

PROFESSIONAL OVERVIEW

- Awarded Fellowship with Engineers Canada (FEC) for “exceptional contributions to the engineering profession in Canada”.
- Generated millions of dollars in sales or savings, including writing new code in lieu of licensing a \$200k decoder, and supplying instructions that generated an additional \$700k in shipyard work.
- Leadership experience includes mentoring, managing projects and their budgets, monitoring project health, and chairing the local APEG-BC branch.
- Accomplished public speaker (e.g. MCed engineering conference, BC Hydro presentations).
- Skilled with communicating project status to clients and partners using clear, understandable language.

CAREER EXPERIENCE

Founder - **Unshockable Engineering**

Dec 2013 – present

Unshockable Engineering provides consulting services for prototyping, building renovations, and bids.

- Assisted international company with bid preparation for a project worth ~ \$100 million. Responsible for all electrical aspects; broke down bid into manageable portions and obtained estimates from potential suppliers and manufacturers.
- Developed prototype for start-up company. Customized components, built device, programmed the underlying electronics, and delivered it to the customer. Provided plan on moving to production and deployment.
- Advised businesses on their electrical systems and equipment. Wrote line diagrams, checked load requirements, inspected sites, and completed residency paperwork.
- Trained engineering companies on best practices, document control, retention, archiving, and processing. Advised clients on change management systems, repositories, data security, and setup of IT infrastructure.

Electrical Engineer - **Fleetway, Inc.**

Apr 2009 – Dec 2013

Fleetway holds the support contract for Canada's Frigates and is the Navy's surface ship design agent.

- Resolved work-stopping problems encountered during ship refit. Coordinated plans with technologists, shipyard staff, manufacturers, and DND staff. Identified and corrected approximately 150 issues and provided 3,500 sheets of corrections to shipyard.
- Computer and software specialist for Victoria office. Wrote and edited macros and machine configuration. Maintained and backed up workstations, laptops, servers, and security system.
- Project Manager and subject matter expert for cable penetrations and EMI handling. Updated manuals and procedures to match new research and equipment.
- Mentored EITs, technologists, and drafters. Guided teams of technologists and technicians to get data for projects. Issued instructions and status reports based on their data.
- Reviewed and approved ship electrical designs, including the *Hero-Class* patrol vessels for the Coast Guard. Met with international team of engineers and designers.

CAREER EXPERIENCE, CONTINUED

Electrical Engineer - Marine Access Solutions

Oct 2007 – Apr 2009

Marine Access Solutions designed a patented chair-lift for disabled sailors using a marine gangway.

- Designed and built control system for a marine chairlift for disabled sailors. System is designed to work in all outdoor temperatures and weather conditions with minimal maintenance.
- Created and programmed PLC-based control system with redundant safety sensors, proximity and impact sensors, and data logging of all events.
- Met with end users, experts, and CSA inspectors to determine gangway requirements and compliance with standards. Ensured interface met the needs of physically challenged end users.
- Responsible for all electrical engineering. Worked with other engineers and company founder. Developed time estimates, procured parts, drafted budget, and monitored expenses.

Communications System Engineer – Codan (Daniels Electronics)

Feb 2006 – Apr 2007

Codan designs and manufactures radio equipment for High Frequency and Land Mobile Radio.

- Updated existing radio systems to work with new P25 standard. Guided system design and prototyping through high-level, low-level, and implementation phases.
- Wrote embedded code for DSP chips and Internet-connected code for PCs. Developed an encoder / decoder that saved \$200k in licensing costs.
- Worked with TIA and Industry Canada to ensure systems were safe for public use.
- Made purchasing recommendations for test equipment for in-house use. Worked with manufacturers to fix problems in third-party systems.

Firmware Engineer - H.A.B.I.T. Research / Locator Systems

May 2004 – Feb 2006

H.A.B.I.T. designed and built GPS, VHF, and satellite tracking systems for animals and humans.

- Designed and programmed tracking systems. These trackers are still being used today and have required no maintenance except battery changes.
- Streamlined production process. Upgraded board designs to save \$15k / year in parts and 16% on labour. Simplified and modularized code to reduce overhead by 99.98%.
- Worked with the FCC and Industry Canada to get equipment approved for public use.
- Introduced a code versioning system to create automatic tracking and backups for code changes.

EDUCATION AND PROFESSIONAL DEVELOPMENT

- Professional Engineer, APEG-BC
- Fellow of Engineers Canada
- B.Eng., Electrical Engineering. 2004, UVic.
- Project Management CPD
- Organizational Quality Management
- Reliability Evaluation of Power Systems

INTERESTS

- Interests include SCUBA diving, teaching fitness classes, concert band, singing, performing live, volunteering, reading, and board gaming.