BRAYDON BOURNE, B. ENG, ACTAR
PROFESSIONAL BIOGRAPHICAL OUTLINE

BACKGROUND

Braydon Bourne is an accident reconstructionist specializing in motor vehicle, bicycle, motorcycle, and heavy truck accident reconstruction, in addition to pedestrian incidents, product failure, and other general safety related issues. He is certified to access and interpret Heavy Vehicle Event Data Recorders and passenger vehicles as a BOSCH Crash Data Retrieval (CDR) Technician/Analyst. His experience also includes human factors related to motor vehicle accidents, including driver response and nighttime visibility analyses. He is accredited by the Accreditation Commission for Traffic Accident Reconstruction (ACTAR #4085). He is currently an active board member and the treasurer of the Washington Association of Technical Accident Investigators.

Mr. Bourne regularly uses laser scanning and photogrammetry; and has taught reconstruction techniques. Common skills used in practice are forensic video analysis, time vs distance, perception response time, animation, simulation, statistical analysis, downloading and analysing event data recorders, as well as sightline and visibility analyses.

Mr. Bourne earned a Bachelor of Engineering (Mechanical) from Carleton University. He was an integrator on the Carleton University Simulator Project; responsible for coordinating schedules, presentations, and organizing major project tasks for the entire flight simulator design team. Mr. Bourne remains up-to-date with the advancements in automotive technology and data recording capabilities of both passenger and commercial vehicles, and continually pursues education relevant to the field of accident reconstruction. Having formerly competed at a professional level, he remains an avid cyclist with racing, commuting, and touring experience, and has worked as a mechanic for Cycling Canada.

AREAS OF SPECIALTY

- Accident Reconstruction (Heavy Trucks, Passenger Vehicles, Motorcycles, Pedestrians, Scooters, Bicycles)
- Event Data Recorder (Black Box) Imaging & Analysis (Passenger Vehicles and Heavy Trucks)
- 3D Laser Scanning and Photogrammetry
- Bicycle Products and Components
- Perception Response Time
- Nighttime Visibility
- Video Analysis
- 3D Diagrams and Simulations
- Inspections and Evidence Preservation

EDUCATION

- Bachelor of Engineering (Mechanical), Carleton University, 2013

PROFESSIONAL AFFILIATIONS

Engineers & Geoscientists of British Columbia (EGBC)
Engineer-in-Training "EIT" - Member ID #195291

The Accreditation Commission for Traffic Accident Reconstruction (ACTAR)
Accredited Accident Reconstructionist - ACTAR #4085

Washington Association of Technical Accident Investigators (WATAI)
Treasurer

National Association of Professional Accident Reconstruction Specialists (NAPARS)
Member

PROFESSIONAL EXPERIENCE

November 2023 – Present | ARCCA, LLC | Accident Reconstructionist

- Investigates and reconstructs passenger and commercial motor vehicle collisions
- Images and interprets Event Data Recorders in passenger & commercial vehicles, such as airbag and engine control modules, and GPS devices
- Evaluates human factors such as sightlines, perception response times, and nighttime visibility
- Performs vehicle, scene, and evidence inspections
- Analyzes video evidence to calculate times, distances, speeds, and sizes of objects
- Documents, analyzes, and preserves evidence utilizing 3D laser scanning hardware and software
- Assesses occupant motion, vehicle dynamics, and impact severity in response to applied crash forces
- Evaluates restraint system usage including air bags and seatbelts
- Creates 3D animations, visuals, and scene diagrams from accident reconstruction analyses

December 2015 – October 2023 | Crashteams PNW/Luker Forensic Engineering | Accident Reconstructionist

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- Performed vehicle, scene, and evidence inspections
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September 2013 – January 2015 | Bronson Consulting Group | Junior Consultant

- Completed Quality Assurance Inspections for the Ontario Power Authority auditing the saveONenergy initiatives and compliance with their implementation by 76 Local Power Distribution Companies.
- Data Analysis for Natural Resources Canada (NRCan) – Office of Energy Efficiency. Analyzed and sorted data collected from EnergyStar participants and reported findings.

