

# APPLICATION OF GIS TECHNOLOGIES IN SEARCH OF USEFUL FOSSILS IN THE TERRITORY OF THE REPUBLIC OF SAKHA (YAKUTIA)

D V Andreev

Federal State Autonomous Educational Institution of  
Higher Education "M. K. Ammosov North-Eastern Federal  
University"

# Introduction

Remote sensing using geographic information technologies (GIS technologies) is promising for geological research with the goal of localizing mineral deposits. GIS technologies make it possible to use a more convenient form of visualization for analysis - cartographic, connecting all available information resources in the form of databases and spreadsheets.

GIS technologies are increasingly being used “in today's information society, representing a convenient and optimal mechanism for solving a large number of practical, scientific and educational problems” (Andreev, Danilov, 2019, p. 41). The presence of a developed information infrastructure created on the basis of GIS technology is a prerequisite for ensuring the effectiveness of scientific research in this area (Naumova, Goryachev, Dyakov, Belousov, Platonov, 2017).

# Problem statement

Numerous and many years of research in the field of geology through GIS technologies have provided a huge layer of information on the territory of Russia in general and on individual regions in particular. As a result, a lot of heterogeneous, heterogeneous, geographically distributed electronic libraries, databases and information systems were obtained, which complicates their use to obtain complete and reliable information.

The integration of GIS technologies and computing resources, taking into account the organization of access to them, is one of the most important problems in the field of geology of the Republic of Sakha (Yakutia) (Shokin, Fedotov, Zhizhimov, 2015). The search for minerals requires the creation of a holistic information field by combining available tools, analytical methods, descriptions and geodata.

# Findings

The need for the use of GIS technologies in the search for minerals in the region in the process of creating a Unified infrastructure for the geology of the Republic of Sakha (Yakutia) has its own justification. This is the ability to use access to geological data via the Internet, ensuring the simplicity and speed of finding the necessary data through thematic queries, and visualizing the obtained geological data based on cartography using GIS technologies.

# Conclusion

Summarizing the content of the article, we can conclude that GIS technologies solve the problems of integrating operational data obtained from various sources, are an effective tool in the search for mineral deposits. Their use in combination with other information resources and platforms can link loosely coupled geological blocks of information.