HISTORY OF GEOGRAPHICAL INFORMATION SYSTEMS AND ITS IMPORTANCE TODAY.

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Annotation:*This article describes the origin of geographic information systems, their current use, software used to measure land areas, the use of advanced technologies, ways of use and recommendations based on the requirements of the time. The advantages and disadvantages of geographic information systems are analyzed.*

Keywords:*technology; panorama; geoinformatics; project; GPS; Geographic Information System (GAT);*

In the 21st century, information technology is one of the fastest growing industries. There is hardly an industry today that has not been penetrated by information technology. To date, many applications have been developed for the perfect use of information technology. At the same time, it should be noted that today, maps, geographic information systems are very important programs in creating a plan of places. The following modern software is an example of geographic information systems.
ArcGIS software;
Panorama software;
Oasis software;
AutoCAD software;
SAS planetary program;
Includes Global Mapper (and other) software
In these programs, cards of different scales are being created today. If we talk about the history and emergence of these Geographic Information Systems, the concept of Geographic Information System first appeared in Canada in the mid-1960s and was called the Canadian Geographic Information System CGIS. The geographic information system is also referred to in other literatures as the full name geographic information system or GAT for short. The main purpose of the system was to conduct an inventory of Canadian land resources and on this basis to determine the current status and future potential of land resources. Today, in developed countries, GAT is used in many social spheres, economics, politics, ecology, natural resource management and nature protection, cadastre, science and other fields.
Today, developing countries are also interested in the programs created in the GAT, including our Republic of Uzbekistan. A lot of work is being done in Uzbekistan to develop this sector. The main reason for this is that today the GAT programs play an important role in the rational use of land resources and their state registration, identification of vacant and neglected lands. In addition, the development of this sector requires us to study these programs not only for the state registration of lands, but also to acquaint the younger generation with modern technologies and to prevent future problems.

If we talk about the history of GAT development in Uzbekistan. In 1991-92, the fund of the Uzdavgeological Committee in Uzbekistan created a geoinformation system, which includes the creation of a cartographic database of the Central Kyzylkum at a scale of 1: 50,000. In 1996-99, in cooperation with the expedition "GGP-Kiziltepageologiya" digital maps were created for the city of Tashkent at a scale of 1: 25000, for the Fergana Valley at a scale of 1: 200,000 and for Uzbekistan at a scale of 1: 1000000 for the Geo-Ecological GAT project. In 1997-98, digital maps of Uzbekistan at a scale of 1: 1000000 and Tashkent at a scale of 1: 25000 were created. To date, 1: 2000 digital maps of Tashkent have been completed by MAGK. The project "Creation of a geographic information system in the Republic of Uzbekistan" between the IAEA and the Agency of the Republic of Korea KOICA was launched in August 2006. In this project, it is agreed to create a GAT system and database for the city of Tashkent and Tashkent region. Of course, building a geoinformation system requires a lot of money and effort.

If we talk about the importance and role of today's GAT programs, many types of these programs have been created to date, but they differ from each other in the principle of their operation, cost, field of application, work with external sources. The most universal of these programs is the Arc GIS program. This program belongs to the Esri family. The Esri family is divided into:

Arc View;

Arc Edit;

Arc Map;

The advantage of the program is that it is not difficult to work with, but the program allows you to make drawings with a single command when making a card or similar drawings, change the file format and direct access to data using the Internet. In addition, new generations of this program are being created to date. However, such programs produced by Esri are also distinguished by the fact that Arc GIS programs are very expensive. This is one of his shortcomings.

Speaking about the advantages and disadvantages of today's GAT programs:

Advantages:

Allows frequent updating of electronic data of location plan maps;

Unlimited copying of the created plan cards allows to make changes, change the scale and also change the formats;

Allows you to create electronic versions in programs by scanning them using maps drawn on old paper;

Allows direct data exchange using satellites;

Using geographic coordinates can allow you to combine multiple maps and cite many of its advantages.

Disadvantages:

The value of the software used in geographic information systems;

It takes a lot of time to learn programs like this;

Geographic coordinates take a long time to process on a map when an error is made;

Because the cards are not in the same format in all programs, the drawings or characters may not be completely converted to another format when the format is changed;

Costs can be very expensive when filming by aero and satellites;

Conditional characters are different and have similar shortcomings.

It should be noted that through the further development of geographic information systems, we will be able to know the changes in the senses at one point, ie geodetic or geographical changes. In Uzbekistan, which is developing day by day, the development of such areas will be one of our future achievements. The use of GATs in the monitoring of agriculture or similar lands also allows for high efficiency.

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