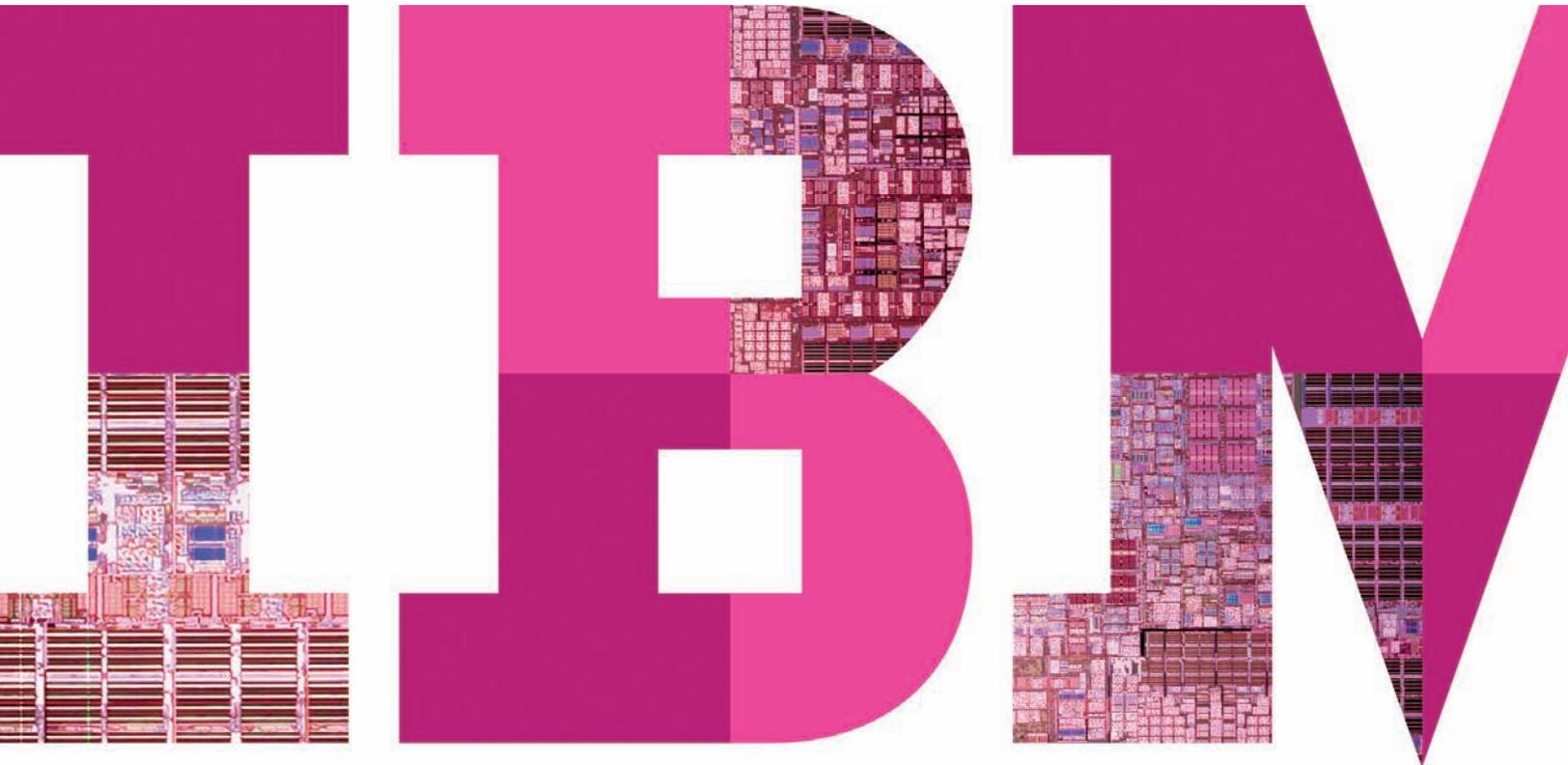


IBM Software

Enterprise modernization

# Modernize your IBM i projects with Rational Software and ARCAD Pack for Rational

*Specialized extensions to Rational Software for the IBM i platform upgraded and available through IBM Passport Advantage*



