THE FUZZY ELEMENT INTRODUCTION TO PROCEEDING GEOANALYSIS AND IMPROVING OF THE EFFECTIVE EVALUATION OF GEOANALYSIS

Lucie Vaníčková, Tomáš Vaníček

ČVUT v Praze

Abstract

Spatial inquiring and proceeding geoanalysis is the core of any GIS. Ability to proceeding geoanalysis is a typical property of GIS. Geoanalysis makes possible the new models and the new relations providing. Therefore it is possible to find unknown relations by these models. The detection of these relations inside the data files or between the data files improves our understanding real world. The methods of geoanalysis are possible to be included in the methods of Decision Support Systems. On this account it is useful the fuzzy element introduction to exactly determined procedures of GA. By the fuzzy element it is possible to model risk of decision in case of inaccurately specified input data even in case of non precisely executable operation of geoanalysis. Representation of spatial data enabling to proceed spatial queries and operations of geoanalysis requires an application of new data structures. These structures make it possible to index the spatial objects and to support spatial operations. Currently GIS use these structures mainly for spatial objects searching. Its using for geoanalysis is rarely. Mostly it is used adaptation R-tree in Open Source GIS. Design of the new data structure, that is suitable for common distribution of the spatial geographic objects and functional introduction these methods into proceeding geoanalysis with the fuzzy element mean radical break-through in GIS using as efficient Decision Support System. That means Decision Support System for many branches including ones, in that is necessary to use methods of soft systems or methods of artificial intelligence.

Autor nedodal plný text příspěvku.

Author did not supply full text of the paper/poster