

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Mobile Satellite Communications and Navigation Technology (4)

Author: Dr. Sergey Revnivikh
TSNIIMASH, Russian Federation, oleynikeg@yandex.ru

Mrs. Ekaterina Oleynik
TSNIIMASH, Russian Federation, ekaterina.oleynik@mcc.rsa.ru

GLONASS STATUS, PERFORMANCE AND MODERNIZATION EFFORTS

Abstract

The Presentation comprises the relevant information on current status, performance and modernization program of GLONASS system. The information on current status includes the data on GLONASS space segment featuring constellation orbital parameters and core “Glonass-M” navigation satellite performance characteristics. Moreover, data on orbital constellation status for the date of presentation is provided including information on the amount of healthy satellites, spares, satellites on maintenance and satellites in commissioning phase. Part of the Presentation deals with the ground control segment and its modernization plans. The Presentation also gives information on current and planned GLONASS signals and information on the system performance in terms of navigation availability and accuracy. Currently the GLONASS orbital constellation configuration provides for continuous navigation service over the territory of Russian Federation and in northern latitudes. However the deployment of the full 24 satellite constellation will allow ensuring the continuous global navigation service of worldwide users by the end of this year and the modernization of the ground control segment will allow achieving the positioning accuracy comparable to that of GPS. In this respect the Presentation covers the system modernization and strategic development efforts which apart from ground control modernization include launches of next generation spacecraft and CDMA signal implementation. The Presentation also describes the basic principles behind the Russian Federation government policy in the field of space-based positioning, navigation and timing as well as the key aspects and achievements of international cooperation activities.