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SUMMARY

A highly skilled Electrical Engineering Professional with RF, DOCSIS, networking, embedded system design, IC Design of DSPs and semiconductor wafer-fab experience. Particular expertise in network architecture. Solid track record of taking challenging projects from conception to fruition.

Technical Skills:

Software: TCL/TK, C, CVS, Clearcase, Linux, ClearQuest, Cisco IOS, Ethereal, VxWorks

Hardware: Agilent 89441A Vector Signal Analyzer, Spectrum Analyzers, Infiniium Oscilloscopes, Cisco/3Com CMTS's, Wavecom Upconverters, Smartbits, Cisco Routers, LAN-GPIB Gateway, GPIB

PROFESSIONAL EXPERIENCE

THERASENSE/ABBOTT DIABETES CARE, Alameda, CA

April 2005 to May 2006

Embedded Engineering Firmware Consultant

Navigator Sensor Calibration Project – Assisted in developing new calibration platform for new family of glucose sensors for the Navigator project. Each target board contains 17 TI MSP430's (MSP430F1611IPM) and is able to test 16 sensors simultaneously. Each test platform contains 4 boards. Responsible for all firmware in the project. FreeRTOS (www.FreeRTOS.org) ported to MSP430/IAR for this project. Participated in schematic/design reviews. Development done under Windows 2K/AS using the EW-430 IAR tool suite.

TERAYON COMMUNICATIONS SYSTEMS, Santa Clara, CA

August 2004 to Nov. 2004

Lead PQA Engineer

- Commercial Services – Working on commercial services effort – work has included test equipment evaluation for T1/T3, Jitter and Wander analysis. Have ordered all equipment needed for commercial services test and validation effort.
- Commercial Services – beginning to help with characterization which included getting a +48VDC power supply working with an Axerra AXN-800.
- Euro-DOCSIS – helped with Euro-DOCSIS testing as needed.
- DOCSIS PHY and MAC-PHY – helped with PHY and MAC-PHY testing as needed.
- GPIB/TCL for Fireberd's – To help with Commercial Services test automation – beginning development of a GPIB/TCL library for our Fireberd 6000's.
- Test Director Evaluation – began evaluation on Test Director from Mercury Interactive.

LSI LOGIC CORPORATION/C-Cube Microsystems, Milpitas, CA

1999 –2003

C-Cube Microsystems, acquired by LSI Logic in 2001

Staff Engineer (2000-2003)

Responsible for DOCSIS ATP certification effort, trade show demonstrations and set-up. Taught training classes.

- DOCSIS Lab – Built DOCSIS (Data Over Cable System Interface Specification) lab for Phy and Mac-Phy DOCSIS (cable labs) certification.
- CVS software repository transition to ClearCase.
- Wrote Smartbits TCL support library for Phy and Mac-Phy tests.
- Patent application on proprietary RF (radio frequency) measurement techniques.
- Wind-River BSP (Board support package) training. Built BSP's to support debug and Wind-View on DVD development systems.
- Released NET-SNMP-TCL to www.sourceforge.net.
- Set up and demonstrated our first cable-modem product at Western Cable Show, November 2001 in Los Angeles. Several CM demonstrations set up for CES show. Set up CM demonstration for trade show in UK.

Senior Engineer (1999-2000)

Validation of DAVIC/DVB software running on customer STB's (set-top boxes). Scientific-Atlanta head-end and Divicom (Intersect) head-end responsibility.

- DOCSIS ECNs (Engineering Change Notices) published by Cable Labs.
- Certified by Scientific-Atlanta head-end as well as Divicom (Intersect) to work on head-end.
- Taught hands-on lab on CMTS (Cable-Modem Termination System) basics and cable modem network basics to large groups of engineers at Set-Top Box University
- Set up, configured, debugged and maintained Scientific-Atlanta head-end for on-site customer, including multi-satellite feed. Trained colleagues on how to use SA head-end.

ON COMMAND CORPORATION, San Jose, CA

1996 - 1999

Senior Engineer

- Developed an automated test that exercised the interactive part of Panasonic's server under Lynx OS using pthreads.
- Assisted in specification of system architecture that is known by the product name OCX.
- Assisted in bringing video server team up to speed on NT. Developed code under NT as needed, which included porting existing TV network interface code to run under NT.

Next Generation System Hardware Manager

Acting Hardware Manager for most of next generation platform development; duties included specifying network architecture and tools.

