Eugenio Diaz, BSEE/BSCE

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Objective: Available for a full-time position on any area in the fields of Electrical Engineering and Computer Engineering. Positions related to simulation, computer graphics, Internet/Intranet, Technology Evaluation, network design, and electronic design are specially fulfilling to me. Due to the fact that I have dual engineering bachelors, extremely diversified experience, and strong passion for technology, I am able to perform very well on different roles or positions, including, but not limited to: Research Associate, Technology Evaluator, Software Engineer, Project Manager, HW Design Engineer, System Administrator, Network Manager, etc. Prefer to work in the academic research, hi-tech research, or entertainment sectors.

Skills/Hands-on: Systems: have worked, programmed and developed on the following platforms: Sun/Solaris, IBM RS6000/AIX, HP/HP-UX, SGI/IRIX, x86/Linux, Sparc/Linux, x86/Win NT Server, PC/Win 3.11-Vista, Amiga/AmigaOS. Have extensive technical experience on hardware (installation, integration, configuration, repair, troubleshooting) and software on the following platforms: SGI/IRIX (Indy, Indigo, O2, Octane, Origin 2xxx, Onyx); Sun/Solaris (Sparc Stations SS4-20, Ultra x, Ultra Exxxx); x86 or Sparc Linux (Mandriva, Red Hat, Debian).

Languages: Have programmed and developed on the following languages: C/C++, JAVA, Python, Shell Scripting, Perl, TCL/Tk, HTML, Fortran, Pascal, Lisp, RDBMS SQL (Oracle, Informix), LDAP, VHDL, PLC Ladder, and many other less known dialects.

Software Tools/Environments: Have effectively used the following tools and environments: most Open Source Software, Netscape SuiteSpot; Unix/X11R6 X-Windows; Kdevelop; Eclipse; XILINX/Viewlogic VHDL/FPGA Design and Simulation CAE tools; MathCad; LabView; Matlab; SciLab; AutoCAD; Inventor; Solid Works; ProE/Wildfire; Maya; OpenOffice; MS Word, MS Excel, MS Access, MS Power Point; Photo Shop; Alias Wavefront/Composer; LightWave; PovRay; Render Man; CATI's X-IG Image Generator; KMW BatSim/IMI/MilCIG; Micron RFID MicroStamp technology; custom Finite Element Analysis (FEA), Statistical Process Control, and Digital Signal Processing Tools; and many other less known tools in the areas of CAD, CAE, DSP, 3D Rendering/Raytracing and Computer Graphics.

Networking: Have designed and implemented networks using the following protocols, topologies and technologies: FDDI; 100BaseTX, 100BaseFX, 10BaseT and 10Base2 Ethernet; Slip/PPP; ARCNET; Token Ring; 56k, ISDN, T1, Frame Relay, and ATM circuits; TCP/IP; Samba SMB; NetBEUI; NFS; FTP; HTTP; HTTPS; SNMP; SMTP; LDAP; Ascend, Cisco, ExtremeNetworks, Bay Networks, Netgear, and ADC/Kentrox routers, hubs, and switches.

Industrial: Have worked hands-on with many industrial machinery like: drills, lathes, milling, punch press, AC/DC/gas welding, polishing equipment, wood working machinery, etc. Have worked and programmed with industrial equipment like: Allen Bradley, Siemens, DirectPLC PLCs. Have training on Good Manufacturing Practices (GMP), OSHA, Statistical Process Control (SPC), Computer Integrated Manufacturing (CIM), pharmaceutical manufacturing processes. Have experience on project management, budget management, applied engineering economics, project feasibility study/justification, process validation and validation protocol writing.

Human: Due to highly diversified experience I can perform very well on teamwork oriented, high creativity, academic, research, field or business environments. Have excellent written and verbal communication skills in both, English and Spanish.

