Abstract

Nowadays, significant increase in density of vehicles on inland routes of the country along with limitations in providing new infrastructure has emphasized the need for optimal use of the available facilities. In such a situation, intelligent transportation systems can not only complement these infrastructures but it can also make optimal use of their facilities possible. In other words, the intelligent transportation system can address the contradiction between increased vehicle traffic and land resource constraints. The purpose of the present study is to measure and design the infrastructure system of the intelligent transportation system in the city of Jiroft, with a focus on the interactive and integrated urban systems. The research method which is descriptive-analytical is based on library studies, documents and field studies. Findings of the first section of the study, conducted using the ELECTRE model, indicated the highest priority of the index, building the required telecommunication infrastructure, among the influential components in planning of the intelligent transportation system. Next, ranking was done using the TOPSIS model which was conducted on the five districts of the city in terms of the infrastructure for facilitating the intelligent transportation, and it was indicated that District 4 with a final score of 0.842 is in the first place of adaptability mainly due to centralization of office buildings, better quality of local facilities and equipment, higher speed of the Internet, and ultimately, availability of more convenient means of controlling traffic and urban transportation like intelligent traffic lights. Finally, several suggestions are proposed for facilitating and targeting the deployment of intelligent transportation systems.

Keywords: Intelligent Transportation, ITS, Electra, Topsis.



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Feasibility and Infrastructure Planning of Intelligent Transportation System (ITS) with Emphasis on Interactive and Integrated Urban System (Case Study: the City of Jiroft)

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