
RoboBusiness – Robots clean up in military and domestic environments

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The fifth annual RoboBusiness Conference and Exposition, produced by Robotic Trends, took place in Pittsburgh, PA, USA, on 8 and 9 April 2008. With an overarching theme of “Achieving Autonomy”, the event featured over 30 sessions of exclusive content on the commercial application of mobile robots and intelligent systems technologies. Topics included: Business Development and Partnership; Applications and Products; Workforce Development; Security and Defense; Intelligent Transportation and Field Robotics; First Responder Robotics; Consumer Robotics; Achieving Autonomy; and a first-time two-day “RoboMedicus” session of dedicated healthcare robotics.

RoboBusiness presentations addressed product and market development, as well as critical sales, marketing and partnering strategies. In his keynote speech, Colin Angle, Chief Executive Officer of iRobot Corp., highlighted 21 robot business opportunities to-date. The markets with the highest potential, according to Angle, are cleaning (both home and industrial), military, material-handling, medical, and oil-drilling.

More than 3 million home-cleaning robots have been sold thus far. Of the \$2.4 billion 2007 domestic vacuum market, Angle reported that robotic vacuums comprised five percent of all vacuums sold. Angle also stated that of those planning to purchase a vacuum in the next 12 months, 18.5 per cent would consider buying a robotic vacuum.

Kevin Fahey, program executive director of ground combat systems for the US army told an audience of 500 in his keynote, that in 2004 the US army was using 162 robots, 5,000 robots in 2007, and will grow to 6,000 in 2008. Most of the robots are being used in bomb-detection and reconnaissance missions, though Fahey expects that the use of military robots will expand within the next year into the deployment of tank-like Gladiator robots, armed with both non-lethal and lethal weaponry. WinterGreen Research, Inc., of Lexington, Massachusetts, forecasts global sales of military ground robots to reach \$20 billion a year by 2011, up from just \$442 million in 2007.

While many robotic experts at RoboBusiness believe that the “killer application” is not here yet, most agree that assisted home care for senior citizens could be a key driver for developments in mobile and intelligent robot systems. Jim Osborn, Executive Director of the new Quality of Life

Technology (QoLT) Center at Carnegie Mellon University, presented information confirming an acute need for QoLT in America:

- In 2030, a total of 70 million older adults is expected (20 per cent of the projected US population).
- About 60 million Americans currently have some form of disability.
- In 2030, one in two working adults will be an informal caregiver.

Osborn explained that opportunities for QoLT could maintain high levels of functioning; preserve and prolong independent living; alleviate or compensate sensory, cognitive, and motor disabilities; assist with activities of daily living; and delay effects of institutionalization, serious injury, or disease.

RoboSoft, located in southwest France, shared with attendees its recently unveiled multi-functional home-centric robot prototype. The robot consists of an off-the-shelf mobile platform and a generic robotic middleware based on Microsoft® Robotics Studio. It combines advantages of internet and robotic technologies to provide daily-life motion and cognitive assistance services for the elderly and disabled. RoboSoft is aiming to have their home-centric robot commercially available at an affordable price within a few years.

Microsoft, now with over 50 partners in the hobby, research, consumer, and military industries since entering the robot software market in 2006, also cited assisted home care as one of the markets with the greatest promise. Microsoft previewed the release of its second-generation robotics programming platform, Microsoft Robotics Developer Studio 2008, to a standing room only audience. Plans to release the finished product, which offers improved run-time performance, tools and distributed computing capabilities, are slated for late 2008.

Further information on RoboBusiness 2008 can be found at: www.robobusiness.com

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