

Kathy Delianides

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SUMMARY: Engineer with over 17 years experience in design, product development, manufacturing, and program management. Directly responsible for executing and managing engineering development and production of medical, high technology, and consumer electronics products. Technical leadership in cross-functional mechanical engineering design with electronics and software integration. Extensive experience in global manufacturing and sourcing with expertise in plastics tooling and molding. **A highly responsible and effective engineer with a proven track record of cradle-to-grave development and management, taking projects to completion, and reducing time and cost of product development and manufacturing.**

EDUCATION

Stanford University Stanford, CA

Master of Science in Aeronautics and Astronautics	1994
Bachelor of Science in Mechanical Engineering	1993

KEY SKILLS & EXPERIENCE

Technical

- “Cradle to Grave” Product Development: Concept Definition, Mechanical and Systems Engineering, Prototyping, Analysis, Testing Validation, Manufacturing, New Product Introduction
- Plastics Design, Metals, Materials, and Components
- Injection Molding and Tool Design: Mold Flow, Gating, Design for Molding; Resin and Material Selection; Tool Qualification, First Article Inspection
- Hands-On Design, Prototyping, and Testing; Manufacturing Processes, Laser Welding, Heat Staking
- Mechanisms, Dynamic Systems, Electro-Mechanical Design, Motors, Sensors
- Electronics Packaging & Integration, Connectors and Cable Assemblies
- Thermodynamics, Heat Transfer, Fluid Dynamics, Micro-Fluidics
- Documentation and Configuration Control for FDA, ISO, FAA, and other regulatory bodies
- CAD: SolidWorks (12 years), AutoCAD / Mechanical Desktop (8 years); MS Office, MS Project
- 3D Solid Modeling, Complex Surfaces, Engineering Analysis, Industrial Design

Industries

- Medical Devices / Biotechnology
- Consumer Electronics and Products
- Automotive / Aerospace / Aviation
- Wireless Communications

Manufacturing / Production

- Design for Manufacturability and Assembly (DFM, DFA), Good Manufacturing Practices (GMP)
- Quality Control, Supplier Quality Engineering
- Global Manufacturing and Sourcing
- New Product Introduction (NPI)

Management

- Product Engineering and Development / Department and Program Management
- Schedules, Program Tracking, Budgets, Staffing, Strategic Business and Marketing Planning
- Cost and Time Reduction for Development and Production Cost and NRE
- Global Presence: Strong Communication and Cultural Understanding (China/Asia, Europe, Mexico)
- Intellectual Property and Licensing

JOB EXPERIENCE

Great Basin Scientific Longmont, Colorado

April 2009 – Present

Medical biotechnology company developing rapid molecular diagnostics platform for detection of nucleic acid and protein analytes.

Senior Product Development Engineer

Principal engineer in design of complex electro-mechanical analyzer and disposable assay cartridges.

- Established in-house engineering department and functions and led product development direction, including integrating outside contract design firms.
- Designed multiple generations of micro-fluidic disposable assay cartridge. Design included molded plastic parts, specialty film and vent materials, laser-welding, heat staking, and adhesives assembly techniques.
- Involved in prototype and early production manufacturing assembly processes, sourcing, and also creation of engineering, manufacturing, and quality documentation.
- Designed and developed electro-mechanical device to analyze the disposable cartridge, which includes complex machined parts, precision motors, sensors, and mechanisms.
- Built multiple development prototypes and pre-clinical devices, and created documentation for components, assembly, training, and quality.
- Designed novel micro-fluidic valve system, implemented on cartridge.
- Worked closely with molecular biologists and scientists to duplicate diagnostic laboratory processes into a rapid disposable cartridge and analyzer.
- Created and assisted in documentation for FDA- and ISO-related regulatory testing, preparation for clinical testing and 510(k) submission, and maintenance of Design History File (DHF), all while following Quality System Regulations (QSRs) and Good Manufacturing Practices (GMPs).
- Conducted extensive testing of micro-fluidic systems and processes, device control and mechanisms, as well as laboratory testing of functioning analyzer device.
- Mentored engineers and scientists in advanced product development and manufacturing.
- Assisted with LabVIEW software integration and test control scripts for analyzer interface.

