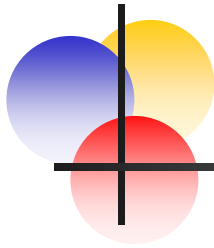




Context Discovery in Ambient Networks

Justinian Oprescu
LSR-IMAG



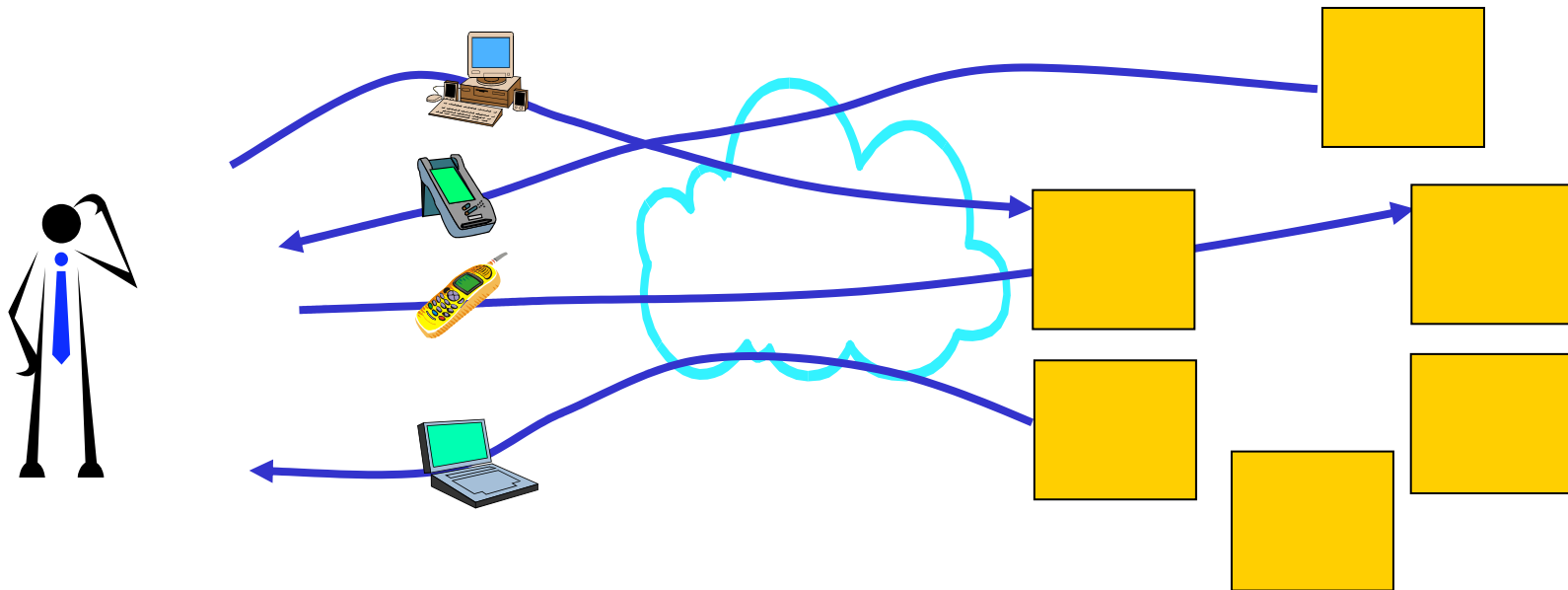
Access to services: traditional

User

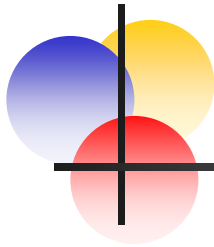
