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OBJECTIVE

A full-time permanent position in software engineering to solve critical problems based on a systemic approach and utilizing skills in software technology, creative approaches and leadership skills.

PROFILE

- More than 20 years in software engineering, with the successful development and delivery of over 22 major software products.
- Over 8 years consulting with companies ranging from small businesses to Fortune 100 corporations.
- Experienced in a large range of roles, including programmer, designer, architect, and team lead.
- A passion for taking on tough problems and delivering innovative and practical solutions.
- Experience with a broad range of programming languages, platforms and tools, using a variety of design, development methodologies.
- Hands-on leader of technical strategy, new product generation and product development, responsible for defining and refining the technical direction within and among several major product groups and the larger enterprise.
- Passion for identifying problems, creating solutions and building products that solve real problems for real people; especially those that demand a breadth of experience in both technical and creative aspects.
- Driven to continually broaden my knowledge and experience with software technologies and product development methodologies, and management approaches.
- Skilled at communicating with and evangelizing to a variety of technical and non-technical audiences, both internally and externally

HIGHLIGHTS OF EXPERIENCE

- Designed and implemented a generic multi-threaded communications framework for complex medical devices.
- Built and maintained relations with critical suppliers in both Korea and US.   Travel 2x/Year to Korea and other domestic OEM medical devices suppliers and customers.
- Designed, tested, architected and released VolumeShield AntiCopy from an initial prototype.
- Assumed the role of developing and delivering the hp MSA1000/1500cs Software Support CD. This position used involve 4 full-time employees (including one manager), I re-engineered this project so that one person can perform the needed functions.
- Designed, developed and delivered a Multi-Path I/O solution for the MSA Storage device family. This WDM device driver utilizes the Microsoft MPIO library to leverage industry standards and to ensure full software interoperability.
- Enhanced suite of development tools to work with new hardware and software environment. This enabled Metrowerks to successfully begin development of the new CATs/ATtaCK instrumented analysis framework that targets a variety of new environments, including NeOS, Linux and other hosted and RTOS operating systems.
- Designed and implemented a distributed image-processing system for Applied Science Fiction, launched the initial deployment after identifying best design strategy within a large-scale multi-computer parallel processing system.
- As consultant in software architecture and technical management, rapidly identified major technical and management problems for client, and subsequently collaborated with key parties for their successful resolution.
- Designed and implemented the Applications Transparent Failover Solaris device driver for Clam and Associates.

4/01/11-NOW   *Dot Net Software Engineer (Permanent)* Spark Energy,   Houston, TX

Tools Used: C#, VB.Net Dot Net 3,5 and 4.1, MVC2, Web Forms,Thin Client, Visual 2008/2010, Design, Architecture, WCF, EDM/EF, Linq (Object, SQL, and XML) SQL Server 2005/2008
Retail Energy
- Maintenance Creating new functionality for Retail Energy Line of Business Applications.
- Maintenance Ongoing maintenance of current applications.

1/2011-3/2011   *Software Engineer (Contract)* Spark Energy,   Houston, TX

Tools Used: C# Dot Net 3.5, 4.0, Visual Studio 2008 and 2010, SqlServer 2005/2008, Design, Architecture, WCF, LINQ (Object, SQL and XML), Visual Studio, 2008 and 2010
Energy Services
- Maintenance and support for CFG/DFG the drilling and completion fluids simulation platform.
- Mentored junior engineers, solved build, coding and design issues.

8/2010-1/2011   *Lead Software Developer (Contract)* Amerada -Hess, Inc   Houston, TX

Tools Used: Visual Basic 9 and 10, Dot Net 3.5, 4.0, Visual Studio 2008 and 2010, SqlServer 2005/2008, Metacarta, eSearch, Oracle, Design, Architecture,, SOA, MVC2, Web Services, WCF, WWF, LINQ (Object, SQL and XML), Silverlight 3 and 4, RIA Services, EDM, Workflow, Data Services,Visual Studio, 2008 and 2010
Oil & Gas Production and Exploration, Data Management
- Created a 'black-box' data retrieval system in Visual Basic Dot Net 4.0 using Metacarta, eSearch and proprietary database systems as data sources. This system featured a dependency injected loadable module system that incorporated a custom configuration section driven static class loader, an attribute driven dynamic assembly loader and a simple lookup API to service future data needs. This system is currently feeding a Captiva document archival system custom reference data.
- Utilizing my Silverlight 3 and 4 skills, I re-designed and extended a line of business application that simplified the arduous process of classifying Oil and Gas company assets for the purposes of archival into a Documentum based Document Management System. This included interfacing with eSearch, PPDM, custom web services and data sources.
- Sped up the document analysis and metadata system that searches large network volume set consisting of over 1 terabyte of data.
- Mentored junior engineers, solved build, coding and design issues, assisted management in communicating complex technical issues to peers. With management buy-in, started task prioritization meetings to ensure that goals are met in timely manner.

