

MICHELLE PILLERS, P.E., CSWP

12653 – 93rd Place NE

Kirkland, Washington 98034

(425) 830-7456

SENIOR MECHANICAL DESIGN ENGINEER/NEW PRODUCT DEVELOPMENT SPECIALIST

New product development • Machine design • Injection molding • Project management

Responsible positions for over 30 years in machine and mechanism design, new product development, injection molded plastics design, and project management – specializing in the design of new high tech products, complex automatic machinery, and consumer products.

CORE COMPETENCIES

- Use of engineering standards, project scheduling, proposal writing, estimating, vendor control, client interface, original industrial design, and management.
- Design, specification, and manufacturing of machined, sheet metal, and plastic molded products (injection, blown, vacuum, and pressure).
- Design of water, slurry, and air-tight seals and manifolds.
- Recognized authority in the use of SolidWorks for mechanical design automation, computer animation, and product development. Recognized for innovative work in articles published in Design News and Cadence magazines. Keynote speaker at SolidWorks World Convention, 2006.
- Experienced in the Medical, Electronics, Disk-drive, Nuclear, Semiconductor, and Food industries.
- Hands-on experience with SolidWorks 2008, Cosmos/Works (FEA), Working Model 3D (IPS), Dynamic Designer (i.e., CosmosMotion).
- Experienced liaison for manufacturing in China, Mexico, and USA

PROFESSIONAL EXPERIENCE

Managing Partner/Chief Engineer/Janitor

Evolution Design Engineering, LLC – Kirkland, Washington

1/97 – Present

Leader of this technical product development consultancy, utilizing advance 3D solid modeling, creation of long-term relationships, and development of Internet technologies to provide numerous design and engineering services for manufacturers, marketing companies, hospitality, inventors, progressive design firms and R&D organizations.

A few projects from the last 11 years:

- Concept thru production of a Rx Pill Sorter/dispenser – Pill-Pak, Inc, Las Vegas, NV
- Rapid Concept Development of Data Cable Staple Gun – Cascade Thermal, Redmond, WA
- Stereoscopic Camera Mount and Accessories – Mission 3D, Inc, Exeter, NH
- Researchers Vial Holder – Amgen, Thousand Oaks, CA
- DNA Printer (prints strands of actual DNA for researchers) – Rosetta, Kirkland, WA
- Retractable Entertainment Wall – on behalf of and for Bill Gates Family Home, Medina, WA
- Non-contact Linear Encoder Design – Micro Encoder, Inc., Kirkland, WA
- Infrared Optical Heat Sensor XYZ Positioner – Quadtek Inc, Redmond, WA
- Slurry Pump Seal Analysis and Design – Pete's Equipment, Kent, WA
- High Speed Sled Analysis and Design – Seattle Safety, Kent, WA
- Entire Travel Mug Product line for Starbucks – PMI, Inc, Seattle, WA
- Transitional Products Department Manager – PMI, Inc. Seattle, WA
- Deflection Analysis (FEA) for Sloan Digital Sky Survey Telescope – UW, Seattle, WA
- CAD modeling of over 200 products for US Military – Survival, Inc., Seattle, WA
- Design and Manufacturing of Café Table for Public Internet Access – AIA, Kirkland, WA

For more sample projects and animations, see <http://www.edeinc.com/EDE-Sampling.html>.

Director of Product Development/Engineer-in-Responsible-Charge

Walter Dorwin Teague Associates, Inc. – Redmond, Washington

1994 – 1997

Managed the Engineering and Industrial Design Departments; generated job descriptions, job proposals; provided department budgets, articulated group mission statement, and provided guidance and leadership to both groups. Responsible for all of Teague's mechanical product engineering in the State of Washington; Individual contributor on Coinstar Trolley, Tempress Marine Seat (issued Patents D398,172 & 5,820,221); Synrad Lasers, Boeing Motorized Spindle, Boeing 777 First Class Divider, Biopsys Biopsis Tool, among other projects. Impetus behind Teague's new Information System. Responsible for improved project management throughout the organization. Authored 2 articles on Product Design for international CAD trade magazines discussing the use and implementation of different CAD systems.