- Assisted heavily in the field on new system roll-out personally bringing new systems online.
- Remote management and maintenance specification and development with SNMP (Simple Network Management Protocol).
- Tested several satellite solutions, including VSAT (Very Small Aperture Terminal).
- Network specification conformance and test. Engineering lab network responsibility.

Network Engineering Group

Integral member of Network Engineering Group; including network architecture specification, remote management and maintenance specification and development with SNMP (Simple Network Management Protocol), router configuration and specification, VPN (Virtual Private Network) configuration and specification, WAN configuration and specification. Also responsible for Engineering Lab Network

- Began Network Engineering Group - network architecture specification, RFP (Request for Proposal) publication.
- Tested several satellite solutions including VSAT (Very Small Aperture Terminal).
- Assisted in publishing RFP (Request for Proposal) for main ISP and RFP for satellite solution.
- Assisted with high-speed laptop internet, including cable-modems, an xDSL-like solution and RJ-45 to the rooms. Set up and tested wireless T1 in our Engineering Labs.
- Working familiarity with TCP/IP Protocol Stack. Working experience with Network General Sniffer and NetXRay.
- As part of On Command's new system roll-out, assisted heavily in the field, bringing new systems online, including Internet service turn-on. Assisted in setting up and demonstrating new platform at two HITEC shows.

Panasonic Video Server Program Manager

Responsible for all aspects of system.

- MPEG-2 conformance and compliance testing.
- Host and client computer specification and conformance
- Network specification and conformance and test

INTERACTIVE FLIGHT TECHNOLOGIES, INC. (start-up company), Phoenix, AZ

1995 - 1996

Embedded Systems Group Team Leader

Major projects were second generation VOD (Video-on-Demand) server and real-time audio processing DSP design. Responsible for small group of direct-hire engineers, plus a small team of engineering contractors.

Responsible for getting first generation VOD server stable by developing good, solid code. Managed all aspects of new designs as well as support of existing designs in field.

- VOD (Video-on-Demand) hardware debug and firmware development. Second generation VOD architecture and DSP-based BTSC CODEC.
- Windows-NT programming of two arcade-style games to satisfy contractual requirements.

Tools used:

WorkView Office for NT for schematic capture

MAX PLUS-II tools from Altera under NT for FPGA Development Embedded Performance Tools

Including SYS-29K Panther Emulator and all associated tools

Microsoft C/C++ 4.2 under NT

SoftIce for NT

TI DSP tools

Analog Devices SHARC Tools

Technologies in System: MPEG, RAID, SCSI, RS-485, NTSC, RISC, DSP, FPGA, EPLD, FLASH

TELESOFT INTERNATIONAL, INC. (ISDN start-up), Austin, TX

1994 - 1995

TeleSoft International, Inc. is a hardware and software solutions provider for BRI and PRI ISDN

Senior Engineer

Responsible for existing hardware designs as well as developing new ones. FPGA design using XACT from Xilinx and ProSeries from ViewLogic. Responsible for LLD's and other ISDN-related software. Current designs are PC-AT compatible cards.

- Developed 68302 based U-Interface ISDN NT1 TA and responsible for S/T design. Demonstrated at Comdex.
- Design and layout in P-CAD. Certified in P-CAD.

Environment: Development work and layout done on Pentium-based PCs.

NUTS TECHNOLOGIES, LTD., (Video Conferencing start-up), Hong Kong

1993 - 1994

A video-conferencing solutions provider for both PC and MAC

Design Engineer, Hardware Design Group

Responsible for design of AMD 29K-based ISDN stand-alone system and PC-based ISDN TA; including schematic entry using ViewLogic and OrCad, PCB NetList Generation for Mentor PCB Tools on the Sun workstation, ICE (In-Circuit Emulation) using the SYS-29K PUMA, ISDN Software Portation and Integration, ISDN Debug and Analysis with Protocol Analyzer, Real-Time Operating System (RTOS) Development and Debug, SCSI Software Portation and Integration, System Checkout and Debug, ISDN Certification and Compliancy, Make Ready for Market

- Design of and 29K-based ISDN stand-alone system and PC-based ISDN TA (terminal adapter).
- First board developed was combination stand-alone/MAC Nu-Bus card. All subsequent boards were PC-AT compatible.
- Assisted in Audio 'C31-based CODEC development as needed.

Environment: Development work done on '486-based PCs. PCB Layout done on Sun workstations.

