

## The Gemplus Java Consulting Offer

**Enabling our clients to deliver improved security and robustness to their java solutions.**



### J2ME and Javacard security

With over 250 million Java-enabled mobile phones and over 500 million Java-based smart cards distributed around the world in 2004<sup>1</sup>, Java is rapidly becoming the programming language of choice for portable devices. The successful adoption of Java is recognised as being due to the fact that it is an open, non-proprietary language that has been conceived and defined with strong cross-industry support. However, Java's openness can also be seen as a source of concern when it comes to both platform and applicative security, as an open dominant platform will surely be an attractive target for potential malicious attackers. Gemplus is able to share its expertise in this domain by providing java security consulting and services that cover both applicative and platform security aspects.

<sup>1</sup> Source: les Echos 5/5/04

### Gemplus' Java expertise

- Expertise born from leadership of Javacard OS implementations: millions of Gemplus java devices distributed worldwide
- Recognised and proven java consulting experience – portfolio of prestigious clients from banking organisations to mobile network operators, handset vendors and application developers
- Dedicated java security team with over 50 man years experience
- Gemplus is a major java security participant in standardisation organisations - OSGI Alliance, Java Card Forum (Security Taskforce), Java Expert Group JSR 177 (trusted channel from handset to SIM card)



### Gemplus java security consulting offer

- Secure Java solutions consulting
- Java client security consulting
- Obfuscation expertise
- J2ME MIDP 2.0 security evaluation service

## Challenges and offers

### How to ensure global security for distributed Java solutions?

The advantage of designing distributed Java solutions lies in the ability to efficiently exploit the assets of each of the solution components, which may be handset, javacard and server-based. However this approach increases application complexity considerably, enforcing the need for excellence in application design and for the clear definition of an appropriate applicative security policy.

### Secure Java solutions consulting

- Secure solution design
- Solution risk analysis
- Solution security policy definition
- Signature and authentication process definition

### How to secure a Java client?

Java code portability brings with it security risks linked to untrusted content, malicious code and Trojan horses. An effective way to manage these risks is to audit sensitive applications.

### Java client security consulting

- Source code audit of Javacard applets, J2ME midlets and OSGI-based applications
- Pragmatic risk analysis audit approach
- Java secure programming guidelines.

### Managing J2ME MIDP 2.0 security risks?

Recent research by the Java Security team has revealed security flaws are commonplace on commercially available J2ME handsets. The flaws reveal inadequacies in the implementation of the complex MIDP 2.0 security

mechanisms. These security flaws open the way to an array of potential risks that can impact both the subscriber and the mobile network operator and which can lead to denial of service, theft of confidential subscriber data and even to illegal access to handset manufacturer's IP through the operating system.

### J2ME MIDP 2.0 security evaluation service

- Test Suite of 300 unit tests covering MIDP, CLDC/VM, WMA and MMA
- Realistic, pragmatic evaluation approach that links each test to an identified risk
- Detailed evaluation report with security flaws classified by criticality
- Recommendations to improve security

### How to protect Java application IP?

Obfuscation allows a certain protection of codes from malicious reverse engineering, by modifying the application code to make it more complex to understand but still executable. Java code is more at risk than binary code as reverse engineering is more effective on its interpreted binary code.

### Obfuscation expertise

- Obfuscator selection: consulting study that provides expertise on the best choice of obfuscation technology to meet with client requirements
- Customised obfuscation: design of solution based on Gemplus' proprietary obfuscation technology

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