

**Professional Experience:****Qualcomm India Pvt Ltd.***Principal Engineer/Mgr*

Development Lead –Data connectivity,  
CPE/Router Lead  
Project Engineer - Automotive Modem  
May 2005 – Nov 2024

**Synergy Infotech**

Senior Software Engineer  
Nov 2002 – Apr 2005

**Winfoware Technologies Pvt Ltd**

Software Engineer  
February Jan 2001 – Oct 2002

**Education**

Bachelor of Engineering - 2000  
Dr. MGR College of Engineering,  
**University of Madras**, India.

Pursuing Professional Certificate  
Programme in “Data Science and  
Artificial Intelligence for Managers”  
**IIM – Kozhikode**

Knowledge on **AWS Cloud Practitioner**

**Technical Skills**

- RDK-B/prpl
- Windows on Snapdragon (MBIM)
- IMS, 3GPP Application which are hosted over IMS network
  - Voice over LTE/Wifi/NR
  - Video over LTE/Wifi/NR
  - SMS & USSD over LTE/Wifi/NR
- TCP/IP, UDP, DHCP, MSRP, SIP, RTP, HTTP, VoIP, IP
- Qualcomm Tools:
  - QXDM/QPST/T32/ADB
  - ARIS/MARS
  - LTE, 5G, TBS, IMS Servers
  - Network Simulators
  - Crash-scope
- Proficiency in defining, Identifying, reviewing and Initial operator requirements, developing and commercialization.
- Software Methodologies
  - AGILE, JIRA
- SW Expertise:
  - C, C++, Python
  - RTOS
  - HLOS – Windows, Linux

**Summary****24 Years of Experience in Product Development & Leadership**

- Accomplished **Principal Engineer/Technical Product Manager** with over 9 years of experience in managing multiple projects in parallel, overseeing end-to-end delivery across diverse teams and technologies. Adept at managing **cross-functional** teams, including team **Leads** and **Managers**
- Technology & Leadership experience including **20 years at Qualcomm** in the field of Wireless Data Connectivity, Routers/CPE product, IMS VoLTE/Video, Project engineering. Proven track record of envisioning, building and launching new innovative products
- Leading RDK CPE Router product development for Qualcomm mobile broadband products.
- Leading MBIM India development team responsible for Data connectivity on Windows Laptop products including Windows on Snapdragon, M.2 attach and IOT
- Led IMS VoLTE/VILTE/SMS NG-eCall, TPS Calling India development team enabling Qualcomm IMS on all tiers of Qualcomm chipsets enabling global customers, Led VoLTE commercialization on 4G/5G SA/NSA VoLTE/VT/VoNR for multiple global carriers including Verizon, TMO, ATT, VDF-EU, RJIL, CMCC, CU and EMEA.
- Familiar with SIP / RTP / MSRP etc IMS protocols.
- **Technical Project Engineer** for Automotive Modem products across various tiers of Qualcomm chipsets for Auto Telematics markets
- Proficient in Technical program management/Project Engineering with a strong track record of overseeing medium to large-scale programs
- Author of multiple **Qualcomm patents** in cutting-edge technologies.

**Current Responsibilities**

- **Technical Leadership:** My primary responsibility at Qualcomm is to provide high-level technical direction and mentorship to engineering (CPE/Router, Windows Data Connectivity and Automotive Modem) teams. Drive the architecture and design of complex systems or products. Leading the technical aspects of projects, ensuring alignment with business goals and technical requirements. Overseen the full lifecycle of product development, from conceptualization through deployment. Manage project budgets and resources, ensuring cost-effective solutions and optimal utilization of resources.
- **Innovation and Strategy:** Under my leadership, Teams have excelled in innovation, filed approximately 40+ US patents. Teams have innovated and developed multiple development tools that helped the team to increase productivity. A few tools, for example, multi-core run automated UTC suite, Unit test case effectiveness measurement tools. Code optimizations
- **Cross-Functional Collaboration:** Collaborating with product management, Modem Systems, QA, and other cross-functional teams to ensure successful project delivery. Act as a liaison between engineering and other departments to address technical concerns.
- **Team Leadership & Mentorship and Training:** Managing and leading engineering teams, handling hiring, performance evaluations, and professional development. Mentored and Guided multiple Staff Managers and Senior Staff Managers, providing leadership and support in their professional growth, helping them navigate complex technical and managerial challenges
- **Customer Focus:** During my tenure in Qualcomm, I have understood and addressed multiple customer needs and ensuring that engineering efforts align with customer expectations. Have led the team’s efforts on tools to prioritize issues and reduce customer

issues. Created escalation matrix, organized focussed trainings for customer facing teams to reduce load on development team

## Core Competencies

Requirements Gathering | R&D | Product Design & Development | Software Architecture | Product Roadmap Planning | Project Management | End-to-end Delivery | Technical Leadership | Engineering Excellence | Product/Software Development Lifecycle | Feature Update | Issue Management | Risk & Change Management | Client Engagement & Satisfaction | Stakeholders/ Vendor Management | Team Building & Leadership | Process Improvement | Global Cross-Functional Collaboration

## Career Milestones and achievements

### Patents:

**US11974176B2** – (Granted) <https://patents.google.com/patent/US11974176B2>

**US10887811B2** – (Granted) <https://patents.google.com/patent/US10887811B2>

**US20240031883A1** – (Pending publish) <https://patents.google.com/patent/US20240031883A1>

**4 more filings in internal review**

**Enhanced Project Delivery:** Streamlined project delivery and delivered 15-20% ahead of average schedule of 15 months through Structured Communication, Agile Methodology, and Team Alignment workshops, overcoming cross-functional challenges and subsequent delays in 1st sprint.