Contract Engineering

January 2007 – 2009

Hybrids Plus Boulder, Colorado

Converts hybrid vehicles into Plug-In Electric Vehicles (PEV).

- Involved in battery cell pack design, vehicle integration, and manufacturing processes.
- Implemented modern CAD capabilities, documentation and revision control, and basic quality system.

AirCell Louisville, Colorado

Designs and manufactures airborne telecommunications and networking for commercial and business aviation.

- Designed next generation handsets including molded plastic parts, electronic packaging and component specification, as well as unique audio/acoustic design.
- Optimized global sourcing, operations, and design for manufacturability.

Mandall Armor Phoenix, Arizona

Develops and manufactures security products and systems for military, homeland security, and commercial markets.

- Assisted in design of high-security armored door system for DOD installation.

Additional contract services provided to clients in consumer products, medical devices, and other industries.

Fu Yu Corporation China / Singapore / Malaysia August 2004 – December 2006

Global manufacturer of injection-molded plastic tooling, molding, and advanced assemblies. (Singapore Stock Exchange SGX:F13, >\$200M annual revenues)

Director of Engineering, Fu Yu USA (Boulder, CO office)

Technical manager and liaison between engineering and manufacturing at U.S. customers and Fu Yu engineers and staff in China, Singapore, and Malaysia for product design, tooling, molding, painting and decoration, component sourcing, and assembly.

- *Directly conducted design programs for customers including 3D CAD design and modeling, documentation, testing; also coordinated CAD design and development with design team in China.*
- Reviewed designs for molding and manufacturability; first-off-tool part review and tool qualification.
- Established assembly design and processes, sourcing for secondary components.
- Coordinated production launch / New Product Introduction (NPI).
- Researched and implemented new manufacturing technologies and specialty materials.
- Bridged cultural practices and logistics between customer and supplier.

Cellport Systems Boulder, Colorado March 1999 – June 2004

Universal hands-free systems for wireless connectivity in vehicles

Director of Engineering (also Mechanical Engineer Manager, Program Manager, Principal Mechanical Engineer)

Principal engineering and management roles for original development and production of company's core product, a universal hands-free cellular phone system comprised of base unit "Docking Station" with multiple phone-specific "Pocket" adapters.

- Authored core U.S. Patent #6,341,218 (also Europe, S/N 00982526.6) for original concept and design of mechanical and electrical interface between universal Docking Station and Pockets.
- Integrated complex latching mechanisms with industrial design and ergonomics, electronics and RF packaging and interconnects, with emphasis on low cost and design for manufacturability (DFM).
- Managed and provide technical leadership and program management on over 25 programs.
- Established processes and specifications with compressed, fast-paced development cycles: Reduced typical timelines from concept to full production from over one year down to 3-4 months.
- Played key role in design, testing, and Automotive OEM type approvals for vehicle embedded products.
- Established overseas plastics tooling and molding: Reduced tooling costs by up to 75%, part price by 25-50%, and time by 25-50%, all with quality and delivery equivalent or better than previous vendors.
- Established turnkey contract manufacturing in China in 3 months with successful delivery: Reduced typical New Product Introduction NREs by 70% and product cost by 50%.
- Highly involved in the technical and management interface with global licensees and partners in Japan, Germany, UK, and the United States.

National Machine Company Tempe, Arizona Nov 1994 – Dec 1998

Aviation and Aerospace Equipment, specializing in inflation systems for aircraft evacuation systems (escape slides).

*Company name has since changed to **National Aviation Products**.*

- Established new competency to design and manufacture precision temperature-compensated electronic pressure gauges and electro-mechanical sensors for high-pressure gases.
- Conducted extensive testing and qualification, including FAA qualification.
- Reduced product and manufacturing costs by more than 25%, and development time by 25-75%.
- Initiated project to modernize design tools and convert drawing documentation to CAD-based system.

GE Nuclear Energy San Jose, California

Engineer (1993); **Engineer Intern** (1992)

Electric Power Research Institute (EPRI) Palo Alto, California

Engineer Intern (1991)

References available upon request.