

Thales Alenia Space signs phase B contract with LeoSat to develop high-throughput, low-orbit satellite constellation

Paris, September 14th, 2016 - Thales Alenia Space and LeoSat Enterprises, announced today the signature of the phase B contract for the development of a Low Earth Orbit (LEO) satellite constellation. It will offer very-high-speed broadband, low latency and secure global connectivity, setting a new standard in satellite network performance.

Following the initial phase resulting in the preliminary definition of the LeoSat constellation, which validated the technical feasibility of the system and its compatibility with other Ka-band services, the current phase B concerns the detailed definition of the overall system architecture and performance specifications, including both the ground and space segments. It will also provide the framework needed to set up an optimized organization for production and deployment.

The LeoSat constellation will comprise from 78 to 108 high-power Ka-band satellites in low Earth orbit, providing global service for large corporations and government agencies. Through the use of tracking spot beams and specific anti-interference techniques, the constellation is designed to prevent interference with geostationary satellite orbiting systems (GSO) and non-geostationary satellite orbiting systems operating in the same frequency band (NGSO). The system is also designed to support and co-exist with anticipated terrestrial use of Ka frequencies.

LeoSat satellites will feature innovative technologies and for the first time, bring together a range of tried and tested systems, including optical inter-satellite links, gigabit class, onboard processors, flexible steerable antennas, and RF (Radio-Frequency) over PCB (Printed Circuit Boards). They will use the enhanced EliteBus™ platform, offering higher payload power and mass while optimizing launch cost and schedule.

LeoSat will rely on Thales Alenia Space's proven industrial organization and capability developed in the frame of previous constellations such as O3b and Iridium Next, delivering a cumulated amount of 125 LEO/MEO satellites. For such constellations, it is key to master critical technologies and mass production. LeoSat will count on Thales Alenia Space's innovative industrial approach based on cobotics (collaborative robotics) to increase productivity of Assembly Integration & Tests sequences. LeoSat will also benefit from efficient and safe use of COTS* for high integration and mass production technologies as well as for cost effective manufacturing and test to reach the optimum trade-off between performance, reliability and investment.

Thales Alenia Space, which recently acquired RUAG's opto-electronics business, now has the ability to provide an in-house solution for the constellation's critical optical inter-satellite link technology, which is key to overall system performance. RUAG brings to the table more than 20 years of experience in the engineering and production of optical communications terminals for spacecraft. RUAG's technical expertise in this specific area will help assure the LeoSat constellation will have the best and most vetted solution for their inter-satellite links. The final configuration and design will be completed during the upcoming Phase B.

"The phase B contract reflects both the quality of our design work and excellent teamwork between Thales Alenia Space and LeoSat throughout the feasibility phase," said Jean-Loïc Galle, CEO of Thales Alenia Space. "I am very proud to continue our work on this exciting and challenging contract, and fully meet LeoSat's expectations. We will be working together to incorporate innovative solutions, based on our proven expertise and long experience in the design, development and production of satellite system for LEO constellations. This latest phase will finalize the manufacturing plan, paving the way for the production and deployment of the entire constellation."

Mark Rigolle, CEO of LeoSat Enterprises, added: "We are thrilled to be moving ahead with this important milestone for LeoSat, building a constellation that will provide the first commercially available, enterprise grade, extremely high speed and secure data service worldwide. We have already signed our first customer contract which is a very strong endorsement of our unique solution offering the highest performance of any existing or planned system, including fiber. We look forward to working on the next phase of our development with Thales Alenia Space, a company with unmatched expertise in designing and manufacturing LEO constellations."

***COTS: Commercial Off The Shelf components**

About Thales Alenia Space

Thales Alenia Space, a joint venture between Thales (67%) and Leonardo-Finmeccanica (33%), is a key European player in space telecommunications, navigation, Earth observation, exploration and orbital infrastructures. Thales Alenia Space and Telespazio form the two parent companies' "Space Alliance", which offers a complete range of services and solutions. Because of its unrivaled expertise in dual (civil/military) missions, constellations, flexible payloads, altimetry, meteorology and high-resolution optical and radar instruments, Thales Alenia Space is the natural partner to countries that want to expand their space program. The company posted consolidated revenues in excess of 2 billion euros in 2014, and has 7,500 employees in eight countries. www.thalesaleniaspace.com

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About LeoSat Enterprises

LeoSat Enterprises was established in 2013 to leverage the latest innovations in satellite communications technologies to develop and launch a new low-earth-orbit satellite constellation which will provide the first commercially available, business grade, extremely high-speed and secure data service worldwide. With up to 108 low-earth-orbit communications satellites in the constellation LeoSat is the first company to have all of the High Throughput Satellites (HTS) in the constellation connected together in networked HTS satellites and to select established sectors on the planet. Based in Washington DC, LeoSat is currently working with Thales Alenia Space for the low-earth-orbit constellation of between 78 and 108 Ka-band communications satellites. Once operational, the constellation will provide high-speed, low-latency and highly secure communications and bandwidth for business operations in the telecom backhaul, Energy, Government, Maritime and international business markets. Launch of the constellation is expected in 2018 or 2019. www.leosat.com

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