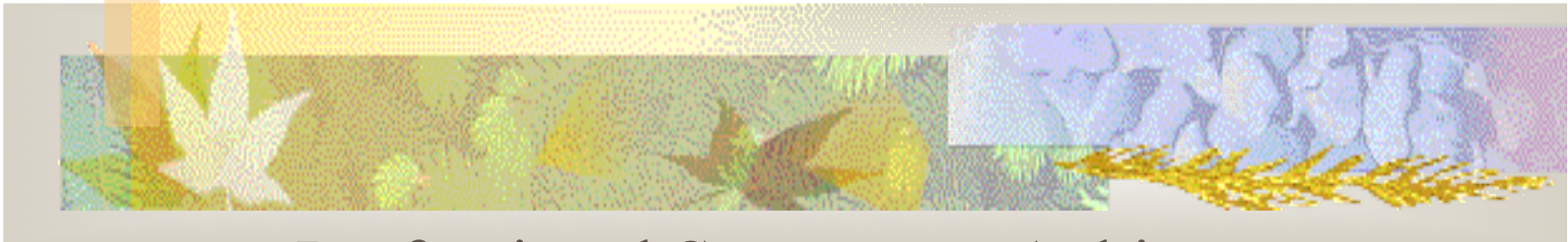# Dr. Ram P. Rustagi

rprustagi@gmail.com, +91-89700-00559

Professional Summary - Achievements

May 2017

Overview

- Executive summary

- Academics & Research

- Technology achievements

- Leadership

- Careers chronology

- SWOT analysis

- Epilogue

Executive Summary

- 30+ years in Academic/product/applications
  - 10+ years in academy and research
  - 20+ years in **Telecom & Networking** domain
    - VAS applications, Switching, AAA services
    - OSS/BSS for WiFi, Internet & enterprise networks
  - Initiated filing of several patents
  - Exposure across the globe
    - North America, Europe, South East Asia, and India
  - Richness of experience
    - Invited speaker (Intel, IEEE Conferences, Academia etc)
    - Academics, Starts-up, R&D organizations, large corporations
  - Hands on to solve extremely critical problems
  - Conducted several hands-on workshops in Networking
    - IPv6, Practical Hands-on Networking, NGN etc.

Academics & Research

- Academic qualifications.
    - Ph. D (Comp. Sc. & Engg)
        - IIT Delhi (Indian Institute of Technology), India. 1998
    - M. Tech
        - IISc (Indian Institute of Science) Bangalore, India. 1981
    - M. Sc
        - Delhi University, Delhi, India. 1979.
- Ph. D Guide
    - Completed : 1 under Dr MGR University
    - In progress: 2 under Visvesvaraya Technology University

Academy & Research

- Innovations introduced
  - Theory: Open Book exams, Take home examps
  - Lab Practicals: Practical hands on based experiments
    - Experience live what a student studies
  - Assignments: online submissions
  - Evaluation: assignments, quizzes, programming, etc
- Research/Project grants
  - Pluribus Networks Inc, (USA) – Software Defined Networking
  - Huawei Technologies India Pvt Ltd:
    - Huawei Innovation Lab
  - Kirusa Software Pvt Ltd: Micro blogging application in cloud
- Consultancies
  - Pronto Networks India, ADA Systems India, Health Heal India

Technology Achievements

- Cloud applications
  - Full backup, data backup & sync with phone, tablet etc
  - Includes Media, SMS, Call Logs
  - User centric data sync approach vs device centric
- Cellular applications
  - Handling 4000+ SS7/ISUP calls/sec, Missed Calls Alerts
  - Call-Complete implementation, empower caller.
- End user access – public hotspots
  - **Non-intrusive auto authentication (u**ser transparent)
  - **Zero configuration change** for end user
  - **Segregating virus infected users**
- Telco/wireless ISP field operations
  - **Plug-n-play deployment** of hotspot controller
  - **remote software upgrade, Remote web console/telnet**

6

Technology Optimizations…

- Missed Call Alert application
  - 10x performance improvement
- OSS/BSS for broadband wireless access
  - 10x performance improvement
- Telecom switching systems
  - Defined messaging communication architecture
  - Real time scalable call routing of voice calls
- High performance web transaction system
  - Single system view to outside world
  - Distributed algorithm to elect cluster leader
  - $O(1)$ time scheduling algorithm

Leadership Characteristics

- People
  - Delegation, imbibe ownership (buck stops at me)
  - Accept mistakes – (review to ensure non-critical)
  - Mentoring – help the team grow

- Processes
  - Key: requirements clarity
  - Small achievable targets (incremental development)
  - Involve QA early, manage with thin resources

- Product development:
  - Correctness, maintainability, efficiency, elegance
  - End consumer and usability focus
  - Plan and design future evolution
  - Hands-on, get involved in design/architecture

Career Chronology - 1

- **PES Institute of Technology, Bangalore, India.**
  - Nov-2010 – May 2017
    - Jan 2015-June 2016: Sabbatical at Smartron India Pvt Ltd
  - Member Board of Studies (MCA), VTU
  - Professor – Dept. of Computer Science & Engg
    - Networks & Security, Software Defined Networks
    - IoT, and Cloud
  - Research(Ph.D): guided: 1, in progress : 2
  - Paper reviewer for IEEE ANTS, IEEE ADCOM, IUCEE
  - Invited Speaker : IEEE ADCOM, Intel Academy India Forum
  - Recipient of 4 Research grants in Network domain
  - Organized several Workshops/Seminars
    - ICMCCA, IEEE-Train The Trainer, IPv6

