

Andrew Cornell

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Summary

A seasoned industry professional with a unique combination of electrical engineering and electronics, and certified skills and experience in Technical Communication. A career track record in project team collaboration, design, production, test, support of OEM robotic process equipment, electronic data acquisition systems, and instrumentation. Design and support experience in three industries: Defense, Semiconductors, and TELCO energy services. International electrical design and support experience for a Europe and Asia install base.

Education

MA in Technical Communication

Boise State University, Boise, Idaho, College of Arts and Sciences, 2004 to present

Expected graduation date is contingent upon portfolio acceptance

42 credits applied to a MA in Technical Communication

EE374 Power Systems Analysis, College of Engineering, spring 2003

EE376 Electrical Power Distribution, College of Engineering, spring 2002

Boise State University, Boise, Idaho

BS in Electronics Engineering Technology, College of Engineering and Architecture Tech
Oklahoma State University, Stillwater, Oklahoma

Engineering Skills and Abilities

(Project Manager and Coordinator, Systems Integrator, Cost Reduction Engineer, Safety Engineer, SCADA Administrator, Data Analyst, Technical Writer, Technical Trainer)

- Electrical/electronic design, system integration of 3rd party equipment, electrical power, instrumentation, signaling, distributed controllers, robotics, computer peripheral devices.

Keywords: analog signal transmitters, environmental sensors, safety devices, control devices, power conditioners, circuit protection, electrical hardware and labels, data acquisition converters, DCS, remote wireless telemetry units, cellular antennas, SCADA

- Technical Documentation for complete product life-cycle: prototyping, production, retrofits, alpha and beta site test, supply chain, safety and FMEA, customer correspondence, training, technical and business operations.

Keywords: Electrical and Process Instrumentation (P&ID), Electrical and Electronic Schematics, 3D solid model/assembly drawings, troubleshooting, interconnects, PRO-Engineer documentation: 3D packaging assemblies, cable assemblies, electrical/electronic circuits and instrumentation, electro-mechanical pneumatics, mechanical

Support capabilities

- Oracle and Access database management for Return Material Authorization (RMA), Engineering Change Order (ECO), Build of Material (BOM), Purchasing; Interlink CheckIn CheckOut workflow process for document generation and revision control, Modular Document Packages and BOM Kits for Configuration Management, Process improvement using Six Sigma process methods.
- Information Design: Proposals, troubleshooting aids, step instructions and procedures, Standard Operating Procedures, user guides and reference guides, operations manuals, online materials, web pages, newsletters, posters, B2B publications, SME Interviewing

Supply Chain Management

Experience corresponding with customers and partners within the supply chain product life cycle management. Conducted schedule training sessions, and impromptu user training over-the-phone. Custom designs and retrofits to meet customer constraints. Experience with end-of-life components, issue tracking and corrective action. Inside and outside sales.

- Managed issue and corrective action liason support among third party design houses, contract manufacturing suppliers, and test houses: Kimball Manufacturing, ESS West Engineering, US Industrial.
- Managed custom cable and connector designs with manufacturers: Thomas & Betts, National Wire & Cable, Service Wire Corp.
- Worked with Aeris Communications and energy customers during the FCC 2008 mandate to upgrade from analog to digital cellular networks.
- Interfaced with AT&T Communications and energy customers during the deployment of GPRS modems and remote telemetry units during the FCC 2008 mandate.
- Collaborated with factory principles (Wakefield, Littelfuse, ECM Motors) and distributors (Kimball Electronics, Radar) during the design-in and qualification of components.

Accomplishments

Involved in major design and production projects with industrial corporations like EMM, Intel, Iljon, Micron, Motorola, ZMD, Ottetail, Pedernales, OG&E, AT&T, Aeris, Lockheed General Dynamics/McDonnell Douglas.

- Team member involved with research, design, production, support of six international Semiconductor Processing Equipment Tool Sets used to clean, etch, dry semiconductor wafers: 8400, 9200, 9400, 94XX, and Pilot Line Team member for E200, Greenstar.
- International E200 tool electrical team lead and electrical design engineer: from concept pilot line design development to sustaining support of 40 built-to-order 1.5 million dollar E200s shipped in the US, Asia, Europe. Implemented new innovative PRO-E documentation for configuration management and 3rd party supplier outsourcing.
- Pilot Line Greenstar Development team member for SCP Global Technologies. Developed high-power distribution, heater control system, facility hookup for the automated tool set
- Troubleshooter and problem solver for Telemetric energy services customers. Proactive response to front-line troubleshooting problems during cellular drop-off, switch hopping, messaging center changes among cellular providers (Cingular, AT&T, Verizon) during the FCC 2008 digital conversion. Developed remote process to ensure units were operational to ensure low voltage protection was operational and protected, and to inform customer about conversion and upgrades.
- Researcher and designer of over 6 airborne data acquisition instrumentation and command/control products for Lockheed F16 Fighting Falcon ATIS instrumentation pod for flight test instrumentation control and data gathering: IH3001, IH3047, IH3053, IH3057, IH3083, IH0906.
- Development team researcher, designer, developer of 2 data acquisition products for the General Dynamics/McDonnell Douglas A12 Avenger Instrumentation Control Package Development Team: IH8012, IH8001.

Employment History

Product Support Engineer

4/2005 - 7/2008

Telemetric Corp. Boise, ID

(Application Engineer, Data Analyst, SCADA Administrator, Technical Writer, Trainer)

Technical Professional for an investor driven small high-tech (20 employees) OEM product manufacturer of remote telemetry SCADA products and services. Responsible for multiple job duties in an intensive front-line virtual IT troubleshooting and support environment within the telecommunications industry. Experience with utilities, irrigators, environmental.

