitePro Help menu. Extended Help displays RUP tool mentors for RequisitePro.	• RequisitePro online Help • Rational Extended Help online Help

Contacting Rational Technical Support

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

Location	Contact Information	Notes
U.S. and Canada	800-433-5444 (toll free) 408-863-4000 (Cupertino, CA) 303-544-7333 (facsimile) support@rational.com	When sending e-mail: ■ Specify the product name in the subject line, for example, "RequisitePro".
Europe, Middle East, Africa	+31 (0) 20-4546-200 +31 (0) 20-4546-202 (facsimile) support@europe. rational.com	■ For existing issues, include your case ID in the subject line
Asia Pacific	+61-2-9419-0111 +61-2-9419-0123 (facsimile) support@apac.rational.com	
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. You can copy the form 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 "req_forum@rational.com," an open e-mail list for customers to exchange ideas on using RequisitePro. To subscribe to the mailing list, go to the following Web site: http://www.rational.com/support/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.

Introducing Requirements Management

<div style="text-align: right; font-size: 3em;">1</div>

This chapter is adapted from Rational's white paper *Applying Requirements Management with Use Cases.* The full version of this document is available from Let's Go RequisitePro. In RequisitePro, select **Let's Go RequisitePro** from the **Help** menu, and then click the link to the white paper.

Applying Requirements Management with Use Cases

If you are new to or somewhat familiar with requirements management and are interested in improving your requirements management process, you can use the framework presented in this chapter 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 chapter 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 is not included at all. For convenience, the term *system* is used here 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 chapter.

What Is a Requirement?

The first step toward 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 (IEEE) 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."[1]

Why Manage Requirements?

Simply put, system development teams that 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.

Recent evidence is supportive:

- The Standish Group's CHAOS Reports from 1994, 1997, and 2000 established that the most significant contributors to project failure relate to requirements.[2]

- 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."[3]

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 Requirements Management?

Because 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 activities.[4] 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.

A more comprehensive list of problems includes the following:

Figure 1. Common Requirements Management Problems

- Requirements are not always obvious and have many sources.

- Requirements are not always easy to express clearly in words.

- Many different types of requirements at different levels of detail must be managed.

- 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; they are neither equally important nor equally easy to meet.

- Many interested and responsible parties are involved in a project, which means that requirements must 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, and 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.

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.
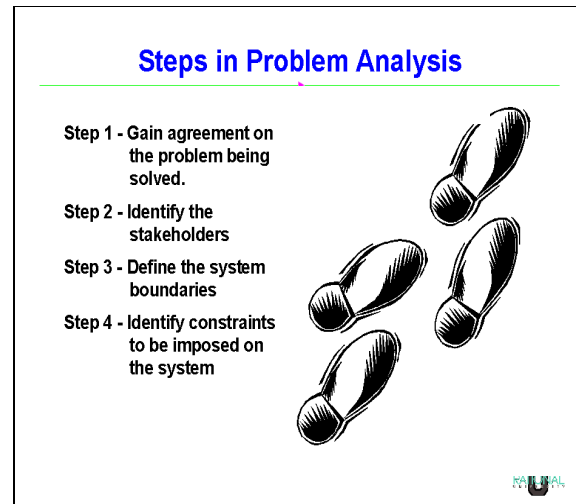
Figure 2. Steps in Problem Analysis

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; so too are management, project team members, business policies, and regulatory agencies.

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.

Requirements may be elicited through activities such as interviewing, brainstorming, conceptual prototyping, using questionnaires, and performing 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.

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.

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, 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 (see Figure 3). Some suggested formats for the description are provided in later sections.

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

Figure 3. System Definition in Natural and Formal Language

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 particularly 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.

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 chapter includes suggested formats for detailed natural language, formal text, and graphical descriptions. After the description format is established, refinement continues throughout the project lifecycle.

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 affect 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.

As Figure 4 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).
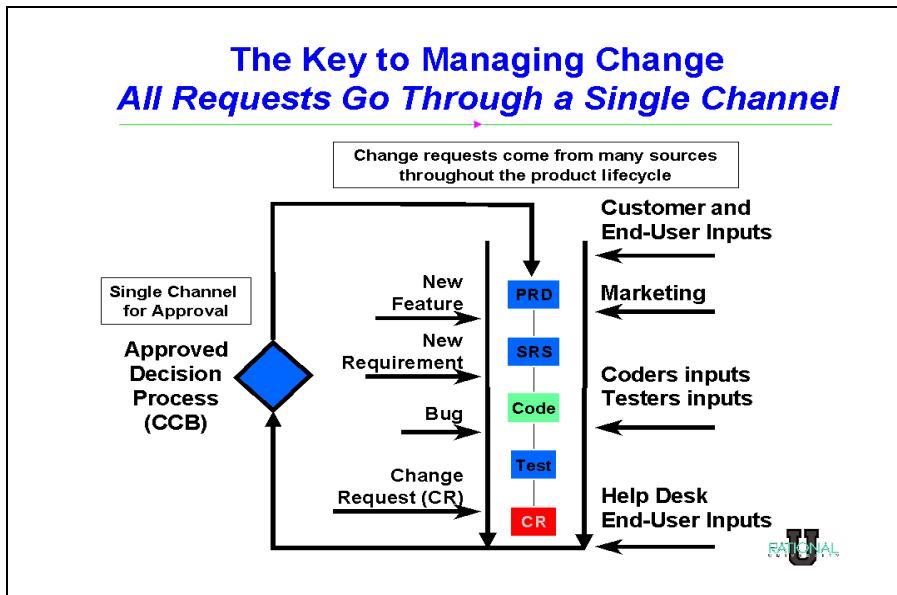
Figure 4. The Key to Managing Change: All Requests Go Through a Single Channel

Important Requirements Concepts

To apply requirements management skills to a project, everyone working on a project should understand certain requirements management concepts, including the following:

Requirement Types. A requirement type is simply a class of requirements. The larger and more intricate the system, the more types of requirements appear. 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, quality assurance personnel, technical writers, and other technical contributors (see Figure 5).
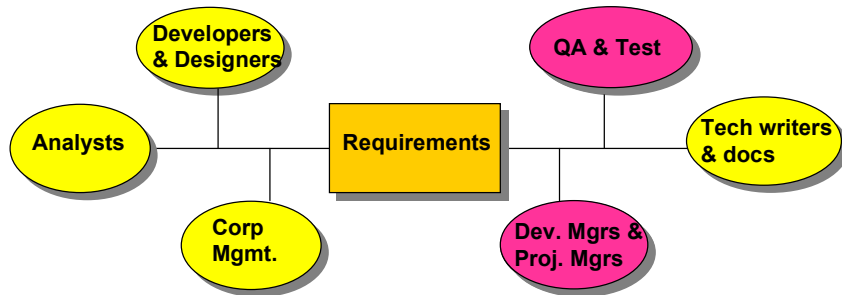
Figure 5. Team Members Involved in Requirements Management

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 nonfunctional behavior. Test cases are related to the requirements they verify and validate (see Figure 6). 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. Traceability is one of the most difficult concepts to implement in requirements management, but 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]
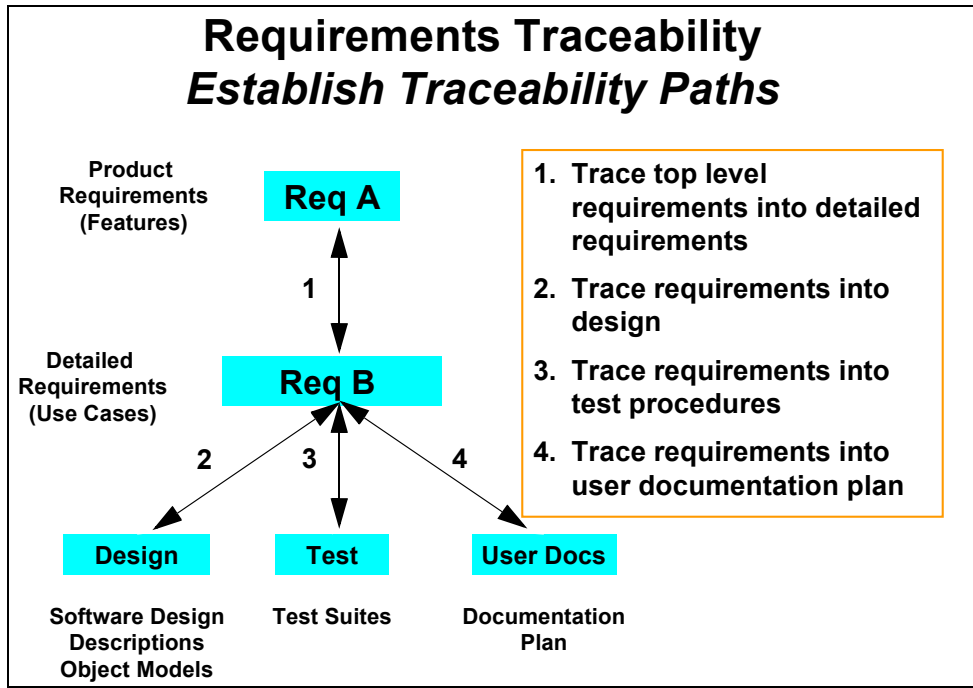
Figure 6. Establish Traceability Paths Between Requirements

Multidimensional 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 7 displays attributes for a Feature Requirement Type from an example project in 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.
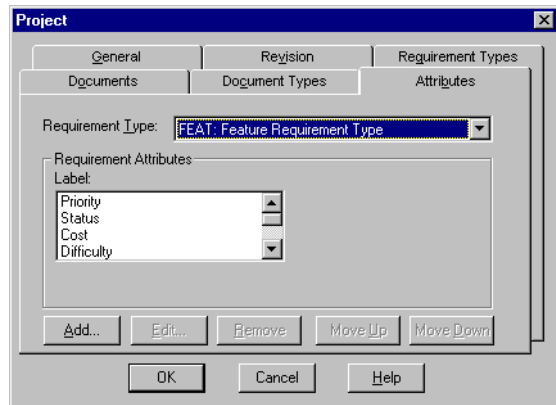
Figure 7. Attributes for the Feature Requirement Type

In Figure 8, 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 deal about each requirement from its attribute values. In this

Figure 8. Attribute Matrix for Feature Requirements

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 (for example, estimated time, lines of code) with which to further refine scope. This multidimensional 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 uses 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 (see Figure 9).
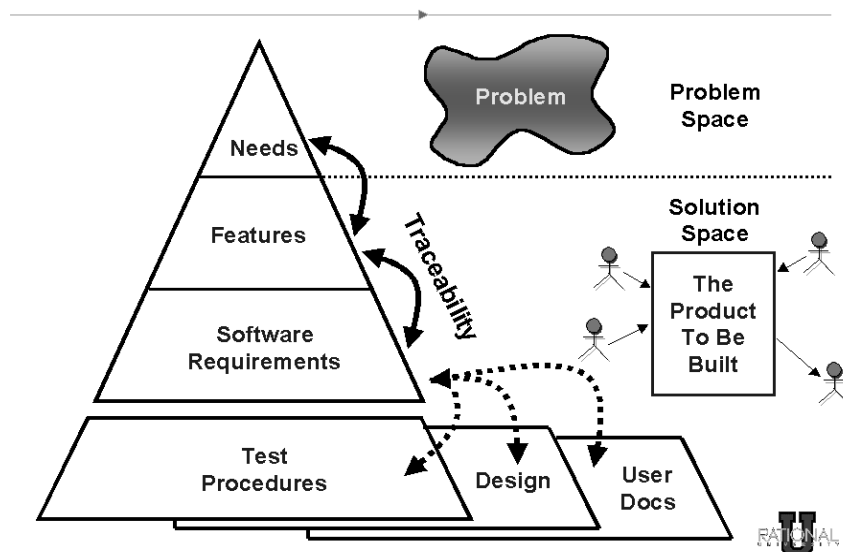
Figure 9. Overview of Requirements Management

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 customer's 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.

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.

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.

Sources

1 M. Dorfman and R. Thayer, *Software Engineering* (Los Alamitos, CA: IEEE Computer Society Press, 1997), p. 79.

2 CHAOS, The Standish Group International, Inc. (Dennis, MA, 1994, 1997, 2000).

3 Computer Industry Daily, December 12, 1997.

4 M. Dorfman and R. Thayer, *Software Engineering* (Los Alamitos, CA: IEEE Computer Society Press, 1997), p. 80.

5 Ian Spense and Leslee Probasco, *Traceability Strategies for Managing Requirements with Use Cases*, White Paper (Rational Software Corporation, 1998).

Recommended Reading

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

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

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

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Introducing Rational RequisitePro

<div align="right">

2

</div>

This chapter covers key Rational RequisitePro concepts. A complete glossary 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 and 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 enables you to organize, prioritize, trace relationships, and easily track changes to your requirements. The program's unique architecture and dynamic links make it possible for you to move easily between the requirements in the database and their presentation in Word documents.

Team Collaboration and 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 consistency and ensuring that what is designed, tested, documented, and delivered meets the users' needs. RequisitePro's deep integration with other lifecycle tools promotes artifact reusability and eases the sharing of information, further enhancing team collaboration.

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, and testers. When each person on your team has access to critical requirements information and is able to manage those requirements, team efficiency and effectiveness are promoted and project risk is reduced.

Flexibility Through the Web Component

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 an intranet. RequisiteWeb uses Netscape Navigator or Microsoft Internet Explorer to provide a thin client solution to access project documents and data. No RequisitePro or RequisiteWeb application-specific files must be installed on the user's machine.

Using RequisiteWeb, you can modify the name, text, and attributes of requirements directly in the database and from within documents, and you can create, delete, and query requirements and assign new parents to them. All changes are automatically tracked, just as they are in RequisitePro. Requirement authoring through the Web allows better support of distributed teams and multiple-platform environments.

RequisiteWeb supports the following features:

- Viewing documents
- Modifying requirements (in documents or database)
- Creating requirements in the database
- Creating and modifying Attribute Matrix views
- Creating and modifying Traceability Tree views (traced into or traced out of)
- Setting your own user password
- Viewing, modifying, and creating hierarchical relationships
- Creating traceability links within and across projects
- Filtering and sorting requirements
- Creating and replying to discussions

Change Management

Change occurs in practically every development project, but it does not have to consume project resources or throw the project off course. With RequisitePro, you can manage inevitable change to ensure that your entire team is current as requirements evolve. Robust traceability features in RequisitePro enable you to establish and maintain dependencies between different requirements. As change occurs, these traceability relationships are flagged as suspect, so you can understand how change affects 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 Unified Modeling Language-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.

Requirements

RequisitePro organizes requirements and provides traceability and change management throughout the project lifecycle. A requirement describes a condition or capability that a system must provide. Requirements contain a name and text, and they can be qualified with attributes to provide specific details. Requirements may be created in a document or in a view. All requirements information is stored in the database.

More information on requirements is provided in the chapter *Working with Requirements* on page 113.

Requirement Type

A requirement type is an outline 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 requirement types that are appropriate for your project. (For more information, refer to *Creating and Modifying Requirement Types* on page 240.)

Requirement Attributes

In RequisitePro, requirements are classified by their type and their attributes. 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 release phase.

Attribute information may include the following:

- 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 allows you to easily customize your project documents and databases to define, articulate, and manage the processes 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 implement only those 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 243.)

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.

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

(For more information on projects, refer to the following chapters: *Creating Projects* on page 183; *Working with Project Security* on page 195; *Managing Projects* on page 207; and *Working with Project Information* on page 231.)

Project Database

The project database is the requirements database managed by RequisitePro. When you use RequisitePro, you can use one of three physical databases to store requirements: Microsoft Access, Oracle, or Microsoft SQL Server. Each RequisitePro

project has its own database, where all the requirements for a project are stored. (With the exception of Microsoft Access, all of these databases may contain more than one project.)

The use of client/server databases offers significantly increased scalability and power to your organization's implementation of RequisitePro. Oracle and SQL Server databases are designed for scalable, enterprise-wide use.

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. You can manage multiple versions of your projects, retrieving, modifying, and returning revisions to the archive in an organized and consistent manner. From RequisitePro, you can use RequisitePro's Archive command or Rational ClearCase.

If your team is using Unified Change Management (UCM), RequisitePro project administrators can create baselines of RequisitePro projects by performing tasks in Rational Administrator and ClearCase, implementing the UCM model. If you have a baseline of a RequisitePro project, you can use that baseline to create new projects in RequisitePro. For example, you may want to base the next release of a project on a stable configuration of the previous release.

(For more information, refer to *Archiving Projects* on page 214 and *Creating a Project Baseline with Unified Change Management* on page 223.)

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 who monitors the progress of all the projects scheduled for completion this quarter could have an extensive list of projects, whereas 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 Project directory. In the Open Project 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 32.)

Explorer

The Explorer is RequisitePro's primary navigation window. In this window, project artifacts (documents, requirements, views, and packages) are displayed hierarchically in a tree browser. Project information is organized in packages, which are units of related artifacts. The project's root package is displayed as the project node, and the contents of each root package are displayed beneath it. Packages can be customized; you can create them as needed, rename and rearrange them, and delete them when you no longer need them. When you select an artifact, a description of it appears in the window below the Explorer.

You can use the Explorer to view your project structure and artifacts and to work with project information. For example, you can double-click a view or a document to open it; you can select requirements and edit them; and you can drag and drop artifacts between packages. The Explorer reflects saved changes made to an open document, view, or requirement.

Project —／ —— Main Menus ── Toolbar ── Views
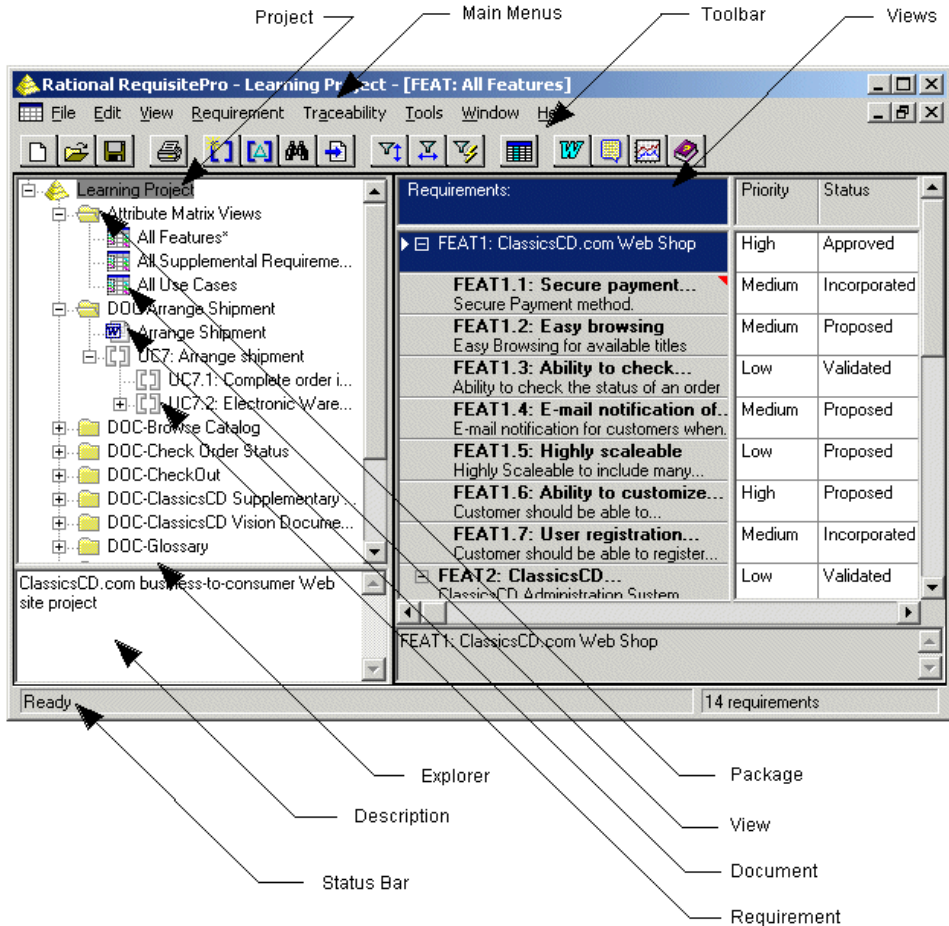
Views

RequisitePro views are windows to the database. Views present information about a
project, a document, and requirements graphically in a table (matrix) or in an outline
tree. Requirements, their attributes, and their relationships to each other are displayed
and managed in views. RequisitePro includes query functions for filtering and sorting
the requirements and their attributes in views. (Refer to *Working in Views* on page 39.)

Three kinds of views can be created:

- The **Attribute Matrix** displays all requirements of a specified type. The
  requirements are listed in the rows, and their attributes appear in the columns.

- The **Traceability Matrix** 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.
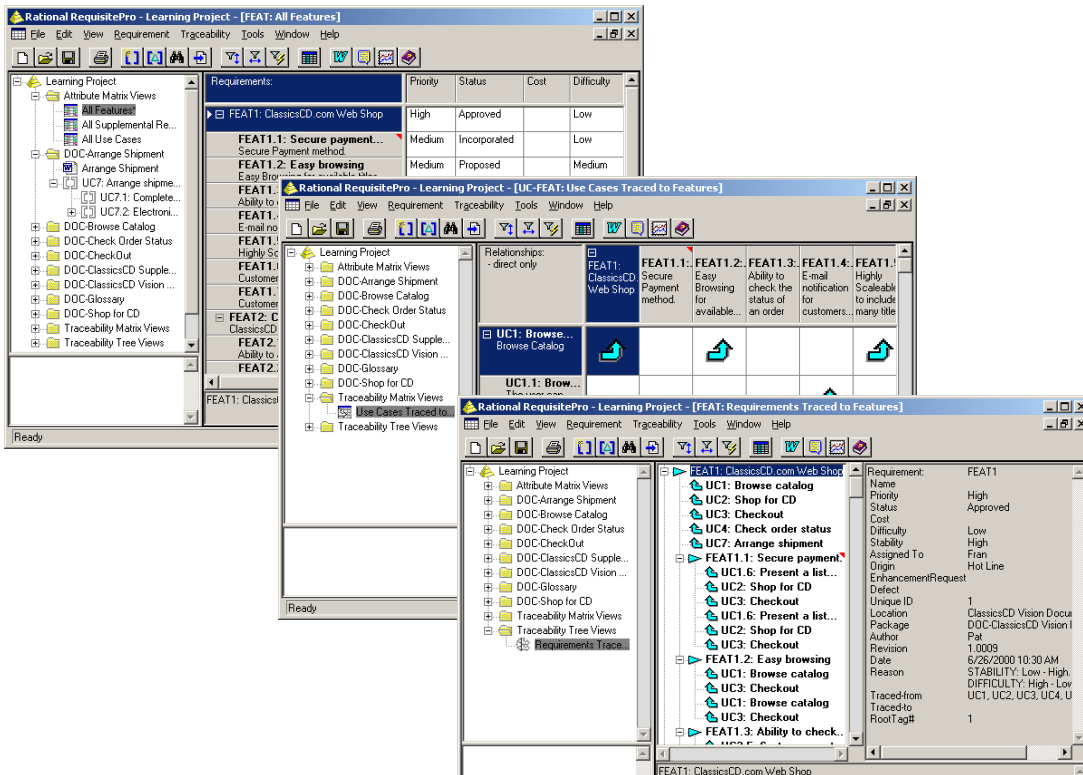
Three views of requirements. Top to bottom: Attribute Matrix, Traceability Matrix, Traceability Tree.

Documents

A document created in RequisitePro look like a Word document, but a few changes have been introduced that allow RequisitePro to exercise security controls over the document. For example, the **File > Save as** and **File > Exit** commands are disabled in the RequisitePro Word window in order to prevent conflicts in handling RequisitePro documents. (To close the Word document, click **Window > Close Word**.) The **Tools > Templates and Add-in** command is unavailable so as to prevent deletion of the RequisitePro template, which is required for proper functioning of RequisitePro.

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, which allows rapid updating of information between documents and views. When you save revisions, they 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.

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 is available in the document list when a project is opened. (For more information, refer to the chapter *Working with Documents* on page 89.)

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 an outline that is applied to documents. The outline can include the default font for the document, the available heading and paragraph styles, and the default type of requirements for the document, or it can 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 235.)

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 outlines that can be used "as is" or customized according to your specifications. After 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 outline 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 outline can create new documents quickly.

- Readers familiar with the outline can quickly locate and review information.

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. If a parent requirement appears in a document, the child requirement must also appear in that document. (Note that all requirements are stored in the database.)

- You can create hierarchical relationships in a document or in a view by using the **Hierarchy** tab in the Requirement Properties dialog box. (You can also use **Requirement** menu commands to create hierarchical relationships in a view.)

- When you delete a parent requirement, 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 one of two views: a Traceability Matrix or a Traceability Tree.

(For more information, refer to *Working with Hierarchy* on page 143.)

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 a document or in a view.

- 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 as suspect the relationship between the two requirements.

- 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 the chapter *Working with Traceability* on page 155.)

Traced to and Traced from Relationships

The trace to or trace from state represents a bidirectional dependency relationship between two requirements. It is displayed in a Traceability Matrix or Traceability Tree when you create a relationship between two requirements.

For example, you might create a feature 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 use-case requirement (Requirement B) associated with that menu item. You would thus create a traceability relationship in which the use-case requirement (B) is traced from the feature requirement (A).

There can be only one traceability relationship between any two requirements. The difference between a *trace to* and a *trace from* relationship is perspective. In the example above, both of the following statements are true:

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

Direct and Indirect Traceability Relationships

Traceability relationships may be either direct or indirect.

In a direct traceability relationship, a requirement is physically traced to or from another requirement; in an indirect traceability relationship, a requirement traces to or from an intermediate requirement, which in turn traces to or from a third requirement. For example, if Requirement A is traced to Requirement B, and Requirement B is traced to Requirement C, then the relationships between Requirements A and B and between Requirements B and C are direct relationships. The relationship between Requirements A and C is indirect. Indirect relationships are maintained by RequisitePro; you cannot modify them directly.

Direct and indirect traceability relationships are depicted with arrows in traceability views. Direct relationships are presented as solid arrows, and indirect relationships are dotted and lighter in color.

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 is modified, its relationships with 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 name, requirement text, requirement type, or attributes.

For more information about parent-child relationships or traceability relationships that are marked suspect, refer to the sections *Suspect Relationships* on page 152 and *Suspect Relationships* on page 162.

Getting Around in Rational RequisitePro

3

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

Starting 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.

Working in RequisitePro

When you start RequisitePro, the Open Project dialog box appears, which enables you to select a project to work with or to create a new project. Click the tab labeled **Existing** to select a project from your project list, or click the **New** tab to create a project.
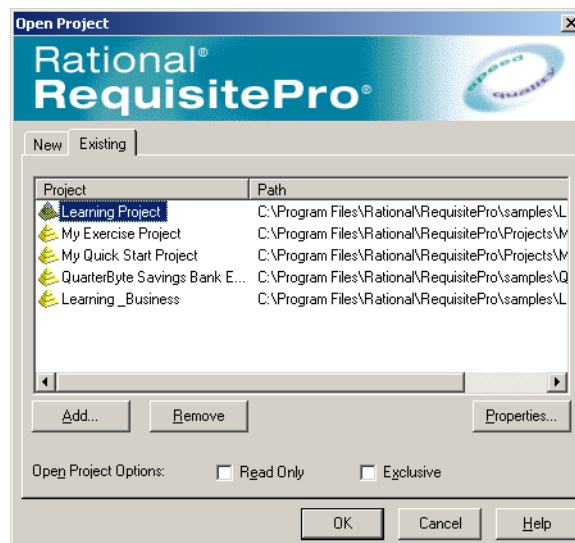
RequisitePro includes the Explorer window (a tree browser) and a description window. The Explorer is RequisitePro's primary navigation window. It lists the requirements artifacts—requirements, views, documents, and other packages—of the open project, organized in packages. When you select an artifact, a description of it appears in the window below the Explorer. Views appear to the right of the Explorer. RequisitePro documents are presented separately in Microsoft Word.

The toolbar and menus in RequisitePro contain RequisitePro commands and provide access to project information, requirements information, and views. When you position your cursor over a toolbar button, a ToolTip appears, describing the button's function.

Working with Projects and Project Packages

When you start RequisitePro, the Open Project dialog box appears, which enables you to select a project to work with or to create a new project. The **Existing** tab lists all the RequisitePro projects that are accessible to you. You can add or remove projects from your list as you need them.

In the Open Project dialog box, projects are listed according to recent use; the projects you have opened most recently appear at the top of the list. When you select a project and click **OK**, it appears in the Explorer, following the RequisitePro icon. The plus sign that precedes the name of the project indicates that it contains artifacts; click the plus sign to expand the list and see the hidden objects.

Within each project, requirements artifacts are organized in packages. A package is a container that can contain requirements documents, requirements, views, and other packages. You can place related artifacts in a single package, and this organization makes it easier for you to view them and to manipulate the data. You can configure your packages as necessary to facilitate your work. An artifact cannot appear in more than one package, but you can move it from one package to another. You can create a package within another package. All project packages are shared by all project users.

Within a package, artifacts are listed in the following order: documents (alphabetically by name), views (by type and then alphabetically within the type), and requirements (by type and then by tag).

Adding a RequisitePro Project to Your Project List

Before you can access a RequisitePro project, you must add it to your project list. Projects you create are automatically added to your project list.

1   Click **File > Open Project**. The Open Project dialog box appears.

2   Click **Add**. The Add Project dialog box appears.
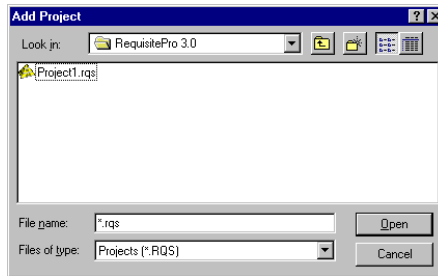
3   Select the project file you want to add to the list. (Project files have an .rqs
    extension.)

4   Click **Open**. RequisitePro adds the project to your project list, and it appears with
    the projects listed on the **Existing** tab. You can now open the project and use its
    requirements and documents.

Tip: Click the **Properties** button to view or change the database properties of the
selected project.

5   Click **OK** to save the changes.

Note: To add a project stored on a floppy disk, move or copy the project to a local drive
or network drive (using Windows Explorer), and then add it to your project list.

Removing a Project from the Project List

You can remove a RequisitePro project from your project list without deleting the files
from your system.

To remove a project from the project list:

1   Click **File > Open Project**.
    The Open Project dialog box appears.

2   Select the project you want to remove, and click **Remove.** RequisitePro removes the
    project.

3   Click **OK** to save the changes.

    Note: You can retrieve a project you removed by clicking the **Add** button. (Refer to
    the preceding section.)

Opening a Project and Project Documents

When you open a RequisitePro project, the project appears in the Explorer. Project artifacts may be hidden from view until you click the plus sign. The artifacts are arranged in packages, as described in *Working with Projects and Project Packages* on page 32. To open an artifact, you select it in the Explorer; then, either double-click it or right-click and select **Open**.

If you try to open a project that requires updating to the current version of RequisitePro but was created in version 4.0 or later, the Database Upgrade Wizard appears. The wizard guides project administrators through the process of upgrading existing database structure and project data to the current RequisitePro release. For information about the upgrading of projects that are not organized in packages, refer to *Upgrading RequisitePro Projects to the Latest Version* on page 192.

If a project is in a version of RequisitePro earlier than 4.0, you must first upgrade the project to version 4.0 before using the Database Upgrade Wizard. Contact Technical Support for information.

Note: Do not open a project for which a baseline is being created in Unified Change Management or one that is being added to ClearCase.

To open a project:

1 Click **File > Open Project** (or click the **Project** button).

The Open Project dialog box appears.
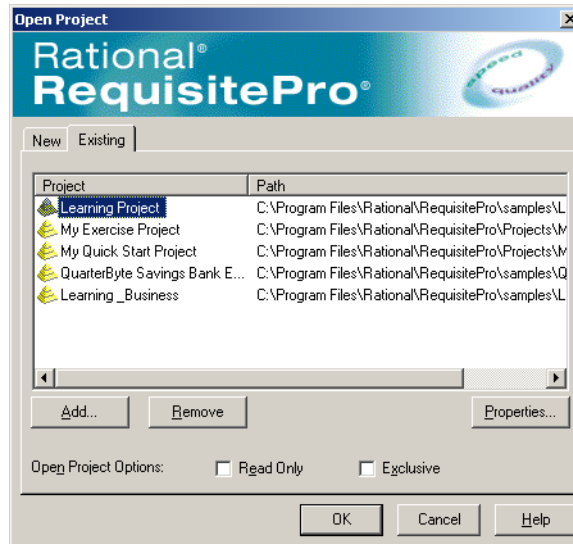
2 Select the project you want to open, and select the **Open Project Options** you want. If you want to be the only user who has change permissions for the project, select the **Exclusive** check box. To open the project and its documents in read-only mode, select the **Read Only** check box. Click **OK**.

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

- ▫ If security is set on the project, refer to *Accessing a Secure Project* on page 36.

- ▫ 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.

3 Do one of the following:

- ▫ Accept the displayed name.

- ▫ Select a user name from the list.

- ▫ Type a new user name that will be added to the project.

4 Click **OK**. The project appears in the Explorer. If the project is already open by another user who has exclusive rights, you are given read-only access.

You can open one or more requirements documents in an open RequisitePro project in one of the following ways:

- ▫ Double-click one or more documents in the Explorer.

- ▫ Click **Window > Show Word**. In Word, click **RequisitePro > Document > Open**. The Open Document dialog box appears. Select one or more documents and click **OK**.

Note: Do not press the ESC key while the document is opening. If you want to view the document but not make modifications to it, you can select it in the Explorer, right-click, and select **Open Read Only**.

Closing a Project and Documents

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

1 Click **File > Close Project.**

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.
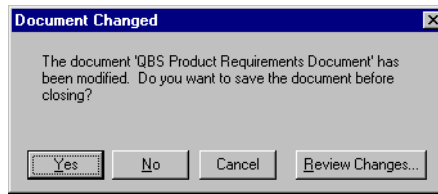
2 Do one of the following:

- 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.
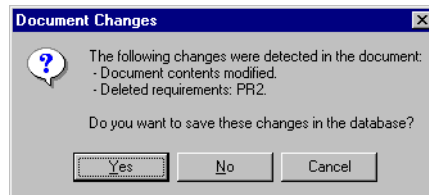
3 Do one of the following:

- 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 Click **File > Open Project**. The Open Project dialog box appears.

2 Select a project in the list to open and click **OK**. If RequisitePro detects that security is enabled, the Project Logon dialog box appears.
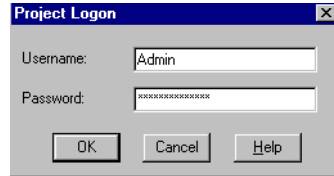
3 Type your name in the **Username** text box. Usernames cannot exceed 20 characters, and they are not case sensitive.

4 Type your password. Your password is set up by a project administrator. Passwords are case sensitive; for example, *Mycomputer*, *MYCOMPUTER*, and *mycomputer* are separate passwords.

5 Click **OK**. You are now ready to use the project.

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

When 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 199.

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 69.

1 Open a project and log on.

2 Click **File > Project Administration > Security**.
The Project Security dialog box appears.

3 Click the **Enable security for this project** check box. Select a user group and a user name, and click the **Edit** button.

The Edit User dialog box appears.
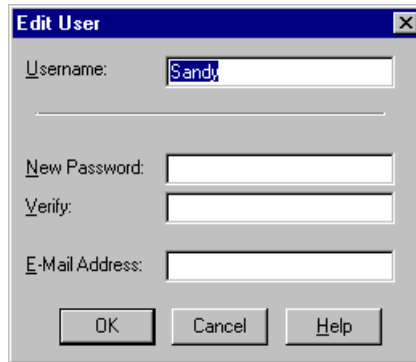
To change your password:

1 Type your password in the **Old Password** text box that appears in the dialog box. (This step applies only to users who do not have project security permissions.)

2 Type your new password in the **New Password** text box. Passwords are case sensitive and are limited to 14 alphanumeric characters.

3 Confirm the new password by typing it again in the **Verify** 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 Select 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 Select your current e-mail address in the **E-mail Address** field.

2 Type a new e-mail address.

3 Click **OK**. Your e-mail address is in place and ready for use.

Closing RequisitePro

Close the project and project documents (see *Closing a Project and Documents* on page 35). Then click **File > Exit**.

Working in Views

4

Rational RequisitePro views use tables or 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.

A view is an environment for analyzing and printing requirements. You can have multiple views open at one time, and you can scroll 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:

- An Attribute Matrix view, which displays all requirements and their attributes within a specified type.

- A Traceability Matrix view, which displays the relationships between requirements of two types.

- A Traceability Tree view, which displays the chain of traceability through the project requirements. A Traceability Tree can be set up in one of two directions: **traced out of** requirements of a specified type or **traced into** requirements of a specified type.

You can do the following in a view:

- Create and modify the requirement name, requirement text, requirement attributes, 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 commands are located in the toolbar. To navigate in a view quickly, use the arrow keys, the PAGE UP or PAGE DOWN keys, and the HOME and END keys. 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 Views* on page 280.

When you select a requirement in a matrix or a tree, the full name and text of the selected requirement are displayed in the text pane at the bottom of the view. (You can resize the text pane by positioning the mouse on the upper border and dragging upward.) When you select a requirement in the Explorer, the requirement name appears in the description window below the Explorer pane.

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 or in the Explorer.

