

Chris Dixon

135 Pitchers Way, Hyannis MA 02601
508-494-7280
chris@capecomputerhelp.com

Summary:

Small Business Owner, Independent Software Development Consultant, Small business IT Support, PC Repair, Website design and management, Internet Marketing consultant.

Accomplished Business Professional with a proven record of developing opportunities, and following up with product development, including team recruitment and management, as well as hands on application software and embedded operating system development. Specialized experience in Microsoft Windows CE and video applications. Skilled with integrating into existing customer systems, developing customer relationships and improving reliability and customer support. Active volunteer in my community, and member of local business networking groups.

Software Development Consultant, using C# and C++ in Windows, Windows CE, and embedded Linux. Specializing in troubleshooting and finalizing products for market by focusing on reliability.

Key skill sets:

Software architecture, system design, testing/QA, installation, training, configuration, system management, troubleshooting, networking, and technical support.

Software development in Embedded Systems, C++, C#, Windows CE, Windows XP Embedded, Linux.

Driver development for Windows CE, Windows Desktop, DirectShow filters and codecs

Strong proven ability in tracking reliability issues like memory leaks and random hangs and crashes, using detailed logging and analysis to track problems in the lab and in the field.

Customer relationships and program management.

Development team setup and management, Embedded system software design, Video systems technology.

Business Networking and developing customer relationships.

Small business server management and installation.

Networking, including wireless and remote diagnostics.

Website design for small business in html and Wordpress, including eCommerce and custom theme design.

Jan 2009 – Present

Owner and Operator of Cape Computer Help Inc., Hyannis MA <http://capecomputerhelp.com>

Driven by interest among local friends and business owners on Cape Cod, I started my own business providing computer repair and web design, mostly to small business owners in the Hyannis and Yarmouth areas. Business is growing steadily. Visit my website for examples of my work and the services provided. I am active in my charitable business networking group (<http://www.capebizpartners.com>) and a member of the Greater Hyannis Chamber of Commerce, attending local networking meetings regularly. I now service about 50 websites mostly for local businesses, and have a significant customer base of regular customers for onsite and offsite IT management. Website development in Wordpress. Small business networking including Windows and Linux servers and Wi-Fi installations, maintenance and troubleshooting.

Dec 2010-Oct 2015

Software Consultant, Lanmark Controls, Acton, MA, part-time as required. <http://lanmarkcontrols.com>

Laser marking control system software development. Consulted on Software Architecture, detailed troubleshooting, interfaces over RS232, Ethernet. Developed custom PCI drivers for windows 8.1, detailed logging architecture to enable in-field problem finding, designed new 'fill algorithm' doubling code efficiency, and added complex island fill algorithm to very efficiently mark complex shapes by minimizing laser mirror deflection. Advised on web interface including modern internet protocols. Worked on interfacing to new customer equipment.

March 2000 – November 2013

Vice President Business Development, Digital Video Communications, Inc, Woburn MA

<http://www.digitalvideocommunications.com>

In 1999, engaged with Captivate Networks and developed business worth \$2-3m per year. Developed Windows CE operating system and digital signage application software, for installation in elevators, integrating it with the customer's existing systems, and worked with them to develop QA/test and acceptance procedures for the product.

These systems connect over WiFi in elevator shafts. Evolved the software and hardware through 3 redesigns over 11 years moving from full time to part-time consultancy position. Developed video graphics and wireless LAN driver. Improved code base to be 'crash-proof', ensuring error recovery and enabling collection of debug logging in the field. This application is installed in over 11000 screens in elevators throughout North America and is very stable in daily operation. This application code runs on 6 different hardware platforms with 3 OS's, from a single set of sources. Integrated Macromedia Flash support working with 3rd party software company.

Recruited and trained and managed additional software development staff. Worked closely with 3rd party software development company to insure their deliveries were achieved and handled testing and verification.

Setup and maintained secure internal office network, including several wireless network software test environments and servers. Built, evolved and maintained company web site, brochures, etc. ASP.NET website development for eCommerce, based on open source code.

Wrote application code to generate digital advertising cues and also to detect them and control video playback.

Setup and maintain Linux open source development environment for cross-compilation for ARM processors.

August 1997 – March 2000

Product Development Manager, Local Cable Adinsertion Systems. SkyConnect Inc, Boulder, Co.

Developed business relationship between Skyconnect and Adlink, managed another large system installation of over 15 sites, including site surveys, wide area network installation and configuration, customer staff training.

