

Chapter 1

INTRODUCTION

Entering a latest compute technology, called as the Internet of Things (IoT) it is also known as Machine to Machine, Machine to Infrastructure, Machine to Environment, Internet of Everything, Internet of Intelligent Things, Intelligent Systems [1]. The Internet of Things (IoT) is a recent communication paradigm in which the objects of everyday life will be equipped with microcontrollers, transceivers for digital communication, and suitable protocol stacks i.e. these objects contain embedded technology in order to interact with external environment. This paradigm finds application in many different domains, such as home automation, industrial automation, medical aids, mobile healthcare, elderly assistance, intelligent energy management and smart grids, automotive, traffic management, and many others.

The aim is to make a better use of the public resources, increasing the quality of the services offered to the citizens, while reducing the operational costs of the public administrations. This objective can be pursued by the deployment of an urban IoT, i.e., a communication infrastructure that provides unified, simple, and economical access to public services, thus allowing development capacity to have full effect and increasing transparency to the citizens. An urban IoT, indeed, brings benefits in the management and optimization of traditional public services, such as transport and parking, lighting, surveillance and maintenance, maintenance of public areas, garbage collection, salubrity of hospitals and schools.

In this project we propose a framework for the realization of smart cities through the Internet of Things (IoT). The framework encompasses the complete urban information system, from the sensory level and networking support structure through to data management and cloud based integration of respective systems. This IoT vision for a smart city is applied to street light monitoring and smart parking system to adapt for the enhancement in the delivery of important city services.