



SMErobot™ Final Project Workshop
May 7–8, 2009
Institutszentrum der Fraunhofer-Gesellschaft
Stuttgart

Press release

SMErobot™ is an Integrated Project within the European 6th Framework Programme (NMP2-CT-2005-011838). In line with the needs of small and medium-sized manufacturing businesses, SMErobot™ is developing fundamentally new automation solutions towards a new generation of industrial robot systems. These new helpers will be of assistance to a large number of businesses, either for the working of wood, metal, rubber, ceramics or plastics, or for drilling, milling, assembling or handling operations. Therefore, this consortium of leading European robot manufacturers, system integrators, producers of industrial IT solutions and research institutions has set itself three ambitious innovation goals, which it intends to achieve within the project runtime:

1. The new robot should be able to understand easy-to-learn, “intuitive” commands, so that it can be shown what to do even by a computer layman.
2. It should satisfy all safety requirements, so that it can share a workplace with human colleagues.
3. And it should be capable of being installed and taken into operation within three days.

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SMErobot™ to present its automation solutions for small and medium sized manufacturing

At its closing workshop, this European research project will present new prototypes, applications and concepts of cost-effective, modular and interactive automation solutions for small and medium-sized enterprises.

After a project runtime of four years, SMErobot™ will present its research results for future automation solutions aimed at small and medium-sized manufacturing businesses at a public workshop on May 7 and 8, 2009 at the Fraunhofer Institutszentrum in Stuttgart. The new prototypes and applications respond to the needs of cost-effective, modular and interactive automation solutions by small and medium-sized enterprises. The focus of the first day will be on robotic technologies and components while the topics of the second day will be reports on experiences and pilot trials.

Automation makes a business competitive – this has long since been true also of small and medium-sized enterprises (SMEs). However, for many SMEs, the standard commercially available solutions are often too inflexible, too big or too expensive. *SMErobot™* now promises to give new impetus to the introduction of robot technology in small and medium-sized businesses: this EU project is developing an entirely new, modular and interactive generation of robots which, in addition to being quick to install and easy to operate, will also help to make European SMEs more competitive thanks to their cost-effective design.

In a final, public two-day event on May 7 and 8, 2009 the SMErobot™ consortium will present some concepts and solutions that have been developed in the course of this large-scale initiative. Besides presentations and discussions, results from the project will be showcased and demonstrated.

The results of the project are technologies, concepts and tools aimed at helping industrial robotics to make a breakthrough into small and medium-sized enterprises. The innovations on show will include the following:

- an all-new robotics system based on parallel kinematics, simultaneously combining the advantages of high stiffness, low cost and modularity
- modern plug-and-play technologies to replace complex cables and wires
- safety systems and solutions for safe human-robot interaction
- easy, automatic program definition with or without CAD data using speech, 3D graphics or programming by demonstration
- new high-density servo-actuator, professional ball joints as well as variable-stiffness joints
- 3D modeller scanning and modelling objects in 3D real-time
- new MEMS-technology-based force/torque sensor for affordable force measurements and low-cost mass production
- flexible grasp technique and robots using conventional manual tools
- a computerized life cycle costing tool for costing and profitability assessments

- a *SMErobot*TM toolbox with self-explanatory training modules and checklists that support the development and implementation of the new generation of robots.

Pilot trials in small and medium-sized enterprises from the fields of casting, mechanical engineering and metal- and wood-working were used to prove the innovation potential of the technologies and applications. During these pilot trials, the robots were optimized for use in a wide range of future applications and industries.

On the first day (May 7), presentations (in English) will focus on the scientific and technical results of the project and are thus addressed at an audience typically from the fields of research, robotics and automation equipment suppliers as well as manufacturing experts.

The second day, May 8, (held mostly in German) will be dedicated to introducing technologies, solutions and tools for small and medium-sized manufacturing and will therefore be of particular interest to manufacturing SMEs and professional organizations.

More information on the Final Project Workshop is available at:

http://www.smerobot.org/15_final_workshop/

More information on *SMErobot*TM is available at:

www.smerobot.org

The video film can be downloaded from: <http://www.smerobot.org/download/#video>

More information on the project partners:

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| • ABB Robotics
www.abb.com | • Fraunhofer ISI
www.isi.fraunhofer.de |
| • ABB Corporate Research Centre
www.de.abb.com | • ITIA-CNR
www.itia.cnr.it |
| • Casting Technology International
www.castingstechnology.com | • KUKA Roboter GmbH
http://www.kuka-robotics.com/ |
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