

This letter is in response to the advertisement for a Software Engineer.

I strongly believe that with my design, testing, experience in the telecom and data network industry both in software and hardware coupling with the web application recently gain which your company can benefit.

I see myself as a versatile, mature, self-motivated, reliable, independent, strong leadership, hard working individual, enthusiastic devotion and eager to learn and produce.

It would be a pleasure to meet and discuss with you regarding the above position.

Regards,

To-Van Tran

Home Page: <http://www.tovantran.com>

RESUME

CONTACT INFORMATION:

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SUMMARY OF QUALIFICATION:

Twenty Three years progressive experience in Mini and Microcomputer based systems and communication:

- Testing and Trouble Shooting
- Technical Support
- Product Management
- Hardware and Software Design

A diverse background in the Communication Industry:

- OSI Layers: working with Layer 1, Layer 2, Layer 3, Layer 4 and Layer 7
- Telecommunication protocols including ISDN: Q.921, Q.931, X.25, X.31/X21, rate adaptation (bit stuffing) to 64 kbps for V.110, DMI
- System and Peripherals Communication Interface: EIA-232-C/D, V.35, X.21, HDLC, DNIC, T1/E1, DS3, OC3-OC48, Ethernet driver: IEEE 802.2/802.3 encapsulation used by SLIP/PPP
- Network Protocols including TCP/IP, PPP, SLIP, LAPD, LAPB, SS7
- ATM, Frame Relay, Wireless UNI 3.1/4.0, Q.2921, Q.2931, FRF.5, FRF.8, 802.11
- Routing Protocols: OSPF, PNNI
- NMS Network Management Solution: SNMP

- Familiar Protocols stack: Telenetwork and Trillium using for ISDN in PBX or ATM/Frame Relay Core Switch
- LAN: Wire/Wireless LAN, Access Point/HUB/Switch/PBX
- Server/Client and Network Management such as Wingate - [WinGate Internet Sharing/Proxy Server Solution](#), ISA - [Microsoft Internet Security & Acceleration Server: Home](#) – DHCP, DNS, Mail Server ArgoSoft/SMTP/POP3.
- WAN: ISDN, ATM, Frame Relay Main Frame, Ethernet
- IBM, PDP-11, and SUN/Ultra SPARC
- Web-based: HTTP, VT100, X-term, Telnet
- MS DOS Windows XP/98/NT/2000, Solaris, Unix, Linux, OS partition Lilo/Grud, pSOS
- ClearCase, Xemacs, Cscope, Documentum, Vantive, File merge (views)

Testing

- Adtech Spirent AX4000 ATM OC3-OC48 Generator/Analyzer, Spirent BERT TEST and SMARTBITS, SNMP Sniffer, DS3 Tester including TBIRD 310, FIREBIRD testers, HP 8153A, 8156A, Teketec and Logic Analyser
Signaling: tools including Adtech with Telecordia Test Suite for PNNI and UNI 3.1, UNI 4.0

Documents:

- Documentum from Citrix, Vantive Enterprise for bugs tracing, MS SourceSave, Cleartools, Perforce, Framemaker, Acrobat, MS Word, Access, Visio, Project, Excel
- Design Object Model using UML from Rational Rose Enterprise Edition

Languages and Debug tools for device drive:

- GNU Compiler, gcc , gdb, emacs, make w/ debug tools: in-circuit emulator ice960 Debugger, Crash Dump, Xray debugger (Microtec)
- CodeTap From Applied Micro System and GNU960 compiler for I960, Pentium
- Borland Builder and Microsoft Visual C++, ANSI C and Pascal
- Microtec C and CodeTap using XRAY debug for Motorola 68000 series
- Cross compiler: Archimede C, Bytecraft C, etc... for Motorola 6800 series
- Assembler for Intel 8080, 8051, 80X86, i960 Motorola 68000, 68340, 6809, 6802, 6502, Hitachi 6301, 6303
- Firmware, EPROM, EEPROM, Flash

Web applications and e-commerce development:

- Photoshop 8, Macromedia Flash MX/2004, Macromedia Dreamweaver MX/2004, Microsoft FrontPage, Database: Microsoft SQL/Microsoft Access/MySQL/JDatastore/JDBC/ODBC, Javacripts, Java, HTML/CSS, PHP, ASP, Apache Server/IIS/Tomcat/PHPAdmin/Web hosting/DNS, Microsoft Visual Studio 6.0/.NET, Borland C++ Builder 6, Borland JBuilder 8, Java/EJB/Servlet/JSP

EDUCATION & TRAINING:

