

## Introduction

*A Smart Space is a physical space rich in devices and services that is capable of interacting with people [aka users], the physical environment and services originated outside the Smart Space. The aim of the Smart Space is to orchestrate the use of integrated physical and computing environment to bring tangible benefits to people in support of their tasks.*

The above definition of a Smart Space represents a challenging vision for the M-Zones project. To realise this vision a number of key research challenges need to be met from a broad spectrum of areas (e.g. ad hoc networking, dynamic service composition etc.). In order to initiate our research, a number of key areas were chosen for review and a state of the art survey was undertaken for each area. These surveys have helped to inform and orient the research work, and are documented within this deliverable. The surveys have been grouped according to the research themes proposed by the project: "Network Connectivity and Configuration" and "Managing a Smart Space".

Network Connectivity and Configuration Theme surveys:

- Admission Control and Mobility Management in Heterogeneous Networks
- Ad hoc networking

Managing a Smart Space Theme surveys:

- Inter/Intra Domain Management
- Adaptive Hypermedia
- Policy Techniques for Adaptive Management
- Context Management
- Service Composition
- Middleware Infrastructure

Each survey provides an introduction, an overview of the problem domain, an analysis of the state of the art, research directions and details of references used.