Career Chronology - 2

- **Kirusa Software Pvt Ltd, India.**
  - Jan-08 – Oct 2010
  - Vice President (Application & Services),
    - Missed Call Alerts, Call Completion, VoiceSMS etc.
    - VAS Applications (Contest, Tele-voting …), handset applications
    - IN Integration for Charging/Billing
    - Managing multi-location in house/outsource teams
  - Operations Support (India) Incharge
    - India – Vodafone, Idea Cellular, Tata Teleservices, etc.
    - APAC – Grameenphone, Warid, Ufone
    - EMEA – Etisalaat, Zain, MTN etc.

Career Chronology - 3

- **Pronto Networks, CA, USA & Bangalore**
  - Apr 2002 – Jan 2008
  - Head, India development center, Bangalore
    - VP Tech (Aug'04–Jan 08), Director Engg (Apr 02-Aug 04)
    - Managed 100+ professionals
  - Technology and Product Domain
    - Retail segment
      - Public hotspots (café, airports, malls), hotels, city wide WiFi mesh (20+ cities in USA), residential dwelling units
      - Wholesale/corporate
        - Corporate visitor/employee WiFi access
    - Offers converged services platform to ISP/Telcos
      - Back office and service control functions,
      - Roaming - ISPs/aggregator: Boingo, iPass, Syniverse.

Pronto Networks...

- OSS/BSS system for public access
    - Technology development and product delivery
    - Mentored a team 40+ technology professionals
    - Hot standby, fault tolerance & scalability
    - Credit card processing (Verisign, PayPal, WorldPay etc.)
    - RADIUS, LDAP, SMPP servers, HLR and IN Integration
- Access controller for hotspot locations
    - Embedded device providing WiFi seamless access
    - Interaction with external interfacing products
        - Property management system (Fidelio, IDS, HSIA)
- WiMax product venture study
    - Requirements, analysis and design for CSN/WiMax

Career Chronology - 4

- **Abeona Networks, CA, USA**
  - Director of engineering : Oct'00 – Feb'02
  - Product/Technology Development
    - High performance web transaction controller
    - Cluster administration & management
      - Monitoring, membership control, software upgrade
    - Web content management with replication
      - Staging, versioning, deployment, synchronization
    - N + 1 fault tolerance
    - Integration with network switching fabric

13

Career Chronology - 5

- **Savera Systems, NJ, USA**
  - Director of engineering: Aug 1998 – Oct 2000
  - Product – Interconnect Billing System
    - First 100% web based interconnect billing product
  - Engineering development responsibilities
    - Interconnect billing settlement & reconciliation
    - Requirement analysis and interconnect specifications
      - European Telco's interconnect agreement
      - National interconnect agreements
    - Mentoring a team of 10+ people
    - Design/code review functions

Career Chronology …

- **I I T Delhi, India**
  - **Feb 1991 to Apr1998**
  - SSO-I (equivalent to Assistant Professor)
  - Industrial Consultancies
- Responsibilities
  - Established first TCP/IP network in the country
    - Networked all the 6 premier education institutes
  - Worked with all LAN/WAN technologies
    - All kind of Ethernet Technologies
    - ATM, OSI, X.25 networks
    - Transitioned WAN connectivity:1200bps to 2Mbps

Career Chronology ...

- C-DoT Delhi, India. 1985-1990
  - Designed & developed voice call routing
  - Designed Inter Process Communication Architecture
    - Defined message fields, framing and format
    - Support variable length message (a new concept then)
  - Designed CRM software module
  - Defined software processes
    - Coding & review guidelines, design walk-through etc.
- Harris Corporation, CA, USA.
  - Consultant, 1990-1990.
- HCL Ltd - R & D engineer, 1981- 85

SWOT Analysis

- Strength
  - Lead the team from the front
  - Strong Analytical skills and Research oriented approach
  - Focus on practical, workable algorithms for complex issues
  - Take complete ownership (successes & failures)
  - Focus on end user usage convenience
- Weakness
  - On occasions too upfront, aggressive and politically incorrect criticism
- Opportunities
  - Rapid assimilation & insight gain of new technologies
- Threats
  - Non-challenging, routine work

Epilogue

- Excitement
  - Development of technology to develop systems that benefits a large user base.
  - Mentor and educate team members for professional advancement
  - Solve technical complex issues that initially appear undoable, considering both tactical and strategic needs.

- Execution
  - A go-getter and 'put things together' attitude
  - Goal oriented and believes in putting best efforts to make timely delivery even with thin teams

Epilogue…

- Personal
  - Develops and maintains cordial relations with colleagues, subordinates, seniors and customers.
  - Mentors team members to achieve professional growth
  - Continuous focus on innovation
  - Welcomes open criticism/feedback to improve upon
- References
  - Available (on request) from any of past work associations
    - PES University
    - Smartron India Pvt Ltd,
    - Kirusa Software Pvt Ltd.