

PERSONAL DETAILS

Date of birth: 9th February 1971
Location: Tauranga, New Zealand
Email: andrew@andrewt.com
Telephone: +64 (0) 21 334097

PROFILE

I am a skilled and highly motivated software developer with over 25 years of commercial design and programming experience. During this time I have been involved in all aspects of software development, from initial requirements and design through to testing and support. I have worked on a wide range of projects, from firmware to websites, on a variety of platforms.

SKILLS SUMMARY

Programming Languages/Technologies

C#/VB .Net (8+ years)
C/C++ (10+ years)
Java (5+ years)
Kotlin (1 year)
Swift (1 year)
Javascript/Typescript (5 years); some experience with Angular 2/jQuery/KendoUI
IoC/DI with Castle Windsor/Autofac/Unity/LinFu/Dagger (Android)/Swinject (iOS)
Entity Framework and NHibernate ORMs

Unit testing in C# using xUnit/NUnit/MSTest, Rhino Mocks (3.3+) and Moq (4.0+)
Unit testing in Android and iOS development
Unit testing in Javascript using Jasmine
Continuous Integration/deployment using CruiseControl/TFS/Jenkins/Azure DevOps
Source Control with Git, TFS, Mercurial and Subversion

Microsoft ASP.NET and MVC 2 – 5 (including WebAPI)
Microsoft SQL Server 2005+
Microsoft .NET Framework 1.0+
Microsoft WPF and WCF
Microsoft Visual Studio all versions
Android Development using Android Studio, IntelliJ IDEA and Eclipse
Microsoft Windows Mobile development using Embedded Visual C++ 3.0/4.0 and .NET Compact Framework
Network programming, Winsock, TCP/IP and application level protocols (eg. HTTP, FTP)
Microsoft Visual C++ 1.0-6.0, MFC 2.0-6.0, ATL; Win32 SDK for Windows 9x, NT, 2000 and XP; OLE/COM
Symbian OS 7.0-9.2 (UIQ 2.0-3.1)

WORK EXPERIENCE

October 2016 – December 2018: Bluelab Corporation

Primary technologies: Android (Java), iOS (Swift), C#, ASP.NET, MVC 5 Web API, SQL Server, Azure, Embedded C

As a **senior software engineer** I completed a number of projects at Bluelab (often as the sole developer):

- a new Azure-hosted service that receives plant monitoring data from Bluelab devices (via a desktop app); several hundred devices reporting every 20 seconds or so
- Android and iOS apps communicating with the service to allow users to see the above data
- an Android app to provide the UI for a new monitoring device communicating via Bluetooth (I also laid the groundwork for the iOS version before I left)
- rewrote the firmware for the flagship Pro Controller device; written in C with extensive unit tests

I also provided input to the UI/UX for many of these, and helped out with other software/firmware projects.

May 2016 – August 2016: BitRocket (contract)

Primary technologies: C#, ASP.NET, MVC 5 Web API, SQL Server 2014, Typescript, Angular 2, D3, HTML, Azure

I was the **sole developer** on a new project to implement a bespoke web-based grazing planner application for a farm owner. This was a multi-farm, multi-user system, allowing farm managers to optimise the use of their paddocks by planning where and when to place their cattle/sheep.

It consists of an Angular 2 single page app, communicating with an MVC-based REST API, through to a SQL Server database. The API and database are hosted in Azure, and are deployed automatically from a Visual Studio Team Services (now Azure DevOps) CI build.

February 2015 – April 2016: Reckon (contract)

Primary technologies: C#, ASP.NET, MVC 5, SQL Server 2012/2014, Javascript (jQuery/KendoUI), HTML

I was a **senior developer** on the Reckon One team, Reckon's cloud accounting product. This is a multi-tier web application, and I worked on all areas of the project stack and some of the internal services it uses – Javascript/HTML front-end, MVC/C#/WCF, Entity Framework, SQL Server Database.

Although a contractor, I quickly established myself as part of the team and became known for producing quality work – as a result I was often given some of the more tricky (and interesting) tasks. I also helped drive the adoption of unit testing (using **xUnit** for C# and **Jasmine** for Javascript) and had responsibility for maintaining the internal nuget package for shared, cross-project functionality.

