

## EXPERIENCED TECHNICAL / ENGINEERING LEADER

### Lead High Performing Teams to Deploy the Next Generation Technology

Technical Professional with experience in leading senior engineers and cross-functional teams in the areas of new technology introduction, product development, architectural evolution and migration. Develop engineers to expand both technically and from a program, project organization and responsibility standpoint.

Led teams to develop and deploy new products, applications, technologies and business opportunities, including working with and defining requirements for Product Management, Network, Systems, Operations, Customer Care, Reporting and Analytics, and Customer Experience. Represent the company in external regulatory and industry forums. Manage in various SDLC methodologies including Waterfall, LEAN, Iterative and Agile.

## KEY ACCOMPLISHMENTS

- Designed Wireless Highspeed data last mile network for Rural Digital Divide in the US Southwest. In support of Connect America Fund II
- **Defined Architecture** and led team that **defined engineering processes** around first Voice over Cable implementation
- Led team that **designed, deployed, and managed** PSTN Interconnect network for Comcast.
- Architected and managed development for 3 customer migrations of 1.5M, 10M and 3M lines that impacted network, home devices, provisioning and billing. These efforts involved significant **data mining** and **analytics**
- Drove initial roll out of E-911 solution, including defining and driving vendor requirements, define process, PSAP to rate center mapping for customer location and PSAP testing. Led Comcast Network implementation of NENA i2.

## PROFESSIONAL EXPERIENCE

**COMMNET BROADBAND/ATN**, Castle Rock, CO

2020-2022

### Manager/ Senior Engineer, Network Development

- Led Assessment of potential Rural Wireless Broadband Site and Private LTE deployments:
  - Assess RF Coverage for UNII, CBRS, EBS, AWS, PCS and Lowband Frequencies
  - Assess Tower Deployment costs including, Real Estate, Regulatory, Construction, Installation
  - Coordinated with transport for Microwave and Fiver Costs.
- Led Vendor assessment for Radio Access Network Equipment
- Managed process and tool development for planning and deployment.

**CHARTER, COMMUNICATIONS**, Greenwood Village, CO

2013 - 2018

### Senior Director/ Principal Engineer II - New Product Architecture/Solutions Engineering/Development

- Coordinated Advanced Engineering efforts to upgrade, integrate, and migrate Voice Mail, Media Server and Converged Communications Server from three networks into Charter Next Gen Architecture. Combined network had over 10M subscribers and 9 different virtual machine application implementations.
- Led team who developed applications using Java, PERL, Python, MySQL, Cloud/VMWare, WebLogic.
- Drove Advanced Engineering efforts, supporting Metaswitch Infrastructure Launch, focusing primarily on Trunk Moves, Voice Mail Migration, Customer / Account Migration as well as support for Next Generation Provisioning Platform.

- Led architecture and development of ETL tool using Agile techniques. Also developed migration process to be non-customer impacting. Migrating 3M residential and voice lines over 9 months. Project saves \$750K in external development costs.
- Managed integration of customer data across, network, provisioning, and billing systems data stores for migration analysis and analytics.
- Interfaced with Systems Development for Advanced Engineering efforts on Voice Apps and Portals; App applied to 2.5M voice sub and spanned across 3 switching platforms.
- Designed architecture for Robo Call blocking product offering, currently used by ~10% of residential base.
- Assessed technology and Architected prototype solutions for Voice Soft Phone Application, WebRTC, IMS, SMS Messaging, IoT, 4G Evolved Packet Core and Deep Packet Inspection / Network Intelligence, supporting product proposals by Product Management group.
- Established weekly tech talk series, lasting 4 years with over 120 technical talks; audience included Advanced engineering, Operations, Product, IT, Field as well as other non-technical organizations.

**COMCAST**, Greenwood Village, CO

2002 - 2013

#### **Director Product Development/Advanced Engineering/Program Management**

- Led team of 15 senior engineers responsible for defining requirements and technical management of Vendors for Elements in a Voice Product offering that grew from 500K to over 10M residential and business customers, generating \$3.2B in revenue with \$75M capital budget.
- Implemented Technology and Defined Process for and led team that Supported Law Enforcement Support (CALEA) and E-911 (legacy and NENA i2)
- Coordinated architecture, development, launch and continued rollout of both VoIP (Voice over IP) and IMS telephony infrastructure, including cross-functional engineering of network infrastructure, operational processes, and provisioning / maintenance systems. Managed participation and buy in from multiple organizations.
- Defined migration process, development and tools for 2 separate platform migrations; one of 1.5M customer accounts and one of 10M customer accounts. Including data mapping and analytics.
- Expanded responsibilities of team to include support for Commercial Voice Launch, Xfinity Text Messaging, and WiFi Access.
- Consolidated distributed Program Management into an integrated team for Voice Engineering
- Developed integrated data model for interface between network and systems for billing, provisioning, reporting and intercarrier compensation.
- Led team that defined and managed network interconnect capacity for initial Comcast voice rollout.
- Submitted 10 Patent Applications of which 5 were granted.
- Worked on Industry standards bodies related to Telephone Number Resource Optimization, Telephone Number Scamming, and multimedia communications.

### **ADDITIONAL RELEVANT EXPERIENCE**

#### **AT&T BROADBAND, Director**, New Technology Introduction/Product Development (Voice)

- Defined Product requirements for initial voice offering by AT&T Broadband
- Managed Initial roll out of voice over Cable Lines in the AT&T Broadband Network
- Led Capacity Management (network and numbering resources) for telephony offering
- Defined network, process and systems interfaces when AT&T Broadband was acquired by Comcast.

#### **AT&T BELL LABS, Member of the Technical Staff** - Network Evolution Architecture/Regulatory support

- Represented AT&T on Industry Standards Boards involved in the creation of Local Number Portability Processes
- Testified before State PUCs related to Local number portability and local phone competition.
- Supported regulatory filing with respect to Local Competition and resale.
- Prototyped desktop Video Conferencing Offering

YALE UNIVERSITY, Associate Research Scientist

### EDUCATION

**Doctor of Philosophy (PhD), Elementary Particle Physics**, University of Notre Dame, Notre Dame, IN

**Bachelor of Science (BS), Physics**, Creighton University, Omaha, NE

### CERTIFICATIONS AND PROFESSIONAL DEVELOPMENT

Machine Learning, Stanford via Coursera

Agile Project Management with Scrum, cPrime

Cultivating Networks and Partnerships, Development Dimensions International

Innovation and Change, The Wharton School, University of Pennsylvania

### PATENTS

Media Content Redirection: Issued Feb 20, 2018, US9900628B2

Processing Sensor Data, Issued Feb 16, 2016, US 9262906B2

Activating Devices Based on their Location, Issued Nov 17, 2015, US9191914B2

Transmission Device Load Balancing, Issued Oct 20, 2015, US9167033B2

Inbound Call Screening for Particular Accounts, Issued Jun 18, 2013, US8467322B2