To update the data displayed in the view and in the Explorer for requirements that were modified by other users, click in the view or in the Explorer and then click **View > Refresh** (or the **Refresh the view** button). The **Refresh** command updates the displayed content.

Traceability in a View

The Traceability Matrix and Traceability Tree views display traceability relationships, and the Traced-to or Traced-from attributes appear in the Attribute Matrix. A traceability relationship is displayed as suspect when you make a change to a requirement. For more information about traceability relationships between requirements, refer to the chapter *Working with Traceability* on page 155.

- 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, suspect relationships are denoted by an **(s)** 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 a View

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 the chapter *Working with Hierarchy* on page 143.

- You can create hierarchical relationships in a view 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 as 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.

You can set the level of child requirements to display in a view or in the Explorer.

1 Click **View > Displayed Levels**. The Displayed Levels dialog box appears.

2 Set the number of levels to display in the rows. You can either type a number or select all. Each level corresponds to another level of artifacts. (If you select 1, only root artifacts are displayed; if you select 2, one level below the root artifacts are displayed; and if you select **all**, all levels are displayed.) For a Traceability Matrix, set the number of the levels to display in columns.

3 Click **View > Properties > Save as Default** to save these levels as the defaults for a view. This command saves the currently selected pane size, window size, displayed levels, and all view properties as default settings.

The Attribute Matrix

The Attribute Matrix is a spreadsheet-like display that lists requirements of a specific requirement type and their attributes. Requirements are arranged in rows, listed by tag number and followed by requirement name (or requirement text, if the requirement has not been assigned a name). Attributes are arranged in columns. The Attribute Matrix displays all requirements, and it is the only view in which database requirements can be created.
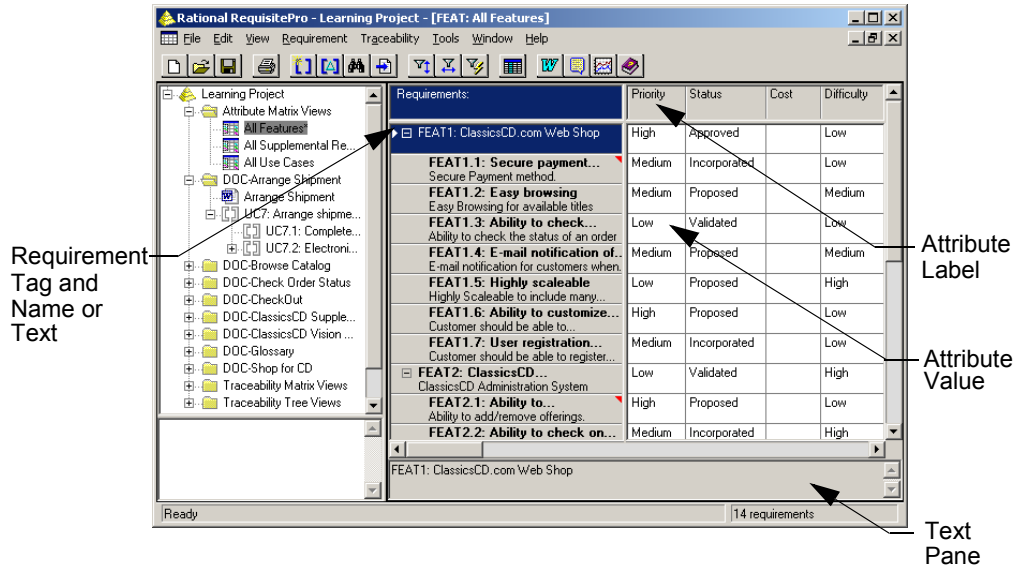
Requirements

In an Attribute Matrix, a requirement is displayed in a single row, showing the requirement tag followed by the requirement name (or requirement text if the requirement has not been assigned a name). 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 that the requirement information you are entering has not yet been saved.

To change the number of lines of requirement name and/or requirement text displayed, click **View > Row/Column Sizing**, and then select a different value for the row or column size.

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.

Click **View > Displayed Attributes** to select the attributes you want to display in the view. The Attribute Matrix displays all internal and external traceability relationships in the **Traced-to** and **Traced-from** columns; suspect traceability relationships are denoted with an (s) in the relevant column. You can change the size of the attribute columns.

Text Pane

The text pane, located at the bottom of the Attribute Matrix, displays a requirement's tag, name, and text, and it reads "Multiple requirements selected" if you have selected more than one requirement. This field is read-only. Graphics and OLE objects included in requirement text are displayed as small rectangular symbols. For Word-linked files included in the requirement text, the path and time stamp of the linked file are presented. The default size of the text pane is two lines, but you can drag the border to increase the size.

The Traceability Matrix

The Traceability Matrix displays and manipulates the relationships between two requirement types. The requirements can be of the same type or of different types, and they include all internally and externally mapped requirements. Use this view to create, modify, and delete traceability relationships and to view indirect and suspect traceability relationships. 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. (By default, only direct traceability relationships are displayed in a new Traceability Matrix. To view indirect relationships, click **View > Properties > Show Indirect**.)

Rows and columns can be resized. The intersection of a row and column is called a *cell.* To change the number of lines of requirement name and/or requirement text displayed, click **View > Row/Column Sizing** and then select a different value for the row or column size.

Note: If the requirement has a name assigned, that name appears in the first line of each row or column. Increase the row or column size to view both the name and text.

Cells

- If the cell is blank, no relationship exists.

- If an arrow points upward to a column requirement, the row requirement is traced to the column requirement.

  Traced to arrow

- If an arrow points down toward a row requirement, the row requirement is traced from the column requirement.

  Traced from arrow

- If a dotted line arrow is displayed, an indirect relationship exists.

  Indirect relationship

- If an arrow with a red diagonal line through it is displayed, the traceability relationship is suspect.

  Suspect relationship

- If a triangle with a red diagonal line through it is displayed, the hierarchical relationship is suspect.

  Suspect relationship

Text Panes

The Traceability Matrix displays two text panes at the bottom of the window. 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 name (or text) of the currently selected row requirement, and the bottom pane displays the name (or text) of the currently selected column requirement. These fields are read-only. If the selected requirement has been assigned a name, that name appears in the text pane. Otherwise, the requirement text appears in the text pane. When more than one row or column is selected, the corresponding text pane displays the message "Multiple

requirements selected." Graphics and OLE objects included in requirement text appear as small rectangular symbols. For Word-linked files included in requirement text, the path and time stamp of the linked file are presented.
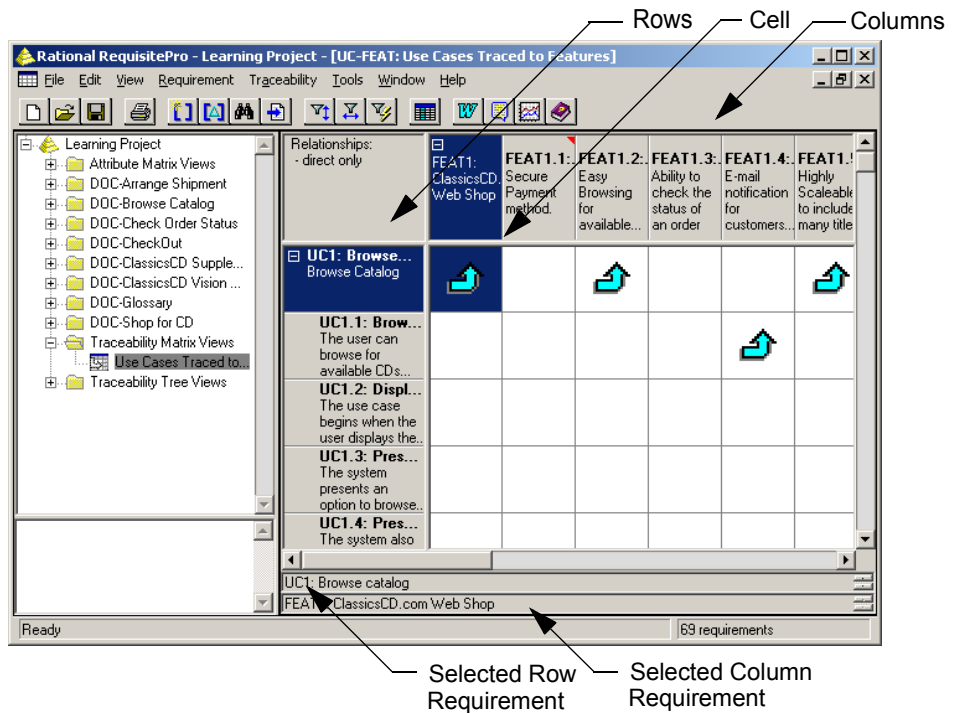
The Traceability Tree

The Traceability Tree provides a graphical view of relationships to or from (internal and external) 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.

The tag, name, and attributes of the selected requirement are displayed in the attribute pane.

Tree Pane ———   Attribute Pane ———

Text Pane ———   Root-Level
                                       Requirement

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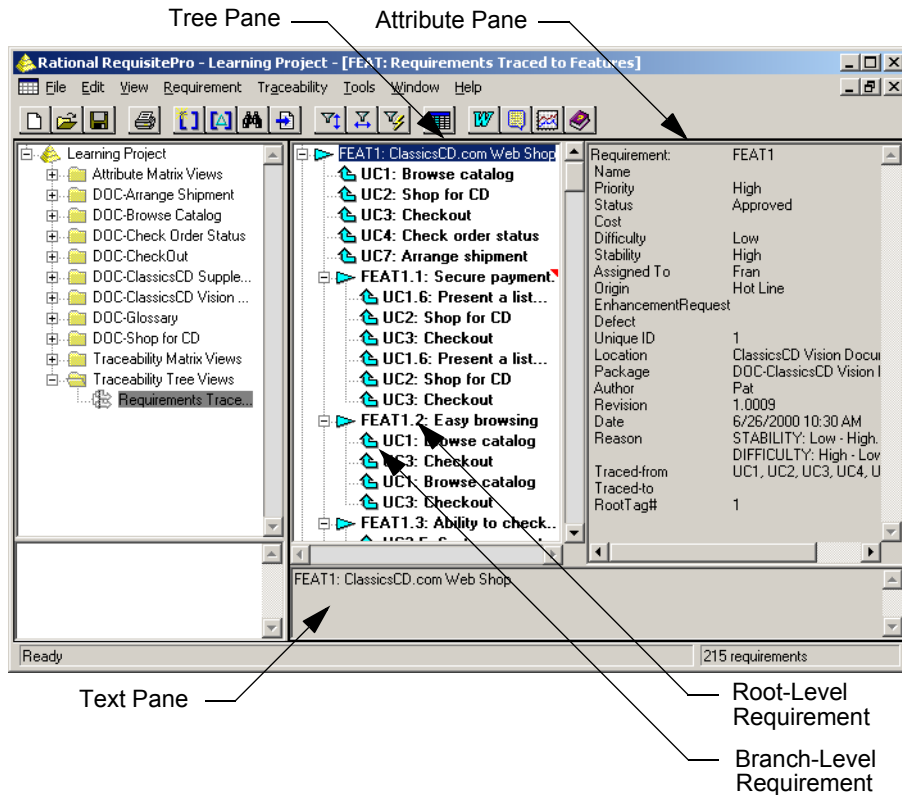
When creating a Traceability Tree, you can choose one that displays all requirements traced to the requirements on which the tree is based or one that shows all requirements traced from the requirements on which the tree is based.

Tree Pane

The left pane of the Traceability Tree displays all the requirements associated with a requirement type. Root requirements appear at the root level (farthest left) of the tree pane and are preceded by an arrow. Child requirements are indented below their parents and are preceded by a triangle. The text pane below the tree provides the name and text of the selected requirement in the tree; the pane on the right side of the view displays requirement attributes of the highlighted requirement.

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 size you want. This does not affect the length of the lines set in the Row/Column Sizing dialog box.

If the arrow leading from a root requirement points toward a branch requirement, the branch requirement is traced from the root requirement. (This appears only in a Traced out of Traceability Tree.)

If the arrow leading from a branch requirement points toward a root requirement, the branch requirement is traced to the root requirement. (This appears only in a Traced into Traceability Tree.)

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

The attribute pane, located on the right side of the Traceability Tree, displays the tag, name, and 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, located in the lower section of the Traceability Tree, displays a requirement's name and text. This field is read-only. To display the full name and 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 size you want. Then click **View > Properties > Save As Default** to save this pane size as the default.

The text pane is blank when a requirement is not selected. When more than one requirement is selected, the text pane displays the message "Multiple requirements selected." Graphics and OLE objects included in requirement text appear as small rectangular symbols. For Word-linked files included in requirement text, the path and time stamp of the linked file are presented.

Working with Views

This section presents the fundamentals of working in a view:

- Creating a view
- Expanding and collapsing a view

- Saving a view

- Opening and closing a view

- Saving a copy of a view

- Renaming a view

- Printing a view

- Deleting a view

Creating a View

1 Select the package in which you want the new view to appear and click **File > New > View**. The View Properties dialog box appears.

2 Do the following:

- In the **Name** box, type the name under which you want the view to be listed in the Explorer. Filling in the **Description** box is optional.

  Note: The Package box contains the name of the package you selected in Step 1. Click the **Browse** button if you want to change that selection.

- Select the **View Type.**

- Select a **Row Requirement Type**. (If you are creating a Traceability Matrix, you must also select a **Column Requirement Type**.) Note that user-defined requirement types are also displayed.

❑ Select the **Private** check box if you want to be the only user who can open the view.

> **Note:** The **View Type**, **Requirement Type**, **Author**, **Date**, and **Time** text boxes are read-only and cannot be modified.

3 Click **OK**. The view opens and appears in the Explorer in the package you selected in Step 1, listed alphabetically by name.

4 Click **File > Save View** to save the view in the project database.

Expanding and Collapsing a View

You can expand and collapse hierarchical relationships in all views and in the Explorer 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 only 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.

You can expand the parent requirement by clicking the plus sign next to the parent requirement, selecting the parent, and clicking SHIFT +, or selecting the parent and clicking **View > Expand**. You can collapse the parent requirement by clicking the minus sign next to the parent requirement, selecting the parent and clicking the minus (-) key, or selecting the parent and clicking **View > Collapse**. Use the **Expand All** command to expand all hierarchical or trace tree relationships in the view; use the **Collapse All** command to collapse all hierarchical or trace tree relationships in the view.

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; it is part of the database. Thus, when you open a saved view, the display shows the current information in a saved view format.

Note: The saved view is not a snapshot of requirement information for a particular date. To save the results of a query, you must print the view. For more information on queries, refer to the chapter *Querying and Searching* on page 57.

If you want to save a view and you have more than one view open, make sure that the view you want to save is active. To make an open view active, click the title bar.

To save a view:

1 Open the view that you want to save.

2 Click **File > Save View** (or the **Save the current view** button).

Opening and Closing a View

When you open a saved view, RequisitePro displays the view according to the specified layout and re-applies the query criteria to the current project database. The display therefore shows the current information in a saved view format.

To open a view, select the view in the Explorer and double-click it; to close a view, click the **X** in the upper right corner of the screen (the one below the top-level **X** in the title bar).

Saving a Copy of a View

If you have already saved a view, you can save another copy of it with a new name. This is useful if you want to change one aspect of the view, such as query criteria, and retain both versions for later use.

1 Open a view.

2 Click **File > Save View As**.

3 In the View Properties dialog box, you can do the following for the new copy of the view:

- ▫ Modify the **Name**. (You must change the name if you are saving the view in the same package as the original view.)

- ▫ Browse to a new **Package**.

- ▫ Select the **Private** check box if you do not want to share the view. (Only the author or a member of the Administrators group can modify shared views.)

- ▫ Modify the **Query**.

4 Click **OK**.

Renaming a View

The name of a view is displayed in the title of the view window and is used as the view name when the view is printed. Renaming the view is useful for printing purposes; you can give a view a longer, descriptive name before you print it, so that the new name appears on the printed page. The new name is saved in the database when you save the view again.

1 In the Explorer, select the view you want to rename and click **File > Properties**.

The View Properties dialog box appears.

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

3 Click **File > Save View** to save the renamed view to the database.

Note: The view is alphabetized in the Explorer by the new name after you click **View > Refresh**.

Printing a View

You can print any active view, and you can choose to print the entire matrix or selected items.

To print an open view:

1 You can print the entire view, or you can print selected requirements or relationships. To print selections, do one of the following:

▫ In an Attribute Matrix, click a requirement.

▫ In a Traceability Matrix, click a cell that contains an arrow. (Both the source and the destination requirements are selected.)

▫ In a Traceability Tree, click the requirements you want to print. (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 and then print.

Note: Use the **Print** button on the toolbar to print directly to the default printer. The entire view is printed using the default printer selections.

You can also export a view to a comma separated value (CSV) file and use another application, such as Excel, to open the file and arrange the data for printing. See *Exporting a View as a CSV File* on page 179 for more information.

You can specify the header and footer information to be printed with the view. In an open view, click **File > Page Setup**. In the Page Setup dialog box, select the information you want to appear, and then click **Print**.

Deleting a View

A personal view can be deleted only 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.

1   In the Explorer, select the view you want to delete.

2   Click **Edit > Delete**.

Customizing Views

You can customize the look and content of every view you create. You can:

▪ Adjust the size of rows and columns.

▪ Filter and sort data according to query criteria, so that only requirements that match the query criteria are displayed.

▪ Select specific view properties to display, such as buttons, requirement name and text, lines, images, root images, and trace to and trace from buttons.

▪ Save a defined view for future use. Saving a view saves its query criteria and layout, but not the requirement data.

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.
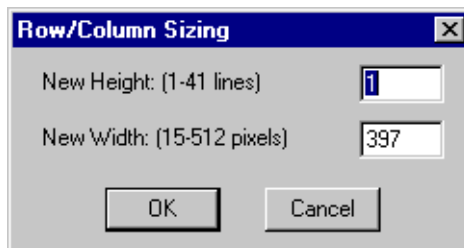
2 Type the number of lines to display for each requirement. The maximum number of lines depends on a monitor's display resolution.

3 Click **OK**. The view is modified according to your specifications.

Shortcut: Click and hold the mouse on any border in the requirement area, and then drag the row up or down to the size you want. 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 Row/Column Sizing dialog box. The maximum screen height is based on your screen's resolution.

- ❑ *Traceability Matrix*: RequisitePro determines the maximum width on the basis of screen resolution.

- ❑ *Traceability Tree*: The column width is represented by the amount of indentation for 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 size you want. The Traceability Tree does not have a shortcut.

Resizing and Arranging Views

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

Creating Cascaded Views

In a cascaded views arrangement, views are stacked on top of each other, each view slightly below and to the right of 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.
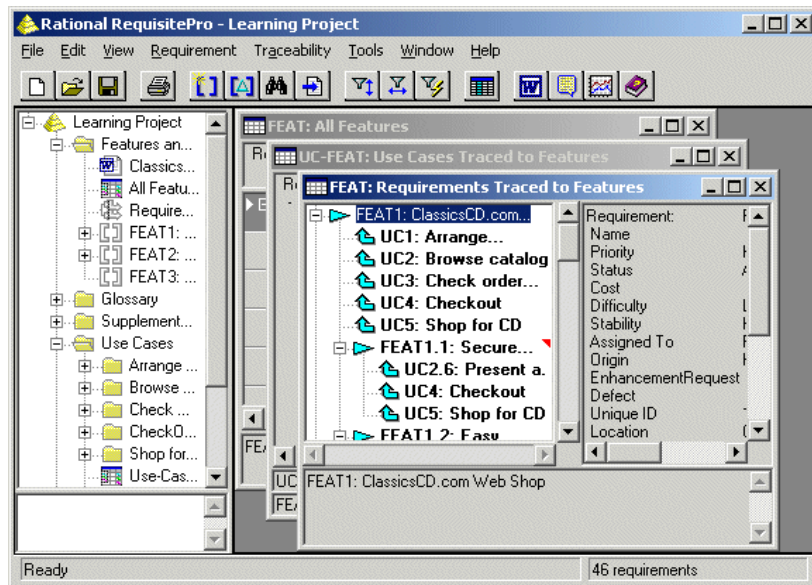
Creating Tiled Views

A tiled view arranges open views next to each other without overlap, and the views are uniform in size. To tile the views, click **Window > Tile**. RequisitePro presents a tiled view, as shown in the following screen shot.
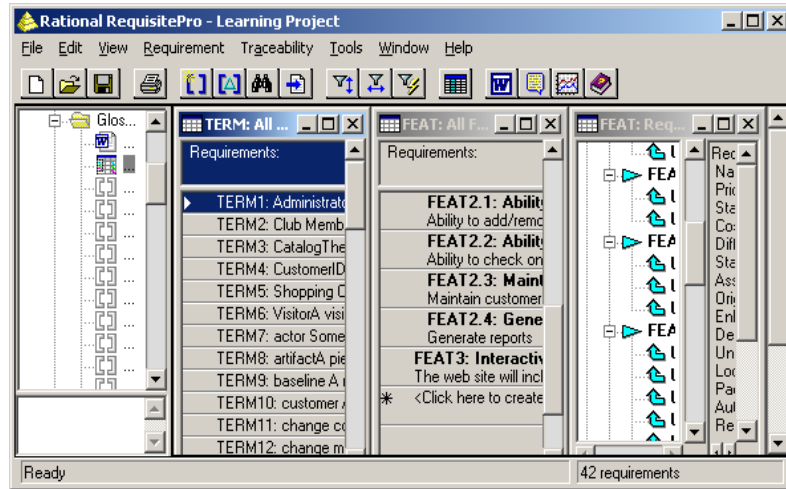
Arranging Icons

Icons for all minimized views can be arranged from left to right, beginning at the bottom left corner of the view. To arrange the minimized views, click **Window > Arrange Icons**.

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.

Click **View > Properties**. Eight menu commands are listed; however, some are not available, depending on the type of view that is active. (For example, the option Show Trace to is not available when an Attribute Matrix is active.) If they are checked off on the menu, they appear in the active view.

- **Save as Default** saves the current view settings as the default settings for a new view.
- **Reset Default** resets the view properties to the saved default settings.

- **Show Name** displays the requirement name. You can define the number of lines displayed using the **View > Row/Column Sizing** command.

- **Show Text** displays the requirement text. You can define the number of lines displayed using the **View > Row/Column Sizing** command.

- **Show Trace To** or **Show Trace From** displays arrows in the direction of either *trace to* or *trace from* relationships, depending on your selection. (These options are not available when an Attribute Matrix is active.)

- **Show Indirect** displays both direct and indirect traceability relationships. (This option is only available when a Traceability Matrix is active.)

- **Show Expand Indicators** displays a + in the cell if the child requirements of a collapsed requirement contains traceability relationships. (This option is only available when a Traceability Matrix is active.)

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.

Querying and Searching

<div style="text-align: right; font-size: large;">5</div>

Creating and Using Queried Views

After 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 Overview

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

You can filter and sort requirements by applying query criteria to the attributes. This criteria limits the values of the attributes and the traceability relationships. You can create an attribute-by-attribute query, so that you can see the results of each query criteria, or you can create a query that filters and sorts several attributes at the same time. When you save a view, you save the query criteria.

You can temporarily sort requirements by attribute value in an Attribute Matrix by right-clicking the attribute label and selecting **Sort Ascending** or **Sort Descending** on the shortcut menu. When you save the view, this sorting is not saved.

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; within priority, you might sort by date and by location. The requirements will be listed by date and in the order in which they appear in the document.

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

Rational RequisitePro does not automatically update queries. You can update a query by clicking **View > Refresh**.

Note: When you query requirements across cross-project traceability relationships, note that queries related to user and document information include data from the open project only. Data from external projects is included in queries on system attributes such as requirement text, revision number, and revision date, but not on user or document information. You must open the external project to query on those criteria.

In an Attribute Matrix, cross-project traceability queries are supported only between projects of the same database type. To query between SQL Server projects, the projects must reside in the same schema.

Working with Queries

You can use a query 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 you query most attributes in a view, 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 can control the query. To ensure that 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**), and 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.

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

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

Creating and Modifying Queries

You can filter requirements in views by limiting the values of one or more attributes or by limiting traceability. You can query row, column, root requirements, and external requirement types.

1 Select a view in the Explorer and click **File > Properties**. The View Properties dialog box appears.

2 Click the **Query** button.

The Query [Row/Column/Root] Requirements dialog box appears. If you have not yet added any query criteria, the Select Attribute dialog box appears.
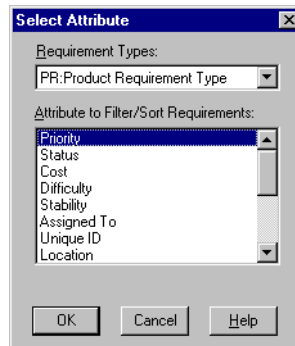
3 Select the attribute value that you want to use to query, and click **OK**.

Only one requirement type is available in the Select Attribute dialog box, unless you are querying with *trace to* or *trace from* attributes and have returned to this dialog box to modify the query.

The Query Requirements dialog box appears. The dialog box displayed depends on whether the attribute is a list-type or an entry-type attribute.

4 For list-type attributes, select one or more attribute values by which you want to filter an attribute; the logical operator OR is assumed for list-type attributes. For entry-type attributes, select an operator (that is, **includes**, **equal to**) and specify 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 Select a **Sort Order** (**None**, **Ascending**, or **Descending)**. If you are querying on the Location attribute, you can select the **Sort by document position** check box to sort the requirements in the view in the same order as in the document that contains them.

6 Type **When Traced** criteria, if applicable. The **When Traced** option is available only 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, and 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.

(The logical operator *and* is assumed between multiple attributes.)

9 Select the **Retain Hierarchical Display** check box to include the parents of filtered child requirements in the view, even though the parent requirements do not match the filter criteria you specified in the query.

(For more information on parent-child requirements, refer to *Working with Hierarchy* on page 143.)

10 Click **OK**.

Note: To run the query again, click **View > Refresh**. (For more information on **Refresh**, refer to *Viewing Current Data* on page 40.)

Creating and Modifying Sort Order for Queries

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 sorted when you query the active view. You can also modify the sort order after you have created a query.

1 Open an Attribute Matrix, Traceability Matrix, or Traceability Tree.

2 Click **View > Query [Row/Column/Root] Requirements**. (The command displayed in the **View** menu depends on the view type you selected in Step 1.)

The Query [Row/Column/Root] Requirements dialog box appears.

3 To move criteria higher in the list, select the criteria and click **Move Up**. The criteria at the top of the list are applied first. To move criteria lower in the list, select the criteria and click **Move Down**. The criteria at the bottom of the list are applies last.

4 Click **OK**.

In an Attribute Matrix, you can temporarily sort requirements by attribute value. Right-click the attribute label and select **Sort Ascending** or **Sort Descending** on the shortcut menu. When you save a view, this sorting is not saved.

Deleting Queries

You can delete a query for a view. Deleting a query does not delete any requirements from your database; it simply removes the ability to filter and sort a view based on the query criteria.

1 Open a view and click **View** > **Query Row Requirements/Query Column Requirements/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**.

Searching for Requirements Artifacts in a Project

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** command launches a search for a requirement in the active view or document.

Navigating to a Requirement Using the Go To Command

You can use the **Go To** command to find a requirement location in a project. Using that command in an open document enables you to jump quickly to a requirement in the document.

Navigating to a Requirement from a View

1 Select a requirement in a view or in the Explorer.

2 Click **Requirement > Go To**.

If the requirement is located in a document, the document containing the requirement opens, with the requirement selected. If the requirement is located in a view, the Requirement Properties dialog box appears, showing the name, text, attribute values, relationships, and discussions for the selected requirement.

Navigating to a Requirement from a Document

1 In an open document, click **RequisitePro > Requirement > Go To**.

The Go To Requirement dialog box appears.
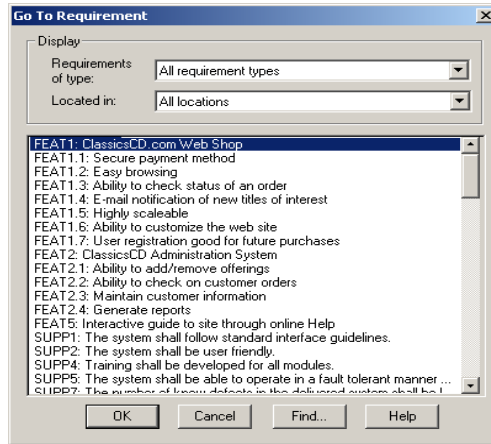
2 Select the requirement type from the **Requirements of Type** list. If you do not know the requirement type, select **All Requirement Types**.

3 Select the location of the requirement from the **Located in** list. Choose **All locations**, **Database only**, or a specific document from the list.

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

4 Select the requirement and click **OK**. RequisitePro performs one of the following operations:

- If the requirement is in a document that is not open, RequisitePro opens the document and selects the requirement.

- If the requirement is in an open document, the document appears in the active window with the requirement selected.

- If the requirement is not located in a document, the Requirement Properties dialog box appears, and you can examine or modify the requirement name, text, attribute values, or traceability relationships.

Using the Find Command to Search a Project

The Find dialog box helps you find an artifact based on requirement name, text, or tag. The dialog box appears when you click **Find** in one of the following locations:

- **Edit > Find**

- **RequisitePro > Requirement > Find**
- Find button
- Go To Requirement dialog box
- Parent Requirement Browser dialog box
- Select Requirements dialog box

The procedure for using the Find dialog box is the same no matter how you open it.
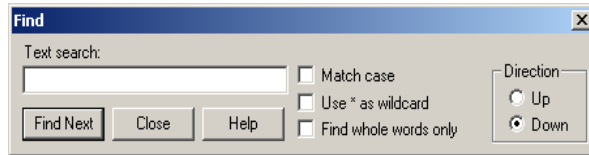
1 In the **Text search** text box, type the text to use to search for the requirement name, text, or tag.

2 Select the **Match case** check box if you want to search only for requirements with an exact capitalization match.
   For example, if you select this check box and enter the text menu, RequisitePro finds requirements containing *menu* but not requirements containing *Menu*.

3 Select the **Use * as wildcard** check box to search for requirements using the wildcard character * (asterisk) to match one or more characters in the search text.
   For example, if you select this check box and enter the text *document*, RequisitePro finds requirements containing *document*, *documents*, *documented*, *undocumented*, and so on.

4 Select the **Find whole words only** check box if you want to search only for a whole word typed in the search text.
   For example, if you select this check box and enter the text menu, RequisitePro finds requirements containing *menu*, but not requirements containing *menus*.
   This check box is not available if more than one word is entered in the text search.

5 Do one of the following:

   ▫ Click **Up** to search from the cursor backward through the document.

   ▫ Click **Down** to search from the cursor forward through the document.

6 Click **Find Next** to search for the next requirement satisfying the search criteria.

   Note: In a view, all children of a parent requirement are searched, regardless of whether or not the children are currently displayed in the view. If RequisitePro finds a child requirement that matches the search criteria but is collapsed, the view is expanded so that the requirement is displayed.

   ▪ 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.

Reviewing a Project with Cross-Project Traceability

Sometimes, when you open a project, RequisitePro connects to an external project and displays requirements from 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 a view.

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 248.)

Results of Cross-Project Traceability

When 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 dialog box displays a list of requirement types for the current project and each externally mapped project.

- The View Properties 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 and Trace-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 cross-project traceability level is displayed. So, if an internal requirement is traced to an external requirement, the external requirement is displayed in the tree. Other requirements to which the external requirement traces 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 179.

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 uses 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.

You can open the documentation for the RequisitePro Extensibility Interface by clicking **Help > Extensibility Interface Reference**.

Requirement Metrics

Requirement Metrics provides RequisitePro project administrators and product analysts with the capability of reporting statistics on requirement names, 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.

Two types of reports are available in Requirement Metrics:

- A **static** report, which uses static filters and shows results about the project at the present time.

- A **trend analysis** report, which 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.

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 those requirements that match your filter criteria.

To access Requirement Metrics, click **Tools > Metrics** or the Metrics button on the toolbar. For more information, refer to *Using Requirement Metrics* on page 208.

Working with Discussions

<div style="text-align: right; font-size: 3em;">6</div>

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 they can 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 users of a Rational RequisitePro project can read discussion items, whether or not they are discussion participants. Participants in discussion groups can create and reply to discussions. Those who have an e-mail address specified in their user information can receive discussion items by e-mail.

When a user opens a project that has unread discussions or responses associated with it, the discussions icon on the toolbar appears highlighted, and the ToolTip on the **Show all discussion** button informs the user. In views, an icon is placed next to requirements that are associated with discussions.

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 to the project in general. When e-mail is enabled, this feature

automatically generates an e-mail copy of any discussion item you enter (a new discussion or a reply) and sends it to all discussion participants with valid e-mail addresses. Otherwise, users are notified through RequisitePro only.

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

- Type an e-mail address in the Project Security dialog box (click **File > Project Administration > Security**). This entry supplies the user information for each user in RequisitePro.

- Configure a notification e-mail service (click **Tools > E-mail Setup**).

- 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.

For information on entering your own e-mail address in Project Security, see the procedure *Modifying Your Password, User Name, or E-mail Address* on page 37. 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 command to configure notification e-mail to other discussion participants in RequisitePro. When you initiate or reply to a discussion item from within the Discussions dialog box, RequisitePro automatically sends copies of the discussion items to the project database and to all participants with valid e-mail addresses in their RequisitePro user information.

Note: This configuration option is not required if your system administrator has configured participation and notification e-mail using the Rational E-mail Reader. The Rational E-mail Reader application allows discussion participants to reply to the discussion items both through their e-mail and from within RequisitePro.

To configure your notification e-mail:

1 Click **Tools > E-mail Setup**.
The E-mail Configuration dialog box appears.

2 Select 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 Select the **E-mail protocol** option that is used on your network (either SMTP/POP3 or MAPI).

  ▫ For SMTP/POP3, type your SMTP server name, your e-mail address (for example, "yourname@yourcompany.com"), and your name as it should appear in discussion group notices.

  ▫ For MAPI, select your **MAPI Profile**.

4 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 through their e-mail or from within RequisitePro. Initial discussion items and replies are automatically stored in the RequisitePro database and sent to discussion participants by e-mail.

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

The Rational E-mail Reader can run only on NT clients or NT servers. To configure e-mail using the Rational E-mail Reader, refer to *Configuring E-mail for Discussions* in the chapter "Rational RequisitePro Installation" in the *Rational RequisitePro Installation Guide.* This configuration is typically performed by a system administrator. Note that this configuration is required for enabling e-mail for use with RequisiteWeb.

Be sure to use the SMTP mail protocol when configuring the Rational E-mail Reader with RequisitePro. MAPI is not supported.

Creating Discussions

You can create a discussion at any time.

1 Do one of the following:

- Click **Tools > Discussions** (or the **Show all discussions** button).

- In the Explorer or in a view, select one or more requirements and click **Requirement > Discussion**.

- Select a requirement in a document and click **RequisitePro > Requirement > Discussions**.

The Discussions dialog box appears.
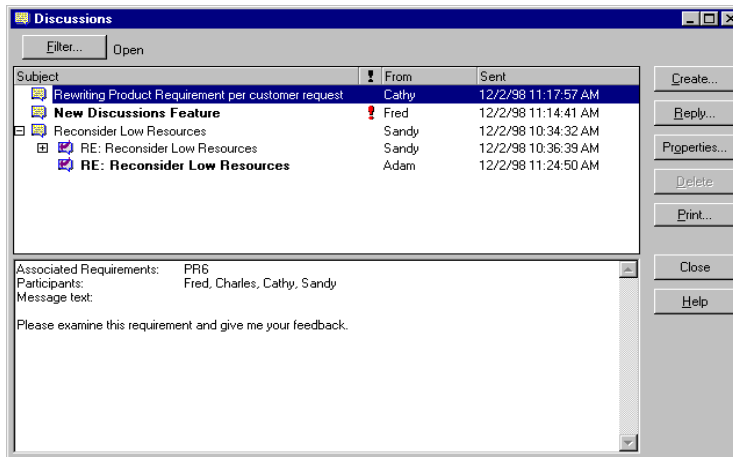
2 Click **Create**. The Discussion Properties dialog box appears.
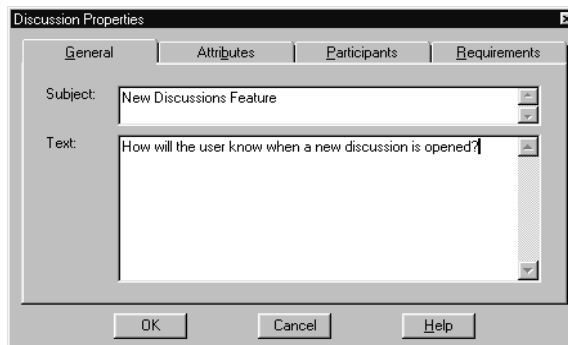
3 Click the **General** tab, and type a subject (required) and text. The subject should be brief, but descriptive enough to inform other users of the discussion's contents. The text you type in the **Text** box becomes the first item in the discussion. Open the discussion by raising an issue, making a comment, or asking a question.

