

Michael Altamirano

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WORK EXPERIENCE

- DirecTV** prominent provider of digital television entertainment services **Aug 2012 – Feb 2025**
Site Reliability Engineer / Feb 2017 – Feb 2025 *El Segundo CA / Remote*
- Managed and supported an infrastructure of 1,000 servers, applications, and platforms to ensure optimal system performance for VOD and Streaming services.
 - Implemented robust queuing solutions using ActiveMQ to streamline messaging and workflow processes within VOD system, enhancing scalability and efficiency.
 - Developed/deployed Bash scripts for automating file management and directory structures, utilized Python to build backend services for metadata management, user accounts, and access control, significantly improving system stability.
 - Led the deployment of server and blade operations, interpreting complex technical requirements to meet the evolving needs of the video entertainment platform.
 - Conducted evaluations of new platforms and executed proofs of concept to identify opportunities for innovation and improvements
 - Automated responses to key performance metrics and alerts, reducing downtime and enhancing operational efficiency.
- Production Engineer / Jan 2015 – Feb 2017* *El Segundo CA*
- Administrated the delivery and management of a VOD library, ensuring seamless service to millions of subscribers.
 - Instituted video delivery systems, integrating both legacy satellite and modern IP-based streaming technologies to enhance the VOD platform's reliability and efficiency.
 - Coordinated troubleshooting efforts to resolve technical issues such as buffering, error codes, and content availability, significantly improving customer satisfaction and service reliability.
 - Collaborated with cross-functional teams, providing technical insights and project management for the successful integration of new technologies, including video encoding and streaming protocols.
- Application Engineer / April 2013 – Jan 2015* *El Segundo CA*
- Operated nationwide Conditional Access Management Center (CAMC) installations for set-top boxes, ensuring secure decryption of premium content for millions of subscribers.
 - Piloted a team in implementing robust encryption and smart card upgrades, significantly reducing vulnerabilities to hacking and unauthorized access to paid content.
 - Executed and managed set-top box (STB) transactions and load balancing for 21 million subscribers, maintaining service integrity during the DirecTV and AT&T merger integration process.
- STB Hardware Engineer / August 2012 – April 2013* *El Segundo CA*
- Developed and implemented test methodologies for transcoder integrated circuits, ensuring optimal performance and compliance with industry standards for video processing systems
 - Analyzed MPEG transport streams in transcoder ICs to optimize video delivery quality and system efficiency for set-top box hardware
 - Applied expertise in video and audio compression fundamentals, working with MPEG-2 and MPEG-4 standards to enhance content
 - Integrated and validated multiple hardware interfaces including analog video, digital audio, RF front-end systems, FSK communications, IR/RF remote controls, HDMI, USB, and Ethernet connectivity
 - Collaborated on hardware design verification and validation processes to ensure seamless integration of video processing components with entertainment delivery systems
- International Rectifier/Infineon** leader in power management technology **Nov 2000 – Aug 2012**
Device Engineer / October 2009 – August 2012 *El Segundo, CA*
- Ran validation and performance testing for innovative power semiconductor products, contributing to a 20-member team focused on electrical characteristics, thermal performance, and quality control.
 - Successfully validated the DirectFET technology, securing a competitive advantage for the company with improved thermal performance and smaller product size, directly addressing critical market needs.
 - Worked on the evaluation and validation of the GaN platform, enabling International Rectifier to lead in next-generation power semiconductor technology, thus positioning the company for future growth.
 - Conducted comprehensive failure analysis and application-specific testing to ensure product reliability and durability, reinforcing the company's reputation for quality and innovation.
- Engineering Technician / November 2000 – October 2009* *El Segundo, CA*
- Conducted comprehensive performance testing and competitive analysis of power semiconductor devices, including MOSFETs, IGBTs, and diodes, to evaluate electrical characteristics and market positioning
 - Designed, modified, and constructed specialized test stations and equipment to support product validation and quality assurance protocols for power management components
 - Performed systematic troubleshooting and defect analysis on semiconductor devices, identifying failure modes and implementing corrective measures to improve product reliability
 - Executed extreme condition testing procedures, modifying devices and test parameters to evaluate performance under stress conditions and validate design specifications
 - Supervised second shift operations and personnel, preparing detailed work summary reports and coordinating testing activities to maintain production schedules and quality objectives

- Analyzed and format test data for engineering review, contributing to product development decisions and continuous improvement

