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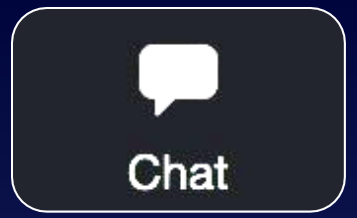
Enter your questions into the Q&A box.



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Post-Webinar Information

- A recording of this webinar will be available in the coming weeks at www.NCJTC.org.
- Please complete the brief evaluation at the conclusion of this webinar.
- A certificate of attendance will be sent to attendees within 2 weeks.

Connected Cars for Law Enforcement

March 28, 2023 | *Presented by:*

Andrew Vallee, Associate, NCJTC

NCJTC
National Criminal Justice Training Center
Fox Valley Technical College

Fox Valley TECHNICAL COLLEGE
Knowledge That Works

Grant Funding Acknowledgement

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Today's Presenter

Andrew Vallee

Associate, NCJTC

Special Agent with the Tennessee Bureau of Investigation since 2014

Learning Objectives

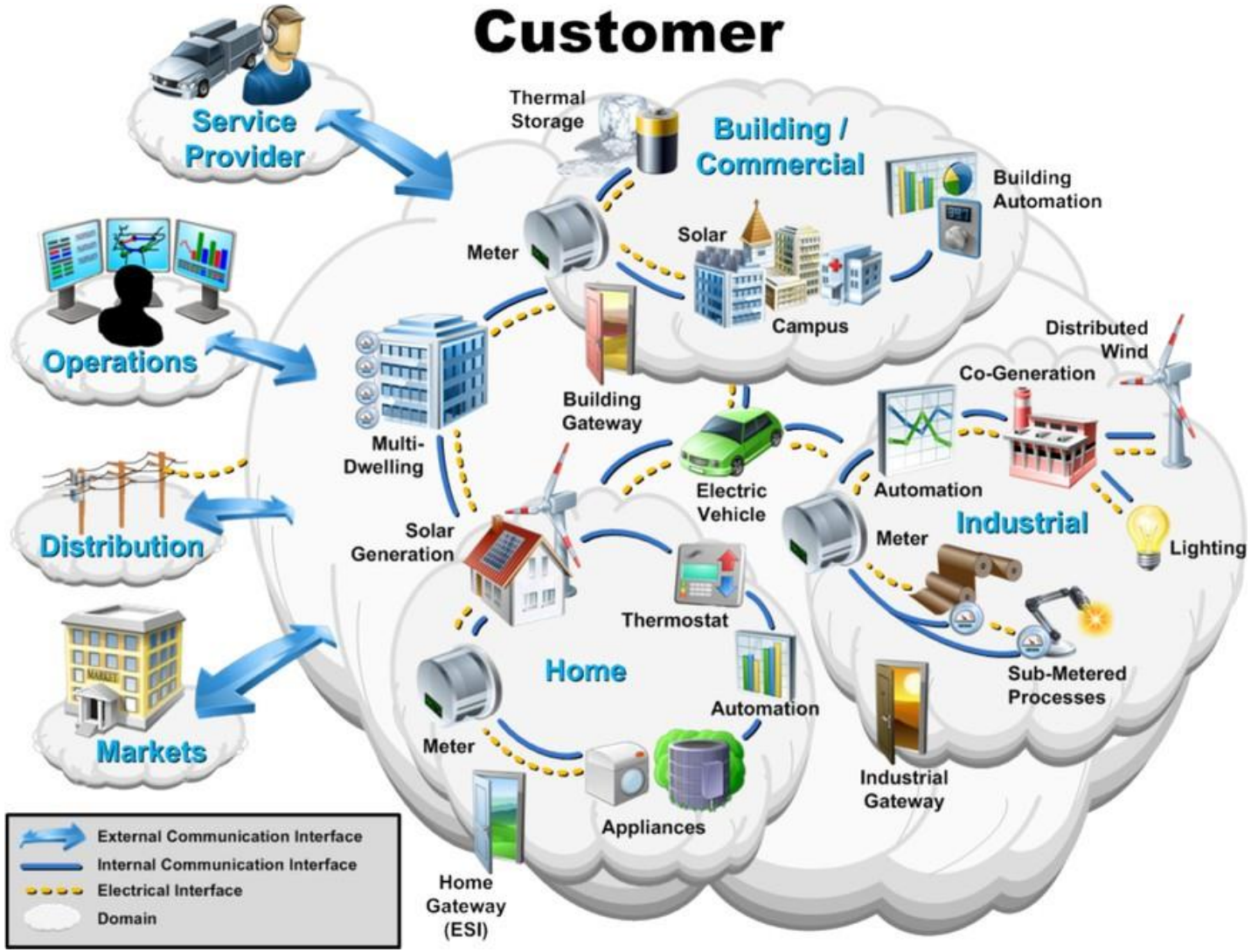
- ✓ Students will be able to identify the types of data that is available from connected cars.
- ✓ Learn the difference between network connected cars and vehicle forensics options.
- ✓ Students will be able to query certain vehicles to determine their connection status to various service providers.
- ✓ Be able to draft legal process for the extraction of vehicle specific data.
- ✓ Students will learn resources and tools that can assist them in their investigations that involve vehicle data.

Where do I get vehicle data from?

Internet of Things (IoT)

Just like the devices on the previous slide are all connected to the internet, so are vehicles….

Internet of Things

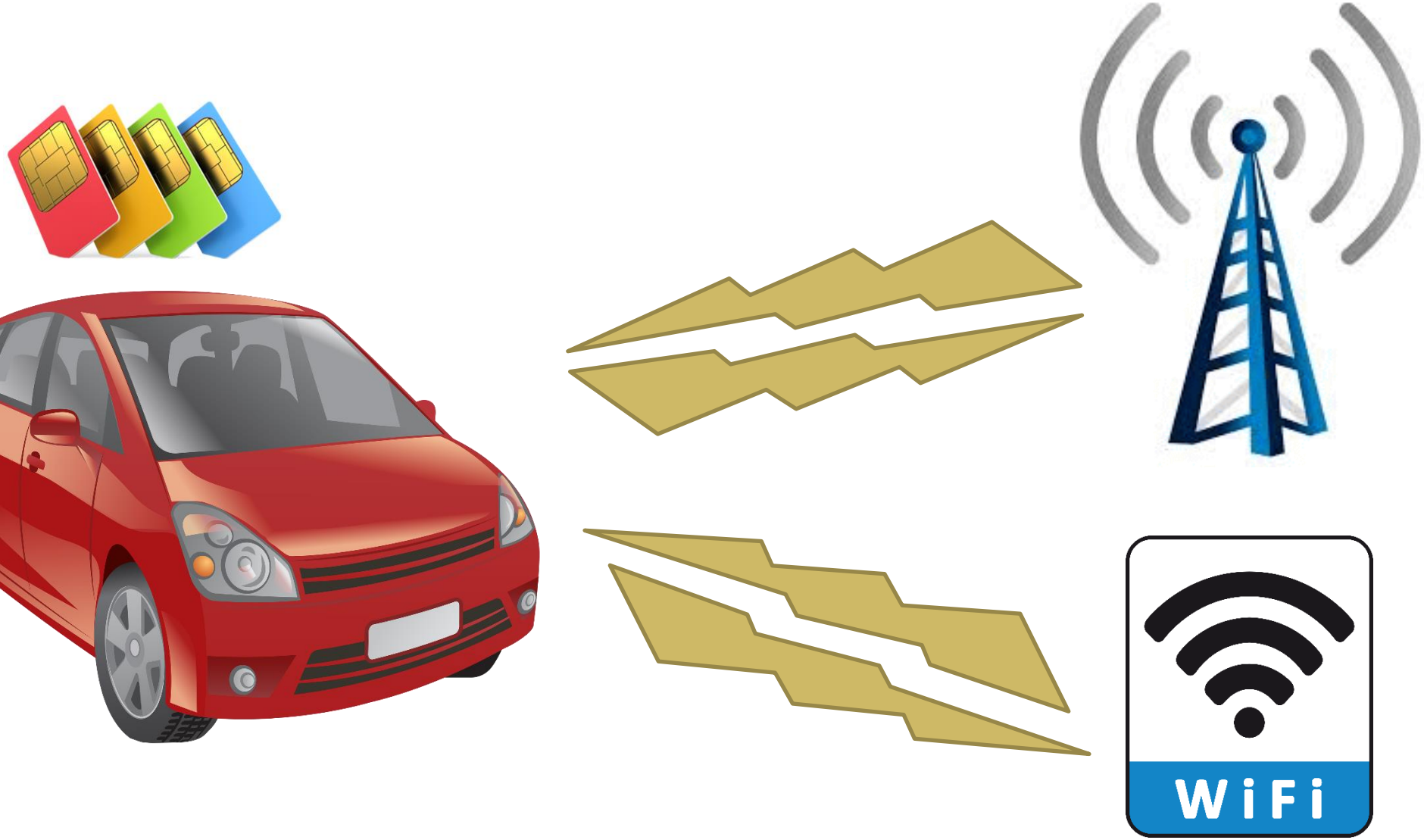


Six Main Sources of Data From Vehicles Are Possible

Connected Vehicle Services

Third Party Vehicle Data

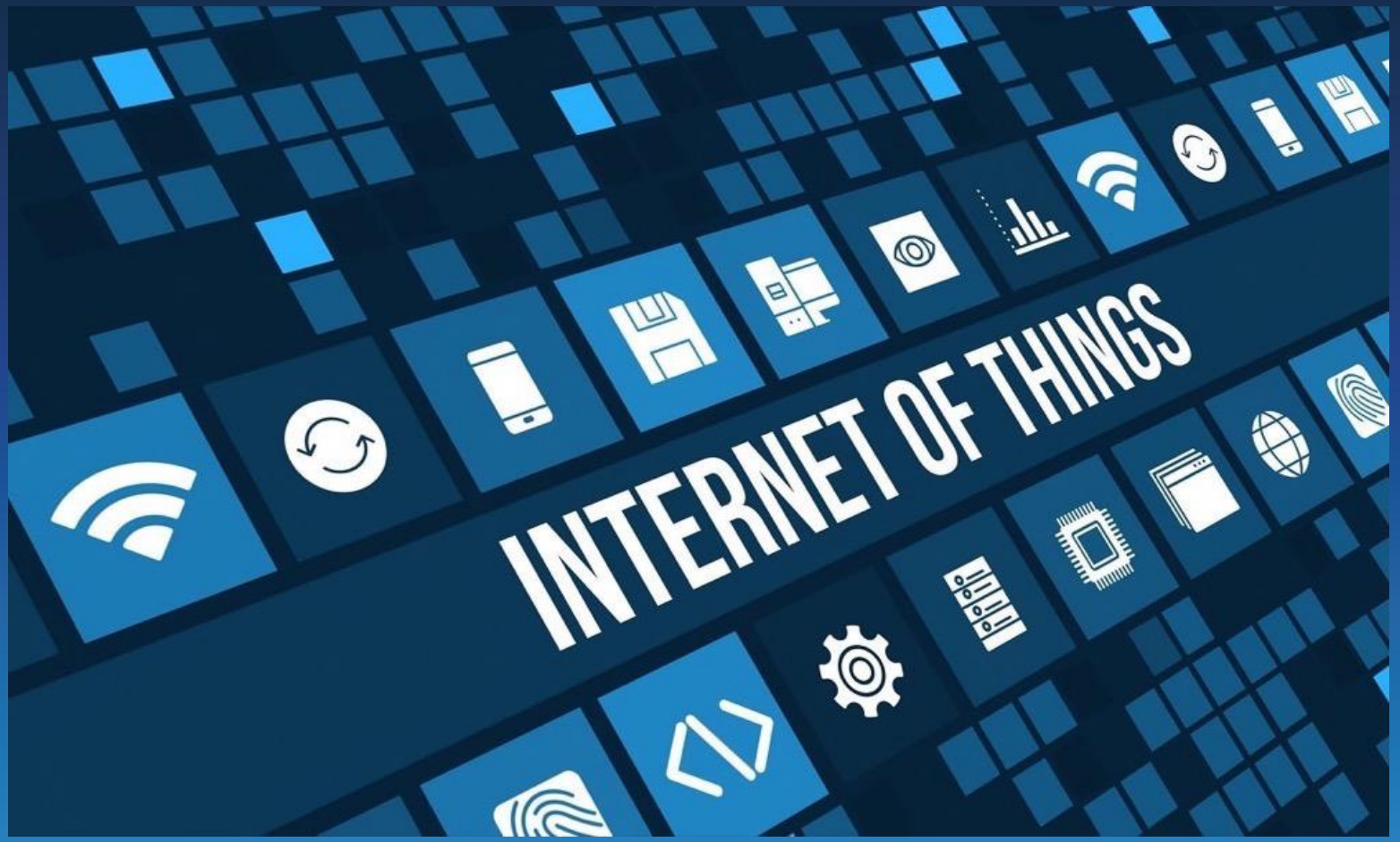
Cellular and Wi-Fi Capable Vehicles



Vehicle Event Data Recorder (Black Box)

Vehicle Digital Forensics (Infotainment System)

Vehicle Video Recording Systems / Devices



Connected Vehicle Services

IoT and In-Vehicle Services

- What allows in-vehicle services to work when you push the button?
- What does this offer you from an investigative perspective?
- How do we get data from these services?

SYNC Powered by Microsoft

uconnect

blueLink

mbrace
Your World, From Your Car

Audi connect

AcuraLink

ACURA

2019 & newer

https://mygarage.honda.com/s/acuralink-marketing

ALFA Connect

2018 & newer

https://www.volvocars.com/us/own/connected-car

Audi Connect

Audi

2016 & newer

https://www.audiusa.com/us/web/en/inside-audi/innovation/audi-connect.html

BMW Connected Drive

2016 & newer

https://www.bmwusa.com/explore/connecteddrive.html

FordPass

2018 & newer

FordPass

https://www.ford.com/support/how-tos/fordpass/fordpass-connect/fordpass-connect-overview/

HondaLink

HONDA

2017 & newer

HondaLink

https://mygarage.honda.com/s/hondalink-product-compatibility

Hyundai BlueLink

2012 & newer

https://owners.hyundaiusa.com/us/en/resources/blue-link/hyundai-blue-link-overview.html

Infiniti InTouch

INFINITI®

2020 & newer

https://www.infinitiusa.com/intouch/system-availability.html

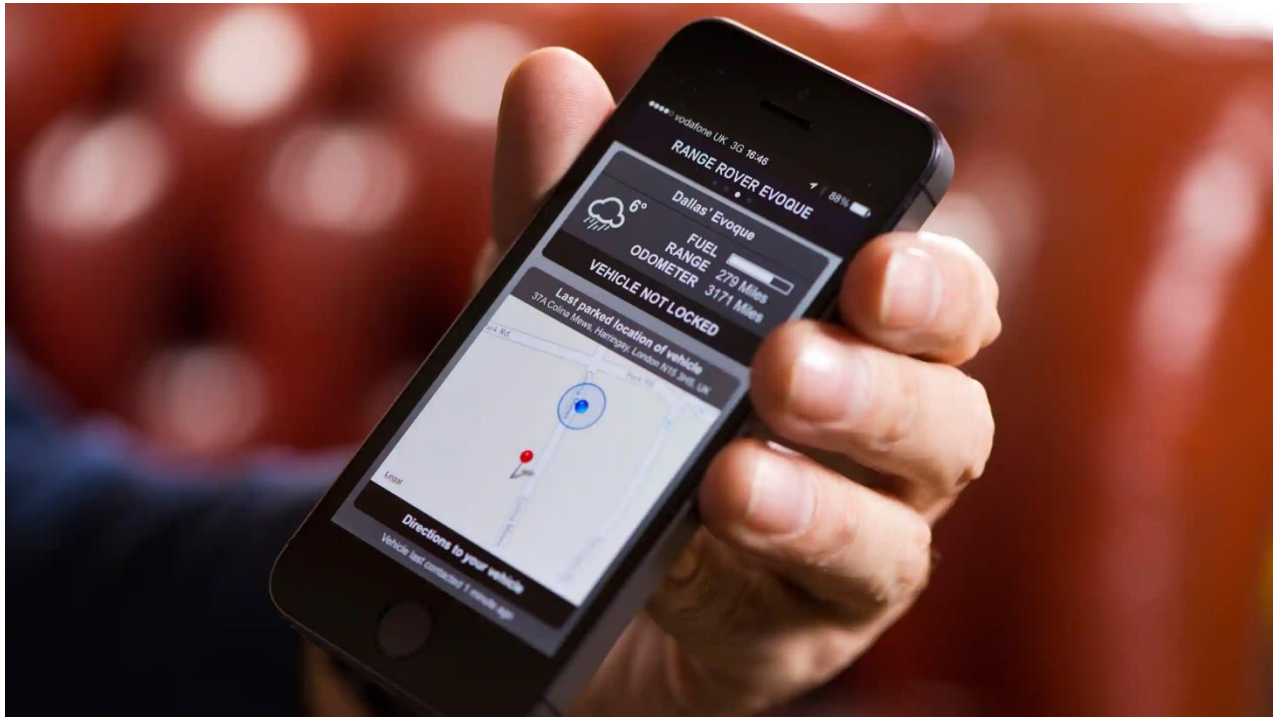
Jaguar InControl

JAGUAR

2016 & newer

https://www.jaguar.com/incontrol-global/index.html

Land Rover InControl



2016 & newer

https://www.landroverusa.com/ownership/incontrol/index.html

Lexus Link

2020 & newer

https://www.lexus.eu/owners/about-my-lexus/lexus-link-connected-services

Lincoln Connect

LINCOLN

2018 & newer

https://www.lincoln.com/support/how-tos/lincoln-way-app/lincoln-connect/how-does-lincoln-connect-work/

Maserati Connect

2021 & newer

https://www.maserati.com/us/en/ownership/maserati-connect

Mazda Connected Services

mazda

2021 & newer

https://mazda.custhelp.com/app/answers/detail/a_id/189/~/what-is-mazda-connected-services%3F

Mercedes Me Connect

Mercedes-Benz

2015 & newer

https://www.mbusa.com/en/legal-notices/connected-vehicle

Mitsubishi Connect

MITSUBISHI
MOTORS

2022 & newer

https://www.mitsubishi-connect.com/en/SafeguardRemote/Manual/eclipse-cross_US/contents/tp_04_FAQ.html

