

Tim Cannell | eWorker Ltd

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CURRENT EXPERIENCE

- Experienced, agile C++ programmer under both Windows and Linux with Git version control.
- Current Investment Banking experience extending life of legacy trading applications.
- Solving 32-bit and 64-bit binary interoperability issues.
- Migration of medium/long term Swap trades to replace LIBOR with alternative reference rates.
- C++ COM, COM surrogate and VB6 development.
- MSc Mathematics (2018).

CONTRACTS

Dec 20- April 23 **UBS (INFOSYS)** Broadgate, London

- Main developer on C++ application for phased migration of Swap trades from LIBOR to an ARR.
- Enable 32-bit VB6 GUI trading applications to use 64-bit C++ dependencies.
- Enable 64-bit MS-Excel to work with 32-bit C++ DLL dependency trees.
- MS-Excel XLL and COM add-in development.
- Use of COM surrogates to facilitate 32->64-bit binary interoperability.

May 20- Nov 20 **EWORKER LTD** London

- Development of C++ MFC MDI application to enable back testing of EOD trading strategies.
- Trading strategies evaluated by embedded and extended Python interpreter.
- Data downloaded automatically from Yahoo and stored in SQLite database.
- Automatic versioning of interesting strategies using Git SDK.
- Use of Boost, Scintilla and extensive customisation of a free CodeProject charting control.
- Work using Gitlab on a Synology NAS from my home office during pandemic.

May 19-May 20 **SKY** Osterley

- Development of SkyQ GUI in C++, on Mint Linux using QtCreator IDE.
- Agile development in small teams sharing large amounts of common code.
- Laying out of mobile and tablet screens using an in-house proprietary framework using fundamentally the same code base as the primary Sky set top box platform.
- Deep consideration of the effect of code base changes across multiple platforms.
- Use of Git, Jenkins and the Qt unit test framework.
- Work on site and from home office during pandemic.

May 17-Jan 19	CUBIC TRANSPORTATION LTD	Redhill
	<ul style="list-style-type: none"> • Full cycle agile development in small teams. • Use of MS Visual Studio, C++ 11 and MFC, to produce applications for a new Windows 10 touchscreen panel PC, that provides a UI for staff to control customer gates across all London Underground and Network Rail stations. • Development of tools to simulate host control of gates via serial port, and gate barcode scanners. • Use of Jenkins, GIT, the WiX installer toolset, the Google test framework, unit testing, static code analysis and engineering testing, to produce robust continuous integration and release solutions for all projects. 	
Feb 16-Mar 17	ALFRESCO	Maidenhead
	<ul style="list-style-type: none"> • Windows Explorer integration and GUI in WTL C++ for cloud-based Enterprise document repository solution 'Alfresco One', involving COM shell extension and executable development. • Liaison with UX team to realise UI design. • Agile development using GIT, Visual Studio and Bamboo automated builds. • PowerShell scripting for build server artefact version stamping. 	
Nov 15-Jan 16	STINK DIGITAL	Old Street, London
	<ul style="list-style-type: none"> • C++ on Linux using Intel IPP, Freetype and libx264 to create video composition engine for digital agency specifically for use during their Christmas and New Year campaigns. 	
Sept 15	SMI SENSOMOTORIC INSTRUMENTS GMBH	Berlin, Germany
	<ul style="list-style-type: none"> • Provide expert guidance in the creation of DirectShow COM filters in C++ for high speed USB cameras. 	
Jun 15-Aug 15	EWORKER LTD	Blackheath, London
	<ul style="list-style-type: none"> • Creation of program using Qt 5, Qt Designer, C++ and boost to enable back-testing of end of day trading strategies, including price graph with long and short, entry and exit points, capital growth graph, list of trades, and metric calculations. 	
Mar 14-May 15	PIRIFORM LTD	Euston, London
	<ul style="list-style-type: none"> • Development and maintenance of CCleaner Network Windows service software in C++ during transitional period whilst product development returned to UK from Eastern Europe. • Debugging using Visual Studio debugger including dump file inspection; use of mock ups and dependency injection for targeted testing and debugging. • Creation of Jenkins CI server build environment with SVN triggered jobs, and development of both WiX and NSIS installers with ability to make additional custom software offers during installation. UML documentation with WhiteStar UML. 	

