



Internet of Services and Internet of Things: adapting to user, task and location in a seamless fashion

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PERSIST

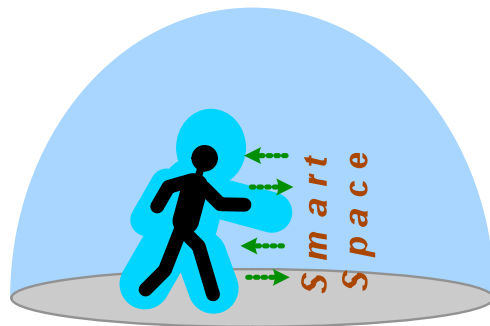
- Concept of fixed smart spaces leads to the creation of smart islands
- PERSIST attempts to bridge the gap between fixed and mobile smart spaces by developing a **self-improving Personal Smart Space (PSS)**



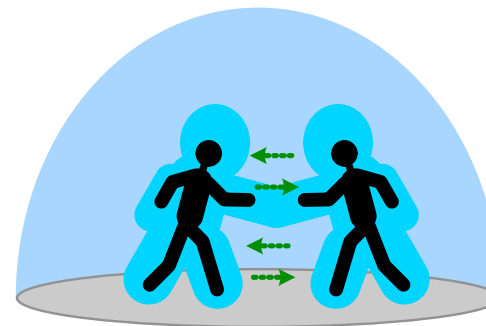
PSS Key Features

- Is a collection of devices and services
- May be mobile (boundary moves with user) or static (boundary is fixed e.g. PSS of a room)
- Has an owner (personalisation)
- Must support an ad-hoc network (changing collection of devices)
- Must be able to interact with other PSS's
- Must be able to adapt and learn

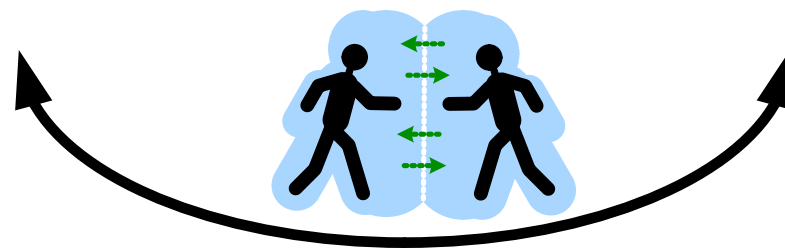
Interaction Between PSSs



a) PSS - Fixed
PSS



b) PSS - PSS
via Fixed PSS



c) PSS - PSS



Adapting to User, Task and Location

A PSS must be able to adapt and learn

- Through use of user preferences and context a PSS can enable 3rd party services to adapt their behaviour
- By monitoring the user's action and applying learning techniques a PSS can be self improving
- Can perform context inference and learn new preferences and act proactively based on user intent predictions



How PSS Adapts to User, Task and Location

- Personalisation
 - Of the PSS
 - Of services
- Learning and Reasoning
 - User's preferences e.g. applying preferences from one service to another
- Recommender Systems
 - Recommending particular service based on some factors
- Pro-activity
 - Undertaking actions automatically for a given user based on their context and what has been learned about them
- Location – sensor management



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- Thank you for your attention