

## USE OF GIS POSSIBILITIES FOR CREATION OF NETWORK PROTECTION ZONES

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The presence of a stable coordinate basis, fixed on the ground by a network of geodetic points is one of the key factors in the single geospace successful formation. Current state of the Novosibirsk region network analysis has shown that a significant amount of outdoor signs points were lost due to the citizens' economical activities and a number of other factors as well. That has caused significant difficulties in using such points. The purpose of this paper is to study state geodetic network, state levelling network and state gravimetric network points' security regime. The scientific significance of this paper is seen as a way to determine the role of the specified security zones in the special territory usage conditions system, as well as the classification of such zones. The practical significance of the article is to forecast possible ways of improving state geodetic network, state levelling network and state gravimetric network points' security regime. The research methodology includes the current security zone regime state analysis as well as forecasting the possible way of its improvement in the future. The main conclusions of this paper indicate that geoinformation systems play a key role in preventing damage and loss of objects which provide human activity on the Russian territory: zones with special conditions are created, which include state geodetic network, state leveling network and state gravimetric network protection zones. Timely provision of their security can guarantee the smooth operation of the entire state as a whole. To prevent of state geodetic network points' further loss, it is necessary to create a united information resource (geoportal), which would reflect the existing and projected security zones using 3D representation.

**Keywords:** security zones, state geodetic network points, state leveling network points, state gravimetric network points, special condition usage zones

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