

Chris Watts B.Sc

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SUMMARY

A highly qualified RF Design Engineer, Systems Engineer, and Field Applications Engineer with 42 years' experience in the industry. Possess deep knowledge of the regulatory environment, RF design and test, system design, equipment design integration, and latterly frequency control products and their market. Provides the skills and knowledge that are an essential part of the product definition, design, and production process.

CAREER HISTORY

Golledge Electronics Limited Feb 2014 to October 2025

Primarily the FAE for Golledge with a deep knowledge of crystals, TCXOs, OCXOs, and SAW and crystal filters. I have helped many design engineers select and get the most out of Golledge products. I provided a design verification service, correcting designs as required. I also work with the quality manager checking customer complaints.

Bayford Systems Limited Feb 2013 to present

My own consultancy company. Won a design contract on the first day of business. Specialised RF design work for the licence free and medical electronics sectors.

- Implemented a SoC radio design including simulation and PCB layout. Then test and debug.
- Simulated a new RF module design that involved innovative production techniques.

BSL was mothballed when I got a good offer from Golledge.

Microsemi (was Zarlink Semiconductor) March 2007 to Feb 2013

Working mainly on the product specification and design of radio modules working in the medical radio bands 401 to 406 MHz. RF IC design, working with teams in Sweden and the USA.

- Created an IC design specification based on marketing product briefs, regulatory requirements, and input from team members.
- Produced link budgets and interferer analysis for product specifications.
- Led module designs right from initial specification through to production proving.
- Provided RF test expertise that has been an essential part of de-bugging the production test of a complex RF IC. Contributed to the architecture definition of a new RF IC.

Software Radio Technology March 2001 to March 2007

Working mainly on TETRA designs, including system level and circuit level designs. Team leader for the RF team. Provided the technical expertise to back up the sales and delivery teams.

- Defined the architecture of the receivers for a base station and a handset, as well as circuit design and integration of all the parts of the radio.
- Selected to perform a customer facing role in SRT travelling to China, South Korea, Japan, Denmark, and Italy.

- Progressed radio designs through SMT factories in China and Korea.
- Provided customer training, so that the customers engineers can maintain the design, and train their own production fault finding staff.
- Produced a development proposal to produce a lightweight aircraft transponder.

Great Circle Design

October 1997 to March 2001

Due to the very small size of this company, and more active projects than engineers, projects were usually completed by just one engineer, so designed the case for a project and everything in it. Working on radio equipment for the low power radio market as well a military project. Consultancy work,

- Created a 1.6Mbits/sec radio data link.
- Designed radio modules for the sub 1GHz licence free bands.
- Monitored the progress of a company contracted to do an RF IC design.

Siemens Plessey Systems

August 1989 to October 1997

Started with RF design work on all parts of the radio and then took technical leadership of the integration effort.

- Took a UHF receiver from initial feasibility and bid preparation, to pre-production phase, doing system level design then RF circuit design and defining digital control algorithms.
- Antenna modelling and design.
- Working on a VHF combat net radio.

Marconi Secure Radio

January 1988 to August 1989

Working on a handheld transceiver, a combat net radio and a vehicle mounted 50W RF PA.

Plessey Avionics

August 1983 to December 1987

Working in the new systems and techniques laboratory on many projects including a RADAR target simulator and a GPS receiver. Designed the RF part of a missile borne UHF receiver.

EDUCATION

Degree Course

B.S.c. Hons Electronic Engineering Grade 2.2. Graduated June 1983.

IT skills

Experienced in the use of RF simulators by AWR, Agilent, Cadence, and Ansoft and experienced in using spice at the netlist level. Experienced in the creation of programs using LabView. Setup of TI code composer, and C debug of others code. Experienced in simulation work using Matlab and Simulink. Written programs in Microsoft Visual Basic.

PCB design using Altium Designer, Eagle, and Protel.

IT support role at GCD (someone had to do it). Experienced in the setup of simple computer networks. User of Linux as well as Windows systems and drives the usual office stuff including MS Project.

RESPONSIBILITIES AND ORGANISATION SKILLS

Successfully working from home for four and a half years and so can manage own time well and working independently. Hybrid working since 2019 equally successfully.

At SRT was RF team leader, responsible for the career progression of junior engineers, organising training where required, and arranging tasks that allow learning on-the-job.

At GCD most projects were one-man projects due to the size of the company. Other than finance was in full control of projects.

At SPS ran a one-man project which was a feasibility study including design and build of a UHF receiver and presentation the design solution to the customer along with estimates for development and production costs. This led to the development and production contract (in excess of £1M) being awarded.

LEISURE INTERESTS

Since working for Golledge, and hence doing not so much design work, I have got back into Amateur Radio (call-sign G8SEK). Published one technical article in RadCom. While no longer so active in the folk music scene I still go to a few festivals each year.