JONATHAN LENNOX

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EDUCATION

Columbia University, New York, NY
 Ph.D. Computer Science, February 2004
    Advisor: Henning Schulzrinne
    Dissertation: Services for Internet Telephony
 M.Phil. Computer Science, May 2000
 M.S. Computer Science, February 1996   GPA 4.083/4.333
 B.A. Mathematics, May 1994   GPA 3.937/4.333, Major GPA 4.126/4.333
    (Summa Cum Laude, Phi Beta Kappa)

PROFESSIONAL EXPERIENCE

Bell Laboratories   *Research Intern*   Holmdel, NJ   Summer 1998 – Summer 2001

  Developed a SIP and RTP-based end point for an experimental advanced mobile switching center (MSC) architecture. Architected and implemented an embedded RTP stack and a C++/CORBA-based SIP endpoint.

  Designed, developed, and analyzed procedures to efficiently integrate a SIP and RTP-based mobile switching center with existing mobile networks.

  Designed and developed a SIP registration presence integrating a SIP proxy server with a Home Location Register.

ACADEMIC AND PROJECT EXPERIENCE

Columbia University   *Post-Doctoral Researcher*   2004 – present
Columbia University   *Graduate Research Assistant*   1994 – 2004

  Design and implementation lead of CINEMA, an Internet Telephony server for SIP.   1998 – present
      Created, designed, and implemented the SIP Common Gateway Interface and the Call Processing Language.
      Designed and implemented the proxying, policy, build system, and event-state architecture.
      Measured performance and evaluated throughput.
  Designed and developed a system for sharing applications among computers.   2004 – present
  Created RTPLib++, a C++-based library for the Real-time Transport Protocol.   2002 – 2003
  Analyzed and categorized feature interactions in Internet telephony.   1998 – 2000
  Analyzed the implementation of Intelligent Network services in Internet telephony.   1997 – 1999

TEACHING EXPERIENCE

Columbia University Department of Computer Science
Taught:
    Programming Languages: Java   Spring 1998
Teaching Assistant:
    Topics in Computer Science: Cryptography   Fall 1995
    Artificial Intelligence   Spring 1995
    Analysis of Algorithms   Fall 1993 & Fall 1994

OTHER EXPERIENCE

Columbia University Engineering Development and Alumni Relations *Web Designer*
1996 – 1997

Designed and adapted alumni magazine for web presentation.

SKILLS

Programming Languages
    C, C++, Java, Perl, SQL, PHP, Tcl/Tk, Unix shell, Common Lisp, Scheme, Pascal
Internet Protocol Knowledge
    VoIP/IP Telephony: RTP/RTCP, SIP, H.323, SDP, SAP, RTSP, SIP-CGI (*Author*), CPL (*Author*)
    General: TCP/IP, UDP, SNMP, RPC, CORBA, HTTP, CGI, SMTP, TFTP, NFS, XML
System Knowledge
    Pthread, Unix system and shell programming, Unix system administration
Tools
    Perl, Tcl/Tk, TeX, LaTeX, Lex, Yacc, CVS, RCS, Make, Sed, Awk, gdb, M4, Autoconf, Automake

SELECTED PUBLICATIONS

J. Lennox. *Services for Internet Telephony.* Doctoral Dissertation. Janurary 2004.

J. Lennox and H. Schulzrinne. A Protocol For Reliable Decentralized Conferencing. *ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV),* Monterrey, California, June 2003.

J. Lennox and H. Schulzrinne. CPL: A Language for User Control of Internet Telephony Services. Internet Engineering Task Force, to appear as Request For Comments (Proposed Standard); blocked on unfinished normative reference. January 2002.

J. Lennox, K. Murakami, M. Karaul, and T. F. La Porta. Interworking Internet Telephony and Wireless Telecommunications Networks. *Computer Communications Review,* October 2001, Vol 31, No. 5, pp. 25-36.

J. Lennox, J. Rosenberg, and H. Schulzrinne. Common Gateway Interface for SIP. Internet Engineering Task Force, Request for Comments 3050 (Informational), January 2001.

J. Lennox and H. Schulzrinne. Call Processing Language Framework and Reqirements. Internet Engineering Task Force, Request for Comments 2824 (Informational), May 2000.

J. Lennox and H. Schulzrinne. Feature Interaction in Internet Telephony. *Sixth Feature Interaction Workshop,* Edinburgh, Scotland, May 2000.

J. Lennox, H. Schulzrinne, and T. F. La Porta. Implementing Intelligent Network Services with the Session Initiation Protocol. Columbia University Computer Science Technical Report CUCS-002-99, January 1999.

CITIZENSHIP

United States of America