**PERSONAL DETAILS**

**Name:** Trevor Anthony **MILLBERY**

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Colden Common,

Winchester,

Hampshire.

SO21 1TZ

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**Date of Birth:** 27th September, 1956

**Nationality:** British

**Highest Academic Qualification:** Bachelor of Technology (2.1) in Electrical Engineering

Brunel University 1979

**CURRENT EMPLOYMENT**

**Jul 2007 Barnes International Ltd**

**to** The Loft, St Clair’s Farm

**present**  Wickham Road,

Droxford,

Hants.

SO32 3PW

**Principal Software Engineer**

Initially responsible for fixing outstanding bugs and updating and enhancing the PC software for Barnes’ magnetic stripe quality testers, the Magtester 3000 and Revo. Software written in C++ under Visual Studio 2003.

When Barnes became a member of the Global Platform group, I became responsible for implementing the software to run the GP-commissioned test suite for testing the GP 2.2 and GP 2.1.1 implementations on SIM and credit cards. This has involved enhancing the Barnes CPT Card Tester to interpret and run the individual test packages within the suite. The test packages are specified in XML as a sequence of test scenarios and an adaptation layer defines the functional operations within in each scenario. The adaptation layer implementation was written in C# under Visual Studio 2005 to run on Microsoft’s .Net Framework. During this time I have had to travel frequently to France and Spain to participate in various testing and debugging sessions with the test suite issuer, card manufacturers and other test tool manufacturers.

Loosely based on my Global Platform work, I developed a test system to generate test scripts in XML to be imported and run on a test engine application.

I then participated in a world-wide Client/Server card testing project for a global credit card issuer and was responsible for designing and implementing the Client GUI application, which hosted a PC/SC card reader and communicated with the server using HTTP and IIS. This was written in C# running on .Net framework 4.5.2 and was multithreaded using my own asynchronous thread class and written so that the GUI could be rebranded for other customers.

Since then I have developed a multi-protocol communications layer for Client/Server interaction allowing interconnection via HTTP, TCP/IP or pipes, as a building block for Barnes products, again in C# running on .Net Framework.

**EXPERIENCE OVERVIEW**

**General:-**

From the type of projects with which I have been involved, I have developed a thorough understanding of real-time systems, software techniques and languages, especially multi-threaded, object-oriented development with C++ (18 years) and latterly C# (12 years) and some Java under Windows. I have also had experience of Web Services under IIS and general C++ and C# development on the Microsoft .NET platform.

I have comprehensive knowledge of structured and object-oriented design principles, which I use to modularise my software to provide reusable building block libraries.

I have an excellent understanding of communication protocols and microprocessor/microcontroller applications in general, but would class myself as a software specialist rather than an expert in any particular applications field, that is to say, I am more interested in how to achieve the desired result rather than the specific area of application. In short, I enjoy problem solving.

**Hardware:-**

8080, 8085, 8088, 8086, 80186, 80286 based SBCs, 8031/8051based OEM hardware and PC Platforms.

**Software:-**

Visual Development Studio C (.NET and native Windows) C++ & C#, MFC, Borland C++ Builder and compilers, InstallShield and Wise installers, SourceGear Vault & Visual SourceSafe source control , PL/M-80, PL/M-86, PL/M-286, PL/M-51, Pascal-86.

**Operating Systems:-**

Windows (various flavours), iRMX88, iRMX86, iRMX286 / iRMXII, VRTX.

**Development Systems:-**

Windows PC Platforms, Intel (Series II and III MDS, 86/330, 86/310 & 86/320), VAX 11/750 and VAX-CLUSTER, SUN workstation.

**Debugging Equipment:-**

ICE-80, ICE-85, ICE-51, ICE-86, I2ICE, DICE-86, Microtek MICE-II and electronic test equipment, including logic, protocol analysers and oscilloscopes.

**Relevant Technical Courses:-**

Microsoft .NET Introduction (Intel)

Java Programming (Learning Tree)

Object-Oriented programming (Object Designers)

Object-Oriented Analysis & Design (Object Designers)

Object-Oriented Programming with C++ (Object Designers)

ISDN & ATM Course (4-Sight)

TCP/IP Course (4-Sight & Bournemouth University)

iRMX86 (Intel)

**PREVIOUS EMPLOYMENT HISTORY**

**Nov 99 Dialogic Telecom Ltd / Intel Corporation (UK) Ltd / Envox UK Ltd**

**to 260, Wharfedale Road,**

**Jun 2007 Winnersh Triangle,**

**Reading**,

Berks.

