Pravesh Tayal, 5G/NR Ran Architect

Profile

I understand the **business** requirement. I am good with **people**. And I can deliver the **technology** solution.

I am a **software engineer** with around 20+ years of work experience. **C/C++** developemnt is my core expertise. I am an exceptionally good hands on programmer with development, debugging and testing skills.

I understand 5G/New Radio(NR) technology in great detail from its use cases(eMBB/URLLC/mMTC) to its evolution from 4G. I understand SA/NSA Modes, 5G Core and 5G RAN. I understand NR features such as carrier aggregation, dual connectivity, harq, resource allocation, measurment gap, bandwidth part, energy saving, beamforming, massive mimo. I understand various frequency ranges, FDD/TDD, multiple numerology and protocol structure(MAC/RLC/PDCP/SDAP/RRC). I have worked on user plane as well as control plane. I understand multiple physical channels, refernece signals, MIB/SIB, BSR/PHR, rach proceduere. I have worked on control plane protocols such as F1AP as well as DU-RU interface such as FAPI. I am very good with 5G NR log analysis. I understand multiple split options in disaggregated RAN with expertise on CU-DU interface(F1AP) as well as DU-RU interface (FAPI).

I have worked with various cross functional teams located in China, Europe, US, and India. I am very good with people, documentation and processes.

I would like to continue working in telecom domain and enhance my skills to contribute to the technology advancements.

In my free time, I like to watch movies and threatre, listen to music and play badminton/chess.

ToolBox

Primary Skills	C/C++ Development, STL, Problem Solving, Data Structures, gdb, git, Wireshark, Log analysis, Jenkins, Jira
Soft Skills	Mentoring, Communication, Efficiency, Hard Work, Initiative, Positive attitude, Getting things done
Languages	English (fluent in spoken and written), Hindi

Work Experience

2021.02 – Till Date	**Technical Leader, Nokia, Banglore, India**
	Project: 5G NR Packet scheduler
	I have very good understanding of 5G NR Packet Scheduler Design, features, and Log Analysis. I am playing an important role in analysing the problem report from test team as well as customers. I have good understanding of 5G configuration parameters, TTI Traces, KPI and Performance Analysis. I am currently working on skippable Proactive Grant feature in Uplink Scheduler.
	Programming languages and tools: C/C++, git, wireshark, Jira, Jenkins

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2019.02 – 2021.02	**Senior Technical Leader, Aricent, Gurugram, India** **Project**: 5G NR gNB-DU OAM I have worked as a core member for gNB-DU OAM, where I was responsible for configuration of various gNB-DU modules (DU Manager, MAC, RLC, F1U). OAM component is also responsible for fetching counters, alarms, etc. The gNB-DU-OAM reads an XML/TR196 based configuration file and configures the DU components accordingly. It also interacts with DU-CLI component to modify the DU Configuration or fetch counters from various components. **Programming languages and tools**: C, git, gdb, Jira, Jenkins **Project**: 5G NR gNB-DU Manager gNB-DU Manager is the Layer 3 component of the gNB-DU. It interacts with gNB-CU and receives all the F1AP messages. It is the master/manager for all the other components in gNB-DU (MAC/RLC/F1U). I have expertise over F1AP protocol as well as good understanding of RRC and various call flows. I have worked on SA as well as NSA call flows/features. I have been part of multiple feature implementations including PUCCH Resource Allocation, Measurement Gap, Multi-Cell Support, Cell Reconfiguration, SI Modification, F1AP Error Indication, Dual Pattern, etc **Programming languages and tools:** C, git, gdb, Jira, Jenkins, lcov, gcov
2018.05 – 2019.02	**Mentor, Coding Ninjas, Delhi, India** **Project**: Helping Engineering Graduates with C++/Data Structures My responsibilities include mentoring the engineering students with C++, STL Design, data structures, problem solving, low level design **Programming languages and tools**: C, C++, Python
2007.08 – 2018.05	**Founder and Executive Director,Vishesh Kids, Gurgaon, India** Project: Pre-school This was a entreprenuer venture where I was responsible for Legal, Operation, Finance, Human Rsource, Marketing, Academic, and all other domain. This helped me a lot in taking ownership, risks, cordination to achieve the bigger goal **Programming languages and tools**: Microsoft Office
2004.09 – 2007.08	**Computer Scientist , Adobe Systems , Noida, India** **Project**: Adobe Postscript Product I witnessed the team growth from 4 members to 200+ members in Adobe India. The product includes Postscript Interpreter (RIP) and PDF-To-PS module. I have been involved in various releases of postscript for production/Graphic art as well as enterprise market. **Programming languages and tools:** Feature enhancement and bug fixes in C/C++ on Vxworks, Mac, Monta Vista, netBSD

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2001.08 – 2004.09	**Senior Software Engineer, Hughes Software Systems Ltd. , Gurugram, India** **Project** : Service Management Centre The SMC acts as a radius proxy and radius server. The project includes lot of customer interaction and onsite posting in Alcatel Belgium. SMC handles incoming radius access requests from various RANs and forwards them to appropriate external or internal radius server. My role includes development of various features such as CSV logging, ran specific attribute operation, adding new dictionary attributes, handling accounting on/off packets, etc. **Programming languages and tools**: C/C++ , git, gdb, Unix True64 **Project** : MGCP/MEGACO Toolkit The project includes MGCP/MEGACO Stack and encoder/decoder library. The stack handles the transport association between media gateway and media gateway controller. I am responsible for designing, implementation and testing. **Programming languages and tools:** C/C++ , git, gdb, Solaris, VxWorks, WinNT

Education

1995-1998	Bachelor of Arts in **Mathematics Honours** from **University of Delhi**, India
1998-2001	Master of Computer Application (**MCA**) from Jawaharlal Nehru University (**JNU**), Delhi, India
2005-2008	Master of Business Administration (**MBA**) from Faculty of Management Studies (**FMS**), Delhi, India

Other

Citizenship	Indian
Marital Status	Married with two kids
Date of Birth and place	1st January 1978, Delhi, India