

## Kumar Anuj

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### Experience Summary

- 16 years of experience in wireless telecom network LTE, 5G
- Expertise in LTE and 5G stack development **L3(RRC and NAS)**
- Expertise in **5G CU (gNB - CU)** Development – F1, RRC and NG interfaces
- Good understanding of Oops, Threading, debugger, IPC and Linux kernel concepts
- Regular participation in customer meeting to understand & debug the real-time issues

### Technical Skills

- **Operating System** : Windows, UNIX/Linux, Solaris
- **Languages** : C, C++
- **Tools and Utilities** : Clearcase, CVS, ClearQuest, Rational Web Platform, Catapult's Digital Communications test System (DCT2000) CATTgen, WinCVS, Nokia challenger tool, RDOX simulator, SVN, Ubinetics, WIPS, WAUT, JIRA
- **Protocol Analyser** : Wireshark/Ethereal, Opera

### Professional Work Experience

- Jio Platform Limited – March 2022 – till date
- Samsung (Client of Altran) – January 2020 – March 2022
- Alcatel-Lucent (A Nokia Company) – January 2011 – Jan 2020
- Nokia Siemens Networks – November 2008 – December 2010
- Azaire Networks/Intellinet Technologies – February 2007 – November 2008
- SixDee telecom solution – May 2006 – February 2007

## Professional Experience – Jio Platforms Ltd – April 2022 – Till date

Project Name : Small Cells  
Duration : March 2022 – Till date  
Tools/Technology : ODSC small cells, 5G  
Description : The Jio Small Cell solution offers to enhance the indoor coverage of 5G network.  
Responsibilities :

➤ Feature development

- UE Capability enquiry enhancement - UE capability enquiry and information is one of the mandatory procedures to complete Registration on 5G. We have observed that UE capability enquiry timer expiry in one of the reason of poor Registration success rate. Since UE capability information message is very big in size so it is expected that this message will be received in multiple segments based on RF conditions. Due to this phenomena it is likely to be dropped for some cases in poor RF.

As a new feature enhancement, below call flow should happen –

- CU should send UE capability in two steps – a. first for NR and then b. for EUTRA
  - After receiving UE capabilities from NR, CU should send ICS response to AMF and it should store NR UE capabilities.
  - After receiving both the UE capabilities CU should combine them and send a single message over NG AP –UE capability info indication.
- NR Emergency Fallback to LTE – The NR Emergency Fallback o LTE feature enables to gNodeB to support emergency fallback to E-UTRA.
    - Feasibility study
    - Design level document creation

## Professional Experience – Samsung – January 2020 – Till date

Project Name : Small Cells  
Duration : January 2020 – March 2022  
Tools/Technology : Femto (small cells), 4G  
Description : The Samsung Small Cell solution offers to enhance the indoor coverage of 4G network. Me and my team are involved in the call processing module of this product.  
Responsibilities :

➤ Feature development in CallP module

- Intra SC HO – Intra SC HO is mobility control functionality between cells belong to same femto. UE can move between the cells without any message exchange with MME.
  - Feasibility study
  - Design level document creation
  - Coding of the feature
  - unit testing

Professional Experience – Alcatel-Lucent(A Nokia Company) – January 2011 – December 2019
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Project Name : Small Cells

Duration : June 2014 – December 2019

Tools/Technology : Femto Access point, Femto Gateway

Description : The Alcatel-Lucent Small Cell solution cost effectively extends wireless network coverage and capacity while simultaneously offloading voice and data traffic from the mobile operator's macro network

Responsibilities :

- **Green field installation of 3G & 4G small cell network (Hanoi – 3 months)**
- Live debugging in case of any major outage/issue reported by the customer
- Reproduction of field scenarios to identify the bugs
- Wireshark and log analysis to identify the RCA for various Call and signalling relates issues.
- Hands on experience on Call processing, OAM, End 2 End Field issue debugging on both FAP and Femto GW

Project Name : NodeB

Duration : Jan 2011 – May 2014

Tools : Catapult, LAMP tool, Qualcomm UEs, Ubinetics (TM500 UE simulator)

Description : NodeB performs power control, packet scheduling in the case HSxPA calls, which is mainly used for 3G call connections, having both IP and ATM connections as the backhaul.

Responsibilities :

- Involved in bug fixing for NodeB software releases
- Involved in reproducing the customer issue for Call-p functional area
- Involved in reproduction of customer reported issues in the lab

#### Professional Experience – Nokia Siemens Networks – November 2008 – December 2010

Project Name : I-HSPA Adapter  
Duration : November 2008 – December 2010  
Tools : TN-SDL/Windows  
Description : I-HSPA (Internet High Speed Packet Access) system is a “data only”-type of overlay network architecture that uses 3G High Speed Packet Access in the air interface.  
Responsibilities :

- Involved in the development and maintenance of handover control program block of I-HSPA using TN-SDL(Nokia proprietary tool similar to C)
- Involved in SRS and HLD document preparation and review
- Feature developed in Handover control block

#### Professional Experience – Azair Networks/Intellinet technologies – February 2007 – Nov 2008

Project : Development and Maintenance of AAA Server for WLAN Access  
Duration : February 2007 – March 2008  
Tools : C, ATCA, Solaris, Monta Vista Linux  
Description : RAC (Radio Access Controller) is one of the flagship products of Azair which acts as an AAA server for WLAN access. The RAC can communicate to all HLRs and MSC/VLRs through SS7 global title resolution.  
Responsibilities:

- Involved in the development of feature
- Involved in SRS and HLD design and review
- Features developed
  - IMSI Blacklisting
  - High Availability

#### Professional Experience – SixDec Telecom Solution – May 2006 – February 2007

Project : Short Message Service Centre  
Duration : May 2006 – February 2007  
Tools : C, Java, UNIX  
Description : The System provides Short Message Service facility to CDMA Mobile subscribers. With this system, a user can send short messages to any other mobile. It also provides feature to send SMS to multi-user at a time.  
Responsibilities:

- Feature development
- Unit testing

## Education

- Integrated PhD from Amrita Vishwa Vidyapeetham (2022-2026)
- Post Graduate Program in Business Analytics and Business Intelligence – Great Lakes Institute of Management, Chennai - 2017
- Masters in Computer Application – 2006
- Bachelors in Computer Application – 2004