iRobot®

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Forward Looking Statements

- Certain statements made in this presentation that are not based on historical information are <u>forward-looking statements which are made pursuant to the safe</u> <u>harbor provisions of the Private Securities Litigation Reform Act of 1995.</u>
- These statements are <u>neither promises nor guarantees</u>, but are subject to a variety of risks and uncertainties, many of which are beyond our control, which could cause actual results to differ materially from those contemplated in these forwardlooking statements.
- Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. iRobot Corporation undertakes no obligation to update or revise the information contained in this presentation, whether as a result of new information, future events or circumstances or otherwise.
- For additional disclosure regarding these and other risks faced by iRobot Corporation, see the disclosure contained in our public filings with the Securities and Exchange Commission.





PREDICTING THE FUTURE CAN BE DIFFICULT







I, ROBOT THE MOVIE







The Checkerboard "Illusion"



Here, the human visual system infers the color of the checks in the world, not the gray value in the image.

The "illusion" reflects the successful design of the visual system, not a quirky failure.







Massive disturbances occur with the introduction of disruptive technology. Life before and after a disruptive technology is fundamentally different.

Disruptive Technologies Timeline



Computers 1978 = Robots 2002

- Locked away from public
 - too dangerous for computers
- Used inside large companies
- Operational use in military
- First few "home" computers
 - in the form of games
- Computer hacking clubs
- How-to-build-your-own books
- Undergraduate majors appearing
- First mass market "serious" home computer attempts

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PackBot w/ Recon kit, Afghanistan, 2003



PackBot w/EOD kit, Iraq, 2006



PackBot w/Recon kit



PackBot w/Advanced Recon kit



PackBot w/EOD kit



iRobot SUGV for FCS Exp. 1.1, WSMR 2007



iRobot Warrior X700



iRobot is integral to the 21st Century Military



- Fully Integrated into:
 - Logistical Supply Chain
 - Communications Network
 - Training Programs
 - Doctrine Development Programs

- 81 robots per combat brigade team
- 3,600 robots
- Spares, upgrades, training, service, and support throughout the lifecycle
- A 30+ year business opportunity





ROBOTS IN FUTURE URBAN ENVIRONMENTS







Air Assault Expeditionary Force (AAEF) Experiment, Ft. Benning, GA 2005 & 2006

• <u>2005</u>

- First question: "Captain, of all the new technologies and capabilities you've used during this AAEF experiment, which one single piece would you deploy today?"
- Answer: "Sir, the Packbot ('SUGV'.)"
- **2006**
 - First question: "Captain what three systems employed at this experiment would you want to take to war?"
 - "Sir, the Raven & Buster uav's and a ugv sir, the Packbot ('SUGV')."
 - "Why did you single out those three?"
 - "Sir, i wanted sa (situational awareness) from the air and from the ground. The packbot was RELIABLE and light enough (to carry.) the Raven was also reliable. I said two uav's because I always wanted one."





iROBOT WARRIOR









iRobot – John Deere Robotic Gator







PackBot: Digital Modular Architecture

EOD: Explosive Ordnance Disposal



iRobot PackBot – A Digital Machine...

• Modular Payload Architecture

- 1 Front Payload
- 4 Side Payloads
- 3 Rear Payloads

Signals

- Ethernet
- USB
- Motion Control
- Power
- 2 Video Channels







Digital Architecture & Systems Integration







Technology Core Competencies









Nomadics FIDO + iRobot PackBot





"FIDO was able to detect explosives 80 feet away. This allowed separation of the Soldiers and dog from the bomb, thus saving lives. . . ."



Military Engagement – The Word is a More Dangerous Place

- High tempo military operations and a dramatically lower tolerance for causalities and POW's.
- U.S. volunteer force resources are being stretched



We have over 350,000 SOLDIERS overseas in 120 countries

 The US cannot afford to spend our way out of this problem using current technology and doctrine



Long Term Driver

- Our current ability to care for the elderly is barely adequate and in decline
- A massive increase in the number of elderly people is imminent



 We cannot simply spend our way to a solution.