4 Click the **Participants** tab. Add users and groups. (See *Creating and Modifying Discussion Participants Information* on page 82.)
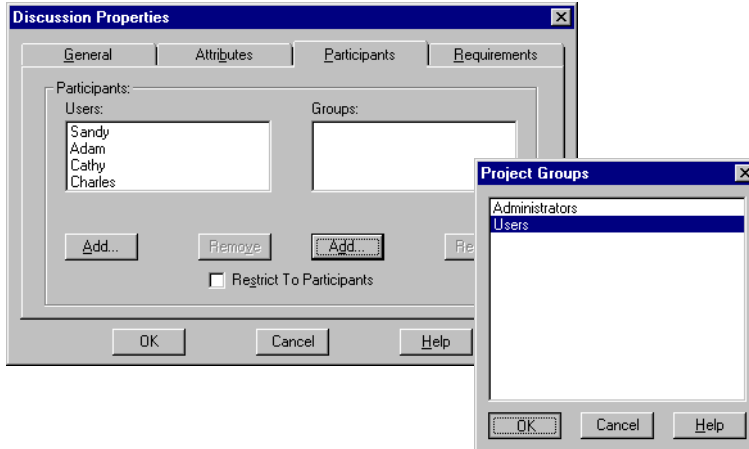
5 Click the **Requirements** tab and add requirements. (See *Creating and Modifying a Discussion's Requirement Information* on page 84.)
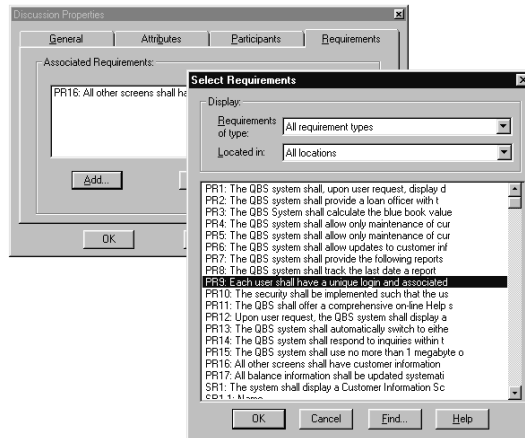
Note: If you have filtered or displayed only discussions associated with specific requirements, those requirements are automatically listed on the **Requirements** tab. (See *Displaying, Filtering, and Sorting Discussions* on page 78.)

6 Click **OK** to close the Select Requirements dialog box, and click **OK** to close the Discussion Properties dialog box.

7 Click **Close** to close the Discussions dialog box.
If e-mail is configured for discussions, 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 toolbar also notifies users that there is a new discussion associated with that project and its requirements. The highlighted icon appears for all users who open the project (whether or not they are participants of the discussion).

As with e-mail, discussion messages cannot be modified after they have been sent. This restriction prevents conflicts when the original text is included in a discussion reply. If you want to add an explanation regarding your initial message, you can do so by creating a reply to the discussion.

If you try to create a discussion when you have a requirement with a pending tag number selected in an open document, a message appears, informing you that you cannot associate discussions with pending requirements. Save the requirements document and try again.

Viewing and Modifying Discussion Properties

To view discussion properties:

1 Click **Tools > Discussion** (or the **Show all 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.

Each of the tabs in the Discussion Properties dialog box allows you to perform different tasks:

- Use the **General** tab to view the discussion subject and text or to type a 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 to restrict the discussion to participants or make it available to others.

- 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, all the discussion's participants are automatically notified about the discussion, provided that you did the following in the Discussion Properties dialog box:

- You typed a subject and topic text in the **General** tab.

- You specified participants in the **Participants** tab.

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 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 a highlighted discussions button on the toolbar, and the Tooltip on the button indicates that new discussions or responses are associated with that project 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. Unread discussion items are shown as bold text. Items you have read are shown as regular text.

1 Click **Tools > Discussions** (or the **Show all discussions** button).

The Discussions dialog box appears.

2 In the discussions list, click a discussion.

An expand indicator is displayed to the left of discussions with responses.

3 Click an item to read it. The item's text is displayed 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 Click **Close** to close the Discussions dialog box.

Note: 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.

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 in RequisitePro using the Discussions dialog box:

1 Click **Tools > Discussions** (or the **Show all discussions** button).

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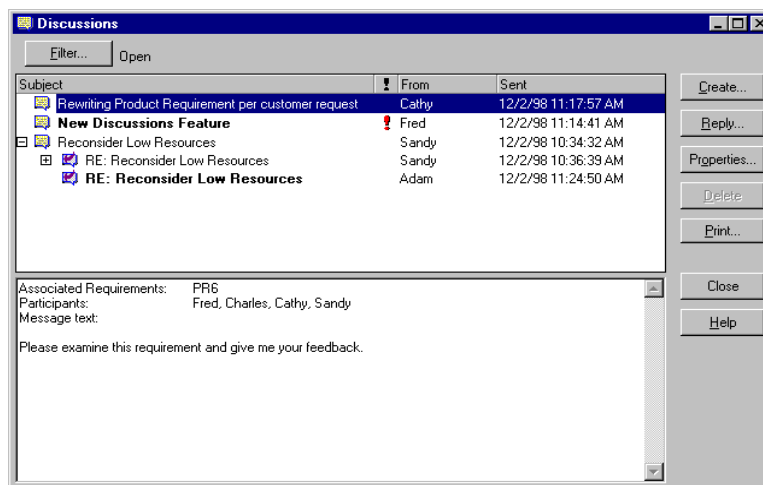
2 In the discussions list, click a discussion or response to a discussion.
The discussion text appears in the lower portion of the Discussions dialog box.

3 Click **Reply**.

The Discussion Response dialog box appears.
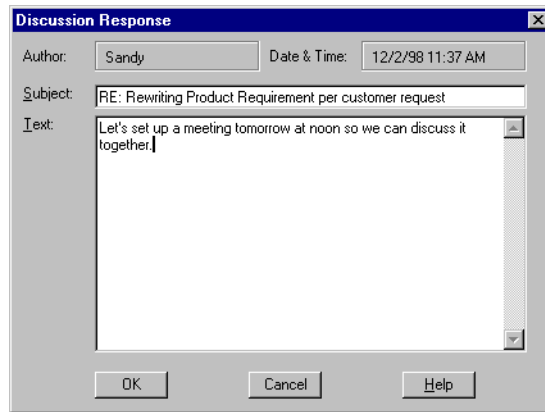
The default subject is "RE: [previous discussion item's subject]." You can change the subject.

4 Type 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 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 disabled, you can reply to all recipients; however, your
    message is not stored in the RequisitePro discussion. You can add recipients in
    either case.

4   Use the default subject provided. Do not modify the subject.

5   Type your response. Do not type below the line "Text below this line is not
    included in the discussion response," and 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.

    Attachments are not supported in discussions, and they are not 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.

    Discussion replies cannot be modified after they have been sent. This prevents
    conflicts when the reply text is included in another reply. To add an explanation
    regarding your message, you can create 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 in the Explorer, a view, or a document.

2 Open the Discussions dialog box. In the Explorer or an open view, do one of the following:

- ▫ Click **Requirement > Discussions**.

- ▫ Click **Tools > Discussion**.

- ▫ Click the **Discussions** icon to the right of the requirement.

  In an open document, click **RequisitePro > Requirement > Discussions**.

  The Discussions dialog box appears, showing only those discussions associated with the specified requirement.

  To display all discussions, do the following:

- ▫ Click **Filter**, clear the **Requirement** check box, and then click **OK.**

- ▫ Close the dialog box, and click **Tools > Discussions**.

Filtering Discussions

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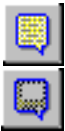
To filter discussions, do the following:

1 Click **Tools > Discussions** (or the **Show all discussions** button).

The Discussions dialog box appears, showing all open discussions.
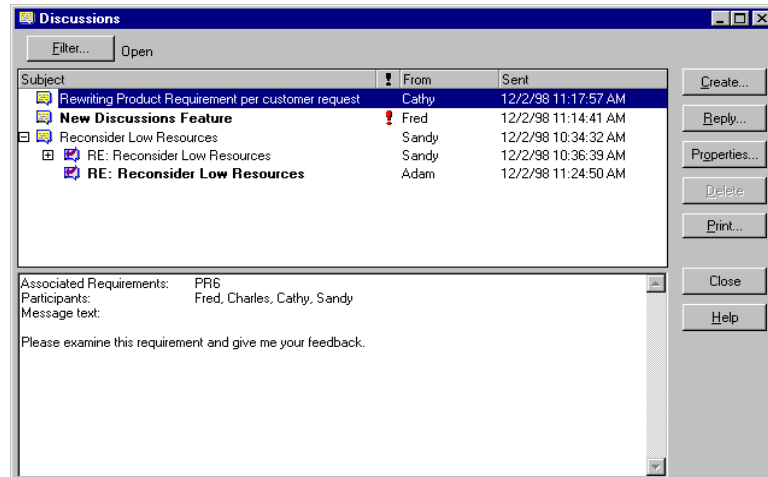
2   Click **Filter**. The Discussion Filter dialog box appears.
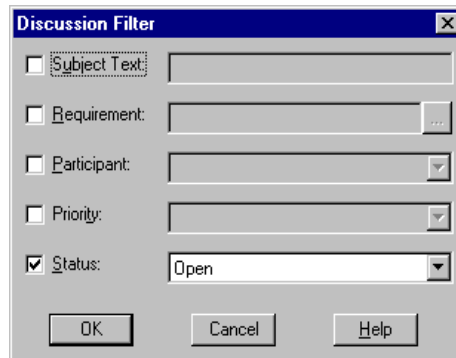
3   To display discussions containing specific text in their subjects, select the **Subject Text** check box, and then type the text.

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 type the text **%document%,** RequisitePro finds discussions containing *document*, *documents*, *documented*, *undocumented,* and so on.

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

You can also click the **adjacent ...** button to open the Select Requirements dialog box and 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 user name in the list.

You can select the name of a user who is a member of a group. RequisitePro finds 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   To display read or unread discussions, select the **Read Status** check box, and then select **Read** or **Unread** in the list.

9 Filter by more than one option by repeating any of Steps 3–7 above, and then 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 Click **Tools > Discussions** (or the **Show all 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 Click **Tools > Discussions** (or the **Show all 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.

4 From the Windows Print dialog box, select the options you want and print.

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 only by the discussion author and project administrators.

To modify discussion attributes:

1 Click **Tools > Discussions** (or the **Show all discussions** button).
The Discussions dialog box appears.

2 Select a discussion, and then click **Properties**.
You can also click **Create** to create a new discussion.

3 Click the **Attributes** tab.

4 Select a **Priority** from the drop-down list box.

   Note: You can change a discussion's priority only if the discussion is open.

5 If you are modifying a discussion, change the **Status** to **Open** or **Closed**. (You cannot change the status of a new discussion.)

   After modifying the priority or status, the discussion still appears in the Discussion list, even if it does not match the filter criteria of the display. To refresh the Discussions list after changing the priority or status, press the F5 special function key.

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 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:

▪ You can add yourself to the Users list if the **Restrict To Participants** check box is cleared.

▪ You can always remove yourself from the **Users** list.

If you are a member of a group that participates in the discussion, you cannot remove yourself from discussion participation. 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 Click **Tools > Discussions** (or the **Show all 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.
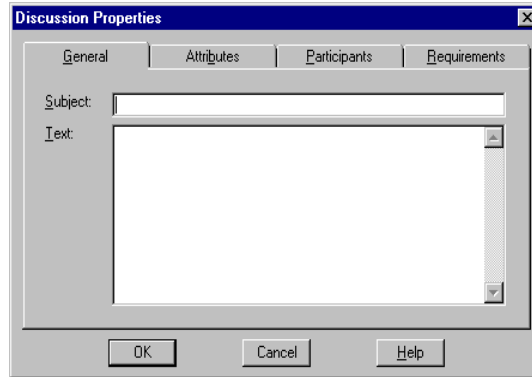
3 Click the **Participants** tab.

4 To add a user, click **Add** below the Users list. The Project Users dialog box appears.
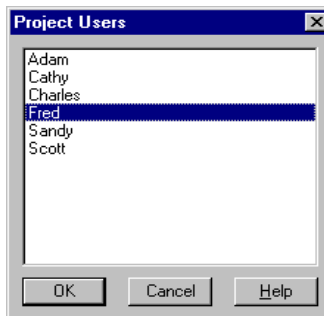
5 Select a user from the list, and then click **OK**. (Use a multiple select action to select
   more than one user.) For a new discussion, the discussion author is automatically
   included as a participant.

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

7 Select a group from the list, and then click **OK**. (Use a multiple select action to select more than one group.) 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 name of the individual user to the **Users** list.

8 To remove users, click the user names in the Users list, and then click **Remove** below the Users list. To remove groups, click the group names in the Groups list, and then click **Remove** below the **Groups** list.

9 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.

10 Click **OK** to close the dialog box.

Creating and Modifying a Discussion's Requirement Information

You can use the Discussion Properties dialog box, **Requirements** tab to associate specific requirements with a discussion. Note that a discussion does not need to address any requirement specifically. However, if you want to address a specific requirement, you should use this tab to associated it with the discussion.

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 Click **Tools > Discussions** (or the **Show all 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 associate a requirement with the selected discussion, click **Add**.

The Select Requirements dialog box appears.
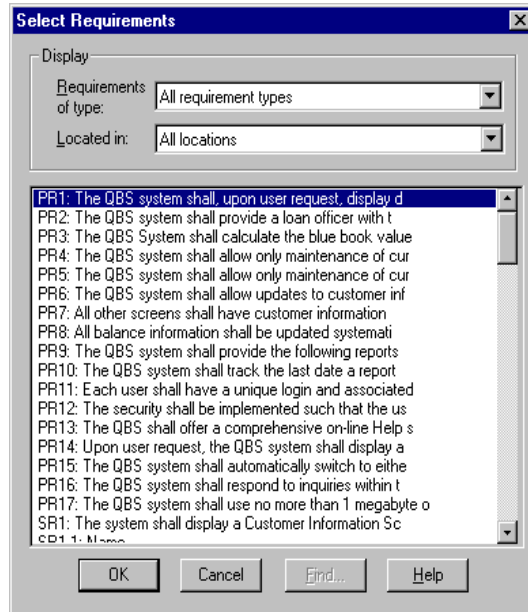
5   Select a requirement type from the **Requirements of type** list, select a location from the **Located in** list, and select a requirement from the list. (Use a multiple select action to select multiple requirements.) To locate a specific requirement, click **Find**. You can use the Find dialog box to locate a specific tag number and requirement name and text.

Note: Requirements with pending tag numbers do not appear in this list because pending requirements cannot be associated with discussions.

6   When you have finished selecting requirements, click **OK**.

The Discussion Properties dialog box reappears with the specified requirement shown in the **Associated Requirements** list.
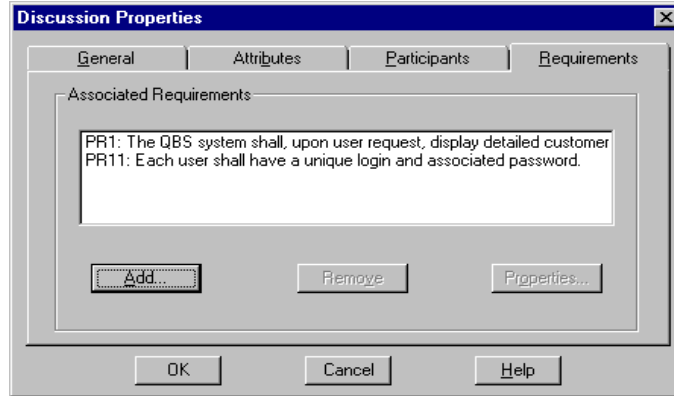
Note: You can remove a requirement by selecting it in the **Associated Requirements** list, and then clicking **Remove**.

7   To display a requirement's properties, click **Properties**.

The Requirement Properties dialog box appears, showing the selected requirement's properties.

8   Click **OK** to close each dialog box.

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 dialog box:

- ▫   In an open document, select the requirement and click **RequisitePro > Requirement > Properties.**

- ▫   Select the requirement in the Explorer or a view and 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**.

If the requirement has not been saved in the database, the **Create**, **View**, and **Properties** buttons are not available. To create a new discussion associated with the requirement, read a discussion item, or view the properties for a selected discussion, save the document containing the requirement, and then open the dialog box again.

Closing and Deleting Discussions

If you are the discussion author or a RequisitePro administrator, you can close a discussion that 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. (However, you may find it helpful to retain closed discussions for the record they provide.)

1 Click **Tools > Discussions** (or click the **Show all 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 On the **Attributes** tab, select **Closed** from the **Status** drop-down list box.

5 Click **OK**. The Discussions dialog box reappears, and the discussion you closed has an **X** next to the author column.

Discussion authors and project administrators can delete closed discussions.

1 Click **Tools > Discussions** (or click the **Show all discussions** button). The Discussions dialog box appears.

2 In the discussions list, click a closed discussion. (Closed discussions have an **X** next to the **From** column.) Then click **Delete**.

3 At the prompt asking you to confirm the deletion, click **Yes**.

Working with Documents

7

A Rational RequisitePro requirements document is a Microsoft Word file created in RequisitePro and integrated with the project database. Requirements created outside of a document can be imported or copied into the 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. Also stored in the project database are the document requirements, their attribute values, and their traceability relationships.

Creating a RequisitePro Document

To create a document:

1 In the Explorer, select the package in which you want to store the new document.

2 Click **File > New > Document.**
The Document Properties dialog box appears.
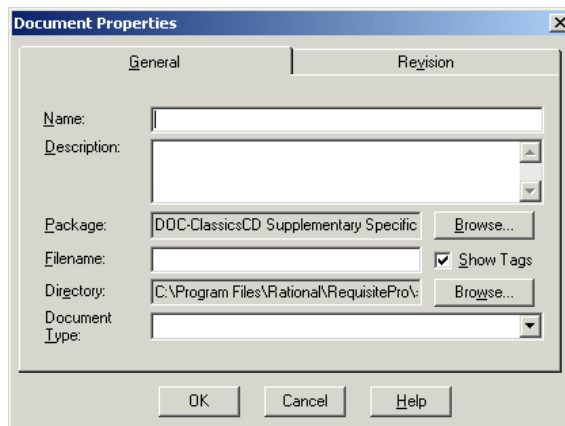
3 In the **General** tab, type the name of the document in the **Name** box (no longer than 64 characters) and a brief description (no longer than 255 characters) of the document's purpose or contents in the **Description** field.

4 The **Package** box displays where the document resides (the package name you selected in Step 1). Click the adjacent **Browse** button to open the Package Browser dialog box and select a different package in which to place the document.

5 In the **Filename** box, type, modify, or view the name of the document. The file name defaults to the name you typed in the **Name** box. The file name is limited to eight characters unless your operating system supports long file names; if it does, you can use up to 64 characters. (See "RequisitePro file names" in online **Help**.) Do not give the document an extension; RequisitePro assigns an extension according to the Document Type selected.

6 Select 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 selected by default in both the **View** tab and the **Print** tab in the Microsoft Word **Tools > Options** dialog box.

7 Type a location for the file in the **Directory** field, or click **Browse** to select a directory.

By default, RequisitePro places a document in the project directory, but documents can be saved anywhere on your system. You can type the name of a directory in this text box. If you are working in a networked environment with shared drives, type a Universal Naming Convention name for identifying a shared directory on a server, such as "\\Servername\Sharename." This happens by default if you type a location with a drive letter.

8 Select a **Document Type** to assign to the new document. If an outline is associated with the document type, RequisitePro uses the outline to format the new document. After the document has been saved, you cannot change its document type.

9 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 RequisitePro Document

When you save a document, RequisitePro saves to the project database all document modifications, such as the document's name, revision number, label, and change description. RequisitePro automatically creates backup files for each document file in the document directory and updates them when you save the document. In addition,

RequisitePro commits all new and modified requirements in the document to the database, and it deletes from the database all requirements that you deleted from the document. Requirements with pending tag numbers are assigned requirement tags.

You save the active requirements document by clicking **RequisitePro > Document > Save**. If you use Microsoft Word's **File > Save** command, the document is saved, but the document and requirements information is not updated in the RequisitePro database.

By default, a document is stored in the project directory. However, you can choose to store a document in any location.

To save a requirements document in a RequisitePro project:

1 Click either the **Save the current document** button or **RequisitePro > Document > Save**.

   If you modified a requirement in the document, the Change Description dialog box appears and prompts you to type a reason for the change.
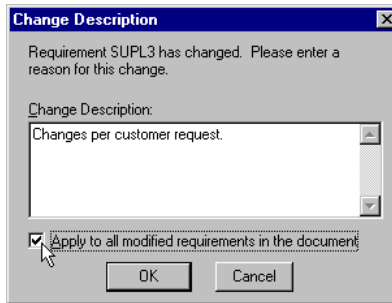
2 Type an explanation of the modifications in the **Change Description** field.

3 If the change description applies to all requirements that were changed in the document, select the **Apply to all modified requirements in the document** check box.

Note: If the document contains requirements that include Microsoft Word-linked files, you may receive a message stating that the location of linked files cannot be resolved. Your machine may be disconnected from the network, your machine may not have the specified drive mapped, the removable drive may be empty, or you may not have permissions to read the specified drive. You can still save the changes you made to the requirements or to the document, but the links to the external documents are not updated. Click **OK**.

4 Click **OK** to save the document and its requirements. (Click **Cancel** to end the entire process.)

If you want to save a document without the standard bookmarks and style RequisitePro adds to requirements, you may turn off the options. To save a document without bookmarks, use the Microsoft Word **Tools > Options** command; on the **View** tab, clear the **Bookmarks** check box. If you want to save a document without requirement tags, use the Microsoft **Tools > Options** command; on the **Print** tab, clear the **Hidden Text** check box. If you have exclusive access to the project and you want to save a document without the colored text, you can edit the requirement style in the RequisitePro Project Properties dialog box.

Opening a Document

You can open a document in one of the following ways:

- Double-click the document in the Explorer; the document appears in Microsoft Word.

- Click **Window > Show Word**. In Word, click **RequisitePro > Document > Open**.

The Open Document dialog box appears.
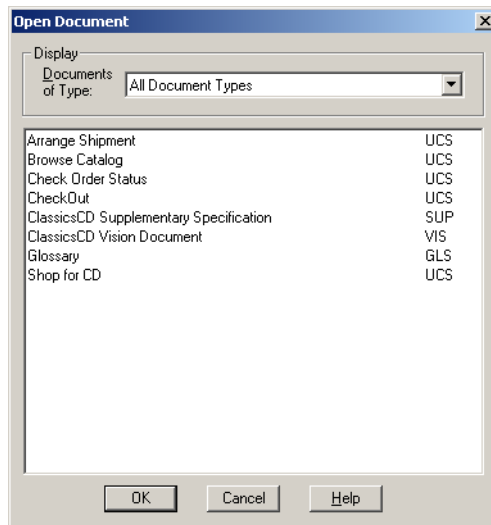
The Open Document dialog box displays the documents that are associated with the open project. This list includes all documents you have either created in the project or imported into the project, regardless of whether the documents contain requirements. You can view a list of all the documents, or you can select a type of document to display. The documents of the selected type appear in the list below the **Documents of Type** list.

      ▫ Select one or more documents to open and click **OK**.
        The document opens in the Microsoft Word window. Do not press the ESC key while the document is opening.

Note: For more information on options for controlling access by other users when the project and documents are open, refer to *Setting Security* on page 196. If you want to view the document but not make any modifications, select the document in the Explorer, right-click, and select **Open Read Only**.

Closing and Saving a RequisitePro Document

To close a project document:

1 Click **RequisitePro > Document > Close**.
If modifications were made to the document that were not saved, the Document Changed dialog box appears.
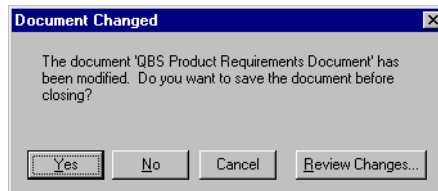
2 Do one of the following:

    ▫ 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 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 in the preceding procedure 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.

The Document Changes dialog box lists all modifications to the document.

2 Review the changes and click **OK** to save them.

Deleting Documents From a Project

The **Delete** command removes the requirements and the document itself from the project database. It saves the document without requirements formatting as a Word document in the project directory. To use this command, you must have exclusive access to the project.

To add the document back to a project, import it into an open requirements document and re-create the requirements.

1 Select the document in the Explorer and click **Edit > Delete**.

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

Note: Before you delete a document, be aware that some of the requirements in the document may have been assigned to other packages. If you delete the document, all those requirements will be deleted. We recommend that you create an Attribute Matrix view for the requirement type of the requirements in that document. Check the Location attribute to determine the document where those requirements are located and check the Package attribute to determine whether they are associated with other packages.

2 Click **Yes**.

RequisitePro makes the following changes:

▫ The requirements formatting is removed from the document.

▫ The requirements are removed from the project database.

▫ All text remains in the document.

▫ The document is closed in RequisitePro.

▫ You can open the document in Microsoft Word, or open it in RequisitePro as a Word document, but you can no longer open it in RequisitePro as a requirements document.

Changing the Location of a RequisitePro 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 Do one of the following:

- ▫ In the Explorer, select the document and click **File > Properties**.

- ▫ In the open document, click **RequisitePro > Document > Properties**.

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

2 Click **Browse** to change the location of the file. The Browse for Folder dialog box appears.
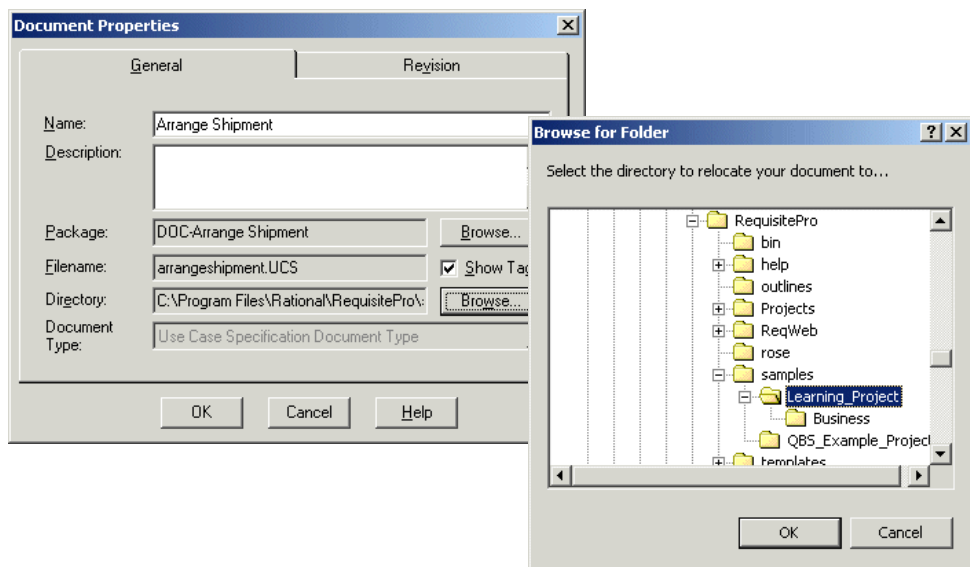
3 Select a new location for the document. Click a folder to open it.

4 Click **OK** to close each dialog box.

Modifying Document Information

You can use the Document Properties dialog box to modify document information provided that the document is open and that it is not in read-only form.

1   Open the Document Properties dialog box in one of the following ways:

   □   In the Explorer, select the document and click **File > Properties**.

   □   In an open document, click **RequisitePro > 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, but you can create a new document and move the text and requirements from the existing document to the new one using the Microsoft Word cut and paste command. The **Package** text box displays the package where the document resides. You can browse to open the Package Browser dialog box and select a different package.

   □   On the **Revision** tab, you have the option of typing a label to associate with the revision number (up to 20 characters) and a change description (up to 2,048 characters). These options are available only if the document is new (and you have added information on the **General** tab) or if you have made changes to the document that have not been saved. You can click the **History** button to display a description of the history of document changes.

3   Click **OK** to close the Document Properties dialog box.

4   Click **RequisitePro > Document > Save** to save your changes to the document.

Moving Text and Requirements to a New Document

If a requirements document becomes corrupted, you can use the Microsoft Word cut and paste commands to move all the contents of the document (including its requirements) to another document. This is also helpful when you want to move the contents of an entire document to a new document with a new file name.

Note: To move individual requirements from one document to another, use the cut and paste commands on the RequisitePro **Requirements** menu rather than the Microsoft Word **Edit** menu.

To move all text and requirements:

1   Open an existing RequisitePro document.

2   Create a new document by doing one of the following:

    ▫   Click **File > New > Document**.

    ▫   In Word, click **RequisitePro > Document > New**.

3   Type a name and file name for the new document, select a document type, and then click **OK**.

4   In Word, do the following:

    ▫   Click **Window** and click the existing file name.

    ▫   Click **Edit > Select All**.

    ▫   Click **Edit > Cut**.

    ▫   Click the **Window** menu, and then click the file name of the new document.

    ▫   Click **Edit > Paste**.

5   Click **RequisitePro > Document > Save**.

    A dialog box appears and asks you how to handle each requirement that you have pasted into the new document.

6   Accept the default option **Change the location of this requirement** and click **OK**.

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 **Track Changes** and **Protect Document** commands on the Microsoft Word **Tools** menu to track changes. To avoid Microsoft Word errors, use RequisitePro's offline authoring feature to edit a document in Word outside of RequisitePro. To make a copy of a requirements document, use the **RequisitePro > Document > Save As** command. (For more information on avoiding Word errors in RequisitePro, refer to the section that follows and to *Working with Documents Offline* on page 104.)

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   Open the RequisitePro document.

2   Click **RequisitePro > Document > Save As**.

    The Document Save As dialog box appears.

3   Specify a destination for the new copy of the document.

4   Accept the default name in the **File name** field, or type a file name. Do not change the .doc extension.

5   Click **Save**. RequisitePro closes the original RequisitePro document and opens the new .doc file in Word.

Note: Microsoft Word turns off the bookmarks and hidden text features by default, so you do not see the requirement tags or bookmarks around requirements when a document is viewed outside RequisitePro. Before editing the requirement text in a Word document outside of RequisitePro, we recommend marking **Bookmarks** and **Hidden text** options for display. In Microsoft Word, click **Tools > Options** and click the **View** tab.

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 unavailable in order to prevent conflicts in handling RequisitePro documents.)

RequisitePro documents are associated with projects, managed from the **RequisitePro > Document** menu, and saved in RequisitePro format by default.

Closing Microsoft Word

To close Word without closing RequisitePro, click the **Window** menu on the RequisitePro toolbar and select **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, you may delete the requirement from the project. In addition, if you cut a requirement from a document using the **Cut** command in Word, you cannot paste it into the project database.

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

Do not use the **Tools > Merge Documents** command on RequisitePro documents.

Do not create requirements from text that contains the Wingdings font or other special characters at the beginning of the text string.

Use with Caution

You can use Word's **automatic paragraph numbering** (the **Format > Bullets and Numbering** command) within requirement text in a requirements document, but be aware that 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 a cluttered revision history list. Changes in autonumbering can also affect 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 a document in RequisitePro.

Incorrect use of the Word's **Track Changes** feature can cause performance problems and database corruption. Bookmarks may truncate requirement text; requirement tags may not appear as hidden text; and requirement numbering may be altered. These changes may be copied into the database, resulting in loss of data or a manual repair of all requirements. When you use this feature, be sure to follow the instructions outlined in the section *Using Word's Track Changes Feature* on page 102.

Improving Word Performance

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

- **Create small RequisitePro documents.** Large documents can take significant time to open, close, and manipulate; documents less than 5 MB or about 50 pages are optimal. (Documents that have graphics or other resource-intensive objects should be shorter than 50 pages.)

- **View documents in Normal mode.** Documents in Page Layout mode are constantly being repaginated.

- **Open documents selectively.** Having many Word documents open at once decreases performance.

- **Store each document on a server that is local to the document's primary author**. When working in a RequisitePro project across multiple sites, authors can improve Word performance when opening, saving, and closing RequisitePro documents by storing the documents on a server that is local to the document's primary author. For more information on relocating documents, see "Creating and modifying general document information" in online **Help**.

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.

Formatting a Document Using Word

If you want to change the presentation style of one or more aspects of the document you are working on but not change other documents of the same type, you can use the formatting commands in Word. RequisitePro uses formatting features in Word to highlight your requirements within a document. If you apply different formatting to a requirement, either by directly formatting the requirement or by changing the template style on which it is based, your requirement text may be modified or entirely lost. You can correct this problem by using the **Refresh Requirements** command.

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 214.)

- 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 Select the project in the Explorer and click **File > Properties**.

2 On the **Documents** tab of the Project Properties dialog box, clear the check box **Save documents in RequisitePro format**.

   Note: This removes all project security from these requirements documents and they can be modified outside RequisitePro, so clear this check box only 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.

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 RequisitePro 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.

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 you edit a RequisitePro document offline or a RequisitePro document saved as a Microsoft Word document, Microsoft Word turns off the bookmarks and hidden text features by default. Before you edit the requirement text in an offline document, we recommend that you select the **Bookmarks** and **Hidden text** options to be displayed. In Microsoft Word, click **Tools > Options** and click the **View** tab.

For information about setting color and style for requirements, refer to *Creating and Modifying Requirement Types* on page 240.

Using Word's Track Changes Feature

You can use the Track Changes feature in Word to edit requirement text. To avoid tracking changes without knowing it, make sure to select both the **Highlight changes on screen** and **Track changes while editing** options in the Word Highlight Changes dialog box (**Tools > Track Changes > Highlight Changes**).

To review edited requirements in a view, click **View > Properties**. Be sure that the **Show Name** option is selected and that the **Show Text** option is not. When you select these options, the view you open will display requirements by name only; the requirement text will not be displayed. This is useful when you use the Track Changes feature, because unlike Word documents, views do not distinguish between text that has been added and text that has been marked for deletion. This can make the requirement text confusing to read in a view.

Be aware that use of the Track Changes feature with RequisitePro documents can cause performance problems and Word errors (such as requirement text errors and database corruption). We strongly recommend that it be used only as follows:

- Use Track Changes only when you are confident that your document is near completion. This is important because use of the Track Changes feature to edit a Word document increases the size of the document, which affects Word performance. Take the document offline for review purposes, use the Track Changes feature, incorporate edits into the offline document, and then bring it back online.

- Do not select the **Hidden** option for **Deleted text** in the Track Changes dialog box.

- Do not use the **Tools > Merge Documents** option with RequisitePro documents.

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. (Refer to the section *Working with Documents Offline* on page 104.)

Creating a Word Document from a RequisitePro Requirements Document

Use the **RequisitePro > 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 Microsoft Word. These commands do not create, open, or save RequisitePro document or requirement information in the database, nor do they convert nonrequirement documents to requirements documents. However, you can cut or copy portions of a Word document and paste them into a requirements document.

Displaying the RequisitePro Toolbar in Word

When you open a RequisitePro document, Word includes a RequisitePro toolbar. It can be floating or docked to the Word window. If the toolbar is hidden, you can display it by doing the following in Microsoft Word: Click **Tools > Customize**, and select the **Toolbars** tab. Select the **Rational RequisitePro** check box and click **Close.**

Unavailable Word Commands

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

The **Tools > Templates and Add-Ins** command is unavailable to prevent deletion of the RequisitePro template, which is required for proper functioning of RequisitePro.

Working with Documents Offline

Offline authoring allows requirements authors and project administrators to use a document outside of RequisitePro (that is, 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 > New** and **Delete** menu commands in offline authoring. Word 2000 defaults to the highest level for macro security. This setting prevents the availability 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 so that the offline document is recognized 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. When you do, 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 an open document, click **RequisitePro > Document > Offline Documents**.

  □   Click **Tools > Offline Documents**.

The Offline Documents dialog box appears.
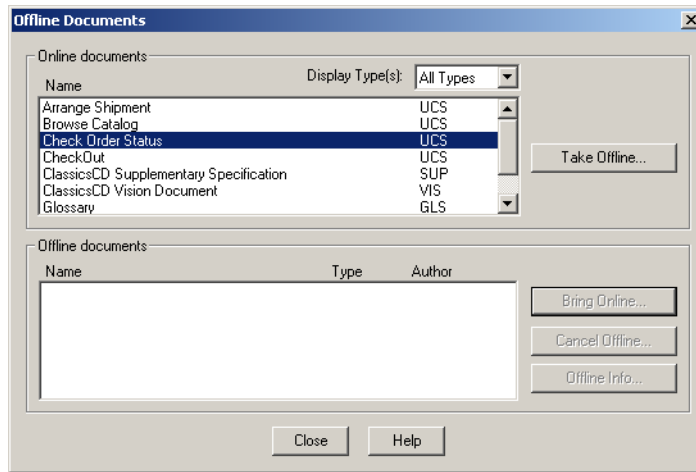
2 Select a document type from the **Display Type(s)** list.

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.
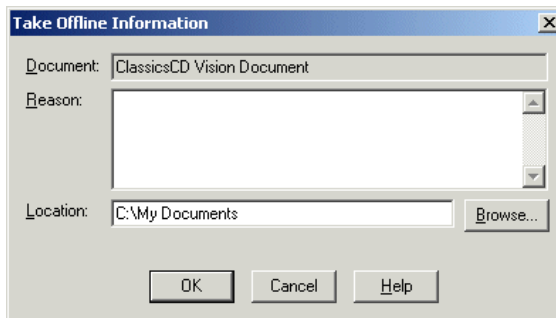
5 In the **Reason** text box, type a reason for taking the document offline.

6 In the **Location** text box, type the directory path where you want to store the document, or click **Browse** to locate the directory.

7 If you are taking multiple documents offline, the Take Offline Information dialog box includes the check box **Apply to All.** Select the check box to apply the Reason and Location entries to all the documents. Clear this check box to address each document individually.

8 Click **OK**.

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.

Determining Whether a Document Is Offline

To check whether a document is offline:

1 Do one of the following:

- ▫ Click **Tools > Offline Documents**.

