THEORETICAL BASIS FOR THE USE OF MODERN GIS TECHNOLOGIES IN THE CREATION OF NATURAL CARDS

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ABSTRACT

This article provides information on the theoretical basis of using modern GIS technologies in the creation of natural maps, preparatory work for the creation of thematic maps.

Keywords: GIS, thematic maps, natural maps, collection, storage, analysis, geographic, cartographic, design, compilation.

INTRODUCTION

Preparatory work to create themed cards includes:

1. Obtaining an order for making a card.
2. Assemble the card development team
3. Collection and analysis of sources.
4. Write the program of the card, develop editorial instructions.
5. Development of the geographic basis of the map.

The work of making a card begins with receiving an order. The purpose of the card and the level of the customer's knowledge of the area are defined in the order. After the order is received, a team is assembled, resources are collected and researched to create the card[1,3,5,7,8,9].

Creating a card - begins with the development of its initial (first, sketch) program. In the process of writing the program, many auxiliary cards are drawn, and if serial cards are being created, experimental work is carried out. Writing the program of the card can take a long time. therefore, at this time, the author or a team of authors also prepares the geographical basis of the map.

Various cartographic bases that meet the requirements of the present time and correspond to its content are prepared for making a map. The cartographic base (it can be made of paper or plastic) serves as a support, a "frame" for the correct placement of special content. The scale and purpose of the future map have a certain influence on

the content of the cartographic base. Basically, from general geographic elements, mathematical basic elements, relief, hydrographic networks, soil-soil cover, population centers, roads, borders, etc. are given[2,4,6,10,11,12].

Cartographic basics. Often, it is developed on the basis of general geographic or scientific reference cards. If such maps are not available, a special cartographic basis will be prepared. The bases can be the scale of the future card, or larger. Currently, two types of cartographic bases are being prepared: for author's works (working bases); for cartographic production (typological foundations)[13,14]. In addition, special bases for the map can be prepared, for example, bases with additional elements corresponding to the content of the map (bases with geological content for tectonic maps), etc. Today, authors use bases of different contents:

1. The same grounds as the content of the card.
2. Basics with simplified content.
3. Very complex meaningful bases.

The basics of the first type have several conveniences: they provide all the necessary elements. The foundations of the second type are used to create simple, elementary cards. Cards built using such foundations need to be reworked. The bases of the third option are used in the creation of cards of medium complexity, in the drawing of different sources in the creation of a card, in their connection with each other, in the interpretation of types of natural connections. In most cases, very complex content bases are used for the author's original[1,2,15,16,17,18,19].

THE MAIN PART

Today, efforts are being made to preserve endangered species of plants and animals, to pass them on to future generations, to ensure their protection, and to map the areas where they live. It requires the performance of tasks arising from this on the basis of accurate and scientifically based information. Currently, cartography, as in all fields, has the opportunity to effectively use the achievements of information technology. Effective use of computer programs used to process, store, and transmit data sets, use models created on a global scale, and organize them fully, accurately, and at a high level are urgent issues. Below we present some of our opinions and suggestions regarding GIS and its composition, important features, and the main directions of its use in agriculture[20,22,24,26,28,30,32].

Geographic information system (GIS) is a rapidly growing information retrieval system that integrates knowledge from several disciplines. This technology can serve as a scientific basis for the management of natural resources, studying the demographic situation, health care, emergencies and other similar territorial and spatial problems. Application of GIS-technologies is a complex process, which consists of obtaining,

processing, analyzing and depicting data with the help of computer programs and specialists. To do this, it takes a lot of time and effort to analyze the spatial data, which is the primary source of this technology, to collect the attributes (characteristics, features) related to them, and to create the layers of the GIS-technology database. . Spatial data visualization and analysis includes one or more operations of GIS technology database layers, measurements and data query. On the basis of this system, it is possible to create various interconnected graphs by analyzing geographical events and events[21,23,25,27,29,31,33].

