

IBM Revitalizes i App Dev Tools in V6R1

By George N. Farr

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This is an abbreviated version of a longer article, which can be read in its entirety on the TUG website www.tug.ca (under "Articles and Downloads.")

IBM's Rational software has revitalized its IBM i application development tools and compilers with changes in the areas of product packaging and rebranding, new client products, enhancements in RPG IV V6R1, and the introduction of the newest IBM i business language — EGL. The latest tools were announced by IBM in late January, and rolled out on March 21, 2008.



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Although the changes are substantial, they are not complicated. The purpose of this article is to offer a high-level summary of what was announced in V6R1 for WDS and the Eclipse-based client products for Version 7.1. We will publish future articles relating to other enhancements announced in V6R1. This is an abbreviated version of a longer article, which can be read in its entirety on the TUG website www.tug.ca (under "Articles and Downloads.")

At a Glance

IBM introduced three new features of WDS; ILE Compilers, Legacy Compilers, and ADTS tooling, with flexible pricing and packaging enabling IBM i shops to

consume only the pieces they require. The announcement also includes new functions in RPG IV/COBOL and workstation tools.

Three new products are also introduced: Rational Developer for System i (RDi), Rational Developer for System i for SOA Construction (RDi SOA), and HATS for 5250.

IBM's newest business language — EGL — which will be part of Rational Developer for System i for SOA construction (RDi SOA), will help IBM i shops extend their existing RPG and COBOL applications to the Web.

Packaging and Rebranding

Customers reported for years that the WDS one-size-fits-all model didn't work. Customers want to consume only the product components that they need. The new packaging clearly identifies our strategic products versus heritage products to encourage customers to make the right choices. A side benefit, this new packaging will help IBM clearly see which features are being used and therefore will impact our decisions for future development investment.

The new WDS (Product ID 5761-WDS) will now contain three separate components:

ILE Compilers — including RPG, COBOL, C, and C++. IBM has made significant enhancements to them and will continue to do so.

Heritage Compilers — including S/36 RPG II, S/38 RPG II, RPG/400 (RPG III), S/36 COBOL, S/38 COBOL, and OPM COBOL. These products are stabilized. This implies that IBM will continue to offer support and service for them but will no longer enhance them.

ADTS (SEU, PDM, SDA, RLU, DFU) — This product will continue to ship but will also be stabilized with no future enhancements.

Figure 1 illustrates the current WDS packaging in V5R4, which contains all the compilers and tools, and the corresponding new packaging under V6R1 that unbundles WDS into three different features.

Although IBM has priced each feature separately, the company has also implemented a user-based pricing model with a reasonable number of user licenses included for each machine's software tier level.

Boost Your RPG or COBOL Skills with EGL

IBM Rational Business Developer (RBD) Version 7 Release 1 offers a number of enhancements which will let IBM i developers effectively leverage existing investments in RPG to produce modern, professional, web or SOA applications using their existing business logic quickly and with minimal time to market.

The RBD product provides a language called EGL, an easy-to-learn, high-level business language that you can use to modernize your applications quickly. RBD provides the development environment (including edit/compile/debug capabilities), a Web page creation editor, wizards, and dialogs

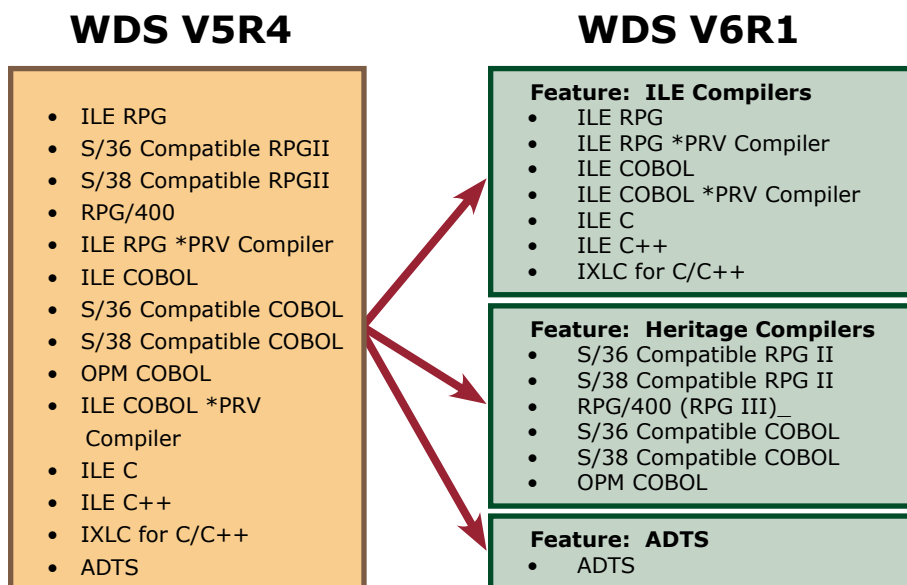


Figure 1.

that make easy to write applications in EGL and use RPG or COBOL business logic or data on IBM i for Web or SOA applications.

