IOANNIS PAPADIMITRIOU
3 Feidippidou Str.
Vouliagmeni, 16671
jpg@stanfordalumni.org
http://www.geocities.com/johnny_pap/

EDUCATION:

9/01 – 12/02 **Stanford University**, Stanford, CA: Master of Science degree in Electrical Engineering, 12/02. Course work included networks, S/W programming (Operating Systems – Object Oriented Programming – Java – Databases), wireless communications and economics.

9/94 – 9/98 **National Technical University**, Athens, Greece: Diploma (M.Sc. equivalent) in Electrical Engineering, 9/98. Specialized in computer networks. Completed the 5-year curriculum in just 4 years.

EXPERIENCE:

01/03 – now **Quality of Service Engineer,** World-Link Telecom Inc., Brooklyn, NY. Responsible for designing new procedures and S/W tools, which improve the quality of services provided to wholesale and retail customers making overseas Direct Dial, Calling Card and Call-back phone calls. Apart from the technical issues which are closely related to voice quality, Sales – Marketing and Financial issues are also taken into account, in order to create a benchmarking and reporting system that will increase the efficiency and profitability of the company. Have also been trained in troubleshooting network/switching/VoIP problems faced by the Network Operations Center (NOC). Currently working remotely (from Greece) as a manager for a project aimed at specifying all internal policies and tools required for the company to scale up and be identified as an important player in the highly-competitive US telecom market.

9/03 – 9/04 **Workgroup Member,** Hellenic Authority for the Information and Communication Security and Privacy (HAICSP). Participated in the workgroup that proposed 3 Regulations focusing on securing the Telecommunications and Internet Applications privacy of users.

2/01 – 7/01 **Supervisor**, Telecom Lab, National Technical University, Athens, Greece. Organized a team aimed at writing testing scenarios using the TTCN language. Developed tests for TCP implementations and IP Denial-of-Service attacks.

9/00 – 2/01 **Software Engineer**, Telecom Lab, National Technical University, Athens, Greece. Implemented an echo cancellation algorithm by programming a Texas Instruments DSP.

9/99 – 3/01 **Network Administrator**, Military Service for the Hellenic Army General Staff. Chosen to join the "Research and Informatics" Corps, aimed at designing, implementing and maintaining the computer systems that strengthen the military force of the Greek Army.

4/98 – 9/99 **Research Assistant**, Telecom Lab, National Technical University, Athens, Greece. Participated in the European ESPRIT project titled "Common Physical Access chip foR ISDN Systems (COPARIS)" aimed at integrating the functionality of modern interfaces (such as ISDN and PBX functions) with common datacom protocols (Ethernet, USB and PRI). Participated in the architecture design. Determined the partitioning of the Ethernet functionality between H/W and S/W. Implemented the Ethernet S/W partition by programming a Siemens DSP.

Summers 1996-1999 **Network Administrator**, Prisma, Athens, Greece. Worked as a part-time network administrator. Managed user accounts, backups, anti-virus protection and security system.

ADDITIONAL INFORMATION:

- Fulbright scholar, 2001 – 2002
- A. S. Onassis Public Benefit Foundation Scholar, 2001 - 2002
- IEEE member since January 1999
- Hellenic Scholarships Foundation Scholar, 1995 – 1996, for ranking 3rd during first year as an undergraduate student
- Knowledge of French
- Computer Programming Skills: C, C++, Java, XML, Javascipt, Matlab, SQL, JDBC.

Quality of Service PROJECT:

1/03 – 05/04

- **Accomplishments**
  - Described new procedures aimed at troubleshooting technical problems more quickly, efficiently and effectively. The average pending time before resolving trouble tickets has been considerably reduced, resulting in:
    - Stabilizing Answer Seizure Ratios (ASRs) at high levels
    - Increasing the volume (in minutes) by 17% for the period January-April 2003 as compared to the volume for the period September-December 2002.
    - Stabilizing the volume between weekdays and weekends
    - Establishing a better profile and identity for a company trying to improve its name in the market
  - Standardized the voice quality metrics the company is targeting for, depending on the service plan it is providing to each customer.
  - Designed and wrote quality reports aimed at pinpointing good-quality routes, as well as problematic routes needed to be taken care of first.
  - Specified an improved Trouble Ticketing system that cuts time needed to troubleshoot network problems by half. Also described new reports aimed at giving more accurate information about the status of the routes.
  - Created a softswitch purchase Request for Proposal (RFP)

