

RON TOLMEI
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EDUCATION:

University of New Haven, BSEE
University of Vermont, MSEE
University of Missouri, Ph.D EE

MILITARY:

United States Air Force
Radio, Radar & Computer Electronics
Honorable discharge

EXPERIENCE:

INNOVATION - Walnut Creek, California

Position: Principal Investigator

Responsibilities:

- Design, development and technical analysis of electronics, software, communications equipment, computer and automatic control systems with an emphasis on their reliability, safety, fault tolerant design methodology and development concepts.
- Analyze system failures, design errors, equipment failure modes, machine hazards, and manufacturing defects. Identify accident causes and their impact on safety and operational reliability. Examine patents for validity and possible infringement. Provide electrical engineering expert analysis and testimony for law and industrial firms.

Major accomplishments:

- Developed and performed technical and financial analysis involving the design methodology, concepts, operational constraints, safety, and commercial soundness of technical projects in the United States, Europe and the Far East.
- Designed and developed computer controlled environmental equipment for manufacturers in Poland for the United States Agency for International Development's (USAID) Project in Development and the Environment (PRIDE).
- Designed and implemented solutions to systems safety and reliability problems, provided expert analysis, testimony and fault diagnosis. Performed technical and financial analysis of transit, power, industrial, and communication systems for the public and private sectors in the United States, Europe, and the Far East.

Teknekron, Inc. - Berkeley, California
Position: Manager of Applied Technology

Responsibilities:

- System development of multi-million dollar computer controlled (indexed microfiche retrieval) record management systems for electric power companies and other commercial applications.
- Overall responsibility for all phases of technology development involving project management, financial analysis, feasibility studies and technical appraisal.

Major accomplishments:

- Development of computer systems for major oil company in Saudi Arabia involving record management of plant control systems and their financial impact on profits.
- Project management and development of real time high power magnetic rail flaw detector system for the Urban Mass Transportation Agency (UMTA).

Bay Area Rapid Transit District (BART) - Oakland, California
Position: Manager of Research and Development

Responsibilities:

- Develop and manage an engineering organization to increase the operational reliability, safety and performance of BART's operating transit system involving computerized fault tolerant electronic control, communication and management information systems.
- Resolve technical problems and implement cost-effective solutions to increase the safety, performance, and reliability of the existing system without affecting operations.

Major accomplishments:

- A new automatic train control system that significantly improved safety and reliability while achieving a 50% reduction in production, maintenance, and operating costs.
- Design and development of a real time computer system to display train position and system status for improved passenger service, safety, reliability and reduced operating costs.
- Analysis and design of a computerized vehicle brake rate instrumentation system to measure and display vehicle performance, safety, reliability and fault tolerance for testing and implementation of a "Close Headway" system to increase throughput.

Rockwell International - Canoga Park, California
Position: Senior Staff Scientist

Responsibilities:

- Technical responsibility for the design, development, testing, and implementation of the hardware and software required to control the space shuttle's propulsion system.

Major accomplishments:

- Design of a laser alignment system for electron beam welding of main engine propulsion system that saved several million dollars per year in operating costs.
- Feasibility study, system design, and production of a high technology laser weapon controller for the United States Government that resulted in a major contract award.
- Completion of design, testing, and implementation of all hardware and software systems that were required to control the space shuttle's main propulsion engines.

Johns Hopkins Applied Physics Laboratory - Silver Spring, Maryland.**Position: Engineer principal staff****Responsibilities:**

- Provide technical and financial feasibility analysis of high technology engineering programs for the United States Government in transportation, defense, commercial applications, and space exploration.

Major accomplishments:

- Design and analysis of fault tolerant computer control systems for transportation, defense, space exploration and commercial systems.
- Design of high reliability distributed computer systems for feasibility studies of high-speed rapid transit people mover systems.

SUMMARY OF EXPERIENCE:

Approximately twenty-five years of professional experience ranging from detailed analysis and design of complex systems to total project management. Overall financial and technical responsibility for compliance with technical specifications of communication, control, and instrumentation system designs. I have authored, and been granted, patents in engineering technology and written numerous technical papers, articles, and reports for publication in the United States and Europe.