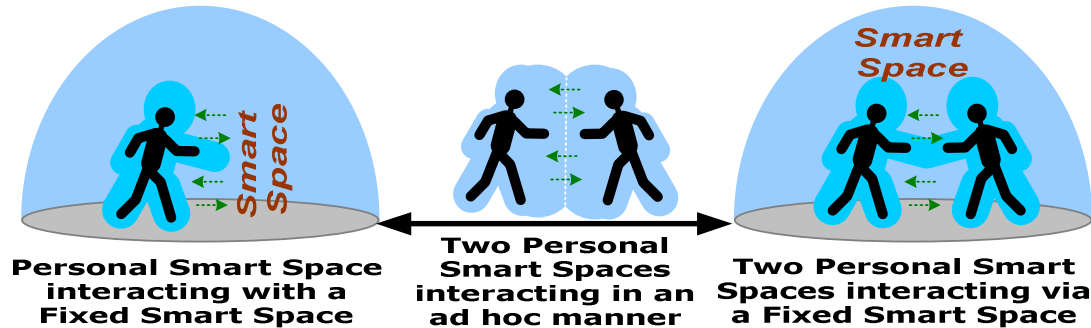


The Persist EU FP7 project is developing a novel paradigm of pervasiveness called the Personal Smart Space.



A Personal Smart Space is defined by a set of services within a dynamic space of connectable devices (a personal area network of the devices) and services (running on those devices) that are owned, controlled, or administered by a single user or organisation. It facilitates interactions with other smart spaces, is self-improving and capable of pro-active behaviour.

Personal Smart Spaces -

- Are user centric
- Provide a minimum set of functionalities at all times
- Take advantage of additional functionality when they meet other smart spaces
- Are context-aware, personalisable, adaptable and capable of self-improvement

The aim of this case study is to consider how this paradigm might evolve over the coming years; how Personal Smart Spaces might actually be used in practice by, say, the teenagers, travellers, senior citizens, etc. of 2020. In addition to these futuristic use cases, it is also interesting to contemplate “ab-use cases” (things that might cause the PSS paradigm to fail) and “dark scenarios” (worrying things that might be made possible by the PSS paradigm).

An example *ab-use case* is scalability. PSSs identify each other’s presence as a result of broadcasts from the devices they contain. By the year 2020 Nottingham Forest Football Club will almost certainly have become a regular contender in the European Championships again. Imagine you are a supporter (home or away) attending a match at the City Ground in Nottingham with your PSS. There could be 30,000 other PSSs all trying to broadcast their existence. Will your PSS be able to cope with this load? If not, how might one reduce this load in a fashion that still enables you to find a long-lost friend who you know will be in the stadium, somewhere?



An example *dark scenario* is stalking. As PSSs are continuously broadcasting identity information, how can one preserve one’s privacy whilst still retaining the benefits that a PSS offers? Imagine you are a well-known person, such as Sean Connery. You wish to use your PSS for exactly the same reasons as everybody else and so your PSS needs to identify you to other PSSs. If this is done in an uncontrolled fashion you will be inundated with autograph-hunters, etc. Is it possible to configure a PSS in such a way that this can be avoided?

