

# David Ching

## Windows System, Desktop GUI, Full Stack Developer

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### OBJECTIVE

To design and build world-class Windows System, Desktop and Web components, which meet business needs the first time with *debugged and maintainable* code.

### EXPERTISE

- **25+** years of MS Windows System – Win32 API, process injection, API hooking, Windows hooks, Accessibility, multi-threading
- **25+** years of native Desktop GUI - C/C++/Python/Qt/MFC
- **10+** years of .NET Desktop GUI - C#, WinForms, WPF
- **8** years of Cross Platform Desktop (Windows/Mac) GUI - Qt, PyQt, PySide
- **8** years of Windows Full Stack Web apps - ASP.NET MVC/Web Forms, LINQ, Entity Framework, SQL Server, HTML5, JavaScript, jQuery, SPA
- Favorite Tools – Visual Studio, TortoiseGit, LINQPad, PyCharm, Process Explorer, Total Commander, ManicTime

### EXPERIENCE & AWARDS

- Microsoft MVP - Visual C++ (2007-2014)
- Nokia Certified Qt Developer (2009)
- Hands-on project management (2001-2004)
- Shipped popular apps including Logitech SetPoint, SanDisk U3, Borland C++, Turbo Pascal
- American-born US Citizen

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### CUSTOMER LOBBY (6/2016 – Present)

Responsible for Windows desktop component of *Direct Connect*, a Windows desktop client which queries and uploads customer data from many different desktop invoicing systems, driving repeat customers to small businesses. Lead offsite consultant, build, QA, release, each version. Rewriting in Python to upload customer data using persistent websocket connections. *Technologies:* Python, Websockets, Reverse

Engineering, Immunity Debugger, SQL, ADO.NET, ODBC, LINQ, QuickBooks, Winforms, WPF, C#, Web API, Downloader and Updater, NSIS Installer, Agile, JIRA, Git.

## DC SOFTWARE (CONSULTING) (2004 - Present)

**Line 2** (1/2018 - Present). Bug fixing and enhancing the Line 2 Windows client providing telephony services. *Technologies:* C#, WPF.

**Eko Devices** (6/2017 – 1/2018). Bug fixing and enhancing a Windows application which controls a Bluetooth connected digital stethoscope, graphs audio waveforms, and transmits digital audio to a WebAPI. *Technologies:* C#, WPF.

**Blue River Technology** (1/2017 – 6/2017). Wrote a Python/Qt application where the user visually places graphical rectangles, denoting agricultural field plots, on high resolution aerial images and exports the GPS locations to the open source QGIS application, for further analysis. *Technologies:* Python, PyCharm, PyQt, QGIS.

**ERG** (2012 – 2017). Building internal web applications to track and report on business financials. *Technologies:* C#, ASP.NET MVC, HTML5, JavaScript, jQuery, MS LightSwitch.

**Salfeld Computer** (2010 – 2015). Providing key components of Salfeld Child Control (parental control software), including blocking access to applications, Windows settings and web sites. Wrote Windows client library and ASP.NET WebAPI for Server Side Events (SSE). Created custom client-side hash table for blacklisted urls. Altered Internet requests for compatibility with Google Safe Search. *Technologies:* C++, API Hooking, WinInet, ASP.NET Web Forms, ASP.NET MVC/ WebAPI, SQL Server, DDE.

**ZeroNines** (2014– 2015). Created prototype of Windows utility to mirror SQL Server transactions. Partially rewrote existing Intel Disk Cache configuration web app as a JavaScript SPA. *Technologies:* Qt, API Hooking, ASP.NET WebAPI, Named Pipes, Winsock, MS Message Analyzer, API Monitor, TDS, SweetScape 010 Editor (formats binary data), jQuery, AngularJS.

**RheoSense** (10/15). Added input screens to VROC initium, for viscosity measurement. Introduced EF over SqlLite. *Technologies:* C#, Winforms, Entity Framework, LINQ, SqlLite.

**GEO Semiconductor** (06/15 – 8/15). Created Windows GUI to facilitate the tuning of video chips. *Technologies:* VC++, GNU, Qt, Qt Creator, JSON, regular expressions, dynamic input validation, process launching and stdout redirection.

**Trimble Navigation** (12/12 – 5/13). Tuned simulation of agricultural controllers. *Technologies:* C++/MFC/Qt, Windows IPC, multi-threading, fibers, memory leak detection.

**Vir2Us** (2011 - 2013). Virtual File I/O using API Hooking.

**Apple** (10/11 – 07/12). Enhanced Windows version of Apple asynchronous library *Grand Central Dispatch*. *Technologies:* C, threading, asynchronous I/O, cross-platform.

**MyBasis** (02/11 – 08/11). Enhanced a consumer-facing Windows/Mac GUI utility to control and collect data from a USB-connected smartwatch, and to upload it to a web server. *Technologies:* C++, Qt, FTDI USB Serial Port, Mac PackageMaker, NSIS, cross-platform.

**Financial Statement Masters** (2009 – 2013). Implemented an Excel add-in for the creation of financial reports. Implemented two prototypes of a financial patent utilizing QTableWidgetItem and QTextBrowser Qt widgets. *Technologies:* C#, Winforms, Add-In Express Qt, NSIS.

**Cisco** (02/10 – 08/10). Supported [Stream Manager video surveillance software](#). Analyzed Wireshark captures, debugged showstopper threading issues, fixed .msi build system. Architected and built restarter program and health monitoring redundancy. *Technologies:* Winforms, C#, sockets.

