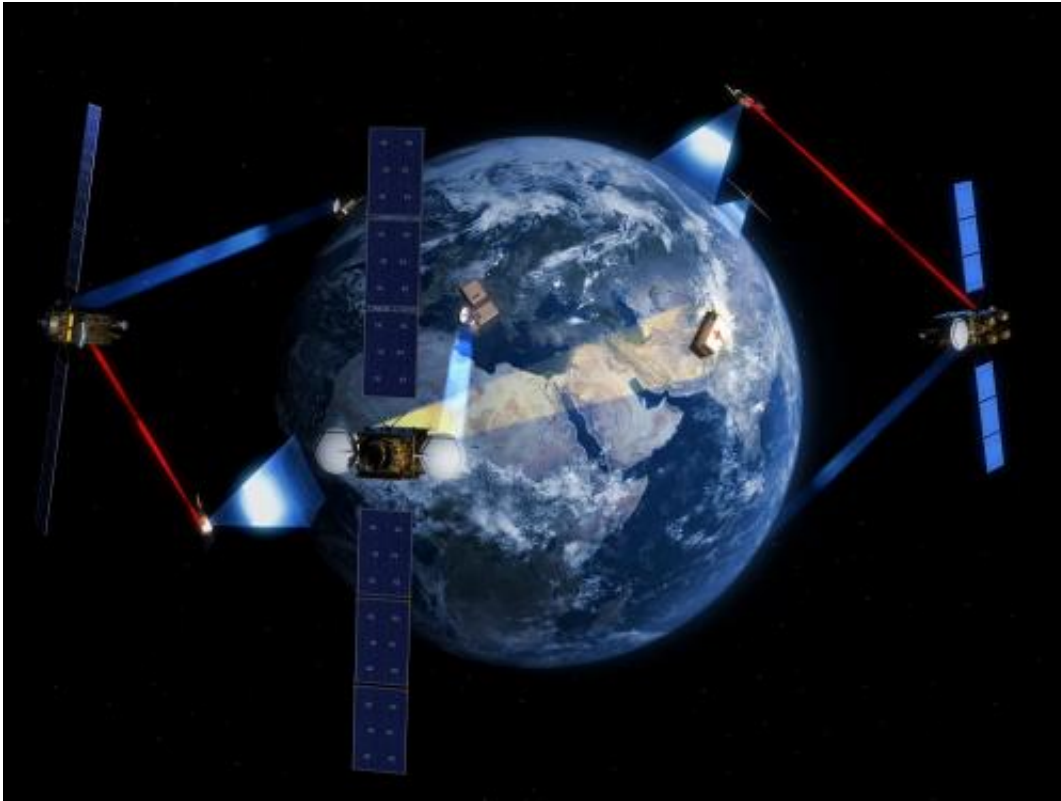


EDRS space network ready to go ahead

November 26 2012



Artist impression of European Data Relay Satellite (EDRS) system. Credit: ESA

(Phys.org)—The design of Europe's data relay satellite system – EDRS – has been completed and approved. This marks the moment when it moves ahead with a green light from its first customer, the Global Monitoring for Environment and Security initiative from the European Union (GMES).

EDRS will provide a telecommunications network that is fast, reliable and seamless, making real-time information from satellites available on demand.

EDRS will be the first commercially operated data relay system to deliver services to the Earth observation community.

It is being built through a Public–Private Partnership (PPP) between ESA and Astrium Services, using [payloads](#) carried by two satellites in geostationary [orbit](#), hovering 36 000 km above the Equator, where their speed matches Earth's rotation.

Data transmitted from satellites in lower orbits to either of these EDRS payloads can then be relayed to the ground.

The payload includes a laser terminal developed by TESAT of Germany to transmit up to 1.8 [gigabits](#) per second over distances in excess of 40 000 km, between the lower satellites and EDRS in geostationary orbit.

A design review board of senior members from ESA, Astrium and the DLR German Aerospace Center approved the entire system design: from the satellites to the support that will be required from the ground.

The industrial organisation is fully in place with all subcontracts negotiated and ESA's partner Astrium Services ready to begin production.

"EDRS is a fantastic breakthrough for Europe, from the innovative laser communication terminal technology, which is the heart of EDRS, to the provision of operational services by 2014 through a PPP that combines the best from European space companies with the national and European space institutions," says Magali Vaissiere, director of ESA's Telecommunications and Integrated Applications Directorate.

The first of the two EDRS payloads will be carried on the Eutelsat-EB9B satellite, starting operation in 2014, built by [Astrium](#) and positioned at 9°E over the Equator.

The second satellite, planned for launch in 2016, will carry the second EDRS payload as well as the Hylas-3 payload from the UK's Avanti Communications. This [satellite](#) will be built by Germany's OHB using the SmallGEO platform, currently under development by OHB under ESA contract.

Provided by European Space Agency

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