Evidence Solutions, Inc.

And the

Texas Trial Lawyers Association

Present:

Trucking Case Digital Evidence & Manipulation

May 14, 2020

Online
Austin Texas

Presented by:
Scott Greene, SCFE, CEO
Evidence Solutions, Inc.

A Digital Forensics Company:

Car and Truck Black Boxes
Electronic Logging Devices / ELDs
Cell Phones
Infotainment Systems
Global Positioning Systems / GPS
Airbag Modules / EDRs
Telematic Systems (Telematics)

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Biography
Scott Greene

Scott is the CEO of Evidence Solutions, Inc. Scott Greene has been doing Data Recovery, Computer, Technology and Digital Forensics, and EDiscovery work for over 35 years.

Directly out of high school, Scott went to work for IBM as a programmer.

In 2008 he created Evidence Solutions, Inc., a full service Computer, Technology & Digital Forensics firm, from the Technology Forensics department of Great Scott Enterprises.

Scott has developed and presented strategic planning seminars, taught numerous classes in database design & optimization, cyber security and technology forensics. Scott's extensive knowledge draws clients to him from all over the United States as well as Internationally for consulting and expert witness services in the field of Technology, Computer & Digital Forensics. His extensive and diverse experience allows him to be an expert in many facets of computer & digital technology.

Scott and Evidence Solutions have been involved in Civil & Criminal Cases, for Plaintiff, Defense and Special Master in Justice, Superior & District Courts as well as Internationally.

He is a sought after speaker and educator and travels throughout the country presenting to local, regional, national and International organizations.

Computer, Technology, and Digital Forensics for Over 35 Years.
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Case Studies in Trucking Case Digital Evidence & Manipulation

Faculty:
Scott Greene

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Electronic Logging Devices (ELDs)

- ELDs must be installed and in use by the December 16, 2017 deadline which is two years after the publication date. The mandate applies to all drivers who are required to keep records of duty status, except commercial drivers who 1) drive eight or fewer days out of every 30 working days; 2) drivers in drive-away and towing operations and 3) operators who are driving vehicles older than model year 2000.

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Electronic Logging Devices (ELDs)

- ELDs must be able to automatically record date, time and location information. Location will generally be in the form of GPS coordinates, but GPS is not required. It also must record engine hours which must be synchronized from the engine on and off time. Finally, the vehicle miles and driver identification information must be logged.

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Trucks & Hyperspace

- Some 18 wheelers now have the ability to make hyperspace jumps.

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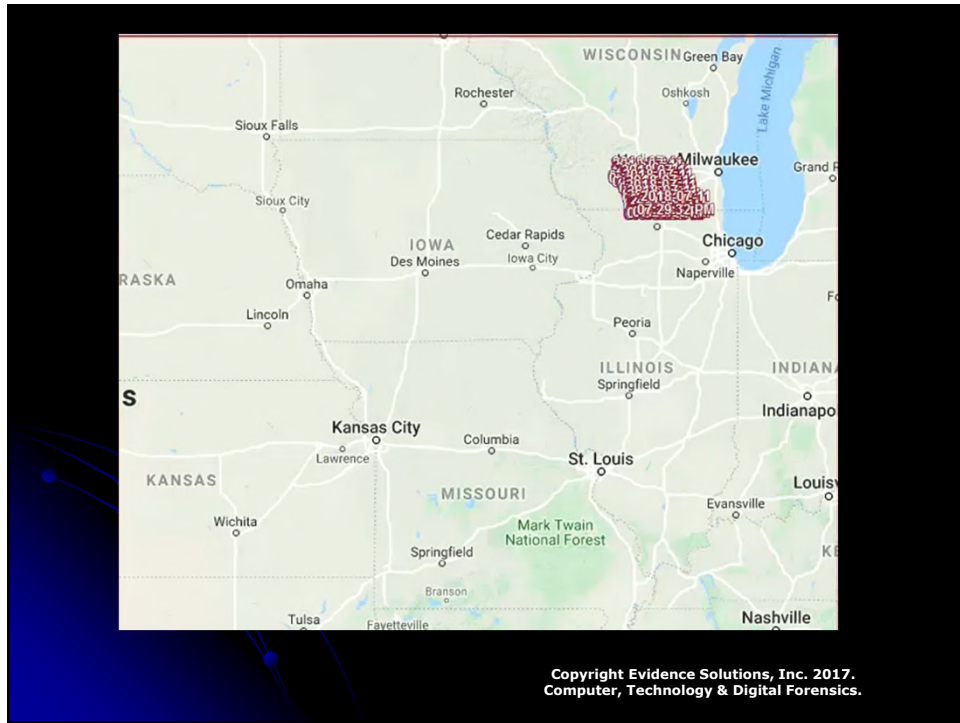
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- This driver disrupted his Omnitracs Device from recording his location and drove more than 2 hours without being logged.
- I thought his company was in collusion with him, but it turns out, while they should have known, they didn't know.
- Always ask for the GPS Coordinates in electronic / digital form (Excel CSV files)