**IBM**

## Highlights

- Address a huge opportunity to improve the efficiency and quality of your IBM i operations
- Revitalize your IBM i teams with specialized analysis, integration and deployment capabilities from ARCAD seamlessly integrated with leading IBM® Rational® Software tools for collaboration and developer productivity
- Now upgraded with enhanced visual analysis tools, 4GL and CASE tool support, Free Format RPG conversion capabilities and a lower entry-price licensing option
- Globally supported by ARCAD with decades of experience in the IBM i ALM market
- Purchase your complete solution through IBM Passport Advantage®

## Drive productivity, accuracy and quality in your IBM i teams

In order to optimize the return on your investment in IBM i application development, test and support environment, you need to address the immediate requirements of operational efficiency and quality, as well as longer-term issues such as skills retention and application modernization.

IBM i development teams work in a highly specialized environment, and ARCAD's intelligent tools for application analysis, integration and deployment, packaged as the **ARCAD Pack for Rational** and available through IBM Passport Advantage, can help serve as important elements for your overall strategy.

The IBM Rational solution for Collaborative Lifecycle Management and ALM products can help provide the key to unlocking better performance of your organization as a whole—by enabling you to integrate operations and collaborate among projects, platforms, functions, lifecycle stages and organizations.

Now you can realize even more improvements with ARCAD's renamed and upgraded solution, which incorporates enhanced visualization of dependencies, automated HTML documentation, support for popular 4GL and CASE tools and Free Format RPG conversion for the latest compiler specifications for IBM i.

ARCAD and IBM have validated as *Ready for Rational Software* the integration of key ARCAD tools with IBM Rational Team Concert™ and IBM Rational Developer for IBM i, designed to help deliver solutions for modernizing your IBM i world. The ARCAD Pack for Rational is available through Passport Advantage, along with support offerings—now you can purchase the complete solution from IBM. Refer to “**For more information**” for a link to IBM Passport Advantage and specific ordering information.

## Working with IBM i applications: Examining the challenges

Most IBM i applications are part of a complex, composite suite of software programs that use multiple platform technologies and are designed, developed and supported by multiple teams. You're probably expecting your IBM i platform investment to become more efficient, more agile and better integrated with application components on other platforms. Along with the IBM i platform strengths comes a highly specialized technical environment that tends to isolate its teams, tools and processes from other activities in your organization. As a leader, how easy is it for you to plan and coordinate activities, given this divide?

It is likely that a proliferation of “point solution” tools have evolved to support your IBM i application lifecycle. Such a situation might tax productivity because the constant context switching between different styles of interfaces is time-consuming. While highly specialized to the individual tasks, do these tools integrate seamlessly with one another? Can they present a modern, graphical view of a complex application's design? How easy are they for a developer unfamiliar with IBM i to understand and adopt?

The IBM i development environment requires specialized support and knowledge. Application structures, multiple code types, 4GL and Computer-Aided Software Engineering (CASE) tool-generated code, and file system and database dependencies can be difficult to understand and communicate effectively. These critical activities are time-consuming, error prone and

difficult to unwind in the event of a malfunction. Do your tools allow you to conduct a fully integrated impact analysis on changes so that you know ahead of time what needs to be tested? How much time and effort do you spend in creating and maintaining a robust software deployment system?

*“With this integrated solution, companies can adopt the standard ALM technology in the market while taking into account all of the specific needs of the IBM i world.”*

—Philippe Magne, CEO, ARCAD Software

## A seamlessly integrated, validated solution to meet your needs

The integration of specialized capabilities of ARCAD’s tools with the IBM solution for Collaborative Lifecycle Management and ALM tools is the answer to the challenges you face. IBM has validated the integration of ARCAD-Deliver and ARCAD-Observer with Rational Team Concert and ARCAD-Observer with Rational Developer for IBM i and awarded them the *Ready for Rational Software* mark. The tools are designed to work well together and help provide the additional benefits of a properly integrated solution. Because all IBM solution for Collaborative Lifecycle Management and ALM products work in tandem, you can extend the benefit of this solution with Rational Requirements Composer and Rational Quality Manager to give you full lifecycle, cross-platform, enterprise-ready ALM. Now all components for your IBM i solution can be ordered through IBM Passport Advantage with the reselling agreement with Business Partner ARCAD software.

