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Germany and Switzerland affirm their leading role in satellite communications

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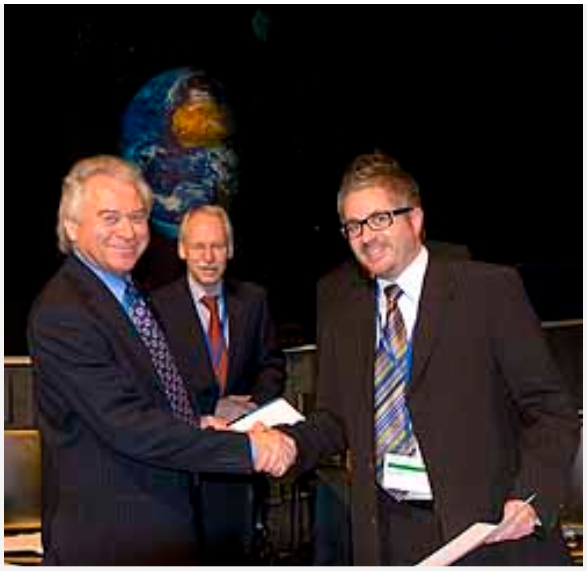

Dr Ludwig Baumgarten and Daniel Fürst

Germany and Switzerland wish to further extend their leading position in the development of satellite-based laser communications in the coming years. To this end, the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) and the Swiss State Secretariat for Education and Research (SER) signed a memorandum of understanding during the ESA Ministerial Council conference in The Hague on 25-26 November 2008.

Professor Johann-Dietrich Wörner, Chairman of the DLR Executive Board, commented: "We aim to build up to four laser communication terminals (LCT) in close collaboration over the next few years. The plan is to use these devices for the European Earth Observation programme Global Monitoring for Environment and Security (GMES) and the projected European Data Relay Satellite (EDRS)."

The memorandum was signed by Dr Ludwig Baumgarten, the DLR Executive Board member responsible for the Space Agency (Raumfahrt-Agentur), and Daniel Fürst, Assistant Director at SER. The two ESA Member States have thus begun implementing the decisions of the ESA Ministerial Council conference right after they were taken.

DLR agrees to provide funding for one LCT to start with. Switzerland contributes about 25 percent to this project. The memorandum also provides for the construction of three additional devices as an option. The total budget involved is about 60 million euro. TESAT Spacecom GmbH in Backnang will be responsible for building the terminals, in close collaboration with Oerlikon Space AG in Zürich.

LCTs transmit large amounts of data via a precisely aligned laser beam. In 2008, they were successfully tested under realistic conditions for the first time. LCTs enable data transfer rates between satellites of 5.6 gigabit per second. The higher transfer rates are made possible by the substantially higher frequency of the laser light, allowing more information to be transmitted per unit of time. This means that this method of data transfer is 20 times faster than the microwave technology in common use today.

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