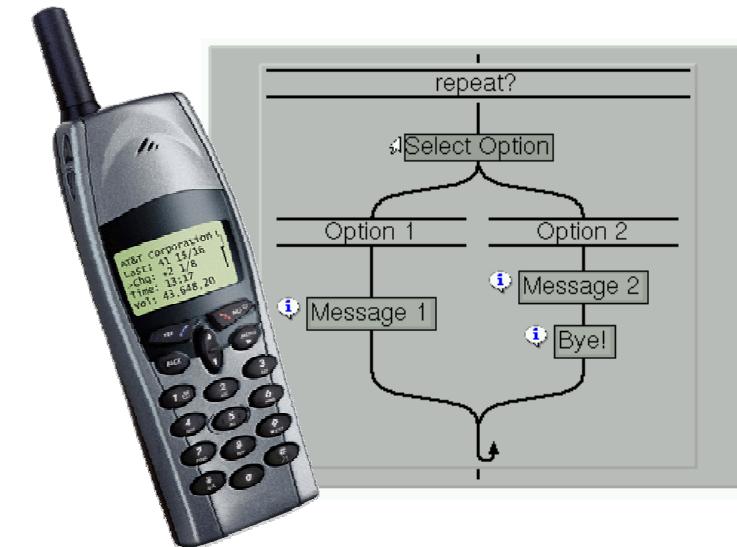


SIMtelligence Designer/J

A Visual Language to Specify SIM Toolkit Applications

Carsten Schmidt Peter Pfahler Uwe Kastens Carsten Fischer



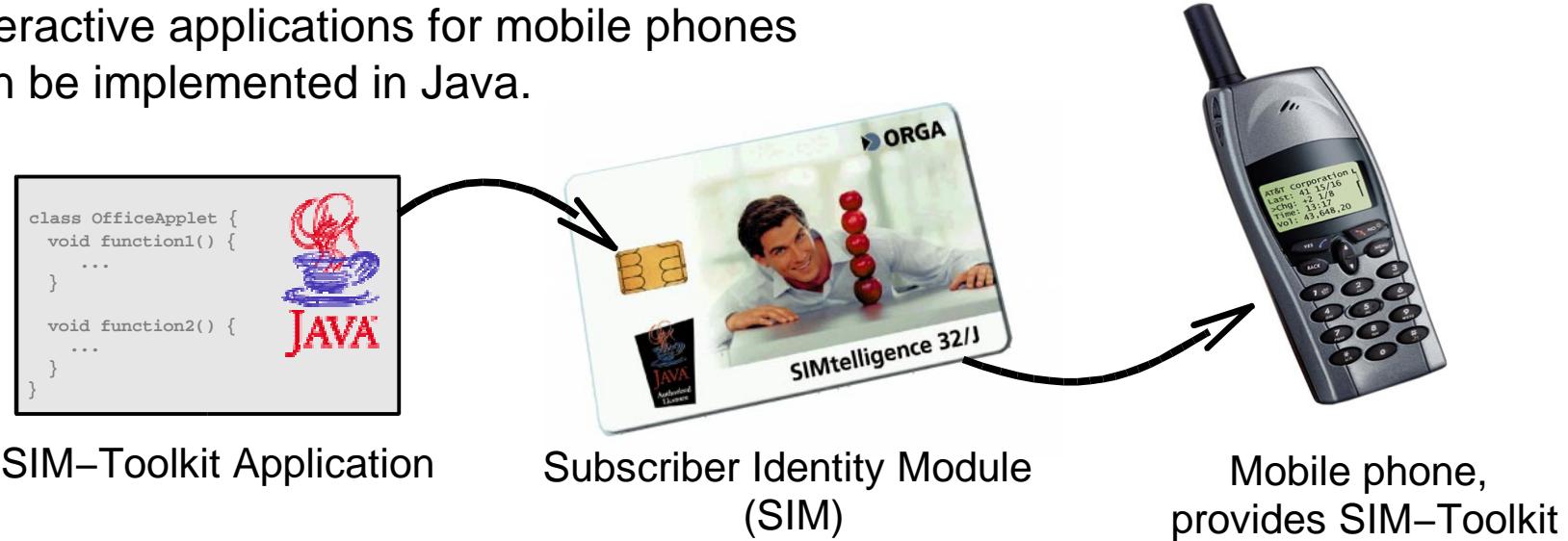
University of Paderborn

Group „Programming languages and compilers“

 **ORGА**
The Smart Card Integrator

Application Domain (1)

- Interactive applications for mobile phones can be implemented in Java.

