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KLEO CONNECT'S FUTURE SATELLITE-BASED COMMUNICATION SERVICES FOR GLOBAL
POINT-TO-POINT CONNECTIVITY

Abstract

KLEO Connect based in Munich and Berlin, Germany and founded in 2017 is a joint venture with strategic investors to achieve the goal of designing, implementing and operating a LEO satellite communication constellation. This constellation will enable the future of data applications using a global network that can provide broadband, real-time connectivity anywhere in the world. The 300 satellites will cover the entire globe and the laser mesh-network provides high through-put up to 10Gbps per satellite at latencies ≤ 150 ms anywhere on the planet with provision of full end-to-end data sovereignty to all customers, wherever they are.

The constellation will operate in a full symmetrical distribution across 12 planes of 89 inclination at an altitude of 1050 km. Multi-beam Ka-Band connections will be used for data downlinks from the satellites to various smart user terminals on ground which uses also Ka-band technology for the uplink connection. An optical network of intersatellite links will provide highly reliable and dynamic data connections creating a global communication mesh across the entire constellation.

Two first test satellites have been launched end of 2019 which are currently used for several in-orbit and space-to-ground test campaigns to proof the concept and mitigate technical, regulatory and commercial risks.

The paper will present in more detail the technical characteristics of the planned constellation and operational system as well as details of the test campaign using the first demonstration satellites.