

Open  
Source

Putting  
collaboration  
to work



## Open Web 2.0

IBM spins EGL into a  
universal application-  
development solution

By Logan Rugler

IBM's Enterprise Generation Language (EGL) has long been a technology of choice for business-application developers, as it lets them develop all parts of the application in one universal language. Now, IBM is spinning a wider web and will provide EGL as a free, open-source download for developers and customers, while putting increased focused on the technology's Web 2.0 capabilities.

In general, building robust Web 2.0 applications for business can be a sticky proposition. Multiple skills and languages are required and

business-application developers spend considerable time learning or reacquiring them as they design and deploy these intricate applications. EGL



lets developers work faster, at a lower cost, while improving quality.

Releasing the language to the open-source community can only mean positive things. Will Smythe, IBM product line manager, predicts wider adoption, a longer shelf life and increased innovation around the tools and language.

#### Expanding the Reach

IBM's contribution to the open-source project is significant. The EGL language, compiler, Java\* generator, JavaScript\* generator and most of the core tools are being open sourced. These components exist today in the IBM Rational\* Business Developer (RBD) product. In 2009, IBM released the free tool, EGL Community Edition, which lets users develop, run and debug EGL-generated Java and JavaScript applications; deploy into a dynamic Web project; and deploy on a Web-application server, such as Apache Tomcat.

Smythe says IBM is seeding code into the project and a fully open-source EGL compiler should be available by the end of this year. The stand-alone Eclipse-based integrated development environment (IDE) for EGL development (conceptually comparable to the Eclipse IDE for PHP developers) will be delivered midyear 2011.

IBM will continue to build development tools and other solutions for EGL, including Rational Migration Extension, which enables migration of various source languages into EGL. This can result in major cost savings and increased platform flexibility. "Our expectation is for these tools to be built on top of the open-source EGL components, but add additional capabilities not available in the open-source project," Smythe says. IBM will also continue to provide support to help address issues encountered when using the tools or when applications are in production.

"Going open source improves choice," he adds "Opening the technology exposes EGL to a new audience of developers, who may have been hesitant to try EGL when it was proprietary technology."

#### Open to Innovation

The open-source model will do more than simply help with wider adoption; users will increasingly turn to a solution that has the capacity for innovation. The Web 2.0 environment is highly dynamic, and business-application developers must act to capitalize on the business opportunities.

"One of the big things about doing an open-source project is you open the technology up such that other people can contribute to it," Smythe says. A handful of vendors also contribute to the project, many of which want to build complimentary tools, such as impact analysis and documentation functions that make more capabilities available to EGL development shops.

## Play Outside the Box

**RDB Connect** allows record level I/O as well as import/export of remote data for use in batch or interactive programs.

Synchronize data between systems  
Generate reports from data on remote computers  
Eliminate data transfers or duplicate data entry  
Read, insert, update and delete records programmatically

**FREE 30 Day Trial! Get yours today.**

Finally a product that allows you play outside the IBM i!

RDB Connect provides direct access to remote data from your RPG programs. You can access and share data from:

MySQL  
Microsoft SQL Server  
Access  
Oracle  
Postgre  
DB2  
and More!

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

**ProData**

**800.228.6318**



This means EGL solutions will more closely match customers' needs, from quick development and deployment to application modernization.

### Agile Development

EGL delivers the tools to design business applications that can be developed and deployed within the constraints of time, cost and quality. Modern companies need this speed to gain a competitive advantage, but Smythe says traditional Web 2.0 tools lack the agility and quality required. "Building new Web 2.0 applications takes time," he says. "Time to learn the different technology and to make it work together to successfully build an application." The challenge is to quickly create robust, business Web 2.0 applications, and test, deploy and adapt them in time to seize business

opportunities while reducing business risk and costs.

Traditionally, one set of languages and skills is required to build the server-side aspect of the application. On the client side, a completely different set of tools is required, for instance JavaScript, Flash and other open-source or proprietary widget libraries. Additionally, different skills may be needed to transmit application data between the client and server sides. EGL cuts out that complexity. "Using EGL, developers can create an end-to-end application in a single language, which works at a level above middleware and hides a lot of the complexities multitier application developers typically have to deal with," Smythe explains.