- Member of ATM and Frame Relay Forum since 1999
- VoIP Understanding Voice over IP by Telecommunication Research Associates, 2001
- Design /Programming in C++ by Semantics, 2000
- Naviscore (OpenView) NMS Fundamentals Training for GX-550 and CBX-500, 1999

- Motorola Technical Training for Power PC MC750, 1998
- Windows NT Kernel Device Driver from OSR, 1997
- Management Training Skill, 1995
- ISO-9001 Training, 1991
- Technical Training Skills, 1990
- Quality Improvement Process Training, 1989
- Motorola Technical Training for MC68000, 1987
- Thalamus Electronics Award Certificate, 1982
- Programming Courses from McGill University, 1982
- Bachelor of Science in Electrical Engineering, University of Saigon, Viet-Nam, 1978
- Proficiency in English Diploma, 1972

ACHIEVEMENT & PATENT:

- Outstanding Achievement Award Certificate, 1991
- Canada Patent No: 2220829 for a new invention by writing microcode algorithm to sample the existing dial tone to allow a modem to operate in the case of the Interrupt (stutter) dial tone.
<http://brevets-patents.ic.gc.ca/opic-cipo/cpd/eng/patent/2220829/summary.html>

WORK EXPERIENCE:

Freelancer

2009-Now

Position: Consulting Software Engineer

- Develop Websites based on Joomla and some Wordpress, Drupal CMS open sources using Photoshop and Dreamweaver CS4 workflow on Linux, Apache, MySQL, PHP, CSS, HTML.
- Softphone with open source Asterisk using Helios Eclipse Platform 3.6 with plugins CDT (C/C++), PDT (PHP5), JDT/JDK, and recently with Android SDK on Linux Kernel 2.6.32 and 2.6.35 based on Ubuntu 10.04 on 64-bit platform. Workable with 64-bit and 4 GB of RAM it is slow since Eclipse is Java based. It can be used together with GEDIT.
- Experience on 64-bit Virtual Box from SUN Microsystems (now is called Oracle) between Win 7 Host and Linux Guest it required more 4 GB of RAM and a faster CPU to make it workable when switching between Host and Guest since Guest and Host share the same CPU and Memory. It is nice environment to have since both Linux and Windows run concurrently unlike Dual Boot systems. Linux runs as Windows Applications.
- Experience on UML with Rational Rose on Ubuntu system using WINE (Windows Emulator) verse native Linux platform Umbrello open source
- Upgrade linux kernel 2.6. 28 to 2.6.35 to fix Suspend to RAM problems and added tools plugins and shell batches for GEDIT (GNOME desktop environment) to make easy to do C/C++ code development. I choose GEDIT over KATE because it is much simple to install all plugins or add a new feature using External tools development like GDB debugger.
- Using SAMBA Network and Files sharing.

- Self learning and start working on Android applications, boot image and system image.

Telcordia Technologies (formerly BellCore), Piscataway NJ, USA

2008-2009

Position: Consulting Software Engineer

- Main job is porting from pSoS to Wind River VxWorks 6.6 for SS7 Front End. From old processor AMCC440GP/MPC8240 to new Processors Power PC: MPC8540/8560
- Using WRICE (Wind River ICE) and Workbench 3.0
- Got p2vLib (pSoS to VxWorks library) working for system calls translation
- Got the VxMP share memory object working between 2 processor via PCI bus
- Set up the environment for a new development including diab/gcc compiler/tools in windows and moved all of them to Linux Ubuntu 8.04 instead of using windows. Linux is perfect to develop real time and embedded systems. Code is centralized in one Linux server everyone can telnet or using X windows to login to do their works in /home/users then copy image into /home/target and to download into BSP target using "ld" from VxWorks Shell "ld" using TCP/IP. Uboot code is stored in /tftpboot and it is using TFTP via xinetd with service entry set to /tftpboot
- Documented them in the website running Apache server
- For BSP developing: Added the Ethernet driver, fixed some uboot issues and bring the system up using TFTP then TCP/IP from VxWorks (uboot is from the vendor).
Added the Comet driver PM4354 and bring E1 up. API detected "COMET-QUAD. Rev. 02 Enabling global E1 mode"
- Training people

ViNetCom, Ottawa, Canada

2003-2007

Position: Software Manager

- Joined a start-up for offshore software development. Lead 2 groups: Device driver and Web Applications.
- GUI is based on LAMP (Linux, Apache, MySQL, PHP), AJAX, Perl, CGI, HTTP.
- Designed ISDN PBX with ability to link with E1/T1/WiMAX/External RF/IP trunks. IP/PSTN interoperability, calls can be routed to a traditional, typically public switched telephone network (PSTN) using Q.921/Q.931 or Internet via TCP/IP. Based on PowerPC and Linux Kernel 2.4 developing on gcc/g++ GNU C/C++ compiler, gdb, ICE, CLI, and NET SNMP.
Call control and signaling using subset of Linux open source ISDN protocol stack and Linux open source IPv4 TCP/IP stack. Processes Communication - IPC using socket interface.
Switch offering standard analog phone, ISDN phone and IP phone can be used to place calls over the traditional Public Switched Telephone Network or to the IP network (either IP or circuit-switched systems). Switch allowing users to make local call on the telephone network while switching to Voice over IP for long-distance via layer 3 messages.

