
Open Source Java

By : Zvika Markfeld, Tikal



Breaking News...

It took 11 years, but we finally got there:

**SUN Java's implementation
will be open sourced!**

What and How?

- ▶ In order not to disrupt the release cycle of Java 6, SUN will start by releasing Java 7 code
- ▶ Later, Java 6 code will be open sourced

When?

- ▶ The Hotspot JVM and the compiler will be open sourced in 2006
- ▶ We will have to wait until mid-2007 to get a full-fledge JVM available in FOSS(free and open source software)
- ▶ No fully buildable JDK until Q2 2007
- ▶ Reasons for waiting until now:
 - » Traditional skepticism (Hardware, SPARC, SunOS, Solaris were all proprietary)
 - » Microsoft lawsuit
 - » Source-code management issues(Teamware -> Mercurial)

Why?

- ▶ Make Java even more ubiquitous on these desktops and mobile(Linux, Firefox...)
- ▶ Gosling: *"we're eager to be even more interactive with the community."*
 - » Better conversations with the developer community
 - » Better relationships with many of the Linux distributions(especially the license-sensitive ones)
 - » Better relationships with the open-source community: collaborate & evolve

Licensing Standpoint

- ▶ **Java SE** will be dual licensed: GPLv2+E and commercial license.
 - » GPLv2+E: modified GPL version that drops virality
- ▶ **Java ME** will be dual licensed: GPLv2 (no exceptions) and commercial license.
- ▶ **Java EE** will be trial-licensed: GPLv2+E, CDDL (already the case) and commercial license.

Compatibility Concerns

- ▶ **Risk:** Others will fork and resell the intellectual property
 - » Fracturing the Java platform(Linux Distributions...)
 - » Breaking compatibility
- ▶ **Solution:** Protect the ecosystem from incompatible implementations
 - » Defining the spec is still under the Java Community Process.
 - » Massive test suites released & performed by Sun
- ▶ ***Will it work???***

Licensing: Analysis

- ▶ The real announcement here is pretty much for Java SE...
 - » OS and hardware vendors customizing and fine-tuning Java for their environments
 - » Java can now be made available on more platforms while maintaining consistent behavior(?)
 - » Compiler could be standardized through the JCP
 - JVM-level AOP integration, scripting languages and optimizations
 - This may lead to a fast turnaround of innovations in Java (think Hibernate-> JPA or SEAM->Web Beans).

Licensing: Analysis - J2ME

- ▶ SUN is making most of its JVM revenues in ME-land
- ▶ Licensing the JVM under the GPL certainly fits with SUN's commercial reality.
- ▶ In case phone vendors are not satisfied by the license, they could either:
 - » Decide to open source their phone software under the GPL (low probability)
 - » Fork SUN's SE implementation and adapt it for ME environments

"Simple Things Should Be Simple"

- ▶ Originally said by James Gosling, but some argue that's a focus Java has lost
 - » Analyst at Burton Group: "Java EE [is] no longer a viable platform."
- ▶ Sample case: EJB 2.0/2.1
 - » Massively complex APIs that made them nearly unusable.
 - » APIs driven by corporate partners, not developers
 - » Aimed at generating nice consulting fees...
 - » Clarity and simplicity weren't virtues!
- ▶ The EJB 3 specification, had much more input from Open Source developers, was a huge improvement

Technological References

- ▶ Java Frameworks: Ruby on Rails, Spring...
- ▶ AOP getting trendy
 - » Java5's javaagent was the beginning
 - » AOP-Capable JVMs?
- ▶ Sun's hope: Opening Java will clean up Java, turn it into a lean, mean, efficient language, thus increasing competitiveness(C#, Perl, php, Python) and pervasiveness

The Challenges

- ▶ Will open source licensed Java help returning to roots in simplicity?
- ▶ Will more input from the open source community help to define a platform that's more developer-friendly?
- ▶ What will be the governance models of OpenJDK, Sun's open source jvm project?


Community Comments

- ▶ **Sacha Labourey, JBoss Architect:**
“Excellent news for Free Software movement. Tighten your seat belts, the Java ecosystem is about to move full throttle ahead!”
- ▶ **Tim O'Reilly, O'Reilly Media:**
“The choice of GPL is a bold move that's going to have a lot of far-reaching consequences. It would open playing field and may cause large communities to take another look at Java”

Community Comments

- ▶ **Doug Fisher, Systems Software Division, Intel:**
“This move signals a new and positive step in the evolution of the community efforts around Java”
- ▶ **Eben Moglen, Software Freedom Law Center Founder:**
“[...]an extraordinary achievement [...] a crucial step in the process of turning the technology today into knowledge that people can use freely to make the technology of tomorrow.”

Community Comments

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- ▶ **Paul Cormier, Executive Vice President of Engineering at Red Hat:**
“[...]the missing piece of the puzzle to enabling broader open source development from desktop to server [...] good for developers, good for the community and, ultimately, good for the customer.”
 - ▶ **Renato Martini, National Institute of Information Technology, Brazil:**
“The Brazilian Government is very pleased with the news that the Java Platform is being now released under a Free Software license.”

Community Catfight!

- ▶ **IBM, 2004:**
“[os-java] would speed the development of a first-class and compatible open-source Java impl' to the benefit of our customers and our industry”
- ▶ **IBM, 2006:**
“Sun should [have] contribute their Java technologies to Apache, or at least make their contributions available under an 'Apache friendly' license”
- ▶ **Fleury:**
“[...]IBM's approach to OS is to let the community do things, then package them, add proprietary code, and markets the result—itness WebSphere. This usually works well with BSD-style licences. Sun's action has taken the wind out of their sails”



Q & A



Thank You

zvika@tikalk.com