In addition, IBM is working on EGL Rich UI, an EGL extension that will be released as Tech Preview first and in a product in the future. With EGL Rich UI, you will be able to create composite Web applications with rich user interfaces using the latest Web 2.0 technologies. (See **Figure 2.**) The intent is to leverage EGL's existing values of simplicity, abstractions, and portability to increase skills transfer, productivity, and time to market.

Rational Developer for System i (RDi)

IBM i customers have long asked for a more lightweight tooling that focuses on the work at hand. Shops have reported that WDSi and WDSi AE are too big, contain features they are not using, and cause a slow start-up time. The new lightweight Rational Developer for System i (RDi) tool offers significant enhancements to let IBM i customers improve their application development. Like all other strategic IBM tools, RDi is based on the Eclipse platform and is exceptionally light with minimal resource requirements. It is certified to run on a desktop machine with as few as 512 MB of memory. IBM has focused on the needs of RPG, COBOL, and CL developers and is offering high-performance edit, compile, and debug capabilities along with access to i5/OS resources and facilities.

The new features of RDi include:

- Full RPG and COBOL syntax checking and program verification that allows you to test compile your members locally without generating an object and reports the errors through the Error List view.
- Content assist that allows you to display help anywhere in your source member.
- Outline view allows you to display the structural elements of the source member that is currently open in the editor.



Figure 2.

Our latest release, RDi 7.1, also comes with many major new enhancements.

Application diagram was first introduced in version 7.0 and helped shops visualize their applications using capabilities such as call graphs showing subroutine, procedure, and program calls. To see an application visually, you select resources by right clicking and selecting Visualize Application



Figure 3.

Diagram. You will then be presented with a graph as shown in **Figure 3.**

Rational Developer for System i for SOA Construction (RDi SOA)

RDi SOA is designed for the developer who needs to build Web applications, Web services, or functionality beyond basic RPG, COBOL, or CL development. Note that RDi SOA is a software bundle that contains two sets of interrelated capabilities. RDi SOA is a combination of RDi and Rational Business Developer (RBD) with Enterprise Generation Language (EGL). It is intended for developers who want to leverage and extend existing RPG or COBOL applications to the Web or to an SOA-based environment.

WDHT Is Now HATS for 5250 Applications

For the last several years, IBM has been consolidating its two presentation-integration (refacing) technologies: WebFacing and HATS. A common runtime and tier-based pricing structure called WDHT and introduced in 2006 let customers take full advantage of both technologies. In 2007, the con-

cept of “interoperability” was introduced so that the technologies could work together. In this release, IBM will be rebranding, renaming, and repackaging the common runtime as Rational Host Access Transformation Services (HATS) for 5250 Applications. The fully functional HATS Toolkit will still be available for free download from

the Web and will also ship with RDi SOA. After customers are ready to deploy their HATS applications to production to either reface or deliver a Web service, they simply purchase the appropriate number of HATS licenses for 5250 applications.


What's Happening to RPG IV and COBOL?

The biggest enhancement IBM added to RPG IV in March is a true multiple thread-

ing capability that is native to the language. Multi-threading gives you the ability to run in multiple threads and therefore allocates each thread its own static storage.

Read more about this new feature in the full version of this article on TUG's website (www.tug.ca).

Stay Tuned

To prepare for the future, you continue to modernize your RPG IV code to make it more modular, use procedures, avoid mixing business logic with user interface, and take advantage of EGL. IBM is adding enhancements in RDi and RDi SOA that you have been asking for. Expect to see great enhancements in RPG IV in the future to further integrate it with EGL to provide you with better Web experience. 

George Farr is the World Wide product line manager for IBM i tools and compilers. George is an award-winning speaker and author of Java for RPG Programmers, Java for S/390 and AS/400 COBOL Programmers, as well as ILE: A First Look and RPG IV by Example. He can be reached at farr@ca.ibm.com.