- ▫ In an open document, click **RequisitePro > Document > Offline Documents**.

The Offline Documents dialog box appears.
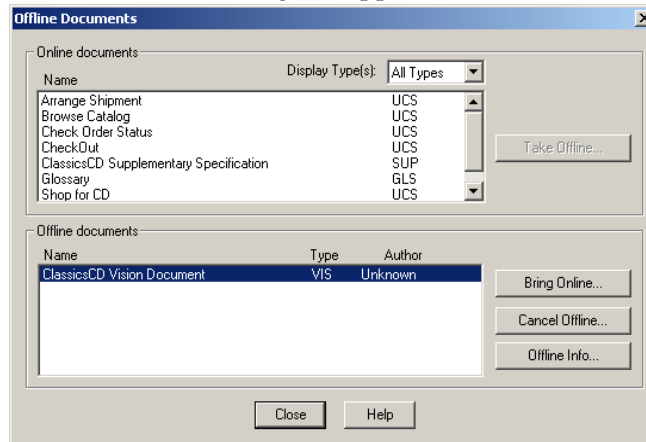
2 If the document you want is listed in the **Offline documents** list, select it and click **Offline Info**.

The Offline Information dialog box appears, displaying the document name, the user who took the document offline, the offline date and time, location, and reason for taking the document offline. All the fields in the dialog box are read-only.

Modifying Offline Documents

You can modify an offline document in the same manner as you would any other Microsoft Word document. All Word features and options are available when you edit 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, you are prompted to provide a reason for the changes you made to the requirement text.

Microsoft Word turns off the bookmarks and hidden text features by default. Before you edit the requirement text in an offline document, we recommend that you mark the hidden text and bookmarks for display. Click **Tools > Options** in Microsoft Word to open the Options dialog box, and select the **Hidden text** and **Bookmarks** check boxes on the **View** tab.

Do not rename documents while they are offline. RequisitePro requires the original file name in order to recognize offline documents.

Creating Requirements in Offline Documents

Mark text in an offline document as a requirement in the same way you would if the document were online.

1   Select the information to define the requirement.

2   Click **RequisitePro > Requirement > New**.

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.

Deleting Requirements in Offline Documents

You can delete a requirement in an offline document in the same way you would if the document were online. When you use the **Delete-Unmark** command, RequisitePro retains the requirement text in the document, but the text is no longer recognized as a requirement. RequisitePro removes the requirement color and style settings and replaces them with the document default style. In an offline document, you can delete only one requirement at a time.

The use of the **Delete-Unmark** command in an offline document depends on a Microsoft Word macro. For more information on enabling the offline macros, see online Help.

To delete-unmark a requirement in an offline document:

1 In the offline document, click anywhere in a requirement.

2 Click **RequisitePro > Requirement > Delete-Unmark**.

To undo a delete operation, click **Edit > Undo**. Click **Undo** until the requirement is completely restored.

When you bring the document back online, RequisitePro notifies you that the requirement has been deleted and asks whether you want to update the online document with the changes. If you decline, RequisitePro does not bring the document back online.

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:

- □ Click **Tools > Offline Documents.**

- □ In an open document, click **RequisitePro > Document > Offline Documents**.

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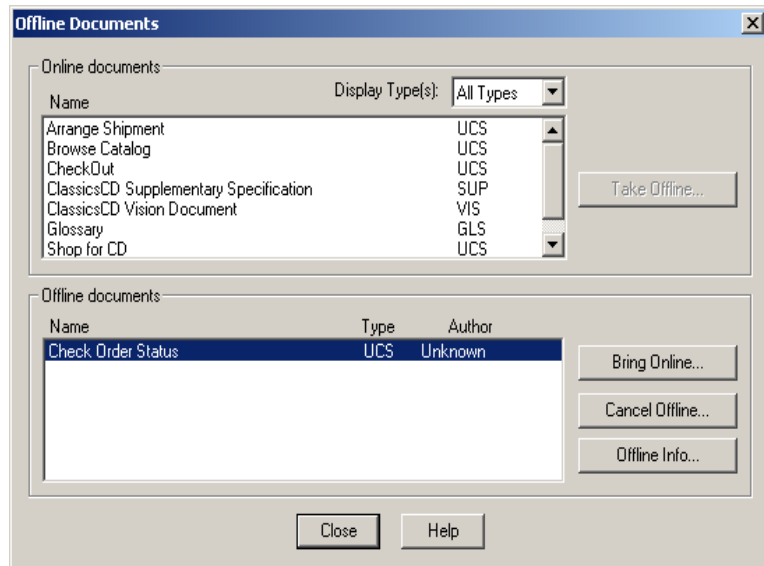
2 In the **Offline documents** list, select the document you want to bring back online. (Use a multiple select action to select more than one document.)

3 Click **Bring Online**.

The Bring Online Information dialog box appears.
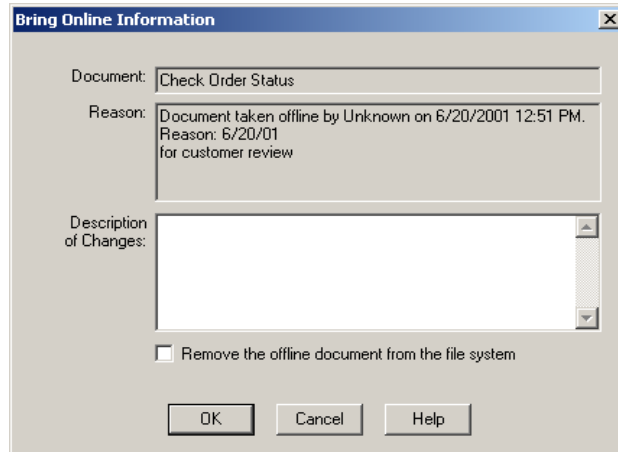
4 In the **Description of Changes** box, type a description of the changes made to the currently selected document while it was offline. If you are bringing multiple documents back online and the changes apply to all subsequent documents, select the **Apply to All** check box. If you do not select that 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.

5 Click **OK**.

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 it asks whether you want to update the online document with the changes.

6 Click **Yes** to update the document, or click **No** to decline the update.
If you do not update 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.

1 Do one of the following:

- ❑ Click **Tools > Offline Documents.**

- ❑ In an open document, click **RequisitePro > Document > Offline Documents**.

The Offline Documents dialog box appears.
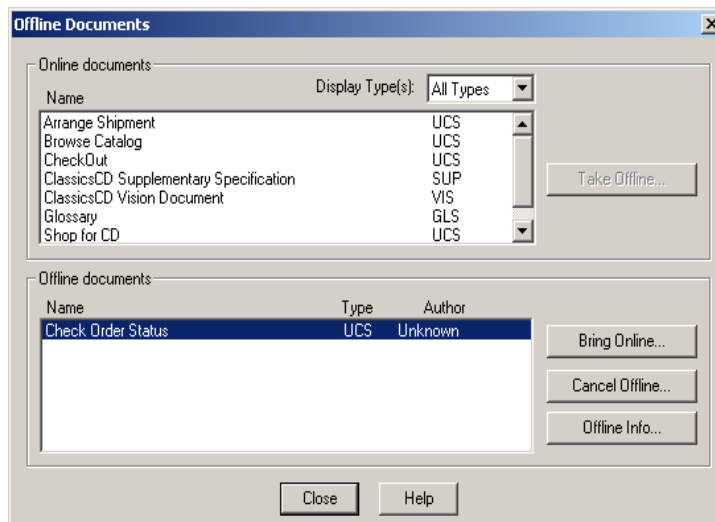
2 In the **Offline documents** list, select the document you want to bring back online without saving offline changes. (Use a multiple select action to select more than one document.)

3 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.)

4 Select the **Remove the offline document from the file system** check box to delete the offline documents from the directory in which they were stored.

5 Click **Yes**. The online version of the documents is 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 it was taken offline.

If you are the offline author or a member of the Administrators group and 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   In the Explorer, double-click the document you want to open.

    The Offline Document Open dialog box appears, identifying the user who took the document offline.

2   Do one of the following:

    ❑   If you are the offline author or a project administrator, you can 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.

    ❑   If another user took the document offline, click **Open Read Only** to read (but not edit) the document.

Working with Requirements

8

A requirement describes a condition or capability that a system must provide; it is either derived directly from user needs or is stated in a contract, standard, specification, or other formally imposed document. Examples of requirements include inputs to the system, outputs from the system, and functions and attributes of the system and the system environment.

Requirements may be described in terms of the "FURPS" model, which categorizes the major types of requirements as follows:

- **F**unctional requirements: feature sets, capabilities, and security.

- **U**sability requirements: human factors, aesthetics, consistency in the user interface, online and context-sensitive help, wizards and agents, user documentation, and training materials.

- **R**eliability requirements: frequency and severity of failure, recoverability, predictability, accuracy, mean time between failure.

- **P**erformance requirements: conditions imposed on functional requirements.

- **S**upportability requirements: testability, extensibility, adaptability, maintainability, compatibility, configurability, serviceability, installability, and localizability.

In Rational RequisitePro, requirements contain a name and text, and they can be qualified with attributes. Attributes describe a requirement in terms of user-defined characteristics or properties, such as cost, priority, and status.

You can create requirements in a view or in a requirements document. All requirements created in RequisitePro are stored in the project database. After a requirement is created, you can do the following:

- Move or copy the requirement to a document or a view

- Qualify the requirement by assigning attributes

- Trace the requirement to and from other requirements

You can use hierarchical relationships to subdivide a general requirement into more explicit requirements. Child requirements provide additional detail about their parent requirement.

A requirement's name, text, attributes, and relationships can be modified in a view or a document. You 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. Click on a selected requirement in the view to start editing the requirement name, text, or attributes. (You can also create requirements directly in the view without opening a dialog box.) You can create requirements in 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 Effects feature is turned on (**Format > Font > Hidden Effects**). To reformat the text to normal, use Word's **Format > Font** feature. The *text* of the requirement should be in normal text only. Requirement text can be articulated as text, graphic elements, OLE objects, or Word-linked files.

Extended editing of documents (available from the Project Properties dialog box, **Documents** tab) 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 opening the document. This allows multiple people to simultaneously edit requirements within a single document. All changes are tracked in the database.

The Embedded Elements Detection Wizard searches all requirement text located in project documents for nontextual elements, such as graphics, numbered lists, formatting, Microsoft Word-linked files, or OLE files, to prevent the loss of these nontextual elements if you select extended editing. These nontext elements cannot be edited outside the document, even if extended editing is available. With this option selected, RequisitePro prevents you from overwriting the requirement text and embedded nontextual elements in the document with text from the database.

The wizard is required for searching requirements created with RequisitePro version 4.5 or earlier. In later versions, requirements are automatically checked for embedded objects. Additional information about this wizard is available from online Help.

Creating Requirements

All requirements that are created in RequisitePro are stored in the project's database. After a requirement has been created, it 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 name.* A user-defined title for a requirement; it must not exceed 128 characters. Like tag and text attributes, the name can be used to reference requirements. The name is displayed by default in all RequisitePro views. All requirements must have either a name or text (or both), but requirements located in documents must have text. A name is not required to be unique, and you can change it at any time if you created the requirement or belong to a group that has update permissions.

- *The requirement text.* Requirement text is the full textual content of a requirement. If the requirement is located in a document, the requirement text may include embedded and linked objects, such as graphics, tables, and Microsoft Word files.

- *Attribute values.*

Creating a Requirement in the Explorer

1 Select the package in which you want the requirement to be located and click **File > New > Requirement**.

  The Requirement Properties dialog box appears.

2 In the **General** tab, select the **Type** from the drop-down list box, and type a **Name** and **Text**.

3 Click **OK**.

  RequisitePro creates the new requirement in the selected package and assigns the next available tag to the requirement.

Creating a Requirement in a Document

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

- The selected *requirement text* information is bracketed with bookmarks.

- The following information is associated with the new requirement:

  - *Requirement tag identifier*. A requirement tag consists 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. Attributes can be viewed in the Requirement Properties dialog box.

- 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 143.)

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

In addition to text, a requirement can include the following elements:

- OLE objects (both embedded and linked)

- Fields (for example, author, title, subject)

- Pictures (both inline and floating)

- Tables

- Annotations (comments, footnotes, bookmarks, hyperlinks)

- Subdocuments

- Lists containing more than a single item (including bulleted and numbered headings or other styles, both sequential and outline)

Note that if you include these elements in a requirement, you will not be able to edit the requirement text outside the document (even when the extended editing feature is selected).

If you plan to edit the requirement text outside a document and the requirement was created in RequisitePro version 4.5 or earlier, you can run the Embedded Elements Detection Wizard to search all requirement text located in project documents for nontextual elements, such as graphics, numbered lists, formatting, or OLE files. (Document requirements created in RequisitePro versions after 4.5 are automatically checked for embedded elements; you do not need to run the wizard to check them.) This search helps prevent you from losing these nontextual elements if you select

extended editing. With this option selected, RequisitePro prevents you from overwriting the requirement text and embedded nontextual elements in the document with text from the database.

The number of requirements in your project documents determines how long this search takes. After the initial search, RequisitePro displays a list of affected documents. If there are any errors encountered during the search, you can rerun the wizard later, and RequisitePro searches only those documents that have not been successfully processed.

Note: Before you start the wizard, review the document paths in the Document Properties dialog box to make sure all the paths are accessible.

Creating a Requirement

1 In the document, select the information (text, graphics, OLE objects) that will become part of the requirement. (If you do not select text, you will be prompted to enter text for the requirement.)

    Note: If you include pictures or objects in requirement text, make sure to clear the **Float over text** check box in the Word 97 Insert Picture or Object dialog box that is used to position the item. In Word 2000, use the **In line with text** option on the **Format > Picture/Object > Layout** dialog box tab. (For information about including Word-linked files in requirement text, see *Inserting Microsoft Word-linked Files in Requirements* on page 120.) If you plan to use the requirements document in conjunction with Microsoft Project, limit the text description of the requirement to 255 characters; this will accommodate the length limitation of a task description in Microsoft Project.

2 Click **RequisitePro > Requirement > New or** the **Create Requirement** button.

    The Requirement Properties dialog box appears.
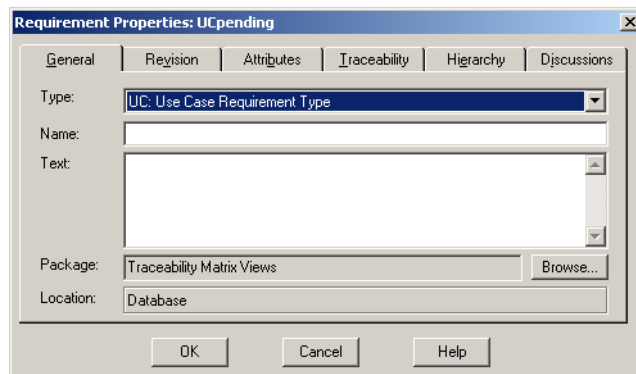
3 Click the **General** tab.

- In the **Type** box, select a requirement type with which to associate the requirement.

- In the **Name** box, type the requirement name (up to 128 characters). You are not required to assign a name to a requirement if you have data in the **Text** field, but you cannot leave both the **Name** and the **Text** boxes blank.

- Note that the **Text** box contains text, graphics, and objects that are included as part of the requirement; they are displayed in this field.

- Click the **Browse** button next to the **Package** box if you want to select a different package in which to place the new requirement.

4 Click **OK**.

5 To save your changes, click **RequisitePro > Document > Save**.
   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.

Creating Multiple Requirements from a Range of Text

Use the **RequisitePro > Requirement > New Wizard** command to create multiple requirements from a range of selected text in a document. When you select this command, the New Requirements Wizard opens. 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 selected range of text:

- K*ey 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 outline are loaded into the Styles box.

To create requirements from a range of text:

1   In the document, select the text you want to identify as requirements.

2   Click **RequisitePro > Requirement > New Wizard**.
    The New Requirements Wizard appears.

3   Select a requirement type to apply to the requirements.

4   Click **Set Defaults** 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. Then click **OK**.

5   In the New Requirements Wizard, select one of the following options to indicate a
    method of distinguishing each requirement in the range of text:

    ▫   **Keywords**. Type keywords in the **Keywords** field; click **Add** to add the
        keywords to the requirements criteria field. Select either the **Match case** check
        box to make the keyword match the case of the typed text or the **Use * as
        wildcard** check box if you want to use a wildcard character in the **Keyword** field.
        (If you want to create requirements from the selected text for each **sentence** or
        for each **paragraph** without parsing based on a keyword, type only an ***** and
        select the **Use * as wildcard** check box.) To create one requirement per sentence,
        click **Sentence**; to create one requirement per paragraph, click **Paragraph**.

    ▫   **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**.

    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. Note that with each selection, the dialog box changes to include
    specific options for that selection.

6   When you have finished adding requirements criteria, click **Create**.

    RequisitePro checks the selected text for the criteria you chose 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.

7 When all proposed requirements have been created, click **Close** in the New Requirements Wizard.

Note: The new requirements are not committed to the database until the document is saved.

Creating Requirements From Tables

To create a requirement from the text within a single cell in a Word table:

1 Select the text.

2 Click **RequisitePro > Requirement > New**.

3 Type the requirement information in the Requirement Properties dialog box, and click **OK**.

To create a requirement that includes text in multiple cells in the table, you must convert the table to text in Word, create the requirement, and then convert the text (including the requirement) back to a table.

To create multiple requirements from text in multiple cells, convert the table to text, use the New Requirements Wizard to create multiple requirements, and convert the text back to a table.

1 In the document, select the text to modify.

2 In Word, click **Table > Convert > Table to Text**.

3 Click **RequisitePro > Requirement > New Wizard**.

4 Create the requirements from the selected range of text.

5 Select the newly created requirements.

6 In Word, click **Table > Convert > Text To Table**.

Inserting Microsoft Word-linked Files in Requirements

You can include Microsoft Word-linked files as part of requirement text. If you change the linked file, any traceability or hierarchical relationships with the requirement are marked as suspect.

You can link to Microsoft PowerPoint files, Word documents, Excel spreadsheets, bitmap files, and other types of files. Do not link to RequisitePro documents. You can include other OLE objects in requirement text, but changes to the files do not mark traceability or hierarchical relationships as suspect. You must edit requirement text from the document if the text contains linked files, OLE objects, or embedded objects. For further information, see "In-view editing and extended editing" in online Help.

You can use Microsoft Word's **Insert** commands to link files to RequisitePro requirement text; you can also use Word's **Edit > Paste Special** and **Insert > Field** commands. If you are using the **Insert > Field** command, the following types of Microsoft Word Links and References are supported:

- Link
- IncludeText
- IncludePicture

Select the **Links and References** category in the Field dialog box and select the **Field** names. For more information about using the above Word commands, refer to Microsoft Word online Help.

To insert a Microsoft Word-linked file in requirement text:

1 Open a RequisitePro document and click where you want to insert the file. This can be in the text of an existing requirement or anywhere in the document where you plan to add a new requirement.

2 On the Microsoft Word menu, click one of the following:

   - **Insert > File**
   - **Insert > Picture > From File**
   - **Insert > Object**

3 In the dialog box that appears, browse to the file you want to insert and do one of the following:

   - To insert a file, select the file you want to insert and click **Link > Insert as Link**. (Word 97 users must select the **Link to File** check box.)
   - To insert a picture, select the picture you want to insert and click **Insert > Link to File**. (Word 97 users must select the **Link to File** check box.)
   - To insert an object, select the **Create from File** tab in the Object dialog box, and type the name of the file. (You can also click the **Browse** button, navigate to the file you want to insert, and select it.) Click **Insert**. In the Object dialog box, select the **Link to file** check box and click **OK**.

   Note: Do not insert other RequisitePro documents.

4 If you are creating a requirement, do the following:

   - Select the text that you want to include as requirement text for the new requirement. Include the linked file in that selection.

- ▫ Click **RequisitePro > Requirement > New**. The Requirements Properties dialog box appears.

- ▫ In the **Name** field, provide a name for the requirement. Notice that the **Text** field includes the path of the inserted object. Click **OK**.

5 Click **RequisitePro > Document > Save** to save the Word-linked file as part of the requirement text.

In a view, the Requirements Properties dialog box, and any integration dialog boxes, the requirement text includes the path of the linked file and the date and time the file was last modified:

<rp.link file:="path" ts:="dd-MM-yyyy hh:mm:ss SGMT"/>

Note: If you do not see the linked file in the requirement text, click F9 to refresh Word. If the linked file path still does not appear in the requirement text, you have inserted an object instead of a linked file.

Inserting Microsoft Equations in Requirements

If you want to use RequisitePro's suspect links feature with Microsoft equations, you must insert the equation in a Word document and then insert that document in requirement text. If you insert the equation as an object rather than as a Word-linked file, changes to the equation do not trigger suspect links.

To insert a Microsoft equation into a RequisitePro requirement:

1 Create a Microsoft Word document containing the equation. You may want to create one document per equation if you want to detect changes to each equation individually.

2 Insert the Word document that contains the equation in RequisitePro requirement text by doing the following:

- ▫ Open the RequisitePro document.

- ▫ Click **Insert > File**.

- ▫ In the dialog box that appears, browse to the Word document that contains the equation.

- ▫ Select the document and click **Insert > Insert as Link**. (Word 97 users must select the **Link to File** check box.)

3 Create a requirement containing the Word-linked file by doing the following:

- ▫ Select the linked file. You can also select any text that you want to include as requirement text for the new requirement.

- Click **RequisitePro > Requirement > New**. The Requirements Properties dialog box appears.

- In the **Name** field, provide a name for the requirement. Notice that the **Text** field includes the path of the inserted object. Click **OK**.

4 Click **RequisitePro > Document > Save** to save the Word-linked file as part of the requirement text.

Displaying Linked Files Outside the Document

In a view, the Requirements Properties dialog box, and any integrations dialog boxes, the requirement text includes the path of the linked file and the date and time the file was last modified:

<rp.link file:="path" ts:="dd-MM-yyyy hh:mm:ss GMT"/>

We recommend using Universal Naming Convention path names if you are sharing documents with other RequisitePro users.

Traceability

When you establish a traceability relationship or hierarchical relationship between requirements that include linked files, RequisitePro alerts you to changes to the linked source files. You can edit the linked file outside of RequisitePro at any time. RequisitePro checks for changes to the linked file when the RequisitePro document is saved, and the relationships are marked as suspect only after the document is saved. A relationship is marked as suspect if the link references a directory or a file that does not exist, but a relationship is not marked suspect if the directory cannot be located.

Troubleshooting While Creating Requirements in Documents

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

- *Verify that the selected text 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 that the selected text 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 name, text, and 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 name*.

    - *Requirement text*.

    - *Requirement attributes*. The new requirement is associated with the attributes established for the requirement type.

- Using the **Requirement > New** command in a view creates a requirement at the root level (that is, it has no parent). To create child or sibling requirements, refer to *Creating Child Requirements in a View* on page 143 and *Creating Peer Requirements* on page 145.

Creating a Requirement in a Traceability Tree or Traceability Matrix

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

1   Open a Traceability Tree or a Traceability Matrix based on the requirement type for the requirement you want to create.

2   Do one of the following:

    - Click **Requirement > New**.

    - Click in a requirement in a view, right-click, and select **New** from the shortcut menu.

    - Select a requirement in the Explorer and click **Requirement > New**.

The Requirement Properties dialog box appears.
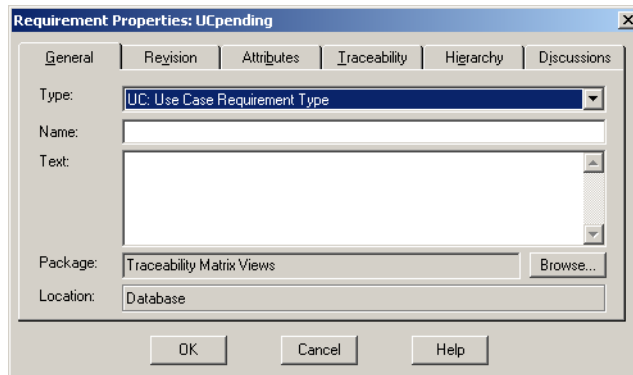
RequisitePro populates the **Type, Package,** and **Location** fields.

- ❑ 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 name and text 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. In a Traceability Matrix, the new requirement is the last row entry before the default entry; in a Traceability View, the new requirement is listed at the bottom of the tree.

Creating Requirements in an Attribute Matrix

You can create a requirement in the database by directly inserting the requirement into an Attribute Matrix.

1 Open an Attribute Matrix of the requirement type that you want to use for the requirement you are creating.

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 > New**.

- ❑ Press the INSERT key.

The **Name** and **Text** drop-down list boxes appear.

Note: If you want to use the **Requirement > New** and INSERT key options to create requirements directly in the matrix in the Text box, go to **Tools > Options** (on the toolbar) and make sure that the **In-view requirements creation (without dialog box)** check box is selected. Otherwise, the Requirement Properties dialog box appears. (See the preceding section.)

3   Type a requirement name and press the TAB key to go to the field below to enter text describing the requirement.

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

4   Do one of the following to save the information:

□   Press the TAB key.

□   Click in another cell.

□   Press the 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 that the requirement is in edit mode and that changes are not yet saved.

5   Select or type an attribute, and press the TAB key to go to other attribute columns to make any changes from the default attribute values.

6   Use the TAB key to go 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.

Revising Requirement Text and Properties

Use the Requirement Properties dialog box to view or modify requirement information, including attribute values, traceability relationships, hierarchical relationships, discussions, and change descriptions. In an Attribute Matrix, you can

change the name, text, and attributes directly in the view. (For more information, refer to the chapters *Working with Discussions* on page 69, *Working with Hierarchy* on page 143, and *Working with Traceability* on page 155.)

Opening the Requirement Properties Dialog Box

Do one of the following to open the Requirement Properties dialog box:

- Select a requirement in the Explorer and either right-click and select **Properties** or click **File > Properties**.

- Select a requirement in a view and either right-click and select **Properties** or click **Requirement > Properties**.

- Select a requirement in an open document and either right-click and select **Requirement Properties** or click **RequisitePro > Requirement > Properties**.

- Select a requirement in a document or in a view and click the **Display properties** button.

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. Changes to name, text, and attributes cause the revision number to change. If you make the change in a RequisitePro view, RequisitePro increments the revision number for the individual requirement each time you make a change. If you make the change in a document, RequisitePro increments the revision number for the requirement each time you save the document.

- 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 alpha-numeric characters, such as *Beta Release*. The label is added to the requirement's change history. When it has been 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. The **Package** text box is also populated by default, but you can browse to select another package in which you want the requirement to appear.

- 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 can describe the reason for the change. Make sure the cursor is still in the requirement and then do the following:

1 Click **RequisitePro > Requirement > Annotate Change**.

The Change Description dialog box appears.

2 Type the reason for the changes.

3 Click **OK**.

RequisitePro commits the description to the database when you save the document.

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 reason for the change.
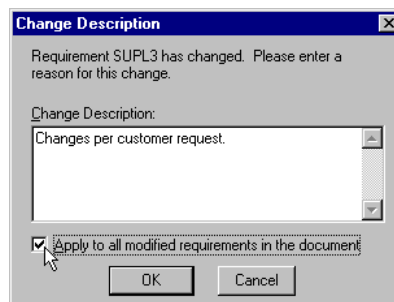
Modifying Attribute Values

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.

To assign values to requirement attributes:

1 Open the Requirement Properties dialog box by following one of the options on page 127.

2 Click the **Attributes** tab.

The attributes for the requirement are displayed.
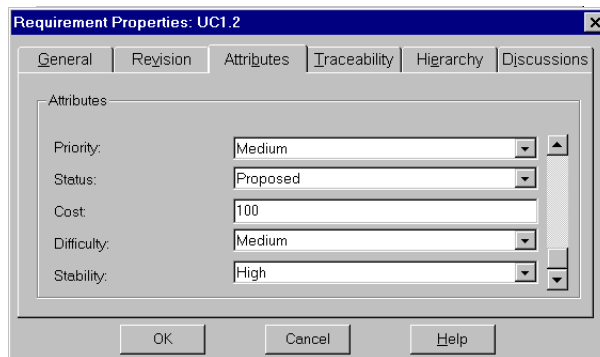
3 Type attribute values:

- ▫ 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**.

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

To modify attribute values from 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 check box is selected, double-clicking opens the Requirement Properties dialog box or a document (if the requirement resides in a document).

    ▫   Click the requirement name, text, or attribute, 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 name and text, type data in the text box.

    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 selected in the **Documents** tab of the Project Properties dialog box.

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.
    (To cancel the editing process without saving changes, press ESC.)

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.

Using the Requirement Name Conversion Wizard

If you have been using a user-defined attribute to serve as a name or label for requirements in your project (before RequisitePro version 2001.03.00), you may want to add the data to the requirement name. The Requirement Name Conversion Wizard takes you through the process of copying this data.

Note: If the project is secure, you can perform this conversion only if you are a member of the administrators group.

The requirement name is limited to 128 characters. If the attribute values you copy to the requirement name are longer, they will be truncated.

To start the wizard:

Open the Requirement Name Conversion Wizard in Windows Explorer. The executable, rqreqnameconvwiz.exe, is located in the Rational\RequisitePro\bin\ directory.

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 the chapter *Working with Hierarchy* on page 143.

Associating a Requirement with a New Requirement Type

1 Open the Requirement Properties dialog box by following one of the options in *Opening the Requirement Properties Dialog Box* on page 127.

2 Click the **General** tab.

3 Select a new requirement type from the **Type** list.

The Change Requirement Type message box appears, explaining the change process.
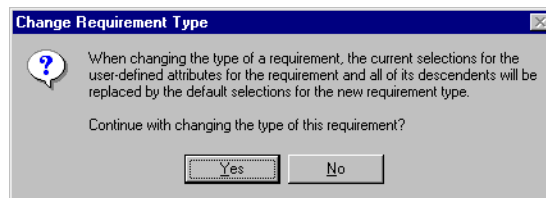
4 Click **Yes**. The requirement type is changed in the Requirement Properties dialog box.

5 Click **OK** to save the changes.

Associating Multiple Requirements with a New Type

When you change the requirement type, several things happen:

- Attribute values associated with the requirements are 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; you do it after you change the requirement type and save the document.

1 Open an Attribute Matrix and use a multiple select action to select multiple requirements.
   For requirements 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.
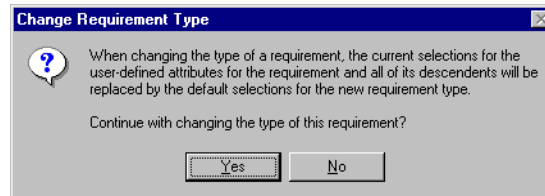
3 Click **Yes**. The Change Requirement Type dialog box appears.

4 In the **New Requirement Type** list, 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.

Cutting, copying, and pasting a requirement include its name, text, attributes, and traceability relationships.

Requirements that are cut using RequisitePro's **Cut** command are placed in a buffer available only to RequisitePro. If a requirement is in the buffer and another requirement is cut or copied, the original requirement is deleted from the database. The buffer used in RequisitePro is not the Windows Clipboard. Any information currently on the Windows Clipboard is preserved when you cut a requirement in a RequisitePro database.

If security is enabled in the project, you must have Delete permissions for a requirement type in order to cut requirements of that type.

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** and **Paste** commands move the original requirements. The **Copy** and **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 a requirement from a document:

1 Click in the requirement text.

2 Click **RequisitePro > Requirement > Cut** (or **Copy**).

   RequisitePro cuts or copies the requirement (and its child requirements) from the requirements document.

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

To paste the requirement in a document:

1   Open or click the destination document and place your cursor in the location where you want to paste the requirement.

2   Click **RequisitePro > Requirement > Paste**.
RequisitePro inserts the requirement (and its child requirements) in the specified location.

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.

If you paste a requirement containing an OLE object from a document into the project database, you can no longer access the linked file.

To paste a cut requirement into the database:

1   Open or create an Attribute Matrix view based on the same requirement type as the cut requirement.

2   Click **Edit > Paste**.
RequisitePro pastes the requirements into the database.

Note: If an OLE object is part of the requirement you are pasting into the database, the object is lost. RequisitePro treats the loss of the object as a change to the requirement and marks all traceability relationships involving that requirement as suspect. Use the **Traceability > Clear Suspect** command to reset these relationships.

Cutting or Copying in a View

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 **Edit > Cut** command to move a requirement, with all of its relationships, into a document.

- Use the **RequisitePro > Requirement > 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. For hierarchical requirements, RequisitePro copies the requirement as a peer requirement at the same level in the parent/child hierarchy. (For more information, see the chapter *Working with Hierarchy* on page 143.)

To cut or copy a requirement from the database:

1 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 **Edit > Cut** or **Edit > Copy**.

To paste the requirement into a requirements document or into another Attribute Matrix of the same requirement type in the same database:

1 Open the requirements document or view and click the location to paste the requirement.

2 Do one of the following:

- ❑ To paste the requirement in a document, click **RequisitePro > Requirement > Paste**.

- ❑ To paste the requirement in a view, click **Edit > Paste**.
  RequisitePro inserts the requirement (and its child requirements) in the specified location in the document; in a view, the requirement is placed at the end of the matrix. Note that a copied requirement is identified with the text "Copy of ... ."

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 cut and paste only 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 the chapter *Working with Hierarchy* on page 143.

[3] For parent-child requirement hierarchies: Only a root requirement can be moved from the database to a document. For more information about parent-child requirements, refer to the chapter *Working with Hierarchy* on page 143.

- *Do not use Microsoft Word's Cut/Paste commands.* We recommend that 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.

- *Be careful when you use 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 on the Windows Clipboard is preserved when you cut or copy a requirement in RequisitePro.

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 inadvertently overwritten.

To refresh requirement color and style in a requirements document:

1 Select the requirements to refresh.

2 Click **RequisitePro > 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 and Removing Requirements in a Document* on page 140.

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. Select 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.

The **Rebuild Tags** command does not restore deleted or corrupted requirement information such as text, graphics, or OLE objects. You cannot rebuild tags if a document is open in read-only mode, and you must have Update permissions to use this command.

To rebuild requirement tags in a document:

1   Highlight the requirement tags to rebuild.

2   Click **RequisitePro > Document > Rebuild Tags**.

RequisitePro rebuilds all the requirement tags in the document and displays a list of them.

Refreshing Requirement Text

RequisitePro updates its display at different times, depending on what you (or other RequisitePro users) modify and where you make changes.

If you modify requirement text in a document, RequisitePro updates the requirement when you save the document. If you open a document and have write or read-only permission, the document is displayed in Microsoft Word in its last-saved state.

Views display the current state of the database. New requirements or modified requirements that have not been saved are not reflected in the view. You can refresh requirements in a view at any time by using the **View > Refresh** command. RequisitePro updates all requirement information in the database.

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.)

If security has been set for the project, you must have project structure permission to renumber requirements. The project must be opened in exclusive mode to use this command. To renumber requirements in a document, you must open all documents that contain requirements of the specified type.

To renumber all requirements in a project:

1 Click **File > Project Administration > Renumber Requirements**.

If the documents have not been saved, a message informs you that all documents will be saved before the requirements are renumbered. Click **Yes** to proceed.

The Renumber Requirements dialog box appears.
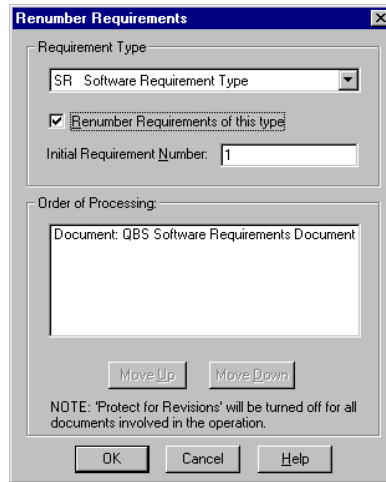
2 In the **Requirement Type** list, select the requirement type that you want to renumber.

3 Select the **Renumber Requirements of this type** check box.

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 that you not delete any requirements after you archive a project, because 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. To delete a requirement after the project is archived, you can use a requirement attribute (for example, 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 and from the deleted requirement.

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

Unmarking and Removing Requirements in a Document

You have the option of leaving the text in a document when you delete a requirement. Use the **Delete-Unmark** command to remove the requirement styling from text without deleting the text itself. The requirement text, graphics, or OLE objects remain in the document, but they are no longer recognized as requirements. 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 and removes it from the database.

To unmark or remove a requirement in a document:

1 In the requirements document, click in the requirement text or highlight a range of text that includes multiple requirements.

2 Do one of the following:

  ▫ Click **RequisitePro > Requirement > Delete-Unmark** to retain the text without identifying it as a requirement.

  ▫ Click **RequisitePro > Requirement > Delete-Remove** to remove the requirement text from the document and the requirement information from the database.

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 select a parent requirement and click **RequisitePro > Requirement > Delete-Unmark** or **RequisitePro > Requirement > Delete-Remove**, 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 Delete process.

You can undo an unmark operation before you save the document; in Word, click **Edit > Undo** repeatedly until the styling, bookmarks, and tags reappear.

4 Click **RequisitePro > Document > Save**.

The requirement is removed from the database.

Deleting Requirements from the Database

In an open view, you can delete a requirement from the database, provided that 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 with the deleted requirement. Unlike cut requirements, which are placed in a buffer for pasting within RequisitePro, deleted requirements are completely removed from the database, together with their history and traceability relationships.

1 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 **Edit > Delete**. A message asks you to confirm the deletion.

