The SavaJe Mobile Platform

SavaJe

The mobile Java experience

The SavaJe Mobile Platform delivers multiple compelling

■ ■ ■ ■ ■ *business benefits to manufacturers and mobile operators.*

Many companies have tried to optimize Java technology for proprietary platforms. Results are mixed, resulting in poor Java application performance while maintaining the security and management problems inherent in proprietary systems.

The New Competitive Battlefield: The User Experience

The competitive dynamic in the mobile communications market has shifted multiple times in the last decade. Competitive advantage once was gained by providing the best combination of price and service coverage. However, these became commodities and were replaced by new competitive differentiators like innovative handset designs and new data services like email, text messaging and Web browsing.

Today, however, end-users expect their mobile communications platforms to flawlessly fulfill their basic voice and data communications requirements. With these once-differentiated services becoming commodities, another competitive shift is underway. A shift focused on a new battlefield called the "User Experience."

It will not be enough to simply deliver new services and applications in the coming years. Rather, those services and applications must be delivered in a way that delivers a completely different – and differentiated – user experience. Today's rigid and stark interfaces will become the equivalent of the desktop DOS prompt as interfaces evolve to become far more customized, consistent and compelling.

However, there is a major hurdle standing in the way of the new mobile user experience: proprietary mobile platforms. These platforms make it impossible to deliver a compelling user experience, because they are difficult to manage and are severely limited in their ability to support interface customization, advanced functionality and rich applications.

Mobile Needs the Java Platform

Virtually every handset today comes with its own unique operating system and set of native applications. It is not unusual for mobile operators and manufacturers to have to support dozens of these platforms in their portfolio of handset offerings. This consumes enormous development resources, since applications must be reverified or even custom-developed for each platform. Additionally, these platforms are usually written in C code and thus pose a security risk, as can be seen in the spate of recent news reports on new mobile viruses and other attacks on popular mobile platforms.

For years it has been clear that the Java programming language is the answer to the interface and security issues surrounding mobile platforms. As a platform-independent technology, the Java platform could solve the requirement to develop custom applications for each platform. The Java programming language is renowned for creating compelling user experience, because it is interactive and graphically rich. It can deliver exciting and dynamic user

experience that will be required to compete in the mobile marketplace. And, as an object-oriented technology, the Java platform is inherently secure and protects against the security threats currently plaguing leading mobile platform providers.

However, the full benefits of the Java platform have not been realized in the mobile market because proprietary operating systems eliminate many of the benefits of Java technology. Java applications require considerable "porting" work to function properly across multiple proprietary operating systems, thus eliminating the cross-platform benefits of Java technology. Also, because native operating systems were not architected to work with Java Virtual Machines (JVMs) – which are the "virtual platforms" on which Java applications run – Java applications tend to perform poorly on these platforms while consuming substantial memory and power resources.

Furthermore, because Java applications run in parallel to native applications on proprietary platforms, the non-Java portion of the platform continues to represent a serious security risk.

To date, some of the world's largest technology companies have spent hundreds of millions of dollars attempting to solve these problems by optimizing the Java platform for mobile operating systems. Only one company has taken a different approach to the problem. That company is SavaJe.

Namely, if it's impossible to optimize Java technology for proprietary operating systems, why not create a mobile platform optimized for Java technology?

The SavaJe Mobile Platform

SavaJe has delivered to market the first mobile platform "built from the kernel up" for Java technology. The result: the first mobile platform that enables mobile operators and OEMs to gain the full benefits of the Java platform: cross-platform, graphically rich and secure.

