Vineet Kumar Maheshwari

C/C++, Embedded. Telecom. PMP.

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I am a senior software lead with over 10years of experience in C/C++ and about 5 years' experience in Java. I have more than 15yrs of experience in Financial, Retail, Health and Telecom domains. I am passionate about processes, enjoy automating solutions to increase my efficiency and enable faster development. I am strong advocate of continuous development and delivery.

Career highlights

I have won several awards for significant contribution in development and successful completion of projects. I have coded approximately ~200k lines of C/C++ and reviewed/studied ~800k+ lines of code. I have been key member in 2 green field projects of size 20, 100 engineers, 5000+ person months. I have worked in UK for 3 months, USA for 12 months, Indonesia for 2 weeks, Japan for 2 weeks.

I have strong analytical skills that has helped troubleshoot extremely tough problems in most demanding situations. Almost in every project, I have pushed for automation efforts, which reduced software release time by at least 10-15%. I know of several scripts – perl, tcl, bash, awk, javascript besides core C/C++.

Skills and Experience Summary

c	6+ years
c++	3 years
perl	1 year
tcl/tk	2 years
linux/Bash	10 yeas
java/Web	5 years
Testing tools and automation	4 years
Excel VBA	4 years

Editors: vi, Eclipse, Sublime, Netbeans, Visual Studio, Webstorm, emacs

Work Experience

da Kine Technologies — Jan'15 till now

- **Developed Traffic Lights with Traffic Counter**

It is developed in C using AVR toolchain for atmega328p controller. I have developed a reusable framework which had scheduler, drivers for LCD, Sensors, USART, Keyboard, Timer. USART interface was integrated with web through local machine using Websockets. Backend was done in NodeJS for remote management of device. It followed agile principles, used JIRA for product log and daily reviews.

- **Wind Measuring Instrument**

It measures wind speed and direction of wind. Architecture and hardware design was reused, with additions of mechanical structure to sense speed and direction. It was done in C and backend was in NodeJs for remote data collection.

VVDN Technologies Dec'12 till Feb'13

- **Developed PoS (Point of Sale) device**

Responsibilities

- I was involved in requirements analysis for this green field project, Payment authorization device, study of related standards from PCI, EMV and UID program. This project had 4 processors with several interfaces (magstripe, contact, contactless, PIN PAD, camera, printer, GSM/GPRs, USB, LCD touch display etc).
- I was involved in solution design. Developed thermal printer driver, DUKPT algorithm in C language, on panda board for Linux and Android OS. It was a small team of 3 engineers. I had been involved in on the spot reviews, resolving their issues.

Hughes Systique Nov'07 till Aug'10

- **Solution design in M&B Software Development Center Jun'08 till Apr'09**

Responsibilities

- Requirements analysis, Solution Design for Messaging and Browsing (M&B) projects
- I worked on MMSC, GMLC controllers, written in C-language: 100 thousands of lines of code. It was a legacy code. I was to study, propose and implement solutions along with a team, demanded by Telecom customers of Nokia Siemens.
- Introduced Agile in the company by liasoning with senior stakeholders across different projects. Adopted it within the team and contributed to first successful agile delivery. Closely worked with Agile coach, senior product owner and stakeholders.
- **Highlight:** Used xplanner, versionone as part of initial adoption of tools for inhouse use. Developed few excel sheets to capture burndown charts, product/sprint log, retrospective meetings and daily standup meeting action point tracker.

Aricent Technologies May'1997 till Nov'07

- **Development of 2.5G Base Station Apr'2004 till Nov'07**

It was a green field prestigious project for Aricent. BTS sits in telecom access network between Mobile and BSC, converting radio signals into digital ABIS-interface. It was 100+ team with 21 month duration over 4 incremental releases and stringent multi-layered testing requirements.

