Research

Prioritizing Vehicles that Carry Important Characters (Political) When Crossing Signalized Intersections

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ABSTRACT

In the urban transportation network as the traffic signals went green at the intersection of the upper hand, a group of vehicles move together and arrive at the next intersection, almost in group. If, at the same time as the group arrives, the signal of the corresponding route at this intersection is green, the total delay and stop of the vehicles will be significantly reduced and the intersection efficiency will increase significantly. The same strategy was implemented on the political vehicles in the study, so that the delay and stop time for them could be reduced. In this study, part of the political vehicle route from Saad-Abad Palace to the presidential office on Pasteur Street is considered. In this study, various strategies were developed to prioritize the vehicles in the Aimsun simulator software. Then, to detect the arrival of these vehicles to the intersection, two identifiers were embedded, one before the intersection and the other after it was installed. Among the results of this study are the following: There is an average increase in the average travel time for a scenario with an extra green time of 10 seconds and 15 seconds. The average delay time was 7 seconds for the additional green time scenario of 10 seconds and the average delay of 6 seconds for the sub-scenario of 15 seconds increased. The average number of stops per vehicle increased by 0.1 stops per vehicle in both cases.

Key words: Road intersection, Prioritization, Political Vehicle, Decreasing travel time.

1. INTRODUCTION

The protection of characters is all that is required to preserve the characters in the face of possible threats, including assault, kidnap, assassination, etc. (1). The personality, namely, honor and majesty, and in the political sphere of characters, are the chosen people of a country or a nation who are responsible for administering the country in a given period, or in terms of social status, as the elite and national capital of a country. Moreover, in this respect, they must be protected. Precautionary measures to protect personalities include: precautionary measures in the area of movement, precautionary measures in public assemblies, precautionary measures and precautions at the workplace, precautionary measures and protection in the home (2). The most familiar means of controlling and regulating vehicle traffic and improving safety are traffic lights. Although traffic lights prevent a vehicle from moving in a different direction on the intersection, overall, if the correct timetable is calculated, the average vehicle delay will be less than that of the intersection without traffic lights (3). Typically, traffic lights are used independently to control intersections, but occasionally, in order of necessity and for better efficiency, it may be possible to interconnect cross-linking lights or all the intersections of a path in a way. And coordinated (4-6). Some types of lights are variable lights that are sensitive to traffic variations, and the green time range of each phase that has already been adjusted depends on the amount of traffic in the paths of that phase. Setting the green time of these lights is done by installing indicators at certain intervals from the stop line and in all directions to the intersection (7, 8). With regard to the security and safety of conservation studies, there are no prioritization studies in the area of public access protection. Therefore, this section examines the priority system for relief cars and buses in Iran and the world (9, 10). In a study, a smart system was designed to control urban traffic with priority of the bus. In such a system, the traffic lights are intelligent and the buses are equipped with intelligent systems. Time is the first priority of the factors. In this system, the link is defined as the road representative,