Project Manager/Senior Mechanical Engineer

GVO, Inc. – Palo Alto, California

1989 – 1994

Lead Engineer on the Visioneer PaperMax Scanner (later known as the HP Scanjet 4s; Issued Patent 5,517,332); ME on Sega's Virtual Reality Headgear project; Project Manager for Ortho's Lock'n Spray hose-end cartridge spray system (issued Patent 5,332,158); Project Manager for Lincoln Electric's model LN9-GMA Wire feeder for arc welders; Project Manager for Andros' medical CO monitor and smog pump; Lead Engineer for Herman Miller geriatric recliner; Lead Engineer on General Instruments' lottery machine.

President/Owner

MJP Development and CAD Service

1985 – 1989

Starting with just myself, built business into a 6 person engineering consulting firm before being absorbed by GVO. The following is a list of clients and associated projects.

- **Nutech Engineers:** Provided complete design package to build a hydraulic Skid Positioning System for positioning 120 tons of cargo. Designed and drafted on AutoCAD. (1989)
- **Dura-Bond Bearing Company:** Provided complete machine design and controls engineering to develop machines that would centrifugally cast Babbitt to the interior of steel tubing and "pre-bore" the interior of the same tubing. Designed entire project on AutoCAD, which required over 200 drawings. (1988)
- **Automated Wafer Systems:** Provided complete design package to build a unique nitrogen purge system for the manufacturing of semiconductor wafers. Designed entire project on AutoCAD. (1988)
- **Gant Western:** Designed and delivered complete drawing packages of plastic injection molded parts for Breath Analyzer and Laboratory Vial Array for genetic engineering. Designs done on AutoCAD. (1988)
- **Guzik Technical:** Assisted in the design of two Hard Disk Tester spin stands, one for conventional testing and one for testing with "sidewinder" heads. Designs done on AutoCAD. (1987)
- **Nutech Engineers:** Lead designer of a Prototypical Spent Nuclear Fuel Rod Consolidation System for the Department of Energy. Designed three major pieces of remote mechanical equipment to be operated in a radioactive "hot cell" with maintenance occurring only once a year. Project included a large number of engineering calculations and use of CAE software. Entire design done on AutoCAD. (1987)
- **GHI:** Designed tri-temp thermal enclosure for handler, brings IC's down to -50°C or up to +150°C using heated liquid nitrogen. Designed automatic bulk loading mechanism for same machine. Finite element modeling, spring design, and thermo analysis were all part of these projects. (1987)
- **Automated Wafer Systems:** Mechanical design of AWS-6000, an automated wafer loading machine for loading wafers from boat transfer machine to horizontal fusion furnace in clean room. (1987)
- **Daymarc Corporation:** Developed complete design package for production of Prototypical Bulk Loading System for automatic loading of IC tubes to an Integrated Circuit Test Handler. Produced complete design package for automatic transfer of empty tubes from handler's input the handler's output. (1986)
- **Beckman Instruments:** Assisted Robotics Technology Department in design and production of a biomedical robotic workstation (Biomek 1000). Developed preliminary designs and concepts for next generation Biomek. Responsible for horizontal and vertical translation of machine, initial design of liquid level sensor, and redesign of the Biomek's casted aluminum tablet. (1985)

Provided Professional Consulting Services to other companies while self-employed, including Autodesk, Mark Products, Magnex, Exxon Enterprises, Grove Dale, and Commercial Consultants:

Mechanical Design Engineer Magnex Corporation – San Jose, California Automated manufacturing and production equipment	1983 – 1985
Student (full-time) San Jose State University	1982 – 1983
Senior Mechanical Designer Ampex Corporation – Cupertino, California Video Camera Division	1981 – 1982
Co-op Engineer IBM , – San Jose, California General Products Quality Assurance Department	1980 – 1981
Mechanical Designer/Project Manager Tonko Corporation – Campbell, California Product handling equipment design and manufacturing	1973 – 1980

EDUCATION/PROFESSIONAL CERTIFICATIONS

- UNIVERSITY OF THE STATE OF NEW YORK: Bachelor of Science, extension depth requirements completed in Mechanical Engineering and Mathematics.
- State Board Certified Professional Engineer; authorized to practice Mechanical Engineering in the State of California [License No. 25081] and Washington [License No. 31602].
- Certified SolidWorks Professional (CSWP)
- Four patents granted and two patents pending.

PROFESSIONAL REFERENCES AVAILABLE UPON REQUEST