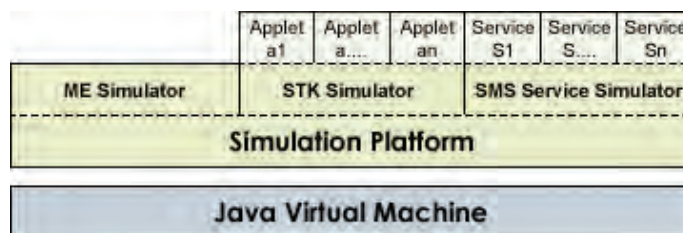# VirtuoSimo™

Universal Wireless Development, Test and Debugging Tool

The VirtuoSimo™ software lets you develop, test, validate and deploy Java-SIM based applets. It enables developers and test engineers to design, model and fine-tune end-to-end applications together before the expense of hardware testing. VirtuoSimo™ harnesses the power of embedded Java without the trouble of an embedded environment.

With VirtuoSimo, you can:

- Run a simulation of independent GSM phase 2+ mobile handsets and SMS services

- Easily implement USIM Application Toolkit* (USAT*) applets and related services on the wireless network, with better control

- Reduce development time and cost by tracking all errors in an iterative manner

- Develop a Java Card™ applet for a USAT card and test it using its mobile phone simulator and a wireless network simulator

- Present your USAT services with a friendly graphical interface, with no network subscription or dependence

- Develop with a GSM phase 2+ mobile handset equipped with a SIM card that can hold one or more applications

- Incorporate an SMS service, providing an open interface (API). This allows developers to benefit from an open environment to integrated middleware and back-end applications. For example, in a mobile banking application, the user can connect VirtuoSimo™ to a banking authorization network

VirtuoSimo™ is a GSM and 3G simulation platform working on a Java Virtual Machine. The simulation consists in the following:

- ME simulators

- SIM Toolkit card simulators (one card being attached to one ME only), on which applets (a1, a2, …, an) can be downloaded and installed

- SMS services simulators, on which services (s1, s2, …, sn) can be downloaded

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VirtuoSimo™ : The Partnership

VirtuoSimo™ provides communication between a simulated phone and any real USAT cards or with a simulated USAT card. Moreover, the USAT cards can exchange data with servers on the network.

3GPP/GSM 11.11

- Simulation of the sim.access API
- Simulation of the card file system
- Management and browsing of the file system of a real card
- Full interpretation of the files stored into the card

3GPP/ GSM 11.14

- Simulation of the sim.toolkit API v1.0.0, v7.1.0
- Connection and USAT exchange with a real card
- Editable tracer/interpreter/analyzer (APDU or command level) of all envelope, proactive command, terminal response exchanges

SMS Services

- GSM 03.40, 03.48: unformatted and formatted SMS
- Tracers for SMS exchanges
- Tests of services with multiple clients and multiple sessions

Java Card™ applets code debugging

- Java Card™ applets debugging with Sun™ ONE Studio (breakpoints, watches during the execution)

Scenarios

- Validation of USAT applets in a simulated or a real card

Extra Features

- Simulation of several phones and servers at the same time
- Bearer-independent commands (CSD, GPRS, Bluetooth, etc.)
- Icon management (black & white, color)
- Dual-slot commands
- UCS2 support (Chinese, Japanese, Russian, etc.)

partnership with

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