Cartography and GIS technology are fields of knowledge that have become interconnected in recent years. Today, cartographers are engaged in GIS technology and create cartographic models.

The stages of work performed in this technology in the design and creation of natural cards can be described as follows: collecting initial data, entering data into computer memory and storing it in "external" devices, processing data, selecting conditional symbols and creating them, selecting characters or creating them, creating a character bank, creating layers of thematic cards and placing them, conducting editorial work on the created cards[1,2,5,6,8,9].

GIS-technology is the collection, processing, transmission and storage of regional and time-varying spatial data, analysis of inter-territorial relationships or differences between several components, and is an automated complex with hardware and software that provides imaging[3,4].

Effective use of these programs, which are entering our country very quickly, makes it possible to collect data related to showing the distribution areas of animal species, quickly process them, and effectively analyze the results.

GIS-technology implements a single process that has special significance for each region. It is a spatial model of events and events created according to requirements for a specific project. The processes it manages are therefore unique to the project[10,11,12,13]. Therefore, the geographic information system is understood as a computer-aided process of collecting, analyzing, and describing spatial data and their attributes. The original meaning of this concept is spatial data analysis, which is a technical capability of GIS technology. The analysis is based on geographic location, which is a distribution of GIS technology in computer-aided mapping and database management. Geographic information systems are a set of functions that are very important because they open up new ways of manipulating (manually complex and delicate) and representing geographic data, as well as the traditional spatial dramatically increases the efficiency of data analysis[14,15,16,17].

With the rapid growth of development, Geographic information systems combine knowledge of geography, geodesy, cartography, computer computing systems,

mathematics, statistics and many other disciplines. Recently, as a result of the increase in the power of microcomputers and the expansion of the possibility of using GIS-technology programs, the number of their users is also increasing[18,19,20].

Such information has the following characteristics: geographic location, legal address, territorial unit, completeness, continuity, visibility, accuracy, etc.

When creating a database, the necessary resources are entered into the computer memory. If the sources are on different scales, scaling is carried out at the stage of photogrammetric transformation of the GIS technology system.

Reading and analysis of aerial and space images can also be done in the photogrammetric process. At this time, attention is drawn to the indicators developed for the natural conditions of the land where the farm is located, such as relief, water, and soil composition[21,22,23].

The fauna formed on the basis of dynamic and territorial changes of a number of processes, such as the change of colorful landscapes of the region, land degradation, increased erosion and desertification, salinization of agricultural lands, and their interrelationships. world was studied based on modern methods[24,25]. The problems of drawing up maps, processing their geographical basis through pictures, and dividing the distribution areas of animal and plant species were solved on the basis of aerospace methods.

Remote sensing is a highly technical field that can detect surface structures without direct contact with the object. In other words, remote sensing is knowing information about the researched object, area or events and events through the analysis of data obtained using sensitive devices (sensors) without direct contact with them. and researching their geographical features.

There are several ways to represent geographic features. Remote sensing in the field is the determination of the dimensions of landscape features at a certain distance, which can be viewed as a landscape-sensor relationship[26,27,28]. An example of this is the measurement of atmospheric air temperature by radiosonde.

CONCLUTION

In short, the territory is covered with natural landscapes and anthropogenic landscapes (settlements, gardens and fields, agricultural lands), and based on this, various animals are distributed. Therefore, taking into account the presence of other species of animals in natural landscapes, and other species of anthropogenic landscape, it is appropriate to research them separately.

