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**P R O F E S S I O N A L   W O R K   E X P E R I E N C E**

**Software Design Engineer in Test    C++ Compiler    Microsoft**  
Summer 2010 – Present    Redmond, Washington

PERFORMANCE ANALYSIS AND REPORTS ON CODE GENERATED BY THE BACK-END OPTIMIZER

TOOL DEVELOPMENT AND ANALYSIS OF WIN8 BOOT PERFORMANCE ON ARM, AS WELL AS  
WINDOWS INSTRUCTION PREVALENCE STATISTICS ON ALL ARCHITECTURES

TESTING ON COMPILER SECURITY FEATURES

AS A "SECURITY CHAMPION" FOR THE COMPILER TEAM I HELPED ORGANIZE AND EXECUTE ON  
THE SDL (SECURE DEVELOPMENT LIFECYCLE) PRACTICES

**Test Architect    "Project Courier"    Microsoft**  
Spring 2010 – Summer 2010    Redmond, Washington

TEST ARCHITECT ON THE "PROJECT COURIER" TABLET INCUBATION TEAM

RESPONSIBLE FOR TEST INFRASTRUCTURE, TEST TOOLS, AND OS SUPPORT

**Test Architect    Xbox    Microsoft**  
Spring 2008 – Spring 2010    Redmond, Washington

TEST ARCHITECT FOR AN ORGANIZATION WITH OVER 100 TESTERS

DESIGNED AND IMPLEMENTED THE CORE ENGINE FOR A TESTING PLATFORM (A TEST OPERATING  
SYSTEM), PROPERTIES INCLUDE:

- SUPPORTS MULTIPLE ARCHITECTURES (X86, AMD64, XBOX 360)
- ALLOWS FOR TESTS TO BE WRITTEN IN MULTIPLE LANGUAGES (C, C++, C#, VB.NET,  
ETC.)
- PLATFORM APIs PROVIDE KEY TESTING SPECIFIC FUNCTIONALITY (NETWORK  
COORDINATION ACROSS MULTIPLE SYSTEMS, AUTOMATIC RESOURCE TRACKING,  
RESOURCE MANAGEMENT, ETC.)

PROVIDED INITIAL PROTOTYPING SUPPORT FOR THE XBOX KINECT USER INPUT CAMERA THEN  
DEVELOPED AND SHIPPED SPEECH RECOGNITION TOOLS TO GAME DEVELOPERS

DESIGNATED AS THE STANDARDS CHAMPION TO HELP DEFINE AND FACILITATE COMMON  
PRACTICES, TOOLS, AND TERMINOLOGY

**Test Architect    Zune    Microsoft**  
Spring 2007 - Spring 2008    Redmond, Washington

DESIGNED AND DEVELOPED A GLOBAL METRICS TRACKING SYSTEM

- TRACKING AND TRENDING OF ANY TYPE OF NUMERICAL METRIC
- CUSTOM REPORTS FOR COMBINING DATA FOR COMPREHENSIVE ANALYSIS
- NATIVE COM LIBRARY ALLOWS TESTERS OR DEVELOPERS TO EASILY PUBLISH METRICS

CREATED A GENETIC AI FRAMEWORK FOR GENERATING NEW STEP-BASED TEST CASES

JUMPED INTO THE MANUFACTURING EFFORT FOR THE 2.0 DEVICES, CONTRIBUTIONS INVOLVED:

- DEVELOPED WI-FI MANUFACTURING TESTS
- DEVELOPED ISAPI WEB SERVICE FOR SECURELY TRANSMITTING DRM KEYS BETWEEN A  
TEST STATION AND AN NCIPHER DEVICE
- REVIEWING THE ENTIRE MANUFACTURING CODE BASE

**Software Design Engineer in Test Lead Xbox**  
Spring 2000 - Spring 2007

**Microsoft**  
Redmond, Washington

WROTE API TESTS FOR THE XBOX KERNEL AND TITLE LIBRARIES; INCLUDING STORAGE APIS, USB STACK, AND PERIPHERAL DEVICE DRIVERS

