

Combination of two methods to visualize multizonal data of remote sensing

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Combination of two methods to visualize multizonal data of remote sensing Sheremetyeva T.A., Filippov G.N., Malov A.M. In this paper we present a method to visualize multizonal data of remote sensing. This method allows to quickly obtain the synthesized images. The method is efficient for rapid interpretation of data of remote sensing and is easily adaptable to specific tasks. The synthesized images are presented in pseudo-colour. A multitude of visualization versions can be generated from the same data. The basic idea of the method consists in transforming each zonal image using the principle of similarity to a sample and visualization these transformed images in pseudo-colour. Comparison with the sample can be made both using each of attributes and the set of attributes. The measure of similarity of each pixel to the sample is determined using a space of attributes with its metric. The brightness value ranges of zonal images may be taken as such a set of attributes. A vector from the space of attributes is adopted as a sample. In particular, one can adopt as a sample the attributes vector of one or several pixels taken from the images to be processed. Each attribute or each set of attributes is examining separately and for them the images in grayscale is formed. The highest brightness level is assigned to the pixels that have the most resemblance to the sample. The brightness value of the other pixels is assigned according to their level of similarity to the sample. The choice of the sample depends on the purpose of the decoding. To visualize set of obtained images the way of presentation in pseudo-colour is used. Each attribute is assigned with colour. A final image is formed as a colour image (RGB). The final image could be generated for each sample, i.e. the number of samples corresponds to the number of samples. A multitude of visualization versions can be generated from the same data in real time. Therefore the user can examine the study object comparing it with various samples.