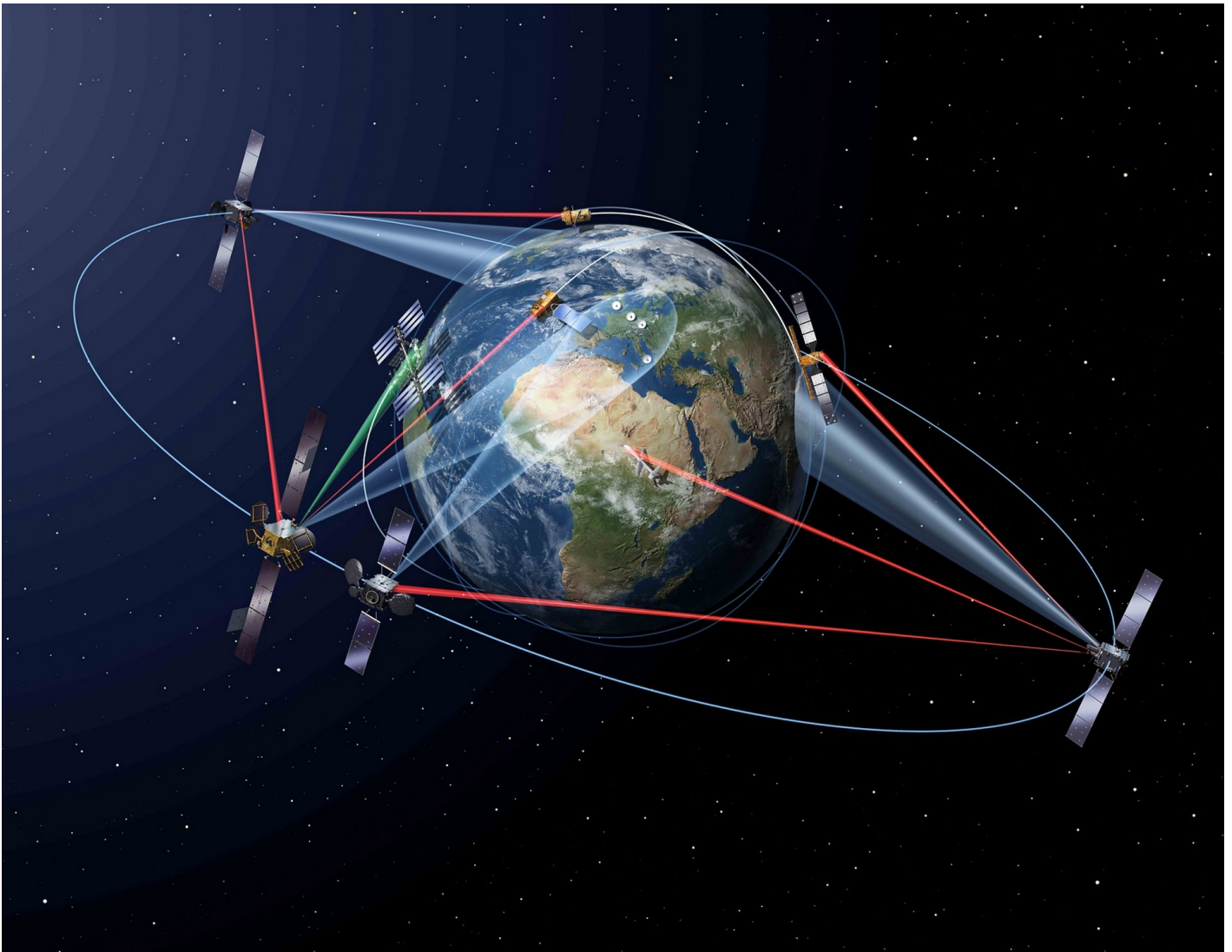


# SPACEDATAHIGHWAY: 10,000 SUCCESSFUL LASER CONNECTIONS - RELIABILITY OF 99.8 PER CENT

News / Manufacturer



The SpaceDataHighway system – the world’s first ‘optical fibre in the sky’ based on cutting-edge laser technology – has achieved 10,000 successful laser connections. The reliability rate has reached 99.8 percent, and during the first one and a half years of routine operations these successful connections have downloaded more than 500 terabytes of data.

The system's satellites are designed to lock on to low-orbiting satellites via laser and collect their data as they travel in low Earth orbit scanning the Earth. From its position in geostationary orbit, the SpaceDataHighway acts as a relay, transmitting the large quantities of data acquired by these observation satellites down to Earth in near-real time at a speed of 1.8 Gbit/s, instead of storing the data on board until the satellites pass over their own ground station.

The establishment of the laser connections is controlled by the SpaceDataHighway's Mission Operation Centre which operates 24 hours a day, seven days a week at Airbus premises near Munich. Operators receive transmission requests from customers, programme the space and ground segment and monitor the performance of communications.

“While 2017 has been a year of ramp-up for the system, we have now reached more than 1,000 connections per month in 2018 with a very high level of reliability,” said Hughes Boulnois, Head of the SpaceDataHighway programme at Airbus Defence and Space. “The total amount of data transferred is equivalent to around 100 million MP3 music files, but the transmission capacity of the SpaceDataHighway goes far beyond that.”

Each day, the SpaceDataHighway is capable to relay up to 40 terabytes of data acquired by observation satellites, Unmanned Aerial Vehicles or aircraft, to Earth. It is currently used by the European Union's Copernicus programme, but its capacities could be used by many more customers.

In 2019, the system will also relay information from the Columbus module of the International Space Station (ISS). From 2020 the Pleiades Neo satellites will begin to use the SpaceDataHighway.

The SpaceDataHighway is a public-private partnership between the European Space Agency and Airbus, which today owns and operates the system, with the laser communication terminals developed by Tesat-Spacecom and the DLR German Space Administration. EDRS-A, the first SpaceDataHighway relay satellite launched in 2016, offers coverage from the American East Coast to India. A second satellite, EDRS-C, will be launched in 2019. It will double the system's capacity and extend the coverage and redundancy of the system. Airbus intends to expand the SpaceDataHighway with a third node, ERDS-D, to be positioned over the Asia-Pacific region.

## **About Airbus**

Airbus is a global leader in aeronautics, space and related services. In 2017 it generated revenues of € 59 billion restated for IFRS 15 and employed a workforce of around 129,000. Airbus offers the most comprehensive range of passenger airliners from 100 to more than 600 seats. Airbus is also a European leader providing tanker, combat, transport and mission aircraft, as well as one of the world's leading space companies. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions worldwide.

18 MAY 2018

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