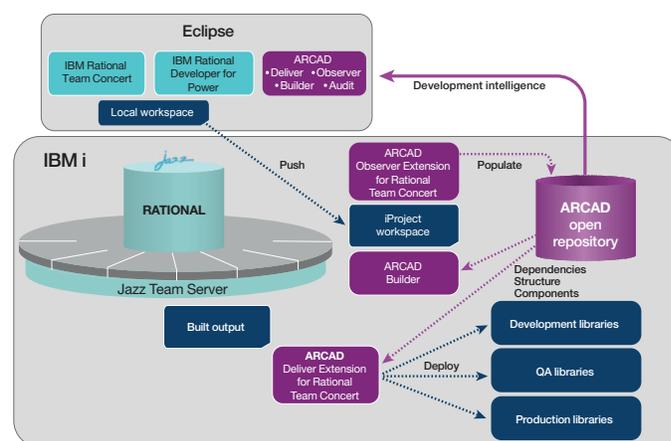


Figure 1. ARCAD Pack for Rational with IBM Rational Team Concert and Rational Developer for IBM i.

## Harnessing the power of ARCAD and Rational

The integration of ARCAD tools with Rational software is designed to help the IBM i development community by:

- Improving your team’s development intelligence with specialized analysis of the IBM i application code and dependencies, maintained automatically in a dedicated repository with the integration of ARCAD-Observer and Rational Team Concert.
- Speeding code comprehension and change analysis with the extension of the Rational Developer integrated development environment (IDE) by ARCAD-Observer’s Eclipse-based user interface for graphical visualization of application structure, code and data relationships and dependencies.
- Freeing up more time for developing by automating the production of maintenance documentation from the code.
- Enabling comprehensive command and control of your entire application with support for 4GL and CASE tool artifacts code alongside RPG, COBOL and Java components—all integrated with Rational Team Concert’s collaborative platform for software development.

- Modernizing your RPG code and taking advantage of the latest compiler updates, by converting to Free Format RPG, either program-by-program, or in bulk using ARCAD-Converter.
- Automating and improving the integration build of IBM i applications by incorporating the ARCAD-Builder tool in the Rational Team Concert build configuration. ARCAD-Builder uses the ARCAD Open Repository to determine all dependencies and steps required for an accurate, repeatable integration build ready for deployment.
- Orchestrating the automated deployment of your applications to multiple test or production platforms simultaneously with the integration of ARCAD-Deliver and Rational Team Concert. ARCAD-Deliver includes functions that provide security-rich features, traceability and the ability to roll back on error for deployment operations.

The developer sees a single, powerful, industry-standard Eclipse workbench environment (as shown in Figure 2) from which all of the integrated solution functions can be controlled and consumed. Release engineers can help configure and control the build and deployment phases using the integrated features of Rational Team Concert. Stakeholders and managers can gain enhanced visibility, intelligence and confidence in their projects, and optimize productivity, quality and reliability. Quality and risk managers can more easily demonstrate compliance with regulatory requirements. Organizations can expect increased satisfaction from their development teams as they use the best tools available.

