Pardha Saradhi Chandana

RAN / Radio System & Automation Test Engineer

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EXPERIENCE SUMMARY

- 4 years of experience in LTE/5G RAN testing, feature validation, and log analysis using tools like QXDM and Wireshark.
- Experienced in 5G NR RAN (gNB) and LTE, DU, CU, E2E System Test validation on feature, functional, performance, & stability scenarios.
- Seeking roles in LTE/5G RAN system and automation testing with focus on stability, performance, and real-UE validation.

AREAS OF EXPERTISE

- ***Wireless Technologies***
  - **4G/5G RAN**: LTE (TDD & FDD), VoLTE, 5G SA (TDD & FDD), SA-NSA Coexist (FDD), Carrier Aggregation (4CA DL/2CA UL), X2/S1 Handover.
  - **ORAN**: CU/DU/RU deployment, multi-vendor integration.
  - **Protocol Stack**: RRC, PDCP, RLC, MAC, PHY layers.
- ***Testing & Validation***
  - **Functional Testing**: Sanity, Regression, Patch, Throughput, KPI, Stress Testing (long-hour/sweep tests).
  - **Feature Validation**: Intra/Inter DU Handover, Initial Attach, CMAS, ETWS.
  - **Simulators & UEs**: TM500, Dingli, Commercial (OnePlus, Samsung), Telit, COMPAL.
  - **Stability & Endurance** Testing (8–72 hour long runs)
- ***Log Analysis & Debugging***
  - **Tools**: QXDM, QCAT, PCAT, XCAL, Wireshark, TCP Dump.
  - **Key Tasks**: Conduct root-cause analysis for HO failures and throughput issues; monitor KPIs and counters.
- ***Test Automation & Tools***
  - Python automation for multi-UE testing and endurance runs
  - Robot Framework – modular keyword-driven automation
  - RSRP monitoring and RF baseline validation

PROFESSIONAL EXPERIENCE

Parallel Wireless — **Bangalore, India.**

Sr Engineer, QA, Radio R&D — Nov 2025 - Present.

LTE Dual-Band and 5G Single-Band Stability & Automation Framework

- Designed and automated dual-band LTE B4/B7 stability and throughput validation using real UEs.
- Developed reusable Robot Framework & Python keywords for UE feature-based selection, band mapping, and attach validation.
- Built automation for simultaneous multi-UE TCP/UDP bidirectional throughput testing and KPI validation.
- Created Python tools for multi-UE attach/detach endurance testing (8-hour stability runs) with controlled timers and fail-safe handling.
- Implemented RSRP monitoring with auto-attenuation handling to maintain consistent RF baseline during long-run stability tests.
- Improved framework robustness by refactoring scripts into modular, reusable, and failure-resilient test components.
- Reduced manual execution, setup dependency issues, and troubleshooting time across stability test cycles.

Mavenir Systems **Bangalore, India.**
Member of Technical Staff - I Feb 2023 – Oct 2025.
Client: DTAG (Deutsche Telekom AG), VMO2 (Virgin Media O2)

LTE & SA-NSA Feature Testing and Optimization:

- **4G/5G RAN Feature Validation** – Validated LTE and 5G features including Attach, VoLTE, Carrier Aggregation (up to 4DL/2UL CA), and X2/S1/Intra–Inter DU mobility across real UE environments.
- **NSA–SA Coexistence & Mobility Testing** – Executed system-level validation of 5G NSA and SA deployments covering SCG/MCG mobility, attach, and regression scenarios.
- **Performance & Throughput Validation** – Performed TCP/UDP UL/DL throughput and KPI testing, achieving up to 1.4 Gbps DL / 250 Mbps UL using Carrier Aggregation.
- **Stability & Long-Run Testing** – Executed 8–72-hour endurance and mixed traffic tests to validate robustness during LTE and NSA–SA coexistence scenarios.
- **End-to-End Debugging & Log Analysis** – Conducted root-cause analysis for handover failures, attach issues, and throughput degradation using QXDM, Wireshark, XCAL, and PCAT.
- **Feature Optimization & Customer Issue Support** – Recreated and debugged customer-reported issues and validated fixes under mixed traffic loads to ensure service stability.
- **Test Strategy & Automation Support** – Developed and executed regression and negative test cases, supported automation-driven stability runs, and reduced downtime through recovery and validation workflows.
- **Performance & Robustness Testing** – Conducted sweep and counter tests on eNodeB using real UEs, improving network stability through tuning and controlled test environments.

Mavenir Systems **Bangalore, India.**
Graduate Engineer Feb 2022 – Jan 2023.
Client: NEC, DTAG (Deutsche Telekom AG)

5G RAN Testing and Validation:

- **5G SA/ORAN Validation & Feature Testing -** Executed end-to-end 5G SA validation across ORAN architecture (CP/UP/DU/RU), including Inter/Intra DU Handover, attach, and throughput testing, ensuring system stability and performance. Verified NR features like mobility (Inter/Intra DU HO) and cell reselection scenarios.
- **Protocol Layer Debugging & Optimization -** Performed deep analysis of 5G NR protocol stacks (RRC, PDCP, RLC, MAC, PHY) using tools like QXDM, Wireshark, and XCAL to debug Layer 1/2 issues such as attach failures and handover anomalies.
- **System Stability & Long-Run Validation -** Achieved 30% improvement in system stability via rigorous long-run/mixed traffic testing, troubleshooting customer-reported issues, and validating robustness under stress (e.g., call loads, throughput, latency).
- **End-to-End Troubleshooting & Reporting -** Led feature commercialization by recreating field issues, analyzing logs, and providing detailed root-cause reports. Verified stability, throughput, and cell reselection, ensuring compliance with 3GPP standards.

EDUCATION

CMR Institute of Technology (CMRIT) *Aug 2017 – May 2021*
Electronics and Communication Engineering

CERTIFICATION AND HONOURS

Spotlight award for **"Customer Focus"** *Mavenir Systems (2024)*
Python for Everybody *Udemy (2021)*