

ANALYSIS OF THE STATE GEODETIC NETWORK OF THE REPUBLIC OF KAZAKHSTAN TAKING INTO ACCOUNT THE DEVELOPMENT TRENDS

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Coordination support of the territories is impossible without the creation of state geodesic networks. The purpose of the publication is to analyze the prospects for the development of the state geodesic network in the Republic of Kazakhstan using GNSS technologies. Perspective analysis cannot be imagined without a historical retrospective on the subject. Therefore, the authors, firstly, analyzed the survey results of the astronomical and geodesic networks points and geodesic networks of condensation, created during the Soviet era on the territory of the Republic of Kazakhstan. More than 40,000 items were surveyed, representing more than 77 per cent of the total. The number of lost points did not exceed 9.5 % of the number of examined items. Secondly, the existing modern satellite geodesic networks of permanent reference stations created by private firms are listed. The schemes of these networks, the number of points are given. However, such networks are not free from a number of shortcomings that are due to their departmental affiliation. The existing regulatory and technical documents on network construction have been analyzed. As a result of the completed studies, proposals have been made to create a new state geodesic network of the Republic of Kazakhstan. Such a network should consist of networks of three levels: FICS, HCV, SGS-1. The authors show the need to establish permanent FICS and HCV points.

Keywords: coordinate systems, state geodetic network, reference stations, SGN Development program, fundamental astronomical and geodesic network, high-precision geodesic network, satellite geodesic network of class 1, astronomical and geodesic network, geodesic network of condensation, geodesic point, work center

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Received 11.09.2020

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