Chris Stergiou
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Curriculum Vitae

CURRENT POSITION

Independent Systems Engineering and Manufacturing Systems Consultant working with manufacturing and start-up stage clients in Medical Disposables, Medical Instruments and Industrial Systems.

PRINCIPAL AREAS OF EXPERTISE

Manufacturing Process Development – Lean manufacturing
Custom Manufacturing Equipment Design & Build
Test Systems Development
Electro-Mechanical Product Design and Development

EDUCATION:

MSSE - University of Lowell	Masters in Systems Engineering	1984
BSME - University of Lowell	Bachelors in Mechanical Engineering Minor in Economics	1982

MANUFACTURING PROCESS KNOWLEDGE AND PROFICIENCY:

- Ultrasonic Welding
- Leak Testing
- Continuous Web Feeding
- Winding operations
- Plastic molding practices
- Mechanical Assembly / Welding
- UV Curable Epoxies/UV Processing
- Plastic Parts assembly
- Parts Handling and parts feeding
- Machine shop practices
- Sheet metal fabrication and finishing
- Equipment safety Guarding

MANUFACTURING DEVELOPMENT EXPERIENCE:

- Lean Manufacturing
- Assembly and Test Equipment
- Cycle-Time reduction
- Fixtures and Methods Development
- Manpower utilization analysis
- Floor Space Utilization analysis
- Process Studies and development
- Semi-Automated Machine Development
- Labor reduction through automation
- Value Stream Identification
- WIP Reduction
- New Process Development

PRODUCT DEVELOPMENT EXPERIENCE:

- Value Engineering
- Prototype development
- Alternative designs optimization
- Precision mechanical motion and joinery
- Commercial parts selection/specification
- Documentation and Testing
- Auto-CAD 3D Design
- Prototype debugging and testing
- Materials compatibility
- Structural design and packaging
- Third party interfacing/ Expert Input
- Design Review and Recommendations

INDUSTRIES WORKED WITH:

- Medical Disposables
- Plastic Molding
- Mechanical Assembly
- Food Industry
- Metal Working
- Electronics Assembly
- Medical Instruments
- Automotive
- Clean room manufacturing
- Electro-Mechanical Assembly

MACHINE ELEMENTS PROFICIENCY:

- Pneumatics
- PLC and Motion Controls
- Linear and rotary Motion
- Vibratory bowl feeders
- Motors - (Servo, Stepper, Reductions, etc.)
- Analog Controls
- Power transmissions
- Bearings, Clutches, Brakes

TECHNOLOGIES AND SYSTEMS PROFICIENCY :

Linear and Rotary Motion Systems, Mechanical structures, Machine shop practices, Power Transmission Systems, Pneumatic and Electrical Actuators, PLC Controls, Parts Feeders, Automation Components, Servo and Stepper Motor Drive Systems, User Controls and Interfaces, Tooling Components, Material Selection.

TECHNICAL SKILLS:

AutoCAD 2000 Expert – 3D.
All Microsoft Office computer skills.
Control algorithms for system programming based on system I/O and controller.
Design of a complete system or a component from Concept to Finished System.
Problem solving using traditional and intuitive methods.
Excellent communication skills at all levels.

PARTIAL CLIENT LIST

- Medtonics
- Power General
- Standard Thomson
- American Superconductor
- General Mills
- Instrumentation Laboratory
- Smith+Nephew
- Joseph Polak
- Tyco
- ITT-Cleveland Controls
- Teradyne
- ESA Biosciences
- Becton-Dickinson
- Millipore
- Parker Hannifin
- Crown, Cork & Seal
- Hewlett Packard
- Boston Scientific

TECHNICAL ACCOMPLISHMENTS BY INDUSTRY: SYSTEMS AND EQUIPMENT

Medical Disposables:

