

IAF SPACE OPERATIONS SYMPOSIUM (B6)
Ground Operations - Systems and Solutions (1)

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MARKET PERSPECTIVES OF GROUND SEGMENT AS A SERVICE

Abstract

The emergence of NewSpace has led to a surge in new satellite operators entering the market. In order to offer the best service to their customers, these operators need to communicate with their satellites, relying on an effective ground segment. The latter requires specific expertise and infrastructure, as well as significant resources – both human and financial. Yet, these new satellite operators do not always have the experience, the capital or the willingness to invest in their own ground segment – risking a financial overkill for their project. Satellite operators are thus looking for a ground segment sold “as a service”, to flexibly and efficiently communicate with their satellite without having to invest upfront in a wholly dedicated ground segment or having to deal with licensing issues. However, until recently, there was no specific offer on the market adapted to answer these new needs. This mismatch between supply and demand created a gap in the ground segment market, which gave rise to a new type of offer: Ground Segment as a Service (GSaaS). GSaaS abstracts ground segment infrastructure similarly to Infrastructure as a Service (IaaS) and cloud computing. Indeed, GSaaS mutualises ground segment infrastructure, relying on a network of ground stations which capacity is shared among different satellite operators. Thus, GSaaS acts as a lever that enables satellite operators to launch their business faster and to focus on their core business, which is, in essence, the provision of data. Acknowledging these advantages, new users, including public entities, have started expressing interest in utilising this service. The paper provides a comprehensive understanding of GSaaS, its current market and its potential evolution in the future. The paper first aims to present the context in which GSaaS was born. It then provides a definition of GSaaS, together with a state-of-play analysis of the current market, assessing both demand and supply. Finally, the paper offers perspectives on the market evolution. To do so, it explores the market drivers that could impact the GSaaS market in the future and assesses their potential impact.