IBM

Rational® software

IBM Rational RequisitePro

Highlights

■ *Enables customized requirements access for business analysts, architects, designers, developers and testers*

■ *Facilitates detailed change-impact analysis with audit trails and e-mail notification*

■ *Provides a scalable and fast Web interface for distributed teams and an enhanced, security-rich model for enterprise deployments*

■ *Helps users create and compare project baselines*

■ *Links Microsoft Word documents with database requirements*

■ *Provides in-depth traceability and coverage analysis*

■ *Supports best practices in the IBM RUP solution*

Valuing successful requirements definition and management

Over the course of more than 20 years, IBM has been helping customers successfully build and deploy software applications. Time and again, these engagements have revealed that requirements definition and management are key process areas for ensuring project success. Effective requirements management is the specialty of the IBM Rational® RequisitePro® solution.

Capturing and communicating requirements

In any effective requirements management process, recording the requirements discovered during definition activities is essential. Having a single, shared location for requirements enables you to accurately communicate and manage them throughout their evolution.

Requirements can be defined and captured using the Microsoft® Word application for use cases and specification documents; through rich notations like business process diagrams and user interface storyboards in IBM Rational Requirements Composer software;[1] or written directly into the database through the Rational RequisitePro client or fully functional Web interface.
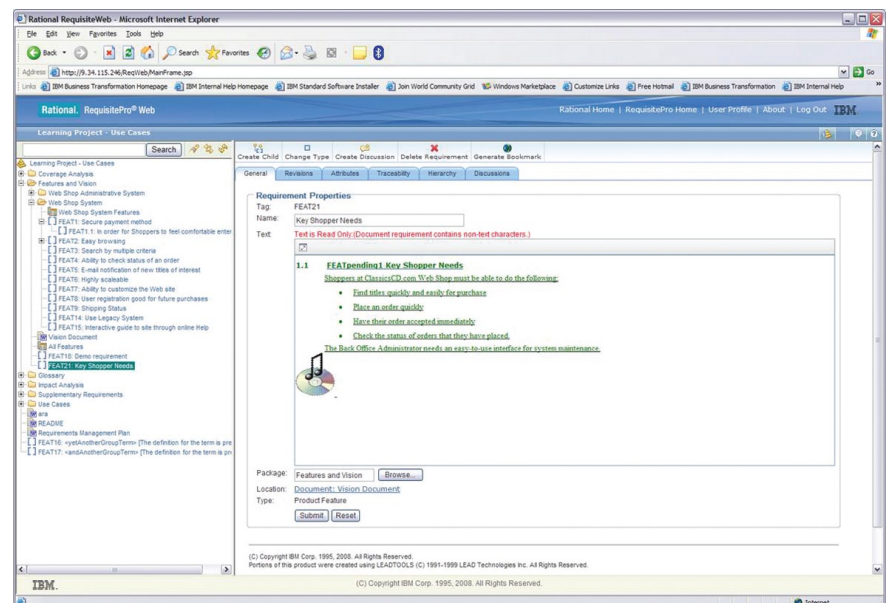

Figure 1: You can display requirements created in Microsoft Word or Rational Requirements Composer in rich text format in the requirement properties view.
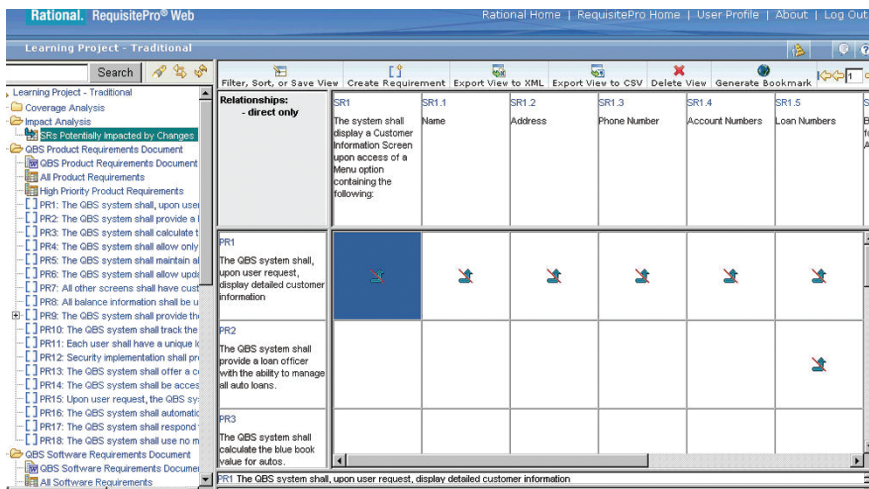
Figure 2: Both the Rational RequisitePro Web interface and the native client provide a tree view to help users understand traceability. Requirement relationships are shown in a familiar expandable and collapsible format, and details for the highlighted requirement are clearly shown.

Leveraging users' licensed copies of the familiar Microsoft Word tool, Rational RequisitePro can help ease requirements capture by linking Word requirement documents to a database. In the database, users can double-click on a requirement to launch the Microsoft Word application, going directly to that requirement in the context of how it was written in the document.

Rational RequisitePro also displays requirements in rich text format in the requirement properties and views, which include an attribute and a traceability matrix. Requirements created in Microsoft Word, Rational Requirements Composer and Rational RequisitePro retain font and style enhancements in the Rational RequisitePro Web interface.

