**A Geospatial Patterns Analysis of Traffic Accidents in Jinju, Korea**

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Rapid economic growth causes a lot of social problems such as social conflicts, crimes, traffic accidents, in addition to positive consequence that implies national development. In this regard, this study attempts to analyze the patterns of spatio-temporal occurrence in the urban space by focusing on traffic accidents which result in human and economic losses caused by the tens of thousands of accidents with a view to reducing the causes of traffic accidents. Traffic accidents are on the premise of movement, so that these accidents are closely related to the structure of urban space including the land use, population density, road networks. Therefore, this study aims to analyze the patterns of traffic accidents according to years, months, time-zones and the types of accidents which show the causes of traffic accidents by collecting the data of traffic accidents that have been occurred over the last several years. It targets at Jinju which is a local city in Korea. In addition, it analyzes the relations between the distribution of occurrence location and the types of land use by using the spatial data of the locations of traffic accidents by using the spatio-temporal data mining method. The spatio-temporal data mining method is evaluated to be appropriate in extracting meaningful information and knowledge in an environment where spatial data are rapidly increasing. In conjunction with GIS, it explores the patterns of the hot spot of traffic accidents by the cluster analysis. Lastly, it provides data, required for establishing the measures to reduce traffic accidents by classifying the causes of traffic accidents by applying the algorithm of decision trees. This research indicates that an analysis on the occurrence patterns of traffic accidents will provide us with very critical information for establishing measures which can reduce the causes of traffic accidents as well as the systematic analysis on the types of traffic accidents in Jinju city.