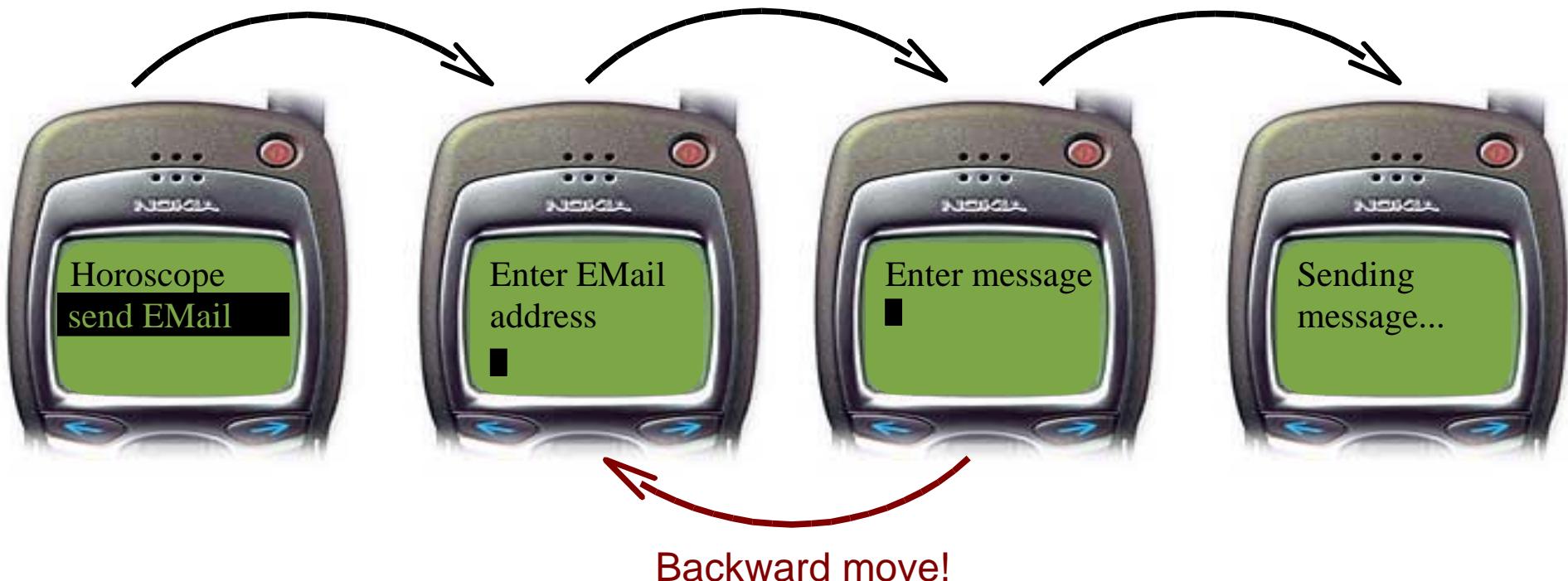


- Deficiencies of Java in this domain:
 - **Restricted language subset**
 - **Java abstractions are not sufficient for certain requirements**
- Objectives of DSVL:
 - **Reduce development and testing effort**
 - **Be usable by non-programmers** (network service provider)

Application Domain (2)