**Reduced Customer Complaints:** Minimized customer complaints by 50% (from an average of 2100 issues) to development team through leading team in conducting root-cause analysis and implementing asynchronous mechanisms in IMS and rigorous unit tests for components to address product instability and regressions hindering commercialization.

**Upendra Patel Achievement Award:** Awarded for pioneering the first-ever LTE SMS commercialization for Verizon.

Multiple QualStar Awards at Qualcomm: Recognized for outstanding contributions and leadership in various technical and project initiatives throughout QC career.

## Experience Details

### **Qualcomm India Pvt Ltd (May 2005 – Nov 2024)**

#### **Principal Engineer**

Current Assignment (1/3): **Development lead for Wireless Broadband Connectivity/ Router (RDK Based CPE)**

#### **Roles and Responsibilities:**

- Responsible for roadmap planning, development and end-to-end delivery of RDK middleware on premium tier Qualcomm chipset. Directed full lifecycle of RDK product development including planning, development and deployment.
  - Guided module leads on features scoping and planning by providing direction on defining project requirements, prioritizing tasks, and breaking down complex features into manageable components and sprints.
- Leading a team of 50+ member team to design and develop RDK-B (Reference Design Kit for broadband) based CPE/Router (Customer Premises Equipment) product
  - Involved in technical design discussions, collaborating with cross-functional teams to evaluate design alternatives, and ensure alignment with project requirements, scalability, and performance goals
- Extensive knowledge of GW Apps, CCSP Components, HAL and TR.69

Current Assignment (2/3): **India Development lead for Windows Data Connectivity /Qualcomm Laptops**

#### **Roles and Responsibilities:**

- Directed team in design, development of Windows data connectivity solutions, ensuring alignment with project goals and technical requirements.
- Leading a team of 11 engineers in India, Managing and coordinating efforts to develop and enhance Windows data connectivity across business units
  - Led the team through the full software development lifecycle, including requirements gathering, design, development and unit testing.
- Analyzing and assessing the requirements, design and architecture on the MBIM, QBI, QMI protocols with oversight of overall control and data paths on Qualcomm products for Windows OS.

Current Assignment (3/3): **Project Engineer for Automotive Modems (LTS)**

**Roles and Responsibilities:**

- Feature Request Management: Review and analyze customer feature requests to understand requirements and coordinate between teams across board to provide necessary support to customers
- Release Review: Conduct through reviews of monthly customer releases to ensure that all feature updates and fixes met quality standards and aligned with customer requirements
- Issue Management: Actively follow up on customer issues and escalations, ensuring timely resolution and closure by coordinating with relevant teams and stakeholders.

**Previous Assignments: (Qualcomm)**

- **Lead, Voice over IMS (LTE/NR/WIFI) (2009-2023) development team**
  - **Team Leadership:** Led the software development team responsible for technical aspects of VoLTE development through design, implementation and optimization on various Qualcomm products
  - Collaborated closely with cross-functional teams including product management, systems team, QA and customer engineering teams
  - Ensured VoLTE product met 3GPP and Operator specifications and compliance requirements
- **Driving IOT/ CSS IMS features (2019 – 2023)**
  - Acted as SPOC for defining, managing and delivering IMS features on IOT products, ensuring alignment with business objectives and technical requirements
- **SPOC for IMS Customer Engineering group (2019 – 2023)**
  - Provided advanced technical support and guidance to customer engineering team addressing complex engineering team queries

**Previous Assignments: (Synergy Infotech)**

- **WinVCG (Video Conferencing Gateway for Windows)**
  - Developed Torrent VCG is a Videoconference Gateway product for Starbak Communications on WIN NT. The Torrent VCG solution migrated to Windows NT environment from Linux.
- **PTT/PTW**
  - Part of Push to Watch and Push to Talk clients development team, contributed to core service logic, Portability layer development and owned UI module.

**Previous Assignments: (Winfoware Technologies)**

- **eZISP**
  - Part of eZISP product development team, responsible for developing mail service using SMTP service, SNMP Protocol client, GTK Based UI.
- **Video conferencing using H.323 Protocol**
  - Part of team developing H.323 protocol suite, responsible for developing part of H.264 video codec development
- **Video conferencing using H.324 Protocol**

- Part of team developing H.324 protocol suite, responsible for developing part of H.223 session negotiation protocol

## Academics

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- Bachelor of Engineering (2000)
  - Dr. MGR College of Engineering, University of Madras, India
- Project Resource Management, LinkedIn
- Pursuing “Professional Certificate Programme in Data Science and Artificial Intelligence for Managers”
  - **IIM - Kozhikode**
- Practicing for AWS cloud practitioner certification