Lucent Technologies, Westford MA, USA

1999-2002

Call Control and Signaling for Core Switching

Position: Principal Software Engineer/ Technical Lead of Integration

- Implemented 32-bit Node Id address for OSPF and PNNI for MR2 release that will be used in the multi-domain for Europa release.
- Bugs fixed for maintenance releases MR1, MR2, MR4 and Europa relating to call control (pvcmgr) and SNMP agent (snmpa) including new features such as increase maximum VCI and VPI bits from 14 bits to 28 bits on the Lport. Thus, increase the number of VCI and VPI of circuits associated with the Lport.
- Bugs fixing for the conformance of Telecordia test suite for UNI 3.1 and UNI 4.0 for Jade and Europa 8.0 and 8.1 release
- Integration some areas of vcmgr to the Trillium Stack
- Implemented the multi-domain trunks for PNNI or OSPF allowing the CBX-500 and GX-550 to inter-connect different equipment's vendors supporting PVC, SVC and -SPVC for both Frame Relay and ATM networks. Allow provision UNI Lport end-to-end instead of hop by hop. Change Node Id to 32 bit address to allow the network integration.
- Worked on FRF.5 and FRF.8 for ATM/Frame Interworking
- Implemented the change to the Internal SVC from ATMIZER to CHARM ASIC for CP 2 (control processor) card to work with PNNI between 2 CP nodes.
- Resolving critical customer issues, interface with technical field support
- Training sustaining Engineers to take over the old projects and how to use the debug tools to fix bugs for Lucent in Chicago and Inforsys in India
- Technical lead for Integration between Lucent CoreSwitch (GX 550 and CBX 500) with Yurie (PSAX) using PNNI and UNI 3.1 signaling protocol.
- Language C/C++, pSOS
- Code review and test plan review

Signaling Testing tools:

- Setting up device testing lab network, build regression test bed and test automation
- Adtech from Spirent with Telecordia Test Suite for PNNI and UNI 3.1, UNI 4.0
- Write the automatic call set up and tear down on SPVC/PVC calls
- Training and Leading the development test team in India, Lucent in Chicago

Ascend Communications, Westford MA, USA

1999-2000

Device Driver for Core Switching

Position: Senior Software Engineer

- Designed and implemented the ATM enhancement service for GX-250 which is a shell allows multiple DS3 ports connecting to an uplink cards to GX-550 (Core switch). Each uplink has the bandwidth of OC12 with redundancy (1:1) and DS3 cards with redundancy (3:1). Based on Frammer PMC-Sierra PMC7346 (QJET) and Intel i960, PowerPC.
- Language: C/C++, pSOS - gcc/gdb
- Add a new MIB in SNMP to program the physical port to ATM or Transparent Mode
- Code review and conduct test plan review

Traffic Testing:

- Developed test plan and procedures to test SNMP MIB objects implemented
- Setting up device testing lab network, build regression test bed and test automation
- SNMP Sniffer Tesla
- HP Open View
- Tested MIBs, using IWL (Internet Working Labs)
- Adtech Spirent AX4000 ATM OC3-OC48 Generator/Analyzer
- BERT (Bit error test) TEST including: TBIRD 310, FIREBIRD Testers.
- Wrote the power up self test

Forums Activities

- Currently is a member of Frame Relay Forum and ATM Forum, my last contribution regarding Frame Discard based on AAL IE Type will be added in Annex 13 of UNI 4.1 of ATM Forum, it can be found at:

<http://www.tovantran.com/atm01-0230.pdf>

Lockheed Martin, Kanata, Canada

1998-1999

Position: Group Leader of I/O Software Engineer

- Management and Forecast and scheduling for all the I/O peripheral interface projects
- Designed and implemented TCP/IP layers for ACR (Aurora Computer Replacement)
- Implemented 1553 Protocol to control the peripherals to interact with ACR
- Maintenance and fixed the problems on DSCAN (Digital Scanner) for RADAR Based on Motorola 68060.

