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Professional Summary

A leader with a very broad industry background that includes: High volume consumer products, Automotive (Electric Vehicles), Automatic Test Equipment (ATE), Fixtures and tooling for fiber optic high volume assembly, Robotics for wafer handling, Capital equipment for gas separation and Process equipment/controls for the manufacture of medical grade silicone. Recognized by peers and executives as a natural leader that consistently delivers fresh, innovative solutions.

Selected Accomplishments

- Lead contributor for the innovation of a safe Lithium-Ion battery technology that changed the automotive world's view of electric vehicles and battery technology feasibility. **Tesla Motors**
- Co-Author Patent #20070218353 Title: System and method for inhibiting the propagation of an exothermic event. **Tesla Motors**
- Pioneered the development of Zero Insertion Force (ZIF) with micro actuation technology that led to new business opportunities at the largest U.S. semiconductor company. **InTest Corporation**
- Transitioned a manufacturing floor for the production of medical grade silicone from manual interfaces to a Distributed Control System (DCS) that created consistent lots needed for future government contracts. **Nusil Technology**
- Conceived a custom bi-stable flexible display that transformed the nature of the product from a static display of 6 digits to an interactive handheld electronic device that performed beyond expectations. **Validus Tech.**
- Championed a new, integrated solution (hardware and authentication match) within six weeks of losing a ten month product development effort because a key supplier suddenly closed its biometric division. **Validus Tech.**

Professional Experience

Founder, i3D | Intrinsic3D.com, Santa Clara, California. 12/2011-Present

i3D is a rapid prototyping shop and product development center leveraging in-house 3D printing, engineering and design to deliver a broad spectrum of solutions to all industries. In addition to engineering and product development solutions i3D is also a dealer of 3D Printers by ZCorporation. Responsible for evangelizing the website, the Salesforce.com infrastructure, sales/marketing and engineering teams.

Customer Engineering Manager, SGI, Fremont, California. 11/08-2010

Manage a SWAT team of the company's best engineers that provide new product development and engineering resources to the company's top ten accounts in the highly competitive industrial server and rackspace industry. Innovative solutions and out of the box thinking were the cornerstones to new products that won new business form customers like Yahoo, Amazon, Facebook and Google. Also evangelize and led the company with engineering process, infrastructure and documentation such that new levels of engineering efficiency, information gathering/dissemination and rapid response could be realized.

Hardware Engineering Manager, Validus Technologies, Inc., San Francisco, California. 09/07-09/08

Responsible for spearheading the engineering efforts required to evangelize a biometric (fingerprint) authenticating credit card from gross prototype to pre-production. Innovative design solutions, requirements driven product development and demonstrated engineering expertise propelled the corporate legitimacy from unknown start-up to working with the largest contract manufactures in the world (Flextronics, Hana, and IMI).

Sr. Mechanical Engineer/CAD Manager, Tesla Motors, Inc., San Carlos, California. 05/05-10/08

Provided leadership, innovation and guidance in the detailed design and engineering of propulsion sub-systems and their integration into a high performance electric automobile with focus on packaging the 6831 lithium-ion battery pack and its composite enclosure into the vehicle. As CAD manager, the US Vehicle CAD assembly/architecture was created and maintained as well as evangelize best documentation practices, engineering standards, CAD design/modeling techniques and CAD data management infrastructure.

Sr. Mechanical Engineer, inTEST Corporation, Sunnyvale, California. 01/03-05/05

Served as a leader in Project Engineering, Mechanical Design, Manufacturing, R&D, and Test/Evaluation for Prober Test Interfaces (PTI) under mentor Bill Brooks. Developed engineering standards and managed R&D projects for test interfaces, probe card docking using kinematic couplings with magnetic force, pneumatic control systems and complex electro-mechanical interconnect as well as the lead presenter for business proposals for high density PTI Interfaces to customers in efforts to acquire new business.

Mechanical Engineer, JDS Uniphase, Santa Clara, California. 12/00 - 11/02

Design & document process equipment used for the development and manufacture of laser diodes, fixture/tooling needed for the high volume assembly of their respective packaging and provide electro-mechanical solutions for testing.

