

Emil DeVries

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Technical Summary

Programming Languages:	C/C++, JAVA, BASIC, HTML, XML, DHTML, ASP
Protocols:	TCP/IP Sockets, USB, WIN32 API, WINCE API, HTTP, SMTP
Development Tools:	MULTI, NetBeans, Eclipse, .NET, Visual Basic, Visual C++
Operating Systems:	Windows, Linux, INTEGRITY, veIOSity, VxWorks, ThreadX, OSE
Standards & System Interfaces:	DO178-B, ISO9001, SQL Server, Oracle, Visio, IIS, Exchange, Site Server, Commerce Server.

Education

BSIT degree from University of Phoenix, FAA DO-178B "Developing Safety Critical Software" course completion from HighRely, completed 96 undergraduate hours towards a BSCS from the University of Texas at San Antonio. Completed both BM3 (small boat piloting and maintenance) and ET3 (electronics testing and maintenance) United States Coast Guard "A" schools.

Experience

2/2009-Present Independent Contractor specializing in Safety Critical product development.

7/2001-2/2009 Green Hills Software, Inc.

Senior Field Applications Engineer / Safety Critical Systems Consultant

Primary responsibilities include pre and post sales technical support, technology presentations as well as management of the customer's success throughout the lifetime of their projects. For many projects this also included architecture redesign of safety critical systems needing to meet (or a path to meet) FAA DO-178B level A safety certifications. I often acted as an engineering "paratrooper" where I was dropped into the customer's lab (that used different toolsets targeting a variety of RTOSes) for a number of days to get them over both software and hardware hurdles and performance issues to ensure the customer could meet their critical milestones and project deadlines.

Key customers and projects include:

- **JPL** – MULTI compiler/debugger support of VxWorks for the Spirit and Opportunity Mars Rovers including debugging, optimizing, and rebuilding the VxWorks kernel.
- **JPL** – RTOS trade study (INTEGRITY win) for the Crew Exploration Vehicle
- **JPL** – Formation Flier and upcoming Terrestrial Planet Finder missions.
- **Hamilton Sundstrand** – Power Control and Life Support Systems for the Crew Exploration Vehicle (DO-178B Level A)
- **NGC** – Inertial Navigation System for Airbus A380 (DO-178B level A).
- **NGC** – Avionics & fire control systems for the Joint Strike Fighter (DO-178B A..C)
- **ITT/Allen Osborne** – Military grade GPS receivers (DO-178 Level C)
- **ATK** – Helicopter missile defense system (DO-178B Level C)
- **Ecliptic Enterprises** – RocketCam space vehicle launch camera system.
- **Aerospace Corp** – Classified ICBM system component
- **Medtronic** – Insulin pumps (FDA)

9/2004-Present Betty Bandit Binary**Software Architect**

Founding partner and software architect for the products "Parking Meter Minder" and "AllCalc" sold under the Betty Bandit Binary brand for the SideKick Family of cellular phones. Primary software development is done with NetBeans and JAVA Swing.

2/2000-9/2000 IPAxess (formerly DataRace)**Lead NT Driver Developer**

Developed and debugged the core functionality of the company's enterprise scale Voice over IP (VoIP) PBX product called "VocalWare".

- Designed with superior patented VoIP technology and transparent interfacing with the corporate PBX, VocalWare routes incoming calls to the office extension to the remote location. Users connect to their actual office extension, providing a complete virtual presence.
- Worked extensively on the VocalWare server's Windows NT Kernel mode driver written in VC++, Win SDK/DDK and DriverWorks. Worked on the firmware for the custom T1 interface board written in C/C++, for the OSE RTOS. Additionally I worked on a number of UI programs for server configuration and troubleshooting written in VB/ASP and VC++. Development was performed in a team environment utilizing PVCS for source control and NetMeeting and AIM as collaborative development tools.
- Transitioned the registry based configuration data to an in-memory, embedded SQL, relational database system.
- Designed and developed new protocols for configuration of the VoIP stream using the Internet RFCs as a model. Implemented the new protocols in both the client and server driver software.
- Participated in the two week, on-site beta testing and field fixes of VocalWare at a major department of the Federal Government in Washington, D.C.

1/1998-2/2000 Double Helix Development, Inc.**Founding Partner**

Double Helix Development was a consulting practice specializing in rapid application development and wireless applications utilizing Microsoft IIS, ASP, Visual Basic, Access and SQL server. The Double Helix Development Mission is to provide customers with custom solutions to unique software development requirements by engineering robust applications and systems using leading edge, rapid application development tools and open architecture design principles.

