

R E S U M E

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Senior Systems/Software/Test Engineer with broad-based experience in project life cycle management, systems integration and testing within highly technical environments. Experience with product development and testing in both military & FDA/medical device applications.

----- FORMAL EDUCATION -----

M.S. Computer Science & Mathematics, Loyola University of Los Angeles
B.S. Electronic Engineering, Northrop University
Certificate in Web Technology & Development, UC Riverside
Certificate in Unix/Linux System Administration, UC Riverside

----- CREDENTIALS AND LICENSES -----

Citizenship: USA
Security Clearance: D.O.D. Current Secret
Registered Professional Engineer - Electrical, California #9274
Registered Professional Engineer - Electrical, Washington #17696
Licensed Private Pilot, Instrument Rated with over 1,100 hours PIC
Extra Class Amateur Radio Operator (KE6JE)
Class 'A' California Commercial Driver License
Fluent in German, semi-fluent in Spanish

----- TRACK RECORD -----

- * Performed HW/SW design & systems test & integration for subsystems in the B-1B, F-117, F-16, F-18, F-35 aircraft and Trident C4/D5 missile related to avionics, flight control and auxiliary power. Led extensive acceptance testing activities on ATE.
- * Developed portable pressure transfer standard to calibrate aircraft pitot-static systems in the field.
- * Managed project for launch of first nationwide satellite pay-per-view movie service, including On-Line Transaction Processing ordering system.
- * Converted business idea into engineering proposal. Secured senior management buy-in for development and project implementation.
- * Embedded systems development in 'C' and Intel -86 assembly using cross-compilers, in-circuit emulators, logic analyzers, scopes, etc. for HW / SW integration tasks.
- * Reviewed/improved code, enhancing reliability and quality of medical device embedded application; helped secure FDA approval for product.
- * Authored several Cost Reduction Initiatives, resulting in lowered cost and quicker response/delivery times for various projects.
- * Have utilized various scripting languages, including C-Shell, Korn Shell, BASH, Perl, Python, Tck/Tcl and others.
- * Familiar with various protocols and standards, such as MIL-STD-2167, MIL-STD-1553, IEEE-488, TCP/IP, RS-232/422/485.
- * Performed fault detection, isolation and prepared related documentation such as Test Plans, Test Reports, Test Procedures.

----- PROFESSIONAL EXPERIENCE -----

Lockheed Martin Skunkworks - Palmdale, CA (Oct 2022 - Jan 2024)
ENGINEERING CONSULTANT - SW Quality Assurance & Test

Conducted software quality assurance activities for developmental aircraft systems including test, integration and configuration management using agile devops. Contributed to CI/CD release documentation, such as Test Plans, Reports, SVDs and company policy documents.

Raytheon Technologies Corp. Intelligence & Space - El Segundo, CA (Aug 2018 - Oct 2022)
ENGINEERING CONSULTANT - SW Test and Evaluation

Performed software QA, testing and development activities for U-2 aircraft Mission Planning application in Java. Developed secure socket interface for communication between ground based mission planning sites using OpenSSL library.

Cobham Advanced Electronic Systems - San Diego, CA (Aug 2017 - Jan 2018)
ENGINEERING CONSULTANT - RF Sub-assembly Test

Upgraded existing Test Program Sets (TPS) using LabWindows/CVI for production testing of Air and Missile Defense Radar (AMDR) system sub-assemblies.

Northrop Grumman Corp. - San Diego, CA

(Oct 2016 - July 2017)

Military Avionics Division

SR. SOFTWARE ENGINEER - LRU Test and Qualification

Developed Test Program Tests (TPS) using National Instruments Teststand and LabWindows/CVI for testing F-35 Avionics Line Replaceable Units (LRUs).

TDG Aerospace, Inc. - Escondido, CA

(June 2013 - Oct 2016)

ENGINEERING CONSULTANT - Software Development

Designed and developed data acquisition, wireless monitoring applications in LabWindows/CVI to monitor temperature, vibration and frequency data collected from heavy machinery, used in industrial monitoring applications, installed at pumping stations, storage tank farms, etc. Application contained interactive UI and plotting facilities. Integrated Linear Technology wireless HART products into overall system.

Covidien, PLC - Carlsbad, CA

(Aug 2011 - May 2012)

ENGINEERING CONSULTANT - Test and Evaluation

2011 to 2012: Developed test software in LabWindows/CVI, LabView, HTML and Javascript for field testing of new medical ventilator device. Created sophisticated Point-and-Click User Interfaces. Converted deprecated database driver to SQL compliant queries.

