

William R. DeHaven

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Education: BS in physics, Kansas State University, 1997, 3.2 GPA

* Research paper published in Physical Review A, 57 292, 1998

* Recipient of first annual John Giese scholarship in physics at K-State

* Member sigma-Pi-Sigma national physics honor society

Objective: I am self-taught in electronics and RF/analog engineering. I am a people person and a good team member with a cheerful, positive attitude and many years experience in electronics technology. It is my desire to continue to develop my engineering skills by participating in the development of cutting-edge technology.

Brief Skill summary:

Electronic Hardware used professionally:

All common electronic and RF test equipment plus; vector network analyzers, signal generators, arbitrary waveform generators, spectrum analyzers, bit error rate test sets, RF phase noise test sets, and numerous specialized test devices.

Engineering Software used professionally:

Ansoft Designer, Orcad Capture, Orcad Layout, Matlab, GNU Octave, LTSpice IV, Qucs, Microsoft office suite and OpenOffice suite.

Programming languages used professionally:

Matlab, Octave, HTML, PHP, Javascript.

Programming languages used in pursuit of hobbies:

(familiar but not professionally tested)

Python, C, C++, Java, SQL (MySQL).

Professional Experience:

Aug 08, 2011 to present;

Contract RF Engineer for Innovative Solutions of San Diego, Ca.
Assigned to the SAIC, Kent Washington facility. Work included design and breadboarding of a low noise, constant group delay ELF I.F. Chain and ADC for a classified IRAD project.

February 23, 2011 to Aug 08, 2011: unemployed due to SAIC workforce reduction.

RF/Analog Engineer (Engineer II); March 2008 to March 2011

SAIC Rapid Systems Solutions Division in Kent, Washington.

Security Clearance: TS/SCI+

My first SAIC engineering assignment provided me the opportunity to design miscellaneous RF filters, and switching and linear power supplies for a classified digital receiver project. I employed a combination of Spice and Ansoft Designer

simulations in tandem with testing of physical breadboard assemblies to verify their performance.

I wrote the Matlab scripts to automate the testing of this receiver. I also specified, purchased, assembled, and calibrated the automated test equipment used to test it. Then I used this test setup for two years to test the completed product. I designed, built, and calibrated a bit error rate test set, clock generators, and RF test filters for this project which were employed in the final performance test.

I was also involved in the final assembly of the product. I developed the thermal profile for an ERSO IR soldering machine to solder 640-column CGA FPGAs (\$22k each) to the main circuit board and I personally performed all the FPGA attachment procedures for the project. I also performed circuit repairs and modifications and designed and installed RF shielding to stabilize high-gain RF circuits.

My second SAIC assignment was assisting in the design and testing of an electrically small, broadband VHF/UHF receive antenna. I performed numerous Qucs, Ansoft Designer, HFSS and NEC2++ simulations to help predict the effects of circuit modifications and uncontrolled environmental factors upon the antenna performance.

I designed and built several specialized RF component test jigs to facilitate collection of S-parameter data with a vector network analyzer for transformers and MESFETS used in the antenna project. These S-parameter blocks became the core components of several Qucs and Ansoft Designer circuit models. (*Qucs is the open-source "Quite Universal Circuit Simulator".*)

Twice I traveled to the SAIC anechoic chamber in South Carolina to perform gain and noise (G/T) performance tests upon the prototypes of this antenna.

RF/Analog Technician; March 2007 March 2008

SAIC Rapid Systems Solutions Division in Kent, Washington

During my first year with SAIC I provided technical support to a team of RF engineers while I studied continuously to learn the fundamentals of RF and analog engineering. My duties included test, characterization, and alignment of numerous RF devices, environmental test of switching power supplies, construction of specialized test equipment, certified soldering, development of attach processes for column grid array ICs, procurement and testing of space-qualified electronic components, and design and layout of printed circuit assemblies using Orcad Capture and Orcad Layout.

Avionics Technician; August 2006 January 2007

Honeywell Avionics manufacturing facility in Redmond, Washington

Temporary assignment through Manpower Professional. Troubleshoot and repaired complex avionics switching power supplies. Manufacturing of this product was relocated to Kansas in January of 2007. Using Ltspice to simulate sections of these power supplies, I was able to troubleshoot, repair, and return to service dozens of high-powered switching power supplies which three technicians before me had failed to repair.

Avionics and I.T. Manager; June 1999 May 2006

Spencer Aircraft of Puyallup, Washington

Sales, installation, and repair of general aviation avionics systems and

supervision of technicians also performing repair and installation work. Design, coding, installation, and maintenance of company E-commerce website. Installation and maintenance of PC network, POS software system, and network firewalls. Network was windows 2000 machines. Website was hosted on remote Debian Linux server using PHP-5, Javascript, HTML, CSS, Perl, Apache and MySQL. Developed and maintained company Exim-4 based email system. Performed all FAA liaison activities for the FAA repair station.

Avionics Repair Technician; September 1997 June 1999
Honeywell Avionics repair facility, Renton, Washington

Bench repair of miscellaneous flight control system components.

Physics Student; June 1994 May 1997
Kansas State University, Manhattan, Kansas

Earned BS in Physics, performed research in atomic physics;
See paper in Physical Review A, 57 292, 1998.
Developed teaching website on laser physics for the KSU physics education department.
Authored magazine article about development of this website, published in "Computers in Physics", September, 1997.

Avionics Manager; June 1989 June 1994
Bob's Aircraft and Avionics, Puyallup, WA.
Responsible to FAA and shop owners for operation of an FAA certified avionics installation and repair facility.

Avionics Repair Technician and Inspector; January 1976 June 1989
Collins Rockwell Avionics repair facility in Wichita, Kansas
Bench repair to the component level of all types of business-class avionics systems manufactured by Collins Rockwell. One year of this time I worked as a Customer Service Product Specialist Engineer for Collins Air Transport division in Cedar Rapids, Iowa.

Avionics Repair Technician; January 1973 January 1976
Gates Learjet Corporation customer service avionics lab in Wichita, Kansas

Component-level repair of all avionics systems installed in the Gates Learjet.

Miscellaneous: References provided upon request.