Nissan Connect

2020 & newer

https://www.nissanusa.com/connect.html

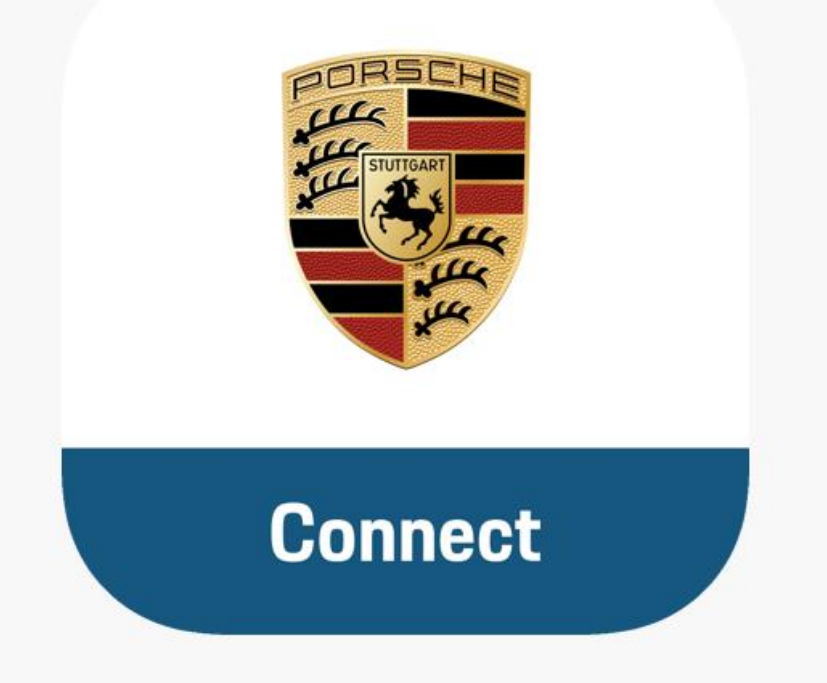
OnStar

2014 & newer

Buick, Cadillac, Chevrolet, & GMC

https://www.public-safety.onstar.com/emergency-situations/

Porsche Connect



PORSCHE

2017 & newer

https://www.porsche.com/usa/connect/

SiriusXM Radio

SiriusXM Connected

SiriusXM®
CONNECTED VEHICLE SERVICES

FIAT
DODGE
CHRYSLER
Jeep®

2016 & newer
Chrysler, Dodge, Fiat, & Jeep

https://www.siriusxmcvs.com/

Stellantis

RAM

2016 & newer

Dodge Ram Trucks

STELLANTIS

https://www.stellantis.com/en/technology/intelligent-vehicles

Subaru StarLink

SUBARU

2018 & newer

https://www.subaru.com/vehicle-info/subaru-starlink.html

Tesla Premium Connectivity

TESLA

2012 & newer

https://www.tesla.com/legal/contact - **Click Gov't & LE Inquiries**

Toyota Connected Services

TOYOTA
connected

2020 & newer

https://www.toyota.com/connected-services/

Volkswagen Car-Net

Volkswagen

Car-Net®

Volkswagen

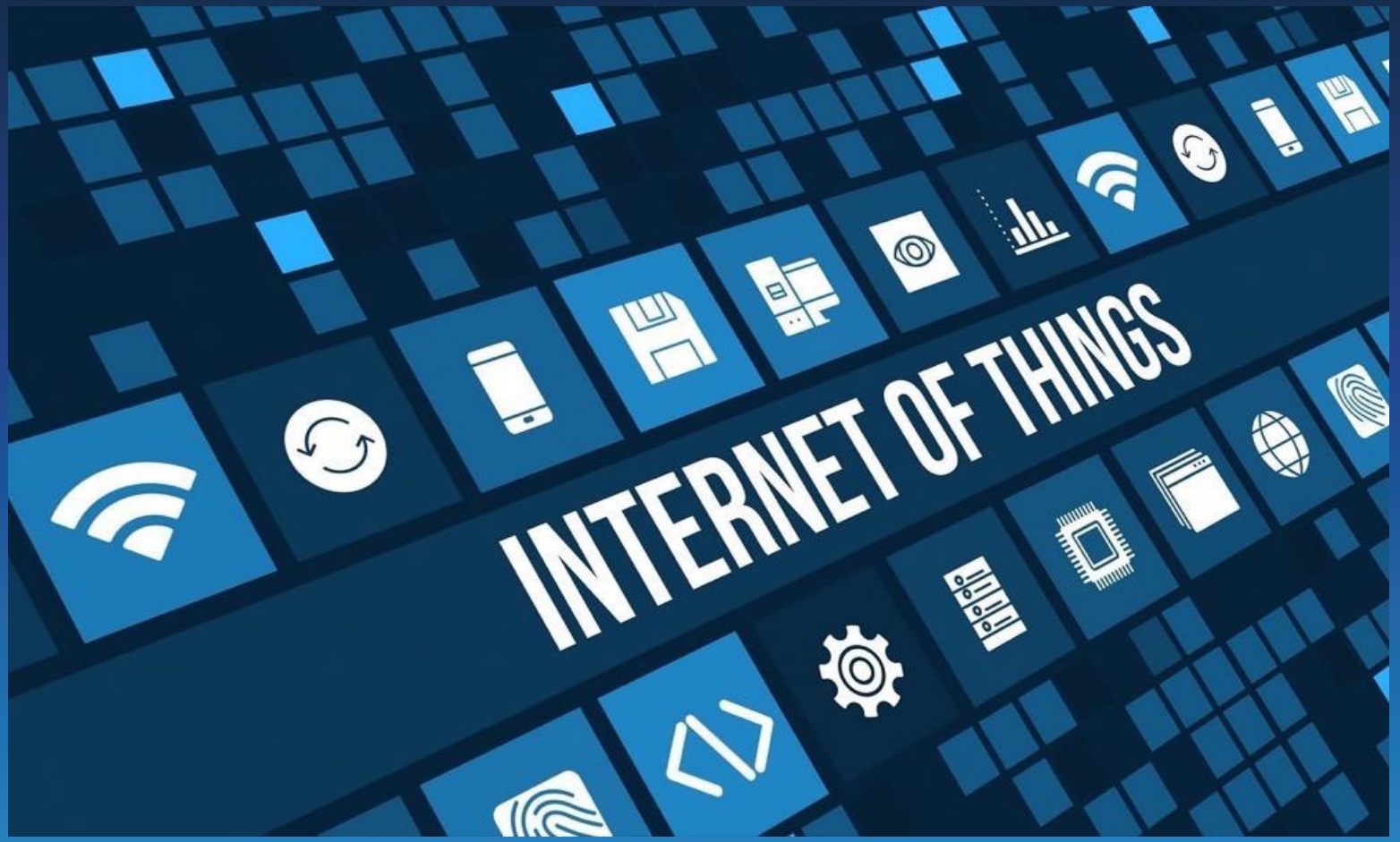
2020 & newer

https://carnet.vw.com/#/home

Volvo Connected Car

2018 & newer

https://www.volvocars.com/us/own/connected-car



Third Party Vehicle Data

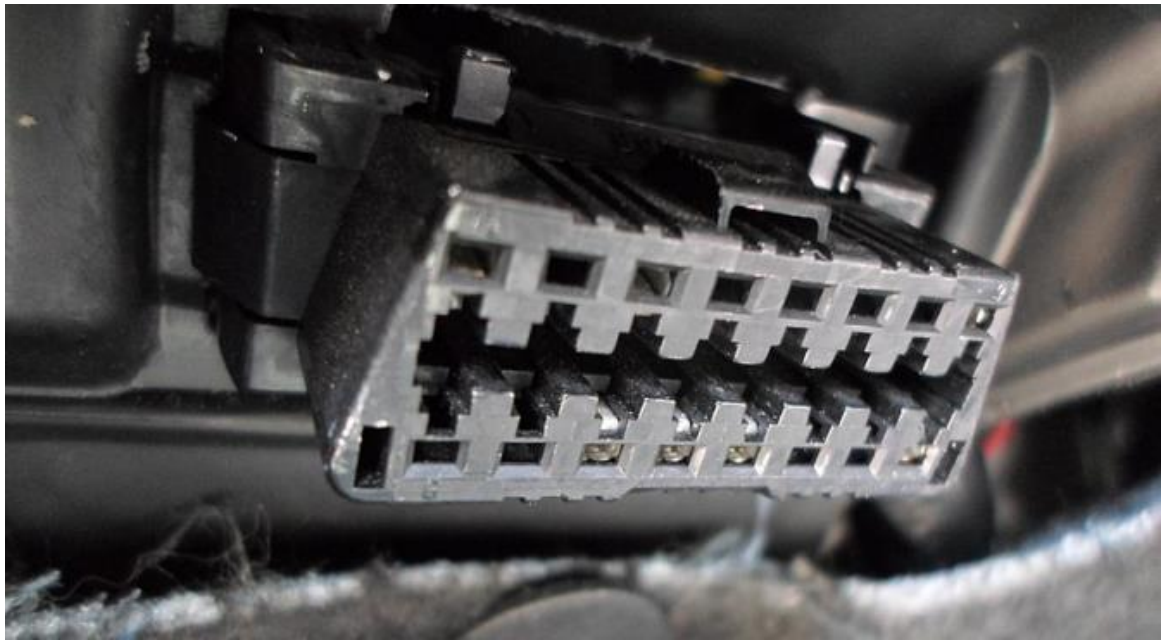
Telematics Driving Usage-Based Auto Insurance

Usage Based Vehicle Insurance
(Device Physically Installed In Vehicle)

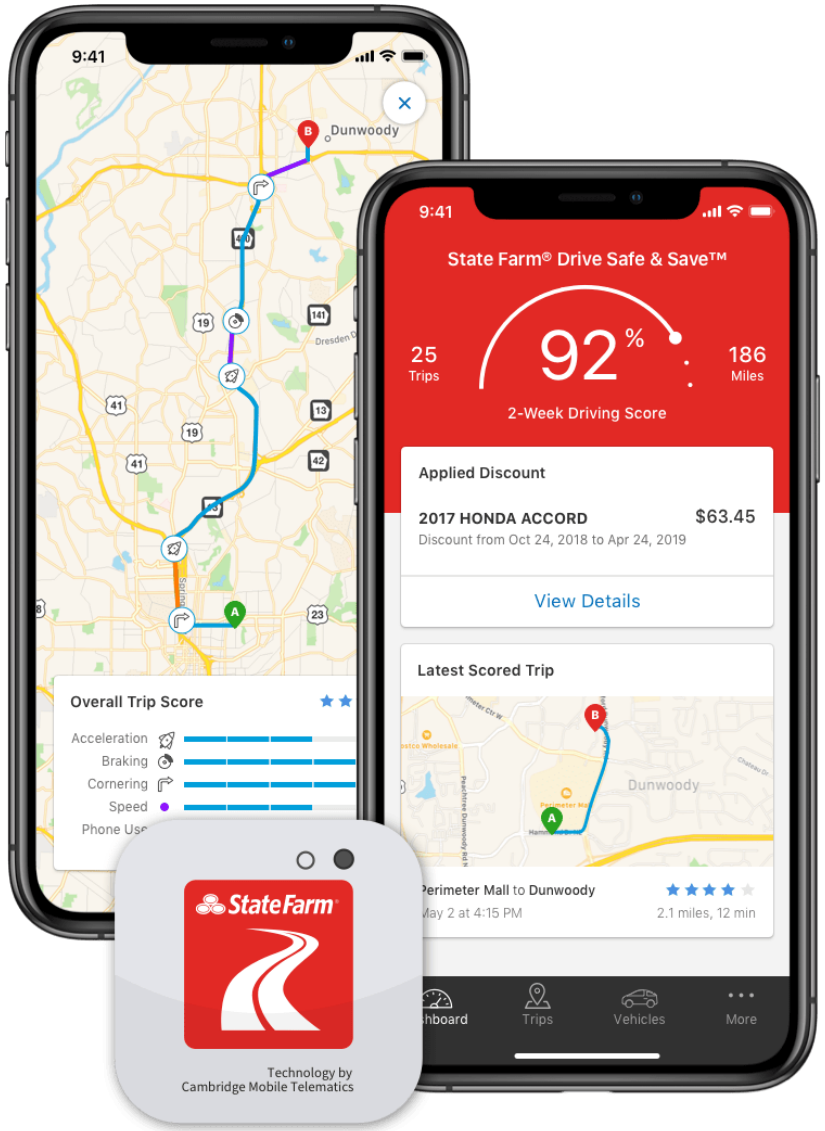
TESLA | Insurance

Vehicle OBD-II Port

- On-Board Diagnostics II
- On-Board Computer that monitors speed, engine parameters, emissions, and other vehicle data
- Usually located under the driver's side dash



Usage Based Vehicle Insurance (Smart Phone App)



How to find out who the insurer is

- Check with the bank or financing company
- Check with the State DMV (many states are now online with insurance companies and import vehicle insurance data directly into State systems)
- National Insurance Crime Bureau (NICB) https://www.nicb.org/law-enforcement

NATIONAL INSURANCE CRIME BUREAU

Lien Holder / “Tote The Note” Trackers

- Many lien holders will place discrete vehicle trackers on vehicle to recover them in case of non-payment.
- Trackers usually check-in every 12 hours or 24 hours.
- Most of the time these lien holders are cooperative with law enforcement.

Rental Car Companies

- Most large rental car companies have vehicle tracking capabilities. These may not be real-time and may only check-in every 12 to 24 hours.
- Airport Police can often help with local law enforcement contacts for most rental car companies.

Hertz, Dollar, & Thrifty Rental Car Law Enforcement Contact

Hertz Corporation
Attn: Legal Dept
8501 Williams Rd, 3rd Floor
Estero, FL 33928

Email: subpoena@hertz.com

Global Corporate Security Phone (24/7):
800-654-5060 (LE Only)

Budget & Avis Rental Car Law Enforcement Contact

Avis Budget Group
6 Sylvan Way
Parsippany, NJ 07054

Email:
subpoena.compliance@avisbudget.com

Security Desk Phone (24/7):
800-533-9056 (LE Only)

Enterprise Rental Car Law Enforcement Contact

EAN Holdings

600 Corporate Park Dr

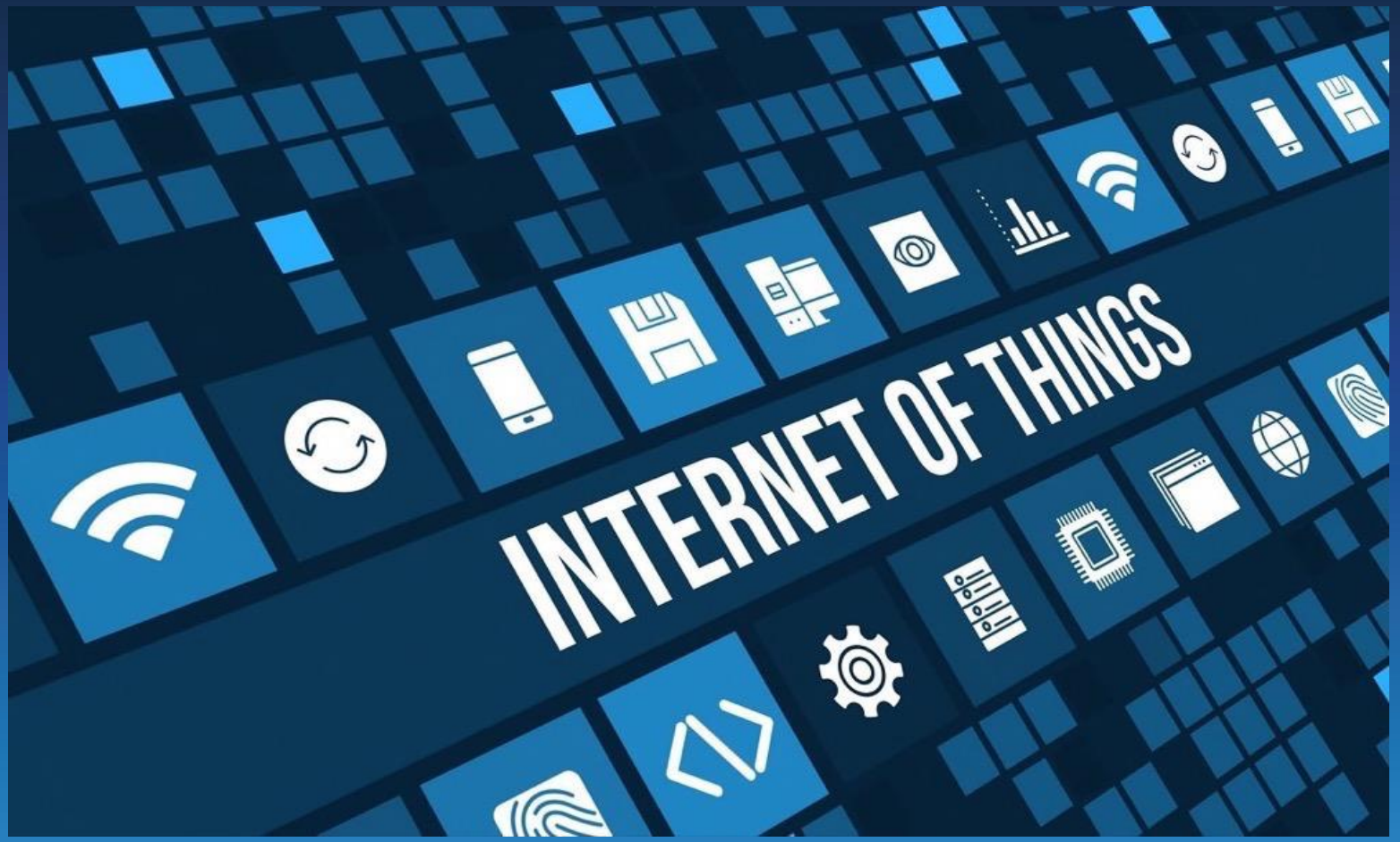
St. Louis, MO 63105

Security Desk Phone (24/7):

866-279-2060 (LE Only)

Enterprise only retains GPS data and tolling transactions for a 14-day period and then it is deleted. They will honor preservation letters.

