

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Systems (2)

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USING GIS PROCESSING SOFTWARE'S FOR DETECTION CHANGES IN LARGE AREAS

Abstract

Abstract: The area covering a certain part of the Earth's surface is a place where human activity is in constant contact with nature. Along with natural elements such as terrain, land, water and vegetation, it includes settlements, road network, communication lines, canals, farm buildings, industrial and cultural objects and other artificial elements that are the product of human activity. Global technological development does not go unnoticed on the ground, surface and atmospheric cover, which in turn causes climate change. As a result, not only the infrastructural buildings created by man, but also the entire landscape structure of the area is constantly changing. Monitoring the changes, analyzing them and making predictions for the future is one of the most urgent issues of our time.

In the planning and implementation of socio-economic and scientific projects, it is important to take into account the changes in the wide area. Because even though the planning and practical activities cover the air space and sea surface, the main and decisive stages take place in the land. If detecting changes in the area selectively from the background of the terrain is one aspect of the problem, recognizing and classifying them according to their location is another. All of these processes that is detection, recognition, and classification must be done faster so that the decisions made take into account the current geographic conditions.

Currently, a range of Geographic Information System (GIS) software is used in military command centers equipped with modern technology to timely incorporate all changes in terrain and combat conditions into the current operational environment. In this case, in order to accelerate the process of data processing and analysis, the characteristics of GIS programs should be taken into account and their mutual use opportunities should be taken advantage of.

The article presents the possibilities of effective use of GIS programs for prompt detection of changes in large areas and mapping them.