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Bytes Per Minute Analysis

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```
1329977.002
06/12/2013                                    MOBILITY USAGE
SCAMP


Run Date:        06/12/2013
Run Time:        17:44:11
SMS Usage For:   (480)
Account Number:  81342
Item    Conn.      Conn.    Originating   Terminating      IMEI              IMSI          Description
        Date       Time       Number        Number
913    01/14/11    09:37P     █████5660    █████3109    35349104165148    310410366057466      OUT
914    01/14/11    09:37P     █████5660    █████3109    35349104165148    310410366057466      OUT
915    01/14/11    09:41P     █████3109    █████5660    35349104165148    310410366057466      IN
916    01/15/11    08:06A     █████5660    █████8587    35349104165148    310410366057466      OUT
917    01/15/11    08:16A     █████8587    █████5660    35349104165148    310410366057466      IN
918    01/15/11    08:32A     █████5660    █████8587    35349104165148    310410366057466      OUT
919    01/15/11    08:32A     █████8587    █████5660    35349104165148    310410366057466      IN
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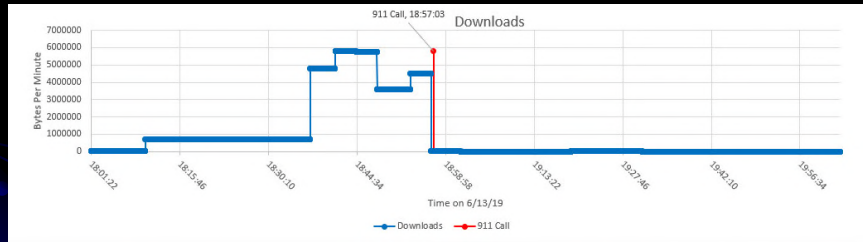
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When You Only Have CDRs for Data

- Data from the cell phone is the best thing to look at for cell phone data activity.

- However that's not always possible.