Mitel Corp., Kanata, Canada

1985-1997

Position: Senior Software Designer

- Designed the functional test system by using the Digital Line Card, which was used for product verification. Based on Motorola 6809 with the Digital Time Space Cross Point Switching
- Designed and wrote the firmware code for the ST-BUS monitor, it can be used to monitor the traffic of the link and analyze the packets information between the digital sets and the PBXs. Based on Motorola 6809 and HDLCs
- Implemented the code for layer1, layer2 and layer3 for the Asynchronous Dataset, Low Speed Synchronous Dataset and the High Speed Synchronous Dataset. Based on Hitachi 6303
- Involved in the MSDN/DPNSS (Mitel Standard Digital Network/Digital Private Network Signaling System) for SX-2000 system
- Worked on the Coax Dataset that was used to interface between the IBM terminal or IBM printer to the host. Based on Motorola 6809. It translated the SNA protocol and low level commands of IBM to the Network Layer of OSI to be transmitted to the PBX's
- Wrote the code for rate adaptation from user speed to 64 kbps for V.110 and X.31 using I.461, I.462 and I.463 of CCITT standard

- Wrote the code to rate adaptation from the user speed to MiNET layer transparent for end to end connection
 - Wrote the code rate adaptation to 64 kbps DMI (Digital Multiplexed Interface) to interface with AT&T equipment's
 - From X.25 involved in the design of the MiNET (Mitel Network Layer) and MiLAP (Mitel Link Layer)
 - Wrote the code for KiloStream used in the diagnostic and maintenance service for British Telecom – UK
 - Wrote the Multitasking Operating System for a PC communication card, which was used to communicate between the IBM-PC and the PBXs for the Host Command Interface application. Based on the Motorola 6809B
 - Involved in the ICM (Intelligent Communication Monitor) used as packet analyzer to monitor the information packet of layer 2 and layer 3. These capture packets can be sent to the PC via RS-232 to display or store for future analysis
 - Wrote the code for the Milink Data Module. This technique allows to share the D-channel among 7 devices and to reduce the EMI, it called SLOW-BUS. The data on the SLOW-BUS will be rate adapted to the ST-BUS by using ASIC before sending to the system at 64 kbps. Based on the DMS320 of TI
 - Wrote the SCSI-2 code for the new controller of the SX-2000. Based on Motorola 68340 and NCR 53C90
 - Involved and implemented the TCP/IP on the new main controller of the SX-2000 for debugging and maintenance the PBX from remote end
 - Fixed, debugged and maintained the code in the line card and peripheral card of the SX-2000. Implemented a series of firmware voice set to the SX-2000. Based on Motorola 6809 and 68000
 - Wrote the DSP code for AIM (Analog Interface Module). AIM converts the Analog signal to the PCM allows the analog phones set or fax machine to connect the Mitel digital PBX
 - Worked on the MPA (Mitel Personnel Assistant) used the existing code from Rockwell to implement the 33.6 k and 56 k modem for the MPA. The data from the modem of MPA that is sent to the PC via 12.5 Mbit/s serial bus called USB (Universal Serial Bus). A wireless version using 802.11a connected to Access Point link to PBX to provide LAN.
 - Worked on the wireless trunk to connect the PBXs in the case that E1/T1 is not available in some areas. The wireless trunk protocols is based on 802.11
- All the above embedded development including the device drivers, and protocols interface with in-house proprietary operating system and the code in written in assembler and ANSI C.

1984-1985

Position: Software Designer

- Wrote the boot PROM for Kontakt system
- Wrote the video and disk driver for Kontakt system
- Wrote test codes to test Kontakt system. Based on Motorola 6809.

1982-1984

Position: Supervisor of Test Department

- Responsible for testing Kontakt system

- Defined the methodologies for Test Department
- Defined the hardware or software problems and managed the field problems, direct interface with the designer, production and product manager
- Provided on site technical support
- Wrote the procedures to test the PCB boards and system final test
- Designed product verification and test plan

Philips, Montreal, Canada

1981-1982

Position: Group Leader of Pre-Production

- Responsible for the new products such as Micom 2000, 2001 and 2002. Based on Intel 8080 and Zilog Z80
- Interfaced between engineer and production to release the new products to manufacture including defined the working methods of testing the new products
- Investigated problems and updated the part lists
- Wrote the test procedures and designed the training aids

1979-1981

Position: Group Leader of Test Department

- Responsible for testing and trouble shooting the Disk, CPU, Video, Memory and Communication card for Micom system
- Wrote the test procedures and developed the automatic tester

References:

<http://www.tovantran.com/images/review.pdf>
<http://www.tovantran.com/images/reference1.pdf>
<http://www.tovantran.com/images/reference2.pdf>
<http://www.tovantran.com/images/reference3.pdf>

More available upon request.

Status:

Single, Canadian , on TN visa and can apply TN Visa to work in any companies in the US
 Languages: English, French and Vietnamese