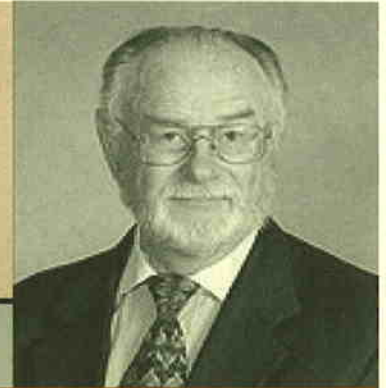


the Consultant

An Engineering and Investigations Newsletter



System Engineering and Laboratories

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By Frank Johnson
President/CEO

Celebrating



System Engineering And Laboratories (SEAL) had its beginning in March 1981.

I began my initial consulting business following my employment in oil field drilling and safety. My roots in laboratory operations began with assignments in the Air Force Weapons Laboratory and my work on the Airborne High Energy Laser Research Program during the 1970s time period.

Following my original formation of the consulting company in 1981, SEAL has continued to grow. SEAL activities include product research and development, failure analysis, fire investigation, and forensic engineering. Our clients have included numerous governmental agencies such as DOJ (Department of Justice), DOD (Department of Defense), HUD (Housing and Urban Development), U. S. Chemical Safety Board, Library of Congress, and OSHA (Occupational Safety and Health Administration). Industry clients have included many manufacturers, law firms, and insurance carriers.

Assignments have been both small and large, both national and international. In addition to our business activities, our in-house talent and equipment resources have also expanded. Our engineering and scientific capabilities include mechanical, electrical, civil, safety, and industrial engineering.

SEAL's technical services include fire and explosion investigation, vehicle accident reconstruction, oil field accident investigations, product testing, Finite Element Analysis (FEA), material failure analysis, and many others.

I founded and developed the business on original in-house capabilities with an emphasis on service to clients. SEAL, unlike many others, is not a spin-off or copycat business. We have maintained our originality and third party independence for the past one-quarter of a century. SEAL is a privately held independent testing laboratory.

I am proud of our past twenty-five years of service, and look forward to the next quarter century. By far, our most important asset is our engineering team and support staff. We hope you will watch for future issues as we spotlight some of these individuals.

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System Engineering
And Laboratories
is an independent
testing laboratory,
forensic engineering
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consulting firm.

BLACK BOX PRIVACY

By Chuck Boston

Is it legal to download the Event Data Recorder located in the Sensing Diagnostic Module (EDR/SDM), aka The Black Box, from a wrecked vehicle in the state of Texas?

Currently at least 23 states have laws governing the downloading of EDR/SDM modules from wrecked vehicles. In the state of Texas, SEC. 547.615 of the Texas Transportation Code says you can only download the data from an EDR/SDM module if you have a court order or the owners permission, or you are a government research agency.

“Why would you want to download the EDR/SDM?”

Depending on the year model of the vehicle, the EDR/SDM module data could provide important information to assist the investigation of an accident. The newer the vehicle, the more information available.

Ever work with a “sudden acceleration” accident?

The EDR/SDM data could report the percent throttle applied and if the brakes were applied. The EDR/SDM module can report the status of the tires inflation, the engine status, the cruise control status, the anti-lock brake system status, the speed of the vehicle, plus much more.

There are 24 models of EDR/SDM modules installed on vehicles today. SEAL has the latest equipment and software available to download and interpret the data stored in EDR/SDM

modules. However it should be kept in mind that the data should be downloaded as soon as possible by a qualified and certified technician to prevent the possible loss or corruption of the data.

Today most GM vehicles, and a growing number of FORD vehicles as well as few Isuzu vehicles, have EDR/SDM modules installed. For questions about downloading an EDR/SDM module call and ask for Chuck Boston, he will be happy to help.

TEXAS STATE STATUTES
TRANSPORTATION CODE
Sec. 547.615 (2) (C) - RECORDING DEVICES.

(c) Information recorded or transmitted by a recording device may not be retrieved by a person other than the owner of the motor vehicle in which the recording device is installed except:

- (1) on court order;
- (2) with the consent of the owner for any purpose, including for the purpose of diagnosing, servicing, or repairing the motor vehicle;
- (3) for the purpose of improving motor vehicle safety, including for medical research on the human body's reaction to motor vehicle accidents, if the identity of the owner or driver of the vehicle is not disclosed in connection with the retrieved information; or
- (4) for the purpose of determining the need for or facilitating emergency medical response in the event of a motor vehicle accident.

