Context Discovery in Ambient Networks

Justinian Oprescu
LSR-IMAG
Access to services: traditional

User Action = A given device + A given service
Access to services: OmniSphere

User + Devices + Networks access = Service Representatives

User Action = Any Device + Any Service
Services

- semantics
- structure
- dependence
  - library
  - client-server
  - product-consumer
- access control
- trust

description
Context: Actors

Me

Relations

The rest of the world
Context: Me

Me

- Physiology
- Administrative
- Spatial
- Activities
- Reactions
- ...

...
Context: Actors

Me

- Physiology
- Administrative
- Spatial
- Activities
- Reactions
- ...

The rest of the world

Relations
The rest of the world

- People
- Physical objects
- Logical objects
- ...
Context: Actors

The rest of the world
- People
- Physical objects
- Logical objects
- ...

Network Presence

Relations
Context: Relations

Relations
- Spatial
- Temporal
- Social
- Ownership
- Dependence
Context: Actors

Relations
- Spatial
- Temporal
- Social
- Ownership
- Dependence

The rest of the world
Context-awareness

Known

Unknown
Context discovery

Known

Define Needs

Own Needs

Define Relations

Relations

Discover

Define Filters

Filters

Unknown
Contextual Services

- Context = Data
- Services provide data

- Context = Collection of Services
- Find contextual data = Services Discovery
- Acquire information = Access Services