BHARAT BHUSHAN LAVWANSHI  
#103 AMR mansion, Teacher’s Colony, Bangalore- 560034 Mob- 9632950579

Objective

Seeking the position of a Senior/Lead telecom engineer wherein my extensive knowledge and experience in the field of telecommunication can be utilized towards the growth and development of the organization and myself.

Professional Summary

* Senior Engineer with 9 years of experience in Protocol Testing, Technical Protocol Support and software development in Telecom/Wireless domain technologies.
* Excellent knowledge of LTE, LTE-A RRC, MAC, Phy and NAS layers protocols.
* 4 years of working experience in Qualcomm's R&D and modem testing.
* Strong knowledge of logs analysis and debugging for both UE side (QXDM) and network simulators logs.
* Excellent customer facing and communication skills, worked with USA, UK, Japanese, Chinese customers of Qualcomm, Intel, Samsung, ZTE, Huawei etc

Skills

* LTE protocol testing RRC, MAC, Phy and NAS layers
* Sound understanding of CAT-M, NB-Iot, IMS and VOLTE
* Detail understanding of 3GPP specification rel 8, 9, 10, 11, 12
* Hands on experience and strong knowledge of network Simulators like Anritsu MD8430, MD8475, MD8480, ME7834 system, Rohde & Schwarz CMW500, CRTU-W
* LTE test case development using network simulator Anritsu 8430, 8480 and software Rapid test designer (RTD).
* Carrier/Operator Acceptance testing (CAT) for ATT, Verison, T-mobile using Anritsu ME7834L Protocol Conformance Testing.
* UE log Analysis with QXDM, QPST, APEX.
* Experience with Wireshark to debug TCP and UDP issues.
* Very good analytical and problem-solving abilities.
* Hardworking team player with strong motivation to learn.
* Excellent experience in customer interaction and support.
* Knowledge and working experience in Quality center, JIRA, Perforce, CVS.
* Sound knowledge of C++, Oracle SQL, JAVA
* ISTQB certified.

Work History

**Senior Software Engineer** - **Anritsu India Pvt Ltd** 01-2017 till present  
**Test and Verification Services, Bangalore, India**

* Anritsu’s LTE L3 library development in C++ for the protocol layers RRC.
* Anritsu Lower Layers library development for LTE in C++for protocol layer MAC and PHY.
* Developed LTE protocols test cases across LTE access stratum features spanning the LTE physical layer, Layer 2 and RRC and IMS.
* Developed and integrated (bring up) of new upcoming LTE features like (CAT-M, NB-Iot, Uplink CA, 3 CA, 4CA, 5CA, FDD\_TDD CA, 4x4 MIMO, 256 QAM, UL 64QAM, Mobility, Handovers, CDRX, Throughput, FDD-TDD, CSG, Femto Cell, eICIC, ASDIV, InterRAT WCDMA HO, reselections, CSFB, Lower layers features like CQI, RI, Transmission modes, Fading, etc)
* Understanding latest 3GPP specification LTE RRC, MAC, Phy spec(36.331, 36.213, 36.212 etc) for the new feature and implementation and write sample test cases for customer.
* Writing upgrade for the test case in JAVA.
* Tested new features for Carrier Acceptance Testing from AT&T, T-Mobile, Verizon for Anritsu CAT packages using Anritsu Setup ME7834L.
* Provided Protocol support for carrier acceptance testing from AT&T, T-Mobile, Verizon for Anritsu CAT packages including test case like data performance, CSFB, IMS, VOLTE.
* Testing the LTE and WCDMA conformance test cases on Anritsu setup Protocol Conformance testing (PCT) tool functionality on the Anritsu simulators MD8480 and LTE-WCDMA IRAT scenarios.
* Log analysis and debugging issues using Qualcomm QXDM and Anritsu Protocol Analyzer tool and Anritsu Monitor and Measurement tool (MMT).
* Throughput testing with TCP and UDP (IPv4, IPv6) and using Wireshark to debug issues.  
  Automation of the test suite.
* Use of the bug tracking tool JIRA, to report the defects/bugs found in RTD at customer site and to track them.
* Test case archive maintenance in Perforce.