The SavaJe Mobile Platform offers the industry's most flexible and rich Java Applications Programming Interface (API), supporting both MIDP and CDC. For the first time, this unleashes Java technology's
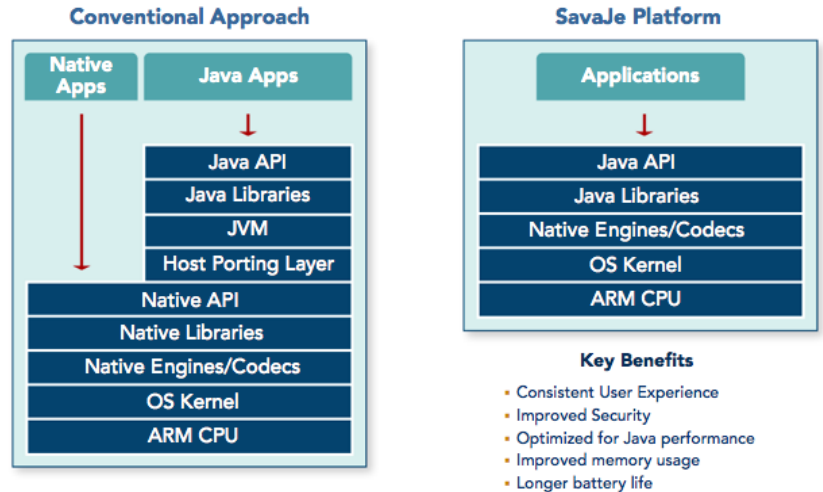
SavaJe is the first mobile platform built from the kernel-up for Java technology.

desktop graphics capabilities on the world of mobile, where Java applications automatically take on the look and feel of the device on which they are running.

The platform uses a single highly optimized JVM and Java technology-based operating system that can support full multi-tasking to simultaneously run multiple applications. For example, users can play music while checking email or surfing the Web. Additionally, applications are aware of each other and can interact seamlessly to deliver even more powerful benefits to the subscriber.

Porting SavaJe to different hardware platforms requires far less time and resources than are required with other mobile operating platforms. The telephony services and system services are written in the Java programming language. Porting is isolated to a low-level interface between the SavaJe platform and the reference hardware. At the same time, since codecs, engines and libraries are integrated at the system level, typically above the porting layer, there are minimal porting requirements.

Delivering on the Promise

Through its 100 percent native support of Java technology, the SavaJe Mobile Platform delivers multiple compelling business benefits to manufacturers and mobile operators, including:

- **Easy Customization** – Manufacturers and operators can establish deep, consistent branding that extends beyond the current "face plate and application welcome screen" to every page of every application. This enables branding capabilities beyond those seen on desktop

systems and opens the door to customization that is tailored to particular subscriber market segments.

• **Easy Theming** – Operators and manufacturers can easily permeate their mobile offerings with themes designed to target specific market segments. Theming is accomplished by simply dragging and dropping .GIF files, using the SavaJe Theme Studio.

• **Superior Performance** – The SavaJe-optimized JVM delivers "native-caliber" application performance and enables advanced features like multitasking, to further improve the user experience.

• **Superior Security** – Because it is written completely in the Java programming language, the SavaJe Mobile Platform includes all of the security benefits of the industry-proven Java desktop security platform. This is manifested in a comprehensive set of security features that enable SavaJe-based handsets to be flexibly configured to meet the demanding security requirements of manufacturers, operators and content providers.

• **Simplified Platform Requirements** – SavaJe radically simplifies the management of multiple hardware platforms by supporting a rich set of industry standard open APIs. This reduces the amount of coding and porting work required. And, because SavaJe is based on these advanced Java standards, it opens the world of 4 million+ desktop and mobile Java developers to the mobile market.

By delivering these benefits, the SavaJe Mobile Platform enables manufacturers and operators to succeed in the next battlefield of mobile communications: the user experience. Proprietary operating systems will become a competitive liability in this environment, because they simply are too difficult to customize and maintain. They also fall short of the Java platform's ability to enable deep branding and theming, combined with new mobile functionality and enhanced security.

Only one mobile platform can fully unleash the power of Java technology on the mobile user experience. *That platform is SavaJe.*

SAVAJE

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