

# Dennis L. O'Brien

Traffic Crash Reconstructionist, Photogrammetrist,  
Forensic 3D Computer Collision Simulator, Modeler & Animator

## CURRICULUM VITAE

Crashtteams NEW MEXICO Inc.  
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### Profile

I am a fully accredited Traffic Collision Reconstructionist with 22 years of experience investigating traffic collisions, including 18 years of full time law enforcement experience. Certifications held from the best schools available. State and Federal Court Qualified Expert in the field of traffic crash reconstruction and as a forensic 3D animator, with experience animating and modeling both motor vehicle collisions and crime scenes.

### Experience & Work History

#### ***President - Senior Traffic Crash Reconstructionist, Photogrammetrist & Forensic 3D Animator***

Crashtteams NEW MEXICO Inc., Santa Fe, NM 2008 - Present

Applying twenty-two years of knowledge and experience as a responder and investigator of motor vehicle collisions. First-hand experience locating, interpreting and processing physical evidence with state of the art equipment for use in accident reconstruction. Court accepted expert in the field of traffic crash reconstruction and forensic 3D animation. 3D animations & graphics prepared for presentation and available for use in all areas of litigation.

#### ***Traffic Crash Reconstructionist-Owner, IMPACT DYNAMICS; Santa Fe, NM - 1998 - 2008***

Traffic crash reconstruction services provided as described above.

#### ***Lieutenant, Santa Fe County Sheriff's Office; Santa Fe, NM - 1994 - 2009***

Division commander of Traffic Homicide Investigation Team, Patrol and K-9 Divisions. I served as a supervisory patrol officer and first responder to all types of motor vehicle collisions, airplane crashes, industrial accidents and crime scenes. I also provided mutual aid services to State and Federal Law Enforcement Agencies with specialized investigation and processing techniques. State of NM Law Enforcement Academy Police Officer Certification and training in motor vehicle collision investigations continued by advanced training through collision reconstruction and applied physics for Collision Reconstructionist's.

#### ***Police Officer, San Juan Tribal Police Department; San Juan Pueblo, NM 1991 - 1994***

Police Officer performing duties on the San Juan Pueblo Indian Reservation. Federal Police Officer Certification obtained through the Federal Law Enforcement Training Center (FLETC), which

Updated  
11/2013

## CURRICULUM VITAE - CONTINUED

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included training in motor vehicle crash investigations. I responded to & investigated all types of cases, including crime and motor vehicle collisions.

### **Selected Advanced Training, Certifications & Education**

Northwestern University Traffic Institute, NM Law Enforcement Academy;  
Santa Fe, NM - 1995; ***At-Scene Accident Investigations Course***

University of North Florida - Institute of Police Technology & Management  
Jacksonville, Florida - 1997; ***Advanced Traffic Accident Investigation***

University of North Florida - *Institute of Police Technology & Management*  
Jacksonville, Florida - 1997; ***Traffic Accident Reconstruction***

University of North Florida - Institute of Police Technology & Management  
Santa Fe, New Mexico - 1997; ***Pedestrian & Bicycle Accident Investigation***

University of North Florida - Institute of Police Technology & Management<sup>2</sup>  
Jacksonville, Florida - 1998; ***Special Problems in Traffic Accident Reconstruction***

University of North Florida - Institute of Police Technology & Management  
Peabody, Massachusetts - 2001; ***Applied Physics for Traffic Crash Investigators***

VS Visual Statement Incorporated; ***Advanced Forensic Diagramming Using Total Station*** –  
2003 -Kamloops, British Columbia, Canada

National Training Center; North American Standard Level I  
Albuquerque, NM - 2004; ***Commercial Vehicle Safety Alliance Inspector Certification***

Tripod Data Systems – Nikon AIMS Training Course  
Santa Fe, New Mexico: ***Laser Total Station Measurement & Mapping Certification***

Collision Safety Institute - CSI Crash Data Retrieval Specialist  
El Paso, Texas - 2009; ***Bosch/Vetronix Crash Data Retrieval (CDR) Technician Course***