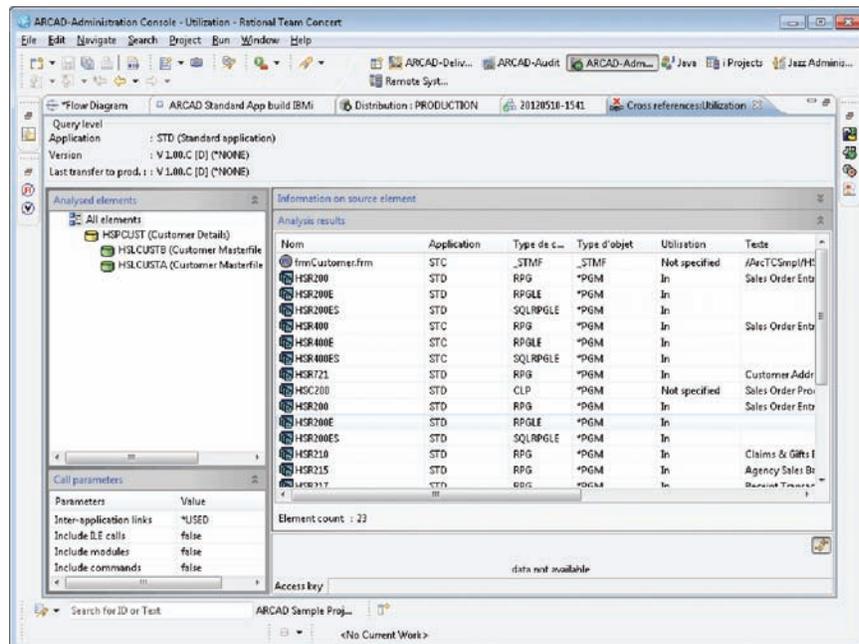


Figure 2. Eclipse workbench environment.

ARCAD's decades of experience and innovation in IBM i technology, when combined with Rational software, helps provide better capability to IBM i teams. IBM Rational Team Concert integrates with IBM Rational Requirements Composer for the creation and management of your business requirements and with IBM Rational Quality Manager software for the centralized management of your entire validation effort. Integrations between these IBM solution for Collaborative Lifecycle Management products provide the ability to link requirements, development plans, designs, activities, test plans, test cases, test results, change sets, builds and defects, providing full lifecycle integration and traceability.

---

*“The integration of the ARCAD solution with Rational Team Concert has moved ALM for the IBM i series to the next level. The integration has enabled us to create a standard automated build-and-deploy process for our applications. The automation will save us hundreds of hours in deployments while increasing the quality of those deployments.”*

— Scott Lancaster, Director, IT Application Development, Kenco Group

---

### **IBM Rational Team Concert environment**

Rational Team Concert is IBM's agile environment for software development teams built on Rational's common collaboration and integration platform, IBM Jazz™

### **Key features include:**

- A modern and rich software configuration management (SCM) capability based on the “stream” and “change set” concepts, with local and distributed models to help enable scalability as well as cross-team and cross-organization collaboration on shared software components.
- Support for breaking down communication barriers within and between geographically distributed teams, with extensive features to assist with efficient and complete information sharing using event feeds, integrated chat and customizable views.
- Defect lifecycle management, fully integrated with the SCM system and all work item artifacts.
- Planning and task tracking of any type of plan, including agile, traditional and hybrid, that is easy for all team members and stakeholders to create, maintain and understand.
- Build configuration and automation, fully integrated with the SCM system and work items. These features are designed to embrace continuous integration and help improve the quality and predictability of your software deliverables.
- Built-in and custom reporting, as well as flexible web dashboards for an instant visual “snapshot” of a team or project, enhancing the whole team's ability to see detail as well as the bigger picture.
- Development process, guidance and governance with templates for popular processes, fully customizable, providing flexibility and control for your teams' ways of working.
- Automated linkage between code, build and work item artifacts, providing built-in traceability with no extra effort.
- Extensible and open platform supporting a large ecosystem of integrations as well as your own customizations.
- Both web and Eclipse client interfaces are available to support all types of users.

### IBM Rational Developer for IBM i

Rational Developer for IBM i provides a rich IDE to create, maintain, or port applications to IBM Power Systems™, including IBM i. The Eclipse-based interface includes remote (IBM i, IBM AIX®, or Linux) file management, searching, editing, refactoring, application analysis, build and debug.

#### Key features include:

- Simplify and accelerate code development and maintenance through a comprehensive application development environment when used in combination with IBM Power Systems compilers and Rational Team Concert.
- Realize productivity gains of moving from older, text-based, command-line development tools to a rich IDE.
- Make use of a modern development environment to attract and retain new talent familiar with Eclipse tools, thereby helping to lower training costs.
- Make developers portable for multiple projects using AIX, IBM i and Linux and development tools for a wide range of programming languages, including Java, Java EE, C/C++, RPG, and COBOL.
- Enables development in both host-connected and disconnected modes.

