DECRYPTION OF SPACE IMAGES BY USING GIS-TECHNOLOGIES

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Abstract. Decryption of satellite images required for subsequent use for practical purposes. Among the methods an automated classification possible to distinguish the algorithms, supervised classification algorithms and unsupervised classification. In the software of automated processing of aerospace images usually consists of several classification algorithms.

Keywords: GIS; decryption; object recognition; spatial resolution; aerospace images

Decryption necessary for subsequent use of space images for practical purposes, includes:

• recognition of objects;

• their reference to any type;

• measurement – determining the size, distance between objects, number of objects per unit area, etc.

The basis for the recognition of objects in images is their spectral reflectivity. It can vary even among objects of the same class, depending on the environmental condition of the objects, moisture, etc.

Methods of digital processing of images can be divided into two groups:

1) methods that provide brightness and geometric transformations of images used to facilitate and improve the reliability of visual decoding and map creation;

2) methods for automated object classification of images with use of advance information on the characteristics of the allocated classes.

Luminance the signs are basic, and often the only one. In the processing of multispectral signs they are most comfortable, as each point in the image receives a set of spectral features, which is convenient to operate.

Methods for decrypting, based on the construction and analysis of derived characteristics is quite simple to implement. The most widely characteristics used in the analysis of vegetation.

Among the methods of automated classification can be distinguished:

1) Algorithms, supervised classification (supervised classification)

In this classification transition rules from the indices of the spectral brightness classes of objects produce on the test, the reference site, and then automatically apply the rest of the image.

2) Algorithms for unsupervised classification (no training)

They assumed that the initial information about the natural differences between the objects recorded in the spectral brightness, sufficient for the separation of classes, and so you can do without standards.

In the software of automated processing of aerospace images usually consists of several classification algorithms. The use of a particular algorithm is determined by the presence of the initial information, the quality of the image, the problem to be solved and other causes.

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