Devices

Networks
access

Services



User Action = A given device + A given service



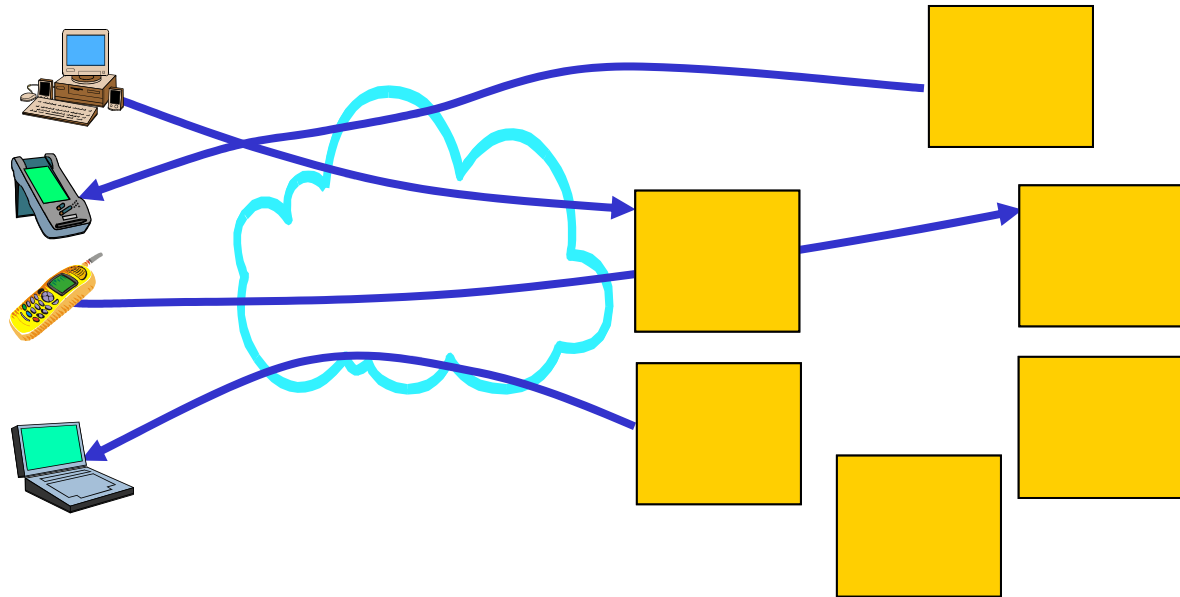
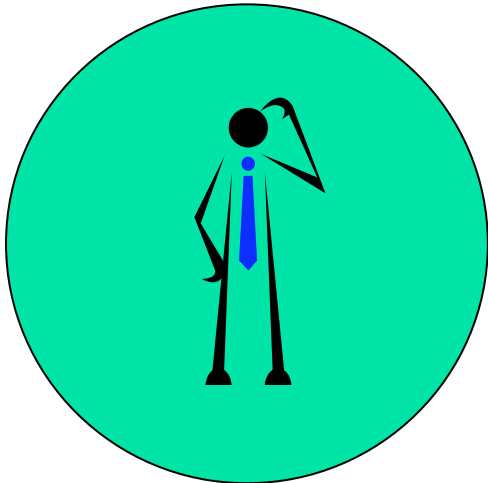
Access to services: OmniSphere

