

**Alan Starkie**  
**Senior Electronics Scientist**

**Professional Profile**

Mr. Alan Starkie is a Senior Electronics Scientist in Exponent's Electrical and Semiconductors practice. He addresses issues related to electronic circuits and systems including printed circuit board problems, component failures, and circuit analysis. He has broad experience mainly in analog electronic design and has spent many years in product development in both military and commercial areas. Mr. Starkie has worked on weapons fusing and safety and arming mechanisms, electronic watt-hour meters and sub metering, transducers, actuators, power supplies, battery chargers, induction, and DC motor control. At Exponent, he has designed specialized test sets covering the range from pico amps to kilo amps, micro ohms to gigohms. Mr. Starkie spent seven months in Afghanistan as Exponent's lead engineer in support of various Army projects. He is familiar with all aspects of product design and manufacturing and has founded and operated a small company producing products for the blind. He is a member of a Volunteer Fire Department, which gives him familiarity with structure and wild-land fire, vehicle accidents and extrications, medical emergencies and hazardous materials.

**Academic Credentials and Professional Honors**

B.Tech., Electronics Engineering and Physics, Loughborough University, England, 1970

## **Patents**

Patent 4,608,533: Automatic Compensation Circuit for Use with Analog Multiplier.

Patent 4,542,354: Delta-Sigma Modulator with Offset Compensation.

Patent 4,709,375: Digital Phase Selection System for Signal Multipliers.

Patent 4,573,037: Analog to Digital Conversion and Method.

Patent 6,329,785: Pulse Width Modulated Controlled Induction Motor.

## **Publications**

Starkie A, Robinton MA. End-use meter—Development and design of the electronic arm.

EPRI Research Project No. 1589-1, September 1983.