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And then there is this…

- Remember to look on FaceBook
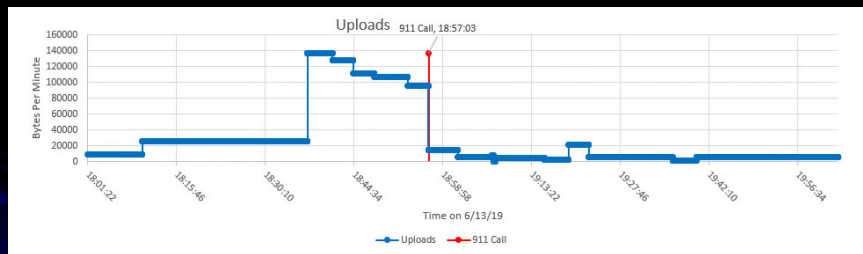
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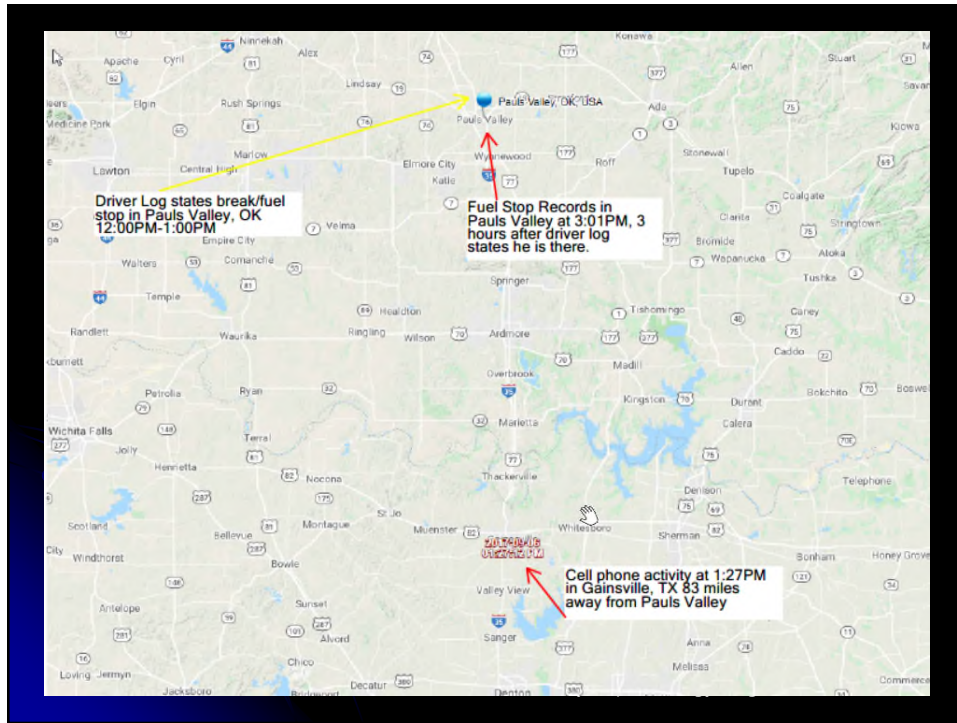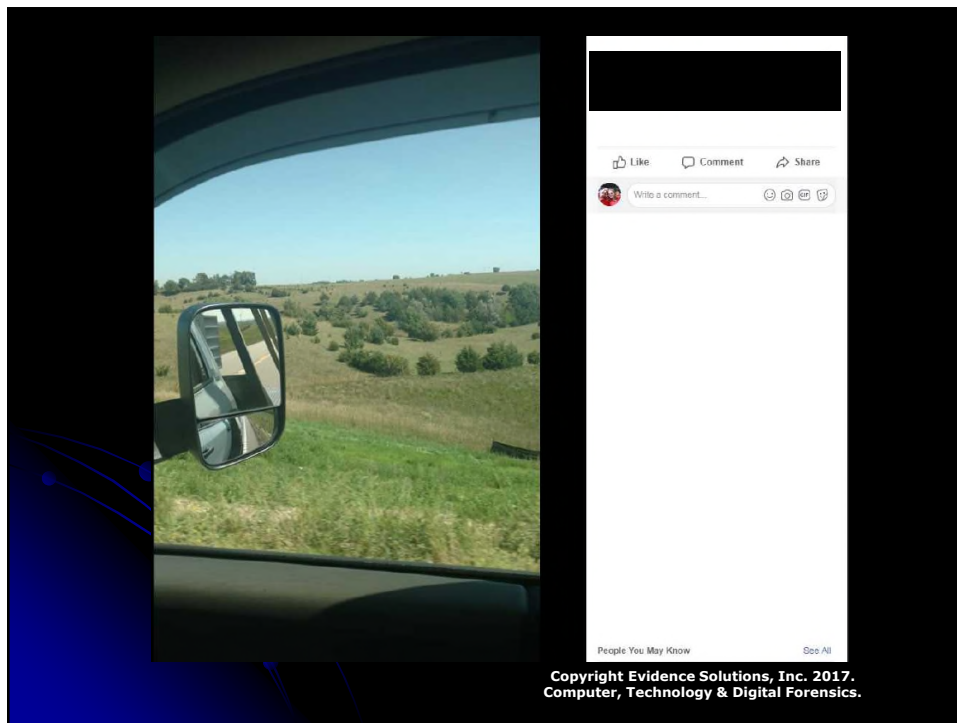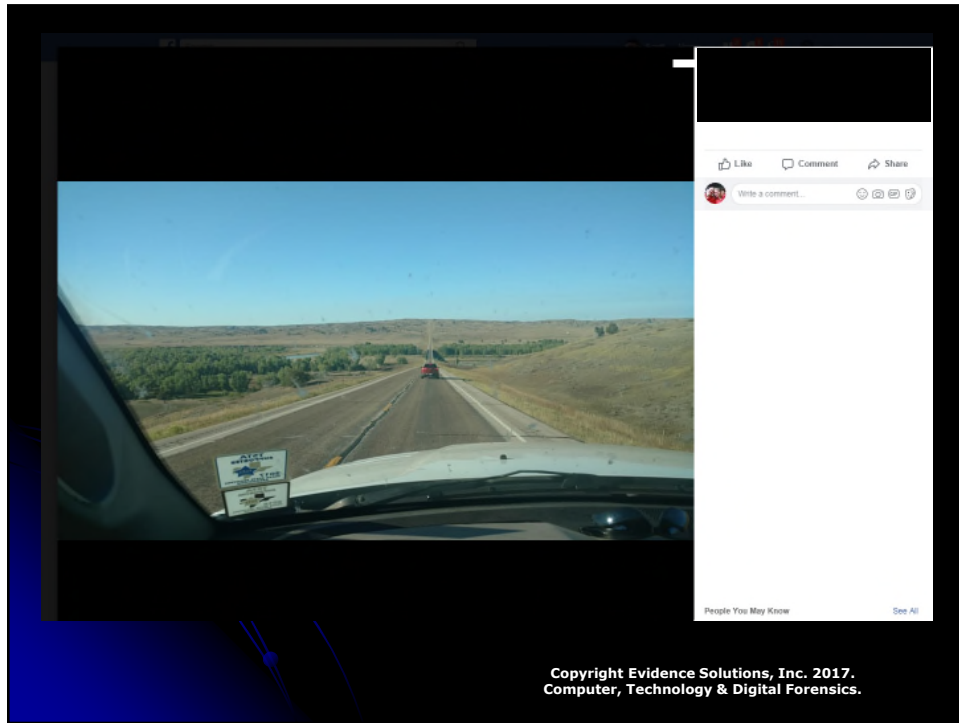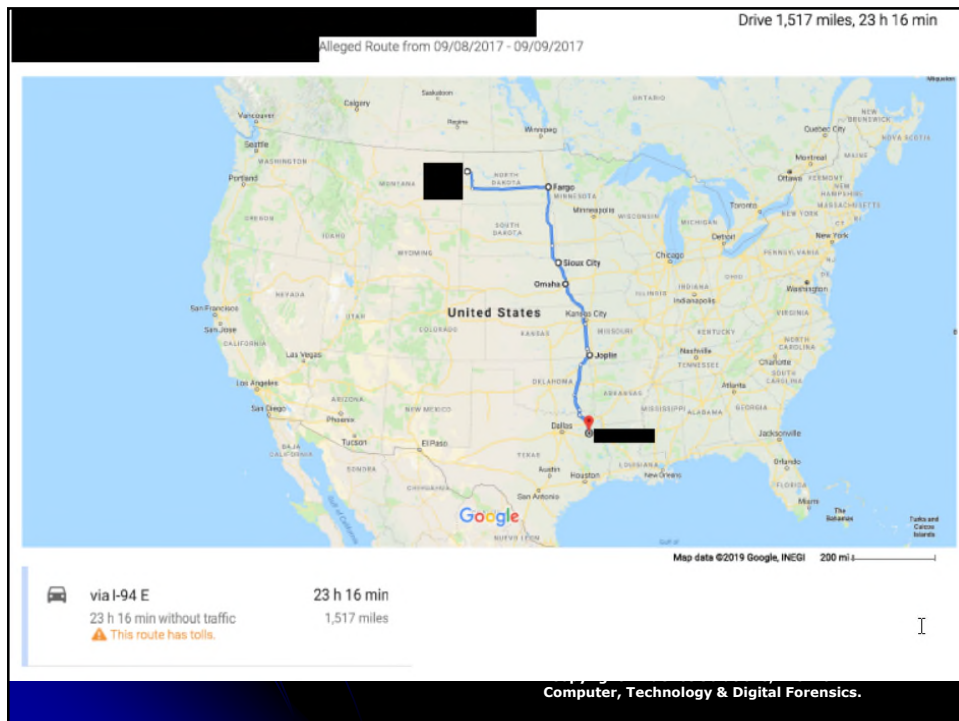Computer, Technology & Digital Forensics.

