



IMPORTANCE OF MODERN METHODS AND TECHNOLOGIES IN CARD
MAKING

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Abstract: *In the article today's in the day the importance of modern methods and technologies in card making themed of layers attributive from tables of use technical aspects, advantages and disadvantages showing passed.*

Key words: *GAT, ArcGIS, geoinformation, geodetic tools, computer technologies, digital tools, electronics total stations, modern innovative technologies, digital technologies.*

Geographical information has been preserved in the form of maps since ancient times. If we define a map, we understand it as a "reduced, generalized image of the surface of the earth or other celestial bodies, structured according to certain mathematical rules" according to the term proposed by the International Cartographic Association. It follows that the map provides more information than the details of the Earth's surface, and the map is a generalized and abstract form of geographic information.

From the point of view of use, the characteristics of cards in the Geographic Information System can be described as follows:

□ A map is a generalized image, and the degree of generalization depends on factors such as the scale of the map, the categorization rules used in it, and the basis for creating content.

□ A card is an abstract visual image that shows events and processes using conditional symbols. Objects shown on the map may not be visible on the surface of the Earth, for example, a geological map shows rocks underground. On the surface of the earth there is no boundary between different types of soil or vegetation, but on the map such lines separate them from each other.

□ The card has a static nature, that is, it shows the status for a certain period of time and needs to be updated.

□ It is the result of high quality art because it relies on the human eye's ability to receive information and human visual psychology to provide a wide variety of information through color and form.

According to the features mentioned above, the card answers only simple questions: for example, how to get from one place to another? what kind of place is this? It is more difficult to get answers to such questions: What is the area? What places are visible from here?



It is the cartographic abstraction of the map that creates a disadvantage for the geographic information system, because some elements are shown sorted, and the sorted elements are divided into groups, small elements are not shown or enlarged, conditional symbols are used. This feature of the map leads to the uncertainty of the territorial information and causes difficulties in assessing the level of accuracy.

The term card is derived from the Greek word $\chi\alpha\rho\tau\epsilon\varsigma$ (xartes - papyrus paper) and the Latin term "sharta" (paper, sheet). Greek $\kappa\alpha\rho\tau\alpha$ (karta), Latin charta, Turkish harita. It is etymologically correct if there is a card in the Uzbek language, which belongs to the Turkic language family.

Geographic maps are divided into two large groups - general geographic and thematic maps. General geographic maps represent the appearance of the globe and some features of objects located in the territory: relief, hydrographic network, vegetation and soils, settlements, communication routes and means are elements of the map content. Sometimes political-administrative division is included in their content.

Thematic cards reflect various natural and socio-economic phenomena and their qualitative and quantitative characteristics. Theme cards are extremely diverse in content. Their content can be any phenomenon spread over the territory.

When studying the natural and socio-economic characteristics of the desired area, the geographer uses general geographic and thematic maps. Using the maps, it is possible to determine the laws of location and placement of events, their interdependence and compatibility with each other, the level and characteristics of the economic development of the area, the spread of events, etc.

The main tasks facing students in studying this topic are:

- types of geographic cards, their classification, reading, analysis and evaluation of the content of the main general geographic and thematic cards;
- to acquire skills in writing bibliographic indexes to cartographic works;
- to learn to use conventional signs and legend of the card to read the contents of the cards;
- To have an idea about the modern cartographic study of the CIS countries and the characteristics of cartographic sources, etc.

The study of cards is done in a certain sequence and in a purposeful manner. First, the name of the card, the scientific institutions (or individual scientists) involved in its creation, the place and year of publication, and the publishing organization are determined. Determining the details of issuing a card is not a simple formality. Such information allows you to think about the modernity and reliability of the card, based on which sources it was created. For themed cards, it is especially important here that its structure, in particular, is a scientific school, which is the key to understanding the practical value of the card. If there is no special instruction on its use, then it is possible to get information about it directly from the organization (institution) involved in the creation of the card. Finally, the publication information indicates where else to find more information about this card.

Studying the mathematical elements of the card is necessary first of all to determine its scale and projection, the possibilities of measuring on the card. The scale indicates the maximum accuracy that can be measured (at a card scale of 0.2 mm, ie, on a card with a



scale of 1:2,500,000, the measurement can be accurate to 500 m). Depending on the projection, the regional distribution, description and characteristics of various errors are considered.

In GAT technologies, it is necessary to determine the boundaries between different objects in order to display territorial information. The boundaries of objects with constant attributes may be displayed differently depending on the scale of the map used as a source, the law of categorization used, and the level of generalization. For example, when comparing soil and vegetation cards, it is desirable that their type match, because generalization and merging of categories will change the boundaries significantly. This must be taken into account when comparing different levels of categories with each other. If there is a constant number of attributes in a field, this field is kept as a whole. It is easy to take information about the area from the map made by the qualitative color or quantitative color method, enter them into the computer memory and determine the existing boundaries.

Flatly changing events are shown on cards using lines connecting the same number of points, isolines. For example, accurately redrawing an isoline to enter relief or precipitation into a computer is a major challenge and is digitized at some level of generalization.

Maps made by the cartogram method depict indicators calculated on a very generalized level, that is, in relation to the area.

A geographic information system distinguishes between a line map and a photo map, because a line map shows an event using a conditional symbol. A photo card is created on the basis of an image taken from space, and it is a representation of some elements.

It can be seen that the map is a source of geographic information and for storing information in the geographic information system, it is necessary to take into account the geometry of the map and the geometry of the elements on the map.

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