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Resume of Robert (Bob) Binns

Overview

Bob Binns is a full-stack Web Application Developer and Windows Software Developer, currently living in Sharon, Massachusetts. With over 30 years of Microsoft software development experience, he established a successful consulting business in 2003. Currently Binns & Co. Software provides services and solutions to healthcare, academia, engineering, and other industries. Bob is both driven and self-motivated and is constantly experimenting with new technologies and techniques. He is very passionate about Web Development, and strives to better himself as a developer, and the development community as a whole. Prior to this business Bob was a Principal Software Engineer for Instron and Analog Devices and an Engineering Manager at Analog Devices. Bob has a Master of Science and Bachelor of Science from Northeastern University, majoring in engineering and computer science, MSEE, BSE...

Professional Experience

May 2003 – Present Independent Consultant, Self Employed

Binns and Company Software, Professional Consultation Services

Established Binns and Company Software, Inc. to provide professional consulting services and software products (<http://www.binns-software.com>). This website is not current and being renovated.

Established sso-solutions.com to provide expert consulting services to hospitals worldwide using Imprivata / Caradigm / Sentillion / Microsoft Identity and Access Management software.

Software Consulting Highlights:

Imprivata, Caradigm, GE Healthcare, Microsoft Health Solutions Group, Sentillion

September 2004 – Present

<http://www.imprivata.com>

- Integration of product to web services and other API's
 - Epic Interconnect
 - ServiceNow
 - Citrix Storefront and other Citrix API's
 - Office365 / Exchange
 - Volte
 - Workday
- Designing and developing code in C#, JavaScript, Java, C++, PowerShell
- Enhancing standard product features
 - Developed a Chrome extension for accessibility
 - Added API Hijacking / Screen scaping
- Working in healthcare industry
 - Epic, Meditech, Cerner, McKesson, ...
- Designing and developing leading edge Identity Management software for

Health Care Security Systems (Vergence and expreSSO product lines). This includes implementing Single Sign-On (SSO) and Single Patient Selection (Context Management) for major hospitals across the country and internationally.

- Designing and enhancing wizard technology for automatic code generation of Single Sign-On and Single Patient Selection. These technologies allowed the user to point and click at application controls and inputs, and generated code that would be used in an enterprise environment to automat login and other application workflows.
- Adapting applications to meet HIPAA, HL7, and CCOW standards. Developing software using the Visual C++/ Visual C#/ JavaScript/ Java/ COM/ ATL/ .NET/ HTML/ XML and the latest OOD techniques. Employed techniques such as Active Accessibility, Hooking, API Hijacking, Screen Scraping, Document Object Model (DOM), and Window sub-classing. Designed and implemented reusable components for CCOW Context management and Text Output API Hijacking.
- Designed and developed a standard State Machine for Modeling Single Sign-On (SSO) and Single Patient Selection (Context Management). This model code is now used in most all implementations of Sentillion Identity Management solutions today.
- Writing server application for the purposes of performing database queries for Patient Mapping Agent (PMA). This was used to synchronize patients across various applications. Data was queried from an EMPI database. Using C#, C++, ASP.NET. IIS, Visual Studio and SQL Server, Oracle. Also developing a Java Servlet version of the PMA with JSP, Sun Java, JDBC, J2EE, Eclipse, Java NetBeans IDE.
- Writing a Sun Java to Windows API Bridge to allow communications between and control of Java applications from MS Windows client software. Java components were injected using Active Accessibility hook and the Java Native Interface (JNI) was used to perform the Bridge. Java Accessibility, AWT, Swing, Java Reflections, JNI, Eclipse, Java NetBeans IDE, and MS Visual Studio tools were used.

Website Development– 2007 – Present **Various Clients (See website for details)**

<http://www.binns-software.com>

- Microsoft ASP.NET / SQL Server
- Web Service Integration, Amazon AWS, Azure, FB, Twilio, Google, PayPal
- JavaScript / jQuery / Bootstrap and Foundation responsive frameworks
- See Website Gallery online.

