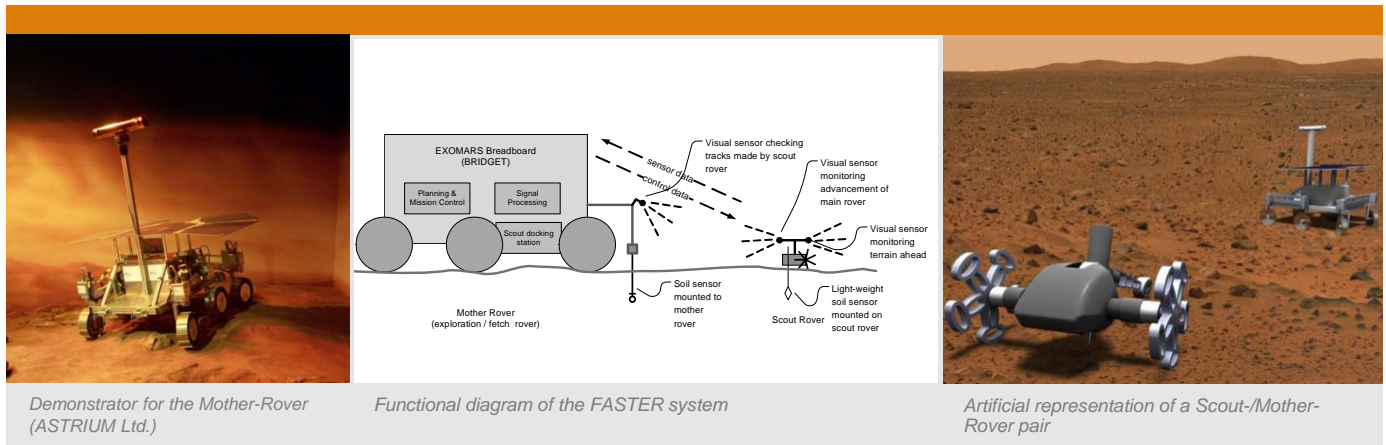


FASTER

Forward Acquisition of Soil and Terrain for Exploration Rover



Helping exploration rovers travel safer and faster over planetary surfaces

The goal of the project FASTER is to address three key technology developments for the efficient and secure exploration of planetary surfaces:

- methods for anticipatory characterization of surface properties
- innovative drive systems for a Scout Rover
- cooperative application of a Scout- and Mother-Rover.

Within the project FASTER, methods and instruments for determining planetary surfaces, on which the robotic vehicles have to maneuver, will be developed. This is for detecting potential hazards (e.g. loose sand) before passing.

Concepts will be developed and implemented, which can minimize the risk of self-inflicted, critical situations.

The project FASTER will proof the feasibility and performance of the efficient usage of at least one Mother- and Scout-Rover pair combination.

A preceding Scout-Rover will be equipped with sensor technologies to acquire soil and terrain information. Based on this information, a risk model can be established, which allows an indication of potential hazards for the following Mother-Rover.

The reduction of locomotion and traverse risk enables the mission-planners to configure a safer exploration of planetary surfaces.

The results of the project FASTER will ensure new levels of autonomous operations by significantly reducing the greatest uncertain factor – namely properties of the surface material on which the Rover must operate. This will lead to increase operational efficiency and, when coupled with the extended state of data, achieving a higher scientific return per capital investment for each mission.

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Partners:



Sponsors:



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