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Drive 1,517 miles, 23 h 16 min

Alleged Route from 09/08/2017 - 09/09/2017

via I-94 E   23 h 16 min
23 h 16 min without traffic   1,517 miles
⚠ This route has tolls.

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Black Boxes / EDR

- Automobile Black Boxes
  - Nearly all vehicles with an air bag have a crash recorder.
  - GM was the first to allow access to EDR data
  - GM vehicles after model year 1990 will become harvestable.
  - In 2002 Ford followed suit by allowing access to some models
  - Other manufacturers also have black boxes capable of recording crash data but have not yet provided the codes needed to interpret the information.

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Black Boxes / EDR

- **What data can Automobile Black Boxes collect?**
- **Seconds Vehicle Engine Percent Brake Switch**
- **Before Deployment Speed (mph) Speed (RPM) Throttle Circuit Status**

Seconds	Speed	RPM	Throttle	Brake
-5	57	4032	100	OFF
-4	65	4160	70	OFF
-3	62	2304	2	ON
-2	55	1088	2	ON
-1	47	896	2	ON
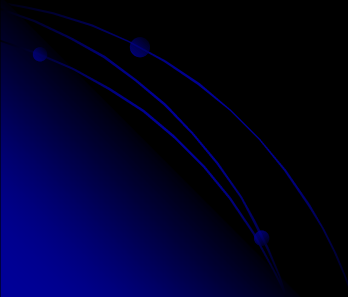
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Event Data (Event Record 1)

Event Recording Complete	Yes
Event Record Type	Deployment
Crash Record Locked	Yes
OnStar Deployment Status Data Sent	Yes
OnStar SDM Recorded Vehicle Velocity Change Data Sent	Yes
Deployment Event Counter	1
Event Counter	1
OnStar Notification Event Counter	1
Algorithm Active: Rear	No
Algorithm Active: Rollover	No
Algorithm Active: Side	Yes
Algorithm Active: Frontal	Yes
Ignition Cycles At Event	5080
Time Between Events (sec)	Data Not Available
Concurrent Event Flag Set	No
Event Severity Status: Rollover	No
Event Severity Status: Rear	No
Event Severity Status: Right Side	No
Event Severity Status: Left Side	No
Event Severity Status: Frontal Stage 2	Yes
Event Severity Status: Frontal Stage 1	Yes
Event Severity Status: Frontal Pretensioner	Yes
Driver 1st Stage Deployment Loop Commanded	Yes
Passenger 1st Stage Deployment Loop Commanded	Yes
Driver 2nd Stage Deployment Loop Commanded	Yes
Passenger 2nd Stage Deployment Loop Commanded	Yes
Driver Pretensioner Deployment Loop #1 Commanded	Yes

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Infotainment Systems

- Infotainment Systems are collectable and have tremendous amounts of data stored in them.

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Infotainment Systems

- Location / GPS
- Automated functions
  - Lane keeping
  - AEB – Automatic Emergency Braking
- Communications Data
  - SMS / Text Messages
  - Email
  - Call Logs

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Infotainment Systems

- Radio
  - Station
  - Volume
  - Etc
- Lights
  - Interior
  - Exterior
- Parental and Valet Controls

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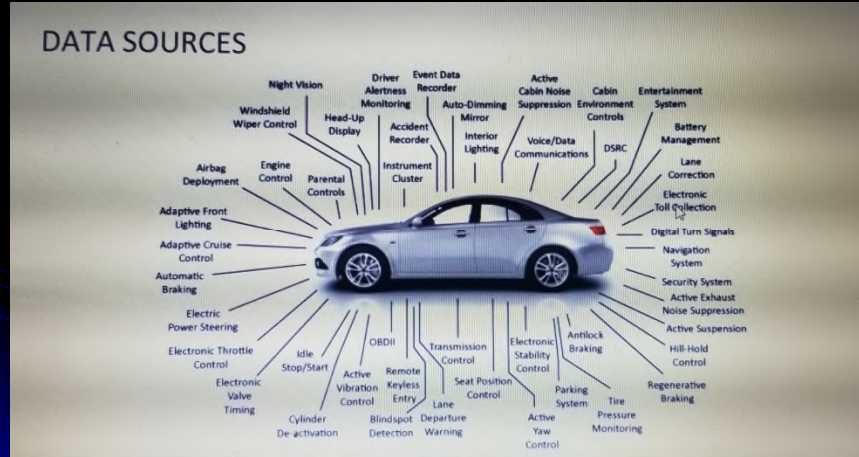
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Truck Black Boxes

- Truck Black boxes have become increasingly sophisticated over time. Newer modern devices have a tremendous amount of memory.

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Truck Case Examples

- Commercial Truck Driver
- Driving in the oil fields in Texas
- On for an hour off for an hour

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