



## MODERN TECHNOLOGIES FOR THE CREATION OF INFORMATION SYSTEMS (GAT TECHNOLOGIES, WEB TECHNOLOGIES)

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### Annotation

The geoengineering system is also referred to in other literature as the geographic information system by full name, or GIS for short. In countries where the main purpose of the system is developed, GIS is used in most social fields, economics, politics, ecology, natural resource management and nature conservation, cadastre, science and other fields. A number of reliefs result from the puddling of GIs in the fields of Geodesy and especially cartography.

**Keywords:** GAT technologies, ARCGIS software, GIS, data collection, data storage and separation system, inclusion in exposure memory.

### Introduction

For the first time, the concept of a geoengineering system appeared in the Canadian state in the mid-1960s and was called The Canadian Geographic Information System (CGIS). The geoengineering system is also referred to in other literature as the geographic information system by full name, or GIS for short. The main purpose of the system in developed countries, GIS has been used in most social fields, economics, politics, ecology, natural resource management and nature conservation, cadastre, science and other fields.

GIS occupies all the fronts, integrating cartography, distance probing, statistics, Cadastral data, Hydrometeorological data, field Expeditionary materials observation, drilling results, underwater probing and hokazo, the types of global, territorial, national, local-information related to our site. In the broader development of GIS, international justifications (UN, OSCE, et al.), large-scale state associations, ministries, cartography, geological and land-making services, individual firms and scientific institutes are participating.



**Figure 1. Systems of GIS.**

GIS I itself is also divided into systems, and they are as follows:

1. **Data collection system.** In this system, data is extracted from various sources and initial processing is carried out. The main task of this system is to change various spatial data (to bring it from a raster view to a vector view).
2. **Data storage and separation system.** The main function of the system is to separate, update and edit spatial data.
3. **Data management and analysis system.** In doing so, the data is grouped, separated and modeled to deal with different issues.
4. **Data extraction system.** All or part of the database is printed by describing it in the form of a table, diagram or card, or given in the form of electronic or paper information at the request of the user.

A number of reliefs result from the puddling of GIs in the fields of Geodesy and especially cartography. In this case, the volume of work increases sharply, and the time spent on such work as processing and printing data, in turn, decreases sharply. In this aspect, it has several advantages compared to traditional cartography.



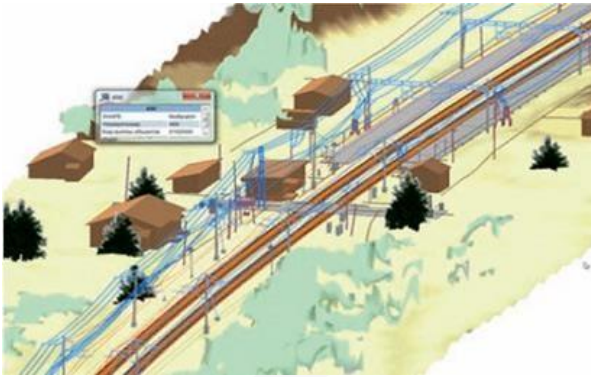
**Table 1.:**

Processes	Traditional technologies on	By GIS
Ways to collect information	Ayrophototasvirs, digital remote sensing, geodesic works, working drawings, statistics.	In the same traditional way and additional ready-made digital cards, digital model of relief, digital orthophototasvirs, digital database
Data input	Putting dots, lines, fields on paper	Drop dots, dashes, fields into computer memory.
Data processing	In this case, the analyst used by the specialist lineyka, planimeter, transporter and other tools are used	Computer information measurement, comparison and database imaging capabilities applied.
Storage and selection of information	Dots, lines, fields on paper drawn using conditional symbols Selection is done by reading.	Points, lines, and fields are stored in computer memory as rasters, coordinates, or identifiers. Attribute table will be related to the coordinates. Choosing by computer effective methods of tracking are used.
Comparative analysis of traditional and modern cartography		

