



AGILE



Architectures for Mobility



AGILE Partners

- LMU: Universität München
- DIPISA: Università di Pisa
- DSIUF: Università di Firenze
- IEI: Istituto di Elaborazione dell'Informazione
- ATX: ATX Software SA
- FFCUL: Universidade de Lisboa



AGILE Goals

- Architectural approach to mobile systems development
- over a uniform mathematical framework
- supporting
 - sound methodological principles,
 - formal analysis, and
 - refinement across levels of development



AGILE Approach

- Component/Connector-based approach to Software Architecture
- 3 dimensions: Computation, coordination, distribution
- Explicit modeling of mobility
- Integration with UML
 - ⇒ “Global Coordination”

Case Studies

Financial & Mobile Applications

Existing Modeling Languages

Prototype

Method

Mobile UML

Semantics

Refinement

Architectural Views

Prototype

Method

Modal Logic and Types

Analysis

CommUnity +
Distribution&Mobility

Algebraic Models of
System Evolution

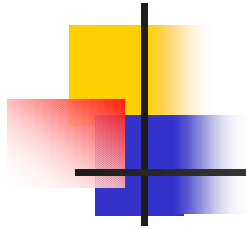
Language &
Semantics

Refinement

Refinement

Uniform Mathem. Basis

Graph-Oriented Specification Framework
(Categor. Diagrams + Graph Transformations + Tile Logic)



AGILE Results

Integrated architectural approach to mobile systems development

including

- High-level architectural primitives for mobility
- Algebraic models of evolution of mobile systems
- Extension of UML for mobile applications
- Analysis techniques for security and behavioural properties
- Refinement techniques