Senior Mechanical Engineer, Applied Materials, Santa Clara, California. 01-00 - 12/00

Lead Mechanical Engineer for the development of a front end wafer handling system in the Etch Transistor Gate Substrate and Wet Processing Division; responsible for design and fabrication of new tool mainframe, including selection and design of packaging/support equipment. Developed a patented concentric axis end-effector system for wafer handling in atmospheric environments with complimentary design of a laminar flow wafer transfer environment for ISO Class 10 applications; FEA Cosmos/M was used to save over $50K in prototype development costs of flow performance.

Project Engineer, Membrane Technology and Research, Menlo Park, California. 08/97-01/00

Project manager of multi-million dollar skid mounted gas separation systems from concept to on-site installation and troubleshooting including all design and off-site fabrication of membrane system and sub-systems (refrigeration units, dryers, vacuum/compressor systems, control panels) within client specifications, quality control, and customer specification review. Systems were designed in accordance to ASME B31.3 and ASME Boiler & Pressure Vessel Code VIII, Div. I & II.

Project Engineer, Nusil Technology, Carpinteria, California. 05/95-08/97

Design and manage existing processes, equipment, and facilities used in the production of aerospace and medical grade silicone. Responsible for the re-design, construction and automation of manufacturing equipment that included shear sigma mixers, two stage vacuum systems, high-pressure extruders, control hardware, miscellaneous small mixing and accessory equipment. Managed and worked side by side with 20+ machinists, welders, assemblers, and electrical technicians in the repair and fabrication of new equipment which included the delegation of tasks, training and supervision.

Education

California Polytechnic State University, San Luis Obispo, California Degree: *Bachelor of Science*, AE. Confirmed 1995

Licensed Professional Engineer in Mechanical Engineering PE, CA. Certificate No. M 31341 by the Board for Professional Engineers and Land Surveyors

Professional Skills

- Engineering Department Creation & Management
- Strategic Technology Planning
- Requirements Driven Product Development
- Sales Engineering and Business Development
- Excellent Leadership & Mentoring Skills
- Product Design Reviews (PDR, CDR, & FDR)
- Product Proposal/RFQ and On-Site Presentations
- Expert Project Management

Engineering Skills

- On the fly “First Order” Thermal and SOM analysis
- FEA for material stress, deflection, and design optimization
- Motion and Kinematic Analysis
- Broad knowledge of materials, coatings and finishes
- GD&T, ANSI Y14.5-1994
- Ultra-Fine flexible circuits
- ACF (Anisotropic Conductive Film)
- Fine Pitch Wire Bonding
- Precision Cost Based Tolerance Allocation, RSS Analysis
- Pneumatic Actuator and Control System Design
- Vehicle Packaging, clearances and crash testing
- Composite Construction; Epoxies, Tapes and Rivets
- Chemical/Mechanical Process equipment sizing
- Design for Shock and Vibration
- Miniature Electro-Mechanical Product Design
- FCOF (Flip Chip on Flex)

Design Skills

- Design for Manufacturing (DFM)
- Smart Assembly Techniques (SAT)
- Compound Machining Techniques (CMT)
- Design for CNC Machining Processes
- Gear & Splines
- Sheet metal fabrication, Structural Off-Shore Skids
- Sand and Die Castings
- Ultra miniature Electro/Mechanical Packaging
- Epoxy/Rivet/Tape Composite Construction Design
- Custom Aluminum Extrusions
- Pressure Vessel Design per ASME, Welding Processes
- ESD plastic/foam thermoforming
- EDM &-Chemical Etching
- Specialty Molecular surface treatments
- Flexible Circuits, RF antenna design
- Plastic Injection Molding and Reaction Injection Molding

Computer Skills

- SolidWorks & PDMWorks Enterprise 2011 (Guru)
- Cosmos Simulation FEA (Expert)
- Catia V5- R16 (Intermediate)
- Pro-E (Novice)
- WordPress (Guru)
- Salesforce.com (Advanced)
- MS SharePoint (Expert)
- Rockwell RS Logix 500 (Intermediate)
- Labview (Intermediate)
- Mac, MS Office & Project Professional(Expert)