Military Ground Robots and First Responder Robot Market Strategy, Market Shares, and Market Forecasts, 2008-2014

Military Ground Robots

Picture by Susie Eustis

MOUNTAINS OF OPPORTUNITY

WinterGreen Research, Inc.
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MILITARY ROBOT MARKET FORECASTS
ROBOTS TO DEFEAT EXPLOSIVE DEVICES
REMOTELY CONTROLLED ARMED ROBOTS
ROBOTS DEPLOYED IN IRAQ
MILITARY ROBOTS FOR SURGE
ROBOT ARMY
INDIA DEVELOPS MILITARY ROBOTS
SOUTH KOREA ARMY OF KILLBOTS

Military Ground Robots Decrease Fatalities

Robotic Reusable Components

ROBOTIC PLATFORMS
UNMANNED GROUND ROBOT VEHICLES
MODULAR SELF-RECONFIGURING ROBOTIC SYSTEMS
MILITARY GROUND ROBOT MARKET SHARES AND FORECASTS
ROBOTS FOR DEFENSE AND HOMELAND SECURITY
U.S. ARMY SMALL UNMANNED GROUND VEHICLE (SUGV)
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NEXT GENERATION MILITARY GROUND ROBOT

OPPORTUNITY ABOUNDS

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Military Ground Robot and First Responder Robot Market

Strategy, Market Shares, and Market Forecasts, 2008-2014

The new generation of robots is set to arrive in theater and change the way the Army fights. Robots give troops the distinct advantage of completing critical missions at a safe distance; more robots create a greater strategic advantage. iRobot serves troops by delivering these robots for urgent deployment.

Robots are automating military ground systems, permitting vital protection of soldiers and people in the field, creating the possibility of reduced fatalities. Mobile robotics operate independently of the operator.

What is good for a robotic unmanned ground vehicle is also good for a robotic vacuum and lawn mower. Multiple technological, cultural, 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 military services. This is a phenomenon that will have a major impact on the way we run the military and police societies.

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. Deliveries of smaller and cheaper MARCBOTs and BomBots are underway.

The emergence of a market for intelligent, mobile robots for use in homes presents many opportunities. Units used in homes are also useful in workplaces and public spaces, airports, under the sea, and on the battlefield creating synergies creating economies of scale that make systems more useful and inexpensive in all the various industry segments impacted.

The trio handle M249s, are remotely controlled by a soldier through a terminal. The whereabouts and missions remain classified. Armed machines were reportedly designed to handle "high risk" combat scenarios if necessary. There is no record of a SWORD firing its weapon, but considering that each of these devices can potentially remove a human from harm. The full blown platoons are being unleashed when finances allow.

Similar 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.

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

First responder robot markets are anticipated to grow rapidly in response to standards evolution. A new ASTM International standard for urban search and rescue robots and components tackles humble logistics problems that can stimulate the use of life-saving robots.

Defense and homeland security systems have an emphasis on causality reduction during combat. This has resulted in investment in robotics technology that is useful. Robotic research is on the fast track for government spending. Congress passed a law making it an Army goal that by 2015, one-third of the operational ground combat vehicles are unmanned. The US Navy and Marines have similar initiatives underway.

Military 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. Military 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 $441 million in 2007 are anticipated to reach $43.7 billion by 2014. Market growth will come from countries, law enforcement agencies, fire departments, and first responders implementing automated process that supports existing manual process.

Market Leaders

Military Ground Robots / First Responder Robots

iRobot
Northrop Grumman
Telerob
Qinetiq / Foster-Miller
Allen-Vanguard

Market Participants

Giuliani Partners
Lockheed Martin
Boston Dynamics
Fujitsu
Gostai SAS
LG Electronics
NeuroSky
Samsung
General Dynamics
Boeing
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REPORT METHODOLOGY