EGL places the focus on meeting business needs and the goals of using

Web applications, rather than resting on the technical logic of the code or platform upon which they'll be developed and operate. This is where EGL truly stands out from the pack of Web-development options: "EGL is crafted and designed to integrate Web 2.0 business applications with databases, to drive transactions and to provide UIs easily and wherever they're needed," Smythe says. "EGL is a completely universal, broadly applicable technology."

Many Web developers will be familiar with tools such as Microsoft Expression or Adobe Creative Suite. These companies seek to dominate the Web-development space by replacing standard technologies, such as HTML or JavaScript, which causes a splintering of innovation in the industry. EGL uses existing tools

## EGL Support

**E**GL works on Windows\*, Linux\*, IBM i, System z\* and AIX\* operating systems. Business-application developers can now write code in one high-level language, without the need to learn JavaScript\*, HTML or any evolving Web technology and framework. Additionally, EGL is an end-to-end solution, which takes care of the coding at the server side, too. (EGL compiles into Java\* and COBOL.) Will Smythe, IBM product line manager, says, "EGL is a complete programming language

that compiles into a variety of other languages—with more in the future. The language was designed from the ground up a few years ago, and the designers took many of the best concepts they found in business-oriented languages (like COBOL) with some of the good stuff found in Java, so EGL is truly the best of both worlds."

EGL is a familiar to many who have experience with midrange and mainframe installations. As a high-level language, it's capable of being easily

understood by human developers but can also be used to code lower languages, which computers need and understand as their programming instructions. "EGL is easy to learn as many developers have a procedural background in COBOL," Smythe says. But "anyone with experience of Java and JavaScript will find EGL very familiar." IBM provides free user training.

—L.K.





and performs all of the hard work of compiling, organizing and testing within IBM's RBD environment. Smythe summarizes the IBM approach: "What EGL means is the developers only have to learn one language and they don't have to learn all the lower-level technologies, such as JavaScript, HTML, Java, and all the various other frameworks and technologies out there today."

### Beyond Development: Modernization

A further business challenge is extending and modernizing existing "legacy" applications, whether green screen, GUI or Web-based. No solution can remain current (EGL works to solve this problem, of course), but it's extraordinarily difficult to port or rewrite existing logic exactly to keep the application up-to-date with the latest technologies and the desires of its users. At some point, adjustments, updates

or even a complete migration of the application to an up-to-date platform becomes necessary. This presents all of the difficulties associated with developing the application from scratch, but is complicated by existing coding and operational considerations. EGL and the Rational Migration Extension solution let businesses adapt or migrate existing applications to EGL, which then lets the business take advantage of newer platforms and technologies, including support for mobile devices.

### Extending Application Longevity

A major advantage EGL derives from being open source is its capability to stay current as new technologies move to the forefront. Innovation is one aspect of the situation business developers will want to take advantage of, but the platforms developers work on will also change.

"We've made EGL extensible in such a way that it can keep up with

new technology," Smythe says. "There are going to be new platforms in the future that people are going to want to deploy their applications to. EGL allows them to take the code they've already developed and tested and deploy it into these new environments. This wouldn't have been possible if EGL remained a proprietary technology. The open-source move allows EGL to fulfill its promise as a language- and platform-independent business application-development technology. We're very excited with the direction EGL is going." 



**Logan Hugler** is a writer and entrepreneur who's written about technology and business for more than 50 national and international publications. He built his first computer at age 10.

## Adaptable System Recovery for AIX® and Linux® on IBM Power Systems

Physical to  
Virtual



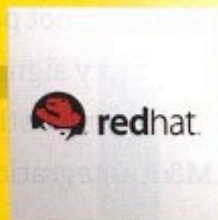
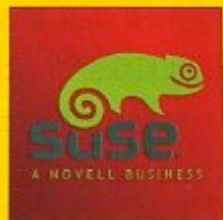
Centralized Backup Management

Flexible Bare-Metal Recovery

Software Storage Migration

Clone Dissimilar Systems

Physical to Virtual Migration



Virtual to  
Physical

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

All trademarks and registered trademarks are the property of their respective owners.

**STORIX**  
System Backup Administrator