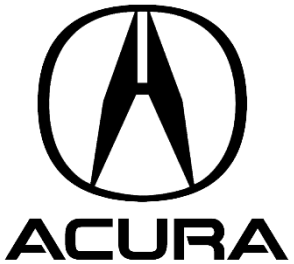
Law Enforcement Vehicle Trackers



Cellular Capable Vehicles

Step 1: Check to see if the vehicle manufacturer is one of the following:

2018 & newer



2019 & newer

2018 & newer

2021 & newer

2016 & newer

Chrysler, Dodge, Fiat, & Jeep

2018 & newer

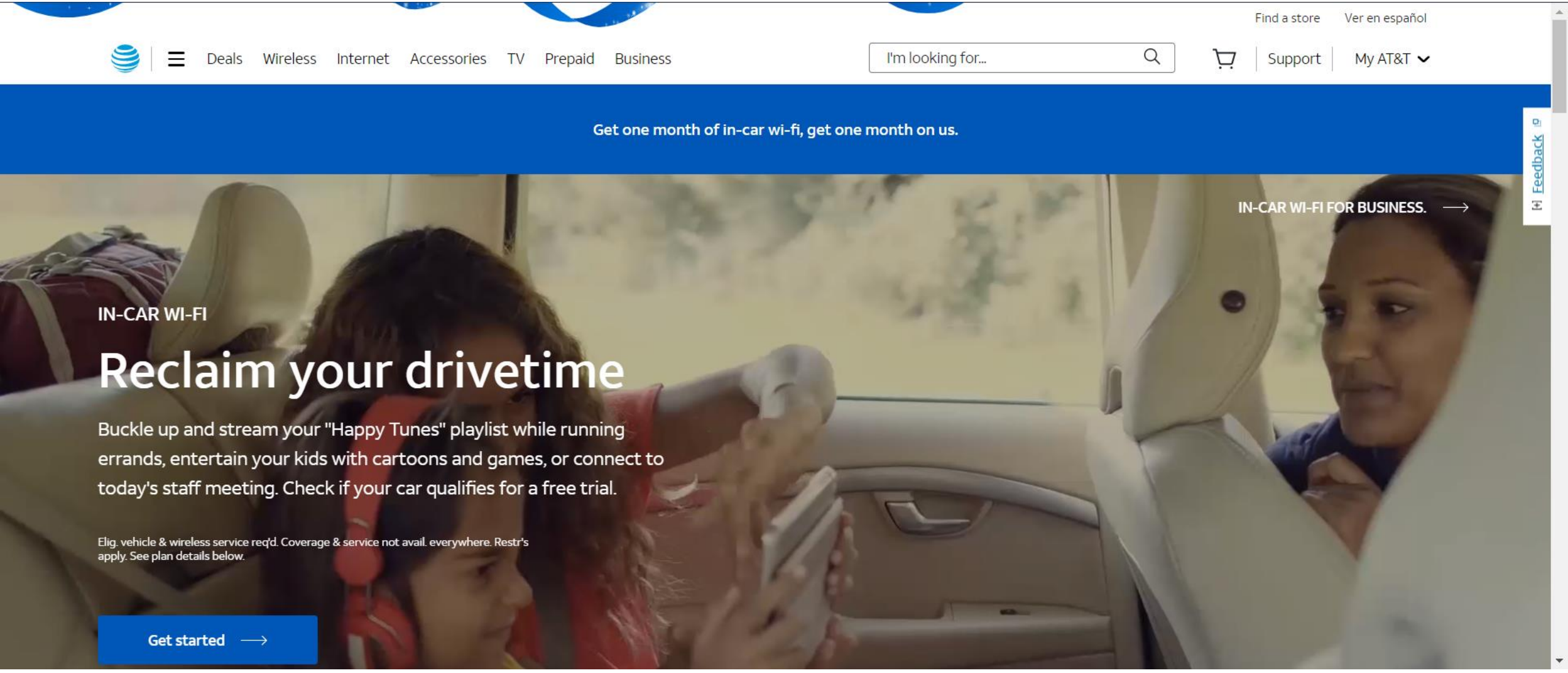
2014 & newer

Buick, Cadillac, Chevrolet, & GMC

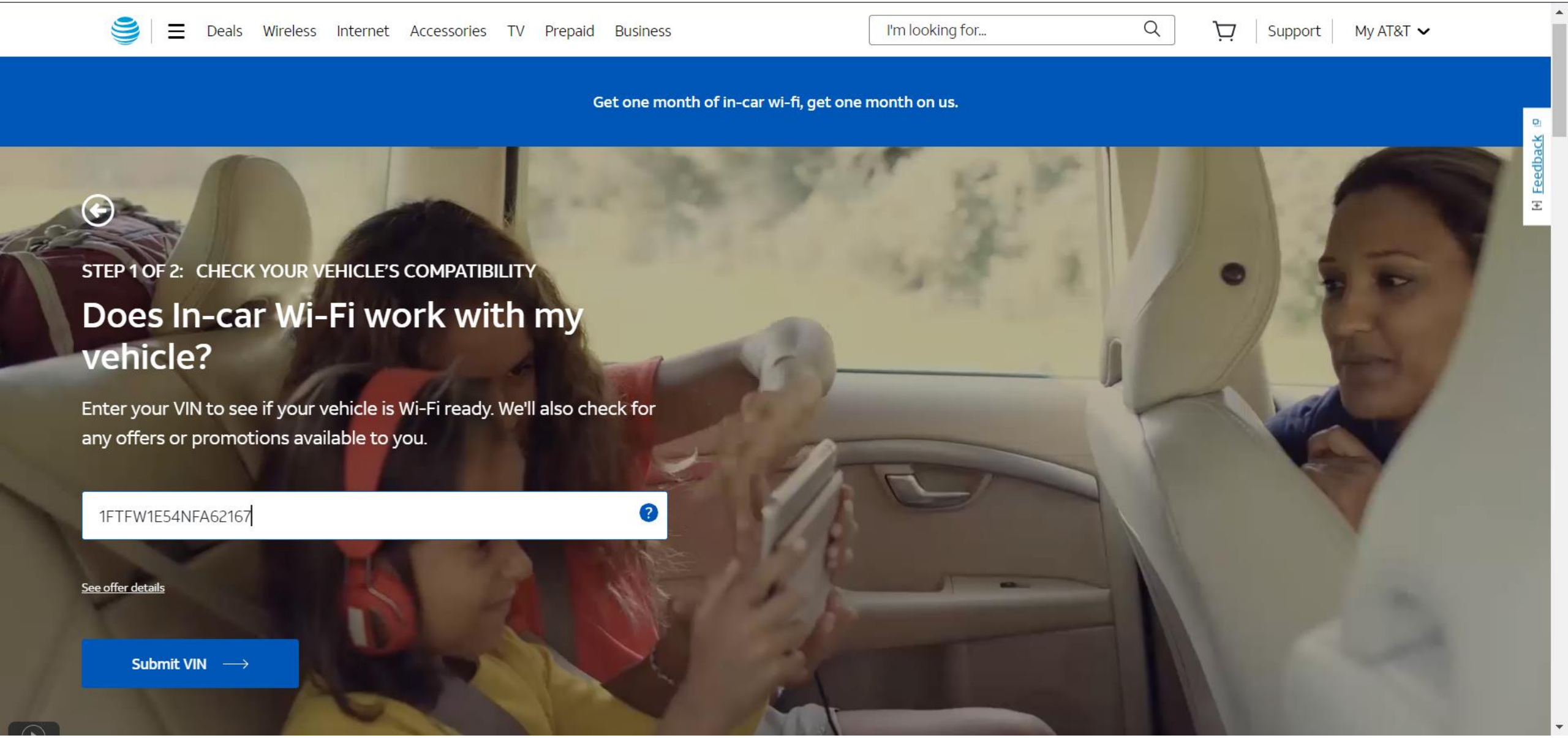
2018 & newer

2017 & newer

Step 2: Check with AT&T for cellular service https://www.att.com/plans/in-car-wifi/



Enter the VIN of the target vehicle



This vehicle has cellular capabilities, contact AT&T

Deals Wireless Internet Accessories TV Prepaid Business

I'm looking for...

Support My AT&T

Get one month of in-car wi-fi, get one month on us.

Feedback

Step 2 of 2: Get Connected

Let's get started

Your 2022 FORD F-150 has a built-in Wi-Fi hotspot, AND your 3GB Data Plan trial is on us!

ACTIVATE MY TRIAL →

BONUS

Your ride is about to get way more entertaining

Get 1000+ hours of on-demand shows, movies, and music on us with an unlimited In-car Wi-Fi plan. Just download the free WarnerMedia RIDE™ app.

If your vehicle was not on the previous list, it is still supported by AT&T. Unfortunately, with these manufacturers you cannot run the VIN directly to confirm cellular connectivity. You will need to obtain the IMSI and/or IMEI.

- Alfa Romeo – 2018 and newer
- Audi – 2016 and newer
- BMW- 2016 and newer
- Infiniti- 2020 and newer
- Jaguar- 2016 and newer
- Land Rover- 2016 and newer
- Lexus- 2020 and newer
- Maserati- 2021 and newer
- Mitsubishi – 2022 and newer
- Nissan- 2020 and newer
- Porsche- 2017 and newer
- Toyota- 2020 and newer
- Tesla – 2012 and newer

These manufacturers are supported by Verizon Wireless

HYUNDAI

Volkswagen

Mercedes-Benz

2018 & older

https://www.verizon.com/od/prepaid/bring-your-own-device/?connectedCar=true#/checkDevice

These manufacturers are supported by T-Mobile

Mercedes-Benz

2019 & newer

2016 & newer

Volkswagen

AT&T Spark – In-Vehicle Wi-Fi

- Tracks the location of the vehicle
- Logs vehicle health
- Impact detection
- Provides in-vehicle Wi-Fi
- Not searchable by VIN

AT&T Wireless

T-Mobile SyncUP DRIVE

- Tracks the location of the vehicle
- Logs vehicle performance
- Provides in-vehicle Wi-Fi
- Not searchable by VIN

MetroPCS Smart Ride – In Vehicle Wi-Fi

T-Mobile

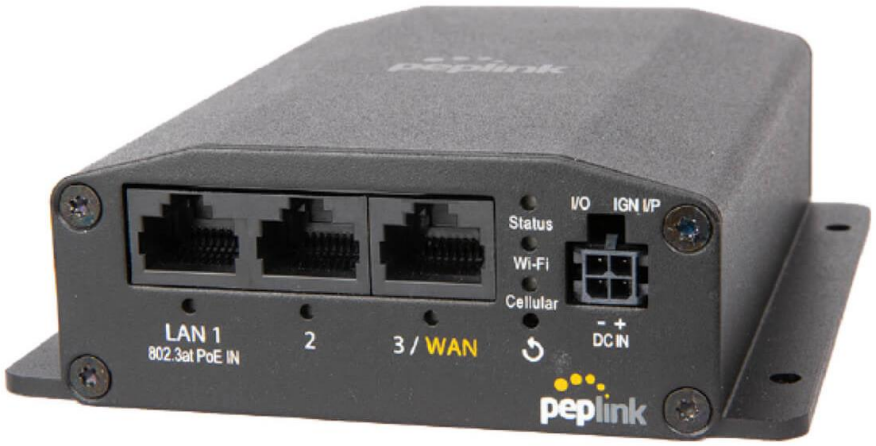
metroPCS.

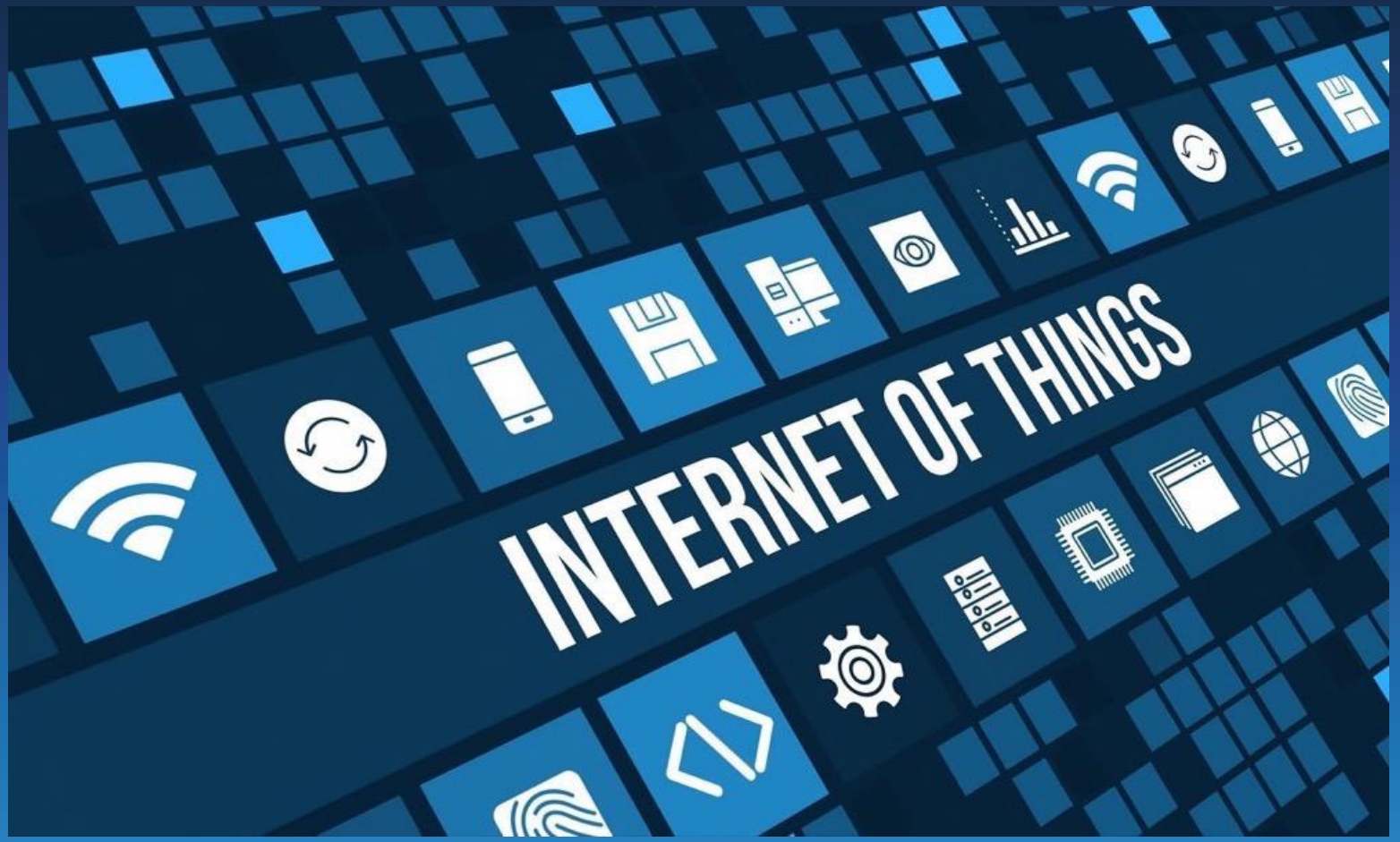
Verizon Vehicle

- Allows non-supported vehicles to have cellular connectivity, Wi-Fi connectivity, and voice calling.
- Plugs into the OBD2 port on the vehicle.
- Not searchable by VIN.

verizonvehicle

There are many versions of cellular based in-vehicle Wi-Fi adapters





Event Data Recorder (Black Box)

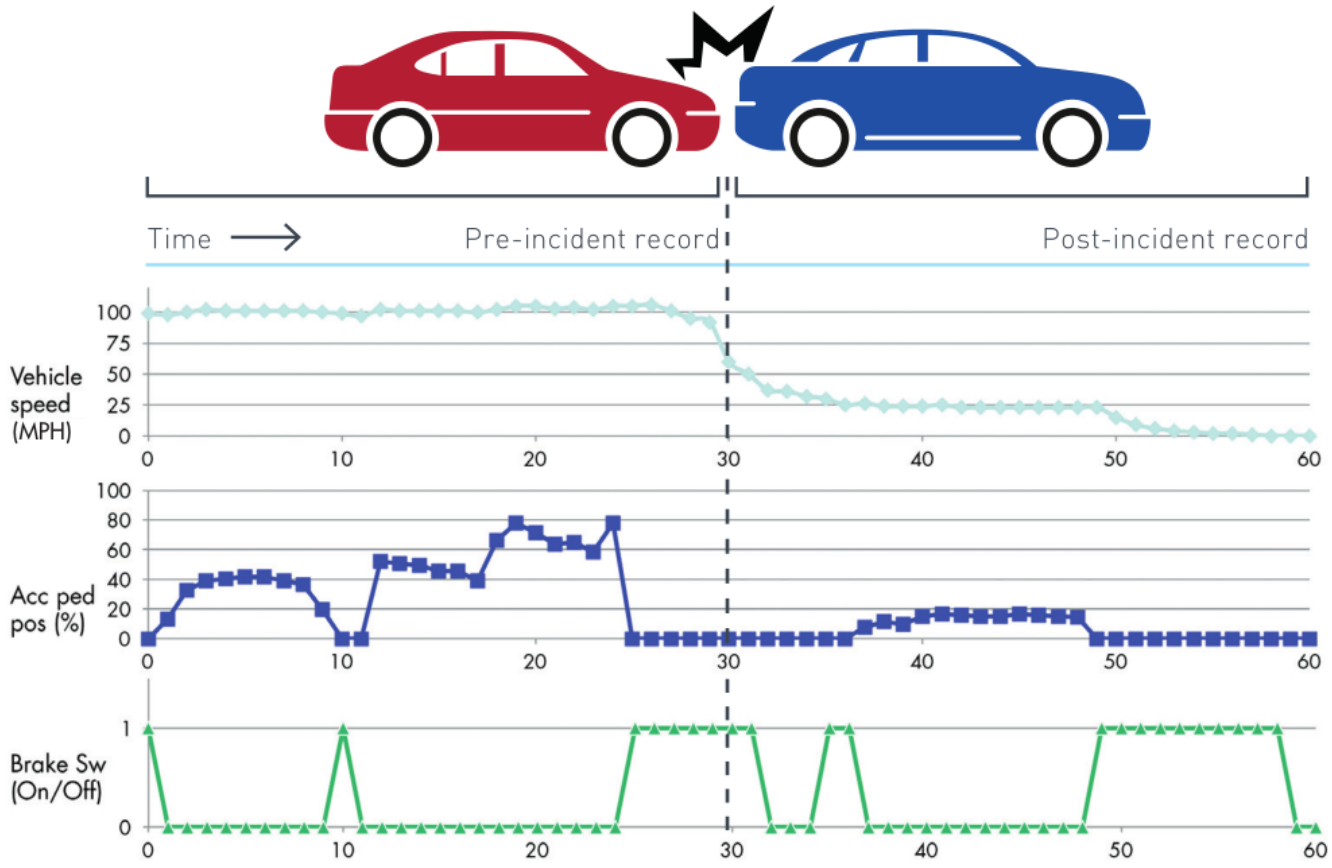
Event Data Recorder (EDR)

- These devices record are intended to only record safety related data when an “event” occurs.
- Some EDRs were installed in vehicles back to 1998 but have never been formally required by NHTSA rules.
- EDRs are voluntarily installed on over 85% of vehicle manufactured today.
- The U.S. federal Driver Privacy Act of 2015 stated that the owner or lessee of a motor vehicle is the owner of the data collected by the EDR.

