Dean Weiten, P.Eng. http://weiten.com/dean-linkedin
101 - 549 Leila Ave (204)-888-1334 or (480)-307-5952
Winnipeg, MB R2V 3M8 dmw@weiten.com

A highly experienced embedded systems engineer and manager with extensive expertise in industrial grade electronics, power, control systems, real-time computing, and product architecture.

QUALIFICATIONS

COMPETENCIES

- Professional industrial product design for power utility, chamber control, medical, and agricultural equipment markets.
- Product life cycle management, from concept to end of life, addressing cost, quality, and component obsolesce.
- Customer technical engagement, from cooperatively developing new ideas to solving field problems.
- Technical expertise in architecture, board design, product reviews, failure analysis, and field product support.
- Feasibility assessment, for partnership, investment, or acquisition.
- Team leadership, including coaching, mentoring, and sharing of expertise and knowledge.
- Regulatory compliance, including interpretation of, enforcement to, and testing to safety and industry standards.

PHILOSOPHY

I seek comprehensive up-front consultation with stakeholders to determine true needs, composing into simple, comprehensive requirements, which I later verify against. My design decisions are well-documented and readily verified, with clear and comprehensive notes. I know my skills, seeking other subject matter experts' involvement where appropriate. I encourage and support others – coaching, mentoring, and learning from other professionals.

TECHNICAL EXPERTISE

- Electronics: architecture and design of analog & digital circuitry, power supplies, single-chip micros, and FPGAs.
- Real-time computing: experienced with LINUX, QNX, RTAI and RT-LINUX.
- Control systems: in power systems, environmental control, and agricultural applications.
- Programming: 'C', assembly language, BASH, PERL, Python, VHDL and Verilog.
- LINUX Programming: applications, device drivers, and kernel hacking.
- Simulations: MS-Excel, PERL, Python, or 'C', as appropriate. Experience with LTspice and MathCAD.
- EDA Tools: OrCAD Capture and Layout, Altium, PADS, PowerPCB, AutoCAD LT.
- Network communications/security: CAN, SPI, I2C, USB, Modbus, IEEE 802.3, VoIP; Wireshark, Nmap, SSH.
- Collaboration and Version Control: Atlassian Confluence and Jira; Subversion and git.
- Quality: Lean Six Sigma and ISO 9001.
- Regulatory and EMC: IEC 60044, 60255, 61000, 61010, 61850, and 61869; CISPR 11, 22, and 24.

EMPLOYMENT & ACCOMPLISHMENTS

Senior Engineer *at* ERLPhase Power Technologies – Winnipeg, Manitoba **2018**

ERLPhase manufactures protective relays and disturbance recorders for power utilities.

Key Responsibilities

Provide experienced product development resource where existing resources were fully utilized.

Significant Achievements

- Recommended Sigma-Delta modulator input on DC Module, simulated and did demo board analysis using PERL.
- Met challenging DC Module size constraints while increasing input to double insulated 600V rating.
- Defined DC Module PCB layout and supervised successful layout implementation.
- Prepared DC Module bring-up guide, including step-by-step verification criteria, and firmware development plan.
- Proposed innovative front end for new fault locator. Simulated using captured waveforms, then made demo board, proving efficacy using arbitrary waveform generator. Performed advanced wavelet transform analysis in Python.

Senior Engineer *at* GE Energy Connections DIT – Phoenix, Arizona **2013 – 2017**

GE's Digital Instrument Transformers manufactures digital fiber optic current sensors for high voltage transmission lines.

Key Responsibilities

Perform product development. Provide experienced viewpoint on development process and management approach.

Significant Achievements

- Diagnosed and addressed long-standing firmware issues in resource-constrained PIC processor on Status Card.
- Developed challenging high voltage high impedance precision VT input. Managed successful regulatory testing.
- After earlier first pass design failure, took on responsibility for 245 kV low capacitance CCVT column. Collaborated with HV instrument transformer engineers, supervised validation and calibration, performed on-site system repairs.
- Drove innovation in next generation sensor architecture & design proposal, collaborating with a multinational team.
- Provided management with direction on more effective product development strategies and ECN policies.

Senior Engineer *at* **ERLPhase Power Technologies – Winnipeg, Manitoba** **2013**

Key Responsibilities

Provide guidance, mentorship, and direct assistance to an India-based team in development of protective relays.

Significant Achievements

- Coached young engineers, provided foundation for professional development.
- Encouraged critical thinking and supported decision making.
- Met regularly by video conference to discuss, plan, and direct development.
- Made significant design improvement recommendations, after reviewing schematics and test reports.
- Provided in-person assistance to team during regulatory testing in Bangalore.

Lead Hardware Engineer *at* **GE Multilin – Markham, Ontario** **2011 – 2012**

GE Multilin is a leading supplier of protective relays for industrial, distribution, and transmission applications.

Key Responsibilities

Responsible for the electronics development team for the UR^{Plus} protective relay platform.

Significant Achievements

- Successful introduction of the B95Plus Bus Protection System - supervised PCB fab, card assembly, and validation.
- Ensured contract manufacturer quality with site visits and detailed process discussion.
- Maintained schedule as close as possible, by adjusting plan and directing rapid response to challenges.

Senior Engineer *at* **ERLPhase Power Technologies – Winnipeg, Manitoba** **2010 – 2011**

Key Responsibilities

Provide support to a less experienced team. Perform design for rapidly expanding family of products. Provide expert analog electronics support to digital electronics personnel.

Significant Achievements

- Successful remediation of failed power supply design, which afterwards met EMC and performance goals.
- Achieved performance goals of analog sections of multiple modules of new IEC 61850 merging unit product.
- Implementation of power management on multiple boards, with custom I^2C protocol communications.
- Researched, proposed, and implemented novel hall effect current sensing method on contact output module.

Product Development Manager *at* **Norscan Instruments Ltd. – Winnipeg, Manitoba** **2007 – 2010**

Norscan Instruments manufactures monitoring systems for buried and overhead communications cables.

Key Responsibilities

Supervised product development process, personnel, and resources. Performed lead role in design review process. Defined policies for all aspects of product development and production test. Was senior architect for all designs, managed the most challenging issues, lead resource for product management.

Significant Achievements

- Directed growth of the young product development team into a cohesive, strong, multi-disciplined 10-person group.
- Counselled young engineers in critical thinking, decision making, continuing education, and professional development.
- Improved efficiency by implementation of FogBugz and Subversion, and strengthening of change control system.
- Ensured design success, assisting developers and reviewing decisions.
- Directed successful implementation of drop-in replacement for Sparton telecom cable air pressure monitoring system.

EDUCATION AND TRAINING

- Green Belt DFSS & DMAIC (coursework) — GE Multilin
- Power System Protection 24.360 (“A” grade) — University of Manitoba
- SAE International Section Officers Leadership — SAE International Warrendale PA
- BSc (EE) with distinction (cumulative GPA 3.82 out of 4.00) — University of Manitoba

OTHER INTERESTS AND SKILLS

- Old automobiles – have 1957 Cadillac, being restored. Trained on 1918 Ford Model ‘T’ operation.
- Time – expert at IRIG-B and time synchronization, have Arbiter 1084C satellite clock for experimentation.
- Cloud computing – Digital Ocean droplets providing NextCloud, SSH and WordPress services.
- Radio operator – shortwave listener, amateur operator VE4DMW (active on local VHF & UHF repeaters).