

THE SPACE COMPONENT IN STRUCTURE OF SYSTEM OF CONDUCTING STATE TOPOGRAPHICAL MONITORING

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Modern of technology of use of the data of remote sounding of the Earth (ДЗЗ) are actively applied now to creation of System of conducting state topographical monitoring (ГТМ), which development carries out ФГУП "State centre" a Nature " Роскартографии.

The creation of System of conducting ГТМ is one of directions of an effective utilization of the space information in maintenance of the decision of priority tasks of socio economic development of regions of Russian Federation.

The system of conducting ГТМ is focused on maintenance in a urgent condition and in readiness for practical use of state digital topographical cards of a scale number(line) 1: 100 000 and is larger by means of constant regulated cartographical tracking changes of objects of district on the basis of the data ДЗЗ.

The architecture of System of conducting ГТМ is defined(determined) взаимосвязанностью of structural components and the documenting and control of processes of the tax, accumulation, account of the initial spatial information about territories, its(her) complex processing and use for актуализации of the contents of state topographical cards, operative creation of target production ГТМ and granting to its(her) consumers in real time consists of set of functional subsystems ensuring formalization.

In System of conducting ГТМ главенствующую the role is carried out of a space component - by(with) a subsystem of the tax and data processing ДЗЗ, which includes space and ground segments.

The space segment provides regular reception of space snapshots of the high spatial sanction in a wide range of an electromagnetic spectrum on territory of Russian Federation. Use of the given satellite navigating systems ГЛОНАСС and GPS, transmitted on the modern ground reception device also is an information component of a space segment.

Ground segment including stationary and mobile parts, in turn each of which contains special information, program and technological maintenance carries out complex data processing ДЗЗ and information of satellite navigation directly for актуализации of the contents of digital topographical cards and operative creation of the specialized cards of interbranch purpose(assignment).

In System of conducting ГТМ the space information is the primary source of the information about a qualitative condition and spatial - temporary dynamics(changes) of components of природно-territorial complexes (экосистем) both natural and anthropogenous objects - elements of the contents of state topographical cards.

The necessity of the complex analysis and estimations of materials ДЗЗ, used in System ГТМ at various hierarchical levels of technological process of conducting state topographical monitoring defines(determines) increased requirements and criterion, which should satisfy materials ДЗЗ, transmitted both Russian, and foreign space systems ДЗЗ with.

At formation and introduction in operation space components of System of conducting ГТМ should be are achieved the following conceptual rules(situations):

Organization of uniform universal technology of the tax, processing, storage and use of the space information;

Use of the uniform standards on representation of the data ДЗЗ and satellite navigation in System;

Use of typical algorithms of reception of the information about changes of objects of district during processing the space information;

Possibility децентрализованной of transfer both reception of the primary and derivative space information - all structural parts of System;

Maintenance of protection of the information from the non-authorized actions and steady functioning space components and Systems as a whole;

Construction of space and ground segments of System in the program attitude(relation) as information systems of an open type;

Maintenance of the operative tax of the space information and data of satellite navigation for conducting current ГТМ in real time for duly and qualitative acceptance of the administrative decisions on territory картографирования;

Maintenance of all-round information support during realization operative ГТМ and on the basis of the data ДЗЗ with the purposes of forecasting and development of possible(probable) conditions in areas of extreme situations;

Operative (if necessary) finishings of the information of the data ГТМ for acceptance of the administrative decisions.

The task становления and development space components in structure of System of conducting ГТМ is one of prime tasks of land and space branches, and its(her) effective decision will promote:

To perfection of информационно-cartographical maintenance by the data of System of conducting ГТМ of bodies of state authority of various levels working and formed state systems of monitoring, formed state of systems, and forecasting of extreme situations, monitoring of natural resources (wood, water, недп, grounds etc.) and also

To complex maintenance of the users by the urgent, authentic, exact digital cartographical information with the координатно-adhered data on changes of objects of district in interests of preservation of safety of the critically important, potential - dangerous objects of district and unique technically of infrastructures of regions of Russia.