Rational RequisitePro supports a choice of nonproprietary, industry-standard databases (IBM DB2®, Oracle, Microsoft SQL Server, Microsoft Access) with which you can easily organize requirements information in packages (folders) using a structure that best suits your needs. From views into the database, you can prioritize and link requirements, as well as track changes.

Understanding the impact of change

Change is inevitable, but it's not the enemy. IBM Rational RequisitePro allows you to see how change to one requirement impacts other requirements, giving you insight into project risk. With the ability to perform impact analysis, you can make quick, informed decisions for scope management or resource reallocation. And as requirements evolve, each modification made is captured, tracked and fully documented by Rational RequisitePro. Requirement audit trails document the who, what, why and when details of requirement modifications. And e-mails can be automatically delivered to notify predefined stakeholders of changes that may affect their work prioritization.

To keep track of changes in requirements across multiple releases, Rational RequisitePro facilitates the creation and comparison of requirement baselines. A baseline is a logically grouped set of requirements for a particular version of an application. Using Rational RequisitePro, you can construct these baselines and perform comparisons between them, exposing differences at the project, document or requirements level in a Web-accessible report. Project baselines can also jump-start the creation of new releases, helping to ensure efficient transfer of historical data.

Managing requirements via the Web

Through the fully functional IBM Rational RequisitePro Web interface, remote team members can create, view and modify requirements and requirement documents. Administrators can manage projects, and users can trace requirements using a traceability tree, which visually depicts relationships between requirements.

The Web interface enables requirements creation and editing capabilities via Microsoft Word integration, reducing the need to install thick-client interfaces on remote team members' desktops. Users can edit Word documents locally while choosing whether they will be connected or disconnected from the Web server.

Accessing projects and packages securely

For larger, more complex projects, Rational RequisitePro offers both project and package security. Package permission provides users with the ability to assign security permissions at the package level, rather than just the project level. On native clients and on the Web, individual permissions for user groups can be set explicitly or inherited for requirements, documents, views and packages. This means you can define the assignment of security that reflects the responsibility of the team using the project.

Rational RequisitePro includes a Federal Information Processing Standard (FIPS) feature for database password encryption. Previous editions of Rational RequisitePro used a homegrown encryption algorithm to store encrypted passwords on the file system and in the database. However, the 7.1 release replaces the existing encrypted passwords on the file system with passwords encrypted using a FIPS 14-2–approved algorithm. But this new capability does not change any of the user passwords in the database.

Integrating requirements across the software lifecycle

Whether they're local or remote, team members can more accurately deliver solutions that satisfy project or business goals if they're better informed of the requirements. Integrating requirements with other lifecycle artifacts and processes helps ensure clear communication and saves time-consuming rework.

Requirements access for business analysts

Often, the first step to improving a business is to create and publish a business model to help ensure that the business processes, organization and resources are well understood. Rational RequisitePro enables users to access requirements from within IBM Rational Requirements Composer and IBM WebSphere® Business Modeler software, allowing business analysts to directly link tasks, processes and resources with requirements. This capability helps ensure that the software being developed meets the needs of the business.

Requirements access for architects, designers and developers

To help ensure optimal design and to minimize costly rework, developers need access to requirements from where they sit. Using IBM Rational RequisitePro, developers can access requirements from within the IBM Rational Software Architect and IBM Rational Software Modeler solutions.

Rational RequisitePro presents requirements information directly in the integrated development environment (IDE), so developers don't have to move between products. For early design iterations, Rational Requirements Composer provides designers with lightweight use-case modeling alternatives.

Through these integrations, Rational RequisitePro enables developers to connect requirements to use-case models, providing instantaneous access to use-case specifications from use-case diagrams, as well as visibility into requirements information. This functionality can help ensure that developers implement the functionality that truly reflects evolving customer needs.

In addition, integrations between Rational RequisitePro, Rational Requirements Composer, Rational Software Architect and Rational Software Modeler can enable you to connect design elements to requirements and work items using IBM Rational ClearQuest® software. By linking design elements with requirements and work items, you can easily review and assess the impact of requirements changes on design elements and keep developers informed of changes that may affect their work.

Requirements access for testers

Without access to the latest require-ments, how can testers be assured they have prioritized their work appro-priately? Through its integrations with IBM Rational Quality Manager,[2] IBM Rational Functional Tester and IBM Rational Performance Tester software, Rational RequisitePro helps ensure that requirements serve as a direct input to test planning and test case creation so that testers and quality assurance (QA) engineers can validate their applications with confidence. And as changes to requirements occur, testers can identify which test cases are impacted by the change, helping to ensure that their test cases are properly updated to reflect the latest requirements.

Requirements access for the team

As a team-based solution, Rational RequisitePro is part of several IBM Rational Lifecycle Packages.[3] Designed to unify cross-functional teams, optimize practitioner produc-tivity and simplify process adoption, these integrated solutions provide your team with a shared platform for development success.

Supporting best practices

Requirements are a critical area for improvement for many organizations. IBM Rational RequisitePro flexibly supports many methodologies, including the IBM Rational Unified Process®—or RUP®—methodology, which helps ensure that your require-ments management process and automation follow industry-proven best practices.

For more information

To learn more about IBM Rational RequisitePro software, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/awdtools/reqpro

1 To learn more about IBM Rational Requirements Composer software, visit www.ibm.com/software/adwtools/rrc

2 To learn more about IBM Rational Quality Manager software, visit www.ibm.com/rational

3 To learn more about IBM Rational Lifecycle Packages, visit www.ibm.com/rational