Collision Safety Institute - CSI Crash Data Retrieval Specialist  
El Paso, Texas - 2009; ***Bosch/Vetronix Crash Data Retrieval (CDR) Data Analyst Course***

EOS Systems PhotoModeler - Photogrammetry Software Tool  
Chicago, Illinois - 2009; ***PhotoModeler Collision Investigation Certification Course***

## CURRICULUM VITAE - CONTINUED

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Accident Analysis & Reconstruction, Inc. & Crash Data Specialists  
Las Vegas, Nevada - 2011; ***Advanced Collision Reconstruction with CDR Applications & Crash Data Retrieval Update***

Accident Analysis & Reconstruction, Inc. & Crash Data Specialists  
Las Vegas, Nevada - 2012; ***Crush Energy Analysis in Collision Reconstruction***

ARAS360 Technologies Inc.  
Kamloops, BC Canada – Virtual Training Session June 18-20, 2012;  
***ARAS 360 HD: Train the Trainers***

MEA Forensic Engineers & Scientists - (MacInnis Engineering Associates Ltd.)  
Richmond, BC Canada (On-line Workshop) 2012;  
***PC-Crash Essentials Training Course – 3D Collision Simulation Tool***

MEA Forensic Engineers & Scientists - (MacInnis Engineering Associates Ltd.)  
Richmond, BC Canada (On-line Workshop) 2012;  
***PC-Crash Expert Skills Training Course – 3D Collision Simulation Tool***

Institute of Police Technology & Management (IPTM)  
Santa Fe, New Mexico (On-line Course) 2013;  
***Online Bosch CDR Technician Course by IPTM***

Northwestern University Center for Public Safety (NUCPS)  
Albany, New York – NYSP Academy - August, 2013  
***Preserving and Analyzing Information from Heavy Vehicle Event Data Recorders (EDR)***

Accident Analysis & Reconstruction, Inc. & Crash Data Specialists  
Las Vegas, Nevada – October 2013; ***Pedestrian Collision Reconstruction***

### **Law Enforcement Certifications**

**Federal Police Officer Certification** - Federal Law Enforcement Training Center (FLETC) – 1993  
Artesia, New Mexico – Training included Basic Accident Investigation Training

**New Mexico Law Enforcement Officer Certification** - NM Law Enforcement Academy – 1995  
Santa Fe, New Mexico – Training included Basic Accident Investigation Training  
~ Other Training / Certifications obtained and available upon request ~

### **Professional Associations**

**ACTAR** - The Accreditation Commission for Traffic Accident Reconstruction  
Member #2218; *Full Accreditation as a Traffic Accident Reconstructionist*

**NAPARS** - National Association of Professional Accident Reconstructionist Specialists, Inc.  
Member #34100

**Licensed State of New Mexico Private Investigator**  
Member #2814

### **Skills & Experience**

I have first-hand experience of in-depth identification, processing and collection of evidence from 21 years of “on-the-scene” crash and crime scene forensic analysis. I have processed and measured major crash and crime scenes in detail, utilizing manual, photogrammetry and laser mapping techniques. I prepare conventional scale scene maps & diagrams along with diagrams over aerial photos.

I am an experienced Forensic 3D Animator, Photogrammetrist and Modeler. I use state of the art software to recreate the incident utilizing forensic scene processing data. The animations, simulations and graphics are rendered to video and other media for presentation in litigation. Crashteam NEW MEXICO Inc. prepares quality animations for any scenario.

### **Professional Forensic Measurement & Mapping Trainer**

**ARAS 360 Technologies – Trainer, 3D Software Product Resource, Consultant and Share Holder**  
ARAS 360 & ARAS 360 HD are state of the art 3D Traffic Crash Reconstruction & 3D Animation software programs used by investigators and law enforcement officers worldwide

🌐 Serving since March 2010 & Kamloops, BC - Canada 2010

**VS Visual Statement Vista FX3 - Collision Reconstruction Measurement, Diagramming & Animation Software Trainer** - Crash Reconstruction Software Trainer for VS Visual Statement FX3 - Trainer in the use of laser mapping total station systems utilizing on-board data collectors and VS m-FX data collection software. Students were instructed on the use and application of measurements obtained from scenes to create scale diagrams and 3D animations