**Senior Engineer** 12/2014 to 09/2016  
**Anritsu Company – San Diego, USA**

* Developed LTE protocols test cases across LTE access stratum features spanning the LTE physical layer, Layer 2 and RRC.
* Developed and integrated (bring up) of new upcoming LTE features like (Uplink CA, 3 CA, 4CA, FDD\_TDD CA, 4x4 MIMO, 256 QAM, UL 64QAM, Mobility, Handovers, CDRX, Throughput, FDD-TDD, CSG , Femto Cell, eICIC, ASDIV, InterRAT WCDMA HO, reselections, CSFB, Lower layers features like CQI, RI, Transmission modes, Fading, etc)
* Understanding latest 3GPP specification LTE RRC, MAC, Phy spec (36.331, 36.213, 36.212 etc) for the new feature and implementation and write sample test cases for customer.
* Provided on-site Protocol Support for customer when using Anritsu's LTE product line (MD8430, MD8480, MF6900, MS2690, RTD,C-Software etc) with testing cutting edge LTE features
* Tested new features for Carrier Acceptance Testing from AT&T, T-Mobile, Verizon for Anritsu CAT packages using Anritsu Setup ME7834L.
* Provided Protocol support for carrier acceptance testing from AT&T, T-Mobile, Verizon for Anritsu CAT packages including test case like data performance, CSFB, IMS, VOLTE.
* Provided the technical protocol support to develop the test cases UTRAN/GERAN layers protocol
* Testing the LTE and WCDMA conformance test cases on Anritsu setup Protocol Conformance testing (PCT) tool functionality on the Anritsu simulators MD8480 and LTE-WCDMA IRAT scenarios.
* Log analysis and debugging issues using Qualcomm QXDM and Anritsu Protocol Analyzer tool and Anritsu Monitor and Measurement tool (MMT).
* Throughput testing with TCP and UDP (IPv4, IPv6) and using Wireshark to debug issues.  
  Automation of the test suite.
* Use of the bug tracking tool JIRA, to report the defects/bugs found in RTD at customer site and to track them.
* Test case archive maintenance in Perforce.

**Senior Test Engineer** 04/2012 to 12/2013  
**Anritsu Ltd – Luton, UK**

* Testing LTE and LTE Advanced (CA) layers protocol (RRC, NAS, MAC) functionality on the Anritsu LTE simulators MD8430.
* Testing UTRAN/GERAN layers protocol functionality on the Anritsu simulators MD8480.  
  Testing carrier acceptance test cases from AT&T, T-Mobile, Verizon using Anritsu Cat packages using Anritsu Setup ME7834L.
* Testing the LTE and WCDMA conformance test cases on Anritsu setup Protocol Conformance testing (PCT) tool.
* Identifying and debugging the protocol related problem in LTE and UMTS test case and fix the test cases.
* Organizing the review for RTD release testing, to make the decision of the release.  
  Automation of the test suit for running sanity test cases.
* Debugging the defect found using application like Protocol analyzer.
* Use of the bug tracking tool JIRA, to report the defects and to track them.
* Test cases development for LTE RRC and NAS layer.
* Using QXDM to analyze UE issues.

**Software Engineer** 12/2011 to 04/2012  
**R System Internationals – Noida, UP**

* Testing LTE and LTE Advanced (CA) layers protocol (RRC, NAS, MAC) ·
* Testing UTRAN/GERAN layers protocol functionality.
* Testing carrier acceptance test cases from AT&T etc.
* Testing the conformance test cases on Protocol Conformance testing (PCT) tool.
* Debugging the logs to detect issues.
* Use of the bug tracking tool JIRA, to report the defects and to track them.
* Using QXDM to analyze UE issues.

**Technical Associate** 07/2008 to 12/2011  
**CanvasM Technologies Limited / Tech Mahindra Limited – Noida, UP**

* Testing 2G/3G/4G handsets and data modules using system simulators Anite 9000(LTE Test Equipment), R&S CMW500 Test System, Anite USAS-4, R&S CRTU-W, Spirent 8100/ULTS, Anritsu, CMU-200 and 3G infrastructure test platform (Live Network).  
  Tested 10776 test sections for ATT carrier acceptance testing.
* Verifying and analyzing SIM-ME Logs using SIM Simulator IT3-Prove/Move while testing section SIM-ME interface.
* Using R&S CRTU-W/G testing test sections Inter-RAT Handovers, measurements reports, RAB Multi RAB, HSDPA/HSUPA functionalities, AMR.  
  Tested AT commands.
* Mobile Application testing for GPS devices, Data cards, Alarm monitoring system, Car devices for Qualcomm devices and other leading vendors like sierra wireless or Telit for AT&T.
* Experience into Device Application Testing for Android, Windows and iOS devices for Camera, GPS, Bluetooth, Call, Battery, Data Services, USSD, Wifi, DTMF,FOTA Testing for leading device vendors and operators like AT&T,T-Mobile, Vodafone.
* Interacting with the clients to provide them technical consultation.
* Responsible for updating the test results to Quality Center and keep track of defects

Achievements/Awards

* Certificate of Achievement – For excellent Feature integration, Support and RnD efforts at Qualcomm (Sep -2015).
* Spot Award: For commitment and hardworking team member (Jan-2015, June-2014).
* Mahindra Innovation award: For contribution in Business Model/Practice Innovation. (Nov-2011).
* Award for Commitment: For commitment towards the team and work.
* Pat on the back: For dedication in the work (Oct-2009, July-2010)

Education

**Bachelor of Engineering:** Computer Science 2008  
**Rajiv Gandhi Technical University** - Bhopal, M.P.  
Scored 79.75%

Professional References

Available on request.

Hobies

Traveling, Hiking.

Playing football, tennis, cricket.

Declaration

I hereby declare that the above-mentioned information is correct to the best of my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Bharat Bhushan Lavwanshi