2006-2010   *Principal Software Engineer (Full-Time)* Omnicell, Inc   Houston, TX
Tools Used: Dot Net 2.0, 3.5, 4.0, Visual Studio 2005, 2008 and 2010, SqlServer 2005/2008, Design, Architecture, UML, SOA ,Web Services, WCF, WWF, LINQ (Object, SQL and XML), pInvoke

Omnicell Hospital Pharmacy Automation

- Architected the framework, designed and lead a team of engineers to implement a new vendors medical device communications protocol. This framework enabled our organization to quickly gain a new OEM for our products for strategic custom conversions.
- Currently using Agile as our development and design methodology. We use three week sprints, story boards, user stories and most of the Agile system artifacts during our development cycle.
- Designed and implemented complete communications infrastructure that unified web services, pharmacy devices and desktop communications. This enabled web applications to have real-time updated information in a very lightweight format.
- Designed and implemented protocol layer that manipulated complex medical dispensing devices using c# 2.0/3.5. Multi-threaded event driven, real-time architecture. Designed an entire abstraction layer that separates the protocols consumer from the underlying device control – an 'Ideal Device' abstraction. This model is primarily driven by interface enforced contract, factory and veneer/adapter design patterns.
- Created a generic approach to fault-tolerant network device management using iBoots, Digis, WMI and other remote management systems.
- Rescued and maintained technical relations with critical suppliers in Korea and US. Travel 2x per year to Korea. Formed critical technical relationships with key personnel at all Omnicell WorkflowRx device OEM partners. Regularly travel to domestic customers and OEM to establish close technical working relationships.
- Provided ongoing technical expertise for both management and peers. Created, championed and maintained informal information conduits via blogs and other web-based communications to help eliminate information silos between internal organizations.
- Researched, created and released Virtual Appliances as a means to reduce operational overhead during on-site customer installations. This simplified model enabled our organization to write to a common virtual machine standard, and removed hardware specific dependencies from our deployment model.
- Created web services, various WinForm UI elements using Infragistics NetAdvantage in C#, and many other standard n-tiered elements for the WorkflowRx application.
- Created stored procedures, tables, indexes on the WorkflowRx backend supporting
- Created Data Access Control (DAC) classes that form a high-level XML enabled data representation for WorkflowRx data persistence backend. This included automatically generated collection classes, type converters and etc.

2005-2006   *Software Engineering Lead (Full-Time)* VolumeShield, Inc.   Houston, TX

Tools Used: Dot Net 1.X, 2.0, Visual Studio Dot Net, 2005 SqlServer 2005/, Design, Architecture, UML, Web Services, WMI,pInvoke, Systems Engineering, Deployment Tools
VolumeShield AntiCopy Manages Removable Device Security

- Brought VolumeShield Personal from a very rough prototype to, Beta and Production version. Download from http://www.volumeshield.com for working production personal version.
- Designed, tested, architected and released VolumeShield AntiCopy Personal Edition from an initial prototype entirely written in C#.
- Architected, designed and implement VolumeShield AntiCopy Enterprise. AntiCopy Enterprise focuses on managing device access across the enterprise. An administrator is able to use group, user and computer ids and assign permissions to device classes, whitelists and settings.
- This design included creating a win32 security resource manager, private object security descriptors, policy

distribution, management services, reporting, and agent installation. The resource manager controls access to devices based on an administrator deployed policy and the management services distribute policy to all agent endpoints.

- C/C++ C#, InstallShield 11, XML/XPath, Dot Net 1.1/2.0 development on Windows XP/2000/2003 platform, Win32 device management, USB device detection, WMI, and Win32 Security Programming.

