

Evolution Robotics

June 2004

**Maynard A. Holliday – Director of Business
Development**



Who am I?



- Current Director of Business Development for the Government and University sectors at Evolution Robotics. Over the past 20 years, his notable work experience has included building robots for use at the Chernobyl Disaster site as well as being named a two-time finalist for the U.S. Astronaut Corp.
- Prior to joining Evolution Robotics, Holliday worked as a senior engineering and robotics professional in both government agencies and the private sector. Having managed interdisciplinary projects of international and commercial importance at Lawrence Livermore National Lab and at Schlumberger Semiconductor Solutions in Silicon Valley respectively, Holliday has developed a reputation for his high level of knowledge and engineering expertise.
- Awarded the American Association for the Advancement of Sciences' (AAAS) Science Engineering and Diplomacy Fellowship in 1995-'96,
- Awarded the DOE Meritorious Service award, it's highest, for his work on the bi-lateral U.S.-Russian Nuclear Material Security Task Force.
- Holliday holds a Master of Science degree in Mechanical Engineering Design from Stanford University where he focused on robotics, international security and arms control. He also has a Bachelor of Science degree in Mechanical Engineering from Carnegie Mellon University.



Company Overview



- Evolution Robotics offers a full set of robotics solutions to help manufacturers build better robotic products, faster and at lower cost



Overview: Company Status



- Launched in April 2001
- Recruited a highly qualified team of 45
- Formed world-class Scientific Advisory Board
- Built cutting-edge robotics software technologies
- Filed 11 provisional, U.S. and international patents
- Building great industry visibility, credibility, and momentum with large OEMs in North America, Asia and Europe
- In discussion with major players in a number of markets



Evolution Robotics



Located in

- 
- A world map with three regions highlighted in different colors: USA (red), EMEA (blue), and Asia (green).
- USA (Los Angeles–Pasadena)
 - EMEA (Düsseldorf)
 - Asia (Tokyo)



Value Proposition



- **Build innovative and highly functional robotic products**
- **Lower development and product costs**
- **Shorter product development cycles**



Customers



- 15% market penetration in 2004
 - In 2004, 100,000+ robots using our components
- 15 OEMs and > 30 universities and labs worldwide
- With public plans...
 - Sony
 - Sharper Image
 - Bandai
 - More soon,...



Company Strategy

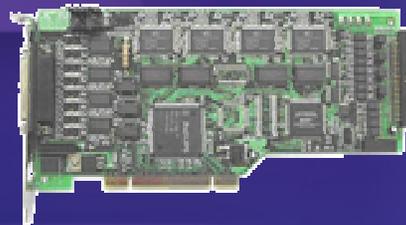


The “Go To” Robotics Technology Partner

Software Solutions



Embedded Systems



Professional Services

- Training & Support
- Platform customization
- Product Development
- Custom design services for embedded boards and ASICs

“Better, Faster, Cheaper”