Event Data Recorder (EDR)

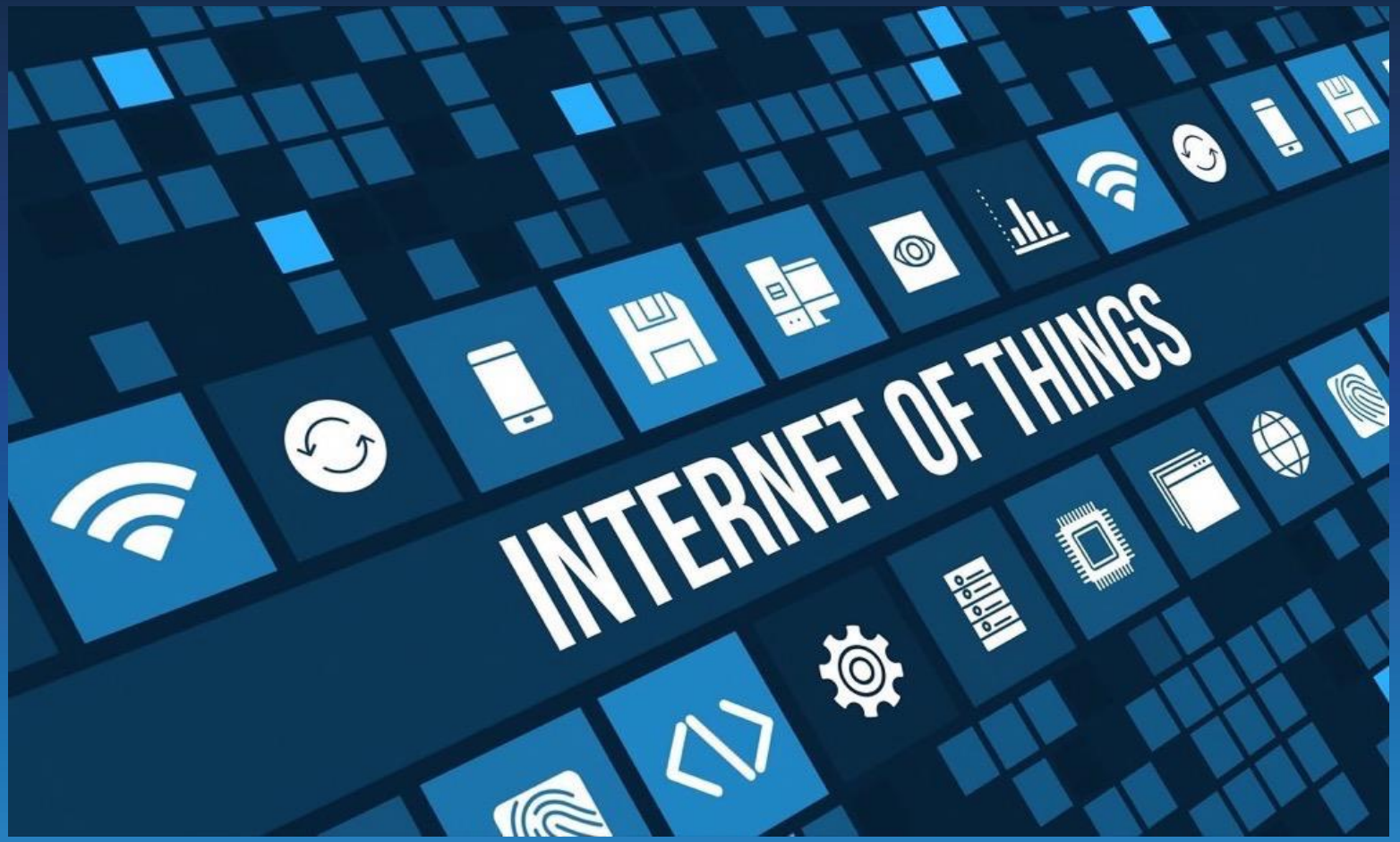
- These devices record various data, such as:
  - Braking Status
  - Speed
  - Steering Angle
  - Seat Belts Buckled or Unbuckled
  - Cruise Control Status
  - Engine Speed / Throttle Position
  - Air Bag Deployment
  - Force of Impact

Usually include about 2 minutes of data and will not include any type of location data.



Event Data Recorder (EDR)

- Downloading of the EDR can be done with specialized equipment and software.
- Contact your State Highway Patrol of the National Highway Traffic Safety Administration (NHTSA) for assistance with downloading EDR data.



Vehicle Digital Forensics

NCJTC National Criminal Justice Training Center *of* Fox Valley Technical College

Vehicle Digital Forensics

BERLA

iVE - Vehicle Digital Forensics for Telematics and Infotainment Systems

Initial Cost: $10,500 + shipping
Annual Renewal: $3,250
Training: $4,500

This is not an endorsement, however Berla is a sole-source provider

Why focus on vehicles?

- We may not have the phone, but even if we do have the phone there are encryption issues.
- We can't always rely on cell site data for precise accuracy. We would normally only have a general area the device was in.
- **Berla can bridge the gap!**

Typical Scenarios

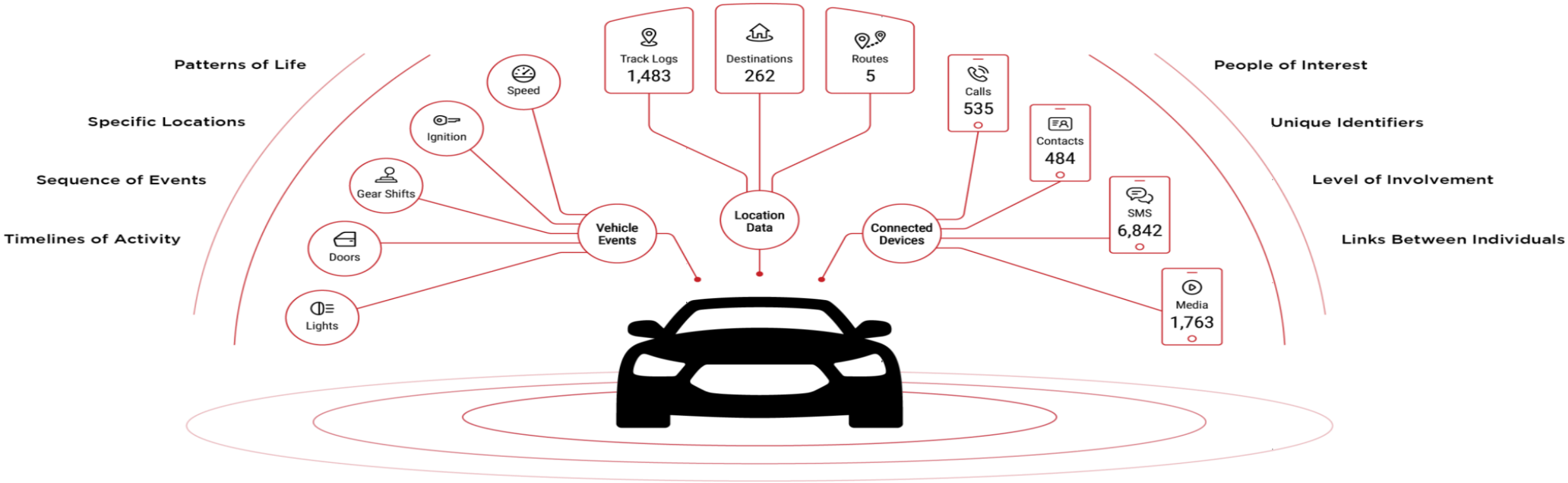
- I know he drives to Atlanta to get his drugs, but I don't know exactly where he goes.

- The suspect drove off and dumped the body but turned off their cell phone.

- The vehicle was involved in a hit and run.

VEHICLES HOLD A VAST AMOUNT OF DATA

VEHICLE DATA CAN BE USED AS KEY EVIDENCE



Infotainment

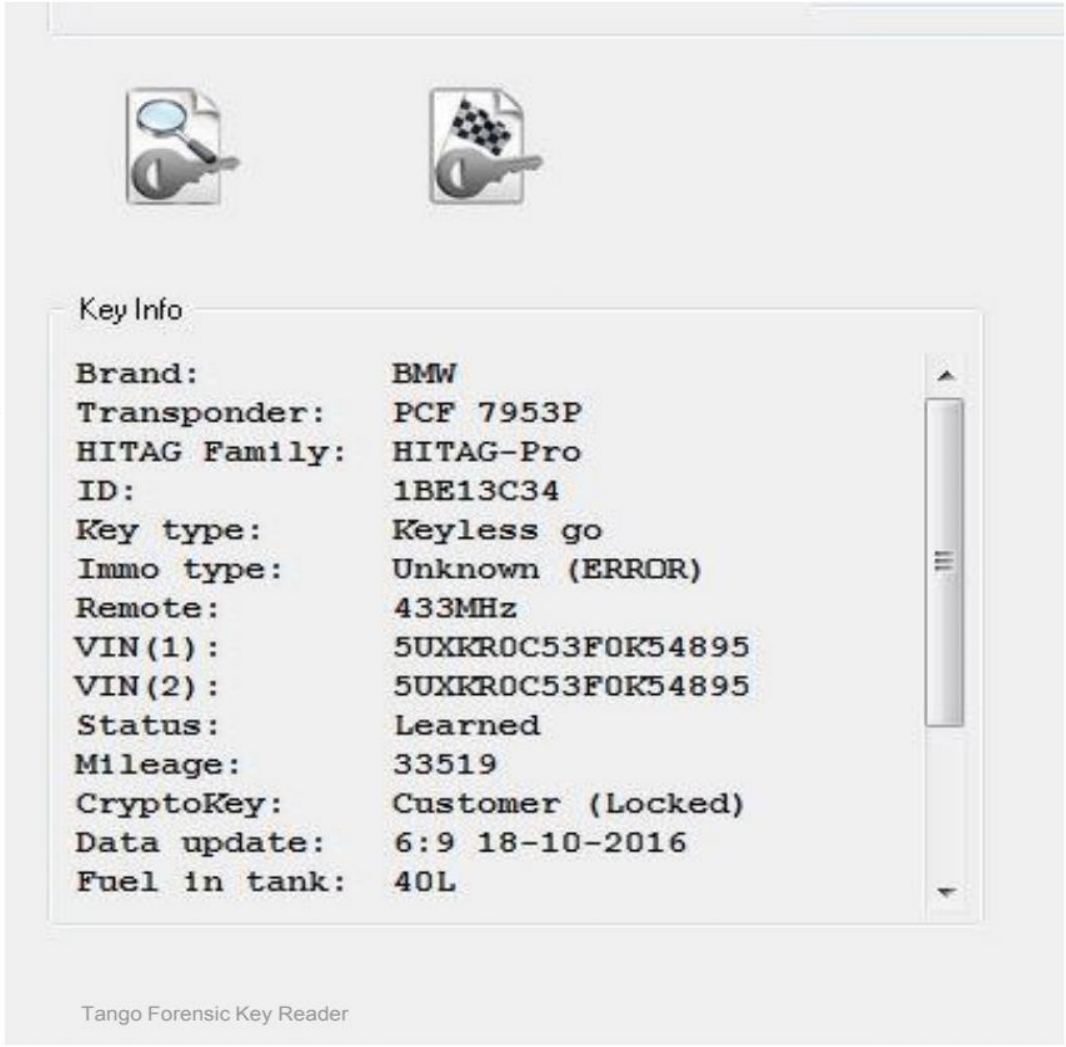
- The combination of information entertainment
- Connects the occupants to their digital world
- Provides information on vehicle performance, schedule maintenance, and current status
- Generally interacts directly with occupants and is main focal point

Telematics

- The integration of telecommunications and information
- Basically wireless connectivity, usually Vehicle to Infrastructure (V2I) or Vehicle to Vehicle (V2V)
- Facilitates requests to/from infotainment system

Key FOB data

- BMW and Audi store the most user data in key fobs
- Brand information, Transponder Type, HITAG Family, Key ID, Key Type, Key Number, Immobilizer Type, Remote Frequency, VIN, Key Status, Vehicle Mileage, CryptoKey, Last Time in Vehicle, Fuel Level, Coolant Temperature, Outside Temperature, Battery Voltage, Exterior Color, Interior Color



Tango Forensic Key Reader

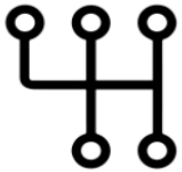
INFORMATION

Connected Devices

Identify devices that have been connected to a vehicle via Wi-Fi, Bluetooth and/or USB, and all of the data associated with those devices

Location Data

Recover location data and navigation information such as tracklogs, saved locations, active routes and previous destinations



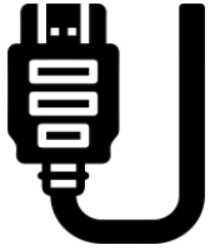
Vehicle Events

See events associated with a vehicle such as doors opening/closing, lights turning on/off, locations and timestamps

METHODS

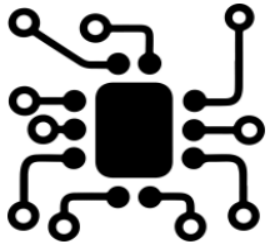
Media

Custom USB cable to connect to one of the USB ports in the center stack of the vehicle



Diagnostic

Diagnostic port located under the steering column or near the driver's side of the dashboard

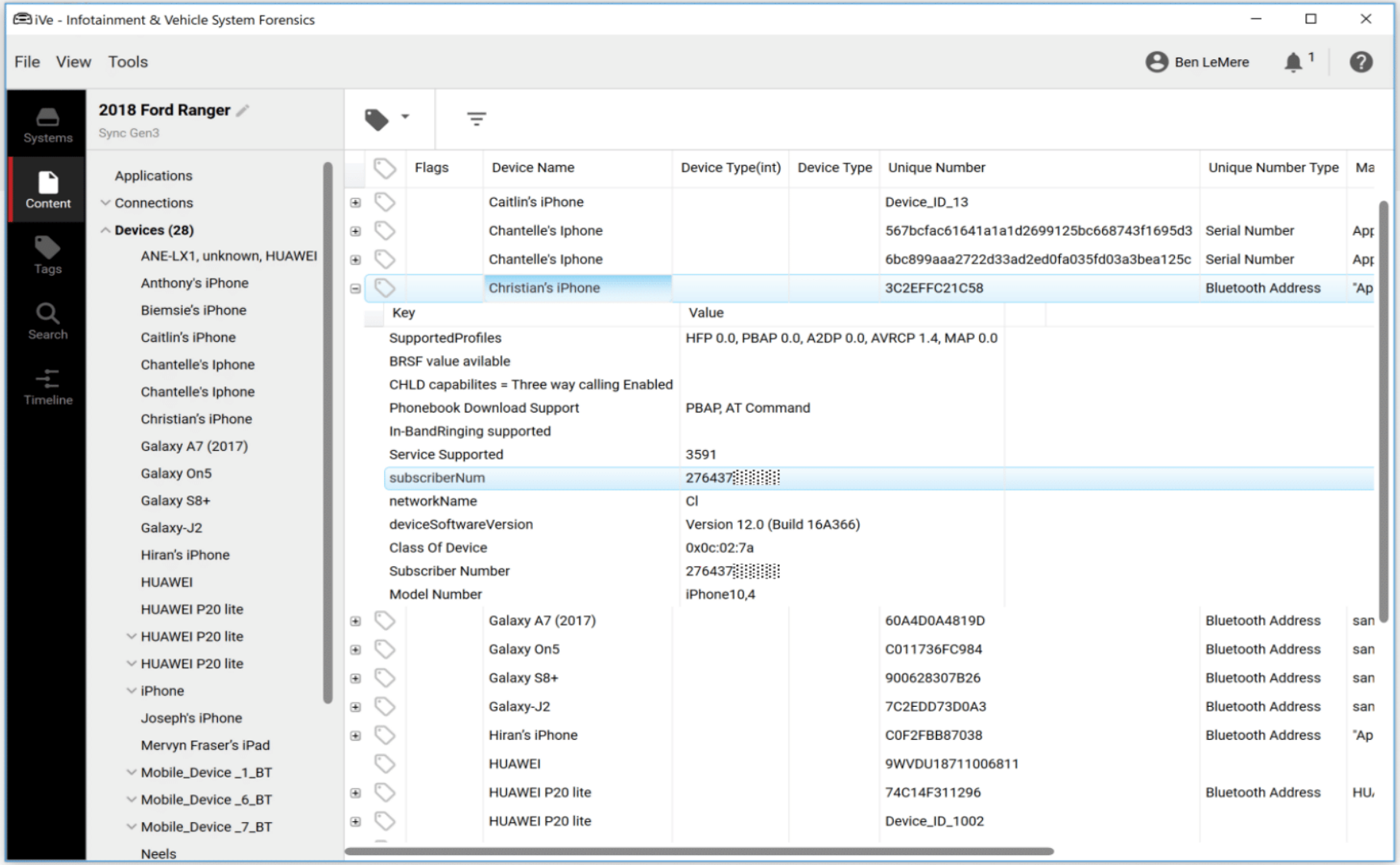


Direct

Remove the target system, disassemble it down to the PCB level and connect directly into it