- Multi part assembly with automated parts feeding
- UV curable epoxy bonding of plastic components
- Tube strengthening system for surgical blades
- Hi-Pot testing of RF surgical systems
- Automated packaging and bar coding labeler machine
- Numerous hand and table top assembly fixtures
- Cold forming of a chamfer on thin walled tubing
- Catheter cut to length and stripping system
- Vision assisted welding system for RF wand used in intestinal surgery
- Low to “zero” tension web handling system

ELECTRONICS AND ELECTRICAL MANUFACTURING:

- Cell phone component, plastic on plastic over molded flash removal system
- RF/EMI shielding, measure to length and cut at adjustable angle, system
- Braided shield, shrink to size system
- Coaxial cable strip and assembly to formed connector system
- Automated "small" element loading system for resistor manufacture
- Automated probing system for laser trimming of circuits on ceramic substrate
- Ceramic substrate cleaning system
- Automated wire nut assembly machine
- Numerous super conductor wire manufacturing and processing modules.
- Vacuum pressure transducer testing system

CONSUMER PRODUCTS MANUFACTURING:

- Kitchen counter top assembly systems
- Rotationally molded plastic pots manufacturing tooling and de molding modules
- Automated parts feeders for cosmetic eye liner brushes and flock tips.

INDUSTRIAL PRODUCTS MANUFACTURING:

- Numerous table top assembly fixtures for automotive switch assemblies.
- Automated coil winding system for hot water heater coils
- Low Voltage - High Current connector assembly machine
- Bellows forming machine
- Capacitor trimming fixture with automated parts feeder

PHARMACEUTICAL AND FOOD INDUSTRIES:

- Automated feeding for plastic bottles for bottle fill line
- Automated gating and converging of three conveyor lines into one
- Automated carton stacking
- Automated pressure testing of ceramic membrane filters
- Semi-Automated assembly of plastic filter assemblies
- Automated assembly and torque limiting of a pneumatic pressure regulator/filter.

PROFESSIONAL EXPERIENCE:

May 2004 – Present

Independent Consultant – Contractor - Providing R&D and Manufacturing consultant services to Clients.

2008: Designed and deployed manufacturing fixtures and equipment- VARIOUS.

2007: Working with ***Boston Scientific***, developed new assembly process equipment and methodologies for a new product. This assignment included dispensing solutions as well as development of innovative mechanical assembly methodologies which resulted in a semi-automated production tool.

2005-2006 Worked on a new product introduction effort with a leading blood analyzer instrument manufacturer, ***Instrumentation Laboratory***. Developed and implemented a test strategy and physical hardware for testing for the newest instrument during manufacture. Developed various fixtures and manufacturing tools, including tubing assembly fixtures, specification of metrology equipment and product packaging design for this same product.

1991 – 2004

Founded and operated ***Global Design & Procurement***, a manufacturing consulting and electro-mechanical systems design and build company servicing manufacturing clients in New England and beyond, in the areas of custom machine design and build, custom manufacturing automation, fixturing, special tooling design, process analysis and manufacturing consulting.

The company was bootstrapped from a 2 person operation working in a 200 SQF space to a 20 person operation in a 10000 SQF modern facility with a complete prototype machine shop, in house electrical systems controls building and programming, 3D AutoCAD design and advanced project management skills. This growth was fuelled in part by a Commonwealth of Massachusetts loan guarantee which was used to grow the company in the late 1990's.

Personal Responsibilities: Owner, Principal Engineer and Project Manager

- Ongoing development of new clients and projects.
- Project design and development from concept to detail execution.
- Detailed direction of day to day project activities in all functional areas.
- System troubleshooting, debugging and optimization.

PREVIOUS EXPERIENCE

1990-1991	Computer Numerical Control Corporation Applications Engineering Manager	Lowell MA
1986-1989	SUN Microsystems Senior Manufacturing Engineer	Billerica MA
1982-1985	WANG Laboratories Manufacturing Engineer	Lowell MA

References Provided Upon Request

A comprehensive Presentation of my background and many examples of work can be viewed on Web Site:

www.cstergiou.com