Professional Profile

Rudolf Chalupa, CFSE

Senior Safety Engineer, exida

Fields of Competence

System/Product Requirements
Product Development Process for High Reliability
Electrical, Electronics and Software Design
Process Hazard Analysis
Product Cycle Gap Analysis
SIL Verification
Failure Modes, Effects and Diagnostic Analysis
Failure Modes and Rates Research
Probabilistic Modeling and Analysis

Experience Summary

Rudolf P. Chalupa has over 30 years of experience in electronic design, software development, and reliability analysis.

Credentials

B.S., Electrical Engineering, Northwestern University, 1979
CFSE., 2007

Publications / Technical Presentations

A Novel Topology for a Direct Coupled Phantom Powered Microphone Preamplifier, 78th Convention, Audio Engineering Society, 1989 October

A Subtractive Implementation of Linkwitz-Riley Crossover Design, Journal of the Audio Engineering Society, Vol. 34, No. 7/8

Calculating an Appropriate Multiplier For βλ When Modeling Common Cause Failure in Triplex Systems, Reliability and Maintainability Symposium, 2010 January

Patents

Method for Discrimination Between Different Kinds of Data Transmission (U.S. 4,850,008).

Key Assignments

Performed component level failure modes, effects, and diagnostics analyses on numerous products.

Authored Electrical and Mechanical Component Reliability Handbook.

Performed comparative reliability modeling of redundant system architectures.

Performed functional safety analyses for numerous clients.

Participated in management of Certified Functional Safety Expert program.

Developed system specifications and detailed software component design for video-on-demand cable television systems.

Designed, developed, and brought to production integrated RF upconverter.

Revised DCS for increased analog precision.

Developed a product integrating high speed control, digital I/O, and analog I/O functions.

Increased reliability of proprietary communication busses.

Developed system specifications and system test plan for complete process control system.

Provided testing and code generation for software products

Designed and developed modems and line interfaces for telecommunications.

Designed and developed microprocessor-based modem test sets and power supply test equipment.