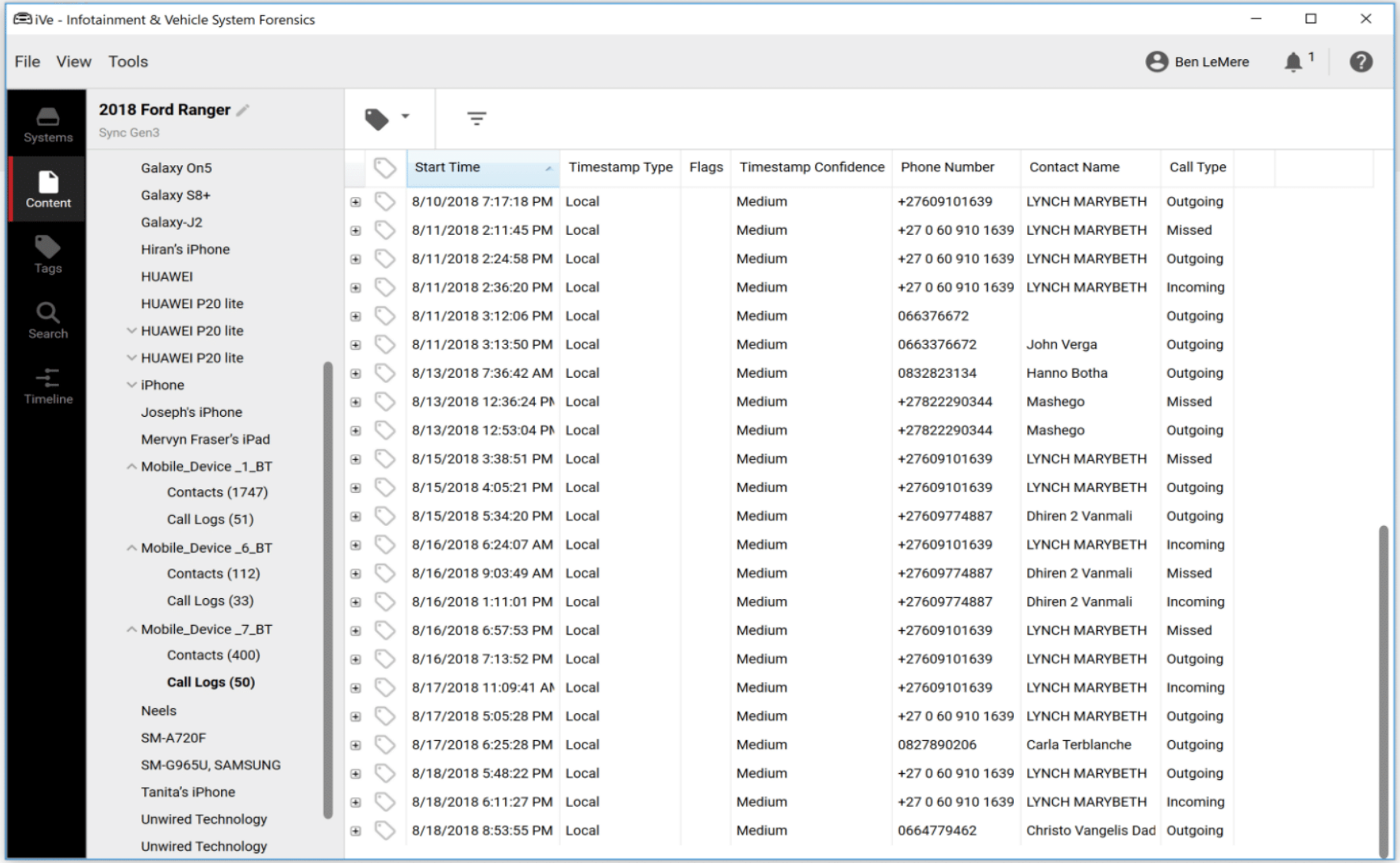
Bluetooth Connections

- BT MAC addresses
- Connection times
- Device phone number
- Phone type
- Phone OS



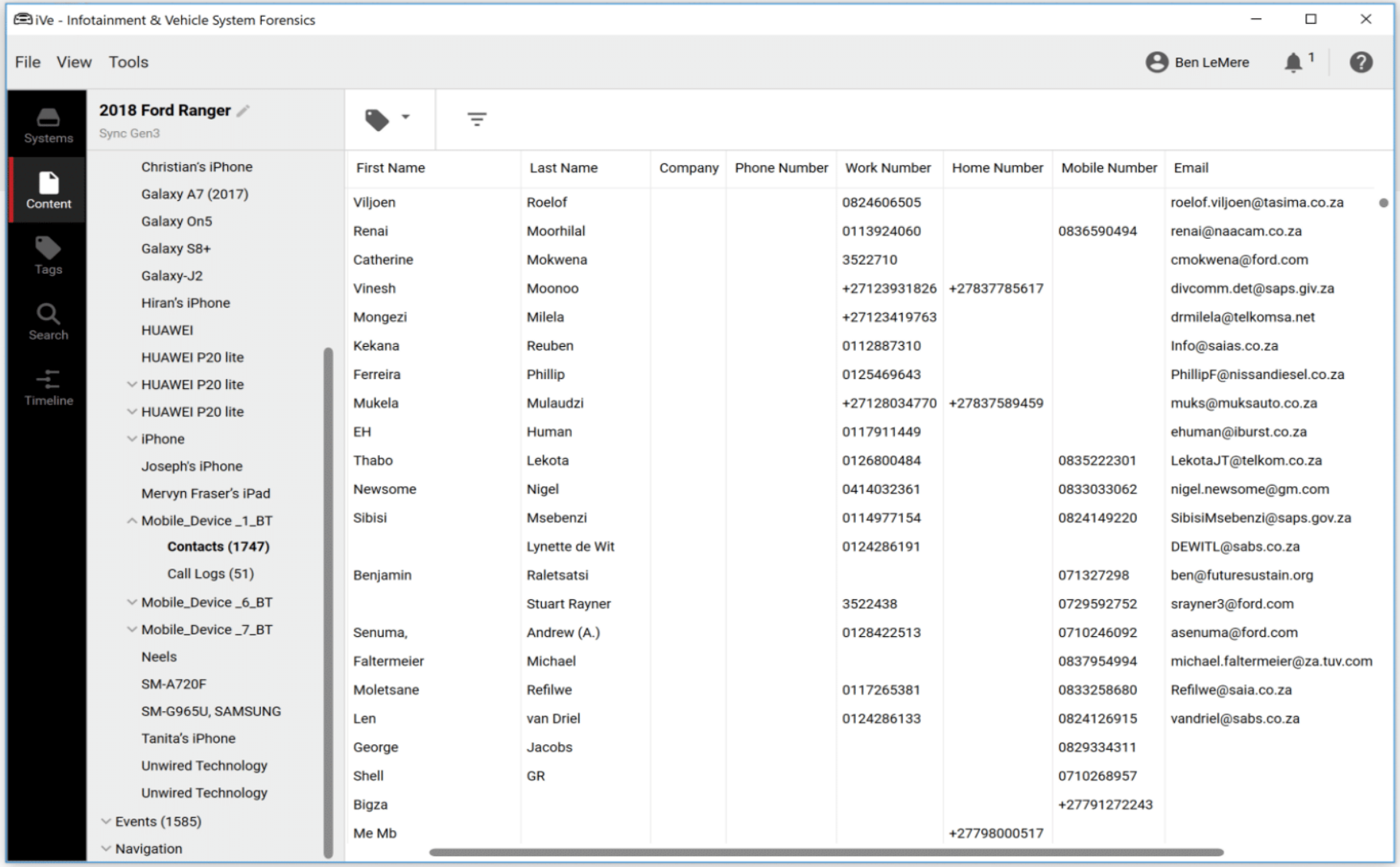
Device Call Logs

- Multiple versions of the call logs are kept from a phone
- Includes incoming outgoing and missed
- Call times normally come from the mobile phone



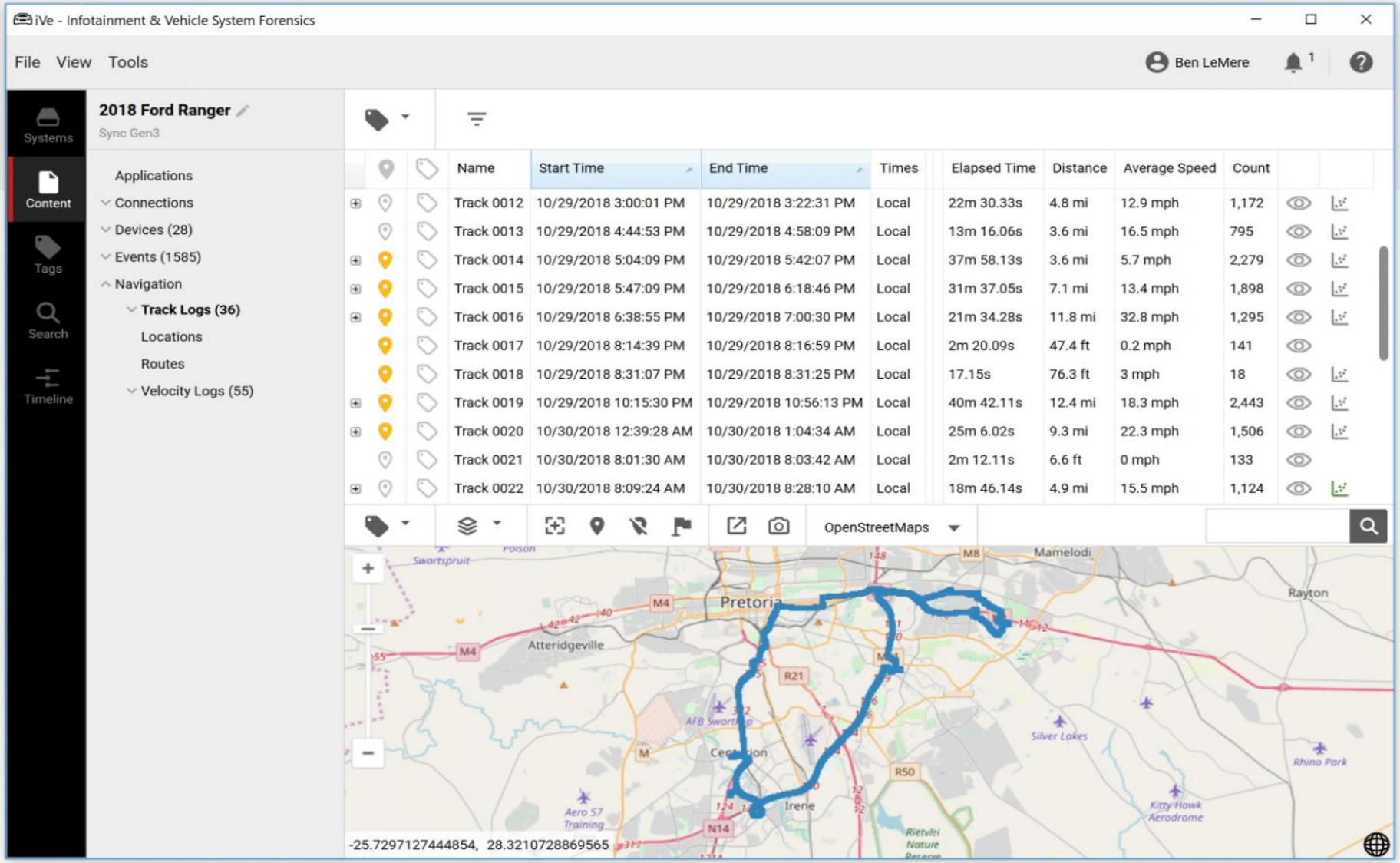
Device Contacts

- Multiple versions of the contact list are kept from phone
- Full contact information downloaded
- Including contact card photos



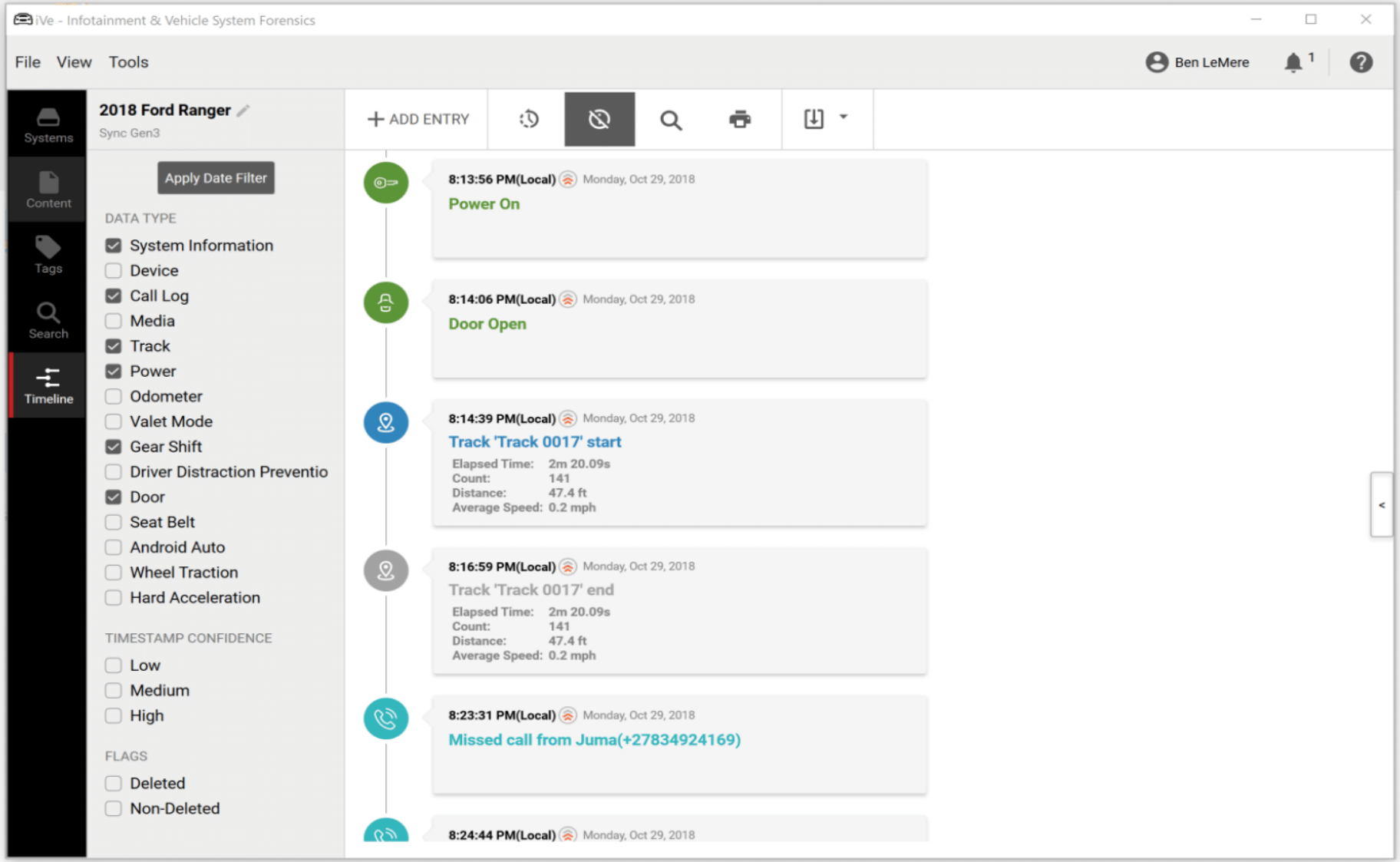
Navigation Tracklogs

- Breadcrumb trail of everywhere the vehicle has been
- Recorded at one-second intervals



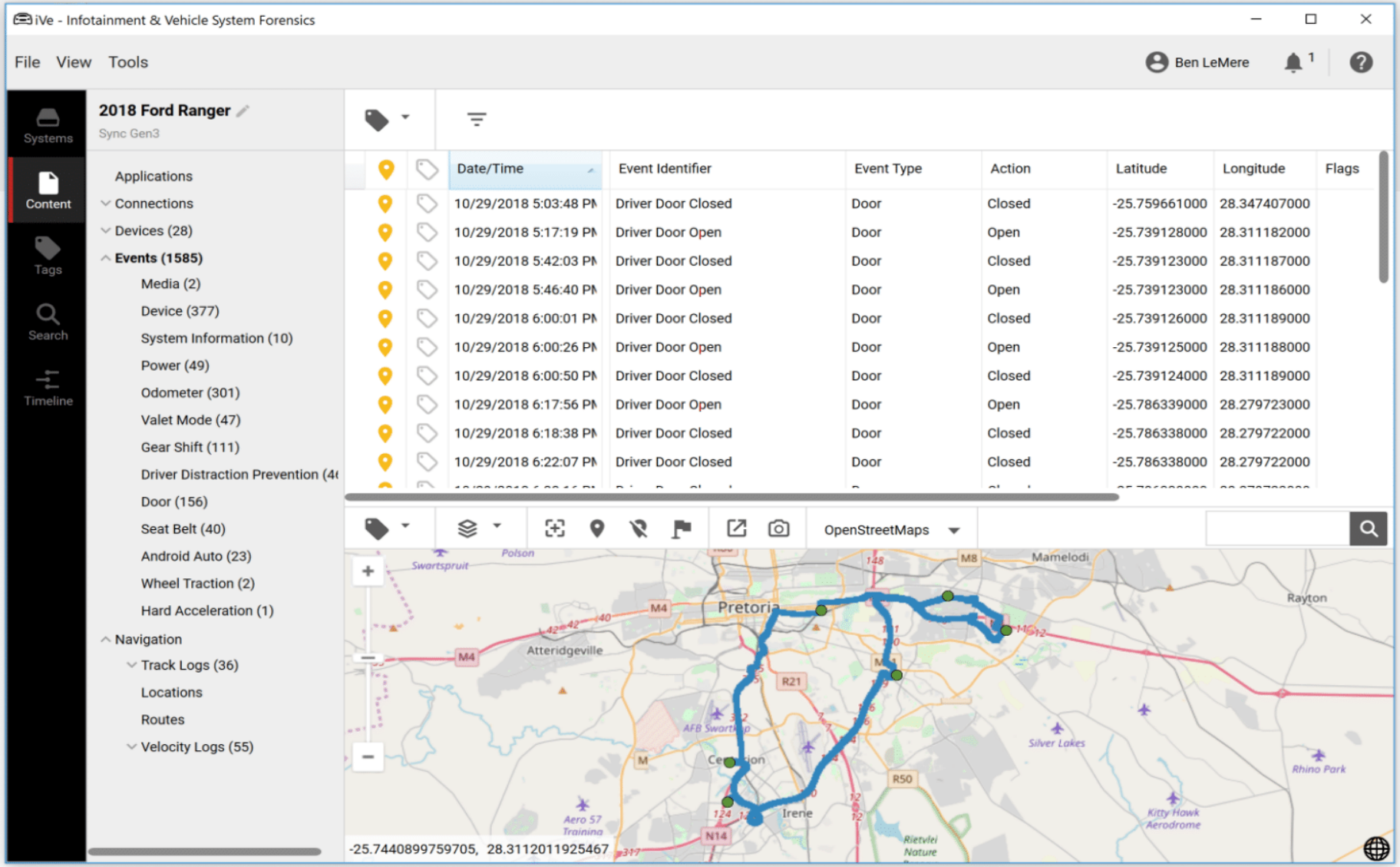
Vehicle Events

- System log files that are recording different events taking place throughout the vehicle
- Examples: doors activity, gear shifts, hard braking, wheel slip, odometer readings, phone calls, system reboots