Cloud Application Development– 2014 – Present

Developed a Text Message Scheduler, Intelligent Responder (BOT IVR). Application for UCSD and BROWN Exercise Study leveraging Twilio Web Services. The system is designed to enroll and maintain participants in studies that encourage them to be active through text messaging. The system tracks their progress during the study. See Website Gallery online for more information.

Instron Corporation (Norwood, MA.) – June 2003 – Present

<http://www.instron.com>

(See previous job experience for further details about Instron)

- 2015 – Present: Upgrading and supporting RoadLab software. Originally written as a project I worked on in 1999 (VB5), it was still being used in all Ford and other plants. This would not install and run on new computers. I

was approach by Instron to upgrade. Upgraded to .NET / C#, Windows Forms. The software is testing cars/trucks that come off the assembly line. See <http://www.binns-software.com> for more details.

- 2002-2003: Developing Windows CE Embedded Applications for instrumentation control panel driving a laboratory test instrument for measuring stresses / strains / strengths of various materials: http://www.instron.us/wa/products/controller/touchpanel/tp_features.aspx

Development was using Windows CE 4.2, using an AGX XSCALE board from applieddata.net. Developed using Visual C++ and MFC.

- Designing and developing leading edge software and device drivers for their premier product line (Blue Hill). Developing using the Visual C++/COM/ATL and the latest OOD techniques.
- Successfully enhancing their software product to interface to a new Test Instrument via a USB interface. Complete project under budget and schedule.
- Supporting activities enhancing existing Windows Device Drivers and Applications using ATL/COM components.

Various Project Work

- 2011-present. Working directly for various hospitals (VA, Hoag, Unity Point, Trinity). Single Sign-on and other integration-based consulting. See website <http://www.sso-solutions.com>
- 2007-present. Working with Illumina Interactive on a number of various projects. Including some website in the online gallery.
- 2003, Developed KaBoom! Popup Blocker, a popular free download on download.com and other sites.

2000 – May 2003 Analog Devices, Inc. Norwood, MA
SoundMAX Integrated Audio Group

<http://www.analog.com>
<http://www.soundmax.com>

Software Manager

Leading a team of engineers sustaining, supporting, enhancing, and releasing Microsoft Windows Device Drivers and applications for integrated audio components. Managing, prioritizing, and assigning customer requests from all accounts. Customers include Intel, IBM, Compaq, HP, DELL, Gateway, Asus, Sony and others. These audio components (CODECs) were designed to the Intel AC97 specification to be included with on-board chipsets from Intel, Via Technologies, ALI, SiS, AMD, and others. These software products were pre-installed on PC platforms running Windows 95, 98, NT, 2000, Me, XP, and OS/2. Millions of units were sold each year. Raising profit margins over 2 million dollars per quarter over a 2 year period. This was during a time when most businesses were cutting back or dissolving.

Directly managing a growing team of 13 (consisting of device driver engineers, Install engineers, Windows developers, and release personnel). Growing the total team from 5 to 13 during a time when most businesses were shrinking. Interviewing and hiring new employees as necessary. Writing and delivering performance reviews. Decision making about priority and direction taken with ongoing issues.

Managing an extremely short cycle (1-3 week) of product releases of 3 major driver products (WDM, NT4, VxD Drivers and associated applications). Software and device driver releases were done on demand to meet the ever-increasing needs of the PC industry. Reviewing technical information and release notes sent out with each release. Directing the design and implementation of database and automation systems to handle the ever-increasing need for software releases; this was accomplished without increase in staff.

Managing cross site product sustaining, development, and releases. This includes direct collaboration with partner firms, contract agencies, and other ADI locations. Coordinated teams from Japan, Taiwan, UK, and various locations across the US. Managing the integration of software components from these sources for test and release. Establishing and tracking schedules for product enhancements and software delivery to customers.

Participating on cross functional management team comprised of Applications, Test, and Software engineering managers. Together working to coordinate schedules to deliver software solutions to our customers.

Principal Software Engineer

Writing and reviewing software designs, specifications, proposals, and other documents. Recommending corrections as necessary. Working on various software development tasks including WDM driver enhancements, audio applications, various customer tools, internationalization, and installation. This using a variety of development tools: MS Project, *Visual Studio*, *Visual C++*, *Visual Basic*, *MFC*, *ATL*, *COM*, *Visual Source Safe*, *Install Shield*, *Soffront Track Web*, *Win32 API*, *Win 32 (Platform) SDK*, *DDK*, *DirectX*, *NuMega SoftICE*, *Longhorn*.

