

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
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PERSPECTIVES OF SPACE AIS DATA UTILIZATION FOR DIFFERENT CUSTOMERS IN RUSSIA

Abstract

Resurs-P 2 satellite with AIS experimental receiver was launched on the 26th of December 2014 from Baikonur cosmodrome. The main goals of this project are the technological "proof of concept" of this type of the AIS payload and investigation of the interaction aspects with the AIS data potential customers. The major flight test of the AIS payload has been successfully finished onboard "Resurs-P" 2 satellite. In the frameworks of the flight test program several reliability tests of the AIS receiver were performed and some features of AIS functionality over different sea areas were revealed. Successful payload reliability confirmation allows starting the next phase of the project realization – to investigate the application of space AIS data in the interest of different consumers. Active interest in using AIS information is expressed by several Russian agencies, such as: Ministry of Transport of Russian Federation and Russian Federal Fisheries Agency. It is assumed that the space AIS information in the region of interest for customers will be directly integrated into industry's monitoring bases of moving objects. The information exchange procedure with other AIS data potential customers, including commercial customers is supposed to be worked on the next stage of the project. Thus, the basis of the system creation for AIS signals registration on board of LEO satellites is appearing. It is expected to create the next generation on board complex which allows processing received AIS signal on board the satellite and it will consist of both the command uplink and data downlink for AIS information near-real-time distribution. Technological demonstrator of proposed technology - an experimental nanosatellite "KosmoAIS" - is expected to be launched at the end of 2015 or at the beginning of 2016. New-generation unified AIS receiver is planned to be placed on board of perspective LEO satellites, which are expected to be launched in the period from 2017 to 2025. Space constellation of this system will consist at least 4 satellites on the Earth's orbit, which will allow achieving the major requirements of AIS data main customers. Several demonstration projects for AIS data utilizing directly in Ministry of Transport of Russian Federation and Russian Federal Fisheries Agency industry's monitoring systems will be started the next 3 years, according to the plans of the constellation deployment.