THIS IS THE 355TH REPORT IN A SERIES OF MARKET RESEARCH REPORTS THAT PROVIDE FORECASTS IN COMMUNICATIONS, TELECOMMUNICATIONS, THE INTERNET, COMPUTER, SOFTWARE, TELEPHONE EQUIPMENT, HEALTH EQUIPMENT, AND ENERGY. THE PROJECT LEADERS TAKE DIRECT RESPONSIBILITY FOR WRITING AND PREPARING EACH REPORT. THEY HAVE SIGNIFICANT EXPERIENCE PREPARING INDUSTRY STUDIES. FORECASTS ARE BASED ON PRIMARY RESEARCH AND PROPRIETARY DATA BASES. FORECASTS REFLECT ANALYSIS OF THE MARKET TRENDS IN THE SEGMENT AND RELATED SEGMENTS. UNIT AND DOLLAR SHIPMENTS ARE ANALYZED THROUGH CONSIDERATION OF DOLLAR VOLUME OF EACH MARKET PARTICIPATION IN THE SEGMENT. INSTALLED BASE ANALYSIS AND UNIT ANALYSIS IS BASED ON INTERVIEWS AND AN INFORMATION SEARCH. MARKET SHARE ANALYSIS INCLUDES CONVERSATIONS WITH KEY CUSTOMERS OF PRODUCTS, INDUSTRY SEGMENT LEADERS, MARKETING DIRECTORS, DISTRIBUTORS, LEADING MARKET PARTICIPANTS, OPINION LEADERS, AND COMPANIES SEEKING TO DEVELOP MEASURABLE MARKET SHARE. OVER 200 IN DEPTH INTERVIEWS ARE CONDUCTED FOR EACH REPORT WITH A BROAD RANGE OF KEY PARTICIPANTS AND INDUSTRY LEADERS IN THE MARKET SEGMENT. WE ESTABLISH ACCURATE MARKET FORECASTS BASED ON ECONOMIC AND MARKET CONDITIONS AS A BASE. USE INPUT/OUTPUT RATIOS, FLOW CHARTS, AND OTHER ECONOMIC METHODS TO QUANTIFY DATA. USE IN-HOUSE ANALYSTS WHO MEET STRINGENT QUALITY STANDARDS. INTERVIEWING KEY INDUSTRY PARTICIPANTS, EXPERTS AND END-USERS. OUR RESEARCH INCLUDES ACCESS TO LARGE PROPRIETARY DATABASES. LITERATURE SEARCH INCLUDES ANALYSIS OF TRADE PUBLICATIONS, GOVERNMENT REPORTS, AND CORPORATE LITERATURE.

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Table of Contents

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MILITARY GROUND ROBOT ROBOT PRODUCT DESCRIPTION

MILITARY GROUND ROBOT STRATEGY, TECHNOLOGY, AND INDUSTRY SPECIFIC APPLICATIONS

MILITARY GROUND ROBOT COMPANY PROFILES

MILITARY GROUND AND FIRST RESPONDER ROBOT USERS

MILITARY GROUND AND FIRST RESPONDER ROBOT CONTRACTS

List of Tables and Figures

MILITARY GROUND AND FIRST RESPONDER ROBOT EXECUTIVE SUMMARY

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MILITARY GROUND AND FIRST RESPONDER ROBOT MARKET DESCRIPTION AND MARKET DYNAMICS

MILITARY GROUND AND FIRST RESPONDER ROBOT MARKET SHARES AND MARKET FORECASTS

MILITARY GROUND AND FIRST RESPONDER ROBOT PRODUCT DESCRIPTION

Telerob Military Robot Platform Sensor Control

MILITARY GROUND AND FIRST RESPONDER ROBOT STRATEGY, TECHNOLOGY, AND INDUSTRY SPECIFIC APPLICATIONS

MILITARY GROUND AND FIRST RESPONDER ROBOT COMPANY PROFILES

MILITARY GROUND AND FIRST RESPONDER ROBOT TYPES

MILITARY GROUND AND FIRST RESPONDER ROBOT

ABOUT THE COMPANY

WINTERGREEN RESEARCH, HAS A UNIQUE RESEARCH STRATEGY THAT RELATES TO GARNERING ACCURATE NUMBERS BY TRIANGULATING SOURCES TO REACH ACCURATE MARKET ASSESSMENT. NUMBERS ARE REACHED BY IDENTIFYING MARKET TRENDS THROUGH READING AND INTERVIEWING OPINION LEADERS. MAKING MARKET ASSESSMENT BY TAKING INTO CONSIDERATION MARKET TRENDS IS A HIGH PRIORITY AT WINTERGREEN RESEARCH. AS WITH ALL RESEARCH, THE VALUE PROPOSITION FOR COMPETITIVE ANALYSIS COMES FROM INTELLECTUAL INPUT.