SIM-Toolkit applications have a typical structure

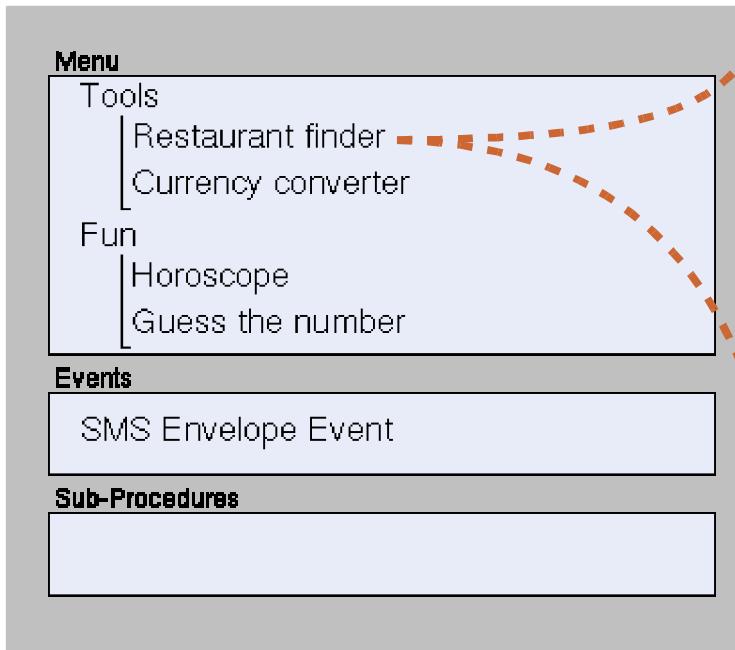
1. Handle menu selection and other events
2. Provide interactive procedures using SIM-Toolkit functions
(display text, select item, get input, send SMS, ...)



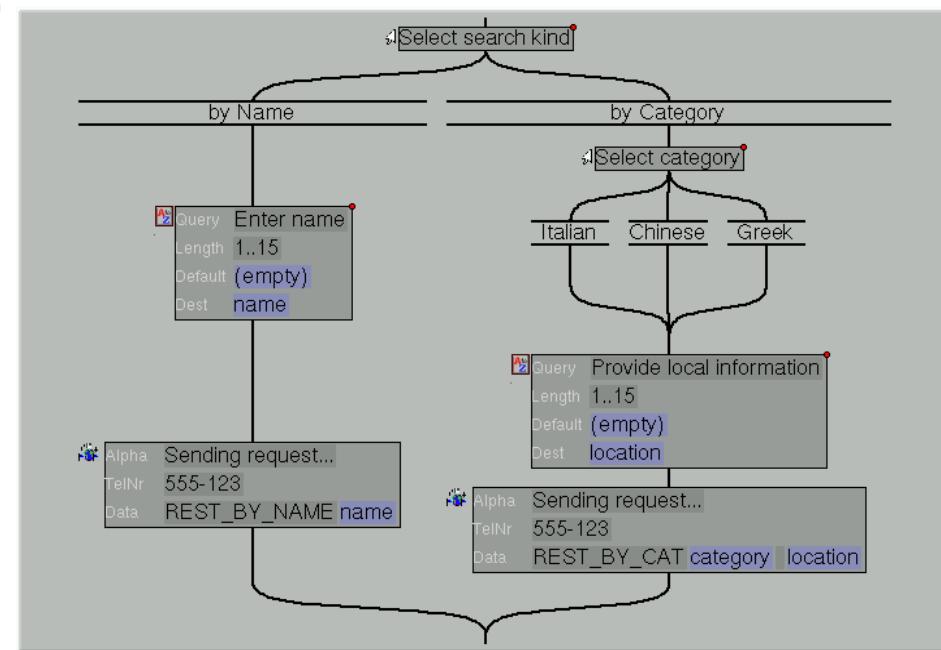
Concepts of the Language (1)

There are two major views:

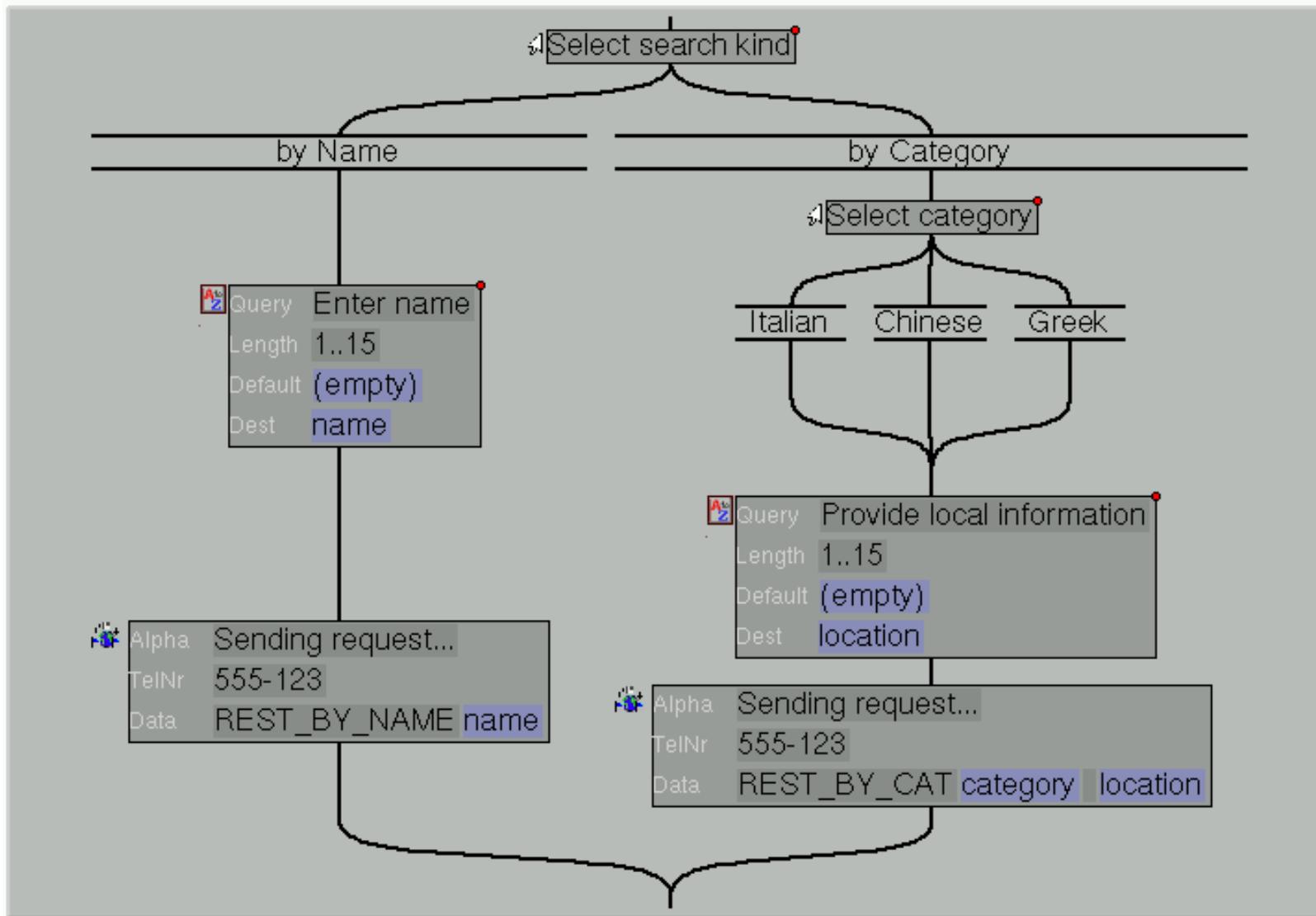
Top-level view



Procedure view



Concepts of the Language (2)



Summary

- DSVL for SIM–Toolkit Applications
 - **Menu and event registration**
 - **Constructs for interactive procedures**
(SIM–Toolkit commands, backward moves)
- Achievements of the DSL
 - **Hides some deficiencies of Java–subset** (e.g. string handling)
 - **Raises abstraction level** (e.g. menus, backward move)
- Achievements of the visual structure editor
 - **Easier to learn and use** (e.g. dialogs for toolkit commands)