Customers included:

- **DELL** – Designed and implemented additions to "Product Master". This web driven, extra-net application allows engineering and marketing groups to design new systems for sell to the public. This project included extensive use of DHTML, ASP, and ActiveX controls
- **USAA** – Worked as a senior consultant assisting in the "Off-With-Beta" project which culminated with the formal launch of the USAA web site. The highly complex project involved primarily management of, and coordination with, all of USAA's lines of business (previously working independently) into a single cohesive site.

- **NORTEL/BayNetworks** – Created the “hardware upgrade” web application. This database driven web application, written for MS IIS using ASP, allowed customers to look up and order hardware upgrades that were previously supported by a call center.

8/1996-1/1998 StockTIPS, Inc.**Lead Applications Developer**

Co-architect of an enterprise scale, NT based, stock information alerting system designed to deliver information to a wide number of wireless devices and e-mail systems. Managed a five person Visual Basic, VC++, ASP development team for this system through the course of many rapidly changing company priorities.

- Architect and developer of several front-end interfaces (World Wide Web, Web-Client, and HDML based Wireless Web systems) which allowed customers to change their stock alerting criteria.

3/1994-8/1996 Landata Technologies, Inc.**Programmer/Analyst**

Designed, documented and implemented a wide range of applications in Visual Basic and VC++ for inner office and end-users.

- Managed the evaluation and testing of scanners, high-resolution monitors and CD-ROM jukeboxes for implementation of high-end mass storage and document imaging systems for the real estate industry.
- Designed and developed direct SCSI interfaces for this specialized hardware in C++.
- Database design and documentation in Btrieve for real estate imaging and indexing applications supporting 2 million + records.
- Designed and coded a PC to IBM / VAX interface utilizing VBScript and Reflections terminal emulator that allowed the integration of legacy database applications with the current document imaging system.

6/1990-3/1994 Electrospec Systems, Inc.**Lead Device Developer**

Designed, developed, and built prototype real-time hardware and software solutions for a range of systems utilizing C, ASM, and Turbo Pascal. Hand fabrication and population of circuit boards, development of system OS, mainline code, and monitoring programs. I also interfaced with machinists, EEs, inventors, management, and representatives from UL during each stage of the project life cycle.

- **Gil-mart Bidet 1990-1992** - An advanced electro-mechanical bidet utilizing an IC based controller, for use by the handicapped that included control, temperature, user placement, and panic interlocks as well as system monitoring via an RS232 interface.

- **The “Computar” 1992-1994** - A resource management and tracking system for machine shops utilizing a network of custom built, INTEL 8051 based, data entry terminals spread throughout the shop connected to a non-dedicated PC data storage and reporting terminal. I designed the mainline code for both the data entry terminals and the monitoring PC, including the construction of a PC/DOS based GUI for charting and reporting.

3/1987-5/1990 USCG Reserve/Active

BM3/ET3

Trained and participated in the multiple missions of the United States Coast Guard by maintaining and piloting small boats as well as testing and maintaining electronic equipment.

- Monitored and maintained the 500K watt, solid state, Loran, transmitter during the Gulf War at USCG Loran station Seneca, Seneca NY.
- Sailed aboard the USCG Cutter Valiant through two tours in the Gulf of Mexico and the Caribbean.

4/1982-5/1988 Self Employed

Computer programmer and experimenter

By pooling the monies received from my 13th birthday I was able to purchase a Commodore VIC20 personal computer. Once it was connected to my 12” B&W TV, I began to teach myself both VIC Basic and ASM.

- Designed and developed a grade book program for my Mother (a college professor) that automatically calculated student grades and outputted a report for the instructor.
- Built a hardware interface to the joy stick port to record thrust, acceleration, and velocity of homemade model rocket engines.
- Wrote and hand-compiled ASM programs into machine language that provided comparative charting of the model rocket data.

Awards & Recognition

- Architect and developer of the 1997 CTIA Appy award winning, *MobileStockTIPS*
- Nationally recognized expert in the design and development of Wireless Web applications
- Speaker at Unwired Planets' 1997 Unwired Universe Conference, "Creating a Compelling 'Push' Application with HDML"

References

- “I worked with Emil on number of projects utilizing Green Hills products, including MULTI IDE, various flavors of INTEGRITY operating system and u-velOSity, while at JPL/NASA and other companies. Emil always been extremely helpful, technically competent, professional and ethical FAE. I highly recommend Emil and hope to have an opportunity to work with him again.”
Yan Brenman, Sr. Software Engineer/Contractor, JPL/NASA, Pasadena, CA
- More references available upon request.