RAJA SHEKAR BOLLAM

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Principal Engineer & Solution Architect
Mobile Communications Solutions Development

TECHNO-MANAGERIAL ROLES

Excellent interpersonal, communication & organizational skills in establishing & maintaining effective working relationships at all levels (multicultural) of the organization with the ability to work on multiple tasks with tight deadlines
Learner & Receiver*: Flair to continuously upgrade knowledge purview & keep updated on latest technology trends*

EXECUTIVE SUMMARY

- Performance Driven Solution Architect with **17+ years** of extensive experience on developing mobile messaging client and server solutions with customers, project managers and technical teams; envisioning usage of new technology and tailoring its usage for achieving desired results
- Serving as the confidante to Functional & Technical Leaders, Teams; currently working on development of **"Rich Communication Suite (RCS) Application Server" Solution** and **"Messaging as a Platform" (MAAP) Solution** based on GMSA RCS.
- Progressive history of **designing & developing Messaging Solutions Server and Client for Mobile Devices**; worked on Messaging Technologies i.e. IP-Based Multimedia Subsystem (IMS), VoLTE and RCS Services on mobile networks
- Insightful knowledge of complete SDLC including designing, testing, integration, maintenance and production support
- Credentials in managing solution architecture function **(Application, Integration, Infrastructure and Data);** currently working on medium-scale **business application architecture and design efforts**
- **Mobile Communications Specialist** with know-how of RCS, IMS, xMS, and VoLTE Communication Protocols in Wireless Network
- Thought leadership and experience in a **multicultural environment** with different approaches to time, information, planning and decision-making, relationships communication styles, resolving conflicts and developing leadership;

COMPETENCIES MATRIX

Solution Architecture ~ Program / Project Management ~ Software Development ~ Project Scheduling ~ Customer Engagement ~ Team Development & Leadership

EXPERIENCE

Since Aug 2007 with Samsung Electronics, Suwon, South Korea as Principal Engineer in Mobile Communication Business

Aug 2004- Jun 2007 with Kyocera Wireless, India as Assistant Engineer

Key Deliverables:

- Helmed technical leadership in establishing a Micro-service Architecture Practice; managing activities that take place during solution ideation, solution design, and solution implementation for RCS AS and MAAP
- With the Implementation of gRPC based RCS AS 2.0, we could handle 20% more traffic than its earlier version and 35% cost reduction on AWS Infrastructure
- Samsung's MAAP is the first GSMA RCS based Chatbot eco-system for both Peer-To-Peer (P2P) and Application-To-Person (A2P) messaging services
- Samsung's IMS Client that we developed, paved way for performance rich RCS Solution in Samsung devices since Samsung Galaxy S7
- Evolution RIL, HAL Layer Implementation for Radio Technology streamlined Radio Interface Layer (RIL) client development and maintenance activities for all Samsung devices to broad categories as CDMA, GSM, and LTE

TECHNICAL SKILLS

- Domain: Mobile Communications Solutions Development
- Languages: Golang, C, Kotlin, C^{++}, Java
- Skillsets: Kubernetes, Docker, Vertx, ELK, Grafana, Prometheus, NoSql, Sql
- Protocols: RCS, SIP, MSRP, MMS, EMS, CMAS, SMS, RTP/RTCP, TCP/IP
- Operating Systems: Android, Linux
- Certifications: Certified Kubernetes Security Specialist (CKS), Certified Kubernetes Administrator (CKA)

EDUCATION

- Master in Computer Science, Data Science, University of Illinois, Urbana-Champaign
- Bachelor in Computer Science, Birla Institute of Technology, Ranchi, India

KEY PROJECTS UNDERTAKEN

At Samsung Electronics

Title: Samsung RCS Application Server	Period: Since Sept' 19

Description: The project involves RCS Application Server to provide RCS and MAAP Services for Mobile Handsets.
- Architecting initial design for RCS Application Server
- Managing the design and development of presence server and registration server
- Providing ELK, Prometheus, and Grafana interface for metrics and performance

Key Achievements:
- Presence Service resulted with a 200% better performance than the existing service

Title: Samsung MAAP Development	Period: Since 2017

Description: The project involved platform with a complete framework to build and deploy intelligent chat bots for providing RCS users a great conversational experience.
- Architected the initial design of Samsung's Message As A Platform Service
- Designed & developed micro services for Bot Life Cycle management, Bot Interface with MAAP, MAAP Core Services and RCS Client Service
- Led the development of MAAP RCS compliant micro services on MAAP Platform
- Customized, deployed & maintained MAAP Solution on AWS Instance using various AWS Services for different Mobile Operators

Key Achievements:
- MaaP Platform is the first of its kind that was launched in the market with AT&T as a beta version and commercialized with Korean Operators (KT, SKT, LGU)

Title: IP based Multimedia Subsystem Client on Android	Duration: 2 Years

Description: The project involved development of IMS Client in C++11. Resiprocate open source is used to support RFC 3261, SIP Parsing and Transportation.
- Managed the design & development of Basic Framework for IMS Client; VoLTE SIP Signalling as per 3GPP standards;
- N-Way and Group Conference Call as per 3GPP standards; RFC 4575 for Conference Event Subscription
- MSRP Protocol based on RFC 4975 to support RCS IM Chat in client side

Key Achievements:
- Framework used for the implementation of MSRP protocol, IMS Client IM Chat and IMS Framework for IM Chat was used for all the commercialization products in the next line of Samsung Android device.

Title: Evolution RIL Client on Android Mobile Handset	Duration: 1.5 Years

Description: The project involved RIL Client to support multiple chipsets in multiple air interfaces (CDMA, GSM, and LTE) for multiple Operators.
- Performed the design and development of Short Messaging Service based on QMI and Samsung IPC in Radio Interface Layer for Android OS in both GSM and CDMA
- Conducted review of CDMA and GSM Messaging Service Requirements TIA and 3GPP

Key Achievements:
- Streamlined RIL HAL to all mobile devices based on radio technology; CDMA or GSM or LTE.

Title: RIL Client on Android Mobile Handset	Duration: 3 Years

Description: The project involved Samsung Native RIL Client for US Operators.
- Involved in bug fixing for Messaging Services in RIL & Android Framework as well as for SMS and MMS Applications in Native RIL Client
- Designed & developed 3GPP TS 23.040 for Enhanced Messaging Service (EMS), CMAS in Android framework, RIL

Key Achievements:
- Google Android used the CMAS and EMS framework implementation in their open source in the following releases

Title Messaging Solutions on Samsung Native Platforms	Duration: 2 Years

Description: The project involved the development of messaging solutions for different operators in Samsung Native Platforms.
- Managed the development and bug fixing for MMS Client, Picture Mail Application, xMS applications for network operators in SHP Platform and Samsung native platform
- Developed OMA Wireless Datagram Protocol (WDP) for Samsung MMS Client on SHP Platform for China Operators

At Kyocera Wireless India

Title: CDMA Mobile Handsets Development	Duration: 2 Years 9 Months

Description: The project involved the development of Mobile Applications for US Operators.
- Developed FOTA Client Download Manager based on OMA Requirements in Kyocera Native Platform
- Fixed bugs in Multimedia Messaging Service 2.0 for USA Operators