🌐 Served as a trainer from 2004 -2009

**Expert Court Venues Served & Testimony List**

United States Federal Court - District of New Mexico, Albuquerque, NM  
United States Special Military Court Martial - 377th Air Base Wing, Kirtland Air Force Base, NM  
First Judicial District Court, Santa Fe, NM – Santa Fe & Rio Arriba Counties (Criminal Court, Civil Court & Family Court)  
Second Judicial District Court, Albuquerque, NM – Bernalillo County  
Eighth Judicial District Court, Taos, NM – Taos County  
Thirteenth Judicial District Court, Los Lunas, NM - Valencia County  
Santa Fe County Magistrate Court, NM – Santa Fe County  
Espanola Municipal Court, Espanola, NM – Rio Arriba County  
Pueblo County District Court, - State of Colorado – (Advisory Expert)

**3D Animation Debuts & Venues**

**National Television Network Broadcast**

CBS Television Show “Inside Edition”  
Episode titled “*Falling Ice Nearly Kills Driver*” - Air Date: 1/11/2010  
Animation prepared and aired by producers to show an ice projectile fall and penetrate a vehicle windshield, causing major injury to the driver.

**Other 3D Animation Venues**

Alamogordo, NM - Fatal Motor Vehicle Collision Animation - 2005  
Albuquerque, NM - Serious Injury Head-on Collision - 2007  
Alamogordo, NM - Homicide Crime Scene Animation - 2009  
Albuquerque, NM – Vehicle v. Motorcycle Rear-End Collision - 2009  
Las Vegas, NV - Vehicle v. Pedestrian Collision Animation - 2010  
Santa Fe, NM - Vehicle v. Bicycle Collision Animation - 2010  
Santa Fe, NM - Bus v. Pedestrian Collision Animation – 2010  
Shoreline, WA – Pedestrian Motor Vehicle Collision – 2010  
Pinellas County, FL – Toll Booth Barricade Rail Incident – 2011  
Albuquerque, NM – Police Pursuit Animation – 2011  
Taos, NM – Vehicle v. Motorcycle Sight Obstruction Collision – 2012  
Santa Fe, NM – Vehicle v. Pedestrian Collision 2012  
Albuquerque, NM – Pavement Drop-off Leads to Collision – 2012  
Evansville, IN – Fire Rescue Truck vs. Chevrolet Pickup Truck Collision – 2012  
Las Vegas, NV – Officer Involved Shooting Animation – 2013  
Glasgow, KY – Vehicle v. Farm Tractor Collision Animation – 2013  
Albuquerque, NM – Vehicle v. Backhoe Tractor Collision Animation – 2013  
Greenville, PA – Walker v. Knoll Furniture – Industrial Injury Animation – 2013  
Royersford, PA – Construction Site – Product Liability Injury Animation - 2013

### **Software Tools Used**

- PC-Crash 3D – Validated Vehicle, Motorcycle, Bicycle & Pedestrian Collision Simulation Software
- ARAS360 HD – Traffic Collision Computer Aided Drawing, Reconstruction & Animation Software
- PhotoModeler Scanner 2013 – Photogrammetry & Dense Surface Modeling Software
- CrashZone 9 – Computer Aided Drawing & Reconstruction Software
- MapScenes Point Cloud 2010 – Computer Aided Drawing & Reconstruction Software
- VS Visual Statement FX3 – Computer Aided Drawing & Reconstruction Software
- Lightwave 3D - Newtek Motion Picture Animation & Compositing Software
  - Modeler – 3D Modeling Software
    - LWCAD Modeling Tools
  - Layout – 3D Animation & Special Effects Software
- Luxology MODO – 3D Modeling & Animation Software
- Poser Pro 2014 – Character Creation & 3D Animation Software
- Apple Shake 4 – Video Compositing Software
- Final Cut Pro X – Video Editing & Rendering Software

### **Referrals**

References are available upon request