

First Responder Robots -- Markets Reach \$3.7 Billion By 2016

LEXINGTON, Massachusetts (January 22, 2010) – WinterGreen Research announces that it has a new study on first responder, law enforcement, and homeland security ground robots. The 2010 study has 460 pages, 165 tables and figures.

Worldwide markets are poised to achieve significant growth as the first responder and homeland security ground robots are used globally. Growth comes as the border patrols and law enforcement agencies use robots to achieve broader security in a less expensive manner, delivering the promise of automated process in yet another industry. First responder robots bring changes in every region while the globally integrated enterprise replaces nationalistic dominance, creating broader cooperative police actions that replace nationalistic wars. These police actions are aimed against the bad guys.

This cost is creating resistance among the agencies to spend such a large amount for what is seen as a device that gives little return in comparison to what a person can do all year. Costs of robots are expected to decrease rapidly in the next year, creating a much larger market than exists now. The current market at \$203 million does provide a significant base for solid growth.

Vendors of homeland security and first responder robots have positioned to provide a common framework through which federal, state, local, and tribal governments can address emergencies. US federal first responder agencies are negotiating agreements with state and local government law enforcement groups to share equipment. First responder robots cost \$50,000 and up, the cost of a person for one year.

Whereas a person can patrol and investigate, a first responder robot able to sniff for explosives is not justified in high quantity. A few shared units go a long way in detecting explosives.

The challenge for vendors is to find applications where the robot is used 24x7 365 days per year. Then there is payback.

An exception is an airport and a border patrol crossing point where there is continuous need to sniff for explosives.

First responder and homeland security robots are useful as patrol units. Just as foot police and patrol cars look for dangerous situations, so also a first responder robot can patrol an area with cameras and chemical sensors.



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First responder and homeland security robot automation of the defense process is the next wave of first responder and homeland security evolution. As automated systems and networking complement the Internet, communication is facilitated on a global basis. The first responder and homeland security charter is shifting to providing protection against terrorists and people seek to maintain a safe, mobile, independent lifestyle. Much of the first responder and homeland security mission is moving to adopt a police force training mission, seeking to achieve protection of civilian populations on a worldwide basis.

According to Susan Eustis, the lead author of the study, “the purchase of First responder and homeland security Robots is dependent on budget constraints. The use of First responder and homeland security Robots is based on providing a robot that is less expensive to put in the field than a trained soldier. That automation of process has appeal to those who run the first responder and homeland security.

Robots are automating first responder and homeland security ground systems, permitting vital protection of police officers and people in the field, creating the possibility of reduced fatalities in this profession. Mobile robotics operate independently of the operator.

The innovation coming from all the vendors is astounding. No one innovation is more significant than another. One vendor, BAE Systems has an ant size robot useful for reconnaissance and networking robots in development. As soldiers take up secure positions behind a wall, they deploy a small reconnaissance team. The initial deployment is poised to be a very, very small reconnaissance team. Some hopping, some flying, the stealthy autonomous reconnaissance squad vanishes into a suspicious building for several minutes, then relays the all-clear back to its partners outside when that is the case.



Source: BAE.

Multiple technological, logistical, political and market forces share a quantum singularity that has brought mobile robotics to the point where robots are useful to every arm of the first responder and homeland security services. This is a phenomenon that will have a major impact on the way we run the first responder and homeland security and police.



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Use of remote-control toys in Iraq started as improvised robots to check out possible roadside bombs. There has since been a flurry of activity on the robotic explosive ordnance disposal (EOD) front since that early beginning. Deliveries of smaller and cheaper Bots are anticipated.

The emergence of a market for intelligent, mobile robots for use in the field and the confined areas of city fighting presents many opportunities. Units used in public spaces and on the border create a better, more flexible, more cost efficient first responder and homeland security.

Technology is used to actuate the disparate robot types. Core robotics research and advances in robotic technology can be applied across a variety of robotic form factors and robotic functionality. Advances feed on and off of each other. With each new round of innovation, a type of technological cross pollination occurs that improves existing robotic platforms and opens up other avenues where intelligent mobile robots can be employed, effectively creating new markets.

Roboticists are more advanced in their training and in the tools available to create units. First responder and homeland security robots have evolved from units used in the field to manage different situations that arise. Robots save lives..

Robotic security systems have an emphasis on causality reduction during law enforcement activities. This has resulted in investment in robotics technology that is useful. Robotic research is on the fast track for government spending.

First responder and homeland security ground robot market forecast analysis indicates that vendor strategy is to pursue developing new applications that leverage leading edge technology. Robot solutions are achieved by leveraging the ability to innovate, to bring products to market quickly. First responder and homeland security purchasing authorities seek to reduce costs through design and outsourcing. Vendor capabilities depend on the ability to commercialize the results of research in order to fund further research. Government funded research is evolving some more ground robot capability.

Markets at \$203.1 million in 2009 are anticipated to reach \$3.7 billion by 2016.



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