Responsibilities

- Got the opportunity to lead the team in UK in initial phase and later worked for 4 incremental releases to develop this product till field trial.
- Developed LAP-D protocol in C-language used for link layer.
- Developed alarms implementation in Transceiver Operations and Management code in C. Transceiver had interfaces with RFU, System Box.
- Involved in Requirements analysis (DOORs), Solution design, code reviews,

- Reviews of C-code coverage done in unit testing done using measurements done using McCabe.
- Worked at Germany with Nokia Siemens team, on solution design for future evolution of BTS
- Liasoned with customer teams for quality aspects in project, implementation of O&M component. I had a training on 2 day function points based estimation techniques.
- Helped program through Excel-VBA based automation in test scripts, analysis of bugs(incoming / closing rate), test progress

➢ **2.5G/3G Protocol Stacks** **Jan'2001 till Apr'2004**

Responsibilities

- During this period, I worked across multiple 3G protocols and their release upgrades. Products are: RNC, RLC/MAC, NBAP, RANAP layers and SGSN system.
- Additionally, I maintained Common Stack Porting library.
- I was involved in Solution design around stacks for customers. Using organization process/templates, I was involved in code and design reviews of the team.
- Developed test suites to automate testing. We were the first users of inhouse developed STATE tool. It helped to mature the initiative as well as reduced repeated system testing efforts worth of 4-6 person months for every release, which happened every month for at least one product).

➢ **Development of User Terminal Simulator (UTS)** **Mar'2000 till Jan'2001**

Responsibilities

- Worked in **USA** for 3 months during initial phase of project
- Led the architecture, design using rational rose
- Used flex/bison to develop grammar and processing engine for CLI in C-language.
- Led team in development of user interface in core java and swing library for providing various configuration and test points into the stack, integration of 3rd party GMM/SM/SNDCP/LLC stack to UTS
- Developed RLC/MAC in C for emulating user side response to network messages and various physical channels.
- Developed perl scripts for automating initiation of load on the system through UTS during system integration, Used purify for memory leaks and performance bottlenecks during Unit Testing, Developed RPM install scripts for target platform of RedHat Linux OS

➢ **ISDN PC based Telephony** **Jun'1999 till Mar'2000**

Platform for development was a PC based telephony card, with firmware in C and host software C++. Host development was in Visual C++. It has support for ISDN, R2 signaling and VoIP.

Responsibilities

- Bug fixes and new feature implementations in C/C++
- **Highlight** - Implementing Global Call API for additional VoIP support in C++ using Visual C++. Implemented a framework to support multiple protocols under Global Call API

- **Network Administration and Subscriber System (NASS) May'1997 till Jun'1999**

NASS is used for registering SSU/MSU (Subscriber units - single, multiple) with Switch and BSC in wireless network.

Responsibilities

- Feature implementation of reuse of Subscriber Ids, Bug Fixes, Logger enhancements in C
- Test scripts in TCL for feature testing and regression of Release 6.0
- Automated telnet interface with NEC(NEAX) switch using expect to implement provisioning commands. Had worked at NEC, Japan for 2 weeks.
- **Highlight -** Member of FWL-Release 6.0 release team in **Indonesia** for a week. Fixed DB corruption causing subscription failure. It was done by automating updating broken links in Raima tables using bash scripts and APIs of Raima. This effort was highly appreciated and rewarded with Individual award.

PunCom Sep'1994 till May'1997

- **Supervisory systems for VSAT and Radio networks**

These were green field, totally new systems. The two systems were developed to do monitoring of local and system alarms, perform controls like switch over to standby system. We were two member team who did hardware, firmware and software for this. It was done in C for firmware and C++ on host side, in Turbo C++. Orcad was used for schematic and PCB design.

Our efforts for the volume of work done by small team was highly appreciated by highest level of organization.

Academics

- B.Tech (Electronics with Honors) from Punjab Engineering College, 1994
- MBA (Marketing & Finance, Gold Medalist) from Management Development Institute, Gurgaon, 2013. 8.42 CGPA
- Six Sigma – Black belt trained and led certification process at earlier organizations for CMMi ML3 and ISO 9001-2008
- PMP Certified 2009