Markets

INDUSTRIAL

CONSUMER

Cleaning



Cleaning



Healthcare



Entertainment
Elderly-care



Security



Security



Military...Aerospace

Tele-
Presence



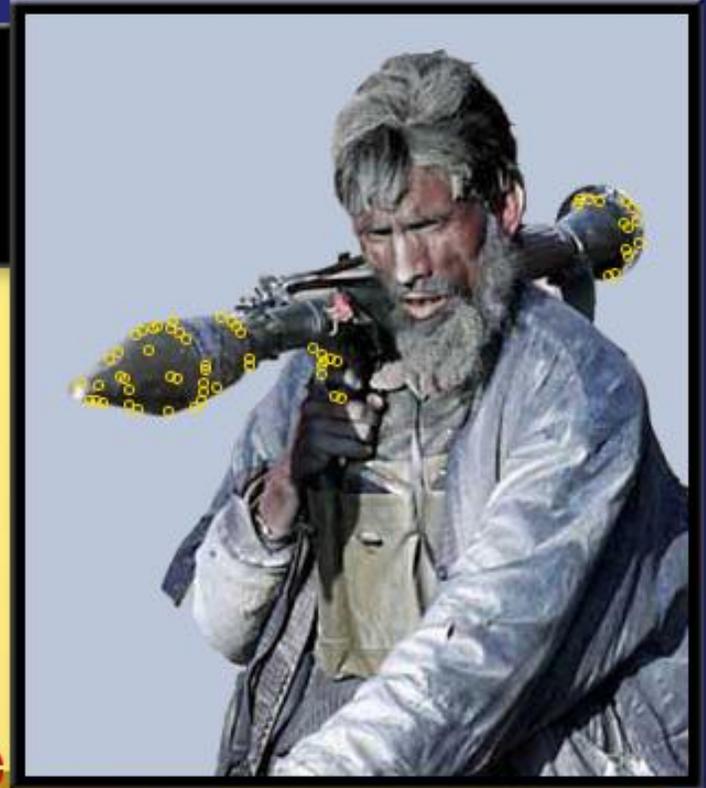
Sony Aibo uses ER Vision



Automatic Small Arms & Artillery Detection System Concept

||| **POTENTIAL THREAT DETECTED** |||

• **RPG-7 :IN FIRING POSITION**



Overview: Engineering Team



Paolo Pirjanian

Chief Scientist

- Lead engineer, Robotic Technologies Group, JPL
- Part-time faculty, USC; graduate-level AI course
- Ph.D., Aalborg University, Denmark

Niklas Karlsson

Senior Software Engineer

- Expert in control & dynamic systems and applications to robotics
- Ph.D., UC Santa Barbara

Jack Weissberg

Senior Hardware Architect

- Director, Hardware Engineering, Paracel
- System Architect, Xerox
- M.S., University of Southern California

Joe Brown

Director
Hardware Engineering

- 10 years of experience designing and developing electro-mechanical systems
- VP Product Development, MetroMedia Technologies
- Mechanical Engineer, Xerox/Tektronics
- M.S., Univ. of Colorado

Jim Ostrowski

Senior Research Scientist

- Expert in robotic locomotion systems, nonlinear dynamics & control
- Professor of Mech. Eng. & App. Mech.; General Robotics, Automation, Sensing, and Perception Laboratory, U. of Pennsylvania
- Robotics consultant to Sony
- Ph.D., Caltech

Mario Munich

Senior Research Scientist

- Expert in speech recognition and human-machine interaction
- Research scientist, VocalPoint Technologies
- Ph.D., Caltech

Luis Goncalves

Senior Research Scientist

- Expert in computer vision and image understanding
- Ph.D., Caltech

Enrico Di Bernardo

Senior Research Scientist

- Expert in computer vision and systems engineering
- Ph.D., Univ. of Padua

Overview: Advisory Team



Ben Rosen

- n Former Chairman, Compaq
- n Co-founder, Sevin Rosen Funds
- n B.S., Caltech; M.B.A., Columbia



Howard Morgan

- n Vice Chairman, Idealab
- n Former professor, Wharton School of Business
- n Ph.D., Cornell



Shig Suzuki

- n President, Overture Services Japan
- n Former President, Intuit Japan
- n Executive roles with AT&T Japan, Sharp



Maja Matarić

- n Associate professor of computer science, USC
- n Director, Robotics Research Laboratory
- n Ph.D., MIT



Ron Arkin

- n Professor of computer science, Georgia Tech
- n Director, Mobile Robot Laboratory
- n Robotics consultant to Sony and Honda
- n Ph.D., University of Massachusetts



George Bekey

- n Gordon Marshall Professor of computer science, electrical & biomedical engineering, USC
- n Founder, Robotics Research Laboratory
- n Editor, *Autonomous Robots*
- n Ph.D., UCLA



Henrik Christensen

- n Professor of computer science, Royal Institute of Technology, Sweden
- n Director, Center for Autonomous Systems
- n Robotics consultant to Electrolux and ABB
- n Ph.D., Aalborg University, Denmark



Don Norman

- n Professor of computer science, Northwestern
- n Co-founder, Nielsen Norman Group
- n Former VP, Apple Computer
- n Ph.D., University of Pennsylvania



Products & Services

Software Solutions

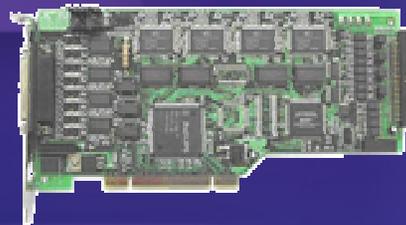


SDKs

Run Time License &

Royalty

Embedded Systems



Embedded Board
Reference Design

ASIC Reference
Design

Professional Services

- Training & Support
- Platform customization
- Product Development
- Custom design services for embedded boards and ASICs