June 2014 – Present: GP Central

Primary technologies: Android, Java, Azure, C#, ASP.NET, MVC, Visual Studio 2015, SQLite

I developed GP Central to provide everything a Formula 1 fan needs in one mobile app: race calendar, results, championship standings and news feeds (RSS). It is available on Google Play at <https://play.google.com/store/apps/details?id=com.andrewt.gpcentral>

As there are no publicly available result feeds, I also had to implement my own service to provide results to the app. This service is implemented using ASP.NET Web API, hosted on **Microsoft Azure**, and automatically updates its own local database by scraping the formula1.com website.

November 2013 – June 2014: Wynyard Group

Primary technologies: C#, ASP.NET, SignalR, HTML, Javascript, Powershell

As a **senior developer** of the *Common Modules* team I was involved in implementing cross-product functionality across Wynyard's suite of Crime Analytics applications.

I mainly worked on integrating the user logon flow between two of their products (*Financial Crime* and *Intelligence*) and improving their automated build/install processes.

September 2012 – November 2013: MCOM/Fiserv

Primary technologies: C#, ASP.NET, MVC, WCF, SQL Server, HTML, Javascript

I was a **senior developer** in the *Mobiliti Advantage* team, helping to produce their mobile banking product. This is a large-scale, multi-tier solution consisting of multiple mobile/web applications, web services, database and bank integration components. This core product is then customised for individual banks by the professional services team, for whom I worked for my first 11 months at MCOM.

I worked on various aspects of a number of different projects: implementing key infrastructure modules in **C#**; integrating with internal and external services using **WCF**; building customised mobile banking websites using **ASP.NET/MVC** and **Javascript**. Unit testing was done with **MSTest**, and behavioural testing with **SpecFlow**.

As a senior member of the team I also contributed to the internal documentation wiki and helped support more junior developers.

January 2010 – June 2012: Swinton Insurance

Primary technologies: C#, ASP.NET, MVC, SQL Server, HTML, Javascript

I was a **senior developer** on the web team at Swinton, mainly working on the customer quote-and-buy websites and the associated web service interfaces to insurance aggregators (CompareTheMarket, etc).

When I joined the company the sites were all developed in **ASP.NET** and I was a key member in the successful redesign of all the customer-facing quote websites using **MVC** and **Castle Windsor IoC**.

All development was test-driven using **NUnit** and **Rhino Mocks**, with **Continuous Integration** using CruiseControl. I helped introduce **TDD** in **Javascript** using **Jasmine**, and I integrated that into the CI builds leading to a large reduction in Javascript defects (especially regressions). I also automated most of the post-build publish/deployment steps that were previously manual processes.

I also developed a secure system for storing credit card details to enable Swinton to take continuous payments from those cards. This used **Castle Windsor** and **NHibernate**, and a **HSM** (Hardware Security Module) for secure key storage.

February 2008 – January 2010: Cold End Services (contract)

Primary technologies: C#, WPF, WCF, C++, Windows Embedded

Cold End Services sell and refurbish inspection machines that work on glass bottle production lines. Their existing machines had Intel 486-based computer controllers that are over 20 years old and so, as the parts for these controllers are becoming impossible to replace, I was contracted to design and write replacement control software for a modern PC. The application is written in **C#/ .Net 3.5** with some **C++** at the core for low-level machine control, and tested with **NUnit** and **Rhino Mocks**.

I separated the application into a **WPF** UI for configuring the machine and viewing a variety of status information, and a service at the back end that actually controls the machine. These two pieces communicate via **WCF**, providing a level of robustness (UI and service are separate processes) and allowing the control UI to run remotely if required.

The software is running in a number of plants worldwide and has processed millions of bottles.

October 2006 – February 2008: Sony Ericsson (contract)

Primary technologies: C++, Symbian

I worked as a **software engineer** in the Messaging and Multimedia team at Sony Ericsson, on a number of different smartphones. I helped develop various applications including: MMS client; Walkman (music) Player; Image Editor; Blogging. The development was all in **C++**, on various flavours of **Symbian** (the core OS) and **UIQ** (the UI/windowing layer). I also helped the team implement a more **test-driven** approach to how they produced their software.

December 2004 – January 2010: Lightbulb Software Ltd.

Primary technologies: C#, C++, Windows Mobile, WinForms, ASP.NET

I was the **owner and lead developer** of Lightbulb Software, a company I started so that I could work on some ideas I'd had for mobile devices. The main product we worked on was Worldolio, a world clock and geographical information application (www.worldolio.com). There are versions for Pocket PC, Smartphone, desktop PC, as well as standard and mobile websites. We used .net 1.0/1.1 for web and desktop versions and predominantly **C++** on the mobile devices (for performance reasons).