RG41 5TP

**Principal Software Engineer**

A member of the Intel / Dialogic team responsible for the maintenance and enhancement of their “CT Connect” CTI middleware product – client-server software supplying a common client API irrespective of the protocol used by the PBX(s) to which it connects via the PBX CTI link(s). Main area of responsibility, the enhancement and customer support of the CTSA I and CSTA II ASN.1 protocol interfaces to supported PBXs. Followed this with the development of a CSTA III ASN.1 protocol interface library. Took over support of the CSTA II PBX Software Simulator and further enhanced it by creating a CSTA III variant. Further development of various gateway protocol converters to interface to non-CSTA PBXs.

Core product written in C running under Windows. Gateway products and Switch Simulator written in C++. Attended Learning Tree Java course and gained experience with Java maintaining the CT Connect management utilities.

With the publication of the XML version of the ECMA CSTA III protocol, investigated the development of a Web Services front-end for CT Connect using C# and managed C++ on the .NET platform with specific experience of integrating managed and unmanaged code. Although an experimental success, found inherent deficiencies in the Web Services model for asynchronous event notification as specified in the ECMA CSTA III specification.

In my last six months with Envox, was involved in the development of a SIP front-end for CT Connect.

Have submitted two software patents for consideration by Intel and have had one processed and adopted by the USA Patent Authority.

**Nov 97 Eurotel Telecom Limited**

**to** St.George’s House,

**Nov 99** St. George’s Street,

Winchester,

Hants.

SO23 8BG

**Senior Software Engineer**

Eurotel manufactured telephony routing boxes for routing residential and business telephone calls to indirect telephony carriers offering cheaper tariffs than the national PTT for national and international calls. The routers were installed at customer premises and managed using Eurotel’s suite of management software by the indirect carriers themselves. Eurotel’s main areas of operations were the UK, Italy and Scandinavia.

Was responsible for adding new features to the Management Suite which consisted of both 32 bit Windows applications and 16 bit legacy applications. Primarily worked with Borland C++ Builder but also used the Borland C++ compiler and Zap libraries. Developed a compiler and platform independent Class Library to aid me in my 32 bit work and to allow the core software to be portable between the management system and the routers.

A major part of my work was the integration of a 3rd-party router into Eurotel’s management suite, necessitating new configuration and service call processing applications; the latter interfacing to Microsoft’s TAPI call processing software. Also responsible for the adoption of Microsoft’s Visual SourceSafe for source code control.

**July 95 4-Sight (International) Ltd.**

**to** 64-68, Norwich Avenue West,

**Nov 97** Bournemouth,

Dorset.

BH2 6AW.

**Principal Software Engineer**

4-Sight provided ISDN communication and workflow packages for the pre-press industry throughout the world. Initially Macintosh based, 4-Sight decided to enter the PC Windows world due the general pre-press trend away from Macintosh towards PCs.

Recruited for my previous experience of voice-messaging (which was thought applicable to 4-Sight’s iSDN Manager product) and also PC development with Windows and C++. Working in a team of three, my initial assignment was to design and implement the ISDN communications application to use 4-Sight’s Rapido protocol with ISDN channel-bundling, interfacing to ISDN PC cards using the CAPI interface. To implement the real-time aspects, developed a multithreaded message based framework using MFC and Visual C++, interfacing to the Win32 API, effectively a real-time OS API running on top of Windows95 or WindowsNT.

Following this, developed another application to automatically extract received files. Other responsibilities included liaising with ISDN card manufacturers, special implementations of the Windows iSDN Manager product, general trouble-shooting and creating product installers using InstallShield Express.

**Jan 93 NOKIA Telecommunications Ltd.**

**to** Admiralty Way, Southern Trade Centre,

**July 95** Blackwater,

Camberley,

Surrey.

**Project Leader/Senior Software Engineer**

Initially employed to undertake validation of GSM Base Station software releases, with the intention of moving onto the design of software for the next generation of Base Stations. However, quickly re-assigned as Project Leader, reporting to the R&D Manager, to develop a replacement Service Configuration Utility for the DCS 1800 variant Base Stations.

