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Satellite monitoring systems in forestry

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Abstract. Space technologies in Earth remote sensing are among the most relevant technologies for monitoring forestry. Difficulties of controlling tree felling and other activities by forestry employees constitute an objective problem which can only be solved by application of space monitoring instruments. The article shows that using the LandViewer Software would provide regional forestry a wealth of information needed for ongoing work and detection of violations. The considered examples demonstrate that space monitoring provides a more accurate determination of the size of forest blocks and the felling volume.

1. Introduction

The purpose of the forest utilization remote sensing is early detection and prediction of development of processes that have a negative impact on forests [1]. Data obtained from Earth remote sensing allow detecting violations of Forest law in specific uses of forests: timber harvesting; geological exploration of mineral deposits; construction and operation of artificial water bodies, hydraulic structures; construction, reconstruction and maintenance of power lines, communication lines, roads, pipelines and other linear objects [2]; wood processing [3].

Remote sensing in forest management is one of the key programs of the state forest inventory. To date, remote sensing is the only modern high-technology way to detect violations of Forestry law during forest utilization. Earth remote sensing data and results from their processing are practically used in the exercise of oversight functions and land use management [4].

The purpose of the research is to identify the capacity of the LandViewer system to observe the thinning. The objectives of the study are to mark current allotments, observe real-time logging through space images processing, determine the harvest areas and to develop recommendations on the use of LandViewer.



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