**IronKey** (2008 – 2010). Architected and built the new, cross-platform (Windows/Mac) control utility shipped on IronKey secure flash drives. Fixed incorrect manifests and redistributables, exception handlers, signing of the manufacturing driver, etc. Implemented Windows system internals such as detecting open file handles when ejecting the device. *Technologies:* C++, Qt, UI Skin, MS DDK.

**Embedded Resource Group** (2007 – 2010). Built [ergtimecard.com](#), a website to manage consultant timecards. Built Winforms app to generate Intuit QuickBooks invoices and reports of missing timecards. *Technologies:* ASP.NET 2.0, Winforms, QuickBooks SDK, C#, SQL Server 2005, Telerik RadControls.

**Amicus Wireless** (12/07 – 08/08). Designed and built a Windows [Control Panel](#) for WiMAX adapter, featuring a tabbed UI. The WPF UI far exceeded the client's expectations in both look and ease of use. *Technologies:* WPF, Winforms Interop, .NET Interop, C#.

**Cranite** (08/07 – 10/07). Created a Windows Control Panel ([screenshot](#)) for a wireless security software product, featuring an Office 2007 UI. *Technologies:* MFC, CodeJock UI library.

**Microsoft** (06/07 – 08/07). Created several videos explaining Visual C++ topics, including [Remote Debugging](#) and [VC Visualizers](#). The videos are posted on MSDN.

**NomaDrive** (09/06 – 01/07). Rewrote hooking engine of application virtualization software. Created installation wizard and setup package. *Technologies:* C++, API Hooking, MadCodeHook, NSIS.

**SanDisk** (2005 – 2007). Wrote IE/Firefox toolbars and MIME filters; developed loaders for browser add-ons that don't require admin access to the Windows registry. Prototyped TrustedSignins security applications using UI skins and wizards. Shipped DHTML-based UI and desktop icon for U3 USB keys. Devised simple localization mechanism and supporting tools to quickly translate into 30 languages. Prototyped Windows AppBar that docks when USB key is inserted. Used Crypto API to write a hashing function. *Technologies:* UI Skin, MFC, GDI, GDI+, ATL, COM, BHO, DHTML, API Hooking, AppBar, Crypto API, XML, Wizard Property sheet.

**Logitech** (2005 – 2007). Architected and built MenuCast translucent windows, providing 10' UI for [MX Air mouse](#). Created several Vista gadgets which hosted an OCX control to show status of Logitech devices. Created Wizard-97 firmware update utility. Enhanced core of Logitech SetPoint to execute different mouse and keyboard macros depending on the active application. Created OEM customizations for well-known OEM's. *Technologies:* Layered (transparent) windows, Vista gadgets.

**Qualcomm** (12/04 – 9/05). Wrote the UI for **Linksys Control Utility** ([screenshot](#)) and the **Airgo Wireless Client Utility** ([screenshot](#)), shipping with various networking cards. Devised strategy to control Internet connectivity with IPHelper API and NETSH.EXE. *Technologies*: UI Skin, MFC, GDI, IPHelper.

**Loyalty Ventures** (2004 –2005). Wrote an Internet client that interacts with popular browsers. It embeds the Lua scripting interpreter, allowing customization with Lua scripts. Packaged in a small 220 KB download, it is extremely easy to deploy. Wrote an Internet Explorer toolbar. Wrote an animated sliding "Toast" window which emphasizes smooth scrolling. *Technologies*: C++, Lua, Microsoft Accessibility, User Mode API hooking, Threading, WinInet, WTL, Nullsoft Installer.

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## EMPLOYMENT (2000 - 2004)

**Logitech** (5/02 - 5/04). Managed four developers and was solely responsible for architecting and writing the core functionality of **Logitech SetPoint**, a mouse and keyboard configuration utility ([screenshot](#)). Also managed the development of the **Media Desktop** full-screen application for listening to music and viewing pictures and videos from a distance of 10' ([screenshot](#)). Coordinated efforts with the localization and marketing teams in Switzerland as well as with QA in the United States. *Technologies*: VC++, MFC, XML localization, WMP, WinLogon.

**Proxim** (11/00 - 4/02). Managed 3-5 developers responsible for designing and building networking software utilities including **Proxim Symphony** and the **Orinoco Client Configuration Utility**, which *PC Magazine* called, "[the best of the three \[reviewed utilities\]](#)." *Technologies*: VC++, MFC controls, full WinXP support, tray icons.

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## DC SOFTWARE (1995 – Present)

**RegEditX** – an enhancement to the Windows Registry Editor (Regedit), included in WINDOWS Magazine's annual "100 Best Shareware Programs" and featured in Brian Livingston's INFOWORLD column. *Technologies*: injection of a DLL into another process, window subclassing in MFC.

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## EMPLOYMENT (1987 – 1995)

**Borland** (1990-1994). Designed and built the Address Book of a **Sidekick for Windows** prototype. Project Lead for the **Turbo Pascal for Windows** Integrated Development Environment, version 1.5. Enhanced environments in **Turbo C++** for DOS and Borland C++, versions 2 and 3. *Technologies*: C++, Quattro Pro object-oriented application framework, Windows custom controls.

**Hewlett-Packard** (1987-1990). Enhanced HP LaserRX, a Windows application which presents performance metrics from HP minicomputers. *Technologies*: Windows 2.0, real-mode memory.

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## EDUCATION

University of the Pacific (1984-1988). Graduated Valedictorian (3.98/4.0 GPA) with **BS in Computer Engineering**.