REFERENCES

1. Khakimova K. R. et al. SOME TECHNOLOGICAL ISSUES OF USING GIS IN MAPPING OF IRRIGATED LANDS //Galaxy International Interdisciplinary Research Journal. – 2022. – Т. 10. – №. 4. – С. 226-233.
2. Zokir A., Sherzodbek Y., Durdona O. THE STATE CADASTRE FOR THE REGULATION OF INFORMATION RESOURCES FOR THE FORMATION AND IMPROVEMENT //Educational Research in Universal Sciences. – 2022. – Т. 1. – №. 1. – С. 47-53.
3. Shavkat o‘g‘li Y. S., Zuxriddinovna M. S., Qizi O. D. S. ARC Create an Agricultural Card in GIS and Panorama Applications //CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES. – 2022. – Т. 3. – №. 6. – С. 429-434.
4. Mukhriddinkhonovich A. Z. Actual Issues of Design of Small Towns in Uzbekistan //CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES. – 2022. – Т. 3. – №. 6. – С. 576-580.
5. Berdaliyeva Y. X. et al. Gis Dasturlari Yordamida Geografik Asos Qatlamlarini Joylashtirish Va Ularni Boshqarish //International Conferences On Learning And Teaching. – 2022. – Т. 1. – №. 6. – С. 312-314.
6. Allahanov Z., Isakov S. Old architecture or modern architecture in Uzbekistan //Збірник наукових праць ΛΌГОΣ. – 2020. – С. 64-67.
7. Arabboevna A. M., Shavkat o‘g‘li Y. S. The Use of Geoinformation Systems in the Study of the Land Fund of Household and Dekhkan Farms //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 8. – С. 163-164.
8. Юнусалиев Э. М. и др. Составные компоненты деформирования и разрушения синтетических тканых лент для грузозахватных приспособлений в строительстве //Энерго-ресурсосберегающие технологии и оборудование в дорожной и строительной отраслях. – 2020. – С. 431-438.
9. Ogli Y. S. S., O‘G‘Li A. P. A. KOSMIK MA'LUMOTLAR YORDAMIDA YER TUZISH LOYIHA ISHLARINI OLIB BORISH //Ta’lim fidoyilari. – 2022. – Т. 25. – №. 5. – С. 23-25.
10. Abduraxmonov A. A. et al. DAVLAT YER KADASTRIDA GIS TEXNALOGIYALARIDAN FOYDALANISH //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 8. – С. 228-233.
11. Абдукадирова М. А., ўғли Ёкубов Ш. Ш. ЭЛЕКТРОН РАҚАМЛИ ХАРИТАЛАРДАГИ КОНТУРЛАР ЧЕГАРАСИ УЛАРНИ МАЙДОН (ПОЛИГОН) КЎРИНИШДА ЧИЗИШНИНГ ARCGIS ДАСТУРИЙ ТАЬМИНОТИ ОРҚАЛИ АВТОМАТЛАШГАН УСУЛИНИ

ТАКОМИЛЛАШТИРИШ //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 8. – С. 133-136.

12. Ахмедов Б. М., ўғли Ёкубов Ш. Ш. КАДАСТР СЁМКАСИНИ БАЖАРИШ УЧУН ТОПОГРАФИК АСОСЛАР //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 8. – С. 287-291.

13. Shavkat o‘g‘li Y. S. et al. QISHLOQ XO ‘JALIK KARTALARINI YARATISHDAGI GEODEZIK ISHLAR //THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH. – 2022. – Т. 1. – №. 5. – С. 460-466.

14. Shavkat o‘g‘li Y. S., Zuxriddinovna M. S., Shuxratbek qiziOlimova D. RAQAMLI TASVIRLARNI QAYTA ISHLASH VA QAYTA ISHLASHNI TOIFALASHTIRISH //INNOVATION IN THE MODERN EDUCATION SYSTEM. – 2022. – Т. 2. – №. 18. – С. 425-429.

15. Ilmiddinovich K. S. Methods Of Teaching English To Young Learners //The American Journal of Social Science and Education Innovations. – 2020. – Т. 2. – №. 11. – С. 65-69.

16. Ilmiddinovich K. S. The methodologies of learning english vocabulary among foreign language learners //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – Т. 11. – №. 4. – С. 501-505.