User +

+
+ Devices

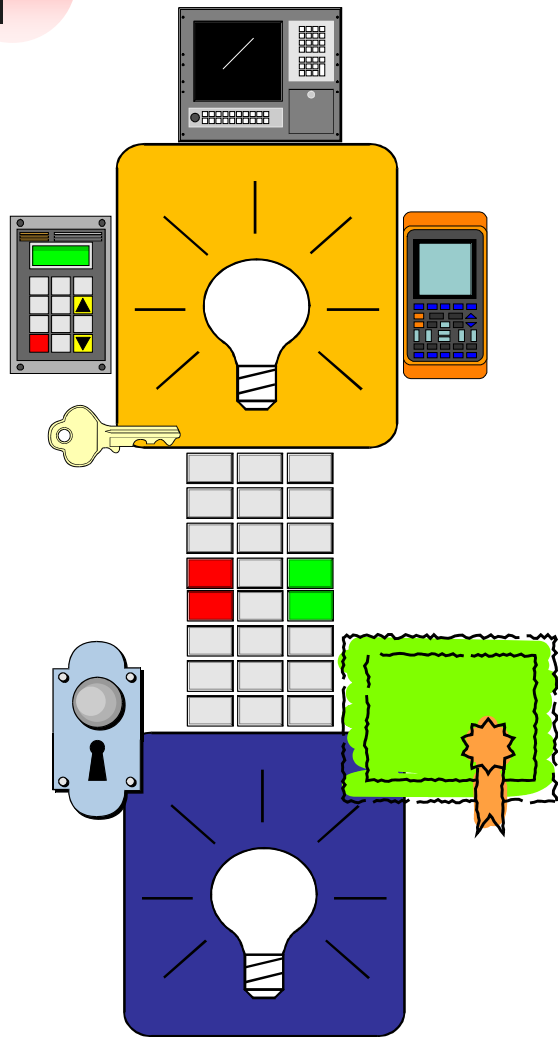
Networks
access

Service Representatives



User Action = Any Device + Any Service

Services

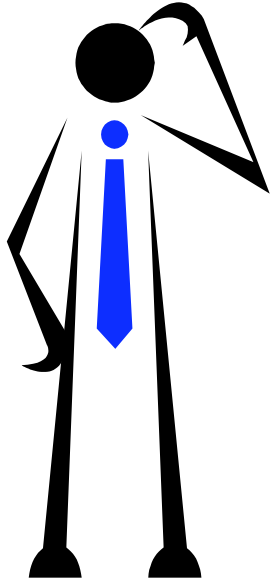


- semantics
 - structure
 - dependence
 - library
 - client-server
 - product-consumer
 - access control
 - trust
- } description

