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OHB DIGITAL CONNECT: STEP INTO THE FUTURE OF EFFICIENT GROUND SOLUTIONS

Abstract

The small sat revolution combined with reduced launcher costs have enabled new applications for space-based infrastructure. Hundreds of missions are proposed for the next decade. Most prominent are upcoming Earth Observation (EO) and SATCOM mega-constellations, which are pushing the utilisation of space-based infrastructure for the benefit of humanity to a new dimension. But this development comes with a price:

1. The data created in space or transmitted via space is only useful here on Earth. Therefore first of all the capacity and capability is needed to match the increasing demand on data links. The EO satellites already produce PetaByte of data today. This volume will continue to grow exponentially. Hence, the development of new ways of processing and distributing data is the challenge. Finally, even space can become crowded. Handling this enormous number of spacecraft in a safe way requires the reinvention of monitoring and commanding capabilities. To do it efficiently a new level of autonomy utilizing intelligent algorithms is essential.

To meet those challenges, the new OHB Company "Digital Connect" (OHB DC) was founded. OHB is well known as one of the three European Large System Integrators e.g. building the European Galileo Satellites and MeteoSat Third Generation. Furthermore, OHB takes a major role in implementing the Sentinel Satellites for the Copernicus Program, which is the Earth Observation Program of the ESA. Less known are OHB's capabilities on the ground, where it has a remarkable heritage. OHB Digital Connect (OHB DC) is composed of several exiting companies and departments within the OHB Group, combining their experience in Ground Segment Engineering, Implementation of Ground Segment Components (e.g. Operations Centre, Data Center, Ground Stations), Space System Operations and EO-data Processing. From this starting position, OHB DC is heading for new opportunities to develop customer services downstream the value chain of space systems. In this paper, we present how we combine all these expertise to be able to provide upstream capabilities for spacecraft, launcher and ground segment manufacturing and downstream service of operating space systems, downlinking and processing space born data out of one hand. This "one stop shop" strategy ensures a maximum efficiency from mission design to customer service. This new efficiency on the ground will be the third component contributing to the utilization of space systems for the benefit of humanity.