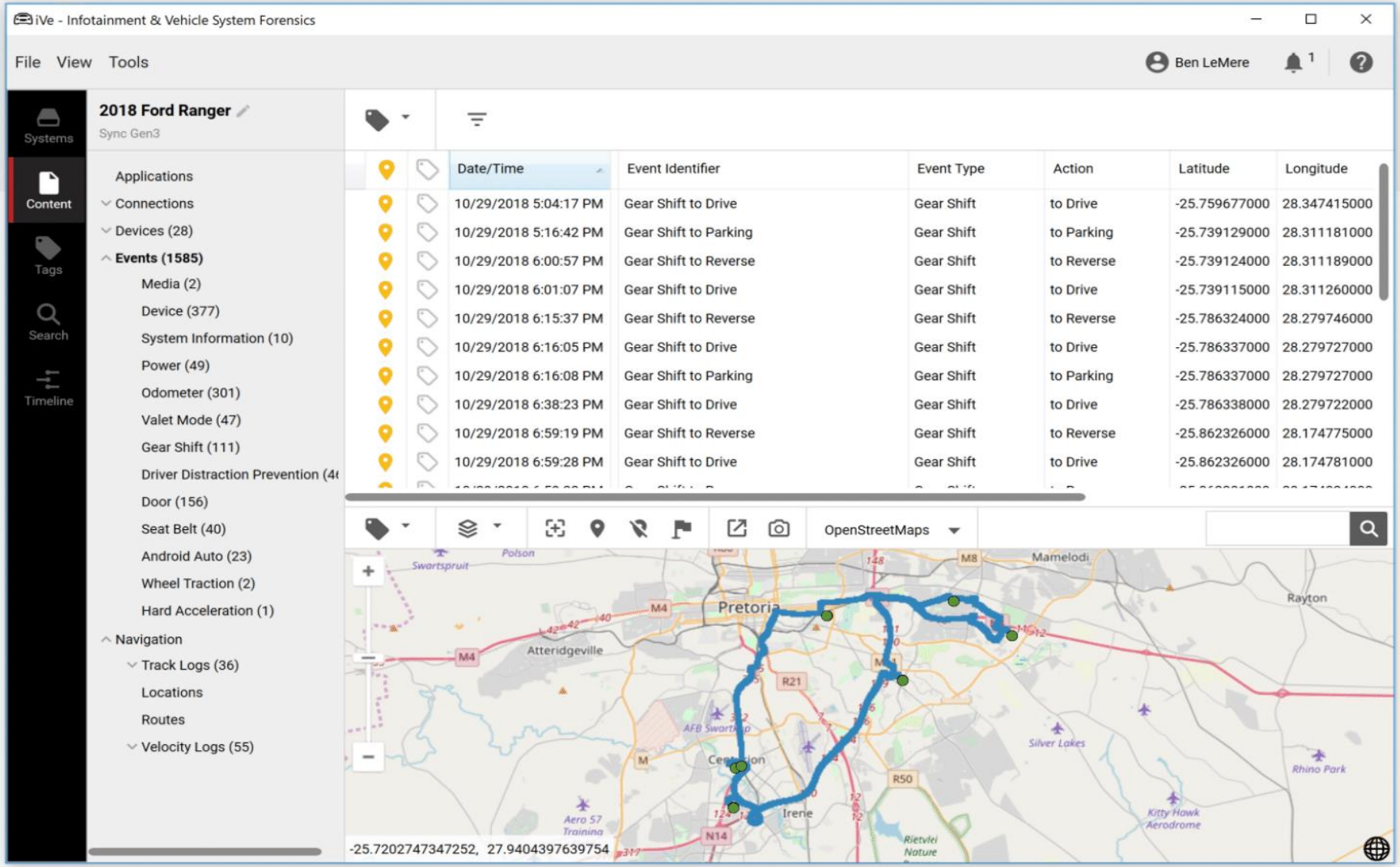
Vehicle Events

- Event type: Doors
- Shows the time and location of which door was opened or closed



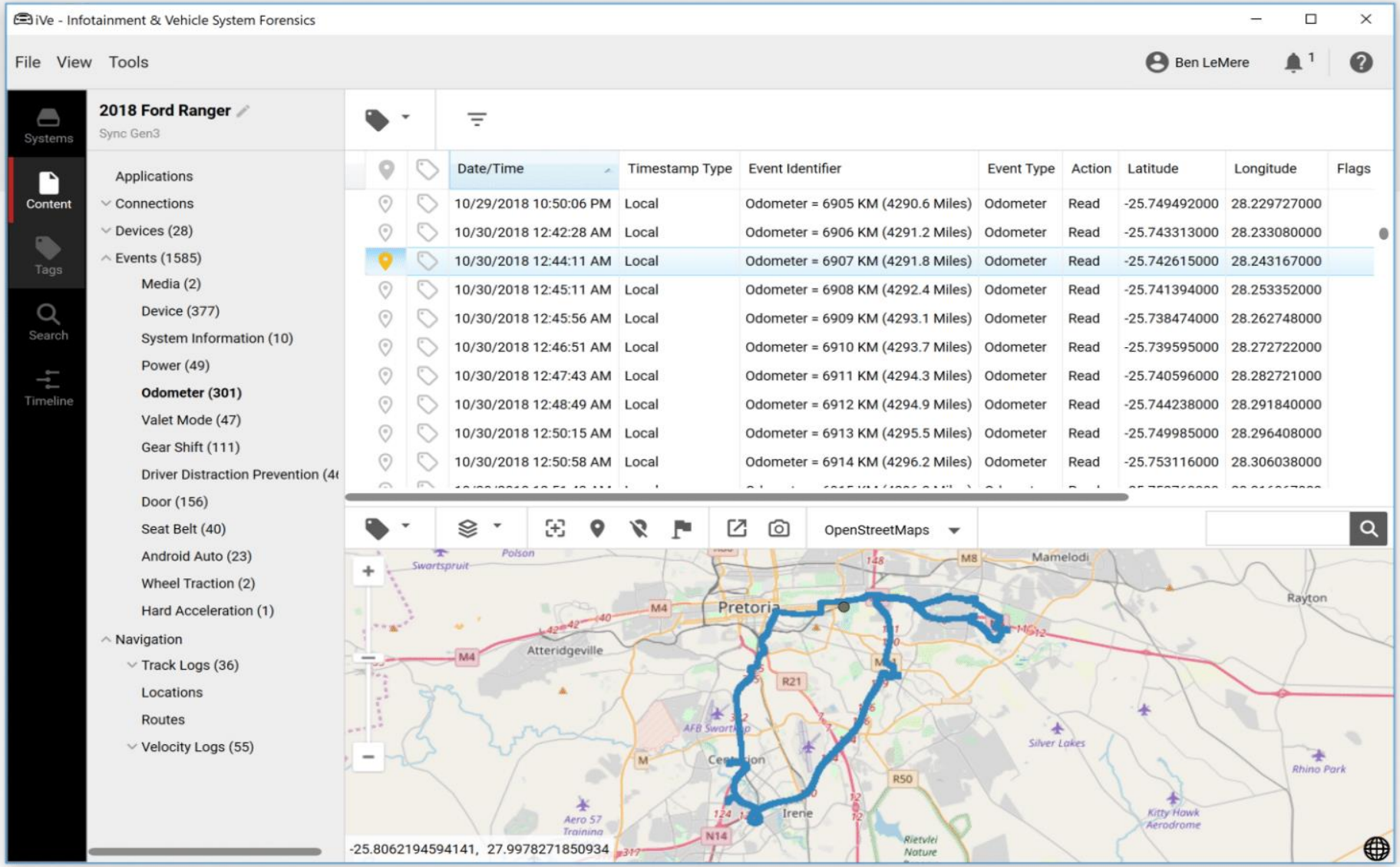
Vehicle Events

- Event type: Gear shifts
- Shows which gear the user shifted the transmission into, along with time and location



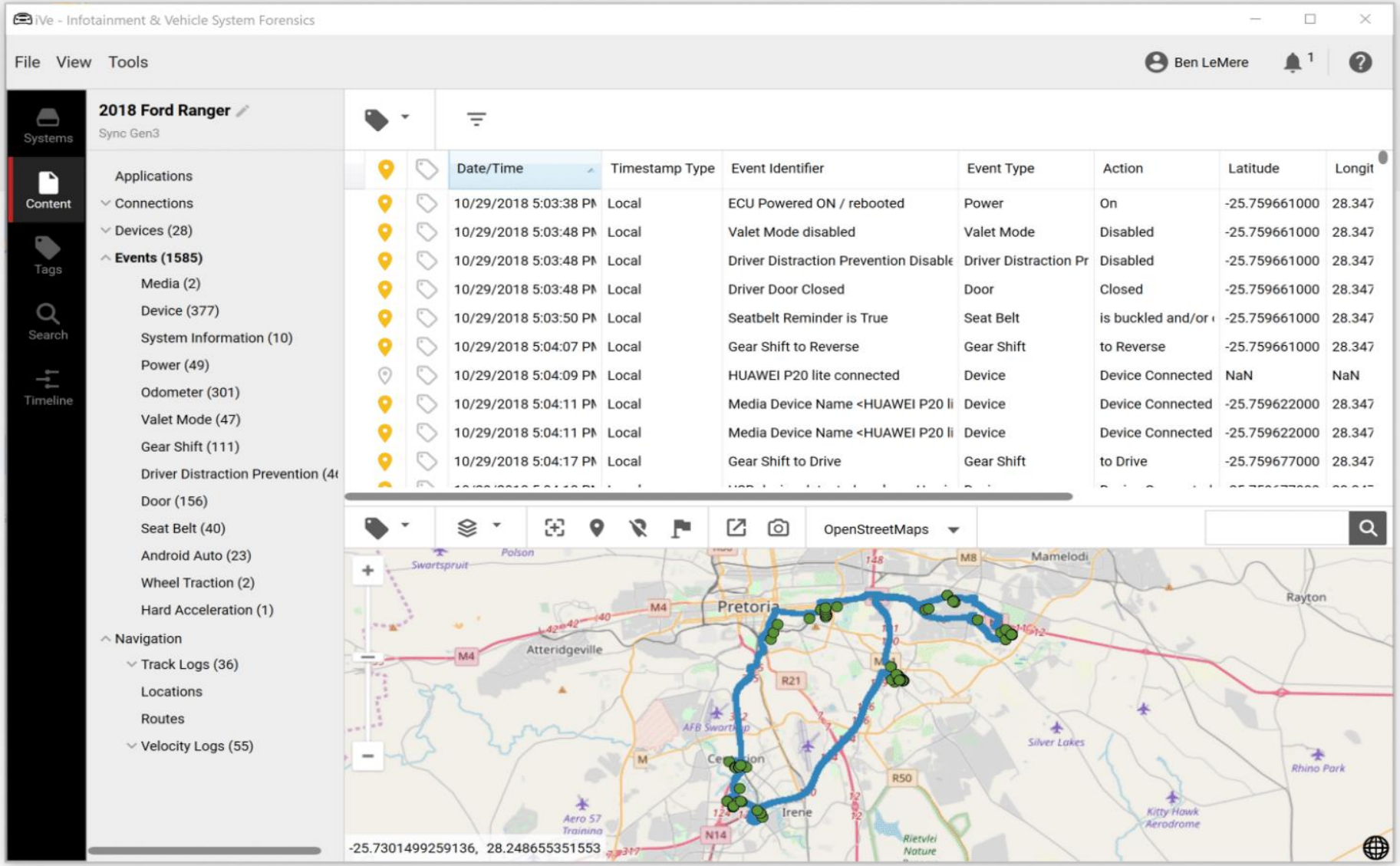
Vehicle Events

- Event type: Odometer Reading
- Shows the time and location for when and where the odometer reading was recorded



Event Patterns

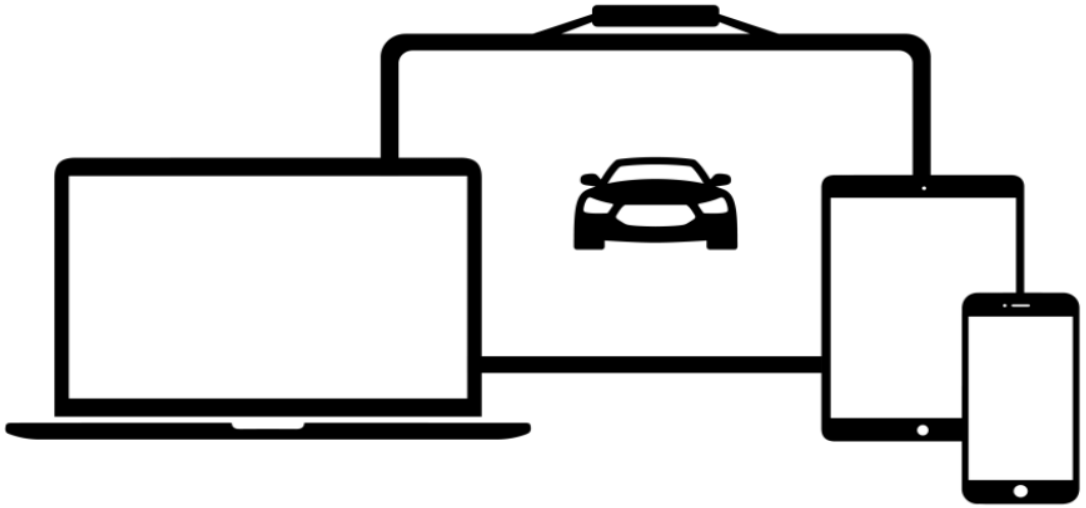
- Combining events and tracklogs allows an examiner to quickly see what happened during a specific trip
- Pattern of life for the vehicle's users can be determined by looking for commonalities



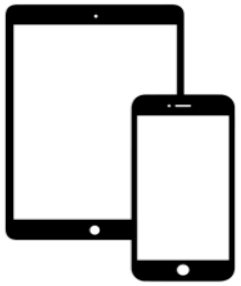
IVE Ecosystem

IVE Ecosystem

- iVe is a collection of tools that support investigators throughout the entire vehicle forensics process
- iVe currently supports the acquisition and analysis of over 14,000 vehicles
- Brand include Audi, BMW, Buick, Cadillac, Chevrolet, Chrysler Citroen, Dodge, FIAT, Ford, GMC, Holden, Hummer, Infiniti, Jeep, Lamborghini, Lexus, Lincoln, Maserati, Mercedes, Mercury, Nissan, Opel, Peugeot, Pontiac, RAM, SRT, Saturn, Seat, Skoda, Toyota and Volkswagen

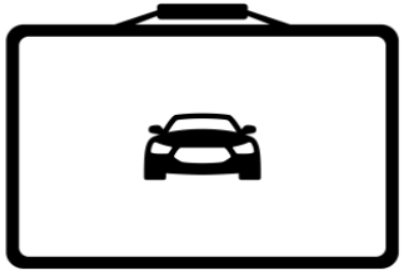


IVE ECOSYSTEM



Mobile Applications

- Vehicle Lookup Tool
- Obtainable Data Types
- Identification Guides
- Removal Walkthroughs
- Acquisition Instructions



Hardware Kit

- Trim Removal Pry Tools
- System Removal Tools
- Device Interface Boards
- System Interface Cables
- Portable Power Supplies

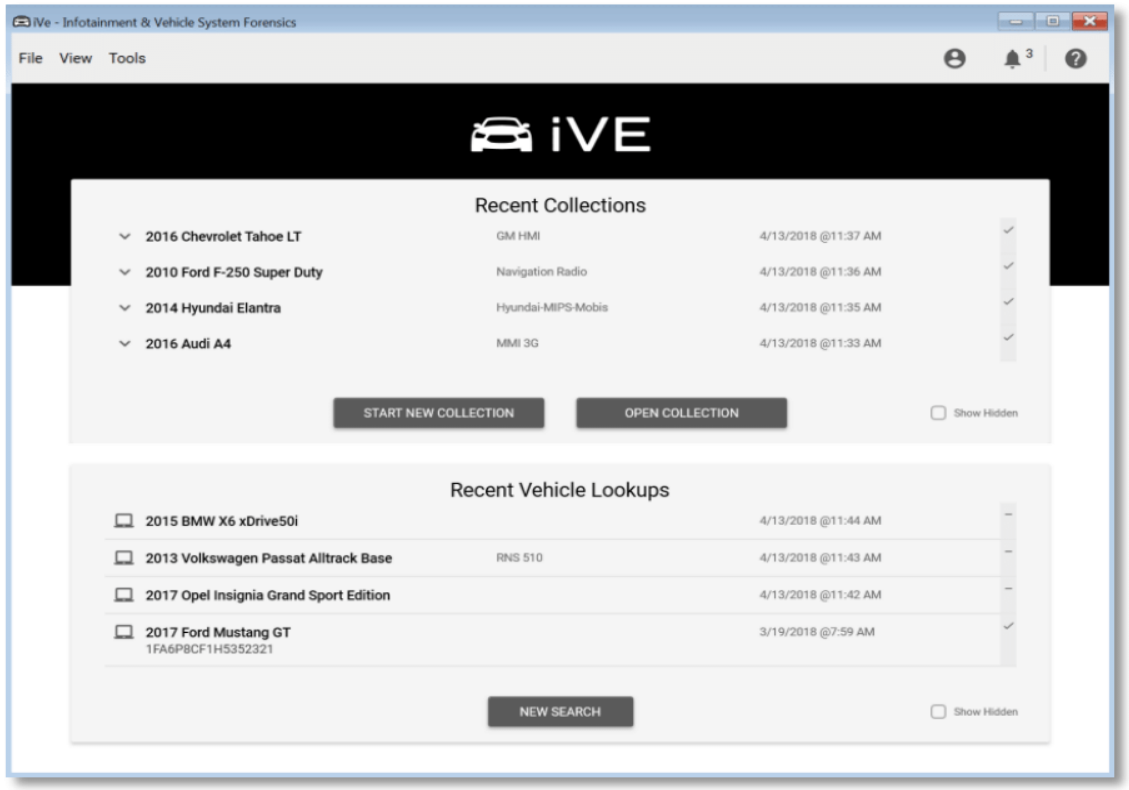
Desktop Software

- Raw Data Analysis Tools
- Advanced Data Parsing
- Custom Report Builder
- Multifaceted Data Filtering
- Complex Search Capabilities

IVE Software

iVe Desktop is a Windows based application. It is the workhorse of the iVe ecosystem and is used for all acquisitions. It is used to parse data, recover deleted information and view raw file systems. iVe Desktop includes a full suite of analysis and reporting tools to include mapping, data export, search, and timeline analysis.

