



Urban operating system for Sensor networks management in smart cities

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Abstract:

Abstract—To meet growing urbanization challenges, technology offers solutions for the optimization of processes and services in cities via the development of a Smart City. Sensor networks, data repositories, and data analytics are current processes that are used to manage Smart City infrastructure, where complexity, resilience and interoperability are key issues for emergent Urban Operative Systems. This concept can allow for dealing with complexity based on similar principles of computer operating systems. Hence, the work of this thesis is related to creating the foundations of an Urban OS for a Smart City. To validate this concept, we will use the Smart Cities Living Lab at CUCEA UDG. The aim is to implement a sensor network to track different variables of a 50-hectare surface representing a micro city to create city dataset prototypes to measure the Smart City status. To achieve this goal, an Urban Operating System is proposed to carry out the administration of the different types of interconnected devices, referencing the Internet of Things (IoT) in the field of Smart Cities.
