POORNANANDA R GADDEHOSUR

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Summary   Over 6 years of network software development experience in areas such as Device Drivers-[Communication Controllers, ASICs, FPGAs], IP Switching & Routing-[OSPF, BGP, ISIS, EIGRP], TCP/UDP stacks, IEEE Ethernet and Bridging(STP, RSTP), and SONET/SDH standards

Education

- **M S in Computer Science**   **University of Arizona**—Tucson, AZ
  Fall 2006-Spring 2008   GPA: 4.00
  - Selected Courses: Design and Analysis of Algorithms, Parallel and Distributed Computing, Optimization problems in Sensor and Ad Hoc Networks, Peer to Peer Networks, Theory of Computation, Geometric Algorithms, Algorithms for Computational Biology

- **B E in Computer Science**   **University of Mysore**—Mysore, India
  Fall 1997-Fall 2001   First class with distinction GPA: 83.8% (overall)

Experience

- **Software Design Engineer II**   **Microsoft Corp.**—Redmond, Washington
  June 2008-Present
  - IPv6 transition protocols Teredo, ISATAP, 6TO4 on the Windows platform

- **Internship**   **Microsoft Corp.**—Redmond, Washington
  Summer 2007
  - Designed and implemented a kernel mode device driver for the Windows Filtering Platform for user mode stream inspection

- **Software Engineer II**   **Cisco Systems Inc.**—Bangalore, India
  August 2001–July 2006
  - Designed and developed software for MPC 8555 and MPC 8260 based L1+ boards on ONS 15454/310 systems
    * Bootup software, device drivers for ASICs/FPGAs and Communication controllers
    * Application software for Pathtrace, LCAS/VCAT, BER, Alarms Agent, RMON Agent
  - Requirements management CFM 802.1ag, J-bytes, LCAS/VCAT (ITU G.707/G.7042)
  - Systems software design and development for making Cisco IOS to run as a task on the VxWorks kernel
    * Device drivers for the SCC, FCC and MCC controllers of MPC 7410/8260 based systems
    * GIXP(based on SCSP), ARP Routing, tweaking TCP/UDP/IP stacks and the respective socket layers
  - Testing routing and switching protocols such as OSPF, EIGRP, BGP, STP/RSTP

- **Internship**   **Cisco Systems Inc.**—Bangalore, India
  Summer 2001
  - Automated routing protocol and system MIB testing on Catalyst 8540

Skill Sets

- **Languages, Scripts, S/W Management Tools:**
  - C, Java, Haskell, Prolog, Ruby, Python, BASH, TCL, LaTeX
  - MPI-LAM, Pthreads, GNU GDB, Make, ClearCase, DOORS(Requirements Management)

- **Platforms:**
  - Linux, Solaris, Windows, VxWorks, Cisco IOS, IXIA
  - Cisco Pagent, Agilent and Omniber Optical Test Equipment

Publications and selected Technical Reports

- Improved approximation algorithms for Relay Placement, *ESA 2008* with Efrat, Alon et al.
- A Protocol Adaptive Mechanism for Routing Information Exchange across Heterogeneous Ad Hoc Routing Domains, *IEEE IPCCC 2004* with Arekere, Tulasi
- The Patricia Trie on the Catalyst 8540 Layer 3 cards *EDCS-417744*
- Methods for system recovery and system debugging in a dual OS system. *EDCS-417519*
- Testing considerations and approach for testing a dual OS system. *EDCS-299116*

Academic Awards

- Graduate Tuition Scholarship for the year 2006-2007
- Sri ChandrashekarMemorial award - Highest aggregate score in Math I to IV semesters
- Sri Narasimha Prasad Memorial award - University Topper, second semester
- Merit award for standing first in school in the Class 10th CBSE exams

Academic Projects

- Google lite - Usefulness of parallelism in Map/Reduce operations for searching data sets as in the Google Web Server Architecture. Python and C-MPI
- Implementation of an Efficient Computation of Single Static Assignment form. Python
- Implementation of SSA based Sparse Conditonal Constant Propagation Algorithm. Python
- Design and implementation of a novel VPN-inspired Peer-to-Peer key based routing system. Python
- DLX simulator for basic, partial and complete data forwarding with branch prediction pipeline
- Trace driven simulator of a two level cache hierarchy with victim buffer

Other Achievements

- Awarded 6 CAP awards at Cisco Systems for exceptional performances in projects
- Worked towards setting up the first IEEE student chapter of NIE & served as Chair of membership committee. The NIE-IEEE Student Branch won the 'Exemplary Student Branch' Award for the entire Region 10 (for the year 2001).