Responsible for the design and implementation of this Utility Program using object-oriented techniques with C++, interfacing to the Zinc libraries to run under DOS and Windows 3.1 on 386 and 486 based PCs. As Project Leader, was also responsible for planning the project timescales and producing requirement and functional specifications for in-house software and for enhancements to software supplied from Finland.

**May 91 BNR Europe Ltd.**

**to** European Transmission System Engineering

**Dec 92**  Llantarnam Park,

Cwmbran,

Gwent

**Contract Software Engineer**

Employed at BNR on an update program for their "Network-300" private communications network product. This involved designing, implementing and testing new features specified by the Marketing Unit and re-designing existing areas of software to improve their performance and reliability.

The Network-300 product consisted of two types of equipment. The Node, a multiplexer / demultiplexer, housing interface and transmission electronics and responsible for concentrating data from the terminating equipment into 2Mbit PCM data streams and vice versa, and the Manager which is responsible for performing housekeeping duties on groups of Nodes within the network.

Primary responsibility was for the Node Software programmed in a combination of C, Pascal, PL/M-86 and assembler, using iRMX86 and running on an 80186 processor.

**Dec 89 Seimens Plessey Defence Systems Ltd.**

**to** Grange Road,

**Apr 91** Christchurch,

Dorset

**Contract Software Engineer**

Employed on two different projects to design, code and test the firmware for I/O linecards using PL/M-86 running on 8088 processors. First assignment was to provide the firmware for a line card forming an interface between the host computer and the combat radio net equipment. The purpose of the card was to control the transfer of data between stations on the radio net using level 4, 2 and 1 protocols based on the X75 and NATO net access standards.

Second assignment was to provide the support and character handling firmware for a message-switch line card with six lines capable of being configured in a mixture of synchronous and asynchronous-PAD modes

**March 86 Storno Ltd.**

**to** (latterly Motorola-Storno Ltd. Basingstoke)

**Nov 89**  Frimley Road,

Camberley,

Surrey

**Team Leader/Contract Software Engineer**

Responsible for designing and developing software for the central control unit of radio systems for the emergency services and other customers which utilised the MPT1327 and MPT1343 transmission and usage standards. In total completed projects for seven customers (including four fire brigades, one ambulance service and one police force). Also contributed to the development of Storno's Starnet trunked radio system.

During the last two years of this contract, became Software Team Leader for Storno's Private Mobile Radio (PMR) Group. In this role, developed a design and implementation technique loosely based on the Mascot design method and using data abstraction and object-oriented modular techniques for code implementation, allowing the partition of the software and allocation to individual team members.

First two projects were written in PL/M-86 running under Intel's iRMX88 executive. This was superseded by the iRMX86 operating system and lastly, by iRMX286. The system hardware was also upgraded from 8086 processors to 80286 processors which were used in both real and protected modes. Also gained experience of PL/M-51 running on 8031 processors.

**Jan 83 Information Technology Limited**

**to** Technology House,

**Mar 86**  Victoria Road,

Winchester,

Hampshire

**Senior Software Engineer**

Was a member of a small expert project team with the brief to bring a telephony voice messaging system from initial design and development through to market acceptability.

The software for the system was written in Intel's Pascal-86 running under the iRMX86 operating system, initially on an 8086 iSBC and later on an in-house 80186-based CPU board.

**Mar 82 G P Elliott Electronic Systems Ltd.**

**to** 8, Deer Park Road,

**Dec 82**  Merton,

Surrey

**Software Engineer**

Responsible for adapting G P Elliott’s standard Fire & Gas Safety System to individual customer requirements and incorporating new types of hazard detectors into the system.

The software for the parts of the system for which I was responsible was written in PL/M-80 to run on 8085-based iSBC and in-house boards.

**Sep 79 Scicon Consultancy International Ltd.**

**to** 49-55, Berners Street,

**Mar 82** London

**Analyst/Programmer**

Joined Scicon directly after graduating from Brunel University and was employed in the Automation Division. During this period, was involved in two projects from the initial stages of client discussion and specification, through to design, testing and documentation.

Started writing software in PL/M-80 running on 8080 processors and then migrated to PL/M-86 and iRMX86 running on 8086 processors.