

Todd Zielinski

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Education:

M.S. in Computer / Electrical Engineering, [Drexel University](#), Philadelphia, PA

B.S. in Computer / Electrical Engineering, [Drexel University](#), Philadelphia, PA

Management Experience:

- Worked as an independent consultant on a wide variety of programming and embedded development projects. Required billing and time management, accurate project requirements / costing assessment, strategy and budgeting, and milestone completion reporting.
- Managed design teams - hiring, assessment, mentoring, resource allocation, process, testing, lab facilities, long term planning, market research and management reporting. Managed multiple team leaders / teams simultaneously in completing projects. Familiar with interdepartmental communications and translating non-technical end user systems requirements into designs, and action plans for development, testing and delivery. Scaled teams from inception to 18 direct reports.
- Familiar in guiding projects from specification through development, supply chain logistics, testing, certifications and standards - IEC, UL, FCC, CE, ISO and others - for consumer, medical and industrial products.
- Software design and project management experience through several complex embedded projects, including agile development management, version control, user requirements analysis, interaction design, and documentation.

Development Experience:

- Embedded systems development – multiple generations of network video compression appliances, scalable video switches, distribution amplifiers, solar power trackers, connected devices and remote telemetry systems. Complete project experience from inception through layout, part selection, BOM / supply chain management, case design, to production. Familiar with video compression processes, transport and standards – Wavelet, JPEG, JPEG-2000, H.264+/265, HVC / AVC.
- Analog systems development in switching power supplies, motor drives, video capture and signal management, and input conditioning and amplification. Interfaces for inductive, capacitive, temperature, audio, MEMS, optical sensors and others. Additional experience in impedance matching, high-speed signaling and clock management implementations.
- Embedded and Applications programming in Assembly, C, C++, C#, Java, Python and numerous other languages. System memory architecture, RAM / NVM / Flash drivers. Experienced with a variety of build environments, including Visual Studio, GCC toolset, Keil, IAR and others, under Mac OS, Linux, and Windows. Familiar with reliability and agile methods in software development. Familiar with ARM, x86, MIPS, PIC, AVR, and other architectures.
- Connected / portable device development - familiarity with Ethernet, Cellular / CAT-M0 / NB-IoT, LoRa, WiFi, Bluetooth / LE, 802.15.4 / Zigbee, NFC, RFID. Designs with battery supplies, USB / charging, RF antennas integration and tuning.
- Programmable logic development using Intel, Xilinx, Microsemi, and others, using ML, schematic capture, VHDL, and Verilog, for FPGAs and CPLDs, for a variety of projects.
- Schematic capture, layout and implementation experience under OrCAD, Cadence, Mentor Graphics, and Altium toolsets. Simulation experience with PSPICE, Matlab, Simulink, MathCAD and Labview.

Employment Experience:

2013 - 2019 BresslerGroup, Philadelphia, PA : Senior Director Electrical Engineering.

2017 - 2019 University of Pennsylvania, Philadelphia, PA : Electrical Engineering adjunct faculty.

2010 - Pres. [Z•Development consulting](#), Philadelphia, PA : Principal / owner.

2010 - 2012 Halliburton, Exton, PA : Senior Engineer - consulting.

2006 - 2010 [Agilence Inc.](#), Camden, NJ : Vice President Engineering / Founder.

1996 - 2006 CA Technology., Mount Laurel, NJ : Senior Engineer.

1992 - 1996 Self Employed, Consultant / Programmer / embedded developer.

1993 - 1996 [Intercommunity Action](#), Philadelphia, PA : MIS Administrator.

1993 - 1994 [Martin Marietta](#), Valley Forge, PA : Engineer.

Additional:

Philadelphia IoT Meetup leadership, 2015-2019

OSIPS – Video Analytics committee member, SIA / ISO standards body: 2007-2008

JPEG IEC standards body, JPIP committee member : 2003-2005

Patents 5,996,694, US20180249696A1, WO2019010019A2 Awarded

Board Member of the Philadelphia Canoe Club, ACA certified whitewater kayak instructor.

Member of The Savoy Opera Company of Philadelphia.

Team Leader, Drexel University SunDragon V Solar Car Racing Team, 1995-1997

Senior Member IEEE - published in EDN, O'Reilly, Appliance news and others