Optimization of Urban Road Traffic in Intelligent Transport Systems

Elena Alina Stanciu*, Ilona Madalina Moise* and Lacramioara Mihaela Nemtoi*

* University Politehnica Bucharest, Romania,
stanciuelenaalina@yahoo.com, ilonamoise@yahoo.com, lacramioaranemtoi@yahoo.com

Abstract– The urban traffic congestions represent a major problem in the vast majority of world metropolis and the Intelligent Transport Systems are created to provide real time control and route guidance for the traffic participants, and to optimize the performance of traffic networks. The updated control and the adaptive control strategies are more and more frequently used due to their potential to reduce the delay in the intersections. New opportunities to control the traffic on street networks have been created due to the fast evolution of communications and computerized processing methods in the last decade. The role of urban traffic optimization is to both increase the efficiency of transport services and their capacity to respond to user requirements. This category of systems include information systems that disseminate information concerning the public transport schedule and the exact time-of-arrival of public transport assets, prices, routes, automatic trip tax collection systems, vehicle location systems for fleet management and safety systems. The paper herein provides an analysis of a group of intersections, starting from the Vasile Milea Boulevard, up to its intersection with the 13 Septembrie Road, while trying to determine the optimal maximum green time for each and every intersection, in order to reduce the waiting time at the semaphores, to improve the level of service and to avoid semaphore waiting queues.