

# **William Stamps Howard, Ph.D.**

**President**

**Stability Technology, Inc.**

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## **HIGHLIGHTS**

- 25+ years as a degreed engineer, designing and developing industrial machines, high-speed automation, robotics, software, machinery, electro-mechanical equipment and devices.
- A Project Manager who spearheaded the projects to designed and developed over \$100,000,000 of industrial machinery, machines, electro-mechanical equipment and devices operating in 30+ countries around the world. Responsible for budgets, cost estimates, performance specification, and scheduling of the projects.
- Well-versed, experienced, and knowledgeable in all aspects of machine, automation, electro-mechanical equipment and devices development; including Mechanical Design, Electrical Design, and Software Development. Also Estimated Costs, Efficiency, Performance against Specifications, Schedules, and Reliability.
- 10+ years as an Expert Consultant and Witness. Routinely qualified by Federal and State courts. Testified in over 20 cases, including trial testimony in Intellectual Property, Tort, and Contract cases. Hired by OSHA and the US Department of Labor as an expert in industrial machines and equipment.
- A large portfolio of renewable energy design projects to support sustainable development in Nicaragua, as well as successful technology projects to support global wildlife protection.

## **EDUCATION, LICENSES, APPS & PATENTS**

- PhD, Department of Mechanical Engineering, *University of Pennsylvania*
- MS, Department of Mechanical Engineering, *University of Pennsylvania*
- MBA, School of Business Administration, *Monmouth University*
- BSEE, *Cum Laude*, Department of Electrical Engineering, *Rensselaer Polytechnic Institute*
- BSME, *Cum Laude*, Department of Mechanical Engineering, *Rensselaer Polytechnic Institute*
- P.E., Professional Engineer, States of Georgia, New Jersey and Alabama
- 5 United States and Foreign Patents (three in mechanical design, and two in software)
- Wrote the OSHA Safety iPad / iPhone App, with over 38,000 downloads in the first 12 months

## WORK HISTORY

7/02 – Present President, *Stability Technology, Inc.* Buford, GA

**A consulting company specializing in Manufacturing, including the design and development of new industrial machines.** Stability Technology is a company that provides specialized design and engineering services to Manufacturing companies in the area of manufacturing, equipment, machinery, software development, packaging equipment, electro-mechanical equipment and devices, and industrial automation.

- Mechanical Design and Electrical Design for many different machines and equipment in numerous companies.
- Developed the software and electrical control systems for many various machines, devices and equipment for numerous different companies.
- 10+ years of Legal Services as an Expert Consultant and Witness (Intellectual Property, Tort and Contract) related to the design and development of machines and equipment, based on patents and/or trade secrets, safety engineering, machine guarding, contractual performance, and software control system design.
- Clients of Stability Technology include (partial list):

Pepperidge Farms, Inc.	Solo Cups
Exxon-Mobile	USG
Sunoco	Sara Lee
L'Oreal Cosmetics	Simmons Bedding Co.
Kellogg's	Welding Services Inc.
Rock-Tenn Co.	Toledo Blade (newspaper)
Wrigley's Gum	Harris Waste
Remy, Inc.	Atlanta Attachment
Multicell	Payless Décor
MTS – Medication Technology	GripNails, Inc.
Yuyama Pharmacy Automation	Shamrock Forrest Products
OPTI Medical	McKenney's Inc.
Industrial Manufacturing, Inc.	Automatic Handling, Inc.
National Cement	PrimeForm Building Systems.
Alliance Machinery	Hydrochem
Atlanta Journal Constitution	Aumund Corp.
Trane (air conditioners)	Coastal Automation

12/10 – Present President, *Wildlife Technology, a trade name of Stability Technology, Inc.* Buford, GA

The part of Stability Technology focused on applying innovative technology to wildlife protection and sustainable eco-development. Projects include:

- Part of the small team of NGOs that spearheaded the project to successfully list the Manta Ray for worldwide protection as an Appendix II listed species at the 2013 Convention on International Trade in Endanger Species (CITES) in Thailand. Lobbied the delegates from 178 countries, culminating in a narrow 17-vote margin to list Manta Rays for global protection.
- Managed the pilot software project for the Asian Development Bank to collect the wildlife protection laws for the Asian Judges Network on the Environment, the roundtable network of ASEAN supreme court justices.

- Developed an experimental solar-powered hydroponics project in Chinandega, with results far exceeding expectations. This project will be expanded 20x, with land purchases to support the expansion.
- Designed seven large renewable water projects in rural Nicaragua, to supply fresh water to seven communities without clean running fresh water.
- Designed the prototype ultra-low cost (\$600) solar-powered home project, and installed the first two systems for rural houses, and a school, in Nicaragua.

- 9/00 – 7/02      R&D Director *Kliklok Corporation*, Decatur, GA  
 Responsible for the design, development, and creation of all new Kliklok-branded and Woodman-branded machinery and equipment (Kliklok is one of the largest US manufactures of carton closers, carton erecting machines, end-loaders, top load closers, over-wrappers, and associated cartoning equipment). Responsible for the software, mechanical and electrical design of all new equipment, and often visited the factories to ensure the new machinery operated properly. Developed the safeguarding, interlocks, and warning labels for new machinery.
- 7/95 – 9/00      Engineering Manager, *Woodman Division of Kliklok Corp.*, Decatur, GA  
 Responsible for the design, development, and creation of new Woodman-branded packaging machinery (Woodman is one of the largest US manufacturers of vertical bagmaking machinery, as well as weighers, volumetric scales, conveyors, casers, infeed equipment, and associated mezzanines and support structures). Oversaw the production and manufacture of all Woodman machinery and equipment. Responsible for the successful operation of the machinery in plants and factories, and often visited the factories to ensure proper operation. Developed the machine guards, interlocks, and warning labels for new machinery.
- 9/91 – 7/95      Lead Research Engineer, *GRASP Robotics Laboratory*, Philadelphia, PA  
 Responsible for the research, operation, and testing of various robotic systems in an applied research facility.