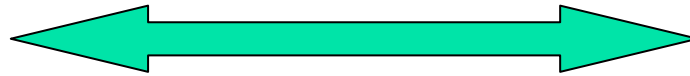


Context: Actors

Me



The rest of the world



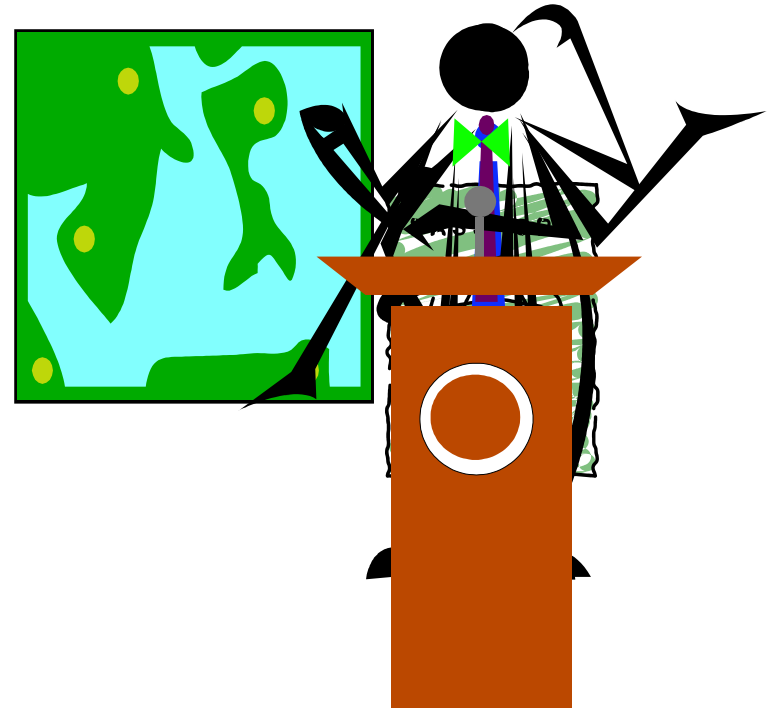
Relations



Context: Me

Me

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



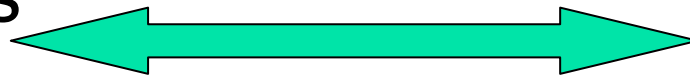
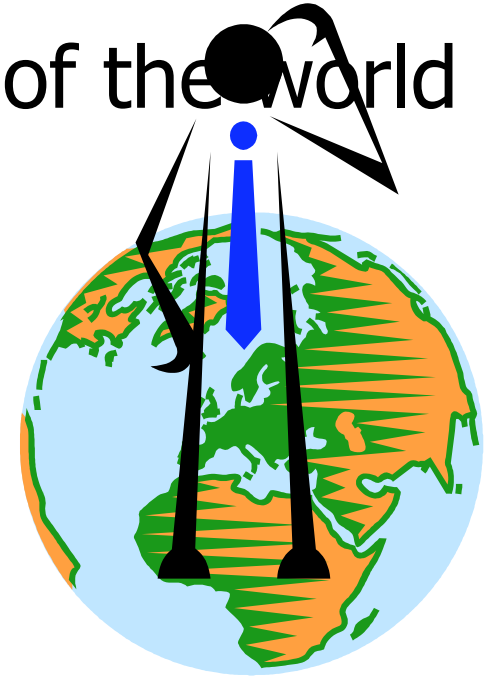


Context: Actors

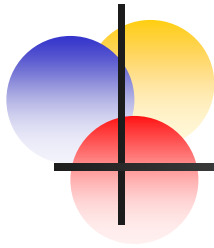
Me

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

The rest of the world



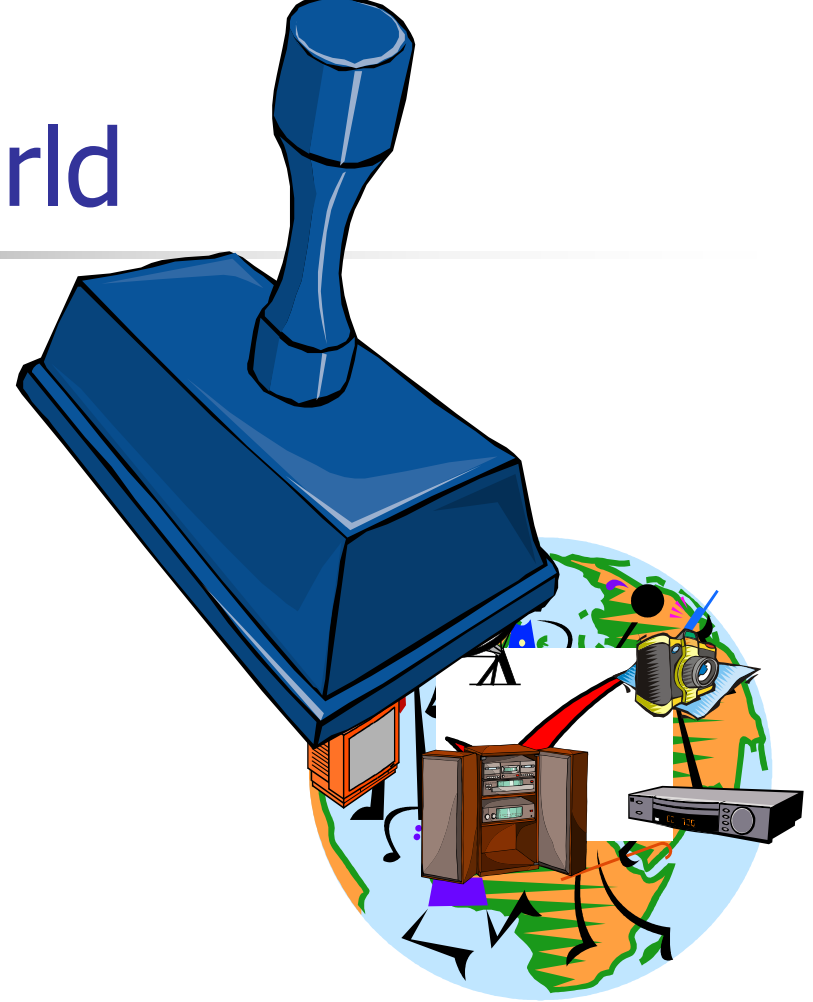
Relations



Context: The world

The rest of the world

- People
- Physical objects
- Logical objects
- ...

