Frank D.M. Wilson


# Curriculum Vitae


4 Bramling Court
Nine Acres
Ashford
Kent, TN24 9JS

0778–648–1709
fdmw@yahoo.com


**Objective**

A software design or engineering role commensurate with my experience and expertise. Particular interests include radar and air traffic control applications, real–time linux / Unix systems, neural networks and pattern recognition, HTML and website development, industrial process control.

**Experience**

SELF–EMPLOYED — Frankfurt, Germany
October 1997 – August 2003

On behalf of the German Air Navigation Service (DFS Deutsche Flügsicherung), performed software maintenance work on Germany's Air Traffic Control (ATC) system (DERD–X, DERD–XL). Expanded the system's capacity from 9 to 15 radars, and doubled the tracker capacity. Implemented network interface and format conversion software allowing the system to obtain radar data in new formats (ASTERIX, Mode S) via an FDDI network. Investigated and fixed software problems. Supported studies of tracker accuracy with the goal of more efficient airspace utilization. Took part in porting the system to a newer and more powerful 64–bit hardware platform (Compaq Alpha running Tru64 Unix), enabling the system to remain in operation for several years beyond its originally–anticipated lifetime.

RAYTHEON INC. — Marlborough, Massachusetts
September 1985 – September 1997

Designed and implemented radar processing, tracking and real-time quality control software for ATC display systems currently in use in Norway, Germany, and Canada. Designed and coded data recording and playback software and various other algorithms for the Terminal Doppler Weather Radar (TDWR) system, for the U.S. Government. Experience both as an individual contributor and as a manager of groups of up to 7–9 other engineers.

SYSTEMS DESIGNERS PLC — Fleet, Hampshire
April 1982 – May 1985

Assigned to Systems Designers' client ASEA AB, based in Västerås, Sweden. Designed and implemented a suite of file transfer software for communication between a Modcomp CLASSIC minicomputer and a Honeywell mainframe. Managed a small team responsible for quality control aspects of a Motorola 68000 based modular industrial process control product. Designed and implemented a real-time test bed capable of supporting the product's wide range of internal and external interfaces.

Data Logic Ltd. — Ruislip, Middlesex
August 1979 – March 1982

Designed and implemented target tracking software, and designed adaptive reflection suppression software for a secondary radar (SSR) plot extractor developed by Cossor Electronics for the U.K. Government. The software was implemented on Intel 8086/7 hardware, using the MASCOT design methodology.

**Education**

St. John's College, University of Cambridge — Cambridge, England
B.A., Mathematics / Computer Science, 1979
M.A., 1983

Boston University — Boston, Massachusetts
M.Sc., Computer Science, 1991
Ph.D., Cognitive and Neural Systems, 1996

**Computer experience**

**Software:** C, Ada, Pascal, HTML, C++, PL/M, FORTRAN, CASE tools (Software through Pictures, ProMod, MASCOT), LaTeX

**Systems:** UNIX (various platforms), linux, X–windows, MS-Windows, IBM PC, Motorola 88000, Motorola 68000, VAX/VMS, Siemens 300

**Other achievements**

Teaching assistant for Prof. M. Cohen's course in neural speech models, at Boston University (Spring 1995).

Experience of living and working in four different countries (U.K., U.S.A., Germany, Sweden). Working knowledge of German and Swedish.

**Publications**

"ARTMAP–DS: Pattern Discrimination by Discounting Similarities" (with G. Carpenter). *Artificial Neural Networks – ICANN'97* proceedings. Berlin: Springer, 1997.

"Neural networks for noise–tolerant category discrimination with application to continuous speech segmentation" (Ph.D. thesis, January 1996).

"Gated dipoles for operant conditioning" (with P. Gaudiano and D. Surmeli). *Neural Networks*, **7**(2), 1994.

"Learning to fly in Sweden". *Pilot*, **20**(5), 1986.

**Professional affiliations**

Member of I.E.E.E.

**References**

To be provided on request.