PROBLEMS OF METROLOGICAL MAINTENANCE OF DIGITAL MAPS AND MEANS OF ITS CREATION

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Nowadays space information technologies are a matter of a current interest and availability, particularly it concerns systems and complexes, intended for high-precision definition of coordinates.

For maintenance of performing of requirements to precision characteristics of developing and existed geoinformation systems, geodetic and cartographical complexes, in particular to errors of measurements of locality coordinates, heights, etc., one must carry out corresponding works on metrological maintenance (such as test, sertification, etc.).

For this necessary development of the hardware-software complex intended for metrological maintenance of geoinformation systems, geodetic and cartographical systems, and also measuring apparatuses of geodetic appointment, precision characteristics of digital district maps and metrological certification of means of their creation.

The complex must provides the solution of the following problems:

- reproduction and storage of lengths of bases of the big length;
- reproduction and storage digital cards;
- prototyping of stereometric phantoms and precision measures of measurement of geometrical sizes;
- metrological maintenance of means of creation of digital maps and district models;
- estimation of precision characteristics of digital maps and district models.

The prospective structure of a complex includes:

- bases of the big length;
- standard digital maps and models of districts;
- complex of means of prototyping of stereometric phantoms and precision measures of measurement of geometrical sizes;
- complex of programm-technical means for checking precision characteristics of bases of the big length;
- complex of software means of estimation of precision characteristics of digital maps.

The complex for metrological maintenance of geoinformation systems will provide the transmission of the dimension of units of physical sizes (special sizes) from standards to technical means of creation of the given systems, i.e. performance of a necessary condition for achievement of the unity, demanded accuracy, completeness, timeliness, efficiency of measurements and reliability of the checking of parameters and technical characteristics of developing and existed geoinformation systems.

Keywords: metrological maintenance, a hardware-software complex, navigating, geodetic and cartographical systems, digital maps