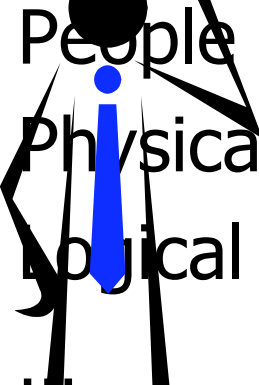


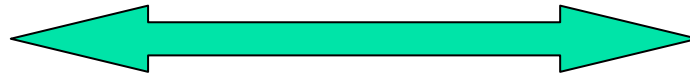
Network Presence



Context: Actors

The rest of the world

- 
- People
 - Physical objects
 - Logical objects
 - ...

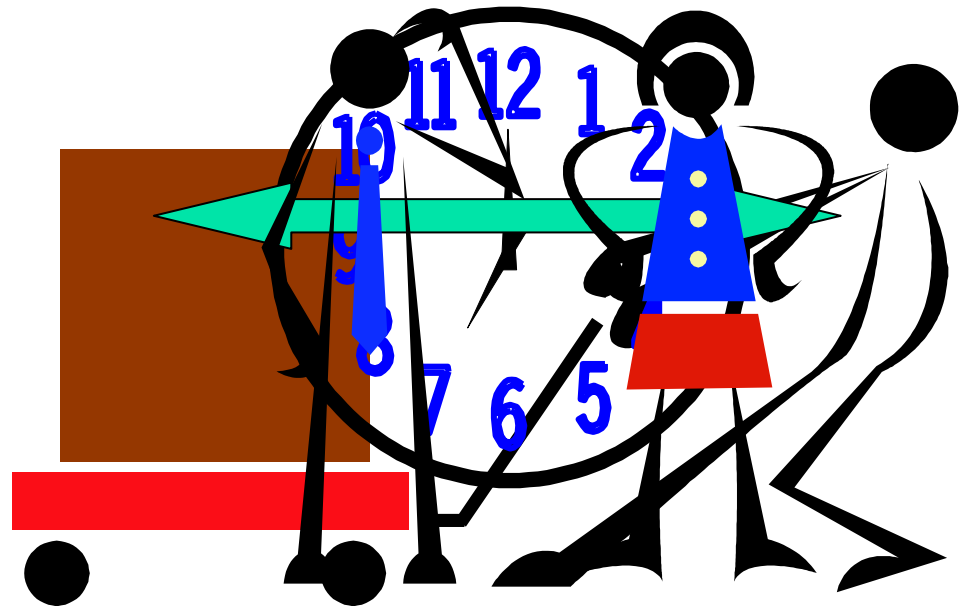


Network Presence

Context: Relations

Relations

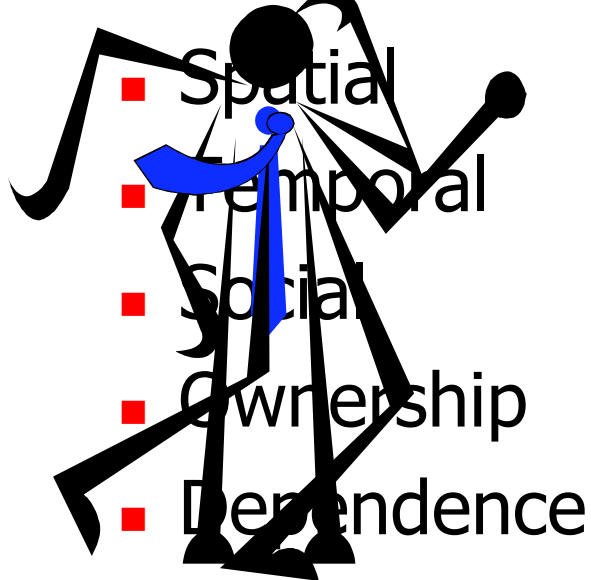
- Spatial
- Temporal
- Social
- Ownership
- Dependence



