

Kenneth S. Baker

*Mr. Baker has been involved with law enforcement and accident reconstruction for over thirty years. As the Director of the Accident Investigation Division at the Northwestern University Traffic Institute, he developed and taught accident reconstruction and computer simulation courses for over sixteen years. He is the principal author of **Traffic Collision Investigation (2001)**, the premier reference in the field, published by Northwestern University Center for Public Safety. Mr. Baker has extensive experience testifying in civil and criminal matters.*

James P. Sneddon

*Mr. Sneddon has been involved in accident reconstruction, law enforcement, civil engineering and education for over fifteen years. As the Associate Director of the Accident Investigation Division at the Northwestern University Traffic Institute, he developed and taught courses in traffic accident reconstruction and computer simulation. He has written several technical papers, and is a contributing author of **Traffic Collision Investigation**. Mr. Sneddon has extensive experience testifying in civil and criminal matters.*

Simulation vs. Animation

Simulation is the process of creating a computer model of the humans, vehicles and environment involved in a traffic accident, and calculating the forces acting on each at discrete time intervals. Using Newtonian Physics, the positions and velocities of vehicles and humans are updated and displayed graphically.

Computer animation software only interpolates vehicle positions based upon user entered coordinates and velocities. Whereas animation provides a visual depiction of the event that is similar to the graphical representation of a simulation, it is not an analytical tool.

Computer simulation is a valuable tool in analyzing complicated events because the motions of humans and vehicles in the simulation are controlled by a physics program. The parameters of driver actions, vehicle characteristics, and roadway conditions can be evaluated easily.

Baker Sneddon Consulting uses HVE® Simulation software from Engineering Dynamics Corporation®.



BAKER SNEDDON CONSULTING

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TRAFFIC ACCIDENT RECONSTRUCTION & SIMULATION



Accident Reconstruction
Expert Witness Testimony
Video Exhibits
Accident Scene Mapping
Vehicle Inspection
Vehicle Handling Simulation
Rollover Analysis

**BAKER SNEDDON
CONSULTING**
CHICAGO

Staffed by former faculty at:
Northwestern University Traffic Institute

BAKER SNEDDON CONSULTING

Baker Sneddon Consulting provides consulting and expert witness services in the field of traffic accident reconstruction, with special emphasis on computer simulation and visualization.

Traffic accident reconstruction is the process of determining *how* an accident occurred. From the available data, we are able to identify the contributing factors and convey this at trial or deposition.

Our internationally recognized staff has over forty-five years of combined experience in consulting, teaching, reconstructing and investigating traffic accidents.

Our areas of expertise include:

- HVE® simulations of vehicle response to human, vehicle and environmental factors
- VHS, DVD or computer videos of simulation results
- Crash Data Retrieval [black box analysis]
- Passenger and commercial vehicle accidents
- Vehicle vs. pedestrian or bicycle accidents
- Motorcycle accidents
- Driver/passenger kinetics
- Accident site documentation using Total Station technology
- Vehicle inspection and damage analysis
- Vehicle acceleration testing
- Vehicle handling simulations and rollover analysis
- Automobile lamp examinations
- Roadway design analysis
- Photography and digital video documentation
- Photogrammetry

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Still image from computer simulation of collision with environment constructed from Total Station data collection.

24 Hour Availability

The extent to which an accident can be reconstructed is dependent upon evidence collected at the scene of a traffic accident. All too often, crucial evidence is not properly documented, and will disappear in the hours or days following an accident. Our staff will respond to the accident scene, and preserve this evidence using the Total Station technology.

Additionally, critical information from the accident vehicles may be lost if not promptly inspected and documented. The condition of the vehicle can be altered by exposure, subsequent damage, repairs or continued use. A rapid response will ensure that this evidence is preserved.



Pedestrian impact simulated with human impact software.

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