

From the Office of the Sheriff:

Over the past two years we have enhanced our ability to identify precise factors that cause traffic crashes. Last August we reported a 17-yr old was “driving 106 mph five seconds before her crash.” In 2006 we stated “the motorist that was killed was driving 140 mph w/o a seat belt five seconds before he overturned several times.” In another crash we assisted another county in their fatal investigation in which the preliminary information showed the driver failed to yield from a stop sign. The Dodge County Crash Investigation Team was able to download pertinent information from the offending drivers vehicle that showed she was traveling at 37 mph and braking five seconds before crash and accelerating at 68% two seconds before the crash indicating she intentionally ran the stop sign (Chicago stop) rather than failed to yield. This is critical information that can be used in the prosecution.

We have two members of our Crash Investigation Team (CIT) who are trained technicians/analysts in the Crash Data Retrieval (CDR) system. CDR is a tool that provides access to data that may be stored in late model passenger cars, light trucks or SUV's. Some of the data is found in the Airbag Control Module (ACM), which is an electronic control module found in vehicles that controls the function of various supplemental and primary restraint systems, such as airbags and seat belt pretensioners. The ACM is designed to run diagnostics and decide whether or not to deploy restraint system components. The information comes from crash sensing systems, seat belt sensors and occupant detection systems, and it may also retain crash data as events. Events can be the result of impacts, rollovers, or even hard braking.

Three types of events are: deployment event – where the module has commanded deployment of a restraint system, deployment level event – where the module attempts to command a deployment of the restraint system which has already been deployed, non deployment – where the module “wakes up” and senses an event which does not require deployment of restraint systems. Information that can be gathered from the ACM is; 5 seconds of pre-event vehicle speed, 5 seconds of pre-event engine rpm, 5 seconds of pre-event throttle percent, and 8 seconds of pre-event brake switch status. All of these are measured at one second intervals, and several modules now record in excess of 30 seconds of pre-event data.

NHTSA code of federal regulations requires all vehicle manufactures to ensure Crash Investigators have access to retrieve data by 2013. The minimum information required to be obtained is: speed, braking and throttle (all 5 seconds before the event) seatbelt status, warning lamp status, change in velocity at time of event and ignition cycle at time of event. Several vehicle manufacturers already go beyond what NHTSA is requiring, showing things such as steering wheel angle, principle direction of force, occupant detection, seat positioning, presence of diagnostic trouble code and rollover sensor status.

So when you read that the driver crashed his car while driving 118.2 mph and the accelerator pedal was depressed 100% you will understand how we came to that conclusion. The Sheriffs Department has used this technology to assist in the investigation of numerous crashes over the last two years. The equipment is pricey, but we have relied on donations from local businesses to include the Dodge County Independent Insurance Agents to make the necessary purchases. The Dodge County CIT is on the leading edge and we intend to stay there. You deserve it. Thanks for listening  
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