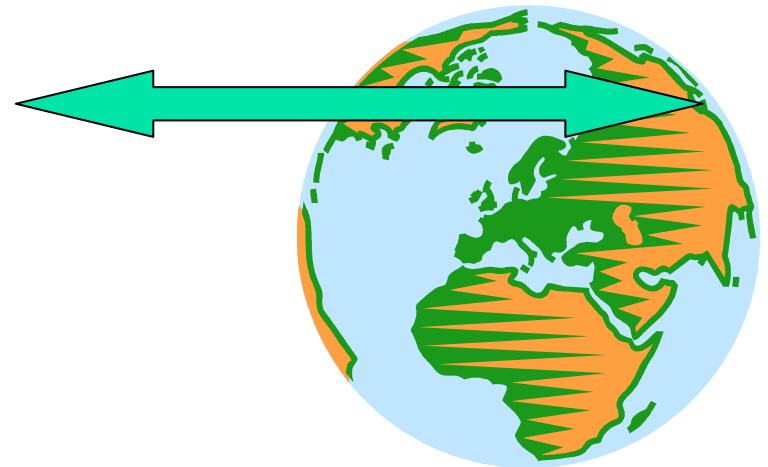


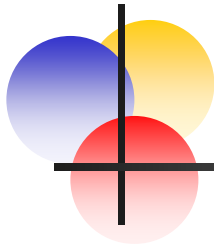
Context: Actors

Relations

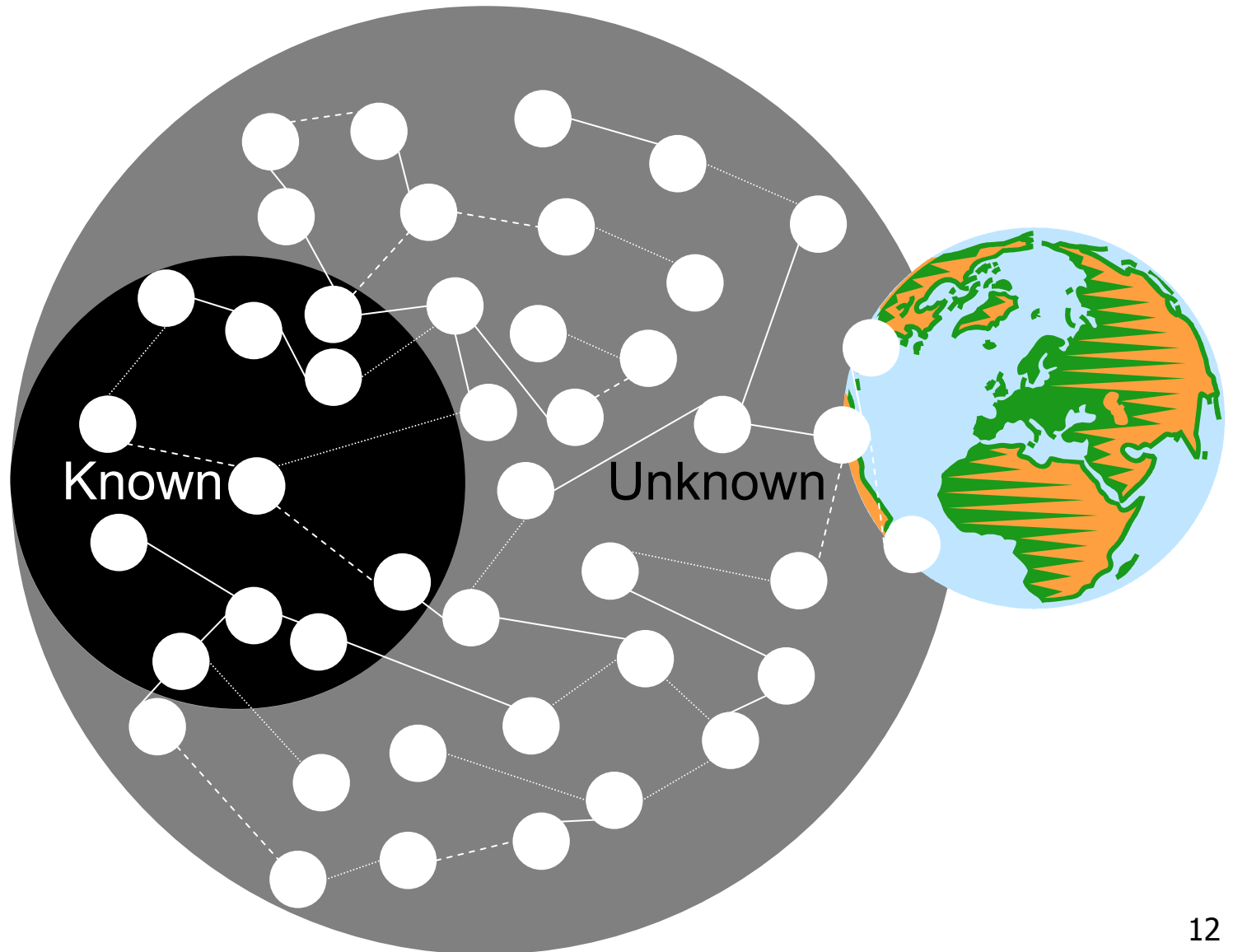


The rest of the world

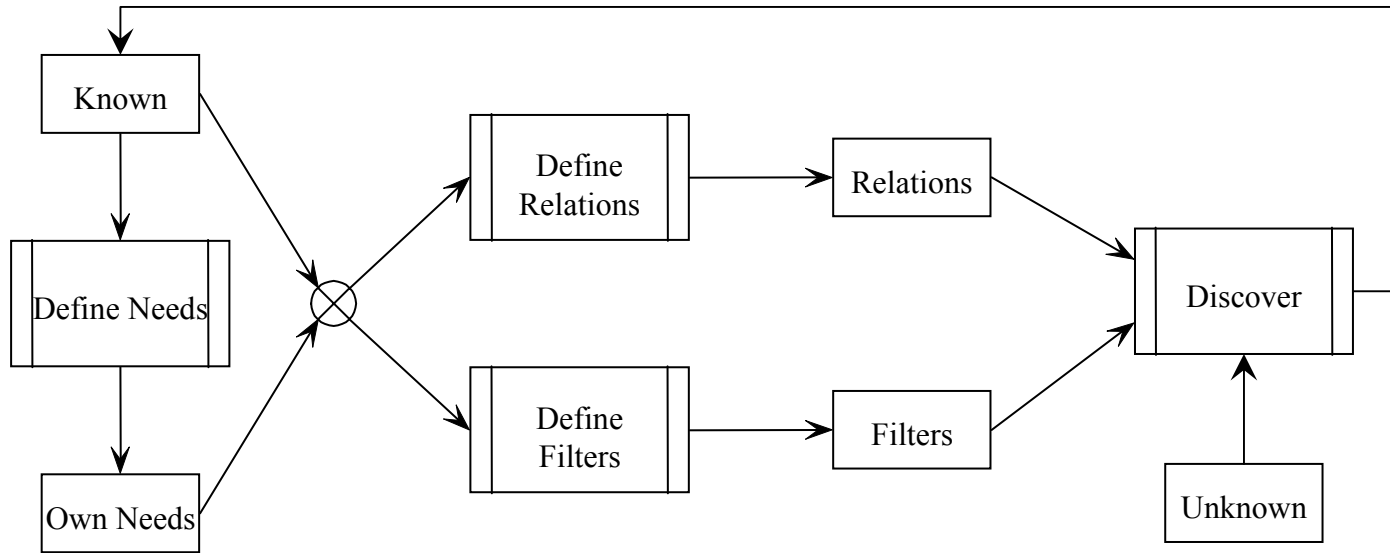
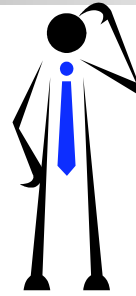




Context-awareness



Context discovery





Contextual Services

- Context = Data
- Services provide data



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