I eventually made this freeware and it had several hundred downloads.

November 2000 – December 2004: VICS Ltd

Primary technologies: C++, Windows Mobile, Symbian, COM

VICS was a leading provider of video compression and video streaming technology (they were subsequently acquired by Zergo). They developed solutions for delivering video to a number of platforms, specifically mobile devices.

I joined VICS soon after the company's inception and spent most of my time as the **lead developer** for their video player products for mobile devices. The player applications communicated with a remote video portal to handle user payment and DRM (Digital Rights Management), as well as streaming video clips.

The players were designed around a portable core for playing videos and network communication, for which I developed my own cross platform subset of Microsoft's COM architecture. As a result, I implemented player applications for **PocketPC** based PDAs, **Microsoft Smartphones** and **Symbian** mobile phones with a minimum of platform-specific development.

I was also involved in the research and design of the **mobile portal** which was a one-stop-shop for users to browse and buy videos, ringtones, etc. via their phones, and just before I left I worked on improving the in-house video encoding tools with Microsoft **DirectX** technologies (specifically **DirectShow** and **DirectShow Editing Services**).

February 1994 – November 2000: Surfcontrol Plc

Primary technologies: C/C++, WinForms, ODBC, Windows sockets, Windows services/device drivers

Surfcontrol Plc (now part of Websense) is one of the leading companies in the Content Security market. They develop a suite of internet access control and monitoring products for the education, home and business markets.

I was an **architect** of the original SurfControl product, and I co-invented some of the technology on which the application was based (US Patent #6219786), namely a method to monitor and control internet connections from an arbitrary machine on a network.

All development was in C/C++ using **Microsoft Visual C++** and I worked on most aspects of the product including: a Windows NT device driver that 'sniffs' network packets and can block access at the packet level; a Windows NT service that logs connection information to a database via ODBC; and a number of administration user interface applications. I often acted as **team leader** for various projects.

Before working on SurfControl I was a **software engineer** on MultiView, the company's main product at the time. MultiView was a suite of UNIX connectivity applications providing terminal emulation, file transfer, email, etc. I had experience on most areas of the product and with a number of internet protocols (eg. FTP, telnet, SMTP).

September 1992 – February 1994: National Computing Centre (www.ncc.co.uk)

I was employed as a new graduate at the NCC working on CentreLink, a client/server data retrieval tool. CentreLink allowed client PCs to access data from mainframe and UNIX hosts via a number of communication protocols such as TCP/IP and IPX/ODI. It was written for Windows 3.1 in C++.

OTHER EXPERIENCE/OPEN SOURCE

In my spare time I work on a couple of open source projects with a friend (as well as maintaining my GP Central app).

Trailblazer (<https://bitbucket.org/andrewandderek/trailblazer>)

Trailblazer is a simple, quick and easy to use **Android** track recorder, for hiking, running, cycling etc, written in **Kotlin**. The app was inspired by MyTracks - a Google app that is now deprecated.

It is published in the Play Store: <https://play.google.com/store/apps/details?id=com.andrewandderek.trailblazer>

PodcastUtilities (<https://github.com/derekwilson/PodcastUtilities>)

This is a set of tools for downloading and synchronising podcasts. It is not intended to compete with iTunes, but is a simple, configurable, small-footprint means of downloading podcasts onto your pc and synchronising them to your phone/mp3 player.

It is written in **C#/ .Net 3.5**, with the **LinFu IoC** container, and uses **NUnit** and **Rhino Mocks** for testing.

EDUCATION/QUALIFICATIONS

October 1989 – July 1992: University of Newcastle-upon-Tyne (UK)

1st class BSc (Hons) degree in Computing Science and Maths

September 1994 – June 1995: Macclesfield College, Macclesfield (UK)

1 'A' level: Business Studies

September 1982 – June 1989: South Holderness School, Preston, Hull (UK)

3 'A' levels: Computing, Maths, Physics

1 'AO' level: Maths

10 'O' levels (including Maths and English)

HOBBIES/INTERESTS

I have always been into cars and motor racing (hence my GP Central mobile app), and I am currently rebuilding/restoring a 1967 Ford Mustang.

I also play badminton at Tauranga Badminton Club; I regularly go hiking/tramping; and I usually have a DIY project or two on the go.