4 Click **Yes.** The requirement is deleted.

Working with Hierarchy

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</div>

Hierarchical requirement relationships are parent-child relationships that reflect direct dependencies between requirements of the same type. 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 the chapter *Working with Traceability* on page 155), hierarchical relationships are a type of change-managed relationship in Rational RequisitePro. If a requirement's name, text, requirement type, or attribute is changed, the relationships with its children become *suspect*. You can view and manage suspect relationships using a Traceability Matrix or a Traceability Tree view.

Creating Child Requirements

A child requirement is any requirement that has a parent. Each child requirement can have only one parent, but a requirement can be both a parent and a child.

Hierarchical relationships are created in a requirements document or in a view. If the parent requirement resides in a document, the child requirement must reside in the same document. The parent requirement and all of its children must be of the same requirement type.

These relationships are created in the following ways: you can use the **Hierarchy** tab in the Requirement Properties dialog box; you can create them directly in a requirements document using the **RequisitePro > Requirement > New** command; or you can use the **Requirement > New** command to insert them in an Attribute Matrix.

Hierarchical requirements use an outline numbering style, with a period denoting each child level. For example, if the requirement tag is PRD108, then its immediate children are numbered PRD108.1 and PRD108.2. Their immediate children are numbered PRD108.1.1 and PRD108.2.1.

Creating Child Requirements in a View

To create a child requirement in a view, make sure the currently selected requirement (which will become the child's parent) is not located in a document.

1   Open the view containing the requirement that you have chosen to be a parent.

2   Click the requirement. (You can create one child requirement at a time.)

3   Click either **File > New > Child Requirement**.

   ▫   In an **Attribute Matrix**, a new row appears directly following the last
        requirement with the selected parent, and the **Name/Text Edit** box appears,
        allowing you to add information. See *Creating Requirements in an Attribute
        Matrix* on page 125 for more information.

   ▫   In a **Traceability Matrix** and a **Traceability Tree**, the Requirement Properties
        dialog box appears. Click the **General**, **Revisions**, **Attributes**, **Traceability**, and
        Discussion tabs to define the child requirement, and type the appropriate
        information.

   Note that in the **Hierarchy** tab, the parent requirement is predefined as the
   requirement you selected in Step 2. (If you want to, you can change the parent.)

4   Press the TAB key to go to the next row, 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 and generates a
   requirement tag for the child requirement based on the parent requirement's
   number.

   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
   select the **Retain Hierarchical Display** check box to include hierarchical
   requirements in the view. Then save the view again to keep those changes. (Refer
   to *Creating and Modifying Queries* on page 59.)

Creating Child Requirements in the Explorer

1   Select the requirement you want to be the parent and click **Requirement > New >
    Requirement**.

   The Requirement Properties dialog box appears.

2   Click the tabs and type information to define the requirement.

3   Click **OK**. RequisitePro creates a new child requirement, indented below the
    selected parent requirement in the Explorer.

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   Click **RequisitePro > Requirement > Properties** or the **Requirement properties** button.

   The Requirement Properties dialog box appears.

3   Click the **General** tab and type the appropriate information to define the requirement.

4   Click the **Hierarchy** tab.

5   Select a parent from the **Parent** list. Note that the default is the last parent selected in the document. If the parent is not selected in the list, select **<choose parent...>** and select from the list that appears in the Parent Requirement Browser dialog box.

6   Click **OK** to close each dialog box.

7   Click **RequisitePro > Document > Save** to save the new parent-child relationship in the database.

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

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 select the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes. (Refer to *Creating and Modifying Queries* on page 59.)

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 115.

Creating Sibling Requirements in a View

When you create a requirement in a view, it is automatically created at the root level. Refer to *Creating a Requirement in a View* on page 124. To create a peer requirement of a requirement that has a parent, use the **Create Sibling** command.

To create a sibling requirement:

1 Open the view containing the requirement you have chosen for a sibling.

2 Select the requirement.

3 Click **File > New > Requirement**.

   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 **Name/Text Edit** box appears, allowing you to add information. See *Creating Requirements in an Attribute Matrix* on page 125 for more information.

   ▫ In a **Traceability Matrix** and a **Traceability Tree**, the Requirement Properties dialog box appears. Click the **General**, **Revision**, **Attributes**, **Traceability**, and **Discussions** tabs to define the child requirement, and type the appropriate information.

   Note that in the **Hierarchy** tab, the parent requirement is predefined 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 and 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 select the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes. (Refer to *Creating and Modifying Queries* on page 59.)
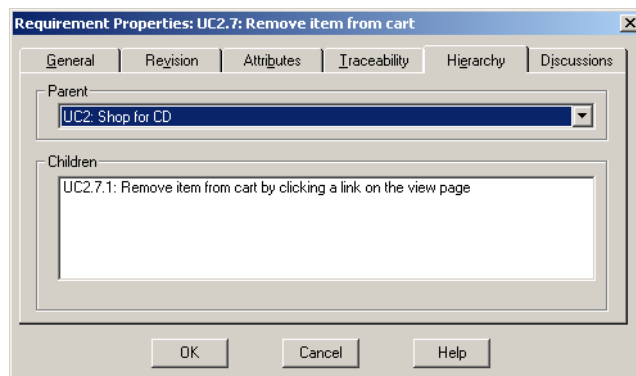
Changing Parent Requirements

You can assign a hierarchical requirement with a new parent of the same requirement type. When you do, the entire sub-tree of children is also moved to the new parent. The requirements are renumbered as though they were created for the new parent.

When children are assigned to a different parent, all hierarchical relationships between the new parent and its immediate children are marked as suspect. However, the relationships between the children and their children are not marked as suspect. (See also *Suspect Relationships* on page 162.)

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 select the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes. (Refer to *Creating and Modifying Queries* on page 59.)
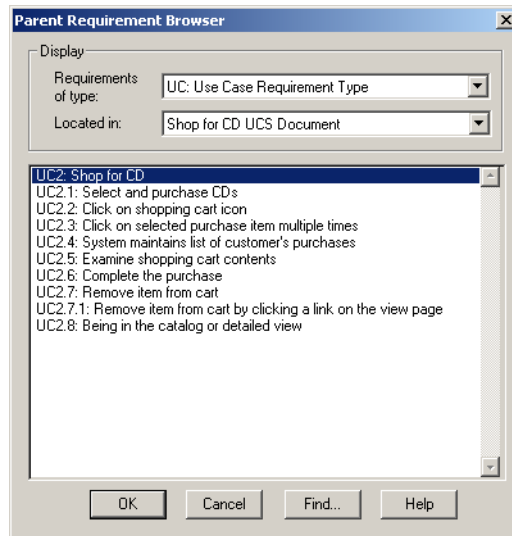
Assigning Parent Requirements in the Requirement Properties Dialog Box

1   Open the Requirement Properties dialog box in one of the following ways:

   ▫   Select the requirement in the Explorer or in a view and click **Requirement > Properties**.

   ▫   In the document, click anywhere in the requirement text. Then click **RequisitePro > Requirement > Properties**.

2   Click the **Hierarchy** tab.

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

The Parent Requirement Browser dialog box appears.

4   Select a parent requirement from the list. To locate a specific requirement, click the **Find** button.

5   After selecting the parent requirement, click **OK**.

6   In the Requirement Properties dialog box, click **OK**.

The requirement becomes a child requirement of the parent you selected. New requirement tags are generated for the child requirement and its sub-tree of children, based on the parent requirement's number.

Note: For requirements in documents, you must save the open document to commit requirements to the database. 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 select the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes.

Assigning Parent Requirements in a View

In a view or in the Explorer, you can associate more than one hierarchical requirement with a new parent of the same requirement type. All selected requirements are assigned to the same new parent. When you assign a new parent to a requirement, the entire sub-tree of children is also moved to the new parent. The requirements are renumbered as if they were newly created for the new parent.

When requirements are assigned to a new parent, all hierarchical relationships between the new parent and its immediate children are marked as suspect. The relationships between the children and their children are not marked as suspect.

Note: If any of the requirements you want to change are in documents, the document must be open (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 Select a requirement in the Explorer or in a view. (Use a multiple select action to select more than one requirement.)

2 Click **Requirement > Change Parent**.

   The Select New Parent dialog box appears.
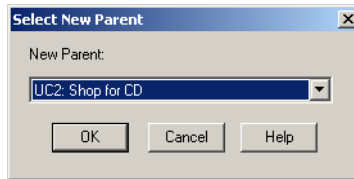
3 In the **New Parent** list, select a new parent. If the parent is not displayed in the list, select **<choose parent...>**.

   The Parent Requirement Browser dialog box appears.

4 Select a parent requirement from the list. To locate a specific requirement, click the **Find** button.

5 After selecting the parent requirement, click **OK**.

6 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 sub-trees 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. After creating new child requirements, review saved changes to make sure both child and parent requirements are displayed. You can modify the query on a saved view and select the **Retain Hierarchical Display** check box to include hierarchical requirements in the view. Then save the view again to keep those changes.

Changing Multiple Child Requirements to Root Requirements

To change multiple selected child requirements to root requirements in an Attribute Matrix:

1   Open the Attribute Matrix, and then select the child requirements. (If the requirements appear in a document, the document must be open.)

2   Click **Requirement > Change Parent**.

The Select New Parent dialog box appears.

3   In the **New Parent** list, select **<none>**.

4   Click **OK**.

The requirements now appear as root requirements of the same requirement type. The children are renumbered to the next available numbers for the requirement type.

Deleting Hierarchical Requirements

In general, we recommend that you not delete any requirements after you have archived a project, because deleting a requirement deletes all the information related to that requirement, including its history. (Refer to *Deleting Requirements* on page 140.) After the project is archived, use a requirement attribute (such as Deactivated, Retired, or Inactive) to indicate that a requirement is no longer valid, rather than deleting it.

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

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

Unlike cut requirements, which are placed in a buffer for pasting within RequisitePro, deleted requirements (together with their history and traceability relationships) are completely removed from the database.

To delete a hierarchical requirement:

1   Do one of the following:

   ▫   Open the Attribute Matrix and click the requirement to delete. (Use a multiple select action to select multiple requirements.) Click **Edit > Delete**.

  ▫ Open the document, select the requirement to delete, and click **RequisitePro > Requirement > Delete-Unmark.**

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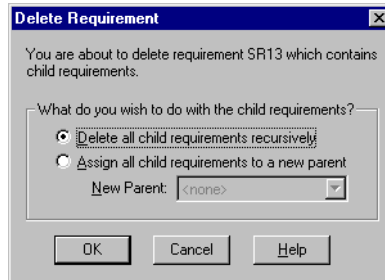
Note: If you are deleting multiple requirements in the Attribute Matrix, the Delete Requirement dialog appears for each parent requirement.

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.

  ▫ 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 from a list of requirements. When the children are reassigned, all hierarchical relationships between the new parent and its immediate children are marked suspect.

4 Click **OK**.

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

If you have deleted requirements from a document but have not saved the document, you can undo the delete operation. In Word, click **Edit > Undo** until the requirements are completely restored.

Suspect Relationships

A relationship between requirements becomes questionable or *suspect* if RequisitePro detects a requirement's name, text, requirement type, or attributes have been modified. In a view, you can manually mark a hierarchical relationship suspect or clear a suspect relationship.

- When you modify a parent requirement, RequisitePro marks as suspect the relationship between the parent and all its immediate children.

- When you modify a child requirement, RequisitePro does not mark as suspect the relationship between the child and its parent, although the child's relationship with other requirements is marked as suspect.

- When children are reassigned to another parent, all hierarchical relationships between the new parent and its immediate children are automatically marked as 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 a view, the suspect relationship is identified by a red diagonal line through the requirement icon.

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

When **Auto Suspect** is disabled, RequisitePro does not monitor changes in requirements, and it 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).

When Auto Suspect is 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 available by default. If you cancel Auto Suspect, it is automatically made available the next time you open the project. You can also make it available with the **Tools > 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.

In a Traceability Matrix, select one or more intersection points in the matrix where a traceability link has been created. Then do one of the following:

- Click **Traceability > Clear Suspect**.

- Click **Edit > Set Value**, and select **Clear Suspect** from the drop-down list box.

In the Traceability Tree, select one or more requirements to modify. Then click **Traceability > Clear Suspect**.

Working with Traceability 10

In Rational 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 the chapter *Working with Hierarchy* on page 143), 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 it is not necessary 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 view.

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 248.

Creating Traceability in a Document

Use the Requirement Properties dialog box or the **RequisitePro > Requirement > Properties** menu command 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 requirement.

2   Click **RequisitePro > Requirement > Properties.**

    The Requirement Properties dialog box appears.

3   Click the **Traceability** tab.

The **From** field lists requirements from which the selected requirement is traced. The **To** field lists requirements to which the selected requirement is traced. An **(s)** after the requirement tag represents a suspect relationship. (You can 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.
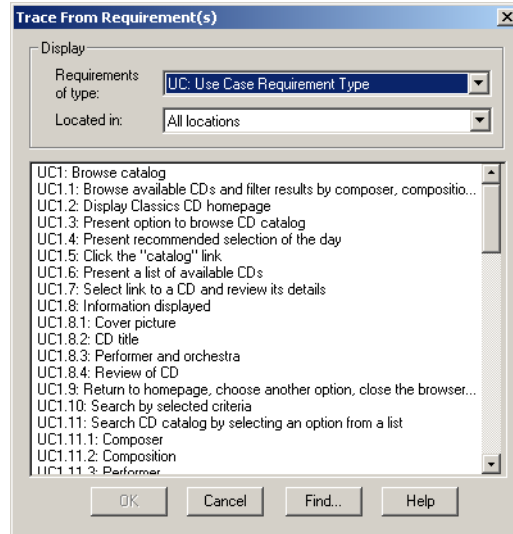
5   Select a requirement to *trace to* or *trace from* in the list box and click **OK**. RequisitePro adds this requirement to the **To** or **From** field on the **Traceability** tab.

Creating Traceability Using the Requirement Menu

To create traceability using the **RequisitePro > Requirement** menu:

1   In a requirements document, place the cursor in the text of the requirement.

2   Click **RequisitePro > Requirement > Trace To** or **RequisitePro > Requirement > Trace From.**
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.

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

4 Select the location (document or database) of the requirement from the **Located in** list box. If you do not know the location, set the list box to **All locations**.

5 Select 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 and Deleting Traceability in Views

You can create and delete traceability relationships in an Attribute Matrix, a Traceability Matrix, and a Traceability Tree. (For more information on navigating in a view, refer to *Working with Views* on page 47.)

Creating and Deleting Traceability Relationships in an Attribute Matrix

To create a traceability relationship:

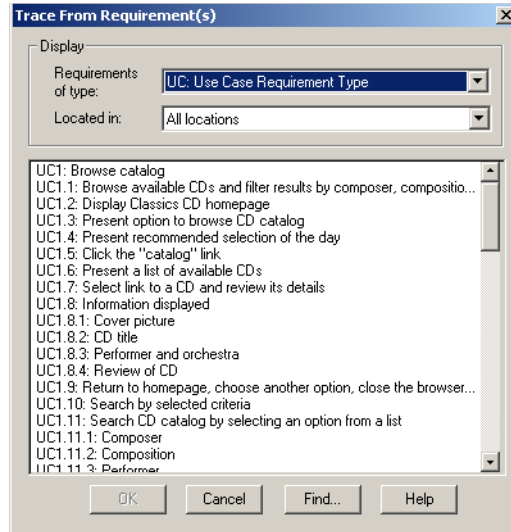**1** Open an Attribute Matrix and select a requirement. Then click **Requirement > Properties**.

The Requirement Properties dialog box appears.

2 Click the **Traceability** tab.
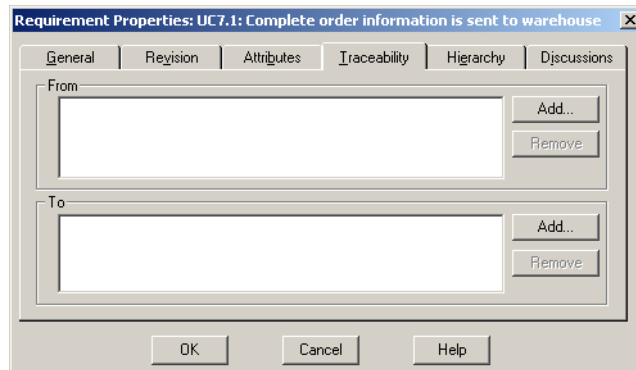
3 Click the **Add** button adjacent to the **To** or **From** field.

The Trace To Requirement(s) or the Trace From Requirement(s) dialog box appears.

4 From the **Requirements of type** list box, select the requirement type with which the requirement is associated.

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

5 Select the location (document or database) of the requirement from the **Located in** list box. If you do not know the location, select **All locations.**

6 Select 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.

7 Click **OK**.

To delete a traceability relationship:

1 Select the requirement and click **Requirement > Properties**.

2 Click the **Traceability** tab.

3 In the **To** or **From** list box, select the requirement for the traceability relationship you want to remove.

4 Click the **Remove** button.

   A message appears, asking you to confirm the deletion.

5 Click **Yes**, and then click **OK**.

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, a row, or a column.)

2 Establish traceability in one of the following ways:

Trace To

- ▫ Click **Traceability > Trace To** or **Traceability > Trace From**.

- ▫ Click **Edit > Set Value**, select a **Traceability Function,** and click **OK**.

Trace From

- ▫ Right-click the intersection cell and select **Trace To** or **Trace From**.

An arrow appears in the cell, signifying the relationship.

To delete the traceability relationship:

1 Select the arrow you want to remove in a Traceability Matrix cell. (Use a multiple select action to select multiple cells.)

2 Do one of the following:

- ▫ Click **Traceability > Delete Trace.**

- ▫ Right-click and select **Delete Trace**.

- ▫ Click **Edit > Set Value**, select **Delete Trace** from the **Traceability Function** drop-down list box, and click **OK**.

- ▫ Press the DELETE key on the keyboard.

A dialog box appears asking you to confirm the deletion.

3 Click **Yes**.

Creating and Deleting Traceability Relationships in the Traceability Tree

Two methods may be used to create traceability relationships in the Traceability Tree:

- ▪ Drag and drop

- ▪ **Traceability** 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 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:

   ▫ Select **Move Here** to delete the traceability relationship between the selected requirements and the requirements to or from which they were traced and to create a traceability relationship between the selected requirements and the requirement the cursor was on when you released the mouse button.

   ▫ Select **Copy Here** to maintain the traceability relationship between the selected requirements and the requirements to or from which they were traced and to create an additional traceability relationship between the selected requirements and the requirement the cursor was on when you released the mouse button.

   ▫ Select **Cancel** to cancel the operation.

   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.

Traceability 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 Do one of the following:

   ▫ Click **Traceability > Trace To** or **Traceability > Trace From**.

   ▫ Right-click and select **Trace To** or **Trace From** from the shortcut menu.
   (In a Traceability Tree, the command available depends on the tree type, that is, whether the tree is traced into or traced out of a specific requirement type.)
   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**.

Deleting Traceability in a Traceability Tree

1 Select the requirement tag for the traceability relationship you want to remove. (Use a multiple select action to select multiple tags.)

2 Do one of the following:

- ▫ Click **Traceability > Delete Trace**.

- ▫ Right-click and select **Delete Trace** from the shortcut menu.

A message appears, asking you to confirm the deletion.

3 Click **Yes**.

The relationship is removed from the tree.

Troubleshooting Failed Multiple Select Actions

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 that a requirement's name, text, requirement type, or attribute has been 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 a view.

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 a view, the suspect relationship is identified by a red diagonal line through the traceability arrow.

The **Auto Suspect** command monitors a requirement's change history and displays a suspect signal when requirements are changed. Use the **Tools > 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 required; for example, when you are correcting spelling mistakes in your documents, you do not want those corrections to cause your relationships to become 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, you can later activate it with the **Tools > Auto Suspect** command. It is automatically enabled the next time the project is opened.

Manually Marking and Clearing Suspect Traceability Relationships

You can manually mark a requirement relationship as suspect and clear the suspect state. When you clear the suspect state, the relationship is reset to its previous state, *traced to* or *traced from*. Suspect relationships are set and cleared in a Traceability Matrix or Traceability Tree.

To mark or clear one or more suspect relationships:

1 In a Traceability Matrix, select one or more intersection points where a traceability link has been created; in a Traceability Tree, select one or more requirements to modify.

2 Do one of the following:

- ❑ Click **Traceability > Mark Suspect** or **Traceability > Clear Suspect**.

- ❑ Right-click any of the selected cells and click **Mark Suspect** or **Clear Suspect**.

- ❑ Click **Edit > Set Value** and select **Mark Suspect** or **Clear Suspect**. (This command is not available in a Traceability Tree.)

Importing Requirements and Documents

<div style="text-align: right; font-size: 3em;">11</div>

Use the Import Wizard to import requirements from a Microsoft Word document or a comma-separated value (CSV) file into a Rational RequisitePro project.

The import process is recommended for:

- Importing nonproject 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 Microsoft SQL Server, Oracle, Microsoft Excel, or Microsoft Access.

Preparing to Import

Project Setup

You will be importing an external document or a CSV file into a RequisitePro project. If the project administrator has not already set up a project, you should create one now. (Refer to the chapter *Creating Projects* on page 183.) The project must include at least one requirement type and one document type.

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: requirement types matching, conflict resolutions, attribute mappings, the success or failure of search criteria, canceled operations, value errors, and the success or failure of the import. The

log file is saved in the directory where the project is stored, and it 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.

About RequisitePro Format

To 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.

When the **Save documents in RequisitePro Format** check box on the **Documents** tab of the Project Properties dialog box is selected, all documents within the project are 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 are 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, select 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 In the Explorer, select the project and click **File > Properties**. The Project Properties dialog box appears.

3 On the **Documents** tab, clear the **Save documents in RequisitePro Format** check box.
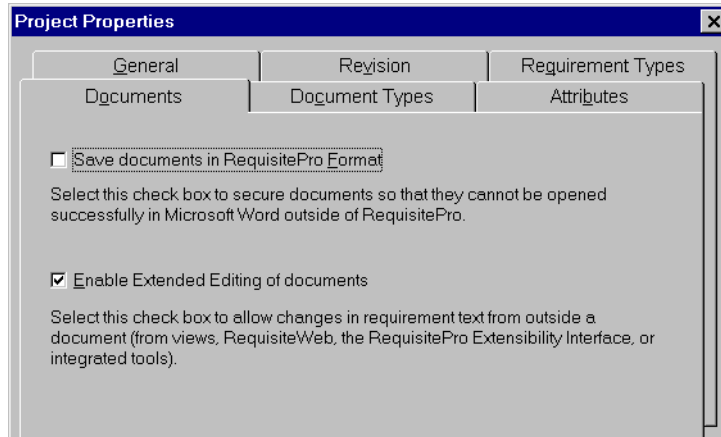
4 Click **OK**. When the project is closed, all documents will be converted to Word format but will remain in the RequisitePro system. The documents will retain their RequisitePro extensions.

The newly formatted documents are ready to import into another project. Follow the instructions in *Importing from Word* on page 168.

Converting an Individual Document to Word

To convert a single RequisitePro document to Word format:

1 Open the document you want to convert.

The **Open Project** dialog box appears.

2 Click **RequisitePro > Document > Save As**. The Document Save As dialog box appears; it displays the file name with its extension changed to **.doc.**

3 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 section *Importing from Word* on page 168.

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 before you import the document. RequisitePro overwrites 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. The Word styles are then maintained in the RequisitePro document. Refer to *Creating Your Own Outlines* on page 238 and to the Microsoft Word documentation for help in creating Word templates.

Importing Word Documents and Requirements

To use the Import Wizard to import Word documents:

1 Open the project into which you will be importing the Word document.

2 Select the project in the Explorer and click **File > Import**. The Import Wizard opens, and the Select a Source screen appears.

3 Select the **Microsoft Word Document** option.

4 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.

5 Click **Next** to continue. The Select Import Content screen appears.

6 Designate the import content by selecting the appropriate option (**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 on the basis of 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.
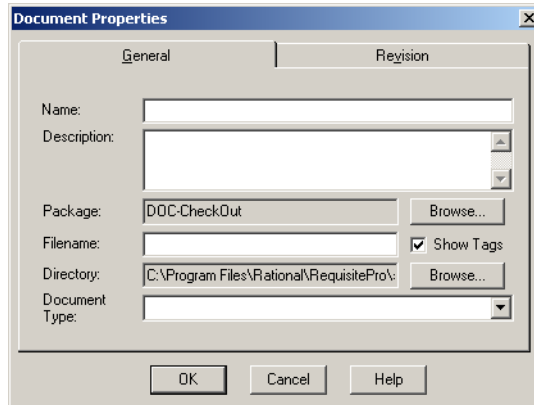
2 Complete the following information:

- Type the document **Name** (any length up to 64 characters).

- Type the **Filename.** (RequisitePro assigns an extension according to the Document Type selected.)

- Select 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.

If the document type you selected contains formatting, you have the option of retaining the formatting of the imported document or overwriting it with the format of the document type outline that you selected.

The Requirements to Import 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.

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, and traceability and type a change description for the requirements you import.

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**.

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

□   *Text delimiters.* The 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 styles.* The 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**.

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.

When you are satisfied with your selection, click **Next** to continue. The Import Wizard displays the final Status screen.

9   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 on the basis of key words, text delimiters, or Word styles. It creates requirements from the text it finds and leaves the rest of the document behind. This option gives you 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 Requirements to Import screen appears.

4   Follow Steps 4-9 in the section *Importing Both Requirements and the Document* on page 169.

   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 if 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 Type information about the new document. (See Step 2 in the section *Importing Both Requirements and the Document* on page 169.)

   If the document type you selected contains formatting, you have the option of retaining the formatting of the imported document or overwriting it with the format of the document type outline that you selected. Click **Yes** to import the document text and formatting; click **No** to import the document text and to apply the formatting of the document type you selected.

   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 168.)

Importing a CSV File

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. Using a comma-delimited file format allows data to be shared between database systems that use different formats.

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.

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 recognizes a hierarchical numbering scheme and imports lower-level requirements as children of a higher-level requirement.
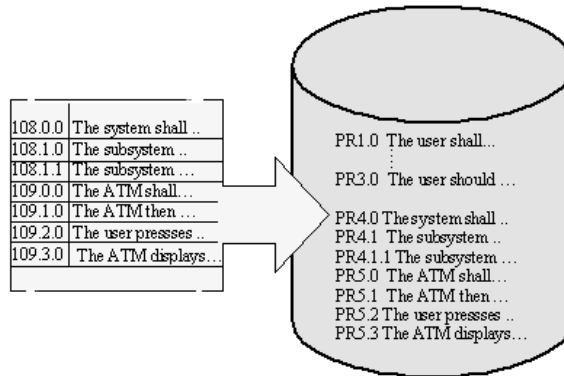
Requirements in a CSV file are renumbered when they are imported into the project database.

Preparing a CSV File for the Import Wizard

The CSV file and RequisitePro must be configured properly in order for you to import all information:

- The CSV file must contain a header in RequisitePro format. RequisitePro uses the following header format:
  <Tag>, "Requirement text", "Name", <Attribute 1>,<Attribute 2>, <Attribute 3>...
  The requirement type specified in the <Tag> field determines the default requirement type that are 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 do not match, the default values for the requirement type are inserted during the import process. (See *Creating and Modifying Requirement Attributes* on page 243.)

- 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 Attributes and Attribute Values* on page 242.)

Note: Multiple-value list attributes appear in a CSV file in quotes, separated by commas (for example, "Chris, Sarah, John").

- If the CSV file contains null values (blank spaces) for any list-type requirement attributes, those attributes are assigned the default value as defined in the Project Properties dialog box. (You open the dialog box by selecting the project in the Explorer and clicking **File > 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 Attributes and Attribute Values* on page 242.)

- All requirements in the CSV file are 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 are renumbered with the assigned requirement tag, and some hierarchical relationships may be lost.

Defining a Header for a CSV File

When you import a CSV file from another RequisitePro project or a non-RequisitePro application, the first row of the CSV file must be a header row with a column heading for each column of data. RequisitePro uses the header to match column headings in the import document with attributes in the project.

RequisitePro uses the following header format:
<Tag>, "Requirement text", "Name", <Attribute 1>,<Attribute 2>, <Attribute 3>...

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 it 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 are not preserved. Imported requirements are added to the project's requirements list and renumbered accordingly. Hierarchical relationships are retained.

2. Add the literal string **Requirement text** as 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. For requirement name, type in *Name*, followed by a comma. The column headings in the header can be anything you like, but you can save time by using names (that is, labels) of attributes as they appear in your project.

   - RequisitePro looks at the header in the CSV file and tries to match the column heading to an attribute in the project. During the import process you are 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 creates 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 179.)

Using the Import Wizard to Import a CSV File

1. Open a project.

2. Select the project in the Explorer and click **File > Import**.
   The Import Wizard opens, and the Select a Source screen appears.

3. Complete the following information:

   - Click the **CSV** button to import requirements from a CSV 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.)

4. Click **Next** to continue. The Match Requirement Types screen appears.

5. 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.

6 Click **Next** to continue. The Match Attributes screen appears.

7 Click **Match Manually** to check that RequisitePro mapped the attributes correctly. The Match Attributes dialog box appears.

8 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 cannot make a match, the imported attribute is listed but has 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 ignores any attributes left unconnected. Only matched attributes are imported

- ▫ To remove a match, select the pair and click **Unmatch**.
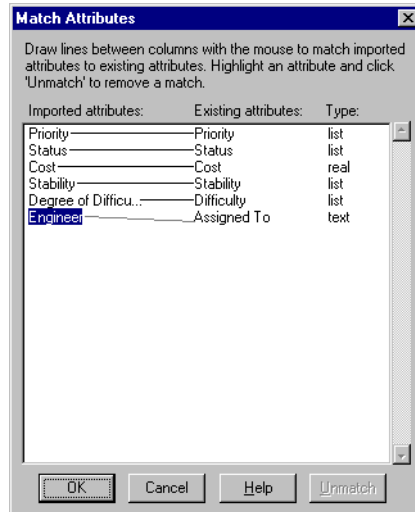
When you are satisfied with the attribute matching, click **OK** to return to the Wizard.

9 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:

- ▫ By adding the imported requirements as new requirements in your document or database

- ▫ By overwriting your existing attribute values with those in the imported CSV file.

Depending on your choice, you will take one of the two paths described in the sections that follow.

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 box. 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, file name, 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 is not imported. You can accept or delete the requirements before importing them.

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.

□ 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 views.

▪ Attribute Matrixes and Traceability Trees can be exported as CSV files or as Microsoft Word documents.

▪ Traceability Matrixes can be exported as CSV files only.

Setting view properties for requirement text and name affects what is exported. If the requirement text and name are not displayed in the view, they are not exported. If you have queried the view, only the filtered requirements are exported.

Exporting a View as a CSV File

As described in *Importing a CSV File* on page 173, 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.

Depending on the view (which is exported as an ASCII file), each requirement is exported with the requirement tag, followed by the requirement text, requirement name, and requirement attributes.

- From an Attribute Matrix, the tag, name, text, and attributes displayed are exported.

- From a Traceability Matrix, the tag, name, text, and traceability relationships are exported.

- From a Traceability Tree, the tag, name, and text are exported. Each indented (traced) requirement includes commas representing each level in the hierarchy. Only the expanded levels in a view are exported.

Setting view properties for requirement text and name affects what is exported. If the requirement text and name are not displayed in the view, they are not exported. If you have queried the view, only the filtered requirements are exported.

Hierarchical requirements are exported with their full hierarchical tag number. This number is used to denote the hierarchical relationships and is used on subsequent imports to reconstruct the hierarchy.

To export a view as a CSV file:

1 Open the view you want to export.

2 Click **File > Export > Export to CSV**.

3 Type a file name for the exported view (use the .csv extension), and click **Save**.

The file is exported. You can open the CSV file in:

- RequisitePro

- Word outside of RequisitePro

- Excel

- Any other utility that reads this type of file

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 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 box.

- ❑ 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), 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 (*treexprt.dot*). You can modify this template and its styles to suit your needs. Heading styles 1-9 can be modified, but they must be retained.

Creating Projects

12

In Rational RequisitePro, the concept of a project is used to provide the groundwork for organizing and effectively managing requirements. Each project includes the following: a database, documents, packages, document types, requirements, requirement types, attributes, attribute values, discussions, traceability relationships, saved personal and project-wide views, revision histories, and security information. Each project resides in a separate directory. This storage method simplifies the process of organizing, archiving, and managing project files. The project-based system is designed to minimize confusion and help you focus on one set of requirements.

Only one project can be open at a time. Numerous requirements documents can belong to a project; different users can edit different documents simultaneously.

Documents are stored separately from the project database, usually in a project directory. Avoid storing documents on your license server if you use RequisiteWeb. If you are storing documents in another location, use Universal Naming Convention paths whenever possible.

RequisitePro project administrators create and manage all elements of projects. This chapter provides instructions for performing the following tasks:

- Creating a RequisitePro project.
- Creating a project template.
- Creating a RequisitePro project from a baseline.
- Converting earlier versions of RequisitePro projects to the latest release.

Creating a RequisitePro Project

When you create a project in RequisitePro, you have the choice of basing the project on a blank template, on one of three templates included with RequisitePro, or on a template created from an existing project. When you create a project based on a template, the document and requirement types, attributes, security information, and data of the selected template are copied to the new project.

If you have a baseline of a RequisitePro project, you can use that baseline to create new projects in RequisitePro. For example, you may want to base the next release of a project on a stable configuration of the previous release. To create a RequisitePro project from a baseline, RequisitePro project administrators perform tasks in Rational Administrator and Rational ClearCase, implementing the Unified Change Management model. Note that the project created from a baseline does not maintain any cross-project traceability links from the original baselined project. (See *Creating a RequisitePro Project from a Baseline* on page 191 and *Using Rational Unified Change Management to Create a Project Baseline* on page 255.)

Reviewing RequisitePro Project Template Options

Three project templates are shipped with RequisitePro; they are described in the sections that follow. They contain packages, document types, requirement types, and requirement attributes, and they provide project structure that you can use to get started. After you create a RequisitePro project based on one of these three templates, you can set your own security and add your own data to the new project. More information about each of these templates is available from online **Help**.

- ▪ **Use-Case Template**. The Use-Case Template is ideal for implementing the Rational Unified Process. This template is designed for RequisitePro projects that use the RequisitePro integration with Rational Rose use cases and ClearQuest enhancement requests. Use cases are particularly applicable to object-oriented software design using the Unified Modeling Language and for applications that are user-intensive.

- ▪ **Traditional Template**. The Traditional Template is best suited for projects that use declarative requirements specifications. This template includes a traditional Software Requirements Specification outline rather than use cases.

- ▪ **Composite Template**. The Composite Template allows you to combine the best qualities of both use-case modeling and traditional requirements specification techniques. This template provides an outline for a modern software requirements specification package applying both traditional document-based techniques and use-case modeling.

These templates provide packages, queries, and documents in accordance with the principles of the Rational Unified Process. The templates contain a Glossary document and a Requirements Management Plan document, which provide base content common to most requirements management needs, including descriptions of project artifacts, common terms, and roles. After you create a project based on one of these template, you can modify and customize the structure as the project evolves.

Determining a Database Type

Before creating a RequisitePro project, you decide which database to use to store the requirements information. The currently supported databases are Microsoft Access and the enterprise databases Oracle and Microsoft SQL Server. Refer to the release notes for specific database versions.

Use the following criteria when deciding which back-end database to use with RequisitePro:

▪ Use a Microsoft Access database with small work groups (five or fewer concurrent users). Use an enterprise database if you anticipate having more than five logged-on users at one time. Tests have shown that the performance of Microsoft Access decreases after the sixth simultaneous logged-on user. (These numbers may vary with network bandwidth.)

▪ Use an enterprise database if your team is distributed or connected through a wide area network (WAN). Enterprise databases provide socket-level access to remote network locations, which tend to perform better.

▪ Use an enterprise database if you are managing large numbers of requirements (tens of thousands).

Microsoft Access is not required on all databases. RequisitePro creates Access databases using the Access Jet Engine.

If you plan to use enterprise databases, RequisitePro provides scripts as a starting point for database administrators to create the RequisitePro schemas in a SQL Server or an Oracle server. These scripts can be modified.

If you plan to use Oracle, each client machine requires Oracle client software. For more information, see *Rational RequisitePro Installation Guide*.

Using the Data Transport Wizard, project administrators can move project data between Access, Oracle, or SQL Server databases. Data can also be moved between two Oracle databases or two SQL Server databases. However, the wizard cannot move data between two Access databases.

For more information on configuring SQL Server or Oracle, see *Rational RequisitePro Installation Guide*.

If you have installed the enterprise database setup under the Custom/Full installation process, you can access the following instructions from the RequisitePro help directory (<install drive>\Program Files\Rational\RequisitePro\help):

▪ Configuring an Oracle database (oraclesetup.html)

▪ Configuring a SQL Server database (sqlsetup.html)

For RequisitePro projects that use enterprise databases, the project administrator has the option to store either one or many RequisitePro projects in the same instance or database/schema. Refer to the following tips when deciding on the distribution of RequisitePro projects across enterprise databases:

- Avoid sharing an instance with applications other than RequisitePro. RequisitePro projects can potentially share an 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, because RequisitePro data must be synchronized with the RequisitePro documents, it is not recommended to share the instance with other applications. If it is necessary to share an instance, the only way that you can back up your RequisitePro data is through logical backups. You cannot perform image (physical) backups in a shared instance because whenever the data for one application must be recovered, the data for all applications is also recovered. This could create a situation where data from an application independent of RequisitePro must be restored, forcing you to restore out-of-date RequisitePro data as well.