### The ARCAD Pack for Rational integration

ARCAD Pack for Rational consists of the following ARCAD functions:

- **ARCAD-Observer**—application analysis, visualization and documentation
- **ARCAD-Builder**—support for complex integration builds of composite IBM i applications
- **ARCAD-Deliver**—deployment automation and synchronization for multiple platforms with automatic rollback on error
- **ARCAD-Audit**—IBM i code audit and restructuring
- **ARCAD-Converter**—Free-format RPG conversion
- **4GL and CASE tool support**

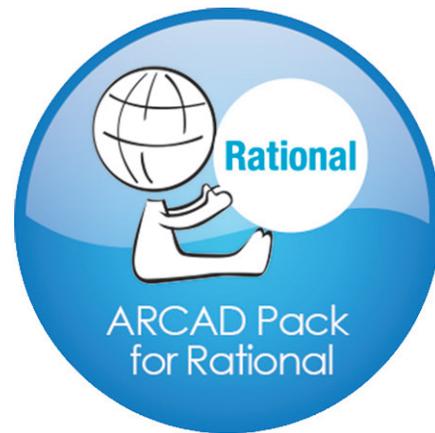


Figure 3. ARCAD Pack for Rational

### ARCAD-Observer

The ARCAD-Observer solution is designed for the ease of use of application intelligence for maintaining and transferring knowledge of existing systems. Whether the context is application maintenance or modernization, the basic needs are the same: to quickly find information that is relevant and up to date.

The ARCAD-Observer component of ARCAD Pack for Rational has been enhanced to support full graphical diagramming of dependencies, synthesizing information and easing navigation through millions of lines of code. With a built-in diagram editor, you can enhance and customize the diagrams and include them in documentation. ARCAD-Observer also now includes “macroscopic views” that allow you to define a functional decomposition of your application and assess dependencies between functional domains more easily. Figures 4 and 5 show examples of workflow diagrams and data relationship models.

