

Study on Spatial Morphology of Traditional Villages DSM in Western Liaoning

Han Cao

School of Knowledge Science, Japan Advanced Institute of Science and Technology (JAIST), Nomi, Ishikawa, Japan

Eunyoung Kim

School of Knowledge Science, Japan Advanced Institute of Science and Technology (JAIST), Nomi, Ishikawa, Japan

Abstract:

The spatial morphology of the village is not only an important part of the joint study of rural human settlements, rural settlement geography et, but also a significant cornerstone for protecting and developing traditional villages. To obtain data by Unmanned Aerial Vehicle remote sensing from topography and geomorphology, structure and vegetation of 24 typical villages in Western Liaoning, this study used Geographic Information System to analyze and evaluate the spatial patterns of and classify them by cluster analysis based on the six index systems of the spatial shape, spatial structure and architectural distribution of the traditional village digital surface model. The results show that the traditional villages in Western Liaoning have five types of spatial patterns: the reunion tendency dispersion type and the ribbon tendency concentration type. Also, the protection and development of its pattern has been discussed. This achievement provides a useful reference for the revitalization of traditional villages and their human settlements protection.

Keywords:

UAV remote sensing, GIS, traditional village, digital surface moder, spatial morphology, cluster analysis.