

Chuck Elliott

Senior Fault Analysis Engineer Goodman Manufacturing, Houston, Texas

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Summary

Innovative, goal-oriented engineering professional experienced in planning, testing and managing mission critical manufacturing software. Proven engineering leader with demonstrated track record of inventing cost-effective solutions to complex business problems. Groundbreaker in finding data-driven solutions to complex manufacturing problems. Expert in software and hardware test engineering principles, comfortable working cross-functionally and cross-culturally. Creative thinker, comfortable leading or collaborating with expert teams to develop business opportunities in challenging environments.

Specialties

Software Test Engineering, Analog and Digital Electronic Design, Advanced Troubleshooting, Process Improvement through Lean Sigma and SPC, Use Case Development, Requirements Analysis, Project Management

Experience

Senior Fault Analysis Engineer: Goodman Manufacturing

November 2012 – present

Designed the file server architecture and network infrastructure for the CAPS factory floor data system. Crafted the capital authorization for both. Conceived, and got authorization for capital necessary to build a web application that improves inventory management within Reliability Engineering. Put into place a SOX-compliant system to update warranty information to the business system. Developed and deployed remote cycle monitors for 39 fin presses and expanders within the factory. All these projects give rise to lower cost by replacing manual labor with automation.

Currently working on separate projects to remotely monitor and report results of reliability testing equipment, build functional testers for commercial AC/Furnace control systems, and improve the ability to make data-driven engineering designs that are based on actual field results.

Manager DTFS/CIS VNR Team: Hewlett-Packard

January 2001 - November 2012 (11 years 11 months)

Implemented a strategy to align global engineering resources in support of two project managers. Managed the master list of cross-functional tasks enabling the resource assignment based on business needs. Improved efficiency by using data to focus priorities, holding engineers accountable to measureable results. Key

advocate for implementing Agile Methodology inside the software development teams. Spearheaded the adoption of Agile technology within my software test team. Built a self-directed team of test engineers, and collaborated with development team members to implement sprint planning cycles, regular daily standup meetings, and on-time delivery. As the lead engineer for level 2 software issues, I implemented data-driven troubleshooting strategy for the hardest problems. Invented a process for acquiring hardware from factories when needed to isolate problems. Put into practice a fact-driven process to methodically resolve issues. I played the key role in reducing software test escapes by 90% over two years, and improving factory problem resolution by same percentage over the same time period.

Initiated and drove a prize-winning Lean Sigma project to reduce software test escapes by analyzing root causes from real data off the factory floor. Discovered the top reasons behind the most common failures, and placed into operation fixes to our process. I was the first in our department to implement effective Use Case methodologies, making Use Cases a prerequisite to software design.

Carried out rigorous software release process and production version control. Created the first software version control process within our team for factory software.

Quality TQC Manager: Compaq Computer Corporation

January 1985 - January 2001 (16 years 1 month)

Pioneered an executive business information system known as IQDC (International Quality Data Collection), to collect global factory and field data. IQDC successfully integrated every important source of quality-related data into one database, becoming the critical system of record for executive and business decisions. Several metrics became easily ratable for the first time. In the first year, IQDC was instrumental in reducing overall DOA's by 5%, while simultaneously lowering problem resolution time. IQDC made it possible to accurately track Compaq to track yield, predictability, warranty costs, and other manufacturing metrics with high precision by product, factory and line. Put into service a Shop Floor Data Collection System (SFDC), which was the forerunner to IQDC. I managed the program to deploy them to US, Scotland and Singapore. Implemented a system to identify faulty diagnosis from post-repair test results, and drove improvements by training technicians how to improve their ability to repair PCB. Guided the production engineers to the value of using down-stream failure data to improve their diagnostic abilities with wave solder equipment, by capturing patterns of wave solder bridges from failure data entered by repair techs, then exposing them in a visual diagram.

Analog Test Engineer at Zaisian Corporation

January 1983 - January 1985 (2 years 1 month)

Designed electronic functional tester for a telephone line interface board, and wrote the control software for it. Using p-Chart theory, I developed a qualitative method to characterize analog signals that was faster than Fourier analysis and just as effective in identifying correct behavior and faults.

Designed a power supply tester and wrote the control software that accurately measured testing settling time, ramp time and other parameters for a switching power supply under variable loading conditions. The load was controlled by precisely varying the gate voltage to modulate the resistance across the drain-source pathway. Also designed test equipment for communications processor board, 300 and 1200 baud modems.

Education

Louisiana Tech University

BSEE, Electrical Engineering, 1972 - 1982

Activities and Societies: Intramural Football, Student IEEE Organization

Skills & Expertise

Interpersonal

- **Cross-functional Team Leadership**
- **Program Management and Planning**
- **Software and Hardware Test Management, Planning and Engineering**
- **Experience dealing directly with customers**

Software Experience

- **Microsoft SQL Server**
- **PHP**
- **Java**
- **JQuery**
- **Apache**
- **Various control software**

Hardware Experience

- **Analog and Digital design of test equipment**
- **Oscilloscopes and Logic Analyzers**
- **Arduino**
- **Rpi**

Analytical Toolbox

- **Use Case Analysis**
 - **Requirements Analysis**
 - **Six Sigma**
 - **Agile Methodologies**
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1 person has recommended Chuck

"Chuck and I worked together during the early, high growth days of Compaq. It was a time of tremendous growth and tremendous pressure to perform. I always had confidence that we'd get great ideas and great execution from Chuck. He was always very easy to work with and did not let the pressures we faced affect how he dealt with others. Chuck had great technical talent and was a pleasure to work with."

— **Rich Beck**, managed Chuck indirectly

[Contact Chuck on LinkedIn](#)