CONTINUING PROFESSIONAL EDUCATION

WATAI Fall Conference
(2025)
3-day conference: Key Equations, Friction & Drag Factors, Motorcycle Dynamics, Critical Speed Analyses, Tire Mark Evidence, EDR Data and PDOF by Mechanical Forensic Engineering Services

WATAI Spring Conference (2025)
2-day conference: Using Momentum Tools, and Axon Investigate

Speed from Video Webinar Series – Module Two (2025)
2-hour course: In-depth training on performing Passing Points and Line of Sight Methodologies by Lightpoint Scientific

Recon-3D 2025 User Group Meeting (2025)
5-hour seminar with presentations from professional users of Recon-3D

Speed from Video Webinar Series – Module One (2024)
2-hour course: An overview of: Video Frame Timing, Reverse Projection, Surface Drawing, Line of Sight, Passing Points, and Pixel Tracking by Lightpoint Scientific

WATAI Fall Conference
(2024)
3-day conference: AEB testing, Autonomous Vehicles, ADAS Systems, and Emerging Technologies Present in Late-Model Vehicles by A.B. Moore Forensic Engineering

WATAI Spring Conference (2024)
2-day conference: A Comprehensive Review of Key Topics in Motorcycle Collision Reconstruction by Compass Kinetics

WATAI Fall Conference – online
(2023)
2-day class: Post Testing Analysis Vehicle vs Pedestrian, Calculating Speed from Video

Recon-3D Training Course (2023)
4-hour training course on design, features, and use of Recon-3D

WATAI Spring Conference (2023)
3-day conference: key recon topics, equations, case-studies, COLM

World Reconstruction Exposition – Orlando, FL
(2023)
Attended live crash testing and over 10 lectures led by industry experts

WATAI Fall Conference – Bellevue, WA
(2022)
2-day class: Crash Reconstruction at Traffic Signal Intersections and Current Topics in Traffic Engineering for Crash Reconstruction by Daren Marceau

WATAI Spring Conference – online (2022)
2-day virtual: EDR Applications and Using Excel in Traffic Collision Reconstruction

Video Evidence Training Symposium (2022)
12-hour video investigation training by iNPUT-ACE

International Forensic Photography Symposium
(2022)
3-day virtual: photogrammetry, cross-polarization, UV & IR cameras

Human Factors in Engineering IE/PSY 57700 (2021)
Full semester 3 credit grad school course – Purdue University

WATAI Fall Conference – online
(2021)
3-day virtual: Human Factors & Visibility Issues in Traffic Recon

CloudCompare Course – online
(2021)
10-hour course by ai2-3D Forensic

WATAI Spring Conference – online (2021)
3-day virtual: GoPro accelerometer data, 3D metrology, EDR update

Heavy Vehicle Event Data Recorder Analyst Training – Meridian, ID
(2020)
40-hour course by Forensic Training Group

Video Evidence Training Symposium – online
(2020)
15-hour course by iNPUT-ACE

Technical Reconstruction of Heavy Truck Crashes – Denver, CO
(2019)
3-day conference by SOAR

vCRASH Interface & Simulation Basics - online
(2019)
self-paced online training courses by Virtual Crash

Forensic Video Analysis Training – Surrey, BC
(2019)
16-hour course by iNPUT-ACE

CDR Data Analyst Course – Vancouver, WA (2019)
40-hour course by Collision Safety Institute

Bosch CDR Tool Technician Training – online
(2019)
24-hour course by IPTM

WATAI Fall Conference – Seattle & Tukwila, WA
(2018)
Attended live crash testing and follow-up analysis over 3 days

WATAI Spring Conference – Burien, WA
(2018)
Video Analysis using iNPUT-ACE and other methods

WATAI Spring Conference – Burien, WA
(2016)
Estimating Maximum Acceleration of Cars and Motorcycles

Advanced Motorcycle Crash Analysis - Tukwila, WA (2016)
40-hour course by Mechanical Forensic Engineering Services

World Reconstruction Exposition - Orlando, FL
(2016)
Attended live crash testing and over 10 lectures led by industry experts

FARO Authorized Training – Kirkland, WA (2016)
Certified training program for FARO Laser Scanner

TECHNICAL SEMINAR INSTRUCTION

Conservation of Linear Momentum for Accident Reconstruction
(2021)
Designed and co-taught 3-day seminar for the Royal Canadian Mounted Police (RCMP) Integrated Collision Analyst and Reconstruction Service (ICARS)

Using Point Cloud Data for Accident Reconstruction (2025)
Presented a half day seminar on sources of LiDAR data and how to incorporate it into reconstruction analysis at the WATAI Spring Conference

Combining Recon-3D with Terrestrial Laser Scanners (2025)
Presented a brief summary of methods and tools to combine laser scan data from multiple sources at the Recon-3D User Group Meeting