

OSiS - Open control with integrated sensor cluster for movement and positioning tasks for the mobility sector

Project management: Prof. Dr.-Ing. Rolf Roskam

Summary: In many areas of the mobility sector, the high-precision detection of movement and vehicle position is important. GPS signals are often used to capture this information, however such signals do not have the required accuracy. Inertial sensors are therefore also used. The different sensors are used in conjunction with a signal processor, forming a "sensor cluster". The processing of sensor signals via the signal processor is performed using complex fusion algorithms which are designed for defined applications, and which the user cannot modify for other application areas, or can only do so to a limited extent. The evaluation of the filtered sensor signals is carried out in a separate control system, although the signal processors often have enough free computing power remaining to undertake the control tasks. The outcome of this project should give users the opportunity to freely configure fusion algorithms and also to integrate additional control functions in the sensor cluster. Particularly in agriculture and in the maritime sector, there are numerous areas of application that would benefit from controls with an integrated sensor cluster. For this reason, the availability of such would lead to numerous innovations.

Funding: State-level funding European Regional Development Fund

Duration: 2017 – 2020

Funding amount: 208.793 €

Organisational unit: Faculty of Mechanical Engineering,

Research areas: Intelligent Systems for Energy and Mobility



EUROPÄISCHE UNION
Europäischer Fonds für
regionale Entwicklung



Salzgitter

Suderburg

Wolfenbüttel

Wolfsburg