

Creation Review

Mobile Tools for the Java Platform

MTJ

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What is Mobile Tools for the Java Platform project?

- *Mobile Tools for the Java Platform* project target is to enhance Eclipse platform to support Java development for mobile devices.
- Focus of the project is:
 - to create Eclipse Mobile Java Tools platform that vendors can extend to support their devices. Extensibility in the first phase includes
 - Runtime management framework
 - adding device adapter to manage emulators + real devices
 - Build framework, customized and extensible build process
 - Packaging (CDC, CLDC, Java in Palm devices, Java in Nokia devices,...)
 - Obfuscation (OS, algorithm/product)
 - Signing (differences between devices)
 - Deployment framework
 - (future) Mobile Visual editing framework
 - Extend: Screen engines, UI component libraries, multimedia content viewers
 - provide default tools to develop mobile Java applications.

Key extension points in MTJ frameworks

Frameworks

Extensions



- **Runtime management framework Framework**
 - Manages runtimes in development environment. Runtimes are emulators or real devices.
- **Build management framework**
 - Manages build process related extensions related to mobile development
 - Also includes preverification and building itself
- **Deployment framework**
 - Allow different deployment solutions to be attached (like Nokia PC suite deployment to Nokia terminals)
 - Transfer application to the runtime
- **Visual editing framework**
 - Planned to extend Eclipse VE project so that Mobile screen engines, UI component libraries and multimedia viewers/renderers can be attached.

First steps for the project

- First step for the project is to develop key functionality needed in mobile Java development including
 - Management of runtime environment (device emulators and real devices)
 - Build process (needs enhancement for packaging, signing)
 - Deployment (SW have to be deployed to runtime – cannot be directly run as J2SE app)
 - Some other features developers will expect (project creation, class creation)
- Next steps will be added value features typically available in development environments
 - Visual editing
 - Screen flow tool for J2ME development
 - Tools to help developers to manage device fragmentation
 - Support localization
- Framework part in the first phase will include
 - Deployment, build and runtime management frameworks

View to MTJ Development

- Much functionality needed in 1st step exists in current Nokia, IBM and EclipseME products. So the main effort in the first release is to harmonize that and create a new code base which can be used by all of the key stakeholders
 - So in practice there should be less development of new code and more “refactoring” and “repackaging” of existing code
- For further releases there will be then more coding also
 - Visual editors, screen flow designers etc.
 - Features to help to manage device fragmentation
- Code development and contributions for it
 - Main code contributors will come from Nokia and IBM in the beginning. Ericsson and Sybase planning to follow.
 - Then in addition of that there are contribution done by smaller companies and individuals (like Craig Setera, Fred Grott).
 - It looks like that there will be about 10 developers/architects contributing to MTJ
- There are also contributors for requirements and testing and not only for coding

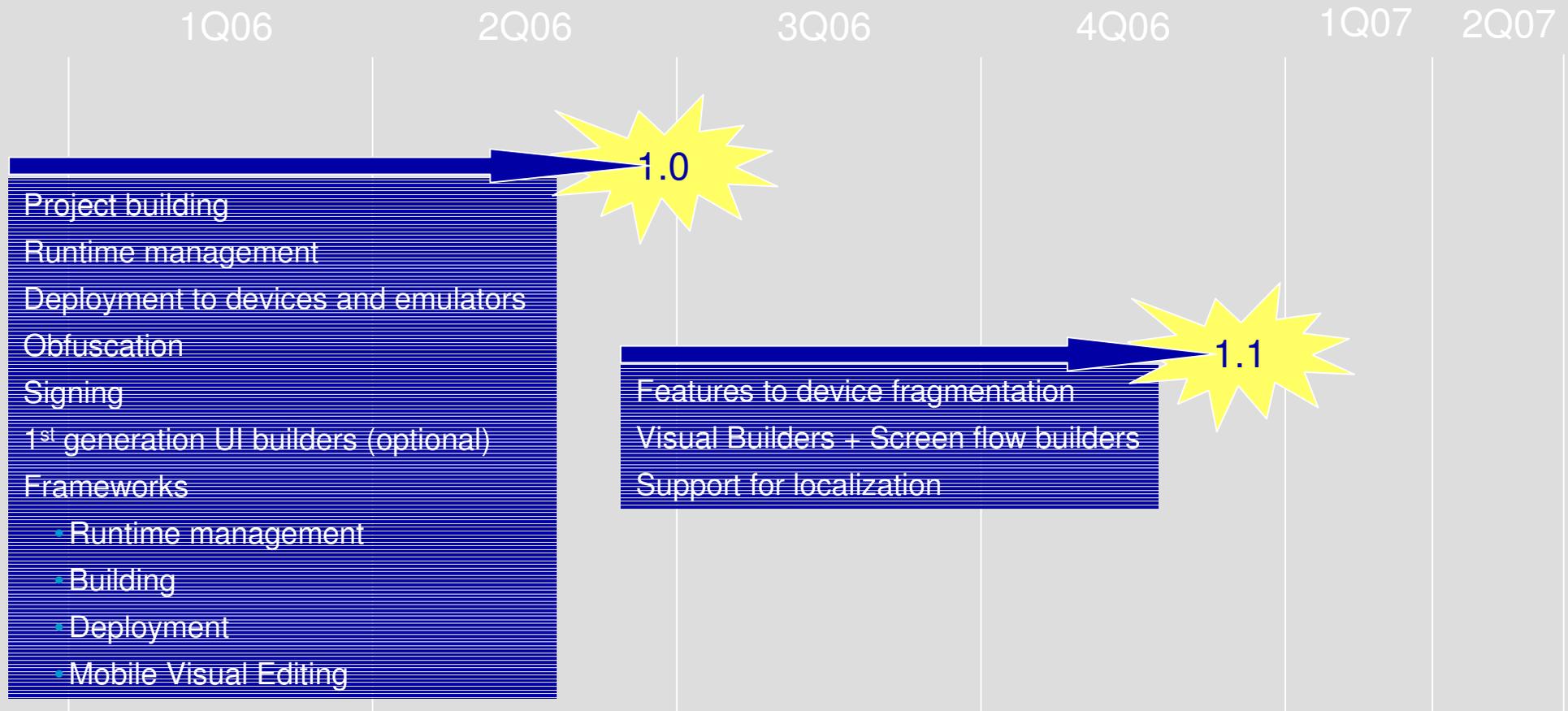
Participation

- Nokia
- IBM
- SonyEricsson
- Sybase
- Craig Setera, EclipseME
- Fred Grott, Antenna
- ShareME Technologies LLC
- Apogee Software
- Wirelexsoft

Linkage to other Eclipse Projects

- Visual Editor
 - MTJ is planning to provide Mobile Visual Editor in the future. Plan is that it would be based on VE. Discussions with VE guys already started
- JDT
 - To implement features to solve mobile device fragmentation (different UI size, APIs etc.) MTJ most likely needs some additional support from JDT. For example in a form of conditional compilation/preprocessing.
 - (Craig Setera already submitted a bug to JDT bugzilla – mainly from the needs based on EclipseME)

Roadmap for MTJ



Current Status + next steps

- Use cases for the first release defined
- Use case detailing started – implementation started
 - First step is to create a common extensibility layer
- Responsibilities distributed to several contributors
 - First Use Cases allocated to contributors
- Next steps
 - Start implementation of first use cases
 - Collect code contributions – get them checked
 - Continue use case work
 - Continue working with operational mode (“processes”)
 - Agree bunch of “architecture” issues: main components, Eclipse plug-ins and continue architecture work
 - First iteration Feb 2006.
 - Content: first version of project creation wizard, packaging, deployment