2003–2005   *Software Engineer (contract)*   Hewlett-Packard   Houston, TX

Hewlett-Packards Network Storage Solutions is a leader in delivering storage products that support all major platforms.

- Designed and developed Proliant Service Pack for Linux new generation installation engine using the QT object framework.
- Developed and maintained Modular Smart Array 1000/1500 cs firmware utilizing my knowledge of C/C++, SCSI, Fibre Channel and embedded systems programming methodologies. This environment included WindRiver VisionICE and VisionClick embedded systems development tools.
- Designed, developed and maintained environmental units for the MSA 1500 cs and family Fibre Channel Storage Devices in an embedded development environment. Cypress PSoC CY8C29666 and CYh8C27XXX device family development utilizing temperature sensors, power supply manipulation, I2C communications, and other constructs designed to ensure the MSA 1500 cs data integrity and availability.
- Develop and maintain backplane communications logic using the Microchip products in an embedded development environment.
- Developed and maintained Modular Smart Array 100/1500 cs firmware utilizing my knowledge of C/C++, SCSI, and Fibre Channel and embedded systems programming methodologies. This environment included WindRiver VisionICE and VisionClick embedded systems development tools.
- Maintaining the UPIC backplane system based on Microchips MPLAB 7.0/ICD 2 development environment and PIC processor.
- Development and maintenance of the Cypress PSoC based Fan Control Module (environmental monitoring/control) for the hp MSA 15000 cs and MSA 20 network storage devices using the Cypress PSoC Developer/Cube emulator.
- Developed and maintained key elements of the MSA1000 Family Platform Kit. These elements include:
    - Visual C/C++, Microsoft Visual Studio .Net, MFC, design, development and implementation of driver installation routines, autorun, device detection, localization, UI, management and other setup routines.
    - 32/64 bit Linux operating systems – EFI/ia32 bootable environment
    - Developed an automated hardware detection and driver load mechanism
- Developed and managed the current Homerun (MSA 1000/1500 cs Software Support CD and documentation). Added the intelligence to automatically detect the correct HBA's and load the appropriate driver set. This has had a significant impact on our 'ease of use' goals and results in reduced warranty costs for our products. This management aspect also required a lot of cross team communication (Applications, hardware and Test)
- Microsoft Storage Device Driver Design and Development. Created the Hewlett-Packard mPath MPIO (Multi-Path I/O) device driver. This system includes I/O failover, load balancing and other management routines. Tools and techniques utilized for this work included: Microsoft 3790 DDK, MPIO DDK 1.0.5 to 1.0.8, Microsoft SDK MSDEV 7.0, SCSI 3, C/C++, driver development, WinDbg, Driver Verifier, and etc.
- Develop and maintained the MSA1000 Family firmware flash utility. This host base utility updates MSA1000 firmware from Windows, Linux and Netware. Responsible for maintaining and updating the functionality of this package for test and release. The tools and techniques are MSDEV, DDK, Fibre Channel, Finisar Analyzers, C/C++, Linux, X Development on the Glade UI builder, and Netware NLM development on CodeWarrior.
- Program Management, Plans of Record, EA's, and technical/program mentoring and other PM and technical related activities for the MSA1000.

2001–2002   *Software Engineer (contract)*   Metrowerks/Freescale   Austin, TX

Metrowerks develops software tools for the shrink wrap, vertical and highly specialized general purpose and embedded systems market.

- Designed and implemented extensions to the CATs UI using Microsoft Visual C/C++ and COM. This UI displayed complex statistical data using a variety of graphical packages
- Designed solutions so that the ATtaCK instrumentation framework can be ported to embedded real-time and hosted operating systems thus realizing full market potential of the CATs/ATtaCK profiler tools. ATtaCK is an extensible Metrowerks framework that abstracts instruction sets, targets, and other analysis entities such that adding supported entities is much easier than other profiler/analysis tools. ATtaCK utilizing instruction replacement and executable file modification as the mechanism for both static and dynamic (runtime) analysis. My changes (for both the RTOS and ATtaCK) included:
    - Added MIPS Level IV instruction support
    - Fully relocated ELF/DWARF information
    - Emulator and serial port protocol support.
    - OS object support – component/dll's, threads, processes, memory domain protection are all now supported entities. Previously, only dedicated; non-OS constructs were supported.
    - PIC instruction replacement for the MIPS architecture
    - Setting up a project-wide
- Served as technical mentor to staff and contractors.