Arroyo Optics, manufacturer of wavelength management solutions for telecoms equipment **1999 – 2000**

Fiber / Chamber Technician

Santa Monica, CA

- Conducted comprehensive testing and validation of fiber optic couplers to ensure optimal performance and compliance with telecommunications industry standards.
- Executed precision fiber cable splicing operations and maintained calibrated splicing equipment
- Performed detailed analysis and calculations of test results, maintaining accurate documentation and database records
- Operated and maintained sophisticated fiber optic test equipment, ensuring optimal functionality and measurement
- Executed laser welding operations and performed precision tuning of fiber couplers to meet stringent performance
- Managed comprehensive documentation systems, including logbooks and database maintenance, to support regulatory compliance and continuous improvement initiatives

Ortel Corp, packaged lasers and photodiodes coupled to optical fiber, transmitters, and receivers **1997 – 1999**

Fiber / RF Technician

Alhambra, CA

- Performed comprehensive RF testing including frequency response analysis, return loss measurements, and final product validation to ensure compliance with telecommunications standards
- Conducted specialized testing procedures including DC bias analysis, environmental burn-in testing, and characterization
- Executed EPROM programming, component screening, and systematic testing protocols to validate product functionality
- Established and configured test stations for optimal measurement accuracy and efficiency, supporting high-volume production testing
- Collaborated closely with engineering teams to troubleshoot pending products and communicate technical findings

Allied Signal / JPL, contractor to monitor a project the antenna JPL was building for NASA ` **1996 – 1997**

Computer Technician

Pasadena, CA

- Maintained critical computer systems and equipment for NASA's Deep Space Network (DSN), ensuring operational continuity for deep space mission communications and data transmission
- Constructed custom adapters and hardware interfaces to support DSN equipment integration and mission-specific requirements
- Executed equipment replacement and upgrade procedures for DSN infrastructure, maintaining system reliability and performance
- Supported ISO 9001 quality management initiatives through documentation, process compliance, and quality assurance activities
- Managed comprehensive inventory control systems for specialized tools and equipment, ensuring asset tracking and availability for critical space communication operations

Alternative Electronics Inc.,

1995 – 1996

Junior Technician

Hawthorne, CA

- Performed testing, troubleshooting, and component-level repair of pager communication devices, for quality and functionality
- Conducted systematic component testing and defect identification, implementing repair procedures and component replacement
- Supported senior technicians with complex diagnostic procedures while managing component recovery and refurbishment operations

EDUCATION

California State University, Long Beach	Master of Science in Electrical Engineering	April 2013
Keller Graduate School of Management	Master of Business Administration	Nov 2011
DeVry University, Long Beach	Bachelors of Science in Computer Engineering Technology	Feb 2010
DeVry University, Long Beach	Bachelors of Science Electronics Engineering Technology	Oct 2009
Don Bosco Tech Institute, Rosemead CA	Associate in Science in Electronics and Computer Technology	May 1998

CERTIFICATIONS, SKILLS & INTERESTS

- Cloud/Infrastructure:** AWS (EC2/S3/VPC/IAM/EKS), VMware (vCenter), Terraform, CloudFormation, Ansible
- Containers/DevOps:** Docker, Kubernetes, CI/CD Pipelines, Jenkins, Git, Container Registries
- Operating Systems:** Linux (Expert), Unix, Windows Server, Red Hat, CentOS, Ubuntu
- Monitoring:** Splunk, Prometheus, Grafana, Log Aggregation, Metrics Collection
- Security:** Vulnerability Management (Nessus, Qualys), CVE Tracking, CVSS, Patch Management, CIS Benchmarks, STIG
- Networking:** TCP/IP, Load Balancing, Firewalls, VPN, Routing, Switching, Layer 2/3 Troubleshooting, RF
- Programming:** Python, Bash, SQL, C++, Java, PowerShell, MATLAB, LabVIEW
- Tools:** MySQL, PostgreSQL, SCCM, ITIL, Agile, Incident Response, Disaster Recovery
- Certificates:**
 - Kester Lead Free Hand Soldering and Assembly Course May 2004
 - Microsoft Certified Professional (MCP) June 2003
 - Adcon Technical Institute A+, MCSE Windows 2000, & CCNA June 2003
 - CompTIA Certified in A+ Computer Troubleshooting October 2002
 - NASA and JPL Certified in Hand Soldering August 1997
 - NASA and JPL Certified in Wire Wrap August 1997
 - NASA and JPL Certified in ESD Awareness August 1997