

Mohan Lal Jangir
E-mail: mohanlaljangir@hotmail.com
Web: <http://mljangir.tripod.com>

Objectives:

A Development Lead/Manager position in an organization where I can work for operating system internals and system programming.

- ❖ A highly motivated and versatile system programmer with experience in operating system internals, device driver development, and system programming.
 - ❖ Especially skilled in a research and development setting where flexibility and creativity are required.
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Selected Skills and Accomplishments

- Device driver and operating system internals.
 - In-depth understanding of Linux kernel programming, including device driver implementation, networking, process management, and the virtual memory subsystem.
 - Experience with eCos (Embedded Configurable Operating System) architecture, networking, device driver development and debugging.
 - Experience with RedBoot, Blob, LILO and GRUB boot loaders.
- TCP/IP Networking
 - In-depth familiarity and experience with TCP, SCTP, UDP, IPv4 and IPv6 stack.
 - In-depth familiarity and experience with Network Layer Security (IPSec).
 - Working experience with other networking protocols like Mobile IP, ARP, NDP, CMIP, DNS, HTTP and SNMP.
- Telecom Networks
 - Understanding of telecom protocols like SIP, H225, Diameter etc
- UNIX system programming.
 - Multi-threaded programming with POSIX threads.
 - Network programming with sockets.
- Programming languages and related tools.
 - Is proficient in C and C++.
 - Decent Exposure to Java (including Applets, Servlets, Swings), HTML, inline assembly language (x86) and IXP2800 assembly.
 - Has Experience with UNIX Shell Script, Perl, sed and awk.
 - Used multiple compilers including GCC, Microsoft C (Visual Studio) and many GCC based cross compilers.
 - Experience with debugging tools such as GDB, kgdb and the ARM debugger.
 - Well experienced with embedded system debugging including remote debugging.
 - Exposure to lex and yacc tools.

- Experience with Workbench tool for Network Processor programming and debugging.
 - Hardware experience.
 - Developed software for 32bit architectures including Power PC, MIPS, ARM, and x86.
 - Worked with ARM920t Integrator and PowerPC based development boards.
 - Worked with strong ARM based Compaq iPAQ.
 - In-depth understanding of various hardware concepts such as USB, PCI etc.
 - Experience with hardware debugging tools (JTAG, ARM MultiICE).
 - Experience with IXP2800 Network Processor.
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Work Experience

Samsung India Software Operations Pvt. Ltd (SISO), Bangalore – (February 2002 - Present)

- Working in KT Octave (Gateway to IMS/POTS/WiMax networks) project.
 - Developed kernel modules that provide load distribution to TCP, UDP, SCTP and SigComp based application protocols
 - Developed applications and kernel modules on MIPS Broadcom processor and Xscale core to provide
 - System initialization, configuration and event handling
 - Complete hardware and software, backup and redundancy.
 - IP fail-over and Multi-homing
 - NAT (Network Address Translation)
 - Back-ported Linux-2.6 SCTP stack to Linux-2.4 Redhat Enterprises kernel.
 - Developed fragmentation and reassembly modules on IXP2800 Network Processor in assembly language.
 - Developed ALG based on H225, SIP etc.
- Demonstrated NGT (Next Generation Terminal) with IPv6 Support
 - Developed network device driver for eCos for RealTek 8139 chip.
 - Ported Web Server and Audio Streaming Client on IPv6 stack, and successfully demonstrated NGT
- Worked as core member in IPv6 development project.
 - Developed IPsec for IPv6. This includes:
 - IPsec Architecture
 - SPD and SAD management
 - Used Encryption algorithms like DES-CBC, 3DES-CBC.
 - Used Authentication algorithms like HMAC-MD5 and HMAC-SHA1.
 - Developed Networking applications like Ping and DNS client for IPv6.
 - Upgraded FreeBSD TCP to work with IPv6 addresses.
 - Ported the IPv6 stack to PowerPC and ARM based targets.

- Developed ABNF base decoder for MGCP
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Non-Commercial Work

- Developed device driver for USB card reader (USB mass storage) on Linux.
 - Developed device driver for RealTek 8139 chip on Linux.
 - Developed Java based API for network management using CMIP.
 - Developed C parser using Lex and Yacc.
 - Developed first pass of 8086 assembler.
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Intellectual Property Work

- Submitted draft to IETF on "IPSec Replay Attack Protection in Multi-sender Environment"
 - Published article on "Writing Network Device Driver in Linux" at Linux Malta Group Website <http://www.linux.org.mt/article/writing-netdrivers>
 - Filed 2 patents for Samsung India Software Operations, Bangalore
 - Published article on "System Security" in SISO magazine SeISmO Feb 2006 issue
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Awards and Recognitions

- Awarded by *Samsung India Trouble-Shooter Award 2006*.
 - Awarded by *Long Term Service Award* (for 5yrs of continuous service in SISO).
 - Awarded by *Samsung Talent Retain Award*.
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Education

- M Tech (Computer Technology) IIT DELHI
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Personal Profile

- Nationality – Indian
 - Designation at SISO – Development Lead (6+ years of experience)
 - Languages Known – English, Hindi, Basic scripting knowledge of Korean
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