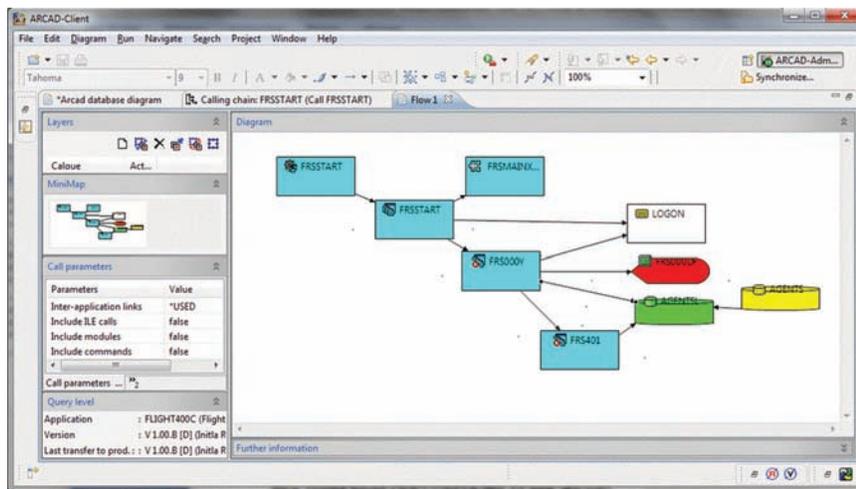


Figure 4. ARCAD-Observer workflow diagram

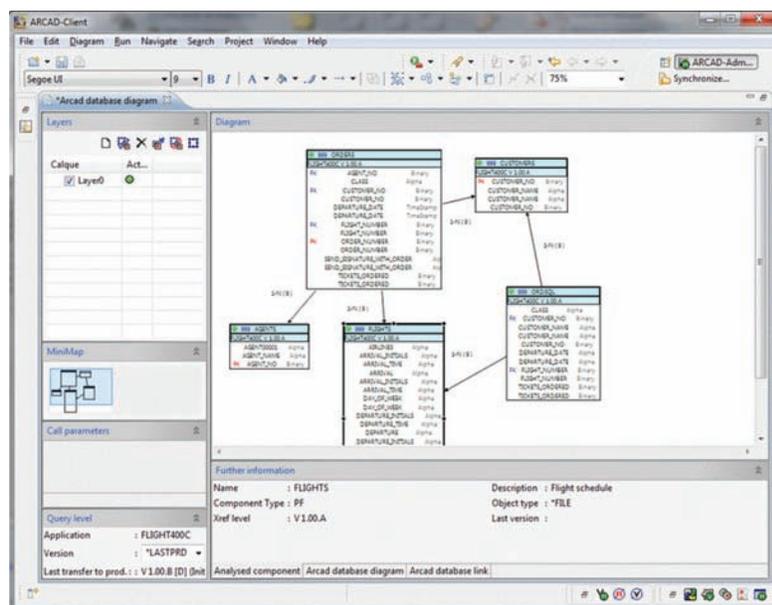


Figure 5. ARCAD-Observer data relationship model diagram

The ARCAD-Observer component now also includes automatic documentation production in HTML format. If your existing documentation is inadequate or even nonexistent, using ARCAD-Observer to produce and maintain up-to-date technical documents can help you meet regulatory requirements, in addition to improving knowledge transfer and productivity within your team.

For customers seeking full application analysis capability, but not yet ready to take advantage of all of the ARCAD Pack for Rational capabilities, the ARCAD-Observer component can now be purchased on its own. Using the ARCAD-Observer component integrated with Rational Developer for IBM i, you can immediately realize productivity and accuracy benefits to help you start modernizing—at a very attractive entry price.

ARCAD-Observer has a *Ready for Rational Software* validated integration with IBM Rational Team Concert that enables the construction and maintenance of the ARCAD Open Repository in synchronization with the application code residing in IBM Rational Team Concert's SCM repository. The Eclipse client for ARCAD-Observer has a *Ready for Rational Software* validated integration with IBM Rational Developer for IBM i that allows seamless integration of ARCAD's enhanced application intelligence capability for IBM i with powerful Rational IDE functions.

### **ARCAD-Builder**

The ARCAD-Builder solution is designed to help ensure complete automation of the build process for any type of IBM i component. The executable code is recreated without any manual intervention, preventing regressions and costly delays or rework.

With ARCAD-Builder you can:

- Automate pre- and post-compilation commands
- Manage attributes, rights and object ownership
- Manage save of data and automatic restore into new file structure
- Automatically sequence the re-compilation of dependent components
- Manage all compilation specifics such as SQL and ILE compilations

ARCAD-Builder does not directly integrate with IBM Rational Team Concert, but is used in Rational Team Concert to build configurations to help enhance IBM i build intelligence by making use of the ARCAD Open Repository data.

### **ARCAD-Deliver**

The ARCAD-Deliver solution enables strong coordination between development and production. ARCAD-Deliver manages the deployment of all platform components in a single transfer. This solution can help enable your deployment process from a central console and deploy any type of files to any number of servers that host UNIX, AIX, Linux, Windows and IBM i operating systems. This solution offers reliability through automatic rollback, allowing return to the previous release at any stage during the implementation.

ARCAD-Deliver also has a *Ready for Rational Software* validated integration with IBM Rational Team Concert that can improve the robustness, automation and traceability of deployment of application software built using IBM Rational Team Concert.

## ARCAD-Audit

The ARCAD-Audit solution analyzes your IBM i libraries and source code to populate a database containing all the interrelationships between components such as programs, files and databases and work fields. This database reveals which components within your application are no longer used. In addition, it provides all the tools needed for a rapid cleanup of your application. These tools can compare, archive, compile and delete obsolete components, providing all the traceability and the security you need.

ARCAD-Audit does not directly integrate with IBM Rational Team Concert, but is included as a complementary offering to help you normalize, sanitize and prepare heritage code repositories as you migrate to the IBM Rational Team Concert SCM and ARCAD Pack for Rational environment.

