Highly Customizable and Flexible Packaging Station for mid- to upper sized Electronic Consumer Goods using Industrial Robots

Fact Sheet

Project Information

CustomPacker

Grant agreement ID: 260065

Funded under
FP7-ICT

Overall budget
€ 3 816 281

EU contribution
€ 2 615 000

Coordinated by
TECHNISCHE UNIVERSITAET MUENCHEN

Germany

Start date
1 July 2010

End date
30 June 2013

Project description

Smart Factories: ICT for agile and environmentally friendly manufacturing
Packaging workstation with teachable system architecture
Electronic consumer goods have a large number of variants and are packaged manually. Automating the packaging process will decrease the production cycle time and costs also for mixed variant production lines, thus allowing that several production lines can be merged to a reduced number of packaging stations.

CustomPacker aims at developing and integrating a scalable and flexible packaging
assistant that aids human workers while packaging mid to upper sized and mostly heavy goods. The main goal is to design and assemble a packaging workstation mostly using standard hardware components resulting in a universal handling system for different products.

The project entitled Highly Customizable and Flexible Packaging Station for mid- to upper sized Electronic Consumer Goods using Industrial Robots (CustomPacker) aims at developing and integrating a scalable and flexible packaging assistant that aids human workers while packaging mid to upper sized and mostly heavy goods. Electronic consumer goods, e.g. TV sets, have a large number of variants and are packaged manually. Only in single-variant production lines with high lot sizes, an automation of the packaging step has been introduced. However, automating the packaging process will decrease the production cycle time and costs also for mixed variant production lines, thus allowing that several production lines can be merged to a reduced number of flexible packaging stations. This also allows an optimization with regard to the actual demands of the (various) goods (i.e. number of items produced per day). In order to achieve the realization of these challenging goals for a highly flexible packaging station, CustomPacker will bring together the highly adaptable skills of a human worker together with the precision and ability of robots to carry heavy goods. The main goal of CustomPacker is to design and assemble a packaging workstation mostly using standard hardware components resulting in a universal handling system for different products. Ideally one setup for packaging a high variety of products and components can be implemented, which can be achieved by a teachable system architecture. This will open a new dimension of today's way in how industrial robots are deployed, namely the collaboration of human workers together with robot co-workers. Only by driving the reliability and precision of today's available technology to the limits and by additionally forcing the use of highly sophisticated software modules for worker detection and intention recognition, the cycle times can be reduced in order to justify the investment costs for additional complexity.

Fields of science

Programme(s)

Topic(s)
## Call for proposal

FP7-2010-NMP-ICT-FoF

## Funding Scheme

## Coordinator Contact

<table>
<thead>
<tr>
<th>Coordinator</th>
<th>Activity type</th>
<th>EU contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>TECHNISCHE UNIVERSITAET MUENCHEN</td>
<td>Higher or Secondary Education Establishments</td>
<td>€ 710 741</td>
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<td>FERROBOTICS COMPLIANT ROBOT TECHNOLOGY GMBH</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
<td>€ 365 200</td>
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## Participants (6)

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<thead>
<tr>
<th>Administrative Contact</th>
<th>Address</th>
<th>Activity type</th>
<th>EU contribution</th>
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<tr>
<td>PROFACTOR GMBH</td>
<td>Austria</td>
<td>€ 446 132</td>
<td>Im Stadtgut D1, 4407 Steyr Gleink</td>
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<td>FUNDACION TEKNIKER</td>
<td>Spain</td>
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VALTION TEKNILLINEN TUTKIMUSKESKUS

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EU contribution
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