

**Applications Engineering Group is introducing Brian Moody**, a Principal Mechanical Engineer with AEGI. He graduated from the University of Florida in 2003 with a degree in mechanical engineering and was involved with UF's Formula SAE race car design project for three years, including taking the role of Team Captain in 2002. He specializes in Vehicular accident reconstruction, including:



- Motorcycles
- Automobiles
- Pick-ups
- Heavy trucks
- Pedestrians
- Bicycles
- ATVs/UTVs and other off road vehicles



Brian is an amateur race car driver and has participated in endurance races at world class race tracks such as Daytona, Sebring, and Road Atlanta. He frequently is involved with testing performed by AEGI on various vehicle types. His interest in, and design experience with suspension systems, braking systems and other vehicle components make him suited to evaluate potential component failures. He is certified as a Bosch Crash Data Retrieval Technician and Analyst for down loading Event Data Recorders. He is a registered professional engineer in Florida.

## Event Data Recorders (Automotive Black Boxes)

By C. Brian Moody P.E.

With a new federal code in place, more vehicle manufacturers than ever before are making data available from Event Data Recorders or "Black Boxes" as they're often referred.

The number of manufacturers making post-crash data from airbag systems available has expanded from just the domestic "Big 3" in 2010 to currently over a dozen spanning the globe. The new federal rule is that *if* data is stored by the system, it has to be made available commercially, and has to meet a specific criteria as far as what is recorded, and how. Currently over 40% of the vehicles on the road have readable Event Data Recorders, and the federal government has made no effort to hide that they are pushing for full compliance in the next few years. Not only are we able to retrieve data from more vehicles than ever before, but more data from each vehicle is being made available.

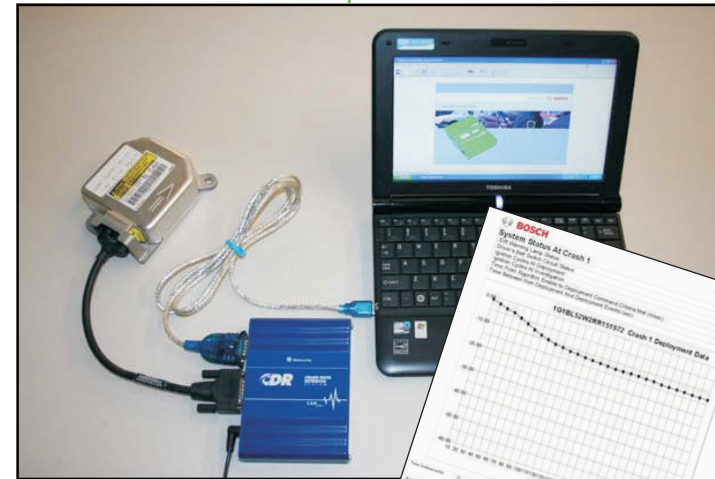
At AEGI, we've made a promise to our clients to stay at the forefront of EDR technology by keeping up to date with the tools and software necessary to access and analyze the data that is available.

Some of the data being mandated by the new federal code:

- Delta V (change in velocity)
- Vehicle speed at impact
- Throttle %
- Brake on/off
- Seatbelt usage

Many vehicles on the road have much more data available than is mandated. With every generation of vehicle that is released, the bar is set higher for safety systems, and with it comes new technology that can be utilized after an accident to answer questions about the collision itself.

In addition to accidents involving airbag deployments, some less severe accidents that do not cause the airbags to deploy, such as low speed rear end accidents and parking lot fender benders, still can cause the vehicle's safety systems to save data which may be useful. In many cases this data is stored temporarily and may be later overwritten. In such cases, it's extremely important that we inspect the vehicle as soon as possible, especially if the vehicle is still being used. Many disputed claims resulting from minor automobile collisions with no airbag deployment may be more easily quantified with the aid of this recovered data.



Looking to the future, these systems can be expected to provide more and more information and cover ever expanding percentages of the vehicles on the road.

We, at AEGI are constantly updating our knowledge base and have informational presentations available on the subject of Event Data Recorders to inform you of their history, coverage, capabilities, and future without getting bogged down in the technical details of how the systems work. We look forward to assisting you with your needs, from a question or two during a quick phone call, to in depth expert services to aid your preparation for a lawsuit and testimony during trial.

### Presentations available:

- 1 hour with CEUs
- 2 hour with CEUs
- 1 hour without CEUs
- 2 hour without CEUs

Please contact us to be added to our mailing list and with any feedback. Download any of our newsletters from our library at:

[www.aegiforensics.com](http://www.aegiforensics.com)

Or for this edition: [tinyurl.com/AEGI-Spring13](http://tinyurl.com/AEGI-Spring13)

**Call for more information:**  
904-249-1718 • 800-777-7668

## **AEGI Capabilities:**

Applications Engineering Group, Inc. is an engineering consulting firm that specializes in failure analysis and accident reconstruction. AEGI is an association of engineers, scientists, and biomechanists who are recognized experts in their fields. AEGI personnel have experience in: motor accident reconstruction; vehicle and electrical fire cause analysis; mechanical component and system failures; commercial/ industrial accidents; electro-mechanical issues; control systems issues; construction issues; metallurgical failures; and accident related medical injury assessments. AEGI also has the capability to produce high-quality graphics, photography, video, and computer animations.



2500 Sq Ft Lab and Inspection Area



Scanning Electron Microscope

- Accident Reconstruction
- Accident Analysis and Failure Analysis
- Full Scale Crash Testing
- Animations/Simulations
- Visibility Studies
- Night Photography
- Photogrammetry
- 3D Photo Modeling
- Reenactments
- Biomechanics
- Fire Component Analysis
- Structural failures and damage
- Wind & Flood Damage
- Mold
- Wood & Tile Buckling
- Testing/Laboratory Analyses
- Fourier Transform Infra-Red Spectroscopy (FTIR)
- Stereo Photo Microscopy
- Scanning Electron Microscopy
- Sputter Coating
- Portable Hardness Testing
- Portable Radiography
- Call or visit our website for a full list of our capabilities.

**AEGI**  
*Applications Engineering Group, Inc.*  
1200 Mayport Road  
Atlantic Beach, Florida 32233

# **AEGI**

*Applications Engineering Group, Inc.*

Proudly introduces



C. Brian Moody P.E.

*www.aegiforensics.com*

Unbiased Scientific  
Analyses and Testing

Solving Technical Problems  
for Litigation and Industry

Spring 2013 Newsletter