

MADAM

Mobility and Adaptation enAbling Middleware

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The Madam project

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Partners:

- Simula Research Lab (NO) (coordinator)
- HP Innovation (IT)
- Integrasys (ES)
- Condat (DE)
- BirdStep (NO)
- SINTEF (NO)
- University of Kassel
- University of Cyprus



Mobility requires self-adapting services

- Computer based services increasingly penetrates everyday life
- Users increasingly expect and need services to be ubiquitously available while alternating between being stationary and being mobile
- This means dynamically varying computing infrastructure and user needs
- Services intended for mobile use must adapt as user needs and available computing and communication resources vary dynamically when the user is moving around in order to maintain availability, usability, usefulness,



Service orchestration requires self-adapting services

To be composable in widely different contexts services need to be flexible and able to adapt to its collaborators

- Interface negotiations
- QoS negotiations
- Dynamic replacement of collaborators



How to build self-adapting services?

Need better support for the development of services that are able to adapt dynamically to changes in context (at launch time and during use)

- What are the tasks involved?
- What and how to model?
- Patterns
- Tools, and middleware



How to build self-adapting services cont'd?

- How to model context and detect significant context changes?
- How to decide when and how to adapt?
(resource needs, offered properties, utility)
- How to leave the user in control?
- MADAM has partial solutions,
but do they scale?
support modularity?
- Can handheld devices accomodate the necessary support?



Thank you!

Questions?