- Place all RequisitePro Projects in one database/schema. Putting all the RequisitePro projects in one database/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 must be restored, all projects stored in that database/schema must be restored together. A restore operation overwrites all work done since the backup was created.

- Avoid one RequisitePro project per database/schema. Each project can be stored in its own individual database/schema. This maximizes flexibility, but it also creates more work for the database administrator. Projects stored in their own database/schema can be backed up and restored without affecting other projects. However, projects that participate in cross-project traceability must be in sync with each other. Cross-project traceability links may be lost if you restore one project but not the other or if you restore the projects from backups created at different points in time.

Naming Projects

RequisitePro uses two different names to identify projects:

- **Project name**. A descriptive name of no more than 64 characters.

- **Project file name**. The DOS file name, followed by the .rqs extension. This is the name you see if you view your project directory in Windows Explorer or File Manager.

When you create a project, RequisitePro automatically determines whether your operating system supports long file names. If it does, all file names, including project, documents, archives, and directories, use long names.

If you save projects and archives with long file names, you cannot read these names if you copy them to a network or drive that does not support long file names and does not offer a conversion method.

Creating a Project

1   Open the Create Project dialog box by doing one of the following:

  ▫   From RequisitePro, click **File > New > Project**.

  ▫   From Rational Administrator, in the Configure Project dialog box, click **Create** in the **Requirement Asset** area.
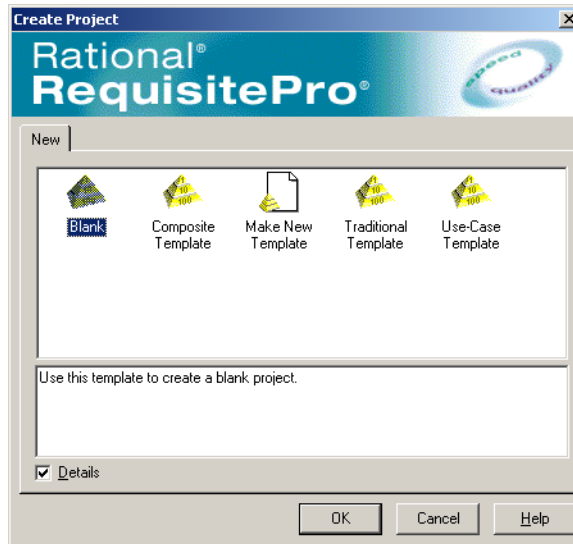
2   Select one of the following project templates:

  ▫   Select the **Blank** template, and set each project parameter.

  ▫   Select one of the default templates provided with RequisitePro.

❑ Select a template you created from an existing project, using the Project Template Wizard.

Note: Templates displayed here are located in the <install drive>\Program Files\Rational\ RequisitePro\Templates directory or in the secondary location specified in the Options dialog box. When you select a template, a description appears in the text box at the bottom of the dialog box. Select the **Details** check box to toggle the display of the template description box.

If you want to use templates created in an earlier version of RequisitePro, you must accept the option to upgrade them. Each upgraded template overwrites the old template in your selected templates directory, and a copy of the old template is added to the /Copy of Project Templates from v.2001/subdirectory.

3 Click **OK**. The Rational RequisitePro Project Properties dialog box appears.

4 Type general information about the new project..
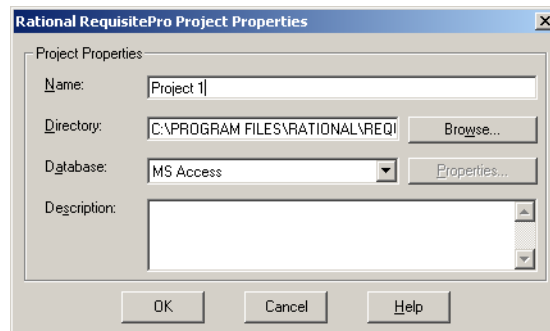
❑ Type a project name (up to 64 characters).

❑ Type the path for the project directory, or click **Browse** and select the directory. After the project is created, you cannot change this field.

❑ Select a database in which to store the project. You can create projects in Microsoft Access, SQL Server, or Oracle. If you select a database other than Microsoft Access, click **Properties** to configure the database. (For more information about selecting a database type, see *Determining a Database Type* on page 185.)

❑ Type a description of the project. (This step is optional.) You can modify the description after the project is created.

5 Click **OK**.

6 Click **Yes** to create the project directory, and then click **Close** when the directory has been successfully created.

Note: For more information on configuring an enterprise database, see *Rational RequisitePro Installation Guide*.

If you have installed the enterprise database setup under the Custom/Full installation process, you can access instructions from the RequisitePro help directory (<install drive>\Program Files\Rational\RequisitePro\help):

- ▫ Configuring an Oracle database (oraclesetup.html)
- ▫ Configuring a SQL Server database (sqlsetup.html)

What Happens When You Create a Project

When you create a new project, RequisitePro performs the following operations:

- It creates six project files:
    - ▫ **projectname.rqs**. A project information text file.
    - ▫ **projectname.mdb**. The project database (in Microsoft Access). This file is not used for enterprise databases.
    - ▫ **projectname.ldb**. Locks the Microsoft Access database file while you have the project open to prevent concurrent project use by multiple users. This file is not used for enterprise databases.
    - ▫ **structure.xml**. Project structure, including requirement types, attributes, and document types.
    - ▫ **security.xml**. Project security definitions, including group names, descriptions, and their access rights.
    - ▫ **permissions.xml**. Project security permissions for individual users, including document and requirement access by type.
- The project appears in the Explorer and is added to your project list. It includes several default packages; this project structure is provided by RequisitePro to help get you started.
- The requirement types and document types you created in the project become available for your use.

Creating a Project Template

You can create a template based on an existing project's structure, including document types, requirement types, attributes, and user and group permissions. You also have the option to include project data. An icon for the new template appears in the Create Project dialog box, and you can select it when creating new projects.

1 Open the Create Project dialog box by doing one of the following:

   ▫ From RequisitePro, click **File > Project > New**.

   ▫ From Rational Administrator, in the Configure Project dialog box, click the **Create** button in the **Requirement Asset** area.

2 Double-click the **Make New Template** icon.
   The Project Template Wizard opens.

3 At the Enter Template Information screen, type the following information:

   ▫ **Template Name**: Type in a name for the new template.

   ▫ **Template Location**: Choose a location for the new template. By default, templates are created in the Program Files\Rational\RequisitePro\Templates directory. You can set a second location for additional project templates, such as those shared on a network or used by a particular project. Use the **Tools > Options** command to open the Options dialog box and type the full path and subdirectory name under **Directories** in the **Project Templates** text box.

   ▫ **RequisitePro Project**: Choose a RequisitePro project on which to base the template structure; you can also include project data. Click the **...** button to browse to the project.

   ▫ **Include Project Data**: Select this check box if you want the template to include data from the selected project in addition to the project structure. Note that if the security has been set for the project, you must log on to the project. If security is set, only users with project structure permissions can create a template that includes project data.

   ▫ **Documentation File (optional)**: You can select an existing .rtf file that contains details about the template. Text from the file specified here appears in the **Details** text box on the Create Project dialog box when the template is selected. Click the ... button to browse to the file.

   ▫ **Icon File**: Select an icon for the template that will appear in the Create Project dialog box.

4 Click **Next** to continue.

5 Check the information at the Confirm screen and click **Finish** to create the template. The new template appears in the Create Project dialog box.

Creating a RequisitePro Project from a Baseline

If you have a baseline of a RequisitePro project, you can use that baseline to create new projects in RequisitePro. For example, you may want to base the next release of a project on a stable configuration of the previous release. See *Creating a Project Baseline with Unified Change Management* on page 223 and *Using Rational Unified Change Management to Create a Project Baseline* on page 255 for more information.

RequisitePro project administrators perform the following tasks in Rational Administrator and Rational ClearCase, implementing the Unified Change Management (UCM) model.

Note: A RequisitePro project created from a baseline does not maintain the cross-project traceability links, discussions information, and associations with Rational ClearQuest and Rational Rose from the original baselined project.

A UCM project and a Rational Administrator project must be created before a RequisitePro project can be created from a baseline. (Refer to ClearCase and Rational Administrator online help for more information.)

1 Create a UCM project.

2 Add a UCM component to the project that already contains a versioned RequisitePro project at a recommended baseline.

3 Set the recommended baseline for the new UCM project. (By default the baseline selected above will be selected.)

4 Create an integration view for the new UCM project.

To create a Rational Administrator project:

1 Click **Tools > Rational Administrator** to open Rational Administrator.

2 Click **File > New Project**. The Rational Administrator New Project Wizard appears.

3 Type requested information in the wizard, select **UCM enabled**, and select **Requirement Assets** to be versioned.
When you complete the wizard, the Configure Project dialog box appears.

4 Click the **Select** button to choose **Requirement Assets**.

5 Browse to the UCM view and select the .rqs file for the baselined RequisitePro project.

6 Click **OK** in the Configure Project dialog box.
The new RequisitePro project contains the data and structure from the selected baselined project.

The new project has the same name as the baselined project. You can change the name in the Rational RequisitePro Project Properties dialog box. You also have the option to remove the old baselined project from the RequisitePro list of projects in the Open Project dialog box.

Upgrading RequisitePro Projects to the Latest Version

If you try to open a project that was created in RequisitePro version 4.0 or later and that must be updated to the current version, a wizard appears. The Database Upgrade Wizard allows RequisitePro project administrators to upgrade an existing database structure and project data structure to the current RequisitePro release. (If the project was created in a version of RequisitePro earlier than 4.0, you must first upgrade the project to RequisitePro 4.0 before using the Database Upgrade Wizard. Contact Technical Support for information.)

Caution: If the RequisitePro project is associated with a Rational repository (rather than the more current structure of a Rational project, which can be created in Version 2001.03.00 or later), upgrading the project may cause irreparable harm to the Rational repository that you use with other Rational products. To protect your Rational repository, first upgrade your software and datastores to Version 2001A, and then upgrade the software and datastores to the current version. For more information, see "Upgrading from Earlier Versions of Rational Suites" in the *Rational Suite Installation Guide* (available on the Rational Solutions for Windows Online Documentation CD).

In the current version of RequisitePro, project data is organized into packages. When you upgrade older projects (which did not include packages) to the current release, RequisitePro organizes the requirement artifacts as follows:

- It creates a package for each requirements document; the package includes all requirements that are located in that document.

- It creates a package for each requirement type; the package includes all requirements of that type that are not located in documents. If a requirement type does not include any requirements or includes only requirements that are located in documents, RequisitePro does not create a package for that requirement type.

- It creates an Attribute Matrix package, a Traceability Matrix package, and a Traceability Tree package. Each view package contains all views of that type in the project.

When you upgrade older projects to the current version of RequisitePro, tables and properties of the database are modified, so you cannot revert to the state before the upgrade. We recommend that you back up the database before you start the upgrade.

If the project you are upgrading contains cross-project traceability links, you must upgrade the external projects as well. After you have completed the upgrade, you may move project artifacts into packages other than the default ones created by RequisitePro. For further information about moving artifacts in packages, see *Working with Packages* on page 232.

The upgrade process upgrades all RequisitePro projects in an enterprise database. Make sure all RequisitePro users have closed all projects in the database before continuing with the upgrade. If the database includes projects that are UCM-enabled and others that are not, RequisitePro flags the UCM projects, which forces you to perform a Check-in-all procedure prior to opening them. After you have completed this procedure, RequisitePro removes the flag, and you can open the project.

Follow the instructions at each screen in the Database Upgrade Wizard, and click the **Help** button to access online Help for the upgrade process.

Working with Project Security

13

Because Rational RequisitePro allows multiple users to access the same project documents and database simultaneously, project security is crucial. Security prevents system use, potential harm, or data loss from unauthorized user access to a project, document, or requirement. By default, security is disabled, which allows unlimited user access to the project.

We recommend that you enable security for all RequisitePro projects. Doing so ensures that all changes to the project are associated with the proper username of the individual who made the change, thereby ensuring that you have a complete audit trail for all changes.

Project security is crucial for projects with multiple users. In RequisitePro, users are given specific permissions that determine the amount or kind of access they have to projects. When security is enabled, users belong to groups. RequisitePro administrators assign group-specific permissions.

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 has not been enabled for the project, any user can open the RequisitePro project. When you open an unsecured project for the first time, RequisitePro allows you to log on with your Windows logon name, as a user name of your choice, or as the user name specified in the Options dialog box (click **Tools > Options**) **Default Project Logon** text box. The user name is added to the Administrators group list for the project.

If security has been enabled, the Project Logon dialog box appears each time you or another user opens the project. The project administrator who set security can assign passwords for other users. When security is enabled, this condition applies to the project regardless of how you open it (for example, from RequisitePro, from RequisiteWeb, from programmatic access using the RequisitePro Extensibility Interface, or from another Rational tool).

Setting Security

To enable or disable security for a project:

1 Click **File > Project Administration > Security**.

The Project Security dialog box appears.
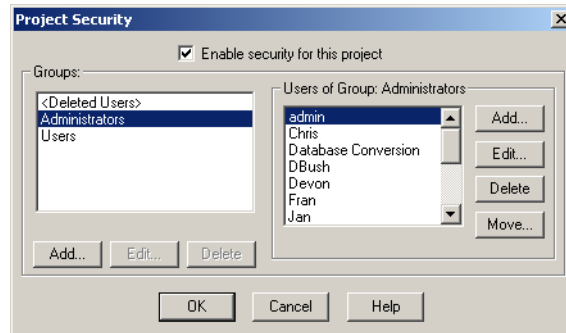
2 Select the **Enable security for this project** check box to set security; clear the box if you want to disable security.

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 that 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 this 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 Click **File > Project Administration > Security**.
The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

2 Click **Add** below the **Groups** list box.
The Group Permissions dialog box appears.
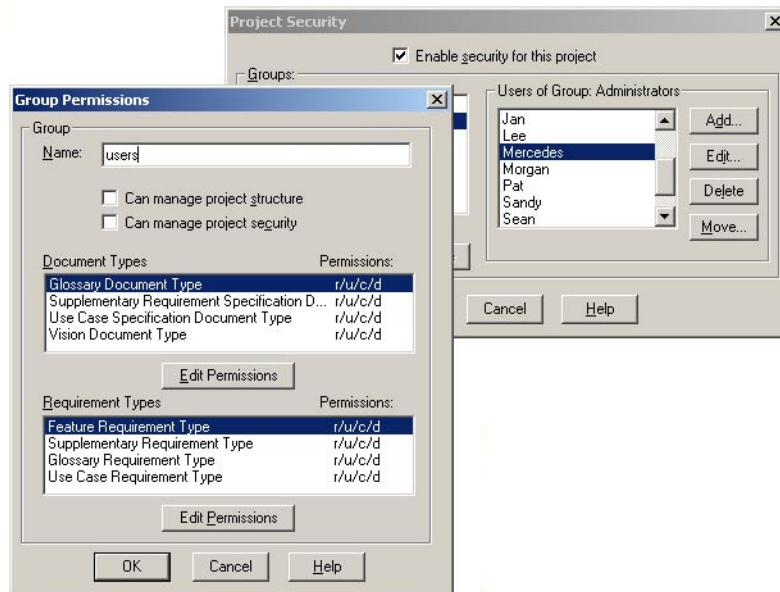
3 In the **Name** text box, type a name for the group.

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 200.)

5 Click **OK** to save and close the Project Security dialog box.

Deleting a Security Group

You can delete a group if you are a RequisitePro administrator or a member of a group with project security permissions and if all users have been removed from the group.

1 Click **File > Project Administration > Security**.

The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

2 In the **Groups** list box, select the group to delete.

3 Click **Delete**. RequisitePro prompts you to confirm the deletion.

4 Click **Yes**.

5 Click **OK** in the Project Security dialog box.
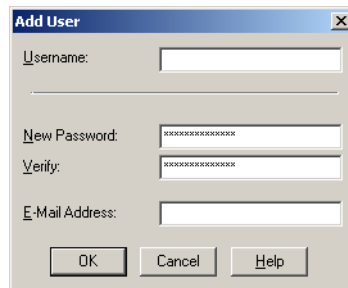
Adding a User to a Security Group

To add a user to a group:

1 Click **File > Project Administration > Security**.
The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

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. It should not exceed 20 alphanumeric characters, and it is 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. 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 *Responding to Discussions* on page 69.)

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   Click **File > Project Administration > Security**.
    The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

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 reinstating the user.

To delete a user:

1   Click **File > Project Administration > Security**.
    The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

2   In the **Groups** list, select the group containing the user.

3   Select the user in the **Users of Group** list.

4   Click **Delete** adjacent to the **Users of 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 Click **File > Project Administration > Security**.
The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

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.
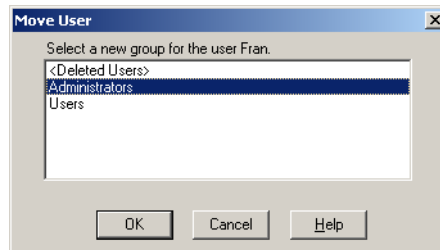
5 Select the group to move the user to.

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 Click **File > Project Administration > Security**.
The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

2 In the **Groups** list, select the group.

3 Click **Edit** below the **Groups** list.
The Group Permissions dialog box appears.

The Administrators group has full permissions. You cannot edit this group's permissions, but you can add and remove users from the Administrators group.

4 To assign project structure modification permissions to the group, select 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, select 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 Click **File > Project Administration > Security**.
The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

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.
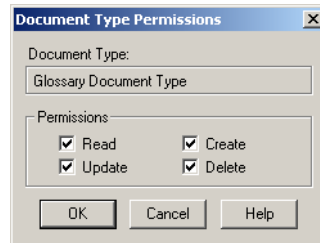
6 Assign document permissions by selecting the corresponding check box. Groups can have read, update, create, and delete permissions. To remove a permission assigned to a group, clear the check box that corresponds to the permission. If you do not want the group to have any permissions for this document 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 and to close each dialog box.

Assigning Requirement Type and Traceability Permissions

To assign requirement type and traceability permissions to a group:

1 Click **File > Project Administration > Security**.
The Project Security dialog box appears. (Make sure the **Enable security for this project** check box is selected.)

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.
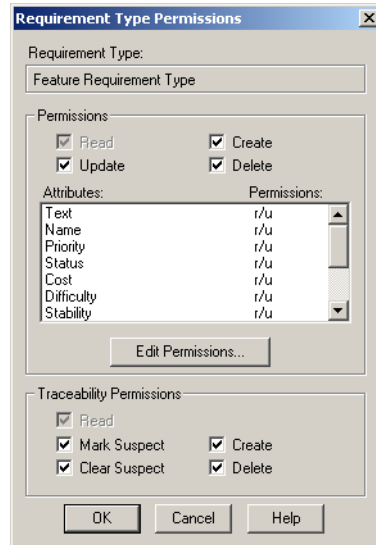
5   Assign requirement type permissions by selecting the corresponding check box.
    Groups can have read, update, create, and delete permissions for a requirement
    type. To remove one of the other permissions assigned to a group, clear the check
    box that corresponds to the permission.

    ▫   **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 selected by default, and
        the box cannot be cleared.

    ▫   **Update** permissions: Members of the group can modify all requirements of this
        type but not create or delete them.

    ▫   **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 selected by default, 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 **Clear Suspect** is selected, **Mark Suspect** 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 **Delete** is selected, **Create permissions** is automatically selected.

- **Delete** permissions: Members of the group can delete traceability relationships to and from requirements of this type.

7 To assign attribute permissions to the security group, select a requirement attribute and click **Edit Permissions**. For more information about attribute permissions, see the following section.

8 Click **OK** in each dialog box to save the modifications.

Assigning Attribute Permissions

To assign permissions for a requirement name, requirement text, or requirement attributes:

1 Select the requirement type, as described in the previous section.

2 In the Requirement Type Permissions dialog box, select the attribute, **Name**, 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.
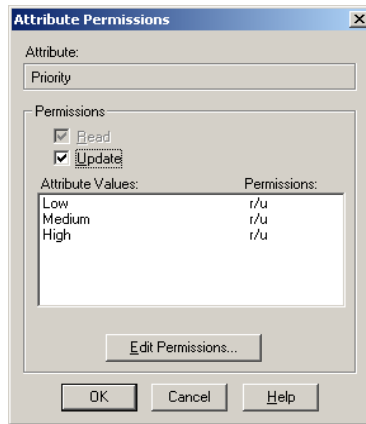
The **Read** permission check box is automatically selected and cannot be cleared. To allow users to modify attributes of the selected type, select the **Update** check box and refer to the section that follows for more information on assigning permissions to modify specific *attribute values*.

▫ For entry-type attributes, **Name**, or **Text**, the dialog box pictured below appears.
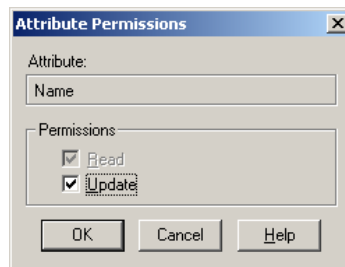
The **Read** permission check box is automatically selected and cannot be cleared.

4 Select 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 1-3 in *Assigning Attribute Permissions* on page 204.

2 Select 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 and attribute value in the list and click **Edit Permissions**.

The Attribute Value Permissions dialog box appears.
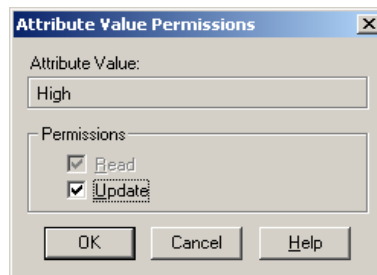
4 Select the **Update** check box to give members of the group permissions to modify the attribute value. (The **Read** permission check box is automatically selected and cannot be cleared.)

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.

Managing Projects

<div style="text-align: right; font-size: xx-large;">14</div>

This chapter provides instructions for the following tasks for managing Rational RequisitePro projects:

- Renumbering requirements

- Printing project summaries and reports

- Using Requirement Metrics

- Archiving projects

- Reading and recording a project's revision information

- Creating a project baseline with Unified Change Management

- Removing documents and requirements from a project database

- Moving projects

- Copying projects

- Moving a project between databases

The final section presents a list of file types used in RequisitePro.

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 *Rebuilding Requirement Tags in a Document* on page 137.

Printing Project Summaries and Reports

Printing a Project Summary in RequisitePro

1 Click **File > Project Administration > Print Summary**.

A standard Windows Print dialog box appears.

2 Select the options you want and print.

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 that the current version of SoDA for Word is installed and that a RequisitePro project is open.

1 Click **Tools > 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 opens. 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 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 the capability of reporting 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. You then combine one or more queries to produce a report.

Two types of reports are available in Requirement Metrics:

- A **static** report, which uses static filters and shows results about the project at the present time.

- A **trend analysis** report, which 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?	▪ **Requirements Creation** filter ▪ Options/Time Period > 10/15/99
How many High Priority requirements do I have?	▪ **Attribute Value** filter ▪ Priority = High
How many requirements went from Low Priority to High Priority in the last month?	▪ **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?	▪ **Requirement Text Change** filter ▪ Number of changes > 3 ▪ Options/Time Period > 10/15/99
What is the level of detail associated with my requirements?	▪ **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, and build queries and add them to your report. As you add filters to your queries, you limit the requirements in your report to those requirements that match your filter criteria.

Start Requirement Metrics with the **Tools > Metrics** command or the Metrics button. 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 at the bottom half of the main window.

The Query pane contains the following fields and controls:

Choose a Requirement View: Presents names of predefined views within angle brackets for selection. (Users may also 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.

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 Report 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 in the Report pane 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: Runs the report with the displayed query criteria.

Creating a Filter and Query

1 Select a view from the **Choose a Requirement View** drop-down list box. This can be a view that you have previously created, 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 Click the **Add Filter** button. The Add Filter dialog box appears, and a list of possible filters is displayed.

3 Select a filter and click **OK**.

Tip: You can also select a filter by double-clicking it.

An appropriate dialog box for the filter appears.

4 Make all your selections and 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 the **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 made available. 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. 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 box.

- ▫   Click **Specific Time Period**, and select an operator (such as ">") and a date from the drop-down list boxes. When you select the "Between" operator, you must select a beginning and ending date.

3 For reports with only time-sensitive filters, select the **Trend Intervals** check box and then select an interval from the drop-down list box.

Note: If you select "Any Time" as your relative time period, the check box is not enabled because there is no end date associated with this selection.

4 Select 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 you edit saved reports and 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 established, 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 then 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, archiving is the process of duplicating the database, documents, and all related files in a project for the purpose of restoring at a later time. You can archive projects by using one of the following commands:

- The RequisitePro Archive command.
- The Rational ClearCase archive command.

Note: .As an alternative to using these archiving procedures, you can create a baseline if you are implementing the UCM model with ClearCase. See *Creating a Project Baseline with Unified Change Management* on page 223.

Neither archive method will automatically create a copy of your database if you are using an enterprise database. Creating a baseline will create a copy for these databases. Refer to *Archiving Projects that Use an Enterprise Database* on page 218 and *Creating a Project Baseline with Unified Change Management* on page 223.

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 archive files; then use your configuration management tool to archive these files. Be sure to include all project documents in your archive.

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 Projects with the Archive Command

You can use the Archive command in RequisitePro to make a copy of your entire RequisitePro project in a separate directory.

Note: 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.

1 Click **File > Project Administration > Archive > RequisitePro Archive**. The Archive Project dialog box appears.
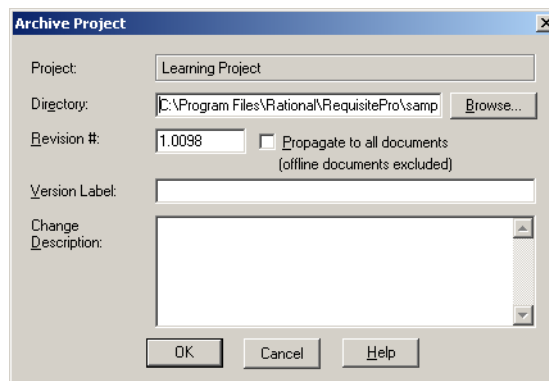
2 Select the directory where you want to store the backup copy. Click **Browse** to open the Browse for Folder dialog box. Navigate to a directory, select a folder, and click **OK**. (To add a new subdirectory to an existing directory path, click at the end of the **Directory** field and type a forward slash (/) and a new subdirectory name.)

3 If you want to add 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). This number appears in the **Revision** tab of the Project Properties dialog box.

4 To apply the revision number to the requirement documents, select the **Propagate to all documents (offline documents excluded)** check box.

Note: If security is enabled, you must have project structure permission to propagate the revision number. You must also have the project open exclusively.

5 If you want to assign a version number for this archived project, type a name for the archived version in the **Version Label** text box and a description for it in the **Change Description** text box. This label appears in the **Revision** tab of the Project Properties dialog box. A label can be used to easily identify this particular version of the project at a later time.

The **RequisitePro Archive** command performs the following:

▪ It creates a directory to hold the archive files. Choose a directory name like "BAKnnn," where nnn represents the version number of the project. (For example, if the version number of the project is 1.0037, the directory could be called BAK137.)

▪ It copies the RequisitePro project files (.rqs and .rql) to the directory.

▪ It copies all project documents to the directory.

▪ It updates the version of the original project (if you have security permissions to modify the project structure).

For Microsoft Access-based projects, the RequisitePro Archive command also performs the following:

▪ It copies the project database file (.mdb) to the directory.

▪ It updates the .mdb file in the archive directory with the location of the project documents in the archive.

For enterprise database projects, the .mdb file is not copied or updated. A solution provided in RequisitePro would remove configuration flexibility. Therefore, the database administrator must create a file containing a logical export of the database. This file must be placed in the archive directory created by RequisitePro. See "Tips for archiving and backing up enterprise databases" in online **Help**.

Note: To retrieve a project archived with the Archive command, add the archived project to your project list (click **File > Open Project,** and in the dialog box, click the **Add** button) and then open the project in RequisitePro.

Archiving Projects with Rational ClearCase

Before you archive your RequisitePro projects in ClearCase, a ClearCase view and VOB must exist. Projects that participate in cross-project traceability should be archived at the same point in time to maintain consistent traceability links between them.

When you archive projects that use an Access database, ClearCase includes all project files, documents, and database content in the archive. When you archive projects that use an enterprise database, ClearCase includes only project files and requirements documents in the archive. You must use your database utilities to archive the enterprise database.

To set the default ClearCase view in RequisitePro:

1   Click **Tools > Options**.

2   In the Options dialog box, type the target VOB location (drive, viewname, vobname, directory) in the **ClearCase View** field. This step defines the view to which the RequisitePro database and documents are copied during the archive functions.

3   Click **OK**.

To archive your RequisitePro project using ClearCase:

1   Click **File > Project Administration > Archive > Rational ClearCase**. The Archive with ClearCase dialog box appears.

2   Select the directory (ClearCase view) 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**.

3   If you want to enter a new revision number for the project, type it in the **Revision #** text box. This number appears in the **Revision** tab of the Project Properties dialog box. Note that this is not the same as a revision number in ClearCase.

4   To apply the revision number to the requirement documents, select the **Propagate to all documents (offline documents excluded)** 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 assign a version number for this archived project, enter a name for the archived version in the **Version Label** text box and a description for it in the **Change Description** text box. This label appears in the **Revision** tab of the Project

Properties dialog box. A label can be used to easily identify this particular version of the project at a later time from within RequisitePro. Note that this is not the same as a label in ClearCase.

The **Archive > Rational ClearCase** command performs the following:

▪ It retrieves the path of the view that was stored at the time of the last archive. If not present, RequisitePro looks for the default view path specified in the **Tools > Options** dialog box. If this is the first time the project is archived, RequisitePro creates the archive directory in your view and makes it a ClearCase element. It remains checked out so the appropriate files can be copied.

▪ It copies the RequisitePro project files (.rqs and .rql) to the directory.

▪ It copies all project documents to the directory.

▪ It updates the RequisitePro Revision # of the original project (if you have security permissions to modify the project structure).

▪ It checks in all files and the directory.

For Microsoft Access-based projects, the **Archive > Rational ClearCase** command also performs the following:

▪ It copies the project database file (.mdb) to the directory

▪ It updates the .mdb file in the archive directory with the location of the project documents in the ClearCase view.

For enterprise database projects, the .mdb file is not copied or updated. A solution provided in RequisitePro would remove configuration flexibility. Therefore, the database administrator must create a file containing a logical export of the database. This file should be placed in the archive directory created by RequisitePro and then checked into ClearCase.

Archiving Projects that Use an Enterprise Database

RequisitePro supports the use of the enterprise databases Oracle and SQL Server for RequisitePro projects. Several considerations should be kept in mind when you archive a RequisitePro project that uses one of these databases.

The following information guides RequisitePro project administrators, database administrators (DBAs), and system administrators in archiving or backing up RequisitePro projects that use enterprise databases so that no data is lost and archives of your projects can be created quickly and dependably.

As an alternative to archiving, you can create a baseline if you are implementing the UCM model with ClearCase. Creating a baseline simplifies the archiving process for projects that enterprise databases. See *Creating a Project Baseline with Unified Change Management* on page 223.

You can archive your project in one of two ways in RequisitePro: through the RequisitePro Archive command or through ClearCase.

Using the RequisitePro Archive command results in the following:

▪ It creates a directory to hold the archive files. Choose a directory name like "BAKnnn" where nnn represents the version number of the project. (For example, if the version number of the project is 1.0037, the directory could be called BAK137.)

▪ It copies the RequisitePro project files (.rqs and .rql) to the directory.

▪ It copies all project documents to the directory.

The database administrator must create a file containing a logical export of the database. This file should be placed in the archive directory created by RequisitePro.

Using the ClearCase archive feature results in the following:

▪ It reverts to the last archive location.

▪ It copies the RequisitePro project files (.rqs and .rql) to the directory.

▪ It copies all project documents to the directory.

The database administrator must create a file containing a logical export of the database. This file should be placed in the archive directory created by RequisitePro and then checked into ClearCase.

Note: Before it becomes necessary to restore a RequisitePro project, it is a good idea to verify the success of the archive. It would be unfortunate to realize that the restoration process is not working correctly when you must restore project data. To what extent you restore an archive depends on your circumstances.

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 (such as tablespace or datafile). The Oracle Export Utility can create a file that contains all the objects in a particular schema. The file 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.

The advantages of logical backups include the following:

▪ Making a logical backup is highly recommended before you upgrade to a 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.

▪ In Oracle, 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 must 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 to train new users.

▪ In Oracle, 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.

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 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.

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 the database and selecting Properties. When 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. 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 backup) refers to making physical copies of the database files while the database is shut down. Offline image backups can be used with RequisitePro data provided that a backup of the RequisitePro project file(s) and documents is created whenever an offline image backup is created.

Online image backup (or hot backup) 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 must be running in ARCHIVELOG mode to create online image backups. For SQL Server, an administrative task should 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.

Restoring Projects from an Archive

To restore a RequisitePro project from an archive, follow these steps:

1 Create a directory to hold the project you are restoring.

2 Do one of the following:

- If the **RequisitePro Archive** command was used, copy all the files from the archive directory to the new directory.

- If the **ClearCase Archive** command was used to archive the project, copy all the files from the ClearCase view into the new directory.

3 If the project uses a Microsoft Access database, you can start using the project from this new location. If the project uses an enterprise database, you must do the following:

- Restore the file containing the logical backup through the appropriate import utility (for example, SQL Server Enterprise Manager).

- Depending on how you are restoring the project, you may need to create database objects such as a database, tablespaces, a user, or a role.

- If you are using Oracle, make sure the alias points to the correct database.

- Modifications to the project files (.rqs and .rql) may be required as a result of changes in server name, database name, and user name. These changes can be performed by using the **File > Open Project** command, adding the project, and with the project selected, clicking the **Properties** button.

- When you open the project, you must update references to documents that were not located in the original project directory (before the project was archived) to reflect the new location. You can update the references by opening the document in RequisitePro; when the Locate document dialog box appears, use the **Browse** button to open the document in the new directory.

Note: Changes made to an archived project cannot be merged into any other project.

Viewing and Entering 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. You have the option of typing information about the most recent revision, and you can access the project's revision history.

Open the Project Properties dialog box by selecting the project in the Explorer and clicking **File > Properties.** Click the **Revision** tab.

- The **Revision** 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 (up to 20 characters). This field is optional, and it is available only if changes have been made to project properties.

- The **Date, Time**, and **Author** text boxes are read-only; they display the date and time the project was modified and the name of the user who made the last change.

- 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 Baseline with Unified Change Management

If your RequisitePro project is using the Unified Change Management (UCM) model, you can create baselines of the project. RequisitePro project administrators can create baselines of RequisitePro projects by performing tasks in ClearCase and Rational Administrator, implementing the UCM model. For more information about UCM, see *Using Rational Unified Change Management to Create a Project Baseline* on page 255.

For archiving projects that do not use the UCM model, refer to *Archiving Projects with Rational ClearCase* on page 217.

When you create a project from a baseline, the newly created project does not maintain the cross-project traceability links, discussions information, and associations with Rational ClearQuest and Rational Rose from the original baselined project. Refer to *Creating a RequisitePro Project from a Baseline* on page 191.

You can create a baseline of a RequisitePro project when the following conditions are met:

- The RequisitePro project must be associated with a UCM-enabled Rational project in Rational Administrator.

- The RequisitePro project must be versioned.

- All users must have closed the Requisite Pro project.

To check in the RequisitePro project:

1 Click **Tools > Rational Administrator** to open Rational Administrator.

2 Select the Rational Administrator project, right-click, and select **Configure** on the shortcut menu.

3 In the Configure Project dialog box, in the **Requirements Assets** area, click the **Check In All** button.

4 Confirm your selection at the messages that follow, and type an activity to describe the baseline in the Check in all dialog box.

5 After the check in operation is completed, close the Configure Project dialog box.

The time required for checking in a project is proportional to the number of requirement types, documents, and saved views in the project.

To create the baseline:

1 Open the Rational ClearCase Project Explorer. (From Rational Administrator, you can click **Tools > Rational ClearCase Project Explorer**.)

2 Right-click the integration stream for the associated UCM project and click **Make Baseline** on the shortcut menu.

3 Type or edit the **Baseline Title**, select a **View Context**, and click **OK**.

Note: You can ignore the message that the integration view contains elements that are currently checked out. It is not necessary to check in all files if you are creating a baseline of a RequisitePro 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. To remove documents and requirements from the database, you must have exclusive access to the project. (For more information about the exclusive option, refer to *Working with Projects and Project Packages* on page 32.)

Before you delete a document, be aware that some of the requirements in the document may have been assigned to other packages. If you delete the document, all those requirements are deleted. We suggest that you create an Attribute Matrix view for the requirement type of the requirements in that document. Check the Location

attribute to determine the document in which those requirements are located, and check the Package attribute to determine whether they are associated with other packages.

To remove documents and requirements:

1 Select the document in the Explorer and click **Edit > Delete**.

A confirmation dialog box appears.
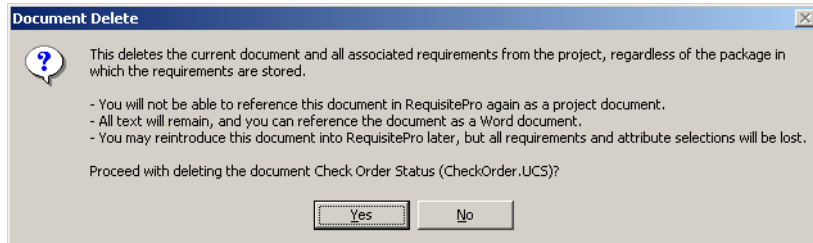
2 Click **Yes**. RequisitePro removes the requirements formatting from the document and removes the requirements from the project database. All text remains in the document, and you can open the document in RequisitePro as a Microsoft Word document (but not as a requirements document) or in Word outside of RequisitePro.