Utility for Finances, Operations and Sales PROJECT:

02/04 - now

- **Accomplishments**
  - Described and established a good communication path between people making routing decisions and the Network Operations Center (NOC). Due to the exchange of vital information between the two departments, margins have been increased by 20% at the same time that quality has been improved and stabilized, although margins and quality traditionally follow opposite tracks.
  - Designed and wrote financial reports aimed at pinpointing the most and least profitable routes.
  - Proposed a new automated pricing tool that proposes rate increases and decreases to carrier customers and allows per-customer price customization based on account manager input and customer classification.
  - Proposed a well-designed plan for enabling reconciliation and routing decision making for USA domestic traffic, taking into account the complex pricing schemas that US telecommunications companies follow.
  - Proposed an improved algorithm on dynamically determining the routing depth per breakout aimed at significantly reducing the risk of negative margin traffic.

ACADEMIC PROJECTS:

9/01 – 12/01
- **Operating Systems and Systems Programming (in C++ under Solaris 8 OS)**

  - Threads: synchronization/serialization of threads, use of locks/semaphores, join

  - Multiprogramming: address space allocation, catching exception cases via system calls, process scheduling

  - Virtual Memory: Paging to and from disk, Memory Mapped Files, use of Translation Lookaside Buffer (TLB)

  - File Systems: support of large files and growing files, directories, cache of file blocks

1/02 – 4/02
- **Object-Oriented Systems Design (programming in Java)**

  - Tetris: using OOP to divide a big problem into many small testable problems, writing efficient classes

  - User Interfaces and use of Java controls

  - Java threads: synchronization, lock critical sections, GUI threading

  - Model/View/Controller decomposition strategy, presenting state visually, saving and restoring that state from the file system

  - Final Project: implementation of an editor for an adventure game, design principles, use of all techniques described above, dividing a large problem into smaller tasks assigned to different members of the team

1/02 – 4/02
- **Implementation of Distributed Network Protocols (programming in C)**

  - IEEE 802.1 LAN Bridging – Spanning Tree protocol

  - IEEE 802.1 LAN Bridging – GMRP/GARP Selective Multicasting

  - Open Shortest Path First (OSPF) routing protocol

4/02 – 6/02
- **Switching Architectures:**

  Participated in a project pertaining to stability issues of congestion control algorithms using control theory with an application to XCP proposed by Dina Katabi of MIT

9/02 – 12/02
- **Databases (programming in ORACLE SQL)**

  Designed and developed a database application. E/R model. Relational Model. Population of relations. Queries. Views. Indexes. Keys – constraints – Triggers. PL/SQL and embedded SQL. Object Oriented features. JDBC

9/02 – 12/02
- **Wireless Communications**

  Participated in a project comparing modern wireless technologies for office and home networking. Focus on Bluetooth, IEEE 802.11a/802.11b, HomeRF and HiperLAN/2.

1/98 – 9/98
- **Mobile Telecommunication Systems**

  Designed a mobile system covering the Kifissias Ave., one of the most frequently used avenues in Athens, Greece.

PUBLICATIONS:

"A combined Hardware / Software ETHERNET Protocol Implementation for Embedded DSP Based Environment" by Aggelos Liveris, Ioannis Papadimitriou, Nikos Moshopoulos, Pavel Karmazin and George Stassinopoulos (Communications and Control Conference 7, Athens, Greece 06/28/99 – 07/02/99)

DISSERTATION:

"Design and Implementation of the IEEE 802.3 MAC Layer in embedded DSP-based environment". The dissertation discusses the decisions made for partitioning the IEEE 802.3 MAC Layer functionality between H/W and S/W. It also contains DSP code for two different S/W implementations depending on the characteristics of the DSP.