TAYLOR D. SPIEGELBERG, B.F.A.

EDUCATION:

Bachelor of Fine Arts, University of Colorado Denver

EXPERIENCE:

Forensic Visualization Expert, Knott Laboratory, LLC, Centennial, CO, 2015 to 2022
Forensic Visualization Manager, Knott Laboratory, LLC, Centennial, CO, 2022 to 2025
Forensic Visualization Director, Knott Laboratory, LLC, Centennial, CO, 2025 to Current

FORENSIC ANIMATION & ACCIDENT RECONSTRUCTION:

Mr. Spiegelberg joined Knott Laboratory in September of 2015 as part of the Forensic Visualization team. Mr. Spiegelberg specializes in creating scientifically based and accurate visualizations of a multitude of cases including vehicle accident reconstruction, workplace accidents, shooting cases, and many others. Mr. Spiegelberg directs his fellow visualization experts and works alongside engineers to develop accident reconstructions using photogrammetry, Matchmoving, point clouds, 3D digital modeling, rendering, compositing, object, vehicle, people tracking, and more. He keeps up to date with new technologies and software to keep Knott Laboratory on the cutting edge when it comes to visualizing these cases.

Mr. Spiegelberg's experience and expertise include the areas of:

- Modeling, texturing, animation, lighting, rendering in 3d computer generation software
- Photogrammetry, videogrammetry, matchmoving (video matching)
- Photo-modeling from photographs and videos
- Human motion application from motion capture
- High-definition laser scanning and processing
- Drone/UAV 3D Mapping – FAA Part 107 – Commercial Pilot sUAS Certification

Mr. Spiegelberg has extensive knowledge in the following software products:

- Autodesk 3D Studio Max
- Autodesk Maya
- Autodesk ReCap Pro
- Blender
- Adobe Photoshop
- Adobe After Effects
- Adobe Premiere
- BorisFX Syntheyes
- PhotoModeler Premium
- Agisoft Metashape Professional
- Google Earth Pro
- Cyclone Register 360
- CloudCompare
- Unreal Engine
- Rokoko Studio
- MediaInfo
- Microsoft Office Suite

CERTIFICATIONS:

FAA Part 107 Remote Pilot Certification

HIGH PROFILE CASES:

Tony Stewart and Kevin Ward Fatal Racing Accident – Canandaigua Motorsports Park, Ontario County, New York – 2014
JFK Assassination – Dealey Plaza, Dallas, Texas – 1963

PRESENTATIONS / PUBLICATIONS:

NAFE Presentation 2023 – Application of Matchmoving for Forensic Video Analysis of a Pedestrian and Train Collision and Verification with Recorded Event Data

NAFE - Forensic Engineering Application of the Matchmoving Process

ACCIDENT CASES VISUALIZATIONS UTILIZED:

- Workplace Accidents
  - Crane Accidents, Crushes, and Falls
  - Slip Events
  - Trip Events
  - Fall Events
  - Woodchipper Biped Interactions
  - Forklift Impacts, Crushes, and Visibility
- Shooting Incidents
  - Officer Involved Shooting cases with Body Warn Cameras, Patrol Vehicle Cameras, Security Footage, Cell Phone Footage, etc.
  - Reaction timing
  - Timeline creations
  - GPS Data Mapping
  - Video Synchronization
- Vehicle Accident Reconstruction
  - Pedestrian Impacts and Dynamics
  - Commercial Vehicle Accidents
  - Consumer Vehicle Accidents
  - Scientific Physical Based Simulations
  - Dash Camera and Security Matching
  - Vehicle Rest and Evidence Diagramming
  - Speed Calculations
- And many more…

VISUALIZATION PROCESSES:

- Drone Capture and Conversion to Point Clouds, Meshes, and Aerials
- Creation of Virtual Light Rigs and Night-time Visualization Studies
- Scene and Site Reconstruction from Photographs after long periods of time between incidents and inspections
- Motion Capture for Human Body Motion and Video Tracking
- Virtual Sun and Shadow Analysis
- Evidence, Vehicle, Pedestrian Tracking, Plotting, and Diagramming
- And many more…

EXPERT TESTIMONY:

As a result of Mr. Spiegelberg's investigations and analyses, he has provided expert witness testimony in state courts in matters related to forensic visualizations. Mr. Spiegelberg's work has been for both plaintiffs and defendants.