DESIGN AND EQUALIZATION OF SPATIAL GEODETIC CONSTRUCTIONS INTENDED FOR CREATING A THREE-DIMENSIONAL CADASTRE

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The article proposes a mathematical algorithm based on the least squares method for calculating the necessary measurement accuracy in a spatial geodetic construction intended for performing cadastral works when conducting a 3D cadastre in a territorial entity. The proposed algorithm allows, based on the specified accuracy of the relative position of real estate objects in the cadastral quarter, to select the necessary technological measuring equipment for building a spatial boundary density network (BDN) on the ground for geodetic support of cadastral works. The use of the developed algorithm for equalizing the results of geodetic measurements will ensure the reliability of the calculated parameters of capital construction objects and the creation on their basis of a single geospatial space necessary for solving various scientific and technical problems, the corresponding territorial entity.

Keywords: 3D cadastre, real estate objects, algorithm, matrix, boundary density network, parameters, coordinates, spatial coordinate system, mean square error, specified accuracy

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