## **Current and Former Affiliations**

- ASSE, The American Society of Safety Engineers, Professional Member
- IOPP, The Institute of Packaging Professionals, Member
- IEEE. The Institute of Electrical and Electronics Engineers, Member
- ASME, The American Society of Mechanical Engineers, Member

## OSHA Background

- Developed, designed and programmed the iPad/iPhone app, OSHA Safety:
  - Over 38,000 downloads over the first 12 months of availability on Apple iTunes
  - #1 ranked OSHA iPad app on the Apple App Store (and the #2 ranked iPhone App).
- Hired by OSHA, and the US Department of Labor, as an expert for OSHA in machinery and industrial automation.
- Holder of an OSHA 30-Hour Card.

## List of Publications

- William S. Howard, *Small Packaging OEMs: The Benefits of Formalized Safety Processes*, Siemens Totally Integrated Automation Newsletter, December 3, 2013
- William S. Howard, *A New, Free OSHA Safety App*, Siemens Totally Integrated Automation Newsletter, August 28, 2013
- Kala Mulqueeny and Stamps Howard, *Sharks Win at CITES – But What Now?* Ocean Geographic, June 30, 2013
- Stamps Howard and Guy Stevens, *Thailand Can Offer a Ray of Light to an Endangered Species*, The Nation, Thailand, March 12, 2013
- Stamps Howard, *Manta Rays and CITES*, The Bangkok Post, Thailand, March 11, 2013
- Stamps Howard and Kala Mulqueeny, *Majestic Maduwa*, Ceylon Today, Sri Lanka, March 7, 2013
- Stamps Howard and Kala Mulqueeny, *CITES and Indonesia: So Why Care About a Fish?* The Jakarta Post, Indonesia, March 6, 2013
- W. S. Howard, *Stability of Grasped Objects*, UMI, Ann Arbor, MI, 175 pp, 1995
- J. Donahue, W. S. Howard, and V. Kumar, *Stable Workpiece Fixturing*, ASME Conference - Advances in Design Automation, 1994.
- W. S. Howard and V. Kumar, *On the Stability of Grasped Objects*, IEEE Transactions on robotics and Automation, 1995.
- W. S. Howard, and V. Kumar, *Modeling and Analysis of the Compliance and Stability of Enveloping Grasps*, IEEE Conference on Robotics and Automation, 1367-1372, 1995.
- W. Stamps Howard, Vijay Kumar: *A Minimum Principle for the Dynamic Analysis of Systems with Frictional Contacts*. ICRA (3) 1993: 437-442
- W. Stamps Howard, Vijay Kumar: *Stability of Planar Grasps*. ICRA 1994: 2822-2827
- Stamps Howard, Milos Zefran, Vijay Kumar *On The 6x6 Cartesian Stiffness Matrix For Three-Dimensional Motion* Mech. Mach. Theory Vol.33, No.4, pp. 389-408, 1998
- William Stamps Howard, *Trends in Electrical Safety of Machines*, IDS Packaging Conference, 17 January - 4 February, 2005.

## Seminars Taught

- William Stamps Howard, *OSHA Subpart O: Machinery and Machine Guarding*, Siemens Factory Automation Webinar Series, February 28, 2014
- William Stamps Howard, *How Can Risk Assessments Help My Bottom Line*, Siemens Factory Automation Webinar Series, August 28, 2013
- William Stamps Howard, *Manufacturing Risk Management*, Georgia Center of Innovation for Manufacturing Excellence, Lanier Technical College, April 18, 2008.
- William Stamps Howard, *Manufacturing Risk Management*, Advantage Industrial Automation, September 26, 2007.

## **Partial List of Machinery Designed, Interfaced and/or Analyzed**

Conveyors	Vibration Feeders	End Loaders
Top Loaders	Carton Feeders	Carton Former
Continuous Bagmakers	Draw-bar bagmakers	Intermittent machines
Weighers	Formers (bags)	Augers
Blow-Molding Machines	Mezzanines	Platforms
Pack-Off Conveyors	Volumetric Feeders	Labelers
Vision Systems	Code Daters	Auto-caser
Film Handling Systems	Automatic Splicers	Printing Press
Stacking & Sorting Machines	Corrugated Machinery	Newspaper Machinery
Textile Machinery	Packaging Machinery	Pharmaceutical Machinery
Robotic Machinery	Recycling Machinery	Gantry Robots
Condom Machinery	Duct-Forming Machines	Wire Forming Machines
Pharmaceutical Machinery	Tube-Cleaning Machines	Pattern-cutting Machines
Automatic Puncher	Thermoforming Equipment	Hydroponic Systems
Grid-Tied Solar Power Systems	Solar Water Supply Systems	Inspection Robots
Material Handling Machines	Waffle-Stacking Machines	