



Small Satellites Systems and Services – The 4S Symposium Abstract Submission (Deadline 8.1.2008)

Proposed topic for the paper

Small Satellite Missions

Title of the paper

The new DLR Standard Satellite Bus series (SSB)

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Summary of the paper

As defined in DLR-Programmplan 2007, the German Aerospace Center (DLR) aims to develop and operate a DLR-owned "Standard Satellite Bus" (SSB) suitable for many different types of missions and applications. SSB aims to provide independent and fast access to space for DLR's research institutes.

A strategic objective is to establish within DLR the capabilities and facilities necessary for satellite development and satellite operation. The program is based on the BIRD satellite bus (Bi-Spectral InfraRed Detection), which was launched in October 2001 and today is in its final phase of operation. It is envisaged to make extensive use of both the expertise gained in BIRD's development and operation and DLR's *Technologieerprobungsträger TET*. Both spacecraft belong to what within DLR is referred to as the "compact class" describing a satellite of approximately 100kg overall mass and dimensions, which allow piggy-back launches.

DLR's Institute of Space Systems (RY) was assigned to analyse and evaluate space systems with respect to their technological, economic and social relevance and to develop concepts for innovative space missions with high national and international visibility. As part of this strategy a dedicated project named "*Projekt Kompaktsatellit*" (RY-KS) was initiated within the Institute of Space Systems for the development and operation of the desired DLR's standard satellite bus.

The *Kompaktsatellit* project aims to develop a "Standard Satellite Bus" called SSB which shall be able to carry many different missions in the BIRD/TET compact satellite class defined above. Missions within this project will be named by the payload's name or acronym followed by the bus' acronym: <Payload-Name>/SSB.



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