Work Experience

Nov 01 - Present	**Research Associate/Hardware Engineer:** Worked on the development of the Future Combat System Embedded Training Crewstation testbed under contract with the ARMY's RDECOM (formerly STRICOM). Worked on the integration of different ARMY's software components, like TARDEC VTT software, and off the shelf hardware components into a cohesive simulation system. Did the mechanical design and 3D modeling necessary for the construction of the crewstation. Duties include: setup, maintenance, and integration of system software, software build, and configuration management environments; troubleshooting of odd hardware/software issues in support of research experiments; evaluation and research of state of the art graphics and simulation technologies as it applies to the ARMY's STOs. As part of the STO, I was trained in the use and maintenance of KMW's (Krauss-Maffei Wegmann) BatSim/IMI/MilCIG simulation system, and I help maintain a demo installation at the STTC. Also worked as technical support personnel for RDECOM's Dismounted Soldier Embedded Training efforts.	Institute for Simulation and Training University of Central Florida Orlando, Florida
Jun 01 – Nov 01	**Research Associate/Software Engineer:** Worked on the integration of robotic entities to Semi-Automated Forces (OTBSAF and FCS) simulation environments, as part of the Composable Behavioral Technologies (CBT) project funded by STRICOM. Created C++/CORBA code to interface the Real World Robotics (RWI) ATRVMini robot to the Future Combat System OCU/SAF.	Institute for Simulation and Training University of Central Florida Orlando, Florida
May 00 - Jun 01	**Systems Engineer/Integrator (Contract):** Worked on the creation and administration of a highly available distributed sever platform, based on Linux, capable of hosting multiple customers using the database driven TECS E-Commerce software developed by Web-Insights.net. Helped with the development and troubleshooting of the TECS software. Duties included the administration of all Internet services like, DNS, NTP, FTP, sendmail, Pop3, SSH, SSL, virtual web serving, network accounting, backup, etc. Developed shell script based in-house solutions for the network bandwidth accounting, backups, web server monitoring, and performance statistics.	Web-Insights.net Orlando, Florida
Feb 00 - May 00	**Systems Engineer/Integrator:** Worked on the upgrade and maintenance of the network infrastructure of the Internet start-up Invent.com. Set-up and maintain security and homogeneity standards among all servers. Looked over the administration of about 10 Linux servers and 5 Windows workstations. Implemented a new backup power infrastructure. Proposed recommendations for future server room physical plant upgrades. Implemented a secure and distributed network wide backup infrastructure using the Arkeia Enterprise Backup software. Helped external website developers with the design and troubleshooting of new websites. Duties included the administration of all Internet services like, DNS, NTP, FTP, sendmail, SSH, web serving, network accounting, backup, etc.	Invent.com Orlando, Florida
Aug 99 - Feb 00	Time off to get married and enjoy life.	Caribbean Cruise ;-)

Work Experience

Sep 98 - Aug 99	**Systems Engineer/Integrator (Contract):** Worked on different aspects of the CargoTag start-up project which consists of an airline asset tracking and management data-warehouse system using Micron MicroStamp RFID technology, SQL database, and Web technologies. Helped design the Internet architecture necessary to, collect data from various World wide customer locations into our data-warehouse, and provide a secure web interface to reports and customer accessible data, using a public key certificate infrastructure. Researched for design alternatives on various aspects of the system, including but not limited to, software and networking architectures, electrical and mechanical characteristics, feature feasibility, and product specifications. Wrote and/or maintained several technical documents like the product specifications, software specifications, architecture diagrams. Worked as a general Unix systems support and network consultant whenever necessary. Provided extensive support in the diagnosis, troubleshooting, and correction of Unix and network problems, in a large security and access control project for a big financial firm. Provided QA assurance consultation to project management on the custom security management application being developed by a third party, running on HP-UX in a distributed multi-server architecture. Also performed a dual role as a Network/System Administrator in a small office environment consisting of one NT 4.0 File Server, one Linux Samba Print Server, over 25 Windows 95 desktops and notebooks, 2 Sun SS20 workstations running Red Hat Linux, and one T1 Wan circuit using a Cisco 2600 series router and Cisco 124 FastHubs.	Lockheed Martin Corp. IMS - ESS Division Orlando, Florida
Jun 98 - Sep 98	**Systems Engineer/Integrator (Contract):** Build and integrated existing hardware/software, under severe budget constrains, into an island wide ISP infrastructure; taking maximal use of existing assets and quality of service as primary goals. The network architecture consisted of multiple incoming T1 circuits routed into several Ascend MAX terminal servers with K56/V.90 modem cards, a dedicated outgoing T1 circuit to the Internet and a 128Kbps ISDN backup circuit, and a switched Fast Ethernet internal network. The server architecture consisted of a main server and several secondary servers. The main server was a SGI/IRIX server with Netscape SuiteSpot 3.5 running web, mail, news, proxy and LDAP directory services, plus Bind running the primary DNS server. The secondary servers consisted of PC (x86) and RISC (Cobalt RaQ micro-server) based Linux servers and micro-servers providing secondary DNS, RADIUS authentication, FTP, backup mail, and dedicated customer web hosting. Implemented a Linux based transparent proxy, masquerading firewall, for internal company use. After the design, integration/installation, and configuration of the whole infrastructure, performed as the Systems Administrator and consultant for a period of two months. During that period, I started the design and installation of a Java based integrated ISP accounting and administration system consisting of the HurlNET ISPAdmin and ISPReg software, MySQL Database, Netscape LDAP Directory Server, RADIUS servers, and a secure web server for over the net credit card applications.	CRC Networks and Cables, Inc. Bayamon, Puerto Rico