WINTERGREEN RESEARCH, FOUNDED IN 1985, PROVIDES STRATEGIC MARKET ASSESSMENTS IN TELECOMMUNICATIONS, COMMUNICATIONS EQUIPMENT, HEALTH CARE, INTERNET AND ADVANCED COMPUTER TECHNOLOGY. INDUSTRY REPORTS FOCUS ON OPPORTUNITIES THAT EXPAND EXISTING MARKETS OR DEVELOP MAJOR NEW MARKETS. THE REPORTS ASSESS NEW PRODUCT AND SERVICE POSITIONING STRATEGIES, NEW AND EVOLVING TECHNOLOGIES, AND TECHNOLOGICAL IMPACT ON PRODUCTS, SERVICES, AND MARKETS. MARKET SHARES ARE PROVIDED. LEADING MARKET PARTICIPANTS ARE PROFILED, AND THEIR MARKETING STRATEGIES, ACQUISITIONS, AND STRATEGIC ALLIANCES ARE DISCUSSED. THE PRINCIPALS OF WINTERGREEN RESEARCH HAVE BEEN INVOLVED IN ANALYSIS AND FORECASTING OF INTERNATIONAL BUSINESS OPPORTUNITIES IN TELECOMMUNICATIONS AND ADVANCED COMPUTER TECHNOLOGY MARKETS FOR OVER 30 YEARS.

ABOUT THE PRINCIPAL AUTHORS

ELLEN T. CURTISS, TECHNICAL DIRECTOR, CO-FOUNDER OF WINTERGREEN RESEARCH, CONDUCTS STRATEGIC AND MARKET ASSESSMENTS IN TECHNOLOGY-BASED INDUSTRIES. PREVIOUSLY SHE WAS A MEMBER OF THE STAFF OF ARTHUR D. LITTLE, INC., FOR 23 YEARS, MOST RECENTLY AS VICE PRESIDENT OF ARTHUR D. LITTLE DECISION RESOURCES, SPECIALIZING IN STRATEGIC PLANNING AND MARKET DEVELOPMENT SERVICES. SHE IS A GRADUATE OF BOSTON UNIVERSITY AND THE PROGRAM FOR MANAGEMENT DEVELOPMENT AT HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION. SHE IS THE AUTHOR OF RECENT STUDIES ON WORLDWIDE TELECOMMUNICATIONS MARKETS, THE TOP TEN INTERNET EQUIPMENT COMPANIES, THE TOP TEN CONTRACT MANUFACTURING COMPANIES, AND THE TOP TEN TELECOMMUNICATIONS MARKET ANALYSIS AND FORECASTS.

SUSAN EUSTIS, PRESIDENT, CO-FOUNDER OF WINTERGREEN RESEARCH, HAS DONE RESEARCH IN COMMUNICATIONS AND COMPUTER MARKETS AND APPLICATIONS. SHE HOLDS SEVERAL PATENTS IN MICROCOMPUTING AND PARALLEL PROCESSING. SHE HAS THE ORIGINAL PATENTS IN ELECTRONIC VOTING MACHINES. SHE HAS NEW PATENT APPLICATIONS IN FORMAT VARYING, MULITPROCESSING, AND ELECTRONIC VOTING. SHE IS THE AUTHOR OF RECENT STUDIES OF THE SERVICES ORIENTED ARCHITECTURE SOA MARKETING STRATEGIES, INTERNET EQUIPMENT, BIOMETRICS, ROBOTIC EQUIPMENT, WORLDWIDE TELECOMMUNICATIONS EQUIPMENT, TOP TEN TELECOMMUNICATIONS, DIGITAL LOOP CARRIER, WEB HOSTING, WEB SERVICES, WHEELCHAIRS AND SCOOTERS, STATIONARY FUEL CELLS, AND APPLICATION INTEGRATION MARKETS. MS. EUSTIS IS A GRADUATE OF BARNARD COLLEGE.

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