1999-2001   *Software Engineer*   Applied Science Fiction   Austin, TX

Applied Science Fiction is the OEM for Digital Film Processing (DFP) and Image Correction and Enhancement (ICE) for major scanner and kiosk manufacturers.

- Led company-wide effort to rapidly prototype, evaluate new technology and develop technology strategy recommendations. This effort resulted in the development of a successful strategy for delivering the application service in a distributed environment.
- Designed and implemented a complex image-processing system on a Mercury Multi-Computer System.   These included FFT, convolution, filters, high speed I/O from camera units, data synchronization, noise reduction/elimination, and other proprietary DFP Image Path algorithms as part of the Digital Film Processing project.
- Led development team in the design and implementation of a new web-based system for 3d manipulation of graphical / photo data. This resulted in a significant new functionality available to end-users in an easy to use system, based on commodity technology, reducing the costs for training, maintenance and support.   The technology incorporated into the prototype included RMI, JINI, JavaSpaces, JMS, SNMP, ARM and other open software technologies.
- Optimized image-processing algorithms to take advantage of the G4 AltiVec vector-processing unit, often able to get upwards of a 12x-speed improvement over non-vectorized code.
- Led team effort to find solution to specialized image-processing problems by comparing various hardware/software solutions. Tested the Mercury (G4, Race++), Sky Computers (G4, SkyChannel), SGI (MIPS/ccNUMA), Compaq (P3/MMX, Linux and MPI, Proprietary Backplane) and others to find the right fit for our organization..

1998-1999   Senior Software Engineer   IBM/Tivoli   Austin, TX

Tivoli is a major player in the multi-billion dollar Enterprise Management software market.

- Senior Software Engineer and Client Architect for Tivoli's Cross-Site Enterprise/Internet Applications Management System.
- Designed and implemented the Cross-Site client focusing on a platform-neutral approach which enabled the

Cross-Site client to operate in a variety of different environments retaining the look-and-feel of each target hosted environment.

- Wrote a variety of n-tiered applications within the CrossSite framework that analyzed, reported and corrected web server availability issues.
- Designed and implemented Windows specific CrossSite client and availability analysis modules using Visual C/C++, MFC, Java JNI, SNMP and Netmon. This module was designed such that the OS abstractions isolated the Java/MFC portions and ensured a consistent 'look and feel' for the Windows Win32 platform.

1997-1998   *Software Engineer*   Clam and Associates   Austin, TX
Clam and Associates is a developer of fault-tolerant software for OEM drive arrays.

- Designed and implemented a Solaris Application Transparent Failover device driver. This driver is a replacement for the standard /dev/sd driver that ensures high availability for the OEM's drive array.
- Prototyped new ATF device deriver for the Windows NT 4.0 platform for SCSI over CDDI.
- Acted as Clam's technical liaison responsible for communicating technical direction and customer needs to Clam's executive staff.
- Designed and implemented changes to allow ATF to function with the Fibre Channel Trident Storage Processors.
- Designed and implemented changes to allow for full SCSI II compliance for 16 targets and 32 LUNS for supported architectures. Work in progress for expansions to 126 SCSI targets to support Fibre Cabinets and future SCSI III capabilities.
- Analysis and prototype development of FC device drivers on the Windows 2000 using MS Device Driver Development Kit, MSDEV, and Visual C/C++.

1997   *Software Engineer(contract)*   IBM Corporation   Austin, TX
AIX development group.

- Designed and implemented LDAP regression test framework for new IBM LDAP server
- Added new features to IBM LDAP servers

1996   *Software Engineer (contract)*   Energy Tracs(El Paso Gas)   Houston, TX
Energy Tracs was a software company that specialized in natural gas routing, billing and trading.

- Creation and maintenance of customer specific procedures Natural Gas routing, storage and billing
- Used C++ and PowerBuider to implement customer requested changes, find an correct defects.
- Designed and implemented schema changes, stored procedures, indexes and other DB artifacts in a Sybase environment.

