THREE-DIMENSIONAL TERRAIN MAPPING

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The article discusses new ideas in the field of three-dimensional representation of geographical space. 3D-mapping is defined as the most effective way to display the surrounding area. In particular, the advantages of three-dimensional maps in comparison with two-dimensional analogues are given, the current state of the field of 3D-representation is analyzed, and two approaches are identified: cartography and geovisualization. The technique of 3D-mapping, as well as various existing graphical environments for creating 3D-maps, and a comparative analysis of their capabilities are considered. For practical work, a graphic editor based on the game engine was selected with a justification for its use and a description of its functional features. The creation of a three-dimensional map of the area is implemented, the results are presented as illustrations of real and simulated territory. Potential applications of the 3D-map in various fields of activity are identified.

Keywords: geospace, digital three-dimensional terrain model, three-dimensional map, 3D-cartography, geovisualization, 3D-mapping factors, the process of creating a 3D-map, specialized geographic information systems (GIS), game engine Prism3D, graphic editor

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