17. Мирзаахмедова У. А. и др. Надежности И Долговечности Энергоэффективные Строительные Конструкций //TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI. – 2021. – Т. 1. – №. 6. – С. 48-51.

18. Умаров Ш. А., Мирзабабаева С. М., Абобакирова З. А. Бетон Тўсинларда Шиша Толали Арматураларни Қўллаш Орқали Мустаҳкамлик Ва Бузилиш Ҳолатлари Аниқлаш //TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI. – 2021. – Т. 1. – №. 6. – С. 56-59.

19. Arabboyevna A. M. et al. In orthophotoplane technology photomod mosaic module //International Journal Of Discourse On Innovation, Integration And Education. – 2020. – Т. 1. – №. 4. – С. 93-97.

20. Musinovich S. M., Khaitmuratovich K. I., Raximovna K. K. Methods of Care and Irrigation of Fruit Trees //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 505-513.

21. Хакимова К. Р., Абдукадирова М. А., Абдухалилов Б. К. РАЗРАБОТКА ИННОВАЦИОННЫХ МЕТОДОВ В КАРТОГРАФИЧЕСКОМ ОПИСАНИИ ЭКОЛОГИЧЕСКОГО СОСТОЯНИЯ //Актуальная наука. – 2019. – №. 11. – С. 34-38.

22. Abdukadirova M. A. The Role Of Builder And Building In The Development Of The Country Is Invaluable //The American Journal of Interdisciplinary Innovations Research. – 2021. – Т. 3. – №. 05. – С. 81-84.

23. Хакимова К. Р., Абдукадирова М. А., Абдухалилов Б. К. РАЗРАБОТКА ТЕМАТИЧЕСКИХ СЛОЕВ НА ОСНОВЕ СОВРЕМЕННЫХ ГИС-ПРОГРАММ КАРТ ЭКОЛОГИЧЕСКОГО АТЛАСА //Актуальная наука. – 2019. – №. 11. – С. 39-43.

24. Khakimova K. R. et al. DEVELOPMENT OF CADASTRAL MAPS AND PLANS IN THE GEOINFORMATION SYSTEM //Galaxy International Interdisciplinary Research Journal. – 2022. – Т. 10. – №. 4. – С. 212-216.

25. Arabboyevna A. M. Biological Activity of Typical Irrigated Gray Soils //CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES. – 2022. – Т. 3. – №. 6. – С. 285-289.

26. Мадумаров Б. Б., Манопов Х. В. НАЧАЛО РАБОТЫ С ARCGIS. ARCMAP //CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES. – 2022. – Т. 3. – №. 6. – С. 325-333.

27. Rakhmatullayev G. D., Manopov X. V., Mirzakarimova G. M. Current problems of increasing soil fertility //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 6. – С. 242-246.

28. Nomonov J. O. O. FARGONA VILOYATIDAGI MADANIYAT VA ISTIROHAT BOGLARI //Science and Education. – 2020. – Т. 1. – №. 8. – С. 27-30.

29. Mamatkulov O. O., Numanov J. O. Recycling of the Curve Planning in Gat Technology (Auto Cad) Program //Middle European Scientific Bulletin. – 2021. – Т. 18. – С. 418-423.

30. Axmedov B. M. et al. Knauf Insulation is Effective Isolation //CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES. – 2022. – Т. 3. – №. 6. – С. 298-302.

31. Kasimov M., Habibullaev E., Kosimov L. Determination of the chimney roll //An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 6. – С. 1313-1318.

32. Ilmiddinovich K. S. The methodologies of learning english vocabulary among foreign language learners //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – Т. 11. – №. 4. – С. 501-505.

33. Мирзабабаева С. М., Мирзаахмедова Ў. А. ДРЕВЕСИНЫ И СТРОИТЕЛЬСТВОv //INTERNATIONAL CONFERENCES ON LEARNING AND TEACHING. – 2022. – Т. 1. – №. 6. – С. 96-101.