The Boeing Company - Long Beach, CA

(Dec 2005 - Jan 2011)

Boeing Defense, Space & Security, B-1B Support Systems

SR. TEST & EVALUATION ENGINEER

Designed & implemented tests for various B-1B Line Replaceable Units for power distribution and control. HW design of Interface Test Adapters (ITA), development of Test Program Sets (TPS) & SW design using LabWindows/CVI, LabView, ATLAS, TestStudio, HTML & Javascript. Performed verification, validation and systems integration testing according to test requirements. Prepared, peer reviewed and released associated Test Plans, Acceptance Test Procedures, Acceptance Test Reports, and Software Description documents. Worked substantial Amount of time off-site at Dyess AFB to support B-1B systems integration and test activities, and performed sell-off with DCMA. Completed Project Management Training, and participated in supporting organization-wide CMMI related issues to ensure compliance with, and maintenance of Boeing's Level 5 CMMI certification. Conducted projects in accordance with Earned Value Management (EVM) principles.

CryoCor, Inc. - Carlsbad, CA

(Jan 2006 - Mar 2006)

ENGINEERING CONSULTANT - Software QA

Conducted software quality assurance peer review, made recommendations to improve operational performance and reliability for company's cryogenic ablation device.

Guidant Corporation - Temecula, CA

(Jul 2000 - Apr 2003, 2006)

ENGINEERING CONSULTANT / VENDOR - Firmware Development & Test

Development of an embedded medical device (RF Ablation Generator) instrument using three 8051 derivative based processors in 'C' and assembly language. Implementation included thermocouple temperature input, monitoring RF outputs, user interface and I/O functions, including linearization, calibration and PID control loops. Implemented white-box test setups for critical control software functions. Analog and digital circuit design and modifications including PLD and GAL designs. Designed, tested & custom manufactured production run of proprietary continuity sensor for catheter production line jig. Designed & built pulse train detection circuit for ultrasonic transducer.

TVN Entertainment Corp. - Burbank, CA

(Aug 1989 - Jul 2000)

ENGINEERING CONSULTANT / VENDOR - Lead Systems Architect

Project lead engineer for the conceptual design, system analysis and implementation of a controlled access Direct Broadcast System (DBS) via satellite. Generated and presented technical proposal and led implementation phase of the conditional access system through deployment. Developed real-time communications and control software for satellite uplink facility written in VAX "C", operating in a VAX/VMS cluster environment and real-time On Line Transaction Processing (OLTP) System for automated order taking over inbound T1 trunks, including interactive voice response applications. Included ANI-based order capturing, automated order processing, verifying transactions against on-line databases and forwarding subscriber authorization information to a cluster of PCs over an IEEE 802.3 (Ethernet) network, using TCP/IP. Developed large relational database design for customers and orders. Implemented user interface programs for database management and system control. Designed & developed Billing Driver to interface to AS/400 system using TCP sockets.

----- PROJECT EXPERIENCE SUMMARY -----

- Developed and conducted SW quality assurance tests for developmental aircraft programs for flight and weapon systems control for Windows and Linux based platforms. Held and attended peer reviews for verification against requirements using agile devops.
- Generated functional requirements for U-2 mission planning application in JAVA running on Red Hat Linux platform. Tested and modified code, maintained discrepancy database, performed regression testing prior to incremental version release.
- Designed Test Program Sets (TPS) for F-35 avionics system integration using Labwindows/CVI and Teststand National Instruments toolsets against Software Requirements Specifications (SRS) with extensive interfaces to programmable instrumentation.
- Created TPS for LRUs used in Missile Defense Radars using Labwindows/CVI.
- Primary systems architect and developer for windows based vibration monitoring application using Labwindows/CVI. Designed and maintained functional requirements and incorporated customer feedback based on test installations in the field.
- Designed & implemented tests for various B-1B Line Replaceable Units for power distribution and control. HW design of Interface Test Adapters (ITA), development of Test Program Sets (TPS) & SW design using LabWindows/CVI. Prepared, peer reviewed and released associated Test Plans, Acceptance Test Procedures, Acceptance Test Reports, and Software Description documents.
- Designed and coded firmware in assembly language for Pressure Transfer Standard used to test and calibrate aircraft pitot-static systems.
- Created TPS for Gas Hydraulic Units (GHUs) for all three stages of the C4 and D5 Trident missiles, Used for acceptance testing prior to installation in missile.
- Worked on various micro-controller based firmware projects using in circuit emulators and cross compilers. Use of array of test equipment including oscilloscopes, logic analyzers, power supplies, etc.
- Project lead and systems architect for first in nation Pay-Per-View satellite movie service on C-Band. Developed real-time communications and control software for satellite uplink facility. Developed large relational database for customers and orders. Implemented user interface programs for database management and system control.