

CRASH TALK

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Quality Photographs

We often rely on photographs supplied by our client to analyze a collision. Many times, the file has entered the litigation stage, so the vehicles are no longer available to examine and the scene evidence is long gone. Therefore, photographs taken by the driver, adjuster, appraiser or Police may be the only evidence available.

In today's digital photograph age, most smartphones are capable of taking excellent quality photographs. The original photographs from the smartphone or camera provide additional information embedded in the JPG image as well (EXIF data), such as shutter speed, aperture, focal length, camera type and date the photograph was taken. These JPG photographs may also include geotag information that provides the GPS location where the photograph was taken. This can be very useful when the precise collision location is not known.

The most important feature about JPG photographs is the original quality. We can zoom into the JPG image without losing details, which allows us to see features not obvious in lesser quality images. In addition, darker images can be lightened to see details not visible in the unadjusted photograph. This is very important for night-time or heavily-shadowed photographs where details in the background (e.g. roadway evidence) can be lightened to expose additional evidence.

Even though camera quality has greatly increased, we have noticed that often the images provided to our office have not followed that trend. Even though a high image quality is available to the photographer, he/she reduces the capable image quality in order to store more images on a memory card. The problem is that the lower quality images are then significantly more pixelated and there is insufficient detail in the photograph to adequately provide the information needed for an engineering analysis.


Another trend we have seen is for adjusters and appraisers to print the photographs to a PDF version.

by Donald K. Pohl, P. Eng.

This is fine, as long as the original JPG images are retained when an analysis is needed. Once the photographs have been printed (converted) to a PDF, the digital quality is lost. The image can no longer be lightened or enhanced to see any greater detail. Furthermore, the photographer often deletes the original JPG images and only retains the PDF. The JPG images contain so much useful information that we never recommend deleting those images. Storage media is relatively inexpensive and reliable, so that images from a memory card can easily be stored and retained.

An example showing the difference in image quality is shown below. The original JPG image is on the left, with a black and white photocopy on the right. The cracks in the windshield may be of interest to show if an occupant struck the windshield. This is not clear from the photograph on the right, but the original photograph confirms there are only cracks on the passenger's side.



Lastly, not to single out lawyers, but they tend to like paper. This often results in a printout of photographs, which are then scanned or faxed. We recommend that if an image is printed to a PDF, or on a piece of paper, that the original digital JPG image be retained and provided to our office for analysis. 

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Vehicle Infotainment Forensics – Another Black Box

D. Patrick Ryan, P. Eng.


The presence of electronic data in vehicle components has been common knowledge in the insurance industry for some time now. At various points in time, data useful to the investigation of claims has been stored in airbag control modules, powertrain control modules, or rollover sensors, and has been broadly accessible by the CDR™ tool (in addition to some manufacturer-specific tools). A new source of radically different data is now available, from yet another vehicle component: the infotainment system, now accessible by means of the iVe™ tool from Berla.

Vehicle infotainment and telematics systems store data such as recent destinations, call logs, SMS messages, and potentially even a navigation history of the vehicle, in addition to a wide array of other material. Even in the absence of active navigation, location data can be associated with events such as doors opening and closing, and Bluetooth device connections.

Generally speaking, this data is not as likely to be useful for the purposes of crash investigations as CDR-style crash data. The exception to this might be cases in which, for example, the presence of SMS messages could indicate the driver was distracted by texting while driving. Alternatively, the navigational history might show a history of elevated speed in the moments leading up to the crash.

However, this type of data has clear potential value for the investigation of other types of claims, such as cases where it is alleged the vehicle was struck while parked, or that the vehicle was stolen prior to crashing. In those cases, the existence of a location history, device connections, or other parameters could

establish with some certainty whether a given scenario is likely or not.

This technology is still early in its development, but a broad range of manufacturers and vehicles (roughly 6000 makes and models) are presently supported. At the time of writing, iVe supports BMW, Buick, Cadillac, Chevrolet, Chrysler, Dodge, FIAT, Ford, GMC, HUMMER, Jeep, Lincoln, Maserati, Mercury, Pontiac, Ram, Saturn, SEAT, Skoda, SRT, Toyota and Volkswagen vehicles, over a range of model years – give us a call and we can tell you whether or not your vehicle of interest has any helpful data. 



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