TEXAS INSTRUMENTS, INC., Stafford, TX

1988 - 1993

Electrical Design Engineer, Semiconductor Group (1991-1993)

Worked in floating-point DSP design group on 'C4X, 'C3X and 'C1X designs

- 320C40 pDSP (p is for parallel): worked on software support and fault grading issues.
- 320C41 (320C40 Spin): Set up logic design databases, modified simulation model and test cases; ran regression. Required 'C4X assembly test case modification. Test cases included functional, functional fault and JTAG.
- 320C31 "Compaction": Set up logic design databases, ran original regression and worked on new timer cell. Debugged and logic validated timer cell. Supported PG regression. Worked on TLM (Triple Level Metal) routing issues.
- 320C31: Assisted customers in getting simulation model up and running.
- 'C1X: Evaluated first generation issues.

Software: Software simulation tool analysis and evaluated software tools.

Environment: Apollo's DN4500's, HP 400's and Sun workstations and servers; running BSD 4.3 compatible UNIX and X-Windows. BSD 4.3, System 5.3 and AEGIS C and C-Shell script Programming.

Software Systems Engineer, Computer Video Products (1990-1991)

Worked with TIGA (Texas Instruments Graphics Architecture) developing software for TI's family of GSP's (Graphics System Processors). Developed assembly and C DLL's (dynamic-link libraries) for Windows as well as numerous TIGA/Windows demonstration programs. Worked on the TIGA device driver for Windows. Investigated Windows Multi-Media extensions.

- Developed TIGA/Windows 3-D Real-Time 34020/34082 Demo Program, released in 34082 3-D library package.
- Wrote TIGA/Windows application note, published in Users Guide.
- Developed software enabling one program to call multiple TIGA boards in system.

Test Equipment Engineer, Dallas, TX (1988-1990)

Dallas Linear-II wafer FAB which manufactures volume linear products such as the TL074 Operational Amplifier. Projects included an automatic visual inspection system for wafer defect detection and keeping the Dallas Linear-II Multiprobe Environment running. Supervised two technicians as direct reports; helped select and train two engineers hired to work on Automatic Visual Inspection System Project. Familiar with wafer-fab semiconductor processing and manufacturing as well as digital image processing

- Chief Systems Engineer for Automatic Visual Inspection system. Wrote C language control program. Automatic Visual Inspection System uses Cognex Vision system to do digital image processing as well as peripheral functions in system.
- Began program for rewriting operating system software on ATE (Automated test equipment) in the Dallas Linear-II multiprobe area.

Environment: '386-based PC software development; including C programming, 80x86-based assembly, Basic, z80 assembly, 8080 assembly. Set up SCO Unix on '386 systems. Some Sun and IBM 370 programming.

OTHER RELEVANT EXPERIENCE:

Bay Area Software Tools Developer

Assisted in developing high-speed download development solution for ARM (Advanced RISC Machines) Embedded Systems Development.

Bay Area Embedded Tools Developer

Developed ARM-based embedded systems emulation solution including Ethernet interface.

EDUCATION

University of California at Santa Cruz, Santa Cruz, CA Currently enrolled in MSCE Program Specializing in Network Engineering; also enrolled in SCPD program

B.S., Electrical Engineering, Lamar University, Beaumont, TX

Eta Kappa Nu, Tau Beta Pi, Pi Mu Epsilon, Phi Kappa Phi, Dean's List, President's List

SMU - completed 15 hours toward MSEE

COOPERATIVE EDUCATION EXPERIENCE: Dow Chemical USA (1 semester) and Gulf State Utilities (3 semesters)

- Programming assignments: Wrote communications program for HP 9000 Series 217 workstation, Modifying DIBINT (distance, bearing, intersection FORTRAN program) including Andoyer-Lambert Subroutine (took into account curvature of the earth).
- Solid-state emergency horn control for major chemical company;
- Power-factor correction and communication control systems for electrical utility company.

PATENT

US Patent #05325071, "Operational amplifier with digitally programmable gain circuitry on the same chip."

PROFESSIONAL ASSOCIATIONS

- Passed EIT in April 1988; EIT #ET-28012 (TX); Passed the Principles and Practice Examination October 2001. CA EE License #16612. Established NCEES Council Record July 2002. USCIEP Registry Established December 2002.
- Past CSPE Santa Clara Valley Chapter President & State Director. Member: IEEE, ACM, SAME, AEA, NSPE, CSPE. NFPA Electrical Section member.