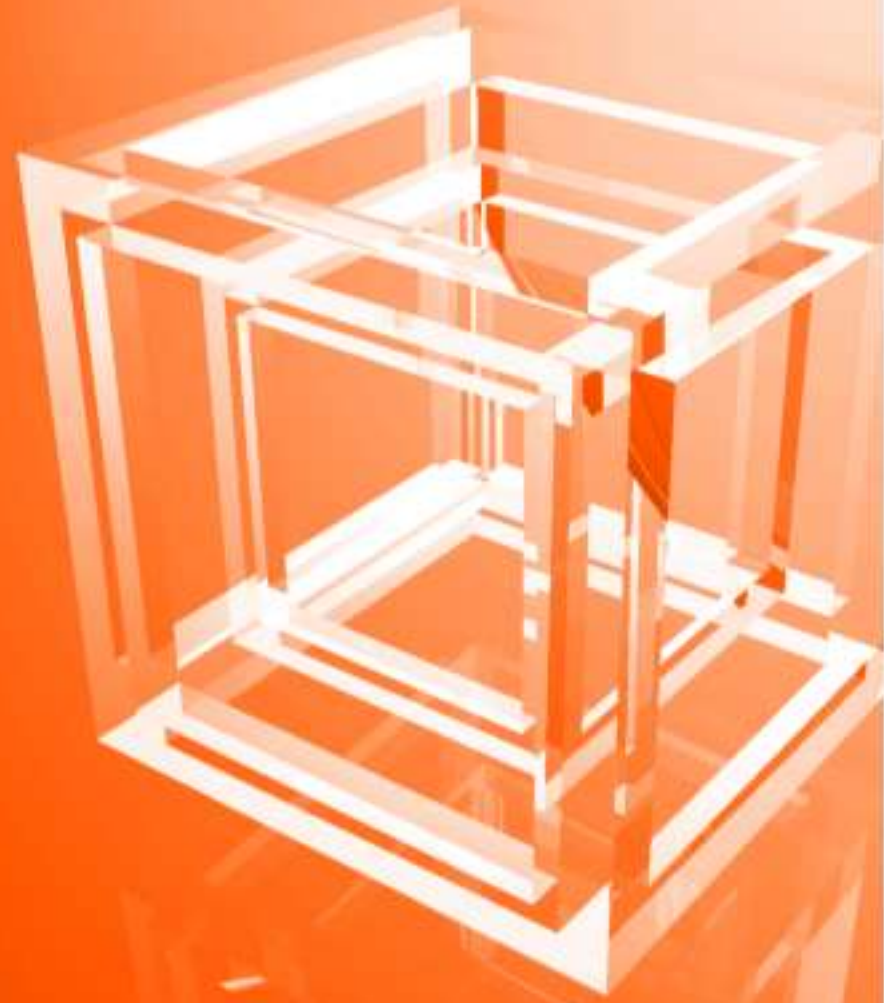


NetBeans Mobility

*Martin Brehovsky
Adam Sotona
Petr Suchomel*



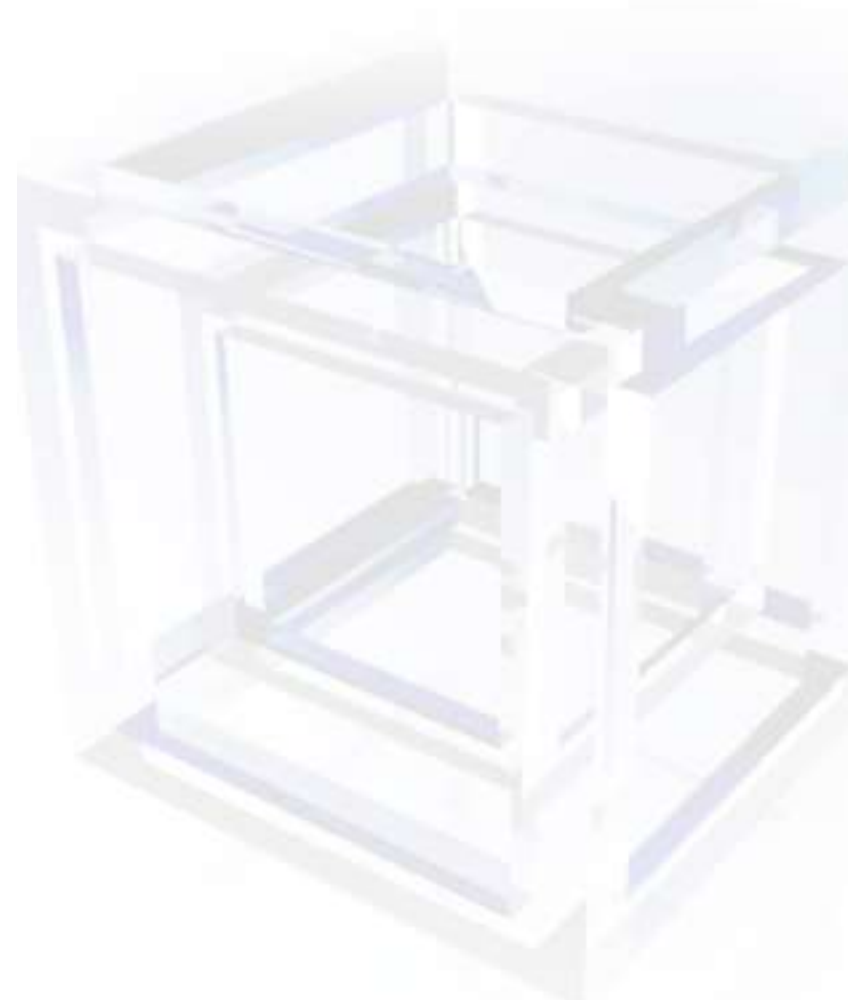
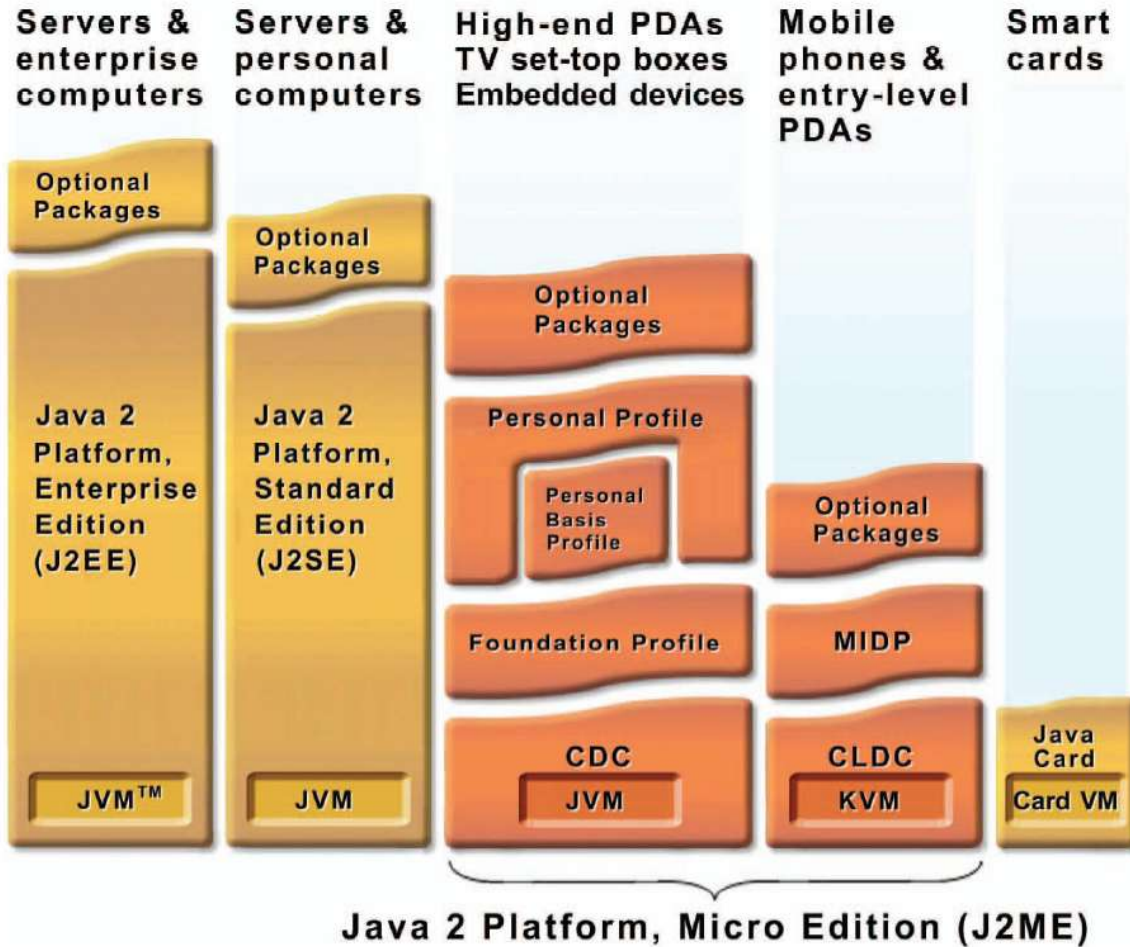
Agenda

- J2ME introduction
- NetBeans Mobility – a complete J2ME/MIDP IDE
- Using NetBeans Mobility 4.1
 - Visually design application UI and flow
 - Add client/server functionality
 - Solve multiple device compatibility problems
 - Deploy developed applications
- What is coming in NetBeans Mobility Next
- Q/A

J2ME brief introduction

- J2ME - a Java platform for consumer and embedded devices
- J2ME defines configurations, profiles and optional packages
- Mobile phones usually use CLDC configuration and MIDP platform

J2ME brief introduction



J2ME market growth

- J2ME technology spreading quickly
- J2ME Devices - 414 million (Ovum 2004)
- Java Technology Devices - 579 million in 2004
 - compared to 254 million in 2003 (Ovum 2004)
- 149 operators with Java Services (Nokia 2005)

NetBeans Mobility – Basic Information

- Complete and feature rich solution for J2ME/MIDP application development
- One-step install (includes Wireless Toolkit)
- Uses NetBeans release schedule
- Free product
- 130 000+ cumulative downloads since introduction last August