WROTE THE SOFTWARE LIBRARY FOR A USB SIMULATOR USED IN TESTING THE XBOX

BECAME LEAD OF THE KERNEL TEST TEAM IN DECEMBER OF 2001, RESPONSIBILITIES INCLUDING:

- MANAGED A TEAM OF UP TO 6 INDIVIDUALS
- XBOX BOOT LOADER, KERNEL, AND TITLE LIBRARY TESTING
- HARDWARE TEST SUPPORT (DVD, HDD, MEMORY, ETC.)
- XBOX/SEGA STANDALONE ARCADE TESTING
- SYSTEM SECURITY

DESIGNED AND IMPLEMENTED THE XBOX 360 TEST HARNESS (H2) WHICH WAS USED BY XBOX TESTERS WORLD-WIDE (INCLUDING ATI AND IBM), MAJOR HARNESS FEATURES INCLUDE:

- FULLY FLEDGED HIGH LEVEL SCRIPTING LANGUAGE (DERIVED FROM JAVASCRIPT) AND A RUN-TIME DEBUGGER
- REMOTE COM SERVER COMPATIBLE WITH XBOXES
- PLUGGABLE LOGGING LIBRARIES TO SUPPORT THE NEEDS OF DIFFERENT TEAMS

**Software Design Engineer in Test Passport**  
Summer 1998 - Spring 2000

**Microsoft**  
Redmond, Washington

DEVELOPED A RADIUS STRESS AND TEST TOOL FOR THE MSN GROUP

PASSPORT STRESS TOOLS, INCLUDING SURGE, A GENERAL WEB STRESS APPLICATION USED BY MULTIPLE TEAMS

PERFORMANCE TESTING

API TESTING ON THE CORE COM OBJECTS USED BY THE PASSPORT SERVERS

MONITORING TOOL FOR THE LIVE PASSPORT SERVICE

**SDET Intern Monitoring and Performance**  
Summer 1997

**Microsoft**  
Redmond, Washington

WROTE SEVERAL INTERNAL UTILITIES TO COLLECT AND ANALYZE DATA CONCERNING THE PERFORMANCE OF MICROSOFT WEB SITES. COLLABORATED IN A TEAM EFFORT AND INDIVIDUAL ASSIGNMENTS TO COMPLETE THE DESIRED PRODUCTS

**Junior Executive Programmer**  
Fall 1993 - Fall 1995

**T3 Systems**  
Boulder, Colorado

PROGRAMMING IN ASM, C, AND C++ ON EMBEDDED SYSTEM APPLICATIONS

- PRIMARY DEVELOPER ON A THREE-AXIS SERVO SYSTEM USED TO STABILIZE VIDEO OPTICS DUE TO LOW FREQUENCY ANGULAR MOTIONS
- USER INTERFACE DEVELOPMENT ON A ROAD CONSTRUCTION MESSAGE BOARD
- WROTE THE CONTROLLER FOR A HIGH SPEED MOTOR, WHICH DROVE AN ELECTRONIC LABEL READER/WRITER

EXTENSIVE DEVELOPMENT WITH MICROSOFT ACCESS ON AN INVENTORY CONTROL SYSTEM

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## P A T E N T S

**Transparent authentication using an authentication server**

7421731

SUPPORT FOR SEAMLESS AUTHENTICATION OF A USER VIA A SEPARATE REMOTE SERVER.

**Testing a host's support for peripheral devices (aka "USB Simulator")** 7162407 / 7418377

HARDWARE AND SOFTWARE TO TRANSFER USB COMMUNICATION THROUGH A NETWORK, ENABLING DISTRIBUTED AND VIRTUAL (EMULATED ON A PC) DEVICES.

**Game console communication with a device**

7991890

TECHNOLOGIES ALLOWING NON-GAMING DEVICES TO INTERACT WITH A GAMING CONSOLE.

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E D U C A T I O N

**University of Colorado at Boulder**

Boulder, Colorado

BACHELORS OF SCIENCE IN COMPUTER SCIENCE (MAY 1998)