THE APPLICATION OF VGI ON SPATIAL CLUSTER ANALYSIS OF TRAFFIC INCIDENTS

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ABSTRACT

This study through “citizen as sensors” concepts of volunteered geographic information, combined with improved density-based spatial clustering of applications with noise (DBSCAN) method used for traffic incident identification. Cluster identification is taking time and space and created a three dimensional cluster model. Simulation of statistical data according to the pattern of roads, where the incident occurred is defined as five categories, including: level crossings, general road (line), circle, square. Outcome data are grouped according to each point in time from the events of the termination point and duration of the event record. In accordance with data validation test is the final event information as the event witnessed a termination condition. And join the search during the time parameter, determine the duration of the event, so as to obtain a flexibility to adjust event time determination. Results of simulation tests showed that when the search space scale, the higher the noise false positive rate, the lower the information notified missing rate; conversely, smaller-scale search, the false positive rate, the lower the noise, the higher the notification information leak rate. The future lies in the traffic incident briefing, the main reference index values missing values false and noise data for the event may be recognized.