



Newsletter – “Intelligent Robots for Handling of Flexible Objects”

This quarterly newsletter informs on the results and other activities within the INTERREG 4 A project “Intelligent Robots for Handling of Flexible Objects” (IRFO).

The project across the Danish-German border is co-financed by the INTERREG 4 A-program Syddanmark-Schleswig-K.E.R.N. funded by The European Union’s “The European Regional Development Fund”.

The project’s aim is to create a vision based system of robotic grippers that can handle objects varying in material, size, shape, and texture, who act differently in industrial processes, for production companies in Germany, Denmark and the rest of Europe. The project has a special focus on the food and meat industry, which handles the mentioned different shaped objects on a daily basis. The developed technology is also applicable in other contexts such as medical image analysis and industrial production.

Project partners are Christian-Albrechts-Universität zu Kiel (CAU), Mærsk Mc-Kinney Møller Institutet (MMMI) at University of Southern Denmark (SDU) in Odense, Mads Clausen Institutet (MCI) at SDU in Sønderborg and the lead partner Danish Technological Institute’s Centre for Robot Technology (DTI) in Odense.

Gripper test on fish

The software’s scan- and tracking area and the Time of Flight (ToF) camera have been used to test the processing of turbot meat.

The project partners have for that purpose built a new scanning and tracking device in Kiel. The project partners have in cooperation with Institut für Tierzucht der Universität Kiel analyzed the volume and the fillet part of fish by scanning them. The project partners have afterwards analyzed the fish with the use of measuring technology from CAU.

The software is now in consideration to be used in similar future projects, because the result from both analysis were in accordance with each other.

The research has also pinpointed that an exciting new and affordable technology – a Kinect camera – can contribute substantially to the project by supplementing the ToF camera.

Read more about this technology in the next project newsletter.

The project partners have tested the ToF camera by checking the feeding stock of cows, as shown in [this videoclip](#)

Powerful computer built especially to the project

The demonstration model has until now been operated by four cooperating computers due to the complexity and extent of the tasks.

CAU, SDU and DTI have now on cooperation constructed a powerful custom built computer, which is located at DTI in Odense together with the demonstrationmodel,.

The custom built computer's software will be tested by the partners as the project group has its next meeting on June 9th at DTI in Odense.

Videos posted on the website

The website www.interreg-robot.eu has changed platform and will be regularly updated with for example newsletters in Danish, German and English.

Videos have been placed under "Artikler/Artikel/Articles" on each website for the three languages. The videos show simulations and 3D models of meat pieces and tests on live cattle.

In addition, DTI works on creating a virtual demonstration model, where the installation can be examined.

To visit the website, click [here](#)

Please visit the IRFO website: www.interreg-robot.eu

