

# TOM WORONIECKI

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## Summary

Design Engineer (EE) with many years of experience in product development and maintenance of line (MOL) root cause failure analysis and corrective modification. Extensive knowledge of electrical engineering and programming concepts with a creative aptitude for new product development.

## Highlights

- Solid knowledge of Product Dev Cycle.
- Significant experience in circuit analysis, design modification, test and reporting.
- Design experience and operational understanding of popular microcontrollers
- Excellent technical writing skills (Product Requirements Documents, Test Requirement Docs & Test Procedures).
- Test case development from requirements.
- Schematic capture experience using PADS.
- Design experience with communications interfaces: RS-485, RS-232, USB, SPI, I2C
- Familiarity and experience with a variety of programming languages including C, VB6 and 808x assembly, (some Python).
- Audio, digital & mixed signal design.

## Experience

RAYTHEON – MCKINNEY, TX

July 2018 to Present

### **Test Engineer – Test Engineering Group, Raytheon Missile Systems**

- Performed root cause analysis of Windows 3.11-based and Windows 7-based test sets for testing of a variety of LRU (Line Replaceable Unit) and CCA (Circuit Card Assembly).
- Released test set requirement/design documents to PDM system.
- Designed new UUT interface test adapters for standard test platforms.
- Wrote BOEs (Basis of Estimate) for product contract proposals.
- Aided in coordination of ATE to production schedules.

ADVANCED TECHNOLOGY (DAIKIN) - HOUSTON, TX

June 2017 to August 2017

### **Software Design Engineer – Design Engineering Group**

- Modified legacy VB6 application used for loading common data onto furnace control boards on the production line.
- Added a code section to legacy code which communicated with a custom board over a USB com port to verify Bluetooth communication.
- Added a code section to legacy code which generated serial numbers for parallel loading of boards from three stations.
- Documented application flow in Visio.

AEROTEK (FLEX MEDICAL) - PLANO, TX

October 2015 to May 2017

### **Quality/Test Design Engineer – Quality Group**

- Devised test methods for feasibility, characterization and design verification phases of product development cycle for bone density scanner.
- Wrote test plans, test cases, test procedures and test reports.
- Researched and purchased test equipment to support tests.
- Performed product feasibility, characterization, and design verification system requirements Hardware and Software testing.

WILLIAMS RDM - FORT WORTH, TX

September 2013 to April 2015

**Test Design Engineer – Product Research & Development**

- Wrote and verified test scripts for testing military aircraft weapons delivery systems using proprietary scripting language.
- Wrote requirement and feature specifications for test systems using Microsoft Word.
- Documented test groups graphically using Microsoft Visio.
- Used Cadence Allegro Design Entry Capture / Capture CIS to document system test cables and self-test loop-back plugs.

EF JOHNSON - IRVING, TX

September 2005 to June 2013

**Principal Design Engineer – Audio and Logic Hardware Group**

- Lead design of embedded processor (TI AM1808) user interface circuit board for control head used in next generation P25 mobile radio.
- Provided maintenance of line (MOL) engineering services for all mobile radio, portable radio, radio accessories and infrastructure equipment from root cause analysis through corrective circuit modification and ECO.
- Wrote product requirement documents for all radio speaker-microphone accessories.
- Developed bed of nails factory test fixture for Viking portable radio audio-logic board. Control PCB schematic captured in PADS.
- Developed programmer (via USB and BDM) for Viking portable radio audio-logic board.
- Developed test fixture for factory testing of 5300ES mobile standard and lightning control heads.
- Developed factory test fixture for testing of short message recorder (SMU) interface units.
- Wrote test plan for design verification testing of mobile control head PCB engineering samples.
- Specified, tested and wrote evaluation reports for validation of product replacement devices.

NEC AMERICA, INC - IRVING, TX

September 1998 to December 2004

**Senior Design Engineer – Wireless Engineering Division (Mobile Phone) Hardware Group**

- Performed Hardware/Software integration of mobile handset platforms
- Developed Bed-of-Nails Tester: Designed the hardware (layout of signal transfer and interconnect boards for relay coil power, signal level comparison, and some switching logic) portion of a bed-of-nails board tester for TDMA phone (LT-JIG).
- Developed Production Phone Tester: Designed the hardware (controller, communications bus interface, and user interface) portion of a production line final systems check tester for TDMA phone (P-JIG).
- Performed root-cause analysis, recommended fixes and made modifications to mobile phone circuits as required based on problem report assignments.
- Generated system block diagrams and various explanatory diagrams for analysis studies, specifications and reports using Visio.
- Authored product development documents utilizing MS Office applications (Word, Excel, PowerPoint)

**Education**

UNIVERSITY OF CALIFORNIA - SANTA BARBARA

1986

**Bachelor of Science: Electrical Engineering**

Santa Barbara, CA, United States

Continuing education courses: Java I, Java II, C++, Richland Community College 2000-2003

**Military Service**

U.S. Navy	1975-1979
USS Omaha (SSN 692 Fast-attack Submarine) Commissioning Crew Member	