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SPACE MONITORING OF GROUND OBJECTS BY MULTITEMPORAL SATELLITE IMAGERY ON
THE SAME TERRITORY

Abstract

The results of various natural, anthropogenic and man-caused affecting the impact ecosystems determine the necessity of using of remote sensing data not only to detect the changes on the Earth surface area, but also to obtain the information about the nature and causes of these changes. Besides the importance of the resulting knowledge about the processes in ecosystems, the information is significant to serve as a basis for solving many practical problems, such as prevention and detection of mentioned impacts and evaluation of theirs consequences. That's why efficient detection of objects changes in remote sensing images is very important for many Earth observation applications. The system tools of space monitoring of ground objects is designed for end users of various areas of land management. The developed methods and technologies of monitoring system for detection of observable changes of natural ground objects are described. The structure of the software functions providing the interrelated decision of problems of automatic detection of monitoring ground objects changes on the multispectral remote sensing images is resulted. The basic positions, structural features and accepted decisions to solve the problems of Earth observation software application are considered. Remote sensing data of two satellites for different dates were used: Landsat ETM + (Minsk Region, Belarus, 28.5 m spatial resolution) and QuickBird (Brest Region, Belarus, 0.6 m spatial resolution).