Moving Projects

Do not attempt to copy or move a RequisitePro project by copying the project directory from one location to another. Internal unique identifiers may cause conflicts if the project uses cross-project traceability.

To move project files to a new location:

1 Remove the project from your list of projects. Click **File > Open Project**.

The Open Project dialog box appears.

2 Select the project and click **Remove**.

3 Copy the project files (.rqs, .rql) to your new location using Windows Explorer. If the project was created in Microsoft Access, copy the Access database file (.mdb) to your new location.

4 Add the project in its new location to the list of projects. Click **File > Open Project**, and in the Open Project dialog box, click **Add** at the **Select a Project** field.

5   Rename the original project directory and all directories that contain project documents (so that you have a backup in case anything goes wrong). You can delete this directory when you are comfortable that the move was successful. If you want to save a copy of the original directory, see the next section for instructions.

6   Open your project in RequisitePro. The first time you open a project document that is not stored in the project directory, you are prompted to locate the document. Select it from the new location.

Note: If you have a document that is not stored in the project directory and you try to open it, you may be prompted to find it and to select it from the new location. If you are using the project with integrations, you must reconfigure those integrations after you move the project. For more information, refer to *Rational Suite Administrator's Guide*.

If you want to move an entire SQL Server of Oracle database (including all RequisitePro projects in the database) to another server, use the native tools provided with the database system. Consult your database administrator.

If you are moving the project data to a new database, use the Data Transport Wizard.

Copying Projects

You can copy the structure or data (or both) of a RequisitePro project, but do not attempt to copy the project directory from one location to another. Internal unique identifiers may cause conflicts if the project uses cross-project traceability. If you are using an enterprise database for your RequisitePro project, copying the project directory does not copy the project database. Both copies of the project will continue to point to the same database instance, and conflicts between document and requirement updates will result.

You can copy the structure and data of a RequisitePro project in one of the following ways:

▪   If you are using an Access database for your RequisitePro project, you can move a project to another location and keep a backup copy. (Refer to the previous section.)

▪   For any project, you can create a template based on the project and create a project based on that template. Document types, requirement types, attributes, user and group permissions, views, and data can be copied to the template and to the new project. (Refer to *Creating a RequisitePro Project* on page 183.)

▪   If you are implementing the UCM model with ClearCase, you can create a project from a baseline. All the data from the baseline project is copied to the new project. (Refer to *Creating a RequisitePro Project from a Baseline* on page 191.)

You can also split a project and keep some requirements in one project and others in a new project. Before you begin, we strongly recommend that you archive your original project. Keep in mind that you cannot merge the two copies of the project back together into one project.

1 Use the **File > Project Administration > 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 Delete requirements in each project until you have one copy of each requirement in each project. (See *Deleting Requirements* on page 140 for more information.)

Moving a Project Between Databases

The Data Transport Wizard can move RequisitePro projects between Microsoft Access, Oracle, and SQL Server. It can also move a SQL Server or Oracle project to another database of the same type, but it cannot move data between two Access databases. The wizard moves one project at a time, and it does not move projects that are connected by cross-project traceability.

The Data Transport 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 an enterprise database.

Note: Make sure all RequisitePro users have closed the project before you continue. It is strongly recommended that you archive or back up both the source and the destination database and related documents before continuing with the move. For more information on configuring an enterprise database, see *Rational RequisitePro Installation Guide*.

If you have installed the Oracle Setup and SQL Server Setup under the Custom/Full installation process, you can access the following documents in your RequisitePro Help directory (<install drive>\Program Files\Rational\RequisitePro\help):

- Configuring an Oracle database (oraclesetup.html)
- Configuring a SQL Server database (sqlsetup.html)

Starting the Data Transport Wizard

It is strongly recommended that you archive or back up both the source and the destination database and related documents before continuing with the database type conversion. (Refer to *Archiving Projects* on page 214.)

Note: Prior to running the wizard, you must open RequisitePro once. Then make sure to close any open RequisitePro project before starting the wizard.

Open the Data Transport Wizard in Windows Explorer. The executable, **rqdatatransportwiz.exe**, is located in the Rational\RequisitePro\bin\directory.

The Data Transport 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.

Moving Project Data to an Oracle Database

To move a RequisitePro project to an Oracle database, follow the step below. If you want to move the entire database (including all RequisitePro projects in the database) to another server, use the native tools provided with Oracle. Consult your database administrator.

We recommend that you archive your project before you move it to another database. Click **File > Project Administration > Archive > RequisitePro Archive**. The destination database must contain a RequisitePro schema. Install the Oracle Setup under the Custom/Full installation process. Then refer to "Configuring an Oracle database" in online Help.

1 Open the Data Transport Wizard in Windows Explorer (see the preceding section).

2 Click **Next** at the first Data Transport Wizard screen, and then click **Browse** to select the project you want to convert.

3 At the project/database screen, click **Choose** to open the Database Properties dialog box. Select **Oracle** as the type and click the **Configuration** button. The Microsoft ODBC for Oracle Setup dialog box appears. Do not modify the default entries in the **Data Source Name** and **Description** fields.

4 Type your **User Name** for logging on to the Oracle database. This should be supplied to you by your Oracle database administrator.

5 For the **Server** field, type the alias you created when configuring your machine (for example, OracleDB).

6 Click **OK** to return to the Data Transport Wizard project/database screen.

7 Click the **Account Info** button to enter database account information and follow the remaining screens. For **Schema**, type the name of the database schema that has been established by your database administrator for storing projects. (All projects can use the same database schema.) Then view the Conversion Report, and exit the wizard.

Moving Project Data to a SQL Server Database

If you want to move data from a RequisitePro project to a SQL Server database, follow the steps below. If you want to move the entire database (including all RequisitePro projects in the database) to another server, use the native tools provided with SQL Server. Consult your database administrator.

Note: We recommend that you archive your project before you move it to another database. Click **File > Project Administration > Archive > RequisitePro Archive**. The destination database must contain a RequisitePro schema. Install the SQL Server Setup under the Custom/Full installation process. Then refer to the topic "Configuring a SQL Server database" in online **Help**.

1 Open the Data Transport Wizard in Windows Explorer. The executable, **rqdatatransportwiz.exe**, is located in the Rational\RequisitePro\bin\ directory.

2 Click **Next** at the first Data Transport Wizard screen, and then click **Browse** to select the project you want to convert.

3 At the project/database screen, click **Choose** to open the Database Properties dialog box. Select **SQL Server** as the type and click the **Configuration** button.

4 In the Create a New Data Source to SQL Server dialog box, do not modify the Name or Description. In the **Server** field, type the name of the SQL Server, supplied by your database administrator. Click **Next.**

5 On the next screen, select the option **With SQL Server authentication using a login ID and password entered by the user.** (RequisitePro does not support Windows NT authentication.) Be sure the check box **Connect to SQL Server to obtain default settings for the additional configuration options** is selected. Type a login ID and password supplied by your database administrator, such as **ReqPro** and **reqpro**. Click **Next**.

6 Select the check box **Change the default database to** and select a database name supplied by your database administrator, such as "RequisistePro." Click **Next**.

7 Click **Next** to accept the default language, character, and regional settings. The use of log files, shown on the screen that follows, is optional. Do not select the check box **Change the language of SQL Server system messages to . . .** The use of this check box prevents users from opening the project after its initial creation. Click **Finish**.

8 In the ODBC Microsoft SQL Server Setup dialog box, click the **Test Data Source** button. Click **OK** in the SQL Server ODBC Data Source Test dialog box. Then click **OK** to return to the Data Transport Wizard project/database screen.

9 Click **Account Info** to enter database account information, and follow the remaining screens. For **Schema**, type the user name of the owner of the database tables. Then view the Conversion Report, and exit the wizard.

RequisitePro File Types

RequisitePro uses the following file extensions:

File Extension	Definition
.rqs	A RequisitePro project information file.
.mdb	A RequisitePro project database (using Microsoft Access). This file is not used for enterprise databases
.rql	A RequisitePro project file that specifies the ODBC and database account information.
.xml	RequisitePro project files that contain structure, security, and permission information.
.doc	A Microsoft Word document file.
.bak	A backup document file.
.dot	A Microsoft Word template.
.def	An outline's definition file.
.txt .mnu	Plain text menu files used to add commands to the toolbar.
.hlp	A Windows application help file.

Working with Project Information

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Project administrators can modify information about a Rational RequisitePro project, including:

- General project information
- Packages
- General document information
- Document types
- Requirement types
- Requirement attributes
- Attribute values
- Cross-project traceability

Working with General Project Information

You can create and modify a RequisitePro project's general information through the **General** tab in the Project Properties dialog box.

1 In the Explorer, select the project and click **File > Properties**.

   The Project Properties dialog box appears.

2 Click the **General** tab.

3 In the **Name** text box, type or modify the project name (up to 64 characters).

   You can change the name at any time. Be sure to use a unique project name for each project; this is important when configuring e-mail using the Rational E-mail Reader.

4 In the **Prefix** text box, type or modify the project prefix. This identifier is used to identify requirements and requirement types in this project when it is referenced as an external project for cross-project traceability.

   The prefix can be up to 8 characters, it is stored in uppercase letters, and it can be changed at any time.

5   The **Directory** text box specifies a path for RequisitePro to store the project. For new projects, type the project directory, or click **Browse**. After the project is created, you cannot change this field.

You can later relocate the project by moving the project directory to another location in the system. To access the project in its new location, users must add it to their project lists.

6   The **Database** field displays the type of database selected for the project. You have the option to create projects in Microsoft Access, SQL Server, or Oracle. To modify the database type, you must run the Data Transport Wizard. You can click **Properties** to open the Database Properties dialog box, where you can view and modify information about the database.

7   In the **Description** text box, type a description (or modify the existing description) of the project's purpose and content. (This step is optional.)

8   Click **OK**.

Working with Packages

Project information is organized in packages, which are units of related artifacts. The project's root package is displayed as the project node, and the contents of each root package are displayed beneath it. You can create, rename, move, and delete packages as needed.

To create a package:

1   In the Explorer, select the project name or an existing package, and click **File > New > Package**.

The Packages Properties dialog box appears.

2   In the **Name** box, type the name under which the package will be listed in the Explorer. The name cannot include commas, colors, nonprintable characters, or carriage returns, and it must be unique relative to other packages at its location.

3   In the **Description** box, type a brief description of the package.

4   Click **OK**.

The new package appears in the Explorer, nested within the project or package you selected in Step 1.

To rename a package:

1   In the Explorer, select the package you want to rename and click **File > Properties**.

The Package Properties dialog box appears.

2   In the **Name** box, edit the package name. The name cannot be the same as the name of another package at the current location.

3   Click **OK**.

The renamed package is displayed in the Explorer, alphabetized by the new name.

You can move artifacts (requirements, views, documents, and other packages) between packages in one of two ways:

▪   You can drag and drop the artifact from one package to another in the Explorer. (Make sure that the package name is unique among the other packages where it is located.)

▪   You can select the artifact in the Explorer, click **File > Properties**, and modify the package assignment in the Properties dialog box.

To delete a package, you must first make sure that it is empty. (An empty package does not have indented artifacts listed below the package name.)

1   In the Explorer, expand the view of the package so that all the artifacts it contains are listed.

2   Move or delete all the artifacts in the package.

You can drag the artifacts to other packages, or you can delete the artifacts by selecting an item in the package and clicking **Edit > Delete**. This removes the artifact from the project permanently.

3   Select the package and click **Edit > Delete**.

RequisitePro deletes the package from the Explorer and from the project database.

Working with Document Information

You can modify general document and document type information through the Project Properties dialog box.

Viewing and Modifying Document Information

1   Select the project in the Explorer and click **File > Properties**.

The Project Properties dialog box appears.

2   Click the **Documents** tab.

3   Do the following:

  ▫   Select or clear the **Save documents in RequisitePro Format** check box. If this check box is selected, documents are secure; that is, they cannot be opened in Word outside of RequisitePro. If this check box is cleared, documents are not secure; that is, they are saved in Word format and can be opened in Word outside of RequisitePro.

  ▫   Select or clear the **Enable Extended Editing of documents** check box. If this check box is selected, the requirement text can be modified and saved in a view in RequisiteWeb or in a Rational Rose use case (Integrated Use Case Management). If this check box is cleared, text of requirements located in documents can be modified and saved only in those documents.

4   Click **OK**.

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 is a template that is applied to your RequisitePro documents. It serves as an outline for each RequisitePro 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. When you create a project based on a template, default document types are included, but you can add or modify the document types at any time. 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 new document inherits the style and functional attributes 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 In the Explorer, select the project and click **File > Properties**.

The Project Properties dialog box appears.

2 Click the **Document Types** tab.
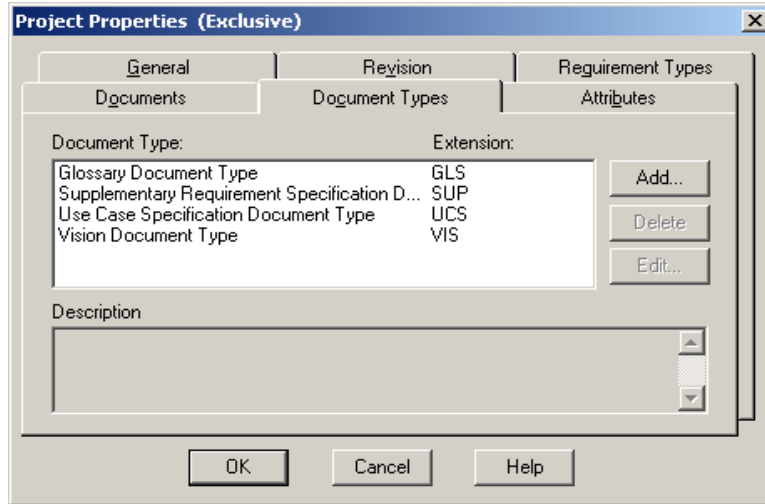
3 Do one of the following:

- ▫ 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.
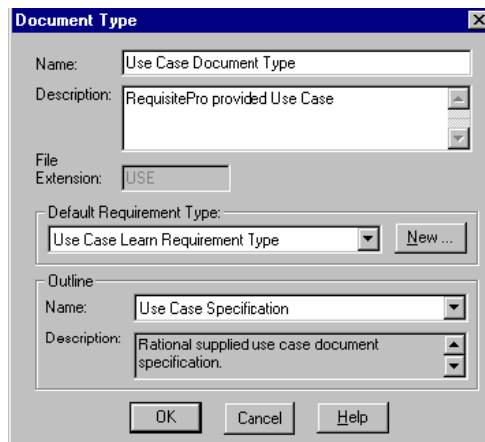
4 In the **Name** text box, type or modify a unique name for the document type (up to 64 characters).

5 In the **Description** text box, type or modify a description (optional).

6 In the **File Extension** text box, type or modify a file extension. Type a three-character text string, or, if your operating system supports long file names, a longer extension. (File extensions can contain a maximum of 20 characters in RequisitePro.) The file extension is applied to all documents associated with the document type.

7 Select a requirement type in the **Default Requirement Type** list.

8 Select an **Outline** from the list. If you use the default selection **None**, documents are associated with the normal.dot Microsoft Word template. See *Using RequisitePro Document Outlines* on page 237 for more information on available outlines.

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 this information in the Microsoft Word **File > Properties** dialog box. Then in the document itself, right-click on the **Company-Name** field, and select **Update Field**.

Deleting Document Types

If no documents of a particular document type exist in a project, you can delete the document type from the list. If security is enabled, you must have project structure permission to delete a document type.
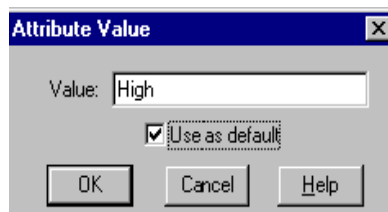
1 In the Explorer, select the project and click **File > Properties**.

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**.

5 Click **OK**.

Using RequisitePro Document Outlines

Outlines are document templates that are useful for maintaining consistency across RequisitePro 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:

- Software Requirements Outline

- Modern Software Requirements Specification

- Functional Test Case Specification

RequisitePro includes the following Rational Unified Process (RUP) outlines 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 Test Plan

RequisitePro includes these additional outlines for business modeling:

- RUP Business Glossary

- RUP Business Rules

- RUP Business Vision Document

- RUP Business Use Case Specification

- RUP Business Use Case Realization Specification

- RUP Supplementary Business Specification

The project templates provided with RequisitePro include specific document outlines that you can use. See *Reviewing RequisitePro Project Template Options* on page 184.

Note: If you have installed Rational TestManager, we recommend that you develop all test artifacts in that tool. Test-related outlines are included with RequisitePro for users who do not have TestManager.

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 type the company name or other information in the Microsoft Word **File > Properties** dialog box. In the document, right-click the **Company-Name** field and select **Update Field**.

Creating Your Own Outlines

You can create your own outlines to use for RequisitePro documents.

1 Start Microsoft Word outside of RequisitePro.

2 Create a new Word template. (See the Word documentation for more information about creating templates.)

3 Copy the new template to the <install drive>\Program Files\Rational\RequisitePro\outlines directory.

Note: Microsoft Word templates that apply to RequisitePro documents are automatically stored as document outlines in the RequisitePro outlines subdirectory. You can set a second location for additional outlines, such as those shared on a network or used by a particular project. Use the **Tools > Options** command to open the Options dialog box and type the full path and subdirectory name under **Directories** in the **Document Outlines** text box.

4 In a text editor, create a new text file containing the following three lines of information, separated by carriage returns (<CR>):

- The outline name, up to 64 characters
  This logical name must be unique in the **Outlines** directory.

- A description of the outline, up to 256 characters

- The Word template's file name (with the .dot extension)

For example:

```
Acme Enterprises Standard Software Requirement Specifications<CR>
Standard outline used for Software Requirements Specifications at
Acme Enterprises<CR>
acme_srs.dot
```

5 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**).

To enable your team to create consistent documents, you can save the outline in a shared directory. All users can set a second location for additional outlines in the Options dialog box. Use the **Tools > Options** command to open the Options dialog box and type the full path and subdirectory name in the **Document Outlines** field.

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 text in the Microsoft Work **File > Properties** dialog box. In the document itself, right-click the **Company-Name** field and select **Update Field**.

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.

If you are using a project template as a starting point, several requirement types are available for your use. You can add or remove a requirement type to fit your process; select the project in the Explorer and then click **File > Properties** and the **Requirement Types** tab. You can also modify a requirement type after it has been created. To do so, you must open the project in exclusive mode, and if security is enabled, you must have project structure permission to change the tag prefix, color, or style.

Creating and Modifying Requirement Types

1. In the Explorer, select the project and click **File > Properties**.
   The Project Properties dialog box appears.

2. Click the **Requirement Types** tab.
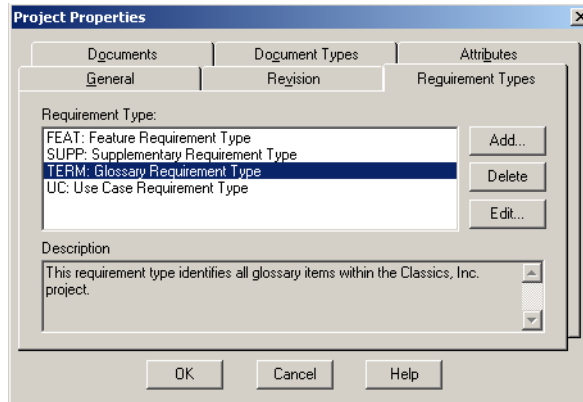
3. Do one of the following:

   □ 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**.

   The Requirement Type dialog box appears.
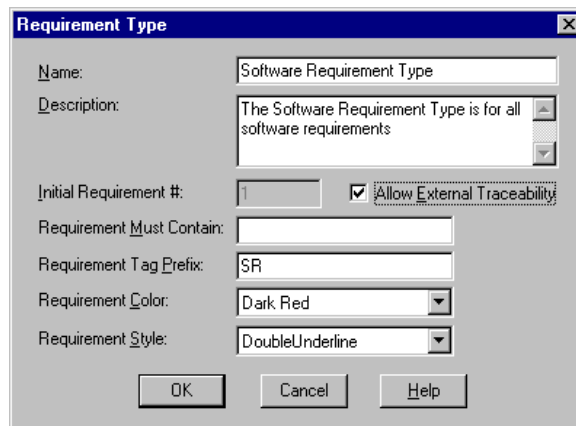
4. Complete the fields in the dialog box as follows:

   □ In the **Name** box, type or edit a name for the requirement type (up to 64 characters).

- In the **Description** box, type or edit a description (up to 255 characters).
- To enable external traceability between requirements of this type in this project and other projects, select the **Allow External Traceability** check box.
- To specify the starting number for the first requirement of the defined type, click the **Initial Requirement #** 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. After the first requirement of this type has been saved, you must use the Renumber Requirements dialog box to change the sequence.

- In the **Requirement Must Contain** 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.

- In the **Requirement Tag Prefix** box, type or edit a tag prefix for a requirement type. Examples of tag prefixes are SR and PR.
- Select a **Requirement Color** and a **Requirement Style** to be used for requirements of this type in documents. The default color is blue, and the default style is **Double Underline**.

5 Click **OK** in each dialog box.

Deleting Requirement Types

You can delete a requirement type if there are no requirements of the type in the project and if document types do not reference it as a default requirement type. You must have the project open in exclusive mode, and if security is enabled, you must have project structure permission to delete a requirement type.

1 In the Explorer, select the project and click **File > 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 and Attribute Values

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 • If a requirement's status is *Proposed,* the requirement is currently being discussed by the project team. • If a requirement's status is *Approved,* the requirement has been discussed and agreed upon. • If a requirement's status is *Incorporated*, 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.
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.

The list of requirement attributes above provides examples. Other common attributes include *Difficulty*, *Stability*, *Risk*, *Security*, *Safety*, *Release Implemented*, and *Functional Area.* RequisitePro also maintains system attributes for all requirements, 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 add an attribute or modify an existing one.

1 In the Explorer, select the project and click **File > Properties**.
The Project Properties dialog box appears.

2 Click the **Attributes** tab.

3 Select a requirement type.

The attributes for the selected type are displayed in the same order as in the Requirement Properties dialog box, **Attributes** tab. (You can reorder the attributes list by selecting an attribute and then clicking **Move Up** or **Move Down**.)
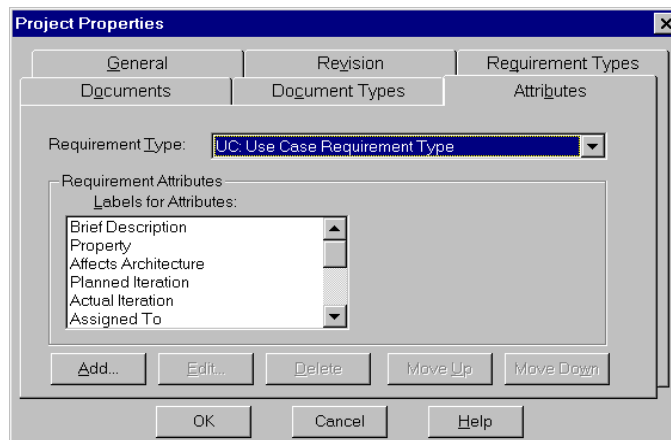
4 Do one of the following:

  ▫ To add an attribute, click **Add**. The Add Attribute dialog box appears.

  ▫ To edit an attribute, click **Edit**. The Edit Attribute dialog box appears.

5 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 32 characters in length.	*High*, *Medium*, or *Low*
List (Multiple Value)	A set of values from which more than one value can be selected. Each list value can be up to 32 characters in length.	Sue, Bob, and John
Text	A text string.	*John Smith*
Integer	Whole numbers.	*5, 1500*
Real	Real numbers.	*1.345, 6.7*
Date	A date in the format defined by the user's Windows setting.	*mm/dd/yy*
Time	A time in the format defined by a user's Windows setting.	*10:00 AM*
URL Link	A site on the Internet or on an intranet.	www.yoursite.com

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.

6 In the **Label** text box, type a name for the attribute.

7   If the data type is a list-type, type the values in the **List Values** text box.

   If the data type is an entry-type, type a default value (optional). If a new requirement is created and a value is not specified for the attribute, RequisitePro uses the default value.

8   To hide attributes of the selected requirement type from all RequisitePro users in views and in the Requirement Properties dialog box, select the **Hidden from display** check box.

9   To ensure traceability relationships are marked as *Suspect* when attributes are changed, select 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.

10   Click **OK** to close each dialog box.

Deleting Requirement Attributes

You can delete a requirement attribute if you open the project in exclusive mode. If security is enabled for the project, you must have project security structure permission to delete an attribute.

1   Select the project in the Explorer and click **File > Properties**.

   The Project Properties dialog box appears.

2   Click the **Attributes** tab.

3   In the **Requirement Type** list, select the requirement type for the attribute you want to delete.

4   In the **Labels for Attributes** list, select the attribute.

5   Click **Delete**.

   If the attribute is assigned to any requirements in the project, a message appears, asking you to confirm the deletion.

6   Click **Yes**.

7   Click **OK** in the Project Properties dialog box.

   RequisitePro removes the attribute from the **Attributes** tab, removes all requirement references to the attribute, and removes all security referencing the attribute. If the attribute is a list-type, RequisitePro removes all list values and all security referencing the list values.

Modifying Attribute Values

You can add, delete, and edit the values assigned to a particular list-type attribute.

1 In the Explorer, select the project and click **File > Properties**.

The Project Properties dialog box appears.

2 Click the **Attributes** tab.

3 In the **Requirement Type** list, select the requirement type; in the **Labels for Attributes** list, select a single or multiple-value list-type attribute; and in the **Values per Attribute** list, select the value that you want to edit.

4 Click **Edit**. The Attribute Value dialog box appears.

5 In the **Value** text box, modify the value.

6 To use the value as the default value, select the **Use as default** check box.

7 Click **OK**. The changes to the attribute values appear in the **Attributes** tab of the Project Properties dialog box.

8 Click **OK** to close the Project Properties dialog box.

Deleting Attribute Values

If an attribute value is not necessary to your project, you can delete it. To do so, you must have selected the **Exclusive** check box when you selected the project in the Open Project dialog box.

1 Select the project in the Explorer, and click **File > 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 single value or multiple value list 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.
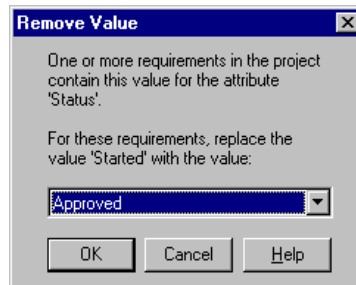
- ▫ Select a replacement value in the list, or select **<no entry>** if you want to assign no value to the requirement.

- ▫ Click **OK**. The value is removed from the **Values per Attribute** list.

  Note: When you delete a list value, any requirement that has that list value assigned to it is affected. If you select a replacement value, affected requirements are assigned the replacement value. If you do not select a replacement value, the value is simply deleted from the affected requirement. If you delete a value from a multiple value list and you do not select a replacement value, any other values previously assigned to requirements remain unchanged, and only the deleted value is deleted from affected requirements.

7 Click **OK.**

8 If the deleted value was the default, and you want to make one of the other values the default, click the value in the **Values per Attribute** list, and then click **Default**. To remove the designation of a value as the default, click the value in the **Values per Attribute** list, and then click **No default**. Repeat this step for any other value that you do not want as the default.

9 Click **OK**.

Setting Up and Modifying Cross-Project Traceability

Cross-project traceability enables you to establish 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 connect automatically 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
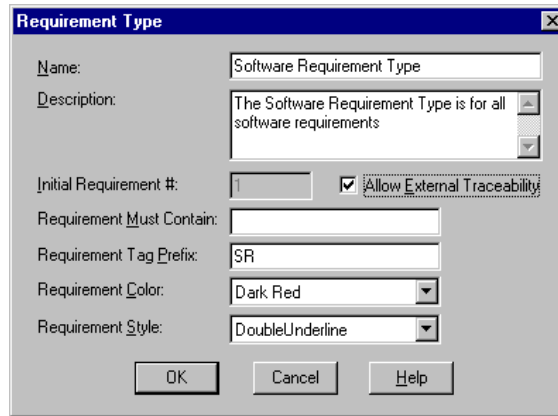
To allow cross-project traceability for requirements in a project, you must do the following:

- 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.

Note: To mark requirements for external traceability, you must have project structure permission.

1 Open the project that you want to be the external project.

2 Select the project in the Explorer and click **File > Properties**. The Project Properties dialog box appears.

3 On the **General** tab, type a prefix in the Prefix text box (up to 8 characters). The prefix is stored in uppercase letters. You can change it at any time.

4 Click the **Requirement Types** tab, and select a requirement type that you want to mark for external traceability.

5 Click **Edit**.

The Requirement Type dialog box appears.

6 Select the **Allow External Traceability** check box, and click **OK**. RequisitePro marks the requirement type for cross-project traceability.

7 Repeat Steps 4 through 6 for any other requirement types that you want to be available for external relationships.

8 Click **OK** to close the Project Properties dialog box.

Connecting Projects

Connecting a project activates the relationship between the current project and the external project. When an external project is disconnected, you temporarily remove the connection to the open project.

You can establish traceability between requirements that reside in different projects. After the requirement types in the external project have been marked for external traceability, connect the external project to the currently open project.

To view external projects, click **File > Project Administration > External Projects**. The **External Projects** dialog box appears.
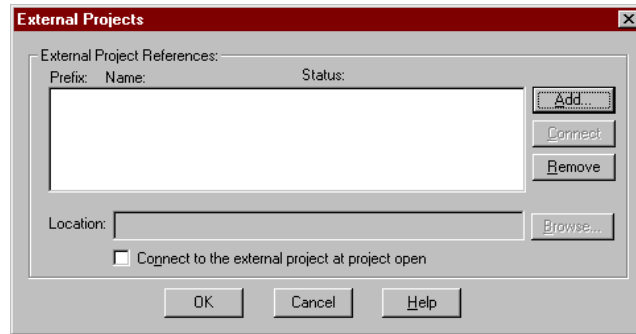
It displays the following:

- □ **Prefix**—an identifier used for requirements in cross-project traceability. 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 external project is currently connected or disconnected to the open project.

- □ **Location**—indicates the location of the selected external 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 specify whether the external project should be automatically connected when the current project is open, select the **Connect to the external project at project open** check box.

Note: In this case, when you open the project, one of several conditions apply:

- □ If neither project is secure, 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. (To remove a project from the External Projects dialog box, select the project and click the **Remove** button.)

5   Select the project from the **External Project References** list, and click **Browse** to relocate the project. Locate the project and click **Connect**.

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, you are not working on traceability issues, or you want to relocate the external project.

Disconnecting an external project increases system performance. A project must be disconnected before you can relocate it.

1   Click **File > Project Administration > External Projects**.
The External Projects dialog box appears.

2   Select the project and click **Disconnect**. This temporarily disconnects the project.

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

Disconnecting an external project has the following implications:

- Requirements in the disconnected project are displayed in the Traceability Matrix and Attribute Matrix with a label marking them as unavailable external requirements. The requirement is denoted as follows: ProjectPrefix<EXTERNAL KEY>ID number NOT AVAILABLE. (The ID number is for internal RequisitePro reference; it does not reflect the tag number.)

- You cannot create or modify traceability relationships with requirements in the disconnected project.

- You can delete 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 when the project is opened.

Moving an External Project

To relocate an external project, you must first disconnect it.

1 Click **File > Project Administration > External Projects**.
   The External Projects dialog box appears.

2 Select the project, and then click **Disconnect**.

3 In File Manager or Windows Explorer, copy the project files (.rqs, .rql) to the new location. If the project was created in Microsoft Access, copy the Access database file (.mdb) to the new location. For more information, see *Moving Projects* on page 225

4 In the **External Projects** dialog box, in the **External Project References** listing, select the project.

5 Click **Browse**.

6 Select the project and click **Open**.

Integrating with Other Products

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You can use Rational RequisitePro with several tools:

- Rational ClearQuest
- Rational ClearCase
- Rational Unified Change Management
- Rational Rose
- Rational SoDA
- Rational TestManager
- Rational Unified Process
- Microsoft Project

In addition, RequisitePro is included in all Rational Suite products as part of the Rational Team Unifying Platform, which also includes ClearQuest, TestManager, Rational ClearCase LT, SoDA, and the Rational Unified Process.

Using Rational ClearQuest with RequisitePro

If you have ClearQuest or any Rational Suite 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 ClearQuest installed, you can open it from RequisitePro (**Tools > Rational ClearQuest**). If you have a Rational Suite product or are working with a Rational Administrator project, 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.

You can use the **EnhancementRequest** and **Defect** custom requirement attributes to associate a requirement with one or many ClearQuest enhancement requests. If you are using a project that is based on the Use-Case project template, these attributes are available for all requirements of the feature (FEAT) requirement type. You can either type the ClearQuest record number or click the adjacent browse button to select a record. Other associations can be created using the ClearQuest/RequisitePro Integration Setup.

Note: When you associate RequisitePro requirements with ClearQuest records in a ClearQuest MultiSite environment, the local ClearQuest database replica may have mastership of some ClearQuest records. You cannot associate these records with your RequisitePro project until you return mastership to the original database.

To configure the integration, refer to the book *Rational Suite Administrator's Guide,* which is available on the Rational Solutions for Windows Online Documentation CD (included with RequisitePro and all Rational Suite products). If you have Rational Suite AnalystStudio installed, refer to *Getting Started: Rational Suite AnalystStudio.* More information on this integration is available from the white paper *Using Rational ClearQuest and RequisitePro for Analysts.*

Associating a Requirement with a ClearQuest Record

To associate a requirement with a ClearQuest record using the Requirement Properties dialog box:

1 Do one of the following to open the Requirement Properties dialog box:

   ▫ Select the requirement in an open document, and click **RequisitePro > Requirement > Properties**.

   ▫ Select the requirement in the Explorer or in a view, and click **Requirement > Properties**.

2 Click the **Attributes** tab.

3 Scroll to the bottom of the **Attributes** list to the **EnhancementRequest** or **Defect** attribute to view the ClearQuest records associated with this requirement.

   Do one of the following:

   ▫ Type the ClearQuest record number.

- Click the adjacent **. . .** button to select a record. In the Associate Enhancement Requests or the Associate Defects dialog box, select a requirement from the **Records** list and click the **Associate** button.

- Click the adjacent browse button and create a new record in ClearQuest to associate with the requirement.

4 Click **OK** in the **Attributes** tab of the Requirement Properties dialog box.

To associate a requirement with a ClearQuest record using an Attribute Matrix:

1 Open an Attribute Matrix view of feature requirements.

2 In the **EnhancementRequest** or **Defect** column for a requirement, do one of the following:

- Type the ClearQuest record number.

- Click the adjacent **. . .** button to select an enhancement request. In the Associate Enhancement Requests or Associate Defects dialog box, select a requirement from the **Records** list and click the **Associate** button.

- Click the adjacent browse button and create a new record in ClearQuest to associate with the requirement. (The button appears when you double-click the cell.)

3 To save the associated value in the Attribute Matrix, click outside the cell.

Using Rational ClearCase with RequisitePro

You can use ClearCase with RequisitePro in several ways.

If your project uses the Unified Change Management (UCM) model, you can create baselines of the project. RequisitePro project administrators can implement the UCM model in ClearCase and Rational Administrator by creating baselines of RequisitePro projects.

If your RequisitePro project does not use the UCM model, you can archive it using the ClearCase archive command from within RequisitePro.

Using Rational Unified Change Management to Create a Project Baseline

UCM is Rational's out-of-the-box usage model for managing change in software system development, from requirements to release. UCM is a unified approach to configuration management and change request management, automated in ClearCase

and ClearQuest. ClearCase can be set up to implement the UCM model for basic activity-based configuration management or in conjunction with ClearQuest to provide full change-request management.

To implement the model for baselining a RequisitePro project, the project must be associated with a UCM-enabled Rational project in the Rational Administrator. For more information, see *Creating a Project Baseline with Unified Change Management* on page 223.

If you have a RequisitePro project that is baselined, you can use that baseline to create new projects in RequisitePro. For example, you may want to base the next release of a project on a stable configuration of the previous release. For more information, see *Creating a RequisitePro Project from a Baseline* on page 191.

Using ClearCase to Archive Projects

In RequisitePro, archiving is the process of duplicating the database, documents, and all related files in a project so that they can be restored at a later time. You can archive a RequisitePro project in ClearCase using the **Project > Archive > Rational ClearCase** command. For more information, refer to *Archiving Projects with Rational ClearCase* on page 217.

Using Rational Rose with RequisitePro

Rose offers powerful tools for object-oriented analysis, modeling, design, and construction. As the world's leading visual modeling tool, 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.

For additional information on Integrated Use Case Management, refer to the white paper *Use Case Management with Rose and RequisitePro* or the manual *Getting Started: Rational Suite AnalystStudio.*

Using Integrated Use Case Management

Rational's integrated management of use cases between 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. The following features are supported:

- 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 and associated design features.

We recommend that you 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 > Rational RequisitePro** menu. For more information on Integrated Use Case Management, refer to Integrated Use Case Management online **Help**, available from Rose or RequisitePro.