NetBeans Mobility 4.1 Key Features

- Supports full development cycle for mobile applications: Edit, Build, Run, Debug, Deploy
- Visual Mobile Designer (new in 4.1)
 - Design MIDP applications using drag-and-drop
- Wireless Connection Wizard (new in 4.1)
 - Develop end-to-end apps (web services, EJBs, ...)
- Device Fragmentation Solution
 - Uses fully-integrated commenting preprocessor to deal with device incompatibilities and specific features

NetBeans Mobility 4.1 Key Features

- Emulator support:
 - Includes Sun Wireless Toolkit 2.2
 - Seamlessly integrates with 3rd party emulators (Nokia, SonyEricsson, Siemens, etc.)
- Ant based build system
- Includes ProGuard for code obfuscation and optimization
- MIDP localization support
- Application deployment

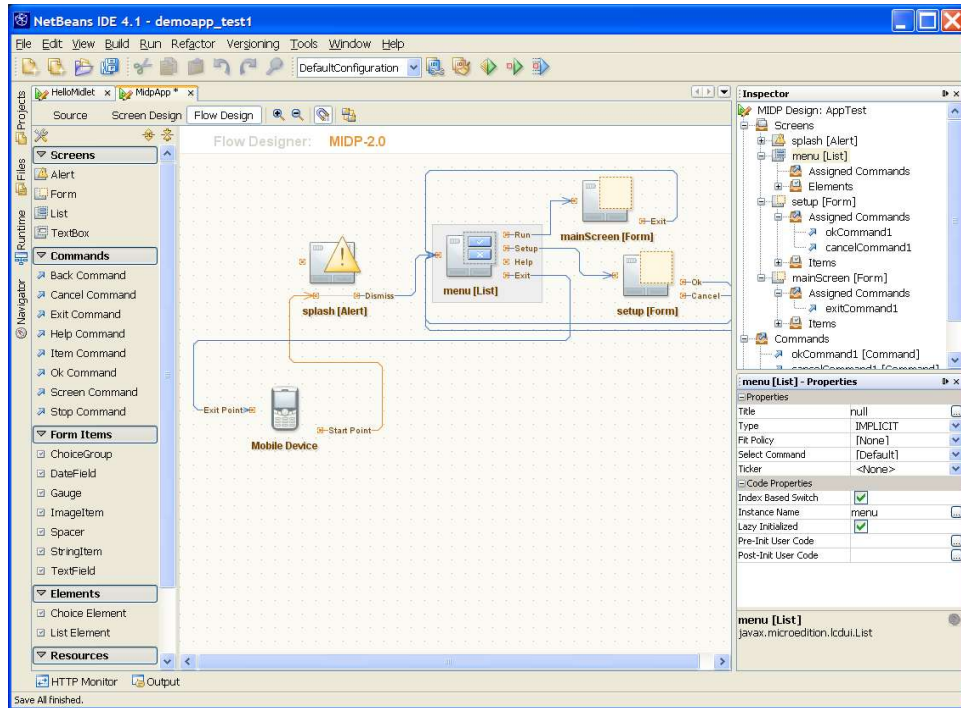
Using NetBeans Mobility

- Demo of various mobility features on full CLDC/MIDP application development cycle:
 - Create a new MIDP project
 - Visually design UI and application flow
 - Add client/server functionality
 - Deal with device fragmentation
 - Deploy the application on a server

Assignment:

- Quickly create application for mobile phone that connects to a web server and shows runtime data (memory, threads). The application must:
 - Download data from the server
 - Show basic runtime data as text on a form
 - Show memory data in a graphical bar
 - Utilize FullCanvas class for Nokia phones
- Finally, deploy the application to the web server.

Designing the Application



- We need to create the basic UI and flow of the application.
- Solution – create UI and its flow using Visual Mobile Designer

Creating Client/Server Functionality

- Application must get runtime data from server
- Solution – using Wireless Connection Wizard, dialog-driven user experience enables creation of client-server interaction.

Dealing with Device Fragmentation

- To enhance user experience, we want to use Nokia's FullCanvas class for drawing graphics.
- Solution – Utilize commenting preprocessor to create standard and Nokia version of the application from the same source.

Deploying the Application

- Final task – deploy application to web server.
- Solution – Deploy both the standard and Nokia versions to the web server using WebDAV.

What's Coming in NetBeans Mobility Next

- Preprocessor supporting Antenna-like syntax
- Enhanced Wireless Connection Wizard
- J2ME web services API support (JSR-172)
- Deployment on real devices
- Enhancements to the Visual Mobile Designer

Summary

- NetBeans Mobility is a complete solution for mobile application development and deployment
- Supports broad set of emulators and devices
- Features for both power users and beginners
- Visit our booth in the Mobility Village @ JavaOne
- Questions, Requirements, Ideas? - send comments to nbusers@netbeans.org

Questions & Answers



Martin Brehovsky
martin.brehovsky@sun.com

Adam Sotona
adam.sotona@sun.com

Petr Suchomel
petr.suchomel@sun.com