1989-1996   *Software Product Engineer(contract/permanent)*   Texas Instruments   Houston, TX
Texas Instruments Software Tools Organization

- Wrote C/C++ libraries functions for ARM C/C++ compiler that ran on ARM (TMS470R1X) emulator controlled system. The emulator system was operated in a real-time environment to debug customer applications on the fly.
- Ported portions of real-time OS to a TI ARM emulator environment. These portions included timer operations and various data transfer functions to assist in communications between debugger and on-board emulator system. Wrote test software that ran on 8/16/32 bite DSP and micro-controllers that assured sane operation of compiler/debugger/emulator environment.
- Designed and implemented a device driver for Windows 3.X that interfaced between the standard TI loader/debugger and a TI DSP board.
- ed TI and other 3rd party emulators, HP Logic Analyzers in successful effort to determine performance problems in the C4UtilizX cube architecture. These problems were corrected by code changes within the monitor code that communicated with TI C4X parallel debugger.

- Visual C/C++ Windows95/NT C/C++; Ported a large Hardware simulator (300K+ lines of C/C++ code) from Windows 3.0 to Windows95/NT using Microsoft Visual C/C++ and MSDEV. This involved rewriting portions of both simulator and interface code.
- SparcWorks C/C++, Apple MPW C, VAX C, HPUX C, Texas Instruments C/C++ Compiler Debuggers; Product Engineering for Texas Instruments Software Development Systems; Compilers, Debuggers, and other support utilities. Involved design, coding, installation, maintenance and testing of in-house designed software testing environment for C/C++ compilers, debuggers, and other associated Software Development Tools.
- Patent Applied for; designed and implemented systems solutions in C/C++ in the SparcWorks, HPUX, and Windows95/NT development environment for multi-platform test environments using a distributed execution model. This system parallel execution of multiple jobs on a heterogeneous network to reduce compile and run time of various software testing stages on both hosted and embedded systems. Patent application also outstanding for generalized file locking on heterogeneous file systems. This system used unique key file, resource locking, timed exponential back off to ensure unique access to locked resources across dissimilar network file systems.
- Leadership Role: Provided technical leadership for junior programmers and engineers for design and implementation of both internal support projects as well as Texas Instruments SDS products.

SELECTED SKILLS

Languages	C# 1.X/2.0/3.X/4.0 CLR, Linq, Managed C++, C/C++, WinForms, Infragistics NetAdvantage, QT Object Library Assembler, Microchip MPLAB, Cypress PSoC Designer, Forth, XML, HTML, Java, JavaScript, UNIX shell (e.g. bourne, bash,ksh and c-shell), SQL, TCL, Perl, SQL,, Open Source Development, Visual C/C++ 5.X, and 6.0, Visual Studio 2k5,2k8 and 2010 environments (VSS and Team). SqlServer 2005 & 2008.
Tools	WindRiver, Rational Rose, awk, sed, grep, Perl, VSS, CVS, Perforce, make, and mibgen Visual Studio 2005, 2008, and 2010
Platforms	DotNet 1.X/2.0/3.X/4.0 CLR, MCOS, VxWorks, SPOX, NeOS (Sony Set Top OS) RTOS, web servers (e.g. Apache, IIS, Netscape), Linux/UNIX; MS Windows; Macintosh; X Window; Databases (e.g. Oracle, SQL-Server, MySQL and others), HP Logic Analyzers, Network Protocol Analyzers(Sniffer), TI, WindRiver VisionIce/VisionClick and other 3rd party Emulators, SCSI/Fibre Channel, and familiar with 802.11 wireless protocol.
Processors	Cypress PSoC, Microchip PIC, X86, PowerPC PPC 750/7400, AltiVec, Itanium/Opteron, TI C6X, MIPS, ARM and Sparc.
Architecture	Web services, SOA, Data Services, SNMP MIB, WCF, WWF, RMI, desktop applications, use of patterns.
Design	Component-based, object-oriented, use of patterns
Modeling	RUP, UML, EDM and patterns
Certifications	Mercury Multi-Computer Certifications in SAL, PAS, PPC 750, and PPC 7400/AltiVec; This comprehensive certification course covered PPC 750/7400/AltiVec programming and architecture, solving complex problems such as Radar and Image Processing using Mercury Parallel Architecture System on the MCOS and VxWorks operating systems;SEI training
Hobbies	Wood Working (building a boat), Private Pilot, Ham Radio, Dog Training, Video Games and of course – computers!