- May 12-Feb 14 **LAERDAL MEDICAL LTD** Copenhagen, Denmark
- Design and implementation of a training solution for medical professionals - SimView™ is an integrated debriefing solution that captures and records audio and video from simulations and other learning activities. Agile environment coordinating disparate technologies; C++, CUDA, FFMpeg, DirectShow, ASP.NET, MVC, JavaScript, Silverlight
 - WiX installer to replace the existing Visual Studio Setup Project and contributed to the Jenkins CI server setup.
- Apr 12 **GLAXOSMITHKLINE LTD** Brentford, London
- Fixed price contract - resolution of issues with 32-bit Future View client server application under 64-bit Windows, involving SQL Server 2005, DCOM and C++. Development of Qt 4 C++ metric testing console application for new client server messaging application with focus on message latency.
- Aug 11-Mar 12 **SMITHS DETECTION LTD** Watford, Herts
- Development of C# application, for user test of portable chemical weapons detection hardware including software upload, log data download and interop with native Win32 binaries.
 - Windows C# .NET Forms, C++ MFC with MS Visual Studio 2008 and Subversion.
 - ASP.NET web service for programmatic generation of license keys.
 - Automated, UI driven, end to end testing, with AutoIt scripting engine.
- Aug 10-July 11 **AEROFLEX** Stevenage, Herts
- Windows C++, STL, Qt cross platform GUI framework 4.7, STL and Boost development within an existing plugin architecture
 - MS Visual Studio 2008 with Subversion source control
 - Software running on industry standard mobile phone touch screen test equipment hardware running Windows XP
- Jun 09-July 10 **NAGRA, KUDELSKI GROUP** Lausanne, Switzerland
- C++, COM development with Qt framework 4.7, in an Agile environment.
 - Responsible for release builds using Perforce and continuous integration build server using Atlassian Bamboo and automated CPP unit testing.
 - UML design with BOUML modelling software and automatic C++ header generation.
 - Development of custom multi-threaded, low latency C++ COM DirectShow components optimized for use with Windows graphics hardware, and dynamic overlaid JavaScript UI.
 - Co-ordination with team in Beijing.

Nov 08-May 09 **VEGA PLC**

Welwyn Garden City, Herts

- Design and development of messaging simulator, in C# / C++/ ATL COM, for military training exercises. SC clearance obtained.
- Custom modification of MailEnable Enterprise mail server software.
- Demonstration to visiting MOD stakeholders.

Aug-Oct 08 **HOW SPLENDID LTD**

Piccadilly, London

- Development of C#/C++/COM multi-threaded video encoding server engine for video editing web project working in tandem with remixing/editing tool running in Flash browser plug-in.
- Use of C++/C#/COM and Microsoft DirectShow Editing Services in MS Visual studio 2008
- Parsing of XML project information and generation of both preview and assembled movie timelines with transitions, overlays and effects.
- Creation of multithreaded windows service to host encoding engine.

Jan-Aug 08 **SMITHS DETECTION LTD**

Watford, Herts

- Development of multi-threaded C++/C# software, interfacing with chemical agent detecting hardware, using OO and finite state machine design.

Aug-Nov 07 **EWORKER LTD**

Blackheath, London

- Development of multi-threaded COM DLL DirectShow filter encapsulating the movie creation abilities of the QuickTime 7 C SDK.
- Creation of Win32 command line and C# forms test applications, demonstrating use of the filter component.
- Creation of simple promotional CSS based website using Microsoft Expression Web.
- Component used commercially in Spot Software subtitling tool.

Oct 06-Jul 07 **REUTERS LTD**

Maple House, City Road, London

- Development of SONIA and EURONIA (Sterling/Euro Overnight Index Averages) 'fixings' engine using a finite state machine design. hosted in a .NET plugin architecture; OO implementation in C# following a prototype in C++, using STL and COM.

Jul-Sep 06 **ROOT6 TECHNOLOGY**

Soho, London

- Short term contract for Root6 Technology with Quicktime 7 C SDK.
- Enhancements to Root6's ContentAgent product; Quicktime encoding capability written in a combination of C++ and C#.

EDUCATION

Feb 13-May 18

OPEN UNIVERSITY

MSc Mathematics

Sep 93-Jun 94

HERIOT-WATT UNIVERSITY

PG Diploma in Information Technology

Sep 85-Jun 89

UNIVERSITY OF READING

BSc Pure and Applied Mathematics

Sep 80-Jun 85

WELLINGBOROUGH SCHOOL

9 O Levels, 4 A Levels