To associate a RequisitePro document with a Rose use case, open the document and click **RequisitePro > Document > Associate to Rose Use Case**.

To associate a RequisitePro requirement with a Rose use case, do one of the following:

- Select the requirement in a view or in the Explorer, and then click **Requirement > Associate to Rose Use Case**.

- Select the requirement in a Word document, and click **RequisitePro > Requirement > Associate to Rose Use Case**.

Viewing a Rose Use Case Associated with a Document or Requirement

If you have Rose installed on your system (as part of AnalystStudio or a stand-alone application), you can work with the Integrated Use Case Management feature that links RequisitePro documents and requirements with Rose use cases. You can use the

Open Rose Use Case command to navigate from a RequisitePro document or requirement to its associated Rose use case. (For more information, refer to the Integrated Use Case help, available through the Help button in the dialog boxes.)

Note: The Rose commands appear on the **Document** and **Requirement** menus only if Rose is installed on your system.

To go to a use case associated with a document:

1 Open a document that is associated with a use case.

2 Click **RequisitePro > Document > Open Rose Use Case**.

To go to a use case associated with a requirement:

1 Do one of the following:

▪ In a view, select a requirement that is associated with a use case.

▪ In a document, click the cursor inside a requirement that is associated with a use case.

2 Click **Requirement > Open Rose Use Case**.

Note: You must save your Rose model before you can navigate from a RequisitePro document or requirement to the associated Rose use case using the **Open Rose Use Case** command.

Associating Documents and Requirements with Rose Use Cases

If you have Rose installed on your system (as part of AnalystStudio or as a stand-alone application), you can use the Integrated Use Case Management feature to associate a RequisitePro document or requirement with a use case in Rose. You can use the **Associate to Rose Use Case** command to directly associate a document or requirement with a Rose use case. (For more information, refer to the Integrated Use Case Help, available through the **Help** button in the dialog boxes.)

Note: This command appears only if Rose is installed on your system.

To associate a document with a Rose use case:

1 Open a document.

2 Click **RequisitePro > Document > Associate to Rose Use Case**.

To associate a requirement with a Rose use case, do one of the following:

- Select a requirement in a view or in the Explorer, and then click **Requirement > Associate to Rose Use Case**.

- Place your cursor within a requirement in a document, and click **RequisitePro > Requirement > Associate to Rose Use Case**.

Note: If you want to move a requirement into another document and it is associated with a Rose use case, you must first remove the association. Then associate the requirement to the appropriate use case after you have saved it in the other document.

For more information about associating a document or requirement with a Rose use case, refer to the Integrated Use Case help, which is available through the **Help** button in the dialog boxes.

Using Rational SoDA with RequisitePro

RequisitePro is a supported domain for 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.

- Create a use-case report that includes all use-case requirements and Rose use-case diagrams.

For more information, refer to *Printing Project Summaries and Reports* on page 208.

Using Rational TestManager with RequisitePro

If you have TestManager installed, you can launch the TestManager component directly from the RequisitePro **Tools** menu (click **Tools > Rational TestManager**).

RequisitePro requirements can be referenced from TestManager to ensure complete test coverage for all requirements. TestManager is part of Rational TeamTest and all Rational Suite products. TestManager is the one place to manage all testing activities—planning, design, development, execution, and analysis. TestManager ties testing and the rest of the development effort, combining your testing assets and tools

to provide a single point from which to understand the exact state of your project. If a requirement changes, TestManager marks the association use case as suspect. Using TestManager, you can create reports that show all suspect test cases and test input development coverage reports that show the percentage of requirements that have implemented test cases. If you have installed TestManager, we recommend that you use it to develop all test artifacts. For additional information, refer to *Rational TestManager User's Guide* and TestManager online **Help**.

Using the Rational Unified Process with RequisitePro

The Rational Unified Process (RUP) 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. 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. Many activities in RUP are supported by software-engineering tools. Tool Mentors describe how Rational Software tools can be used to support particular steps and activities. Click **Help > Extended Help** to access the Tool Mentors and other information databases.

The Use-Case template provides a basic project structure that is compliant with RUP. The project template provides requirement types, suggested attributes, default attribute values, and related document types. For more information on using the Use-Case template, see *Reviewing RequisitePro Project Template Options* on page 184.

Using Microsoft Project with RequisitePro

The Microsoft Project Integration Wizard manages traceability from requirements in RequisitePro projects to tasks in Microsoft Project schedules. You can use the wizard to do the following:

- 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 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 Microsoft Project with RequisitePro

Follow these guidelines when using the Microsoft Project integration:

- Create an associated task for any requirement that you want to track in Microsoft Project. For example, you would generate a task for any feature requirement for which you must produce a document and submit that document for review and approval by a specified date.

- If you follow the Rational Unified Process, you should probably include a use case as the main item that should appear in your schedule. It may also make sense to trace each alternative flow and 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; for example, performance constraints have one set of tasks, and usability constraints have a different set of tasks.

- Whatever requirements are handed off to the development team 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, link only 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.

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 Microsoft Project schedule. The MSPT requirements are linked to tasks in a schedule. The MSPT requirement type 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 268.

Requirements

Software Requirements

To use the MS Project Integration Wizard, you must have Microsoft Project 98 or Microsoft Project 2000 installed on your system. If neither is installed, the **Start Microsoft Project** and **Integration Wizard** commands are disabled on your RequisitePro **Tools** menu.

Security Requirements

To initially integrate a RequisitePro project with Microsoft Project using the wizard, you must have RequisitePro administrator permissions.

To use the Microsoft 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.

Note: You cannot integrate an individual Microsoft Project schedule with more than one RequisitePro project. You can integrate multiple Microsoft Project schedules with various requirement types within one RequisitePro project.

Starting the Wizard and Adding the MSPT Requirement Type

You can start the Microsoft 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 Microsoft Project Integration Wizard.

To start the Microsoft Project Integration Wizard:

1 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, searches for the MSPT requirement type, and adds it if it is missing. The MSPT Info screen is displayed. Click **Next**.

The wizard opens the project and schedule and displays the Select an Action screen.

Creating Tasks from Requirements

The following instructions assume that the wizard is started and that 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*) in requirement name or text, 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 that you save with a baseline for each change. See the Microsoft Project online help 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 that the wizard is started, the Select An Action screen is displayed, and you have created tasks in Microsoft Project that are linked to requirements in RequisitePro.

You can modify traceability in the Microsoft Project Integration Wizard by doing one of the following:

- Select a RequisitePro requirement and link it to a Microsoft Project task.

- Select a Microsoft Project task and link it to a RequisitePro requirement.

Both option 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*) in the requirement name or text, 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, 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**.

4   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.

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 **Microsoft 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 the requirement is removed.

- Select a task and the **Add Traceability** option. Then click **Next**. The Select a Requirement Type screen appears.

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*) in the requirement name or text, type the string in the **Requirement Text Search** box. You can use partial strings but not wildcard searches.

6   Click **Next.** The requirements that you filtered in the previous screen are displayed.

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 that the Select An Action screen in the Microsoft Project Integration Wizard is displayed and that you have created tasks in Microsoft Project that are linked to MSPT requirements that 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 must use the refresh feature in the Microsoft 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 you update RequisitePro from the 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 Click **File > New > View**.

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 **.rqs** 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.rqs** file to create new attributes for the MSPT requirement type.

If security is enabled for the project, you must have project structure permission to map a field to an attribute for an MSPT requirement type.

To map fields to attributes:

1 In a text editor, open the **.rqs** file for the project with which you are working.

2 Refer to the next section to locate the task field that you want to map to an attribute for the MSPT requirement type.

3 In the [MSProjectMappings] section of the **.rqs** file, enter the following:

field ID=attribute name

where field ID is the field ID listed in the next section, and attribute name is the label you want to give the attribute in RequisitePro.

4 Save the **.rqs** file.

The Microsoft 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 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 = 28	**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

If security is enabled for the project, you must have project structure permission to remove the MSPT requirement type if you want to delete an attribute for the requirement type.

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 Click **File > Open Project.**

5 Select the project, check the **Exclusive** check box, and click **OK**. Log on to the project, if necessary.

6 Click **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.

Troubleshooting 17

The following sections describe some of the problems that may arise when you use RequisitePro and how you can resolve them.

Creating Requirements

A requirements document is a Microsoft Word file created in Rational RequisitePro and integrated with the project database. Requirements cannot be created in a normal Word document.

If you experience problems when creating requirements in a document, check for the following:

- Overlapping requirements. Make sure that the highlighted selection is not inside of or overlapping another requirement. Requirements cannot be nested or overlap one another.

- Bookmarks and hidden text. RequisitePro uses Word bookmarks and hidden text to designate requirements. If your document contains bookmarks or hidden text (either in other requirements or in nonrequirement text in the document), make sure the highlighted selection is not inside of or overlapping a Word bookmark or hidden text.

- Document saved status. You cannot establish traceability for a new requirement or in a newly created document until you save the document. If a requirement is not displayed in the Traced From Requirement(s) dialog box or Traced To Requirement(s) dialog box, try saving the document.

- Track changes. Be sure that Word's Track Changes functionality is not turned on when creating or modifying requirements.

- File versioning. Be sure that Word's file versioning capability is not turned on.

(See *Tips for Using Word in RequisitePro* on page 99.)

Database Corruption

On very rare occasions, a RequisitePro project that uses the Microsoft Access database may become corrupted. When this occurs, RequisitePro displays an error message. It is a good practice to periodically repair or compact your Access database even if you are not experiencing problems.

Note: To repair corrupted projects that use an enterprise database, see your database administrator.

To repair and compact a corrupted Microsoft Access project database, make sure that all users close the project, and then do the following:

1 Open the Database Properties dialog box by doing one of the following:

   ▫ Click **File > Open Project**. In the Open Projects dialog box, select the corrupted project and click **Properties**.

   ▫ In the Explorer, select the project and click **File > Properties**. On the **General** tab of the Project Properties dialog box, click **Properties**.

2 Click the **Configure** button.

   The ODBC Microsoft Access Setup dialog box appears.

3 To repair a corrupted database, do the following:

   ▫ Click the **Repair** button.

      The Repair Database dialog box appears. The selected database appears in the **Database Name** box.

   ▫ Click **OK**.

4 To compact the database, do the following:

   ▫ Click **Compact** on the ODBC Microsoft Access Setup dialog box.

      The Database to Compact From dialog box appears. The selected database appears in the **Database Name** box.

   ▫ Click **OK**.

5   In the Database to Compact Into dialog box, select one of the Format options based on the version of Access the RequisitePro project uses, not the version of RequisitePro. Select **Version 4.x** if you are using Access 2000; select **Version 3.x** if you are using Access 97.

Note: If the version selected does not match the database, you will receive an ODBC error. If you have Access 97 on your system, the **Version 4.x** option does not appear. If the database you are compacting is in the Access 2000 format, you must perform the compact procedure on a system with Access 2000 installed.

6   Click **OK**.

7   Click **Yes** to confirm that you want to replace your database with a compacted version.

Document Not Found Messages

If the Document Not Found dialog box appears when you try to open a document, the document may have been deleted in Windows Explorer, moved, or renamed. You can respond to the error message in one of the following ways:

- You can browse the file system to associate the document with a new location.

- You can delete all requirements associated with the document from the project.

- You can click **Cancel** to keep the requirements associated with the document, and then try to restore the file and reopen the document.

Files Are Too Big for Microsoft Word

When you open a large document in Microsoft Word, an error message may appear, stating that the file is too large to open.
We recommend that you use small Word documents for the following reasons:

- Word allows only one user at a time to modify a document.

    Note: The extended editing feature allows concurrent users to modify requirements located in documents without having to open the document.

- Small documents are more likely to be reviewed thoroughly because multiple reviewers can work on small sections of text concurrently.

- Small documents enable better system performance.

- Word may have problems processing large documents.

For help working with large documents, see Rational Technical Note #2383 (available at www.Rational.com); *Tips for Using Word in RequisitePro* on page 99; and the Microsoft Word documentation.

Failed Multiple Select Actions

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 in documents and the operation is not permitted for requirements in documents.

RequisitePro notifies you of such failures by providing an exception log 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, 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**.

General Protection Faults in Page View Mode

Viewing documents in **Page View** mode in Microsoft Word can trigger General Protection Faults (GPFs), caused by high memory requirements. A GPF is an error condition that occurs when an application attempts to access memory outside of its authorized memory space or an invalid instruction is issued. To avoid GPFs while

viewing documents, switch to Word's **Normal** view. When you have had a GPF, you may continue to have problems caused by memory corruption. Restart the machine and try again.

Recovering an AutoRecover Document

If your computer system fails, you can retrieve a Rational RequisitePro document saved with the Microsoft Word Autosave feature. You must have previously selected the AutoRecover feature in Word.

1   In Word, click **File > Open**.

    The Open Word Document dialog box appears.

2   Locate the directory and the document, and click **Open**.

    The document is displayed. Word prompts you to save the document.

3   In Word, click **File > Save**.

    A message appears, asking whether you want to replace the existing document.

4   Click **Yes**.

    The document is saved in the condition it was in at the time of the last automatic save.

5   Click **File > Close**.

6   Open the document in RequisitePro by clicking **RequisitePro > Document > Open**.

7   Click **RequisitePro > Document > Save**.

RequisitePro Menu Appears Incorrectly

If you encounter General Protection Faults in a document, the **RequisitePro** menu may appear in applications other than Microsoft Word, such as Microsoft Outlook or other e-mail applications. In addition, you may see duplicate occurrences of the **RequisitePro** menu in the Word document.

To remove the erroneous menu, delete the normal.dot and email.dot templates from your Microsoft Office directories. Before doing so, verify that you do not have any customizations in normal.dot or email.dot. If you do, you will have to recreate those customizations after the files are generated again. Typically, the .dot files are located in the following directories:

- Program Files\Microsoft Office\Office

- Program Files\Microsoft Office\Templates

These files will be generated again automatically by your Microsoft Office applications.

Invalid Date/Time Errors

If you receive invalid date/time errors, change the Windows Regional Settings on your machine to one of the default settings.

To find the default settings in the Regional Settings Properties dialog box, switch to a different locale on the **Regional Settings** tab and then switch back. The default settings appear on the **Time and Date** tabs.

SQL Server Syntax Error

If you have an existing RequisitePro database in Microsoft SQL Server and your SQL Server has been upgraded to 7.0 from a previous version, then the system administrator must run the following stored procedure in SQL Server to set the database compatibility level to SQL Server 7.0:

sp_dbcmptlevel<database name>, 70

For example:

sp_dbcmptlevel RequisitePro, 70

If the system administrator does not run this procedure, SQL Server Syntax Errors may appear in RequisitePro.

Keyboard Shortcuts and Mouse Actions

A

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 menus. 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**.** When 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 CTRL 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. 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 Views

You can use keyboard shortcuts and mouse actions to quickly move around and select information in views. 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 a 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

If you want to	Do this
Switch the column selection to the column in which you click. (Clicking in a cell also selects the row in which you clicked.)	Click column label OR CTRL-click column label OR CTRL-click in cell

Keyboard Shortcuts

If you want to	Do this
Move to the right one column.	RIGHT ARROW
Move to the right one column when in edit mode OR Switch between the Explorer and the open view.	TAB
Move to the left one column.	LEFT ARROW
Switch between open views.	CTRL-TAB
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 currently selected cell for editing. (This action is only available when a single cell is selected.)	SPACEBAR

If you want to	Do this
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
Move to the top of the view and select all items between the anchor row and the first row of the view. (This action clears all other selected items.)	SHIFT-HOME
Move to the top of the view, without changing the selection or the anchor.	CTRL-HOME
Move to the bottom of the view and select the last row. (This action sets the last row as the anchor and clears all other selected items.)	END
Move to the bottom of the view and select all items between the anchor row and the last row of the view. (This action clears all other selected items.)	SHIFT-END
Move to the bottom of the view, without changing the selection or the anchor.	CTRL-END
Move up one page in the view, while changing the anchor. (This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or it selects the first row if the view is positioned on the top page. The newly selected row is the new anchor.)	PAGE UP

If you want to	Do this
Move up one page in the view, without changing the anchor. (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 it selects all rows from top to anchor if the view is positioned at the top of the page.)	SHIFT-PAGE UP
Move up one page in the view, without changing the selection or the anchor.	CTRL-PAGE UP
Move the view one page left. (This action selects the column that is in the same horizontal position as the previously selected column was when its page was displayed, or it selects the first column if the view is positioned on the far left page.)	ALT-PAGE UP
Move down one page in the view, while changing the anchor. (This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or it selects the last row if the view is positioned on the bottom page. The newly selected row is the new anchor.)	PAGE DOWN
Move down one page in the view, without changing the anchor. (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 it selects all rows from the bottom to the anchor if the view is positioned at the bottom of the page.)	SHIFT-PAGE DOWN
Move down one page in the view, without changing the selection or the anchor.	CTRL-PAGE DOWN

If you want to	Do this
Move the view one page right. (This action selects the column that is in the same horizontal position as the previously selected column was when its page was displayed, or it selects the last column if the view is positioned on the far right page.)	ALT-PAGE DOWN
Expand the selected row requirement to show its children in the view.	SHIFT-PLUS SIGN
Collapse the selected row requirement to hide its children in the view.	MINUS SIGN
Select every row in the view.	CTRL-A

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 OR CTRL-click row label OR CTRL-click column label
Select the row and the cell(s) at the intersection of the selected row and the currently selected column(s). (This action clears all other selected cells and rows and sets the selected cell and row as anchors.)	Click row label

If you want to	Do this
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 the column and the cell(s) at the intersection of the selected column and the currently selected row(s). (This action also clears all other selected cells and columns and sets the selected cell and column as anchors.)	Click column label
Select the cells in all columns between the clicked column and the anchor column, in all selected rows. (This action includes all selected rows.)	SHIFT-click column label

Keyboard Shortcuts

If you want to	Do this
Move to the right one column.	RIGHT ARROW
Move to the left one column.	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
Switch between the Explorer and the open view.	TAB
Switch between open views.	CTRL-TAB
Close the shortcut menu for the currently selected cells.	ESC

If you want to	Do this
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
Move to the top of the view, without changing the anchor. (This action selects all cells in selected columns between the top row and the anchor row.)	SHIFT-HOME
Move to the top of the view, without changing the selection or the anchor.	CTRL-HOME
Move to the bottom of the view in the selected column and select the cell in that column in the last row. (This action clears all other selected rows and sets the last row as the anchor.)	END
Move to the bottom of the view, without changing the anchor. (This action selects all cells in selected columns between the bottom row to the anchor row.)	SHIFT-END
Move to the bottom of the view, without changing the selection or the anchor.	CTRL-END
Move up one page in the view, while changing the anchor. (This action selects the selected columns and the row that is in the same vertical position as the previously selected row, or it selects the top row if the view is already on the top page. The newly selected row is the new anchor.)	PAGE UP
Move up one page in the view, without changing the anchor. (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.)	SHIFT-PAGE UP
Move up one page in the view, without changing the selection or the anchor.	CTRL-PAGE UP

If you want to	Do this
Move the view one page left, while changing the anchor. (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 it selects the first column if the view is positioned on the far left page.)	ALT-PAGE UP
Move the view one page left, without changing the anchor. (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.)	ALT-SHIFT-PAGE UP
Moves left one page in the view, without changing the selection or the anchor.	ALT-CTRL-PAGE UP
Move the view down one page, while changing the anchor. (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 it selects the last row if the view is already on the bottom page. The newly selected row is the new anchor.)	PAGE DOWN
Move down one page, without changing the anchor. (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.)	SHIFT-PAGE DOWN
Move down one page in the view, without changing the selection or the anchor.	CTRL-PAGE DOWN

If you want to	Do this
Move the view one page right, while changing the anchor. (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 it selects the last column if the view is already on the far right page.)	ALT-PAGE DOWN
Move the view one page right without changing the anchor. (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 it selects the last column if the view is already on the far right page.)	ALT-SHIFT-PAGE DOWN
Move right one page in the view, without changing the selection or the anchor.	ALT-CTRL-PAGE DOWN
Expand the selected row requirement to show its relationships. Preserve the previous row selection.	SHIFT-PLUS SIGN
Collapse the selected requirement to hide its relationships.	MINUS SIGN
Select every cell in the view.	CTRL-A

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

If you want to	Do this
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. (The requirement cannot be a root requirement.)	CTRL-click row, then drag
Move a selected row's requirement. (The requirement cannot be a root requirement.)	ALT-click row, then drag

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
Switch between the Explorer and the open view.	TAB
Switch between open views.	CTRL-TAB
Close the shortcut menu for the currently selected requirements.	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

If you want to	Do this
Move to the top of the view, without changing the anchor. (This action selects all items between the anchor row and the first row of the view.)	SHIFT-HOME
Move to the top of the view, without changing the selection or the anchor.	CTRL-HOME
Move to the bottom of the view and select the last row. (This action sets the last row as the anchor and clears all other selected items.)	END
Move to the bottom of the view, without changing the anchor. (This action selects all items between the anchor row and the last row of the view.)	SHIFT-END
Move to the bottom of the view, without changing the selection or the anchor.	CTRL-END
Move up one page in the view, while changing the anchor. (This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or it selects the top row if the view is positioned on the top page. The newly selected row is the new anchor.)	PAGE UP
Move down one page in the view, while changing the anchor. (This action selects the row that is in the same vertical position as the previously selected row was when its page was displayed, or it selects the last row if the view is positioned on the bottom page. The newly selected row is the new anchor.)	PAGE DOWN
Move up one page in the view, without changing the anchor. (This action moves up one page from the anchor.)	SHIFT-PAGE UP

If you want to	Do this
Move down one page in the view, without changing the anchor. (This action moves down one page from the anchor.)	SHIFT-PAGE DOWN
Move up one page in the view.	CTRL-PAGE UP
Move down one page in the view.	CTRL-PAGE DOWN
Expand the item to show its relationships.	SHIFT- PLUS SIGN
Collapse the item to hide its relationships.	MINUS SIGN
Highlight every item in the view.	CTRL-A

Customizing RequisitePro

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</div>

Configuring RequisitePro

You can use the **Tools > Options** command to configure the appearance and behavior of Rational RequisitePro.

1 Click the **Tools > Options**.
The **Options** dialog box appears.

2 Type or select the following options as needed:

General

- □ **Show Buttons**: Select this check box to display the toolbar buttons.

- □ **Show Status**: Select this check box to display the status line. This displays project and document status as you work in RequisitePro.

- □ **Show ToolTips**: Select this check box to display a button function definition when you hold the cursor over a toolbar button.

- □ **Let's Go RequisitePro at startup**: Select this check box to display the Let's Go RequisitePro splash screen each time you start RequisitePro.

Views

- □ **Prompt for save**: Select 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**: Select this check box if you want the option to double-click on a requirement in a view to access its source. For requirements located in documents, the document opens. For other requirements, 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)**: Select 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)**: Select this check box if you want to create requirements directly in the Attribute Matrix using the **Requirement > New** command or the INSERT key. If this check box is cleared, the Requirement Properties dialog box appears when you click **Requirement > New** or the INSERT key.

- **Font**: This field lists the font displayed in a view .

- **Change**: Click this button to change the font.

Traceability

- **Warn on remove**: Select this check box if you want RequisitePro to display a warning message when you remove requirement traceability.

- **Changes logged in history**: Select this check box to display changes to requirement traceability on the revision history list in the Requirement Properties dialog box.

Default Project Logon

- **Username**: This field contains (by default) the user name from the last successful project logon. This entry is used as the default name at your next attempt to logon to a RequisitePro project. Type another user name if necessary.

Microsoft Word

- **Version**: 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.

Microsoft Project

- **Version**: Select your preferred version of Microsoft Project 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

- **Document Outlines**: This field defines a secondary location for accessing document type outlines. If RequisitePro is installed locally on your PC, the default path is Program Files\Rational\RequisitePro\outlines. Use this option to define an alternate location for outlines (for example, a directory on a server for shared outlines). Note that the document outlines directory and the secondary document outlines directory are stored for your own machine configuration, not for the RequisitePro project.

- **ClearCase View**: This field defines the directory for ClearCase archiving in RequisitePro. This must be a ClearCase view that is available to all users of the RequisitePro project.

- **Working Path**: This field displays the working directory for RequisitePro. Write permission must be available for this directory in order for RequisitePro to create new projects and write temporary files.

- **Project Templates**: This field defines a secondary location for storing project templates. If RequisitePro is installed locally on your PC, the default path is Program Files\Rational\RequisitePro\templates. Use this option to define an alternate location for project templates (for example, a directory on a server for shared templates).

3   Click **OK**.

Customizing Toolbar Menus

The **Tools > Add-ins** command allows you to add your own customized menu options to menus in RequisitePro. 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 commands to any of the following RequisitePro menus: **File**, **Edit**, **View**, **Requirement**, **Traceability**, **Tools**, and **Help**.

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 RequisitePro is open on your PC. The **Add-ins** command prompts you to specify an external menu file that defines your customized menu options.

1   Click **Tools > Add-ins**.
    The Add-ins dialog box appears.

2   Click the **Add** button to add a customized menu option.

3   In the Add-in dialog box, 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 selected, and select either **Local** to apply the menu items to your menus only or **Project** to apply the menu items to the menus of all users who open the project.

8   Click **OK** in each dialog box.

The options defined in the menu file are added to the specified menu.

Creating a Menu File

Using any text editor, you can create a file to add menu options to menus in RequisitePro. The entries will appear on the RequisitePro menu in the order in which you specify them. You can add commands to any of the following RequisitePro menus: **File**, **Edit**, **View**, **Requirement**, **Traceability**, **Tools**, and **Help**.

As you add menu entries, you 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 menu or submenu to which you want to 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
<RequisitePro menu name>	File, Edit, View, Requirement, Traceability, 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

Menu names, submenu names, option names, and statuses require double quotes if they include more than one word. You can include more than one menu command in a file, and separators can be in menus or submenus. You can create a maximum of five levels of submenus (indented one below another). Add an ampersand (&) directly before a character in the menu name to create an underlined letter signifying an access key in the menu option.

Sample Menu File

The following example shows a simple menu definition file. After you create a menu file, reference it using the **Tools > Add-ins** command. This feature allows you to add customized menu commands to the RequisitePro menus.

The following menu file instructs RequisitePro to add the command **Open Windows Notepad** to the **Edit** menu.

Menu Edit

{

Separator

Option "Open Windows &Notepad . . ."

{

Exec notepad.exe

Status "Open the Windows Notepad"

}

}

Glossary

The terms that follow are used throughout *Rational RequisitePro User's Guide*. Most are specific to RequisitePro.

active document: The document that has processing focus. You can have more than one document open at a time; however, only one of the documents is active.

active view: The view that has processing focus. You can have more than one view open at a time; however, only one of the views is active. See also *view.*

activity: A unit of work an individual, or a set of individuals working together as a team, may be asked to perform.

actor: Someone or something outside the system that interacts with the system.

Add-ins command: A command on the **Tools** menu that allows you to add your own customized commands to any RequisitePro menu. These menu commands can be used to start external applications, such as e-mail or the Windows Notepad, directly from RequisitePro. In addition, you can configure a command 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. These users can change a project's structure, create and modify data, modify and delete project-wide views, and set and maintain security permissions. Users can be added and removed from the group, but the 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. 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 and 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 duplicating the database, documents, and all related files in a project for the purpose of restoring them at a later time.

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 them 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 box. 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 r*equirement attribute value*.

author: The user responsible for creating or modifying a document or requirement.

author (version information): The 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 are created whenever the original documents are saved.

baseline: A Rational ClearCase Unified Change Management object that typically represents a stable configuration of one or more components. A baseline identifies activities and one version of every element visible in one or more components. You can create a development stream or rebase an existing development stream from a baseline. See also *Unified Change Management.*

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 another type of 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 state*.

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 references only internal requirements and first-level external requirements.

ClearCase: See *Rational ClearCase*.

ClearQuest: See *Rational ClearQuest*.

collapse indicator: See *expand/collapse indicator.*

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.

.def file: A file, located in the RequisitePro outlines directory, that specifies information about a particular document outline used by RequisitePro. This type of file has the following format: outline_logical_name is the name of the outline (up to 64 bytes); outline_description is a description of the outline (up to 256 bytes); and outline_filename.dot is the name of the corresponding Microsoft Word template file. See *document outline*.

deleted users group: A security group of users who have been removed 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*.

discussions: 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 requirement document types.

document: Any Microsoft Word document. It may be part of the RequisitePro project or outside the project, and it may or may not contain requirements. See also *requirements document.*

document outline: A reference document or template used to create new documents in RequisitePro. An outline can include formats, page layout information, fonts, and Word styles. It is useful for maintaining consistency across documents of the same type. Document outline information is stored in a .def file. It includes the full name of the template, a description of the outline, and the associated Word template's DOS filename (.dot). See also *document type.*

document properties: Specific items of information about a 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 is based on the default requirement type unless you indicate otherwise. The document type also identifies a document template which controls the document page layout, default text, paragraph styles, and other structure.

document version: A revision of a document, identified in the document properties revision history. A new version is created when a document is changed and saved. See *revision.*

.dot file (Word template): A DOS file name extension for Microsoft Word template files. A Word template determines the basic structure for a document, including fonts, menus, special formatting, and styles. A Word template is associated with a document template, which can be used to create Word documents in RequisitePro. Document outline information is stored in .def files. 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 and other information in the Microsoft Word **File > Properties** dialog box. Then in the document itself, right-click the **Company-Name** field, and select **Update Field** (Word template).

enhancement request: A type of stakeholder request that specifies a new feature or functionality of the system. Certain Rational RequisitePro requirement types have attributes that associate the requirement with specific records in Rational ClearQuest. By default, if you are using a project based on the Use-Case project template, the feature (FEAT) requirement type includes EnhancementRequest and Defect attributes that can associate the feature requirement with enhancement request and defect records in ClearQuest.

enterprise database: A database that is designed to support a large, networked organization. An enterprise database offers scalability, security, and administrative features for large, complex projects. RequisitePro supports the use of the enterprise databases Oracle and SQL Server**.**

entry-type attributes: Entry-type attributes are numeric, text, time, or date values that are typed in 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, if you want to set a default cost of $20, 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 entry type or list type. If you have configured an integration with Rational ClearQuest, you have two additional default requirement types, EnhancementRequest and Defect. 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 available only 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. You can open a project and its documents in exclusive mode only if the project and documents are not already open by another user.

expand/collapse indicator: A small box displayed 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. An item that can be expanded (that is, preceded by a +) contains hidden subitems that can be displayed. An item that can be collapsed (that is, preceded by a -) does not have hidden subitems.

Explorer: RequisitePro's primary navigation window. In this window, project artifacts (documents, requirements, and views) are displayed in packages in a tree browser.

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. See *cross-project traceability*.

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 RequisitePro 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. 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 to display only requirements having a high priority. See also *sorting* and *query*.

hidden text: A Microsoft Word feature used to hide text within a document. Hidden text is delineated with a dotted underline. A requirement within a Word document begins with a requirement tag formatted in hidden text style. You can hide the tags for improved readability. Click **Tools > 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 have only 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.

import: To bring information from one system or program into another. In RequisitePro, you can import documents and requirements from Microsoft Word and CSV files.

Integrated Use Case Management: An integration between Rational RequisitePro and Rational Rose that allows you to associate use cases in Rose with RequisitePro documents and requirements. You can easily navigate between Rose use-case models and RequisitePro use-case documents and requirements.

internationalization: The process of developing a program core whose feature and code designs do not make assumptions on the basis of 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. 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. When 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.

label (version information): A string (no more than 20 characters long) that contains user-defined revision information. You can use a revision label for noting requirement, document, or project/archive version information.

licensed user: A RequisitePro user. Each user who is associated with a license of RequisitePro is a licensed RequisitePro user. Also referred to as *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 a view. See *Attribute Matrix, Traceability Matrix.*

menu file: A text file with specific syntax that is used to add menu commands to any RequisitePro 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.

name: See *requirement name*.

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 use OLE objects in RequisitePro requirements documents.

outline: See *document outline*.

package: A container, represented in the Explorer as a folder, that can contain requirements, documents, views, and other packages. You can place related artifacts in a single package for organizing your project. All project packages are shared by all project users.

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. The Import Wizard parses text to separate requirements in a document.

peer requirement: A requirement that is at the same hierarchical level as another requirement. 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. 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. The project database stores all requirements in the project, including those created in requirement documents. Changes you make to requirements in the documents are reflected in the project database. You can create requirements directly in the project database rather than in a requirement document using an Attribute Matrix view. These requirements can be modified or deleted in a view. Microsoft Access, Oracle, and Microsoft SQL Server databases can be used with RequisitePro projects. See also *project 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 RequisitePro Project Properties dialog box.) 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 enterprise database (i.e., Oracle and SQL Server databases). Requirements documents for the project may be stored in another directory. The project directory path can contain up to 256 characters. See also *project 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 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.

project template: A RequisitePro template that contains project structure including document types, requirement types, requirement attributes, users, groups, and security.

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 are displayed. For example, you might create a query to display only requirements having a high or medium priority. Within that filter, you might sort requirements first by priority, and then by cost.

Rational Administrator: A Rational tool that enables integrations between Rational products. Use Rational Administrator to configure Rational projects, which store software testing and development information.

Rational ClearCase: Rational's configuration management tool, which can be used to store copies of RequisitePro projects. If you are implementing a Unified Change Management model, you can use ClearCase to create baselines of RequisitePro projects.

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.

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: A Rational tool designed to help software development and testing professionals track software testing information through all phases of the software development, test, and revision cycles. RequisitePro requirements can be referenced from TestManager to ensure complete test coverage for all requirements. If a requirement changes, TestManager marks the associated test cases and test input as suspect. Using TestManager, you can create reports that show all suspect test cases and test input development coverage reports that show the percentage of requirements that have implemented test cases. If you have installed TestManager, we recommend that you develop all test artifacts in that tool.

Rational Unified Process (RUP): 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.

renumbering: The process of assigning new numbers to requirements. The renumber feature is useful for eliminating "holes" in a numbering scheme, which 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.

requirement: Describes a condition or capability that a system must provide; it is either derived directly from user needs, or stated in a contract, standard, specification, or other formally imposed document.

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 Rational RequisitePro feature for compiling statistics on requirement name, 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 name: A user-defined title for a requirement. Like tag and text attributes, the name can be used to reference requirements. The name is displayed by default in all Rational RequisitePro views. All requirements must have either a name, text, or both, but requirements located in documents must have text. A name does not need to be unique and can be changed at any time if you created the requirement or belong to a group that has update permissions.

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, UCS) 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 *pending tag number*.

requirement text: The full textual content of a requirement. In a document, it may include embedded and linked objects, such as graphics, tables, and Microsoft Word files.

requirement type: A set of descriptive and operational information associated with a requirement when the requirement is created. A requirement type serves as an outline for all requirements of the same type and is useful for classifying and grouping similar requirements in a project. Each requirement type has 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, such as product features, use cases, and supplementary specifications. 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 *document* or *RequisitePro document*.

requirements management: A systematic approach to eliciting, organizing, documenting, and managing the changing requirements of a software application.

requirements text: The full textual content of a requirement. In a document, it may include embedded and linked objects, such as graphics, tables, and Microsoft Word files.

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 using 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.

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. Revision numbers take the form **M.n**, where **M** is generally 1 and **n** is a 4-digit number that is incremented each time changes are saved.

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 level 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.*

Select: See *multiple select actions*.

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 sort again by unique ID number. See also *filtering, query.*

.~sr file: A text file created for each user who accesses a project. When a user opens a project, a file is 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 require 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. A tag is a unique identifier assigned to each requirement you create. The tag prefix can be up to 20 characters long, and it is defined as a part of the requirement type.

template: See *.dot file (Word template)* or *project template*.

TestManager: See Rational TestManager.

text: See *requirement text*.

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 feature 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 software requirement (Requirement B) associated with that menu item. You would thus create a traceability relationship in which the software requirement (B) is traced from the feature requirement (A). There can be only one traceability relationship between any two requirements. The difference between calling it a "trace to" or "trace from" relationship is one of perspective. For the example above, both of the following statements are true: A is traced to B, and B is traced from A. In RequisitePro, the terms *trace to/trace from relationship* and *traceability relationship* are used interchangeably.

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 displays only the first level cross-project traceability. For example, if an internal requirement is traced to an external requirement, the external requirement is displayed in the Traceability Tree, but other requirements that the external requirement is traced to are not displayed in the tree. Also referred to as a *tree view*. See also *view*.

tree view: See *Traceability Tree*.

type: See *requirement type*.

Unified Change Management (UCM): Rational's out-of-the-box usage model for managing change in software system development, from requirements to release. UCM is a unified approach to configuration management and change request management, automated in Rational ClearCase and Rational ClearQuest. ClearCase can be set up to implement the UCM model for basic activity-based configuration management or in conjunction with ClearQuest to provide full change-request management. To implement the UCM model when creating a baseline of a Rational RequisitePro project, the project must be associated with a UCM-enabled Rational project in the Rational Administrator.

Universal Naming Convention (UNC): The system of naming files among computers on a network so that a file on a given computer will have the same path when accessed from any of the other computers on the network. For example, if the directory c:\path1\path2\...pathn on computer servern is shared under the name pathdirs, a user on another computer would open \\servern\pathdirs\filename.ext to

access the file c:\path1\path2\...pathn\filename.ext on servern. Also called *Uniform Naming Convention*.

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 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 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.*

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 underscore (_) 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.

Word document: A document created in Microsoft Word or RequisitePro that is saved in Word format. See also *RequisitePro document.*

Word Template: See *.dot file*.

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