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## **MobileRobots Inc Overcomes Hurdle of Dynamic Robot Navigation, without GPS! \$15 Million in Autonomous Guidance Research Approaches Fruition**

Amherst, NH – MobileRobots Inc announced today that it has the first robot guidance system that can self-navigate and autonomously update its knowledge of its surroundings, even when signals from Global Positioning System (GPS) satellites are blocked. The announcement signals that the company is nearing its 12-year, \$15-million dollar research program to create an out-of-the-box ubiquitous commercial autonomous robot guidance system that can drive robots seamlessly indoors and out.

As anyone who's driven their GPS system through a tunnel knows, GPS is only good when there's a signal. Without it, even DARPA Grand Challenge robots may become lost in a short time. MobileRobots Inc, which has worked since 1995 designing intelligent robotic bases from their core heartbeat systems to the highest levels of autonomous navigation, demonstrated one of its new capabilities for hours - - driving successfully outdoors with no GPS – before military officials at the National Defense Industry Association in San Antonio, TX last week. Today, it announced that it can now autonomously re-map spaces, updating the map automatically on a regular basis so that the robot can adjust to changes in its environment.

MobileRobots Inc uses advanced techniques fusing multiple sensor readings so that robots combine information from lasers, cameras and GPS. Comparing this multi-modal picture of the world to its mapped information, MobileRobots can drive even near buildings, in urban or rural canyons and through tunnels as well as follow fences and plan GPS-based best-paths. Its patent-pending Dynamic Guidance System (mDIGS) also enables it to drive intelligently through garages, warehouses, airplane hangars and other rapidly changing spaces using vision information from an omnidirectional camera. Its re-mapping system functions from MobileRobots MobileEyes robot control GUI with or without mDIGS to update map site data without losing goals, forbidden areas and other information embedded in the map. Fleets of robots cooperate with each other using MobileRobots Central Server software and MobileSIM simulator.

MobileRobots Inc manufactures its own autonomous bases for VARS to use in security, remote viewing, visitor guidance and delivery applications. It also supplies autonomous guidance systems for use in OEM robots. MOBILEROBOTSinside technologies are used by factories in the auto and steel industries, as well as hospital and clean-room laboratories. MOBILEROBOTSoutdoors, intelligent guidance system using GPS, has been released for researchers and is in testing for commercial applications. It was demonstrated at FPEDVI near Quantico last August. Last week was the first showing of MobileRobots' non-GPS driving to a military audience. MobileRobots Inc will be beta testing its re-mapping in a pharmaceutical warehouse in late April.

With two years remaining in its 12-year program to develop comprehensive autonomous navigation, the company has three major goals left to integrate into its



systems: 1) seamless automatic map swapping in the MobileEyes control GUI so that robots can move easily among building floors, between buildings and into separately mapped outdoor spaces (Summer, '08); 2) a more sophisticated multi-level obstacle avoidance that will reduce the number of expensive sensors required to safely navigate complex environments (Winter, '09); and 3) improved road-follow navigation for on-road vehicles (Spring, 09).

MobileRobots is a founding member of the Robotics Technology Consortium, along with Lockheed Martin, Boeing, Carnegie Mellon, General Dynamics, Foster-Miller, iRobot and other leaders of the robotics industry. The company has sold over three thousand robots world-wide and provides intelligent navigation platforms and systems to OEMs and VARs in Canada and the US. Customers include: BAE, GM, Microsoft, US Army and the US Navy.

MobileRobots Inc was founded in 1995 in association with Grinnell More, later a principal of iRobot. CTO, William Kennedy, PhD, its chief manufacturing officer, Gary Fischer and other MobileRobots employees moved from More's company or iRobot as well. CEO, Jeanne Dietsch was partner with Pat McGovern of IDG on a technology venture prior to helping found MobileRobots Inc.

MobileRobots runs its R&D, manufacturing and administrative operations from a 25,000 square-foot facility in Amherst, NH, fifty miles northwest of Boston. For more information about MobileRobots autonomous navigation systems, see [www.MobileRobots.com](http://www.MobileRobots.com) or contact Donna Doran, [pr@mobilerobots.com](mailto:pr@mobilerobots.com), +1-603-881-7960.

*Guidance with GPS, without GPS, in a fleet, all driven via MobileEyes GUI command software*