ANALYSIS OF FUNCTIONAL CAPABILITIES OF OFFICE APPLICATIONS FOR VISUALIZATION AND EVALUATION OF GEODATA

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Capabilities for visualization and analysis of spatial data cease to be the prerogative only of geoinformation systems, and are added to the functions of application software and web services. The aim of the work is to form criteria and analyze the functionality of the geo-information component of modern office and analytical platforms. The criteria cover the full cycle of spatial information usage – data loading, evaluation, mapping, display setup, analysis and forecasting. The research was carried out on the example of Microsoft 3D Maps add-in for office Excel spreadsheet processor, as well as Microsoft power BI and Tableau interactive business intelligence software.

Several sets of structured data from various sources on the territory of the Russian Federation and the city of Novosibirsk were used for practical approbation of the selected software and analysis according to the formulated system of criteria groups. Based on the results of the testing, summary tables were compiled for each of the categories. The results obtained show that from the point of view of visualization, creation of basic types of mathematical maps, analysis elements, modern office systems are not inferior in functionality to desktop geoinformation systems and can be used to work with spatial information without the need to resort to additional software.

Key words: visualization, spatial data, geoinformation, thematic map, data aggregation, office applications.

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