Debebe Asefa, M.S., Ph.D.
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Education

University of Medicine and Dentistry of New Jersey – 2002 to 2007
Newark, NJ
Ph.D. Informatics

Drexel University - 1987 to 1990
Philadelphia, Pa
Master of Science in Computer Science

Expertise: scientific data analysis and decision making, Unix shell programming, HL7 standard, Java, C++, Relational Database : Oracle and MYSQL, Good knowledge of Provisioning, Maintenance and Performance Process, Intermediate knowledge of ITUP – IBM Tivoli Unified Tool, IPTV and VoIP, Python and Perl scripting, Project management.

Professional Experience

HCASS(health care advance solutions)

- Founder and CEO, developed open source EHR(electronic health record system)based on HL7
- Member of Tiger Team HITSP
- Developing an open source HL7 based HER for nonprofit organizations, the first cut will be out sometimes in March, 2010

AT&T Corp as a Senior Systems Engineer (consultant)
Middletown, New Jersey April 2007-April 2009

- AT&T U-Verse (IP TV) Statistical picture quality and performance analysis and identification of signatures
  - Wrote algorithms for changing adaptively maintenance threshold (it is now being implemented using object oriented C++)
  - Wrote office power and generate state of health management algorithms (it is now implemented)
  - Wrote the algorithms for Network Capacity and Maintenance management
- AT&T Bell South ATM and Ethernet based services performance analysis and identification of signatures
- Zigbee RF simulation of power surge and temperature sensors to identify potential usage in AT&T central offices (developed the simulation using TI zigbee)
- VoIP configuration, performance analysis, and engineering
- Wireless communication outage control and engineering

Sovereign Tracking Systems LLC as a Software Manager
Brick, New Jersey 2006 – 2007

- Systems Engineering and Development of software application for real time asset tracking using active RF signal using C++
- Responsibilities include: Systems Engineering (writing requirements), Software Development (writing codes), Simulation Development, Testing the Software against Systems Engineering Requirements, Development of installation CD for a customer, Deployment of the software on Customer Premises, Training customers of the product, and constant support of the customer

Universities: William Paterson, Georgian Court, Kean, and NJIT; Colleges: Hudson and Essex
New Jersey 1997 - 2006

- Adjunct Professor of Mathematics and computer science, taught the following courses:
  - Advance Database Management
  - C++ Programming

- Graph Theory and Algorithms
- Data Analysis and Systems Engineering
- College Level Mathematics
- Statistics
- Introduction to Mathematics and Algebra
- Mathematics for Nursing Students

Fujitsu Communication Group

Pearl River, NY -Lead Systems Engineer January 2001 to November 2001

- Fiber Optics Engineering
- Performed feasibility studies, wrote requirements for OC12 and OC48 optical carrier cards of Fujitsu Flash Product.
- Defined new target fiber reaches requirements (short, intermediate, long reach one (1) and long reach two (2)) for Fujitsu Flash product.

Lucent Technologies Optical Network Group

Holmdel, NJ - Consultant Lead Systems Engineer - December 1999 to June 2000

- Participated to define the system architecture for third generation wireless Lucent switches and worked on ATM switch architecture for IP based service routing to and from the base transceiver station and multimedia processing equipment

Lucent Technologies Optical Network Group

Holmdel, NJ -Lead Systems Engineer December 1998 to December 1999

- Submitted and granted a patent on adaptive IP routing algorithms which uses wireless and wired networks- patent number 6914877 (Patent was July 5, 2005)
- Member of the Optical network Group- one of the original members who defined the 400 Giga bit per second Hardware Operation Support Systems (on the hardware end)
- Wrote TNM Q3 information model requirements (one man effort) for Metro Product in an effort to make the information model the same for all wave star products
- Planned, and led Systems testing efforts of wave star Optical Network Elements TMN Q3 functionality; defined and wrote TMN Q3 Operation Systems test plans and test scenarios.

AT&T Operation Technology Center

Red Hill, NJ -March 1992 to December1998

- Lead Senior System Engineer for planning UNITEL network: coordinated all trouble shooting, repair, installation and testing of software updates (for the operational systems), and analyze all business cases and translate these into functional requirements for the operational systems
- Team member to define and write Functional Operation System Requirements for the new Next Generation Network Switch; apply ITU TMN Q3 Protocol, and CORBA platforms
- Lead Senior Engineer who defined and wrote Functional Fault and Configuration Management Operation Systems Requirements for 5ESS toll switches and DMS type switches
- Signal and Network Performance Modeling
- Forecasting and periodic capacity engineering of AT&T Signaling Network
- Signal Transfer Point and Switching Hardware and Common Channel Signaling

AT&T Bell Laboratories

Holmdel, NJ -March 1990 to March 1992

- Team member to define and write functional requirements of adaptive routing algorithms for switches that can handle survivable signaling network
- Member of the original group who defined VSN (Virtual Signal Network) for commercial card transactions for Credit Card Validation

Professional Publications

- Restoration of fMRI Signal using Wiener Filters in a Wavelet Domain, submitted for publication in International Conference on Mathematics and Engineering Techniques in Medicine and Biological Society, accepted for publication
- Activation Points Extraction and Noise Removal of fMRI Signal using Local Cosine and its Comparison with Gaussian and other filtering methods, submitted for publication in International Conference on Mathematics and Engineering Techniques in Medicine and Biological Society, accepted for publication
- Computerized early detection of AIDS dementia presented in International Conference on Mathematics and Engineering Techniques in Medicine and Biological Society, 2003 and

2005, published

Professional Awards

- . Granted a patent, July 5, 2005, patent number 6914877, System for alerting a network of changes in operational status of communication links
- Filed the following Patents:
  1. G. Beattie, S. Griesmer, D. Asefa, 22008-2020(ATTWP395US) – Filed at USPTO October 1, 2009 Title: DYNAMIC RECONFIGURATION OF CELL SITE
  2. G. Beattie, S. Griesmer, D. Asefa, ATT/2008-201 - ”METHOD AND APPARATUS FOR DETECTING SILENT GAPS IN WIRELESS NETWORK SERVICE" Filed at USPTO on September 2009
  3. D. Asefa, P.Bajpay, S. Griesmer, and G. Beattie: U-Verse Interactive Fault Resolution Algorithms (submitted to USPTO)- 10/15/2008
  4. G. Beattie, D. Asefa, S. Griesmer: An Enhanced Proactive Maintenance Method for the Prevention of Port Exhaustion on DSLAM/VRADSs (submitted to USPTO) – 12/15/2008
  5. G. Beattie, D. Asefa, S. Griesmer: A method for Pre-Fielding And Pre-Qualifying A User Community For VDSL Service (Submitted to USPTO) – 12/15/2008
  6. G. Beattie, D. Asefa, S. Griesmer: Enhanced Method for the Prevention of Port Exhaustion in Broadband Customer Services (Submitted to USPTO – 10/15/2008
- Mini MBA Certificate, Wharton and AT&T school of business, 1994
- Vice President of AT&T Network Strategy Award for Defining Alternate Signaling Interface and Alternate Link Set Routing of AT&T Signaling Network