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Author: Dr. Stefano Ferretti
European Space Policy Institute (ESPI), Austria

Mr. Hermann Ludwig Moeller
ESA, France
Mr. Jean-Jacques Tortora
European Space Policy Institute (ESPI), Austria
Magali Vaissiere
European Space Agency (ESA), France

SPACE AND SATCOM FOR 5G EUROPEAN TRANSPORT AND CONNECTED MOBILITY

Abstract

Profound change lies ahead for the transport sector, both in Europe and in other parts of the world. A wave of technological innovation and disruptive business models has led to a growing demand for new mobility services. Transportation systems develop towards connected mobility. The choice of communication technology will depend on the location, the type of service and cost efficiency. The user should be unaware of the communication technology used. 5G and satellite communication should be integrated as future technologies into the hybrid communication mix.

The Space Strategy for Europe underlines the role satellites can play to provide cost-effective solutions to improve connectivity for Europe's digital society and economy as part of the future 5G networks, where numerous applications and services using space data will also require uninterrupted connectivity. It encourages the uptake of space solutions by integrating space into future strategies addressing, for example, autonomous and connected cars, railways, aviation and unmanned aerial vehicles (drones).

The paper will provide the major findings and recommendations from the June 2017 ESPI-ESA Conference on "Space and Satellite Communications in the 5G era". It will identify the cooperative frameworks to encourage the interworking of satellite and terrestrial technologies in support to the automotive and transport sector. It will provide the perspective of the respective business and institutional communities and the roles and approaches of the diverse groups of stakeholders involved in the development of satellite based 5G networks and of future transportation vehicles. It will focus on markets where satellite communications and other space applications provide strong value-add and complementarity to terrestrial 5G solutions, in automotive, aeronautics, maritime, trains and other domains.

The paper will discuss the identified user and market needs and assess the possible solutions and the way they may be implemented, including possible public-private partnership models.