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SPACE BIG DATA IN THE SERVICE OF THE SPACE2030 AGENDA

Abstract

The rapid technological advancement of the space sector paired with the growing supply of and demand for space-enabled information have laid the ground for the realization of the benefits from space data in today's information-driven society. Modern telecommunication technology, high-throughput satellites, and constellations of high-accuracy remote sensing and positioning satellites, which are able to receive, store, and transmit large amounts of data, have resulted to the emergence of space big data. The term is used to describe large amounts of data collected, stored, and transmitted by means of space technology. The wide variety of available data and the predictive capabilities from the combination of space and non-space data create the potential for well-informed decisions and accustomed services. They also offer considerable social and economic benefits by establishing easy access to an unprecedented amount of information that can be used to address various needs.

This paper will explore the ways in which space big data applications can support the objectives of the Space2030 Agenda related to the promotion of the role of space technology for sustainable development and for improving the quality of life. To this end, it will focus on the potential of space big data for analytic services, automation, and prediction. The paper will also address ways in which the Space2030 Agenda objectives regarding accessibility and cooperation can be realized through the sharing of space big data. For that, it will examine existing data policies of countries and international organisations, as well as the differences between open and commercial data. The purpose of this paper is to underline the integration of space technology into everyday life and its convergence with other information technologies.