



Research Challenges in Mobile and Context-Aware Service Development

Julien Pauty, Davy Preuveneers, Peter Rigole, Yolande Berbers

K.U. Leuven

julien.pauty@cs.kuleuven.be

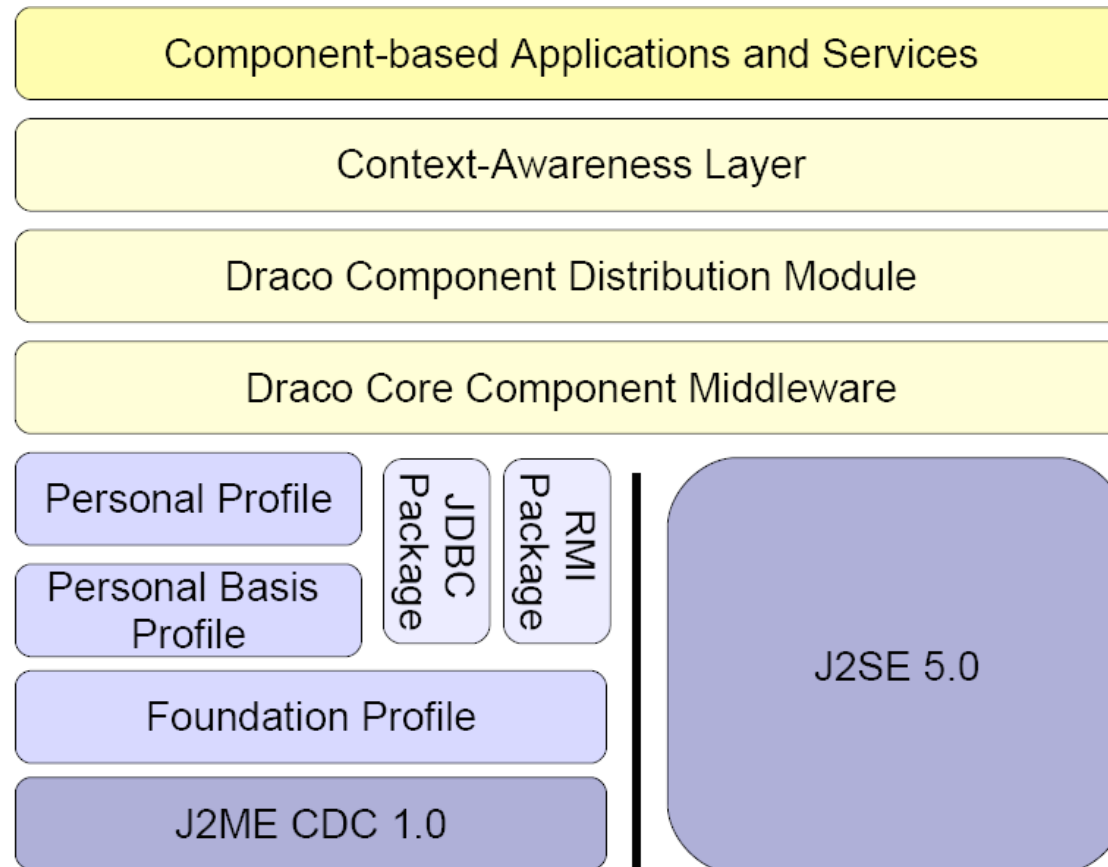
FRCSS'06



CoDAMoS: context-driven adaptation of mobile services

- Ambient intelligence
 - Mobile devices, wall displays, desktop computers...
 - Mobile user
 - Surrounded by various devices
 - Available devices vary over time
 - Available resources vary over time
- Adapt services according to available devices and resources

Context-aware middleware





Component based services

- Component
 - Software black box
 - Connected to other components via connectors
 - Communicate only via connectors
- Service
 - Set of connected components
 - Optional components
 - Versioned components
- Service adaptation
 - Change the version of versioned components
 - Remove optional components
 - Relocate components on remote hosts



Context-aware adaptation

- User context
 - Described with an ontology
- Adaptation rules
 - Trigger adaptation
 - Example
 - If battery is below 20% and if the user is close to a desktop computer then move the service
 - Defined by the programmer
 - Defined by the user in his profile



Final remarks

- CoDAMoS will be demonstrated at Pervasive'06, Dublin
- CROSLOCIS
 - New basic research project
 - Creation of a service architecture
 - Overall goal
 - Lower the threshold for SME to set up their own mobile services
 - Easy creation and deployment of services



Thank you! Questions?

Julien Pauty, Davy Preuveneers, Peter Rigole, Yolande Berbers
K.U. Leuven

julien.pauty@cs.kuleuven.be

FRCSS'06