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The Java Community Process℠ Program Goes for New Enhancements: The Value of Adopting Change

— Sun Microsystems

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Executive Summary

Business relationships are governed and supported by some form of contract or agreement. This is true for the relationship between the corner store and the local milk distributor as well as for the business executive, the software vendor, and educational, government, nonprofit, or open source organizations. Over time, as the businesses of both the customer and the vendor mature, it becomes necessary to modify the contract or agreement to ensure that both sides remain content and the relationship continues to produce for both parties. Those relationships and agreements that do not mature and change to reflect the needs of the parties involved eventually end. Successful relationships modify their agreements to reflect market conditions and help ensure continued collaboration between the parties involved.

The Java Community Process[SM] (JCP[SM]) Program is no exception to the general rules of engagement for business relationships. The JCP is maturing its relationship with members of the Java™ community by ringing in JCP 2.5 and the new Java Specification Participation Agreement (JSPA). The JCP is changing its agreement with its members to support new business requirements and requests from community members. The changes to the agreement that governs the operations of the JCP will, over time, contribute to the overall health of the JCP, encourage the Java community to grow, and ensure that Java technology continues to be cutting edge by encouraging organizations and individuals to contribute to the JCP and as the JCP produces open Java technologies.

Java Technology Overview

Developed by Sun Microsystems, the Java technology allows Java to be used for any business solution, regardless of the underlying hardware or system software. Java technologies' promise of interoperability and compatibility removes for the business end user the issue of platform dependence. Systems of all flavors and design can speak to each other using Java technology. Java technology allows organizations of all kinds — educational, nonprofit, open source, and government — to concentrate on the business process and solution at hand rather than be concerned with technology incompatibilities. For more information, be sure to check www.java.sun.com.

The JCP Overview

Simply stated, the JCP is the governing body for all things Java. The JCP's main purpose is to ensure the advancement of Java technology through open standards in a community development model. The JCP is a collection of supply-side technology vendors, technology service providers, end-user organizations, and individual contributors as well as educational, government, nonprofit, and open source organizations that create and manage the processes and rules that ensure the advancement of Java technologies.

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The community development model used by the JCP is designed to ensure that the best Java minds come together and share their innovations while providing a review and acceptance process that ensures the business use of Java technologies. Research, development, and application of new Java technologies are quickly integrated through the JCP. A think tank without results, the JCP is not; rather, it is a fluid standards-implementing organization that reacts to the business needs of the Java community and technology.

The JCP is overseen by two executive committees, one of which concentrates on Java 2 Standard Edition™ (J2SE™) for desktop computing and Java 2 Enterprise Edition™ (J2EE™) for server-based enterprise solutions. The other committee focuses on Java 2 Microelectronics Edition™ (J2ME™) for handheld devices and embedded computing. These committees comprise industry leaders and subject matter experts in the research, development, and application of their respective Java target markets and are elected by the JCP members.

An individual or organization can become a JCP member by completing and signing the Java Specification Participation Agreement (JSPA). The JSPA is the contract or agreement between the business user (individual contributor, company, or software vendor or an educational, government, nonprofit, or open source organization) and Sun Microsystems. This agreement defines the relationship and each community member's rights and obligations surrounding development of Java technologies through the JCP.

JCP members can submit ideas for enhancing Java technologies. The ideas are submitted through Java Specification Requests (JSR). After a JSR is submitted, it is processed through a standard review cycle, which can result in approval of the technology and possible implementation into the Java code-base. The process includes an open review of the idea or JSR, followed by a vote governed by the appropriate executive committee. If the JSR passes the vote, a specification lead (subject matter expert) is appointed, and an expert group is formed. The specification lead and the expert group work to refine the specification and JSR to the point where it is ready for implementation. Next, the specification lead works with the applicable engineering team to develop a reference implementation of the JSR. This team takes the JSR through the testing and compatibility phases of the integration process by producing a Test Compatibility Kit (TCK) to ensure functionality and integration of the Java platform. More information can be found at www.jcp.org.