- Trained and supported a large user base of virtual customers on a product line of four remote telemetry units and configuration software, wireless cellular web-based SCADA.
- Designed and revised 7 technical documents to improve user experience.
- Administrated SCADA web site Application Suites and data to coordinate service plan airtime billing, modem commission/decommission.
- Troubleshooter of remote problems hidden from customer view in wireless SCADA electrical systems thru product knowledge, cellular network knowledge, EE experience.
- Practiced applications in customer care services by specifying antennas, antenna location and direction based upon remote analysis of cellular coverage and terrain, data analysis, and real-time virtual phone communication with the user in the field.
- Pro-active notification of field customers during FCC 2008 transition in analog to digital conversion in cellular industry to upgrade equipment based upon operation. Duties include customer invoicing, RMA coordination, technical billing overages, inside sales.

Keywords: T646, TC012, TVM, DNPRTM, PowerVista Application Suite

Electrical/Electronics Design Engineer

7/1993 - 1/1997 and 3/1998 - 2/2005

SCP Global Technologies Boise, ID

(Project Manager, Systems Integrator, Cost Reduction Engineer, Specifications, Safety Engineer)

Technical Professional for an International OEM Automated Semiconductor Process and Control Equipment manufacturer involved with the cleaning, etching, drying of 200mm semiconductor wafers

- Lead EE designer and project manager responsible for the design and support of electrical/electronic systems, auxiliary equipment integration, electro-pneumatic systems, power and safety during the complete product life-cycle: prototyping, production, sustaining, cost reduction, retrofits, alpha beta site testing, safety and FMEA, supply chain, technical support, customer correspondence, training.
- Technical lead and supplier liason for Configuration Management and Supply Chain Partnership for the international E200 Automated Semiconductor tool set. Participated in design reviews, job starts, and Failure Modes and Effects Analysis.
- Project manager of PRO-E document package for Configuration Management and Supply Chain outsourcing. Duties were creation, revision, and customer issue resolution.

Keywords: Temperature Control, Instrumentation, Heaters, VFD, Berkeley Amplifiers and BAM Controllers, Environmental Sensors, Safety and Interlock, Optical Detects, Power Conditioning and Circuit Control and Protection, Controllers, Pumps, Xkw Heaters, Interconnect Cable Wire Hardware, Specialized Process Equipment, Thermoplastics, Polymers, Thermal Stickers, epoxy, tapes, FRPP, NPP, PVC, Stainless Steel, Aluminum, Scope-of-Work, Engineering Change Order (ECO), Build-of-Material (BOM), CE, TCF

Electronics Manufacturers Representative

1/1997 - 3/1998

Halbar-RTS Boise, ID (Kirkland, WA)

Technical Professional for independent Boise sales office providing local presence to support northwest regional accounts and Micron Electronics.

- Represented Wakefield thermal products by managing account at Micron Electronics. Qualified Blue Heron Heatsink for PII processor.
- Represented Littelfuse and provided a local technical presence for circuit protection devices at Micron Systems Integration. Team member for qualification of SMT Fuse.

Instrumentation Design Engineer Sr

2/1988 - 7/1993

Lockheed Martin Aeronautics Co Fort Worth, TX

(Electronics circuit designer, Lab Test Technician, Project Coordinator, Trainer)

Technical Professional for the Flight Test Department of an aircraft manufacturer that developed the flight test programs for the Lockheed F16 Fighting Falcon and General Dynamics/McDonnell Douglas A12 Avenger.

- Researched, designed, prototyped, and tested custom air-borne products for instrumentation products based upon specifications from Operations Engineering. Described technical information for product design and operations for international users.
- Electronic circuit designer for mixed-signal instrumentation using Pre-Millennium active and passive components for analog and digital signal conditioning, and data formatting.
- Designed analog electronic signal conditioning for flight test instrumentation transducer. Used Pre-Millennium software applications to design and simulate digital logic.
- Collaborated with packaging engineers and managed printed circuit board layout: design of enclosures and interconnects, component and trace layout for multi-layer and surface mount through-hole printed circuit boards.

Keywords: A/D converters, connectors, ribbon cables, active analog and, passive components, digital discrete, programmable logic, micro controller, Mil-Spec, firmware, 87C51, assembler, Instrumentation Operations Handbooks, DOD clearance

Digital Design Tools

- PTC PRO/Engineer electrical SC, cabling 3D solid model/assembly
- Adobe Framemaker, InDesign, Illustrator, Photoshop, Dreamweaver
- Adobe RoboHelp, Morae Usability Testing Software, TechSmith Snagit
- Microsoft Excel, Power Point, Word, Excel

Engineering Codes and Specifications

- NFPA 70 National Electrical Code
- NFPA 79 Electrical Standard for Industrial Machinery
- European EN 60204 Low Voltage Electrical Safety Standard
- SEMI S2 Product Safety Specifications
- Class I Division 2 hazardous location guidelines for vapor% LEL

Societies

Society for Technical Communication (STC), IEEE Professional Communication Society, Toastmasters Competent Toastmasters (CTM) program

Publications

Instrumentation Specialists Support COAS Research

Framing Questions for Accuracy and Professional Image

Get the Lead Out and Take the Lead: Developing P&P for Green Policy and RoHS Compliance

Lessons about Usable Information Products (Alaska Railroad Corporation)

Due-Care Approach to Avoid the Normalization-of-Deviance: Visual design strategies in S. Operating Procedures

Ethos of Rhetoric: A rhetorical analysis of an accident report in chemical tolling operations