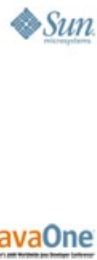




the
POWER
of
JAVA™

netbeans
m  **bility**



NetBeans™ Mobility Pack and Sony Ericsson: Mobile Java™ Technology Development...Simplified

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TS-5454

The Java™ ME Platform Development Cycle

Using the NetBeans™ Mobility Pack

Learn how to build a mobile Java technology-based application for multiple profiles and configurations using the NetBeans IDE and the Sony Ericsson SDK for the Java Platform, Micro Edition (Java ME)

Agenda

- Java ME Platform-based Application Basics
- Layout With The Mobile Visual Designer
- Optimize The Application For Different Devices
- Produce Packages For Each Target
- Deploy Application Via Bluetooth
- On-device Debugging
- Accessing Web Services

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Java ME Platform-based Application Basics

What You Need to Know Before You Get Started

- Configurations
 - CLDC 1.0
 - CLDC 1.1
 - CDC 1.0
 - CDC 1.1
- Profiles
 - MIDP 1.0
 - MIDP 2.0
 - Foundation Profile
 - Basic Profile
 - Personal Profile
- Additional optional APIs
 - 3D Graphics (JSR-184)
 - Bluetooth (JSR-82)

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Platform Manager Demonstration

Configuration management

Power of Abilities and Platform templates

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Layout with Mobile Visual Designer

Designing Flow And Screen Content With Drag-and-drop

- Flow Designer
 - Map out navigation
- Screen Designer
 - Select elements to be presented to the user
- Corresponding code automatically generated
 - Hint: Plan out your entire application flow before diving into the code manually

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Visual Designer Demonstration

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Optimize App for Different Devices

Solve Device Fragmentation and Utilize Additional Features

- Device specialization = #1 challenge in Java ME platform
 - Configurations and profiles have evolved since introduction in 1999
 - Different configurations and profiles
 - Different screen sizes and physical characteristics
 - Different APIs
 - Different implementations of JSRs
 - Operator and OEM variations
- Generate multiple packages from one source
 - Map abilities to device families
 - Optimize code for different abilities

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Device specialization solution

Editor integration features

Sony Ericsson Java Platform
strategy

New pre-processor syntax

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Produce JARs and JADs for Each Target

Device-specific Output

- Device specialization solution results in packages for each target device
 - Hint: Use HTTP headers to determine which device is requesting the file and serve the appropriate package since many users don't know (or care !) what specific device they are using

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JAD and JAR creation (CLDC)

SIS package creation (CDC)

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Deploy Application via Bluetooth

No Cables Required For Many Devices

- SDKs and emulators good for early testing rounds
 - Fast
 - No equipment required
 - Lots of SDKs available
- On-device testing is the only way to ensure 100% compatibility
 - We are evolving and technology is getting more complex
 - Hint: If devices don't support Bluetooth, PC cable or InfraRed methods, post your app on a web server with a link from an XHTML or WML file, then download it

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Bluetooth deployment

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On-Device Debugging

Complimenting Emulators With Real Hardware

- What is on-device debugging?
 - Testing applications on specific firmware and hardware
- Benefits of on-device debugging
 - No special phones required
 - Pixel-for-pixel accuracy
- NetBeans IDE support for on-device debugging
 - Using the Sony Ericsson SDK for the Java ME Platform



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On-device debugging

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Web services stub generation

Support for phones without web services
(JSR 172)

Summary

- Visual authoring enables rapid creation of application flow and screen content
- Device fragmentation pre-processing produces optimized packages
- Use SDKs and emulators for early testing
- On-device debugging provides unparalleled accuracy

For More Information

- @ 2006 JavaOneSM conference
 - Visit the JavaOne Pavilion
 - Demos of CLDC and CDC application development tools
 - Attend the Sessions & BOFs
 - TS -1878 Debugging Across Tiers, Thu 1:30 pm
 - TS - 4589 Good Morning, Buenos Dias, Dobry Den: Mobile Internationalization in Action, Thu 2:45 pm
 - LAB - 6205 Mobile Application: Visualize it, Build it, Deploy it to Many Devices, Fri 3:45
- Online
 - Netbeans.org — <http://netbeans.org>
 - Sony Ericsson Developer World — <http://developer.sonyericsson.com>
 - java.sun.com — <http://java.sun.com>

Q&A

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