Work Experience

May 97 - Jun 98	**Senior Systems Engineer:** Was engineer #2 on a six-employee startup, where engineer #1 was one of the owners. Performed several engineering roles due to the small size of the company. The company provides hi-tech computing solutions to the enterprise, academic, scientific research, graphics arts, Internet, entertainment, and telecommunications markets. The core products sold at QBE were: Systems Integration and Consulting services; the full line of Sun Microsystems and Silicon Graphics hardware/software/service/support products; Netscape full suite of client-server software; SGI Alias/Wavefront high-end graphics software; Gauntlet Firewalls; MSI molecular simulation software; Oracle, Informix, and Sybase database environments among other solutions. Functional roles included: pre-sales engineer; on-site software and hardware support engineer; and integration engineer/project manager. As a pre-sales engineer, my duties consisted of: the design of systems hardware and software configuration to meet or exceed customer needs at an specified budget range (usually between $5K and $250K); the design of high-end presentations and demos to show-off the capabilities, features, and superiority of our computing solutions and products (this usually consisted of setting-up temporary Unix network environments in a show room floor, with web servers, streaming media, 3D graphics, remote management, etc.); and helping the sales staff with technical questions, new technological advancements, etc. As a support engineer my duties consisted of: 24x7, 4 hour response on-site, phone, and remote hardware and software support; general Unix OS and application support; periodic remote systems/network monitoring and performance profiling; onsite preventive maintenance, and repair/replacement of hardware to the FRU (field replaceable unit) level; periodic patch installation and upgrades on production systems; provided technical support to the vendors we were dealer of, in trade shows and large training sessions; due to the high-end/low volume nature of the equipment sold, it often (very often) required troubleshooting of odd technical problems involving drivers, kernel tuning, or hardware testing, and always resulting in either the installation of an existing patch or a bug report to the manufacturer for the creation of one (most situations required coordination between the system manufacturer and a third party hardware or software provider, in order to solve the problem). As an integration engineer/project manager my duties consisted of: the installation, testing, and release into production, of the systems designed as a pre-sales engineer; systems usually consisted of an Intranet or Internet/ISP solutions using high-end servers and Netscape SuiteSpot server side software which typically involved installing and integrating http/https, mail, ftp, proxy, news, certificate, catalog, DNS, and NIS services, plus a firewall running on a hardened Unix kernel (there was a great deal of Netscape software customization in these projects); installed several Sun E450s and E3000s, and SGI Origin 200 with software/hardware raid configurations using Sun's Online Disk Suite/Sun Storage Array and SGI Plexing/Volume Management software; installed several SGI O2 and Octane workstations with Alias/WaveFront's Power Animator, Maya, Composer, and Adobe Photoshop and Premiere.	Quantum Business Engineering Hato Rey, Puerto Rico
May 96 - May 97	**Self-employed:** Started a home based Internet company. Used a dedicated 56Kbps Internet circuit, Linux servers running DNS, mail, ftp, web services. Used Apache, Unix shell scripts, and a custom search and database engine written in C to provide a unique web based business portal and directory for the Island corporations. Played with lots of newly developed Internet technologies and concepts, searching for a marketable product or business model; but ultimately failed due to the high cost of a dedicated Internet connection, and the lack of capital funding.	Softengine Technologies Las Piedras, Puerto Rico

Work Experience

May 92 - Dec 92	**System Analyst:** had full responsibility for plant-wide projects. Had similar responsibilities and duties as in the project engineering department, but this time within the IT department. Worked on the development of an enterprise-wide CIM Initiative. Worked on the maintenance of network and telephone circuits. Duties: design, integration and deployment of new information technologies.	Information Technologies Johnson & Johnson Mfg. Corp. McNeil Consumer Products Las Piedras, Puerto Rico
Dec 91 - May 92	**Project Engineer:** had full responsibility for plant-wide projects. Duties: cost analysis; feasibility studies; system design; material/equipment/contract service specification and approval. Worked as project manager for several production machines upgrades like granulators, nozzle washing stations, tablet compressors, etc. Wrote and executed qualification/validations protocols, and wrote and/or maintained official SOP manuals. Actively participated in the brain storming weekly sessions of the project engineering department, to determine priorities, scheduling and status of projects, and to discuss existing problems that would open opportunities for new projects.	Engineering Department Johnson & Johnson Mfg. Corp. McNeil Consumer Products Las Piedras, Puerto Rico
Jan 90 - Aug 90	**Programmer:** designed and programmed a GUI (graphical user interface), to generate the parameters input file to an existing structural analysis program, and to graphically visualize the output of the simulation.	Dept. Civil Engineering University of Puerto Rico Mayaguez, Puerto Rico

Education

Aug 88 - May 96	**BSEE** *Majors*: Electronics Design *Minors*: Mathematics, Economy	University of Puerto Rico Mayaguez Campus Mayaguez, Puerto Rico
Aug 88 - May 96	**BSCE** *Majors*: Hardware Design *Minors*: Mathematics, Economy	University of Puerto Rico Mayaguez Campus Mayaguez, Puerto Rico