



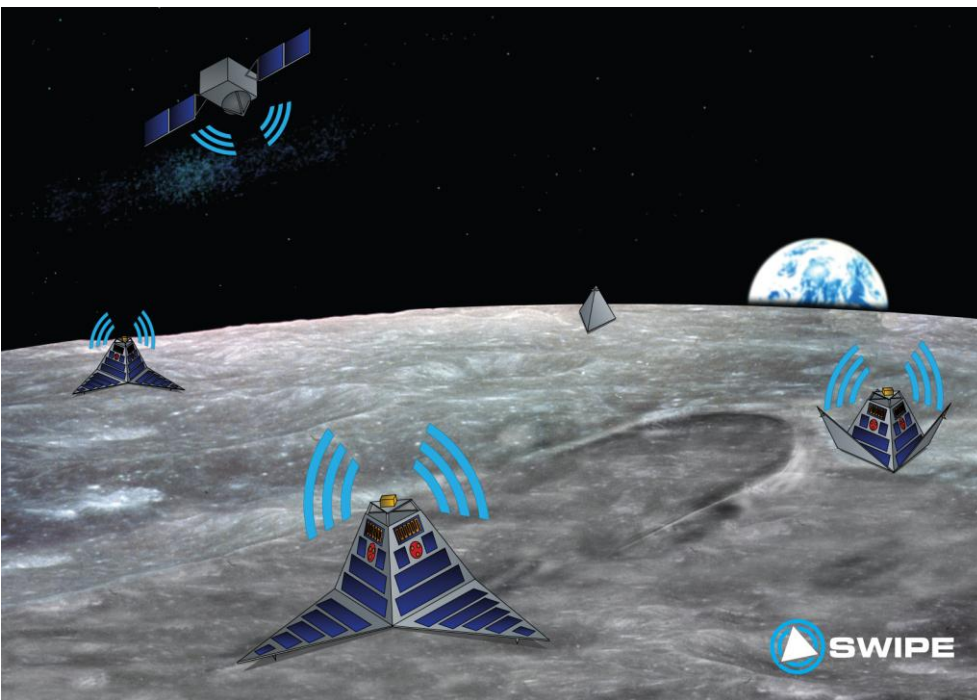
## Space Wireless sensor networks for Planetary Exploration

THEME: SPA.2012.3.1-01 - Bringing terrestrial SME research into the space domain

In order to prepare for manned missions to other planets, it is necessary to monitor permanently the surface environment and have a clear notion of its conditions.

SWIPE intends to bring hybrid satellite-*ad hoc* networks to space.

Hundreds or thousands of small wireless sensors could be dropped from a satellite orbiting the planet onto the surface to assure a uniform and sufficient coverage. These autonomous sensors would then create their own *ad hoc* network while some of them, equipped with satellite communication capabilities, would establish a link between the WSN and the satellite. Data gathered from the sensors would be processed and sent to the satellite and later to Earth.



The main goal of the SWIPE project is to design and develop sensor node prototypes. The whole system will be integrated and evaluated in laboratory and in field tests on a planetary surface analogues. An extensive research on novel multi-sensor data processing and data fusion techniques will also be carried out.

### SWIPE Consortium

Coordinator:

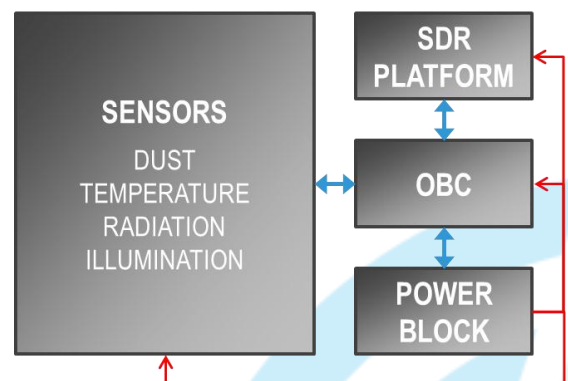
(PT)

(ES)

(FR)

(UK)

CONSORTIUM FOR RESEARCH IN AUTOMATION AND TELECOMMUNICATIONS (IT)



High-level SWIPE node diagram.

### Contacts

Project coordinator: André OLIVEIRA  
email: [andre.oliveira@tekever.com](mailto:andre.oliveira@tekever.com)  
Project website: <http://swipe.tekever.com/>