



Jim Belling

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Objective

An experienced mechanical design professional with outstanding knowledge in developing high performance, cost effective, on time designs seeking progressive company.

Technical Highlights

- o At Enclos Corp, implemented finite element modeling software solutions that reduced thermal analysis times by over 70% increasing available time for research.
- o At ADC, led the mechanical design and development of a new Street Coverage Solution (SCS) wireless digital distributed antenna system for personal wireless RF communication. Significant skills in the use of Computational Fluid Dynamics (CFD) thermal analysis programs including Flotherm and CFXDesign.
- o At Calix, lead mechanical design engineer responsible for developing the electro-mechanical system level design of an innovative telecommunications product capable of bringing fiber optics to the home. Company has been recognized in Telephony and Bandwidth Magazines.
- o At Turck, first mechanical engineer hired in the United States. Initiated Mechanical Design Department.
- o At Texas Instruments, mechanical design member of the development team that developed the first "room temperature" infra-red detectors.

Experience

2010 - 2011

GeoSystems LLC, Maple Grove, MN
Senior Mechanical Design Engineer

- o Lead mechanical design engineer for GeoSystems - an innovative green energy company specializing in ground source heat pumps.
- o Led projects in reducing ambient noise and transmitted vibration up to 95 % using innovative CAD, test and material selections.

2006 - 2009

Enclos Corp., Eagan, MN
Mechanical Design Engineer

- o Responsible for research and development of commercial curtain wall systems. Systems employ glass and structural support systems to provide stylish, energy efficient and structurally superior building enclosure. Emphasis placed on energy efficiency and architecturally attractive designs.
- o Initiated use of Flovent computational fluid dynamics (CFD) software to study and enhance air flow in dual skin curtain wall assemblies for a major development in New York. Customer was extremely pleased with scope and accuracy of report.

2000 - 2006

ADC Inc., Minneapolis, MN
Senior Mechanical Design Engineer

- o Led the mechanical design development team for Digivance, a ground breaking 3G wireless digital indoor distributed antenna system capable of delivering seamless broadband services to cellular systems.
- o Introduced product development strategies that resulted in enhanced communication and design for cost strategies between development team members. Strategies have been permanently adopted by ADC management. Strategies included Web based costing, target costing and real-time costing software.
- o Received Key Contributor Award for mechanical design innovations.

- 1998 - 1999 **Calix Inc. / Optical Solutions Inc., Plymouth, MN**
Senior Mechanical Design Engineer
- o Consolidated two geographic diverse mechanical design locations into one centralized location increasing operating efficiency.
 - o Redesigned to enhance field service and reliability a stand-alone node permitting fiber near the home. Effort involved thermal testing and enhancements to reduce component junction temperatures.
- 1994 - 1998 **Turck Inc., Plymouth, MN**
Mechanical Design Engineer
- o Strong skills in the industrial hardening/ protection of electronics and design of experiments.
 - o Brought to market 130 unique network products in a 4 year period.
- 1987 - 1993 **Alliant Techsystems Inc., Minneapolis, MN**
Principal Hardware Development Engineer
- o Led the mechanical design, electronic packaging, process design and development, customer and vendor interface, cost estimating, structural analysis and testing for undersea systems.
 - o Special skills in design and use of engineering plastics, injection and insert molding, geometric dimensioning and tolerance (GDT) analysis, tooling, stainless steels, protective plating, aluminum, adhesives, fastening and joining techniques, cast and close tolerance machined parts.
- 1982 - 1987 **Texas Instruments, Dallas, TX**
Mechanical Design Engineer
- o Responsible for mechanical design of electro-optical night vision systems.
 - o Design duties included optics and electronic packaging, surface mount electronics, conceptual packaging development, mechanism design, customer interface, cabling, material selection, shielding (EMI / RFI), human factors, thermal, structural and environmental testing.

Education

- 1987 **Southern Methodist University, Dallas, TX**
MS Engineering Management GPA: 3.1
- 1982 **University of Wisconsin at Milwaukee, Milwaukee, WI**
BS Mechanical Engineering GPA: 3.9
- o Named to Dean's List 8 times.
 - o Graduated with High Honors.
 - o Tau Beta Pi Engineering Honor Society

Portfolio

Online Portfolio: [Linked In](#)
<http://linkedin.com/in/jimbelling>

Project Portfolio: [Project Portfolio](#)
https://docs.google.com/presentation/view?id=0ASxgQrnxtPejZGQ2OTlkajZfNzZoa20yczVuOA&hl=en_US&authkey=CM7Sg6EP

Keyword Summary

Electronic Packaging
Electromechanical Design
Thermal Analysis
Computational Fluid Dynamics (CFD)
Energy Analysis / Green Design /
LEED
ProEngineer / SolidWorks
Operations Research