TEXAS STORM SEASON

By Tom Owen

Texas spring storm season is here with its heavy rains, potential high winds, lightning, and hail that often times can spawn tornados. It seems this time of year, we get at least one frontal system with severe storm watches/warnings per week. Increased volumes of water during intense rainfall can enter a structure when it normally would not or compromise an area where small unnoticed leaks already existed. Strong winds can separate exterior finished surfaces, such as roofs and walls, or cause impact damage from high velocity debris and blow trees on top of buildings. Lightning can cause damage to structural or electrical systems (i.e., television, stereo, phone). Hail of sufficient size can cause impact damage, most commonly to roofs. Old roofs tend to be more susceptible.

The more severe storm events frequently cause damage to residential and commercial structures, resulting in an increase of storm related claims. This may involve roof damage, interior leaks, broken framing, or fallen trees, to name a few of the concerns.

In the past, SEAL investigations have encountered situations where storm damage was claimed that turned out to be related to rot, termites, or a plumbing leak. Sometimes

questionable construction or maintenance techniques have been found. SEAL has even dealt with claims that a wind storm moved the concrete foundation. Various issues can arise, such as extent of structural damage, was damage related to the storm event, is damage old or new, what other sources of causation may exist, and can it be repaired or how.

Some, but not all of such storm related damage may need to be evaluated by someone with special knowledge in construction, building codes, and structural design principles. SEAL has several engineers on staff with these needed skills to evaluate structural storm damage. If you have a need for services in this or other areas, please let SEAL assist you with evaluation of issues or concerns of yours and/or the property owner. Our structural engineers can also provide consultation on other non-storm related issues, such as foundations, plumbing, and fire damage/repairs.

If we can be of service to you on such matters, please call Tom Owen at SEAL's Tyler, Texas office (903.566.1980 or 800.624.0905). Tom will be glad to assist you or refer you to other available engineers, depending on your needs.



On The Fire Scene

with Fire Cause Investigations

a division of SEAL

NFPA 921

By Frank Johnson
and
W. Glenn Bolton

NFPA 921 "Guide for Fire and Explosion Investigations" has become the authoritative document utilized during fire investigations. It is revised every three years and is considered to be the minimum guidelines utilized in such activities. Additionally, certain American Society for Testing and Materials (ASTM) are applicable.

The ASTM Standards are very useful in areas of establishing criteria for evidence handling, preservation of evidence, and requirements for technical reports and opinions. However, NFPA 921 is the guideline for the activities during the fire investigation. While NFPA 921 is a guideline, it has become so well accepted it is regarded as the standard for fire investigation. Given the authority of NFPA 921, it is important the client (manufacturer, insurance company, attorney, or government agency) insist and require that the fire investigator show evidence of compliance.

Our experience indicates that fire investigators have generally adopted NFPA 921 and are following those standards. However, guideline deviations have been observed on many occasions. With regard to

the fire scene investigation, the most common failure of fire investigators is not thoroughly cleaning and reconstructing the fire scene. Fire debris should always be carefully removed and the fire scene reconstructed in order to properly evaluate fire patterns or other evidence that can lead to determination of fire causation and its origin. The practice of some fire investigators to not clean out the scene, yet claim to do a fire investigation, is sometimes referred to as "drive by investigations".

Conversely, we have also observed some companies taking the requirement for fire scene reconstruction to great extremes. We observed one company that descended upon a mobile home fire with a huge team of investigators and technicians, spending several days at the fire scene, and generating little results other than an investigation bill of titanic proportions.

NFPA 921 and ASTM guidelines are also abused by some firms who claim to test products that are identified to have potentially caused a fire. One such company in Knoxville, Tennessee claims to inspect upward of 9,000 products per year with a handful of laboratory technicians, yet claim to produce results that insurance companies can rely upon for subrogation. Such questionable activity with regard to the application of NFPA 921 and ASTM standards only serve to damage the reputation of investigators and those clients who retain such investigators.

If you think you have encountered questionable fire or product inspections, seek a second opinion.

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