Telespazio UK to lead new quality control service for European Space Agency mission data

Telespazio UK, a subsidiary of Telespazio - a joint venture between Leonardo (67%) and Thales (33%) -, has been awarded a €25M framework service contract by the European Space Agency (ESA). The contract will see the company managing quality control operations and undertaking research and development into cutting-edge calibration and validation techniques used to ratify the vast quantities of mission data returned from Earth Observation (EO) satellites.

Funded by the ESA and delivered over the next 5 years, the contract will see Telespazio UK working with a pan-European team of industrial and scientific partners including Serco UK, the National Physical Laboratory, and the Finnish Meteorological Institute.

The service will be delivered on and offsite from the ESA’s ESRIN site in Frascati, Italy, using a distributed service model under a Service Level Agreement. A huge range of satellite missions are included, spanning optical, radar, atmospheric and altimetry domains including:

- Ongoing ESA missions such as CryoSat-2, SMOS and Proba-V;
- Historic ESA missions such as Envisat (AATSR, ASAR, MERIS, SCIAMACHY, GOMOS, RA-2/MWR and MIPAS), ERS 1/2 (ATSR-1/2, SAR, RA/MWR, GOME) and GOCE where Telespazio’s team will analyse the quality of the latest reprocessed data sets;
- 3rd party missions where the ESA has agreed with another nation to make their data available for study. Such datasets include Landsat 1-7, SeaWiFS, AVHRR, Nimbus-7, Seasat (USA), ALOS, MOS, JERS (Japan), ODIN (Sweden) and OceanSat-2 (India).

Notably, Telespazio UK has introduced Artificial Intelligence (AI) into the quality control process, an important evolution which will ensure data quality remains high, even as the volume of data continues to increase.

The service will also have a strong element of metrology research, with the National Physical Laboratory leading development work on inter-satellite calibration coefficients that can draw on data from multiple missions to understand system-level changes on Earth, including looking for signs of climate change.

Marco Folino, CEO of Telespazio UK said: "We are delighted to continue our service delivery relationship with the ESA. We’re proud to play a core role in ensuring that the Earth Observation data delivery to the global community is of a high quality.”

Beth Greenaway, Head of Earth Observation and Climate at the UK Space Agency said: “The UK is investing a record amount in ESA space programmes and has a world-leading satellite Earth Observation capability, which is vital to help tackle climate change and other grand
challenges. Telespazio UK’s ability to innovate and include AI in satellite data quality control shows how this fast-growing UK sector is adapting and leading the way in the use of new technologies.”

Philippe Goryl, Head of the Sensor Performance, Products and Algorithm department at ESRIN said: “Data Quality is at the heart of our Earth Observation programme. The ESA is committed to providing high quality data that is recognised as such worldwide. In this context, Telespazio UK is a key partner on which we can count to ensure that ESA data remains high quality and to develop and apply new and innovative methods when the challenge evolves. For this new service, Telespazio UK is managing a large team and benefitting from Europe’s leading experts in the field, ensuring quality EO data can be used to study climate science and for a growing number of operational applications.”

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