Thomas W. von Alten

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SELECTED QUALIFICATIONS

Web application development - Fluent in C#, javascript, SQL, GIS, perl, HTML, web server and system adminstration, data transfer and conversion

Mechanical engineering design - Materials, fabrication methods, MEMS, structural analysis, fastening technologies, dynamic measurement, design-for-manufacturability, nanopositioning, UHV test systems, disk and tape drive mechanics, aluminum diecasting, injection molding, air filtration, solid modeling, finite element analysis.

Leadership - Led formal and informal teams for tasks in new product introduction, production and design problem solving, and design development. Participated in and helped lead international and inter-company teams for product and standards development. Non-profit board leadership and treasurer.

Statistics - Command of statistical principles and inference testing, experiment design, data reduction and tolerance analysis.

EXPERIENCE

2004-present Self-employed Web application developer
Primary field: database-backed applications for agricultural conservation. Work with USDA NRCS, State of Idaho, U. of Idaho Extension, Montana State U. Extension, Oʻahu Resource Conservation & Development Council

1999-2003 HP Labs R&D Engineer
Implementation of a nanopositioning UHV test system for MEMS product development; CMOS/MEMS integration and analysis

1996-99 HP Computer Peripherals Bristol Product Development Engineer
Mechanical design for ½" tape drive mechanisms, new tape cartridge design with 3-company team, worked with media manufacturers and HP's manufacturing partner to introduce Ultrium format products.

1990-96 HP Disk Memory Div. Product Development Engineer
Mechanical design for 3½" disk drive mechanisms: architecture, shell, sealing, filtration, PCA attach, actuator latch, bezel. Led HDA design team, task forces to solve yield and product reliability problems in thermal variation, shock and vibration performance. Set up and maintained a web server for M.E. R&D.

1986-89 HP DMD Manufacturing Development Engineer
Design and implementation of cleaning, assembly and test processes for disk drive mechanisms; Parallel product/process development & production line implementation; Supported prototype and initial production of 5¼" mechanisms

1983-86 HP DMD Process Engineer
Installation & startup of new through-hole PCA line; Production support for soldering and cleaning processes

1979-1980 JP's Bikeshop Business Manager/Mechanic
General manager, part owner; retail sales and service

EDUCATION

Continuing: NRCS Business Application Technical Developers Workshop; MEMS Fabrication; multiple programming languages; FEA modeling; FMEA;

1990 M.S. Manufacturing Systems Engineering Stanford University

1982 B.S. Mechanical Engineering *cum laude* **University of Idaho**

1978 B.S. General Studies University of Idaho
Physical Sciences, Architecture and Ecology, Tutor and teaching assistant

PATENTS

US Patent 7,658,736 Internal drug dispenser capsule medical device; Feb 9, 2010

US Patent 6,929,636 Internal drug dispenser capsule medical device; Aug. 16, 2005

US Patent 6,873,840 Resource access/return system; March 29, 2005

US Patent 6,847,367 Display for port area of electronic equipment; Jan. 25, 2005

US Patent 6,717,771 Magnetic tape cartridge having projections; Apr. 6, 2004

US Patent 6,751,058 Positioning system for removable data storage cartridges

US Patent 6,538,842 Position System for Removable Data Storage Cartridges; March 25, 2003

US Patent 6,499,684 Tape leader pin assembly and method for making the same; Dec. 31, 2002

US Patent 6,003,802 Tape leader pin assembly and method for making the same; Dec. 21, 1999

US Patent 5,936,816 Integrated cleaning and leader tape; Aug. 10, 1999

US Patent 5,901,916 Tape cartridge reel lock; May 11, 1999

US Patent D407,084 Tape cartridge housing; March 23, 1999

US Patent 5,813,622 Tape cartridge reel lock; Sept. 29, 1998

US Patent 5,523,910 Recording/reproducing device having a bypassing pole electromagnetic actuator latch of low power requirement; June 4, 1996

US Patent 5,455,550 Dual gap electromagnetic actuator having a bypassing pole gap and a variable pole gap; Oct. 3, 1995