- Raw Data Analysis Tools
- Advanced Data Parsing
- Custom Report Builder
- Multifaceted Data Filtering
- Complex Search Capability



IVE Hardware

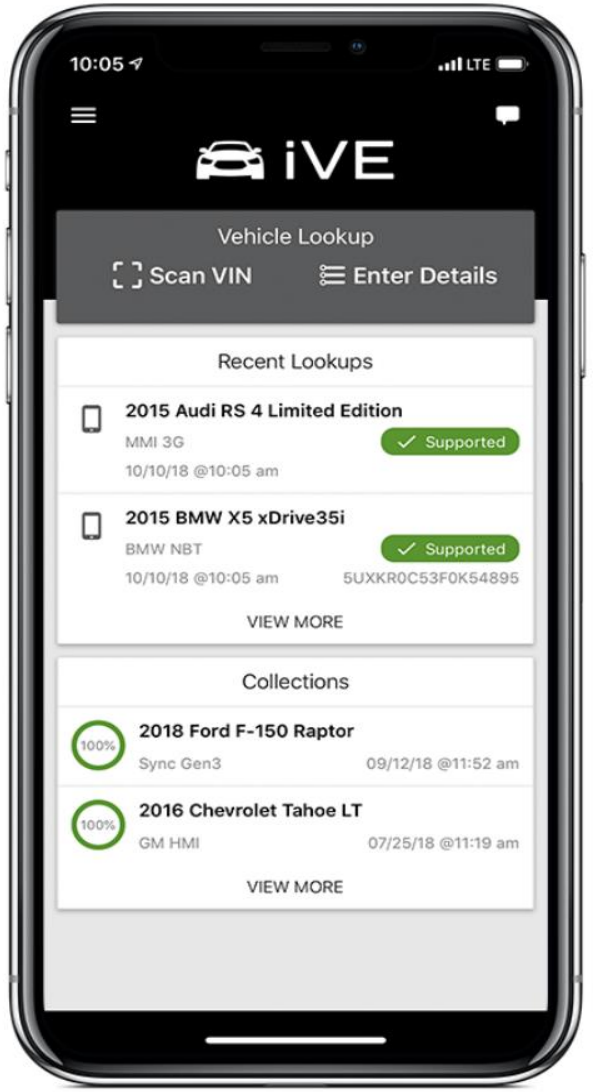
The iVe Toolkit is a collection of specially developed interface boards and cables used to acquire various supported vehicle systems. The toolkit includes tools to help remove the systems from a vehicle when required. The interface boards and cables are used in conjunction with the iVe software to acquire the data.

- Trim Removal Pry Tools
- System Removal Tools
- Device Interface Board
- System Interface Cables
- Portable Power Supplies

IVE Mobile

iVe Mobile allows investigations to identify vehicles supported by iVe, determine which systems are installed, know what data can be retrieved, and how to acquire the data – all prior to taking action. It provides instructions for locating and removing vehicle systems, and it lets investigators monitor the progress of long-running acquisitions

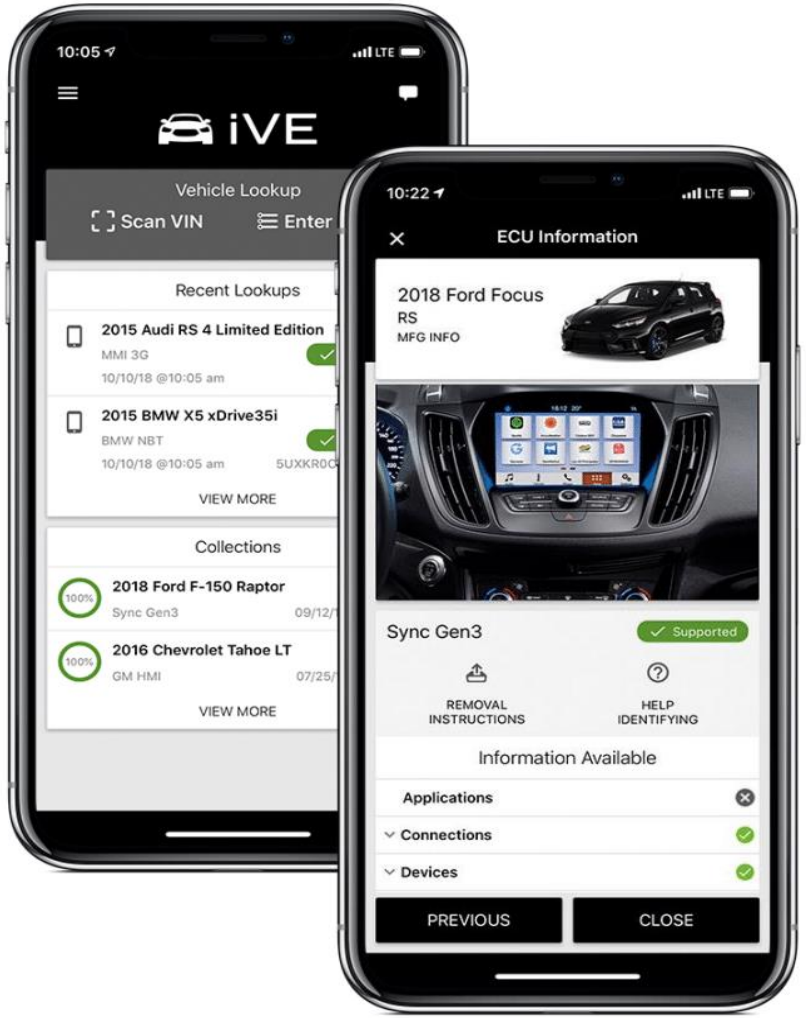
- Supported Vehicle Lookup Tools
- System Identification Guides
- System Removal Instructions
- Available System Data



Getting Started

Download the Mobile App and create an iVe mnAccount to identify supported vehicles and systems in your investigations

Enter Berla or iVe Mobile



Case Study Involving Vehicle Digital Forensics

Vehicular Homicide and Hit-and-Run
July 03, 2018

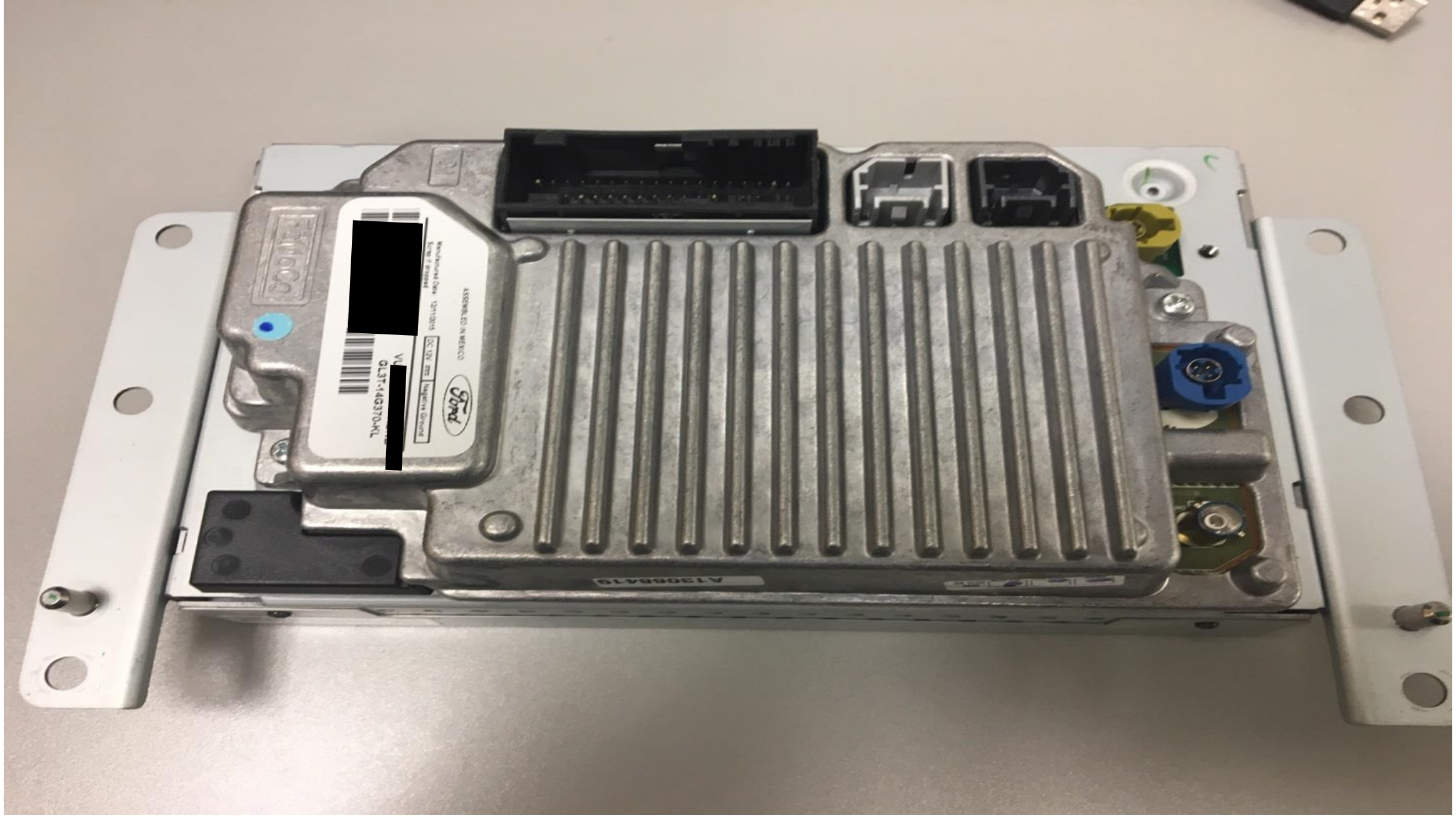
- Two vehicles, fatal head-on collision with suspect fleeing on foot
- One vehicle was on the wrong side of the road (divided highway)
- Roadway evidence
- 911 call
- Call detail records with cell site/sector
- Text message content
- Event data recorder (EDR / black box)
- **District Attorney says "I want more. I want to know where he got on highway going the wrong way."**

Suspect Vehicle – 2016 Ford F-150 Pickup Truck


OFF
PASSENGER AIRBAG
1
2
3
MEDIA
4
5
6
VOL
TUNE
12V
AC 110V
400W MAX
4A
4H
MAX
MAX A/C
A/C
AUTO
DUAL


A13068419


12V
FoMoCo
Ford


[redacted]
[redacted]
GL3T-14G370-KL
ASSEMBLED IN MEXICO
DC 12V
Negative Ground


FLEXTRONICS TECHNOLOGIES MEXICO S DE RL DE CV
ASSEMBLY IN MEXICO
Assy No. GJ5T-14G371-CFC SERIAL No. VUCAXXMA
Manufacture Date: 12/11/2015
FoMoCo


PRESS
HERE


M1F4118500
3
AL-380

Systems
Content
Tags
Search
Timeline

2016 Ford F-150

Sync Gen3

Ford Sync Gen3 (27)
Acquisition Files (2)
File Systems

Name	Group	Value
Database Version	Database	2.0.0
Database Created	Database	9/19/2018 00:41
Application Version	Application	1.11.4
LicenceNumber	Application	2[redacted]
Case Name	Case	2016 Ford F-150
Case Number	Case	
Case Type	Case	Vehicular Homicide
Acquisition Unit	Acquisition	Ford Sync Gen3
Acquisition Location	Acquisition	Hamilton County Sheriff's Office-West Sector
Acquisition Details	Acquisition	Assist Hamilton County DA's Office
Acquisition Date	Driver	9/19/2018 00:41
Manufacturer	Device	Ford
Model	Device	Ford Sync Gen3
Unique Number Type	Device	Serial Number
Unique Number	Device	VUCA[redacted]
Berla SBC Version	Device	1.12.0 03/20/2017
Device storage size	Device	31.3 GB
Vehicle VIN	Device	1FTEW[redacted]
Serial Number	Device	VU[redacted]
Build Number	Device	SYNCGen3.0_1.0.15049_PRODUCT

iVe - Infotainment & Vehicle System Forensics

File View Tools

Ed Merritt 1

Systems Content Tags Search Timeline

2016 Ford F-150
Sync Gen3

- Applications
- Connections
- Devices (36)
- Events (5248)
- Navigation
  - **Track Logs (143)**
    - Breadcrumbs (803)
    - Track 0086 (1)
    - Recovered 0001 (1)
    - Recovered 0002 (4)
    - Recovered 0003 (1)
    - Recovered 0004 (1178)
    - Recovered 0005 (493)
    - Recovered 0006 (42)
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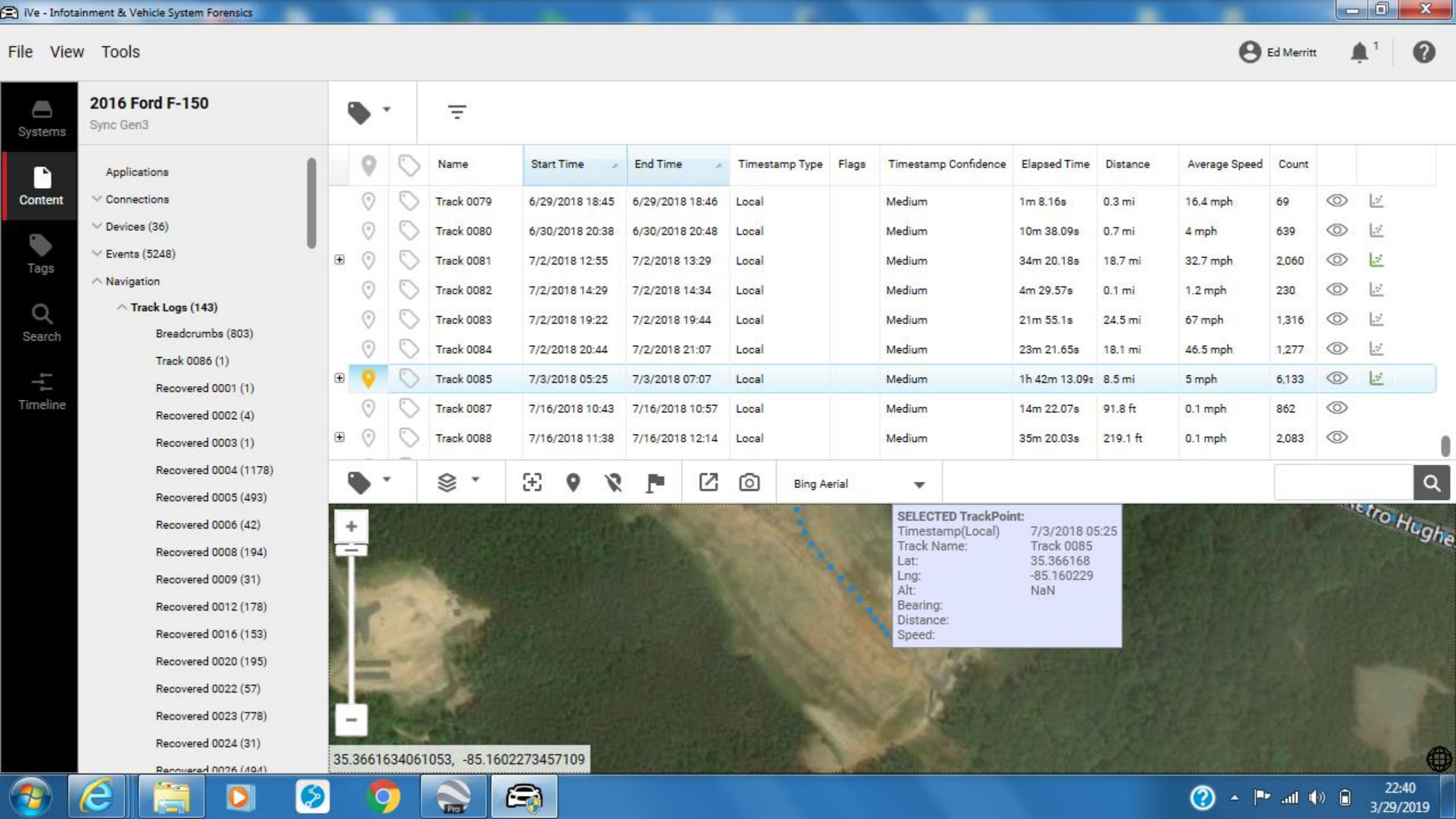
    - Recovered 0020 (195)
    - Recovered 0022 (57)
    - Recovered 0023 (778)
    - Recovered 0024 (31)
    - Recovered 0026 (494)

