

Analysis of Implementation of Innovative Technologies in Road Economy Enterprises

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ABSTRACT

In this article, the materials used in our highways today and the road construction processes using these materials, as well as the work activities of production enterprises and bases, etc. . Mainly, our progress achieved during the use of modern and innovative methods is that we focused more on the innovations in the use of new technologies in the design methods of industrial enterprises.

Enter: As we know, in the last thirty years of the last century, mankind has rapidly developed instrumental tools called geographical information systems, which are designed to help expand and deepen geographical knowledge. Geoinformation systems help us collect and use spatial data. Some components of GIS are very technological. They include modern spatial data storage facilities, advanced telecommunication networks and advanced computing technology. However, there are other GIS styles that are quite simple. For example, using a simple pen to verify cards. In the past fifty years, the process of collecting and using spatial data, like many aspects of our lives, has changed dramatically due to the rapid development of microelectronics. The GIS software and hardware platform is a major technological breakthrough, as spatial data acquisition and processing has accelerated over the past three decades and continues to evolve.

Geoinformation systems and spatial research are directly involved in the absolute and relative localization of these specific features according to the features and symptoms of the terrain features. Usually, not only the location of important geographical objects, for example, rivers and streams, but also their size, flow rate, water quality and the type of fish found in it are recorded. Geoinformation technology has been around for almost 50 years. Is this too much or too little for such a high-tech destination? Why geoinformatics and geoinformation technologies represent one of the most rapidly developing directions in information technologies? And what is it in general - science, technology, method, computer program?

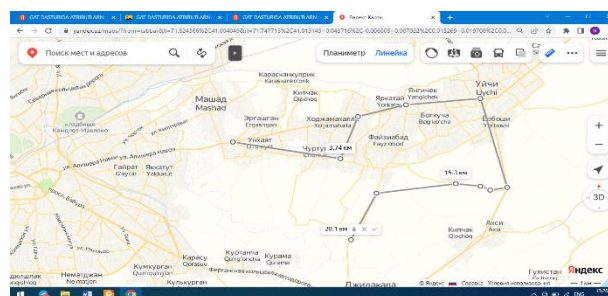
A person completely unfamiliar with geographic information systems may ask the following question: "why do I need to know what geoinformatics is?" In fact, most of us do not need to refer to geographical atlases or maps every day.

However, if understood, geospatial technologies represent much more than just a card inserted into a computer. At the same time, the concept of "geographic information system (geoinformation system, GAT)" is inextricably linked with the usual printed map. In essence, any geographic map is a model of the earth's surface and is an object of analysis by its users. A quick look at the location of some events or objects on the map is enough for an expert to assess the laws of their occurrence and connection with other parameters. Ultimately, a visual image is obtained, and the entire process of visualization is the process of creating a map.

Figure 2.2 above shows the distance between two points, the routes and times for traveling by light transport through the Google Maps application. The first of the two addresses is the first main building of the Namangan Institute of Engineering Construction, and the second address is the fourth building of our institute. Figure 2.2 shows that the nearest road between them is 1.7 km and the shortest time is 5 minutes. Described through GAT technologies.

The simplest example is to determine the distance from one point on the map to another point (Figure 2.2). A more complicated problem is to determine the area of objects of irregular shape. In the most complex issues, the relationship between different thematic information of the maps, for example, the dependence of the snow leopard population on the topography or the soil composition on the geology of the bedrock is determined. The list of examples can be expanded. In scientific, production and management activities, a person is always faced with the need to process large information arrays related to the spatial location of various objects that describe the changes in their characteristics and characteristics over time. Ultimately, a visual image is obtained, and the entire process of visualization is the process of creating a map

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The natural slopes of the site often exceed the permissible values necessary for efficient use of vehicles. In such cases, the slope of the road is made more flat compared to the slope of the ground surface, for this, a part of the soil is cut off when going up hills or, on the contrary, soil is poured from the low parts of the terrain to the crossings.

One of the most important issues in the traditional design of highways is the topographical map of the place and the amount of time and calculations required for the design work performed on it. One of the main hypotheses in the development of the methodology for the application of GAT technologies in the design of highways is the reduction of time and calculation work, the formation of an information base about the planned road, and the almost threefold increase in the efficiency of works such as construction and repair. lays a great responsibility on us road workers. Another important aspect of the decree is the formation of the road cadastral system by using modern technologies. Clause 12 of the decree sets the tasks of determining the location of highway objects using the mobile application of the geoinformation system and creating the basis of electronic cartography of highways based on remote sensing of the earth, knowing the technologies of GAT (geoinformation systems), putting them into practice. Application of GIS in road management, design, construction, operation and cadastral preparation and teaching of geoinformation systems to young road engineers is an urgent issue today. Nowadays, various modern GAT technologies are used in the design of highways. Of course, there are geoinformation systems that serve to facilitate the same design process. These systems allow gathering, processing and management of information. It is possible to automatically obtain and calculate the signs of the earth's surface along the road axis, which are necessary for the design of highways, from the earth's programs. These programs include ArcGIS, IndorCAD, CREDO, Infracad, and AutoCAD Civil 3D. Based on the above, further improvement of the road management system, development, design, construction and operation of road transport sectors using modern computer programs and the development of design methodology by using gat technologies is one of the urgent issues in the economy.

Summary: In this article, the materials used in our highways today, as well as the road construction processes using these materials, as well as the work activities of production enterprises and bases, and the results that can be achieved when we build roads with this method. More emphasis is being placed. Mainly, our progress achieved during the use of modern and innovative methods is that we focused more on the innovations in the use of new technologies in the design methods of industrial enterprises.

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