What's Changing in JCP Version 2.5 and the New JSPA

The JCP today, currently JCP 2.1, is moving forward. The focus is on defining a new version of the JCP, version 2.5. The goal is to ensure that the working model of the community is in sync with the new version of the JSPA that will evolve from the changes under development in JSR 99.

Business decision makers have no doubt been presented with considerable information on another community development process over the last few years. This other community development process is known as the Open Source community. Many specific organizations in the Open Source community have their own set of rules and agreements to work with contributors and to approve technologies. Many of these particular organizations in the wider Open Source community and the JCP have collaborated over the past few years, but some differences were causing concern about the ability of these organizations to continue to work together to advance Java. Additionally, other organizations and individuals had expressed concern with some of the membership agreements of the JCP — specifically, license fees, intellectual property ownership, and the basic legal structure of the JSPA. Utilizing the established community process of its organization, the JCP Executive Committees have instituted a number of JSRs to address the requests of its members and introduce changes to the JSPA and the JCP itself.

As previously discussed, the JSPA is the contract that potential JCP members sign to join the JCP. Two JSRs directly impact the future of the JSPA and the JCP itself. JSR 99 represents a major revision of the JSPA as requested by current JCP members. It produces a new JSPA to enhance the relationship between the JCP and the many organizations that make up the Open Source community as well as the educational and nonprofit organizations. It also makes provisions for government participation and provides the ability to create open source implementations of Java technology. The new JSPA requires companies leading JSRs to separately provide the technologies that ensure compatibility of Java standards, the Technology Compatibility Kits (TCK), and Reference Implementation. This enables developers using Java standards to do a clean-room or independent implementation of any JSR without having to adhere to the Reference Implementation developed by the specification lead.

In conjunction, Sun Microsystems will provide no-cost access to TCKs for qualified nonprofits and has instituted a scholarship program for organizations that cannot afford Sun's support services. Additionally, the new JSPA provides for independent implementation of all JSRs and separate licensing of Reference Implementations (RIs) and TCKs. In JCP 2.1, no rules governed what happens to an individual specification that ends up as part of a larger Java standard. This lack of rules has led to confusion as to which technology an implementer must support to be compatible with a specification. JCP 2.5 aims to establish rules for bundling technologies and specifies when technologies have to be made available on their own as well as through a platform JSR. Finally, in the current JSPA, Sun automatically shares the intellectual property license generated by a JSR technology submission; JSR 99 revises the JSPA to allow the specification lead company to be the sole owner of the license.

The Hurwitz Take

Technology communities that are stagnant and do not continue to meet the business demands of the organization using their technologies will be passed over and ignored. They must react to their constituents' requests regarding their contractual obligations and deliverables in order to survive.

Hurwitz Group believes that the changes in creating JCP 2.5 contribute directly to the maturity and solidification of the JCP model as a technology advancement platform. The benefits of the changed model will increase membership in the JCP, will encourage more collaboration between JCP members, and should easily increase the number and breadth of JSR contributions.

The changes to the JSPA and the related new version of the JCP are direct benefits to organizations currently using or evaluating Java technologies. JCP members as well as the Java end-user community now have the best of both worlds; in addition to contributing to and directly influencing Java technology, they can contribute to and directly influence the parameters of the agreement that governs the ruling body of the community. Hurwitz Group believes that these changes to the JCP are an improvement on an already stunningly successful technology creation model.

The ability to have vendors and even end users — whose businesses are in some cases in direct competition — contribute to a technology code base in an open forum with public review is one thing. To have that group not only allowed but also encouraged to use the same processes to affect the governing rules and agreements of the overall community is quite amazing. Hurwitz Group believes that the JCP is making the right choices to keep itself healthy and to keep Java a prosperous foundation for building computing solutions that drive business success.

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About Hurwitz Group

Hurwitz Group, an analyst, research, and consulting firm, is a recognized leader in identifying and articulating the business value of technology. Known for its real-world experience, consultative style, and pragmatic approach, Hurwitz Group provides strategic guidance to its clients by delivering analysis, market research, custom content, and consulting services. Clients include Global 2000, software, services, systems, and investment companies.