The Fifth EURON/EUnited Robotics Technology Transfer Award

By Martin Hægle and Kostas Kyriopolis

The European Robotics Research Network (EURON) and the European Robotics Association EUnited Robotics have now for the fifth time presented their joint Technology Transfer Award in the recognition of outstanding achievements in the European robot technology. At their annual meeting in Prague on 28 March, the first prize was awarded to Nicola Canelli and Giancarlo Teti from the Italian startup company RoboTech for its successful I-Droid 01 robotic kit. More than 100,000 units of this small humanoid robot have been sold worldwide in the form of collect-and-build kits available in around 90 consecutive issues from newspaper kiosks.

The second prize was awarded to Nicola Tomatis, from the Swiss-based startup company BlueBotics, for autonomous navigation technology (ANT), a modular system to provide autonomous navigation to a large spectrum of unmanned vehicles such as automatic forklifts in logistics, mobile service robots, and self-propelled wheelchairs. Members of a Swedish consortium that joined forces to develop a robotic, force-controlled drilling tool were awarded the third prize. This too is the basis for fully automated, high-accuracy, and cost-effective drilling for a variety of products ranging from aircraft to automotive. Tomatis was also the coreipient of the IEEE Robotics and Automation Society (RAS) 2008 Early Industry/Government Career Award.

The I-Droid 01 robot is a small robot for education and entertainment with an anthropomorphic appearance. It is composed of numerous parts such as a wheeled base, two arms with grippers, and visual and auditory sensory systems with speech and image recognition capabilities. Each issue contains robot components and a magazine with articles on robotics as well as instructions for assembling and programming the I-Droid 01.

The autonomous navigation suite from BlueBotics had its origin at the Swiss Federal Institute of Technology, Lausanne. The company faced its first technological challenge in 2002 with the successful development and implementation of a tour guide robots at the Swiss national exhibition Expo 02. Their current navigation suite ANT is a complete package for autonomous navigation solutions in indoor environments. Other robots equipped with ANT include mobile robots as diverse as machines from Nespresso, which freely navigate in buildings or autonomous 2-t forklifts.

SAAB Aerostructures has been pioneering the use of the novel robotic tool for drilling flexible airframe skin panels. The development successfully eliminated the sliding movement or skating of the tool, which usually results from the low mechanical stiffness of industrial robots. The presented solution is the result of a Swedish research project including ABB Robotics, a leading industrial robotic manufacturer, researchers from Lund and Linköping Universities, and DELoI, an industrial IT solutions developer.

“The EURON/EUnited Robotics Technology Transfer Award has firmly established itself as a permanent part of European robotics research,” says Herman Bruninckx from Katholieke Universiteit Leuven who is the technical and scientific coordinator of EURON.

The European robotics association EUnited Robotics was established in June 2004 by leading robot manufacturers and system integrators to act as a mouthpiece and platform for cooperation between all stakeholders from research institutes through national associations to end customers.

EURON sees its role as an excellence network that is aimed at advancing European research, teaching, publications, and cooperation between universities and industry in the field of robot technology and also at making Europe the world’s number one in robotics.

The EURON/EUnited Robotics Technology Transfer Award is jointly presented each year by both institutions in recognition of outstanding innovations in the field of robotics and automation to promote excellence in applied research and technology transfer between research and industry. The award is financially supported by the European Community and sponsored by the EUnited Robotics members. For more information, visit http://www.euron.org/activities/techaward.html or http://www.eu-united-robotics.net or contact Martin Hægle at haegele@pa.fhg.de.

Award winners and their jury. From left: Roland Siegwart, ETH Zurich (Switzerland), jury member Henrik Kihlman, DELFoi (Sweden), third prize; Herman Bruninckx, KU Leuven (Belgium), EURON coordinator and jury member, Nicola Tomatis, BlueBotics (Switzerland), second prize; Stefan Sagert, EUnited Robotics (Belgium), jury member; Nicola Canelli, RoboTech (Italy), first prize; Martin Hægele, Fraunhofer IPA (Germany), jury member, organization of TechTransfer Award; Rainer Bischoff, KUKA Roboter (Germany), jury member; Gisbert Lawitzky, Siemens (Germany), jury member. The small robot in front is the small humanoid robot I-Droid 01, which has been sold worldwide in the form of collect-and-build kits.