1984 – 2000

Instron Corporation

Canton, MA

Principal Software Engineer

Leadership Experience:

Leading team of software engineers for ongoing support and development of Instron's premier software product (Merlin). Organizing schedules and budgets. Leading a series of on-time and on-budget projects. Working with Software Quality Engineers to develop a successful software process. Participating in cross-functional business teams to develop product development plans (both long and short term). Working closely with Customer Support Center to solve problems. Interfacing with all company departments to resolve any issues. Brought software from marginal profits to a company success within two years. Introduced cross-functional work team concepts to group. Overall technical leader of the group. Advising on designs and designing software. Writing technical specifications, proposals, designs, etc. Acting as technical consultant / leader on other software projects throughout the company.

Technical Experience:

Developing software using state of the art modeling and requirements tools. Using *Rational Rose* Modeling (CASE) tool to architect new premier testing software. Interfacing with *Caliber RM* requirements management and *Mercury* testing tools. Using full design methodologies (*Rational Rose* and *Rational Unified Process*). This includes: Requirements, Use Cases, JAD, OOA, OOD, UML. Also have experience using *Select Enterprise* CASE tool. Have attended training courses for these products.

Developing Windows 95 / 98 / NT / 2000 Software applications using a variety of tools: *Visual C++*, *Visual Basic*, *MFC*, *ATL*, *COM*, *DCOM*, *FrontPage*, *MASM*, *Visual Source Safe*, *Install Shield*, *PVCS Tracker*, *Win32 API*, *Win 32 (Platform) SDK*, *DDK*, *ActiveX*, *OCX*, *NuMega SoftICE*, *HTML*, *XML*, *ADO*, *COM+*.

Designing and developing both custom and standard software products for the purposes of automating laboratory testing in the areas of material science, automotive, and mechanical engineering. Applying expertise in the areas of Software Architecture, Real Time Data Acquisition, Control, and Signal Processing in interfacing Instron equipment to computer systems. An example application would be a Road Simulation system so that new vehicles could be road tested "in place" without leaving the factory. Frequently interfacing with hardware and embedded firmware development projects.

Designing and implementing Device Drivers for Windows 3.x / 95 / 98 / NT / 2000. Designed Windows 95 / 98 Virtual Device Driver (VXD) and Windows NT / 2000 Kernel mode Device Drivers for a high rate HDLC communications link. This was developed for custom designed ISA and PCI boards. This used Interrupts and DMA Bus mastering. Implemented using Visual C++, MASM, Windows 3.x / 95 / 98 / NT / 2000 DDK, Win32 SDK, NuMega SoftICE, and WinDebug. Designed and implemented ATL COM interface for driver to MS-Windows VB and VC++ applications. Leading team of two contract programmers to assist in completion of the task.

Developing MS-DOS and Windows 3.x applications and drivers (using 16 Bit in MASM, C, Fortran, Visual C++, Borland C++, and Win31 API). Lots of great experience in these and other ancient and forgotten arts.

1979 – 1984 Various Positions

Software Engineer

Various entry level positions via the Northeastern University Cooperative Education program. This included programming in Basic, Fortran IV, Fortran 77, COBOL, Pascal, and Assembler. Applications varying from financial to engineering / scientific. Programming on IBM 360 mainframe systems, Digital Equipment Corporation VAX 11 / PDP 11 system. Also did some microprocessor programming in assembler.

Joining a startup after graduating that developed an aircraft laser mapping system. Wrote real-time aircraft data collection system in assembler code using a popular microcomputer at the time. Worked with scientific staff to develop / enhance software to generate maps from the collected data. Also performed on-going maintenance and systems management of VAX 11 computer used for software development.

Education

1993 Northeastern University Boston, MA

Master of Science in Electrical Engineering

- Majoring in Signal Processing and Control systems.

1983 Northeastern University Boston, MA

Bachelor of Science in Engineering with Honor

- Minor in Computer Science