



Cooperative infield transporter and combine

Cooperative threshing with several machines

Automatic bin transfer FM-X autonom

## Automate the working processes in the intralogistics and agriculture areas

Many industries have to continuously increase their productivity due to competitive environments. The dependencies within the supply chains thus become stronger and the participants are more interconnected with each other. Increasing the efficiency through machines provides only limited improvement to overall productivity. Of greater importance is the implementation of intelligent management of the supply chain which takes into account the specific capabilities of the machines and their mobility, especially in dynamic environments. Business process automation and robotization are often considered as to be one and the same because robots are not only technological solutions but are deeply engaged in the process organization.

**marion** focuses on the motion and process planning for mobile machines and groups of machines. A partial result is a planning system that dynamically takes into account the present situation in its generated plan. This includes recognizing the necessity for re-planning and automatically generating such a plan. Appropriate processes should be carried out automatically by the system, while other processes are presented to the operator in the context-specific information to assist operator decisions. The automation will be realized through intelligent assistant systems that perform the processes autonomously and support the people involved in those processes.

The modelling of the working process and the realizations of its functionalities in logistic and agriculture areas will be conducted in the subproject "Modelling and architecture for autonomous systems" (Atos). In addition, this subproject is responsible for the IT architecture and business models for later recovery. The planning system will be developed in the subproject "Automated dynamic planning system for transport logistic and working processes" (DFKI). The implementations will be carried out within two application areas; intralogistic transport systems in the subproject "Intralogistic automated load and unload from trailer train" (STILL) and agriculture in the subproject "Infield-transport logistic autonomous agricultural machines" (CLAAS).

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