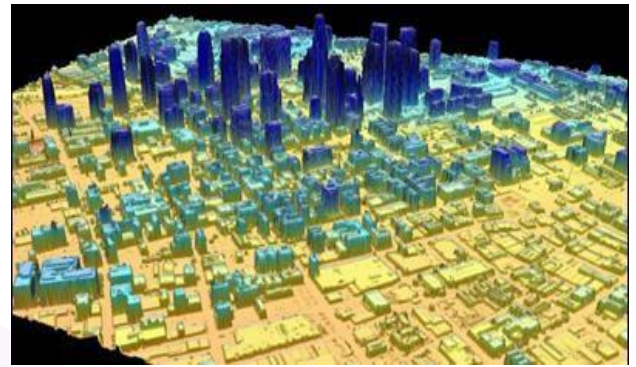
### GIS classification

In the scientific and technical literature, most authors are trying to systematize this or that important direction, sign or other indicators. The most common classification should be based on the properties that we think are:

- according to its purpose-on the sphere of Use and the issues and tasks it is addressing;
- problem - according to the thematic orientation-in the field of application;
- according to the area covered-by a series of scales of digital cartographic data that make up the base of the data of this GIS;
- according to the method of organizing geographic data-by the format, storage, processing and description of entering cartographic data into the exposure memory.



GIS base created for electric energy structures



GIS base created for buildings and



GIS base created for delivery chases agricultural land



GIS base created for

### Conclusion:

As areas and networks that use GIS today, the following can be cited:

1. Land Resources Management, in the land cadastre.
2. Production infrastructures, their management and in the inventory of

### Objects

1. In the construction of the city, in the construction of architecture, industry and transport, in the study and planning of engineering.
2. In thematic cartography in the desired area, when drawing up atlases and thematic cards.
3. In maritime cartography and navigation.
4. In aeronautical cartography and in the control of the movement of aircraft.
5. In water resource management and water cadastre; in the inventory of water objects and seasonal and annual cases of water and in forecasting.





6. In navigation and Land Transport Traffic Management.
7. Remote sensing and space monitoring.
8. In the use and management of Natural Resources (water, forestry, etc.).
9. When describing and laying the terrain of the place.
10. Modeling processes in the natural environment, conservation in carrying out activities.
11. In environmental monitoring, in the assessment of man-made consequences, in the resolution of emergency and crisis situations.
12. In defining environmental problems, assessing their relevance and developing measures to eliminate them.
13. In cargo transportation planning and entrepreneurship.
14. In the industries of geology, mineral-raw material resources and mining of rocks.
15. In the targeted development of Transport and telecommunications networks.
16. In marketing and market economics.
17. In archaeology.
18. In the complex management and planning of the development of Gods and cities.
19. In security, military work and intelligence.
20. In secondary, special and higher education.

### List of Used Literature

1. Shukurov Akmal Uktamovich, Ergashev Nuriddin Gayratovich, Jabborov Elbek Erkin o'g'li. USING THE CAPABILITIES OF MODERN PROGRAMMING LANGUAGES IN SOLVING PROBLEMS OF TECHNICAL SPECIALTIES. ACADEMICIA An International Multidisciplinary Research Journal. 2019. 686-696. <https://saarj.com/>
2. S.A. Uktamovich. Stages of development, directions and comparative analysis of cloud technologies. European Journal of Research and Reflection in Educational Sciences Vol 8 (12), 2020. <https://www.geniusjournals.org/>
3. SA Uktamovich. Stages Of Development of Cloud Technology in Education. Eurasian Scientific Herald 5, 48-51. <https://www.geniusjournals.org/>
4. SA Uktamovich. The role of digital technologies in the development of the new Uzbekistan. Models and methods in modern science 1 (18), 35-38.



5. A Nurbekov, U Aksoy, H Muminjanov, A Shukurov. Organic agriculture in Uzbekistan: status, practices and prospects. Food and Agriculture Organization of the United Nations, Tashkent.
6. A Nurbekov, U Aksoy, H Muminjanov, A Khujabekov, R Nurbekova, A Shukurov. Organic agriculture in Uzbekistan. XXX International Horticultural Congress IHC2018: II International Symposium.
7. S.A. Uktamovich. Stages of development of cloud technology in education Eurasian Scientific Herald 5, 48-51. 2022. <http://www.geniusjournals.org/>