## 4GL and CASE tool support

For users of CASE and 4GL tools, such as CA Technologies' CA 2E (Synon) and Oracle's JD Edwards World, LANSa and Adelia, a new optional feature enables integration of the additional source, intermediate and object assets from these tools within the combined IBM Rational and ARCAD solution for IBM i developers. Developers using CASE/4GL tools can therefore get a complete picture of the application components in development with bi-directional linkage between Rational Team Concert work items and the CASE or 4GL tool assets. Figure 6 shows an example of the linkage of a Rational Team Concert work item with a CASE tool artifact.

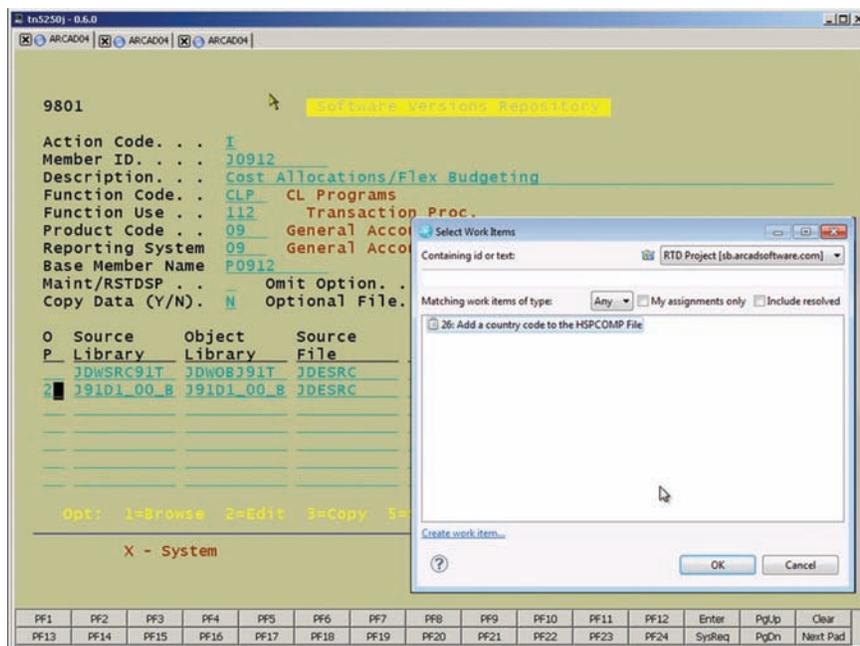


Figure 6. 4GL and CASE tool support

### ARCAD-Converter

IBM's RPG compilers include the ability to use free-form style coding, recognized as an important modernization language feature that can help productivity, application maintainability and skills acquisition. ARCAD Pack for Rational now includes an optional, standalone feature that accelerates the conversion

of your application to free-form. The Free-Form RPG Converter supports the conversion of individual modules in a statement-by-statement fashion under the control of the user, or as a bulk operation on many modules at once. Flexible licensing options allow you to purchase the optimum number of conversions based on the size of your application suite. Figure 7 shows an example of the ARCAD-Converter “side-by-side” conversion capability.

