

A Review on Urban Intelligent Traffic Management Problems: Sensors and Methods

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Abstract— Researchers have developed various methods for the smooth flow of traffic due to the density of vehicles and environmental restrictions in urban traffic, and they have benefited from various sensors while applying these methods. The fact that the urban traffic is multi-factorial increases the difficulty of the problems compared to other intelligent transportation systems issues. Therefore, it is inevitable for the methods to be developed to be more comprehensive and to use more diverse and capable sensors in order to realize this in urban traffic management problems. In this study, current studies on smart systems developed to manage urban traffic are discussed in terms of the methods and sensors used. Taxonomies have made for the main problems in urban traffic, and then their relations with the sensors used in the solution of these problems have been revealed. Understanding the sensor-method relationship is very important for developing new approaches to solving problems. In addition, it has aimed to shed light on the studies to be done in this field by making a general analysis of the studies discussed in the study.

Keywords—*intelligent traffic management, autonomous vehicles, urban traffic flow, collision avoidance, traffic congestion*