Negotiated with and assisted business and software development teams to improve software functionality to be more market competitive. Improved software reliability (hands on coding), customer support (training, creating procedures) and sales staff training, technical sales support with preparation of proposals, trade show setup and booth duty.

September 1994 – August 1997

Product Manager, Digital Equipment Corporation, New Media Services group, Shrewsbury, MA

Won a \$9m contract with Adlink in Southern California for 1200 channels of Digital Ad-insertion at 58 sites.

Recruited and managed the software and hardware development team, designed the hardware and software architecture, planned and helped to execute a complex phased installation plan to closely fit the customer's needs, and carried out testing in the lab and in the field.

October 1992 - May 1994: **Product Manager for Automation Systems**, Basys Automation Systems, Langley, England

September 1986-October 1992: **Sony Broadcast, Basingstoke, England**

1977-1986: British Broadcasting Corporation

Education:

1973-1976 Cambridge University, England. Masters Degree in Electrical Engineering, specializing in electronics, communication theory, semiconductors.

1968-1972 Blundell's School, Tiverton, Devon, England (Private High School)

2009 US Coast Guard Captain's License.

Employment status: Naturalized US Citizen.

Specific Software development achievements
Application software development in C++ and C#
Revising complex infrastructure to allow introduction of new functionality
PCI Driver development for Windows Desktop, including installation program
Embedded Linux application and website design for custom web-based configuration tool
Create and maintain embedded linux software development environment for ARM processor device
Windows CE memory management – measurement and solving problems with fragmentation
More efficient algorithm for filling polygons with dots or lines for laser marking
Rewriting test application for mail sorting equipment – initial design and troubleshooting, and then remotely working with on-site engineer
DirectShow renderer filter that outputs to shared memory so the images can be combined with jpeg and swf in directx flipping chain (XP and CE 6.0)
Adapt Directshow video playback to use the H.264 hardware assist in the Atom/Poulsbo graphics chip
Complex multithreaded application which reads UDP messages from a server, copies video content files, and plays a combination of JPEG, MPEG and SWF files in a multilayer flicker-free presentation. For use in elevators connected on wireless network, using LCD screens. This code was an ongoing development over 11 years, and transitioned through CE3, CE4.2, CE5.0 and CE6.0
Port of CE application to win32 so that it can be combined with the server code on a single machine for a new market in lobby displays.
Usage of COM and DCOM for interprocess communication. ActiveX control development.
Software and hardware watchdog timer for CE and XP, triggering safe reboot if application fails to start and hard reset in case of system hang.
C# application to monitor system and upgrade software remotely by installing .msi package for win32 solution.
Interface RS232 control for Otis elevator position indicator board, and adapt application to display the floor number and description in a flash animation
Interface NEC large screen LCD monitor using DDCCI (like I2C) to control power on/off and read monitor status
Developed ASP.NET eCommerce System using open source code, and added support for licensing on-line software download. Now working on software to support issuing annual subscriptions for digital signage server support.
Linux embedded application development with open-source compilers for Scout product, which reads DTMF tone detector, compares sequence to configuration and sends SCTE 35 tone packets on TCP/IP interface to video server.
Work with BIOS software supplier to configure BIOS, and use tools adjust default settings and to integrate it with Video BIOS and configure that to adjust timings for LCD screens
Overlay surface Directshow codec using Philips Trimedia DSP which plays DVD quality video on 300MHz Intel Windows XP host system. Developed downloadable code for Trimedia, re-coded graphics driver to deinterlace and stretch the video correctly. Directshow app which synchronizes audio with Trimedia codec.
Cisco 350 series mini-PCI Wireless LAN driver for CE3.0. Ported from XP driver, supporting bus master
Direct X capable Windows CE3.0 graphics driver for C&T 69000 including accelerated video blt which improved performance of the media player application by 100%
PCMCIA controller driver for Windows CE 3.0
Windows CE 3.0 and 5.0 OS development using Platform Builder
Windows XP Embedded OS development and licensing
Persistent registries on CE using M-systems DiskOnChip boot block to store the registry data in ROM
Digital Unix kernel configuration, integration of hardware RAID controllers and extensive performance testing. Achieved 40 channels of MPEG-2 8MBit/sec simultaneous video playback in Alphaserver with 500MHz processor
Supervised 20-person team handling software development across 4 different software development projects
Hands on software development of Digital Unix application for video server. Used multi-process and multithreaded solution with rpc interprocess communication including interface to Windows NT based user interface software. Source code control, build scripts, system administration
Develop tech support guidelines to provide customer support, using error codes built in the software which correlate to customer problems and troubleshooting instructions.