

Java™ Technology in Mobility At-A-Glance

Java™ Platform, Micro Edition (Java™ ME) securely and efficiently extends consumer and enterprise applications and data to any device, over any network, leveraging the Java-installed base

Customer Wins/References

Mobile Java is leaping to the next level – with new capabilities backed by major players in the global ecosystem of wireless and mobile data services providers

- NTT DoCoMo FeliCa: Japan's **NTT DoCoMo** takes consumer convenience to a new level with the i-mode FeliCa™ Mobile Wallet service. Enhanced by Java technology-based application, it allows users to replace their cash, cards and house key with a FeliCa contactless IC chip in their phone.
- **MobiTV** is using Java technology to power new handsets for carriers like Cingular Wireless and Sprint PCS. By utilizing this technology, MobiTV is providing consumers with cost-effective access to more than 20 live television channels.
- In Korea, the **SK Telecom MONETA**, built on Java Card™ technology and the Java ME platform, brings financial services to the mobile phone via the Internet or a MONETA card.
- Launched in Q1 2005, Sun and Vodafone are cooperating to define a next-generation Java technology-based platform for Vodafone live! 3G services. Called Vodafone VFX, the new platform will help Vodafone monetize data services and deliver a rich, secure communications experience to usher in a more exciting, more connected mobile world.

Technologies and Products

- Sun Microsystems Java Card™ Platform has Record Number of Shipments - Java Technology Enabled Cards Surpassed the 1 Billion Mark (Sun, 06/05).
- Sun Java Wireless Toolkit: Developer.com Wireless/Mobile Development Product of the Year (2/05), Developer.com Product of the Year 2004 Wireless Development Product category (01/04), Jolt Product Excellence Award (03/04), 2004 Java Pro Reader's Choice Award for Best Mobile Development Tool (10/04).
- Sun's optimized implementations and technologies enable Java-based data services in devices.
- Sun's testing tools ensure quality of Java-based handsets.

Top Five Things You Should Know About Java Technology in Mobility

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| <p>1. Sun's enterprise mobility strategy is comprehensive.</p> | <ul style="list-style-type: none"> • Java ME, together with Java EE, provides an integrated architecture and platform for accessing business data and assets for any mobile device. • Mobile web services empowers developers to use Java to build mobile applications that deliver business advantage. • Comprehensive suite of development tools and online learning help build the ecosystem necessary to feed these applications into solutions that reduce cost and complexity for the enterprise. |
| <p>2. Java Technology for the Wireless Industry (JTWI) is fostering cooperation. The next generation, Mobile Service Architecture (MSA), takes JTWI to the next level.</p> | <ul style="list-style-type: none"> • The industry has worked together to define and agree on a single roadmap, specification, reference implementation, and testing compatibility kit resulting in an agreed upon feature set that device manufacturers, carriers, and developers can plan on. • The JTWI specification enables the deployment of end-to-end solutions on mobile phones and other mobile information devices. • MSA will extend JTWI to provide new and enhanced services. |

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| <p>3. Sun supports an open, healthy mobile developer ecosystem.</p> | <ul style="list-style-type: none"> • Industry standards for mobile Java test criteria shorten development cycles for applications. • Java Verified testing provides a single, respected standard and the Java Powered logo™ provides a seal of approval for mobile Java content. • Developers can target a global audience of top-tier operators and device manufacturers to grow their business. • Developers can drive demand among millions of end-users through promotion on www.java.com. |
| <p>4. Java technology is the de facto standard for mobile data services.</p> | <ul style="list-style-type: none"> • Over 708 million handsets are Java-enabled (source: Ovum 06/05). • 140+ carriers have deployed mobile Java services worldwide (source: Nokia/Sun, 6/05). • 570+ million Java mobile devices on the market (source: Sun 6/05). • 32 mobile device vendors using Java (source: Sun 6/05). • 23 million Java mobile application downloads (source: Nokia 6/05). • Java is the no. 1 wireless gaming platform in volume, quality and deployments, and commercial mobile games (source: Wireless Gaming Review 5/05). • 7 out of 10 wireless applications currently under construction will use a Java technology runtime environment. Java has a strong following amongst developers targeting wireless applications due to its ability to create small footprint applications and its enviable portability (source: Evans Data 2004). • 34% of wireless developers port to Java ME first, more than any other wireless platform (Evans Data 2005). • Deployed across all major wireless networks, on every continent: GSM, CDMA, PDC, iDEN, 3G. • Secure and open: off-device pre-verification, secure provisioning model, on-device verification and secure sandbox. |

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5. **Developers are winning with Sun's market leadership, tools and programs for mobile developers.**

- Java Verified™ Program: Developers can test their applications to ensure the application meets the industry-recognized test criteria created by mobile Java technology experts, including leading device manufacturers and network operators. Currently more than 1000 applications are Java Verified (source: Sun 5/05).
- Java developers are able to apply their programming skills to a rapidly growing market for mobile applications, from consumer entertainment and information services to business mobility and productivity applications.
- NetBeans Mobility Pack offers client and server side support for extending existing content and applications to any device – browser or Java-enabled.
- Sun Developer Network Mobility Program provides a complete portfolio of resources to create, test, and verify J2ME applications and market them to consumers and enterprises.