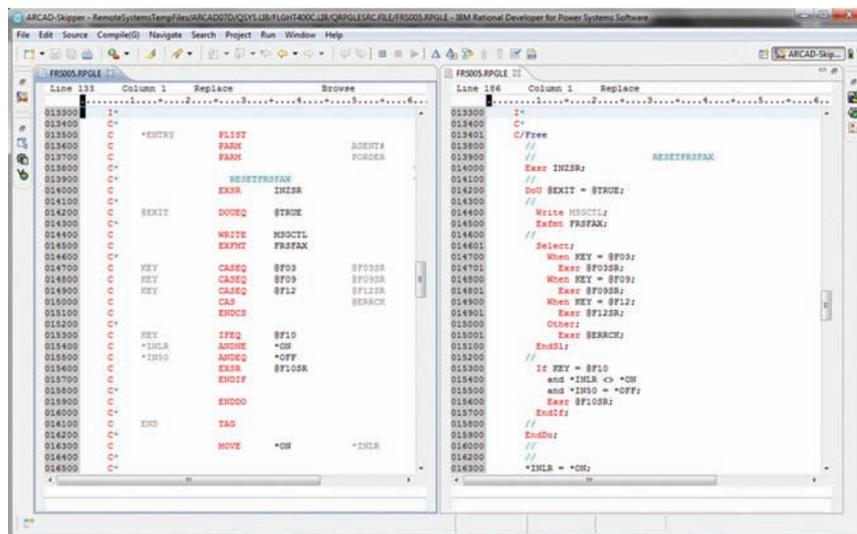


Figure 7. Free Format RPG Conversion

## About ARCAD Software

Founded in 1992, ARCAD Software develops and supplies an open and integrated range of solutions dedicated to the automation, security and traceability of software change for multiple platform types. ARCAD solutions are modular, covering release and change management, application analysis, test automation and application modernization. Individual modules are built over a common metadata repository, enabling progressive adoption of IT best practices and regulations compliance—for example, ITIL, SOX and CMMi. Twenty years of sustained R&D effort have given ARCAD a functional coverage in the international market that includes software with more than 1,000 licenses deployed in 33 different countries and international references such as IBM, HSBC, NASDAQ OMX, ABN AMRO and GE Capital. For more information about ARCAD, go to:

[www.arcadsoftware.com](http://www.arcadsoftware.com)

## For more information

To purchase ARCAD Pack for Rational use Product PID 5725L13 and Selected Support PID 5725L14 in IBM Passport Advantage.

To learn more about the ARCAD Pack for Rational, please contact your IBM marketing representative or IBM Business Partner and request a briefing, demo or proof of concept, or go to the following websites:

- [ibm.com/software/products/us/en/arpp](http://ibm.com/software/products/us/en/arpp)
- [arcadsoftware.com/products-scm-rational](http://arcadsoftware.com/products-scm-rational)

To learn more about IBM Rational Developer for Power Systems software, and to download a free trial, go to:

- [ibm.com/software/rational/products/rdp/](http://ibm.com/software/rational/products/rdp/)
- [ibm.com/developerworks/downloads/r/rdp/](http://ibm.com/developerworks/downloads/r/rdp/)

To learn more about IBM Rational Team Concert go to: [ibm.com/software/rational/products/rtc/](http://ibm.com/software/rational/products/rtc/)

To keep up to date with IBM's thought leadership in the IBM solution for Collaborative Lifecycle Management and ALM, go to: [jazz.net/](http://jazz.net/)

Additionally, IBM Global Financing can help you acquire the software capabilities that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize a financing solution to suit your business and development goals, enable effective cash management, and improve your total cost of ownership. Fund your critical IT investment and propel your business forward with IBM Global Financing. For more information, visit: [ibm.com/financing](http://ibm.com/financing)



---

© Copyright IBM Corporation 2013

IBM Corporation  
IBM Software  
Route 100  
Somers, NY 10589  
U.S.A.

Produced in the United States of America  
October 2013

IBM, the IBM logo, ibm.com, AIX, Jazz, Passport Advantage, Power Systems, Rational, and Rational Team Concert are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at “Copyright and trademark information” at [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml)

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Linux is a registered trademark of Linus Torvalds in the United States, other countries or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product and service names may be trademarks or service marks of other companies.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

It is the user’s responsibility to evaluate and verify the operation of any other products or programs with IBM products and programs. THE INFORMATION IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

ARCAD Pack for Rational is not an IBM product or offering. ARCAD Pack for Rational is sold or licensed, as the case may be, to users under ARCAD Software’s terms and conditions, which are provided with the product or offering. Availability, and any and all warranties, services and support for ARCAD Pack for Rational is the direct responsibility of, and is provided directly to users by, ARCAD Software.

The client is responsible for ensuring compliance with laws and regulations applicable to it. IBM does not provide legal advice or represent or warrant that its services or products will ensure that the client is in compliance with any law or regulation.



Please Recycle

