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## **Thomas E. Long**

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### Principal, Expert Technology Services Technical Consultant, Solution Engineering Group

Over 30 years of experience in failure analysis, product development, design and integrity studies. Also includes computer-aided design, three dimensional surface and solid modeling, digitizing objects for reverse engineering and computer animation/simulations. 10+ years of experience in the use of laser scanning and data interpretation software used in accident scene investigation. Expert in the field of firearm design, accidental discharge investigation, and component failure.

#### **PROFESSIONAL EXPERIENCE**

Nov. 2014 – Present	Expert Technology Services
Nov. 2014 – Present	Consultant for Solution Engineering Group
Feb. 2012 – Nov. 2014	ITC Experts, Inc. – Sugar Grove, IL
Jan 1982 – Jan. 2012	Packer Engineering, Inc. – Naperville, Illinois Manager Field Services

Co-Inventor for Patent # **US 8,046,946 B2, Shot-Counting Device for a Firearm**

#### **SKILLS** - Extensive laboratory and field experience include:

- Emergency response specializing in accident scene documentation and mapping
- Expert in the use of digital surveying equipment, laser scanning equipment, CMM measurement technology, photography, and videography
- Expert witness in accident scene documentation and measurements
- Experienced in evaluation of engineering data/preparation of courtroom graphic exhibits
- Metallurgical failure analysis & specimen preparation
- Skilled in construction of 3-D solid models for the use of engineering analysis & animations
- Involved in digital acquisition of forces and displacements
- Transducer preparation, calibration and strain gage application
- Firearm investigations and firearm safety device testing
- Actively involved in firearm design and evaluation
- Design of test fixtures for the use of engineering design analysis
- Preparation of automobile, motorcycle and off-road vehicle for crash testing
- Proficient in use of high-speed video, photo editing and enhancement
- Certified vehicle mechanic, welder, and machinist

#### **ACADEMIC and CERTIFICATIONS**

- Associate of Science College of DuPage, IL
- Associate of Digital Electronics College of DuPage, IL
- Certified by the State of California for handgun testing
- Certified Fork Truck operator
- Hazardous Environment – 8 hour
- Mining - 40 hour
- Power Plant and Scaffolding - 8 hour
- Private Investigative License (in process)

### **SPEAKING ENGAGEMENTS**

- Association of American Railroad Conference – Vancouver, BC
- National Defense Lawyers – San Diego, CA
- National Defense Lawyers – Freeport, Bahama
- SPAR Point Group Annual Conference – Houston, TX
- Indiana Defense Lawyers – Michigan City, IN
- Iowa Defense Counsel – Iowa City, IA
- Lawyer-Pilots Bar Association – Miami, FL
- Railroad Liability Seminar – Kansas City, MO
- Evidence Photographers International Counsel – San Diego, CA
- Exelon Nuclear – Warrenville, IL.
- ACE Insurance – Chicago, IL.
- Zurich Insurance – Schaumburg, IL.
- Farmers Insurance, Downers Grove, IL.
- American Family Insurance, Green Bay, WI.

### **COMPUTER PROGRAMS**

- AutoCad/Mechanical Desktop
- AutoCad 2D
- 3D Studio MAX
- Poly Works
- Point Cloud
- FARO Scene
- Point Tools
- Rhino3D
- Solid Works
- PC-Crash
- Lab Tech Notebook
- Microsoft Office
- Cyber Link Power Director
- Adobe Photo Shop
- Adobe Premier

- Adobe After Effects