Europe - 1950



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Europe - 2000





Europe - 2050



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The Robot Industry







Trade Space







SOUTHWEST RESEARCH INSTITUTE







NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY







Early Decisions Affect Life Cycle Cost



- B

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Soldiers will find more missions for robots than expected







SEE THE WORLD THROUGH THE SOLDIERS' EYES, AND MEASURE OUR SUCCESS BY THEIR SUCCESS





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Big Application - Manufacturing

- currently: robot arms for "fixed automation"
- future: flexible low-cost manufacture
 - dexterous assembly/fabrication of small low cost products
 - currently we outsource this to low cost developingworld labor
 - what are the technical challenges?





Consequences

- Completely change the world's labor markets from the way they have developed over the last 50 years
 - change the need for low-cost labor migration
 - change the face of out sourcing
 - significantly impact the labor requirements for eldercare in societies with changing demographics
 - CHANGE THE WAY THE MILITARY OPERATES
- Potential to create an economic tsunami that rivals or surpasses the silicon valley experience





Deliver Great Product



Romba SCHEDULER










Have Fun







Change the World







A Better Way

More than 500 PackBot® Military Robots delivered

TRO Man 2485 SACRAMENTO DE Live SANLUIS Obispo, TOCAT 9340 ET2 Jose Televint millibiolobili

"You have saved lives today!"

"When a robot dies you don't have to write a letter to its mother."







iRobot®

THANK YOU!

jdyer@irobot.com



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iRobot Today

- 142 Million in 2005 Revenue
- 400 Employees*
- Offices in 3 US locations + Hong Kong and India
- Over the past 3 years, shipped over \$.25 Billion of robots to a diverse set of customers





*includes consultants and temporary employees



Behavior-Based Robots

- Fast connections between sensors and actuators
- Composable behaviors
- Multiple simultaneous goals with dynamic arbitration
- Dynamically variable degrees of autonomy







Our Innovation Engine















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• Modular Payload Architecture

- 1 Front Payload
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iROBOT G&IR Division Sensor & Payload Strategy

- We shall Shop the Market for Best in Class
- We will Integrate and Market 3rd Party equipment on Our Robots
- While We View Our Platforms as "Tightly Integrated," We are Open to Licensing Arrangements and Partnerships
- We will <u>Selectively</u> Develop Sensors & Payloads when Customers, Technology, and/or Packaging Demands











sponsored by: The Technical Support Working Group

Summary







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Four Fundamental New Capabilities

- I. The object recognition capabilities of a two year old child
- II. The manual dexterity of a six year old child
- III. The ability to move around freely and to work in built-for-human environments
- IV. Intuitive human interfaces





- currently: roboticizing large agricultural machines
- future: maintenance of individual plants
 - pruning, picking, etc.
 - currently Europe and US import low cost labor, Japan has higher cost agriculture
 - what are the technical challenges?





Big Application - Elder Care

- currently: no automation
- future: robotic assistants
 - in-house care and nursing care
 - currently Europe and US import low cost labor, Japan is facing immediate challenges
 - what are the technical challenges?





Exploring the Great Pyramid of Giza



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Local Ambiguity: Quadrants Same

Information must be propagated across space.







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There is a Better Way







- Introduced in 2002
- 2 million units sold
- Strongly patented
- 1% market penetration









- Wet scrubs hard surfaces
- 4-stage cleaning process
- Cleans better than mopping
- Recent Awards
 - Popular Science
 Best of What's New
 - Consumer Electronics Show Innovations award
 - Time Magazine Top Inventions












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Headquarters, Burlington MA, USA

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Washington DC, USA





Mysore, India

Hong Kong, PRC

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Explosive Revenue Growth







Market Opportunity



Source: Future Horizons



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