

ARCHITECTURE:

Parking is becoming an expensive resource in almost any major city in the world, and its limited availability is a concurrent cause of urban traffic congestion, and air pollution. In old cities, the structure of the public parking space is rigidly organised and often in the form of on-street public parking spots. Unfortunately, these public parking spots cannot be reserved beforehand during the pre-trip phase, and that often lead to a detriment of the quality of urban mobility. Addressing the problem of managing public parking spots is therefore vital to obtain environmentally friendlier and healthier cities. Recent technological progresses in industrial automation, wireless network, sensor communication along with the widespread of high-range smart devices and new rules concerning financial transactions in mobile payment allow the definition of new intelligent frameworks that enable a convenient management of public parking in urban area, which could improve sustainable urban mobility. In such a scenario, the proposed intelligent parking assistant (IPA) architecture aims at overcoming current public parking management solutions. This study discusses the conceptual architecture of IPA and the first prototype-scale simulations of the system.