Name	Start Time	End Time	Timestamp Type	Flags	Timestamp Confidence	Elapsed Time	Distance	Average Speed	Count
Track 0079	6/29/2018 18:45	6/29/2018 18:46	Local		Medium	1m 8.16s	0.3 mi	16.4 mph	69
Track 0080	6/30/2018 20:38	6/30/2018 20:48	Local		Medium	10m 38.09s	0.7 mi	4 mph	639
Track 0081	7/2/2018 12:55	7/2/2018 13:29	Local		Medium	34m 20.18s	18.7 mi	32.7 mph	2,060
Track 0082	7/2/2018 14:29	7/2/2018 14:34	Local		Medium	4m 29.57s	0.1 mi	1.2 mph	230
Track 0083	7/2/2018 19:22	7/2/2018 19:44	Local		Medium	21m 55.1s	24.5 mi	67 mph	1,316
Track 0084	7/2/2018 20:44	7/2/2018 21:07	Local		Medium	23m 21.65s	18.1 mi	46.5 mph	1,277
Track 0085	7/3/2018 05:25	7/3/2018 07:07	Local		Medium	1h 42m 13.09s	8.5 mi	5 mph	6,133
Track 0087	7/16/2018 10:43	7/16/2018 10:57	Local		Medium	14m 22.07s	91.8 ft	0.1 mph	862
Track 0088	7/16/2018 11:38	7/16/2018 12:14	Local		Medium	35m 20.03s	219.1 ft	0.1 mph	2,083

Bing Aerial

22:38
3/29/2019


iVe - Infotainment & Vehicle System Forensics
File View Tools
Ed Merritt
Systems
Content
Tags
Search
Timeline
2016 Ford F-150
Sync Gen3
Applications
Connections
Devices (36)
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End Time
Timestamp Type
Flags
Timestamp Confidence
Elapsed Time
Distance
Average Speed
Count
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Track 0080 6/30/2018 20:38 6/30/2018 20:48 Local Medium 10m 38.09s 0.7 mi 4 mph 639
Track 0081 7/2/2018 12:55 7/2/2018 13:29 Local Medium 34m 20.18s 18.7 mi 32.7 mph 2,060
Track 0082 7/2/2018 14:29 7/2/2018 14:34 Local Medium 4m 29.57s 0.1 mi 1.2 mph 230
Track 0083 7/2/2018 19:22 7/2/2018 19:44 Local Medium 21m 55.1s 24.5 mi 67 mph 1,316
Track 0084 7/2/2018 20:44 7/2/2018 21:07 Local Medium 23m 21.65s 18.1 mi 46.5 mph 1,277
Track 0085 7/3/2018 05:25 7/3/2018 07:07 Local Medium 1h 42m 13.09s 8.5 mi 5 mph 6,133
Track 0087 7/16/2018 10:43 7/16/2018 10:57 Local Medium 14m 22.07s 91.8 ft 0.1 mph 862
Track 0088 7/16/2018 11:38 7/16/2018 12:14 Local Medium 35m 20.03s 219.1 ft 0.1 mph 2,083
Bing Aerial
SELECTED TrackPoint:
Timestamp(Local) 7/3/2018 05:25
Track Name: Track 0085
Lat: 35.366168
Lng: -85.160229
Alt: NaN
Bearing:
Distance:
Speed:
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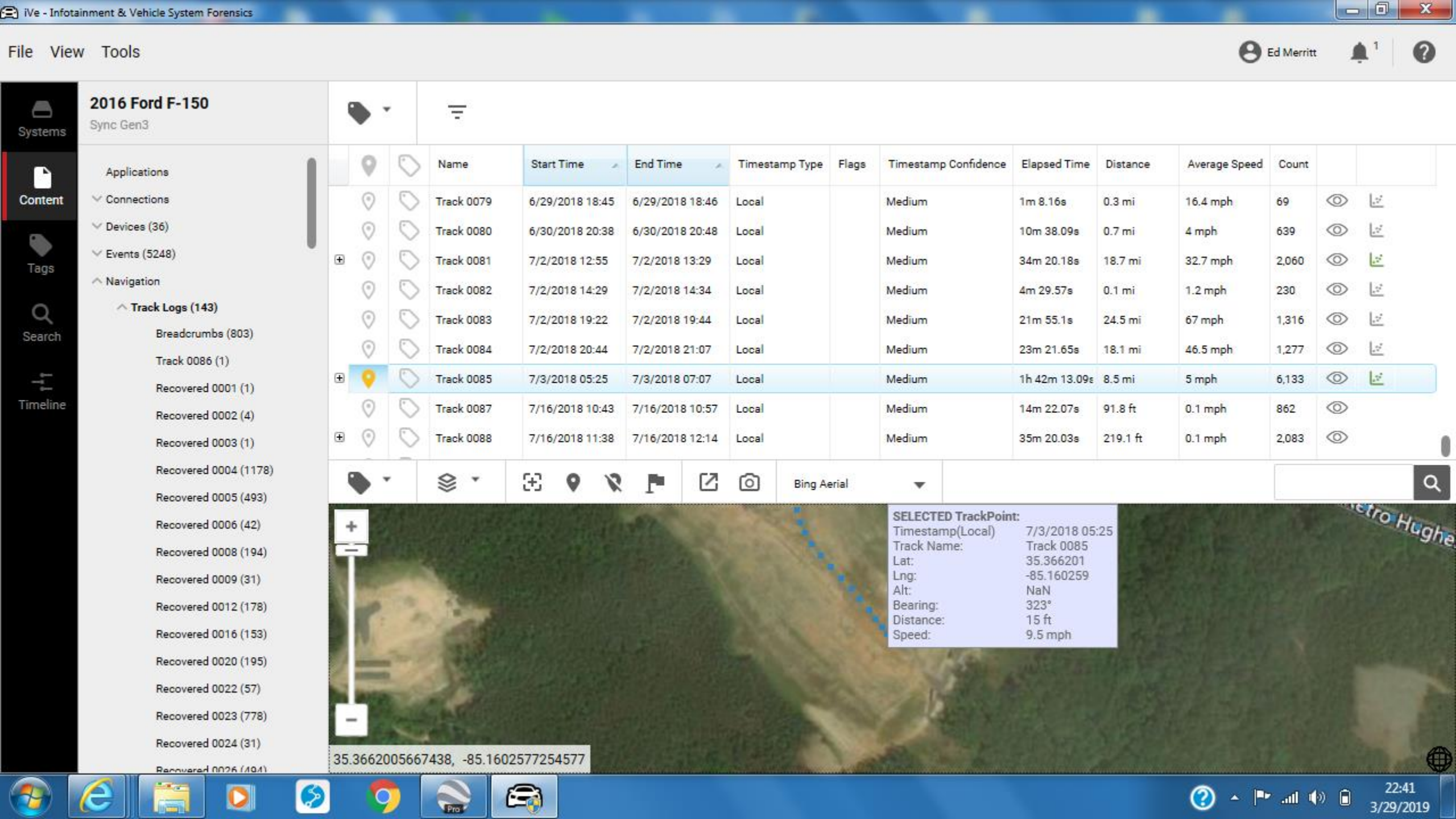
22:40
3/29/2019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Track 0088 7/16/2018 11:38 7/16/2018 12:14 Local Medium 35m 20.03s 219.1 ft 0.1 mph 2,083
Bing Aerial
SELECTED TrackPoint:
Timestamp(Local) 7/3/2018 05:25
Track Name: Track 0085
Lat: 35.366201
Lng: -85.160259
Alt: NaN
Bearing: 323°
Distance: 15 ft
Speed: 9.5 mph
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22:41
3/29/2019

iVe - Infotainment & Vehicle System Forensics

File View Tools

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Systems Content Tags Search Timeline

2016 Ford F-150
Sync Gen3

- Applications
- Connections
- Devices (36)
- Events (5248)
- Navigation
  - **Track Logs (143)**
    - Breadcrumbs (803)
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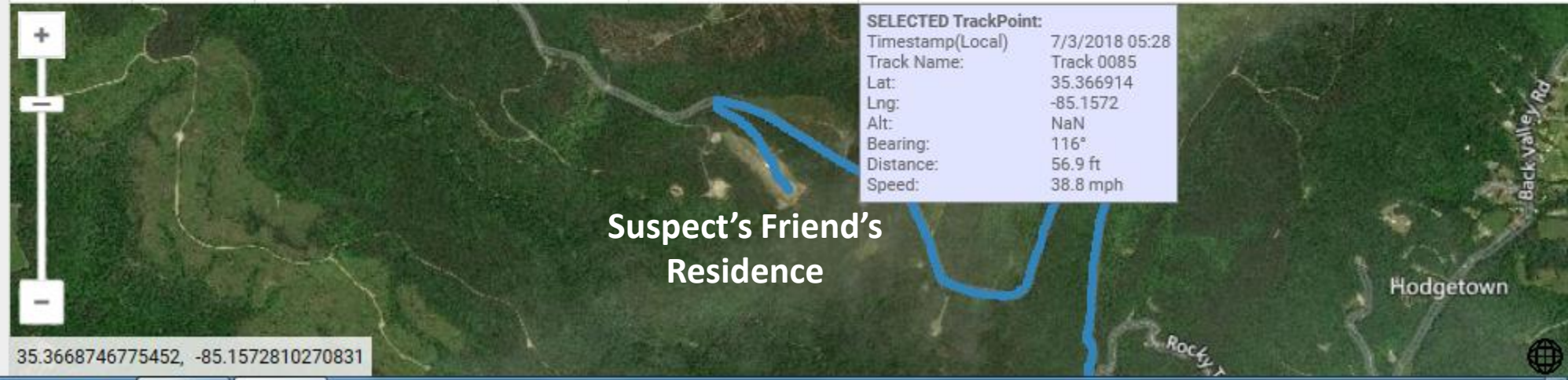
Bing Aerial



22:42
3/29/2019

iVe - Infotainment & Vehicle System Forensics

File View Tools

Ed Merritt 1

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Sync Gen3

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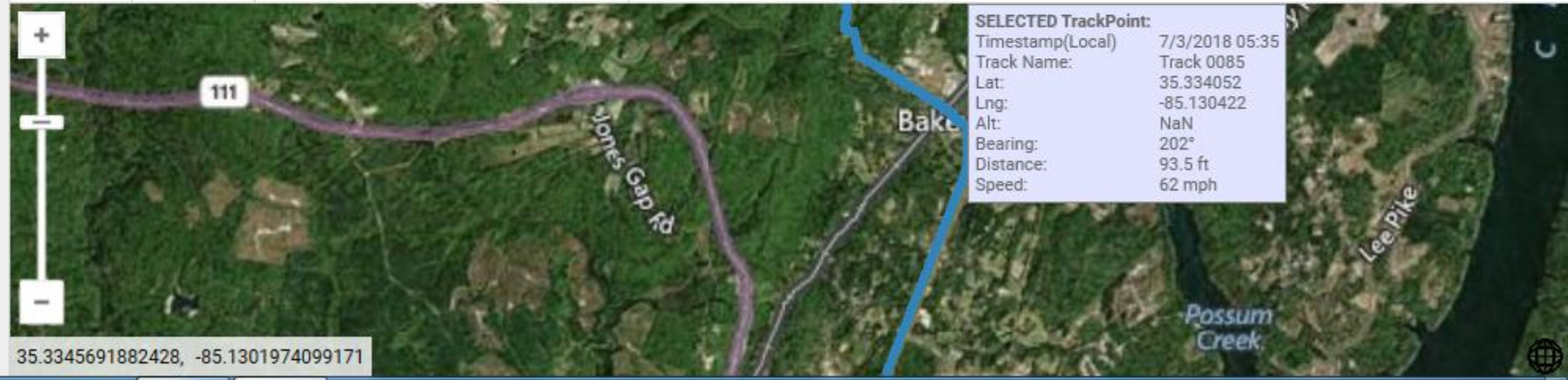
Bing Aerial



22:44
3/29/2019

iVe - Infotainment & Vehicle System Forensics

File View Tools

Ed Merritt 1

Systems Content Tags Search Timeline

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Sync Gen3

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Track 0082	7/2/2018 14:29	7/2/2018 14:34	Local		Medium	4m 29.57s	0.1 mi	1.2 mph	230
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Track 0088	7/16/2018 11:38	7/16/2018 12:14	Local		Medium	35m 20.03s	219.1 ft	0.1 mph	2,083

Bing Aerial

35.301950422484, -85.1674302302756

22:45
3/29/2019

iVe - Infotainment & Vehicle System Forensics

File View Tools

Ed Merritt 1

Systems Content Tags Search Timeline

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Name	Start Time	End Time	Timestamp Type	Flags	Timestamp Confidence	Elapsed Time	Distance	Average Speed	Count
Track 0079	6/29/2018 18:45	6/29/2018 18:46	Local		Medium	1m 8.16s	0.3 mi	16.4 mph	69
Track 0080	6/30/2018 20:38	6/30/2018 20:48	Local		Medium	10m 38.09s	0.7 mi	4 mph	639
Track 0081	7/2/2018 12:55	7/2/2018 13:29	Local		Medium	34m 20.18s	18.7 mi	32.7 mph	2,060
Track 0082	7/2/2018 14:29	7/2/2018 14:34	Local		Medium	4m 29.57s	0.1 mi	1.2 mph	230
Track 0083	7/2/2018 19:22	7/2/2018 19:44	Local		Medium	21m 55.1s	24.5 mi	67 mph	1,316
Track 0084	7/2/2018 20:44	7/2/2018 21:07	Local		Medium	23m 21.65s	18.1 mi	46.5 mph	1,277
Track 0085	7/3/2018 05:25	7/3/2018 07:07	Local		Medium	1h 42m 13.09s	8.5 mi	5 mph	6,133
Track 0087	7/16/2018 10:43	7/16/2018 10:57	Local		Medium	14m 22.07s	91.8 ft	0.1 mph	862
Track 0088	7/16/2018 11:38	7/16/2018 12:14	Local		Medium	35m 20.03s	219.1 ft	0.1 mph	2,083

Bing Aerial

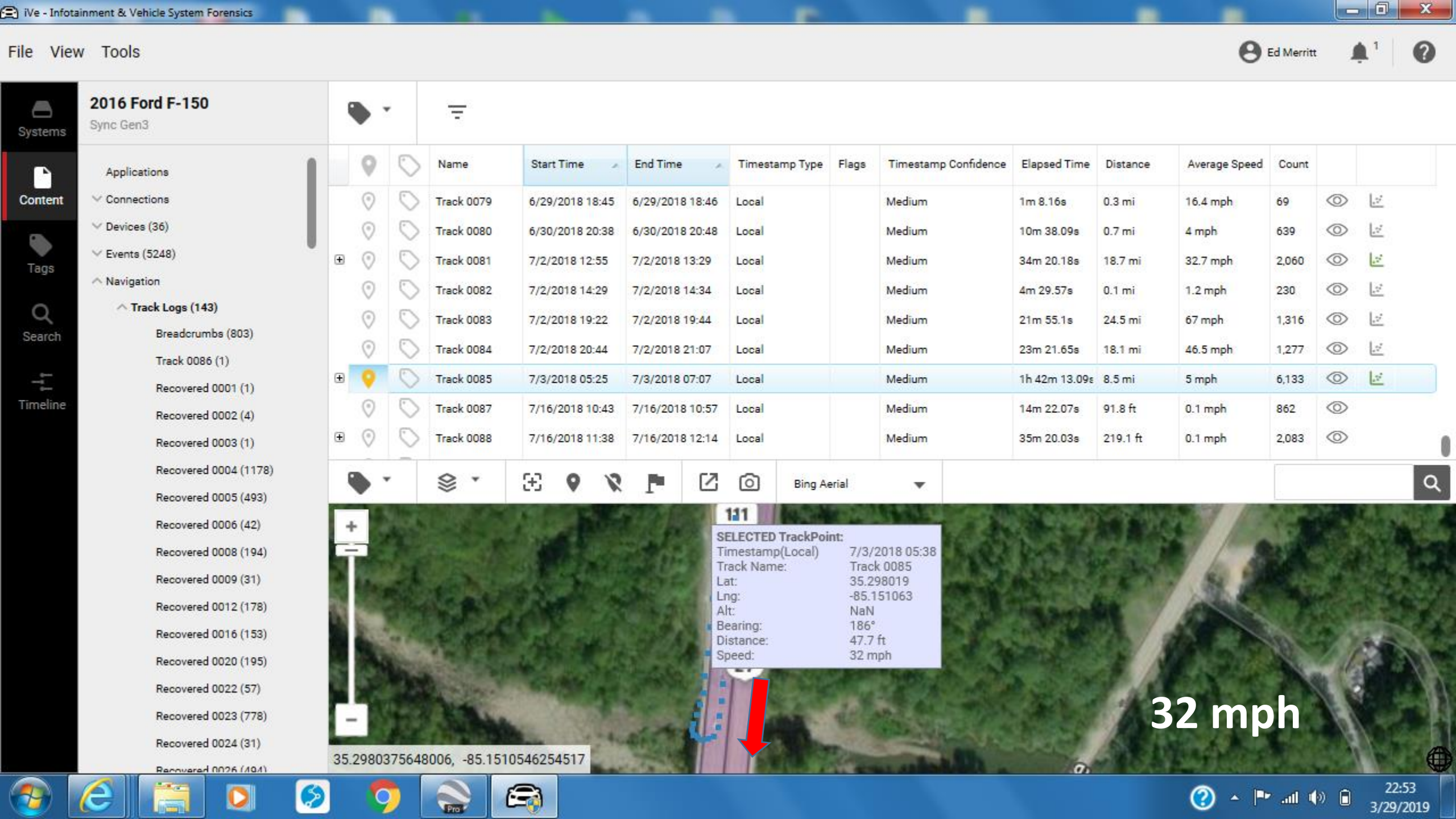
SELECTED TrackPoint:

Timestamp(Local)	7/3/2018 05:37
Track Name:	Track 0085
Lat:	35.300456
Lng:	-85.15118
Alt:	NaN
Bearing:	174°
Distance:	91.3 ft
Speed:	60.5 mph

60.5 mph

35.300463828431, -85.1511659204858

22:46
3/29/2019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Breadcrumbs (803)
Track 0086 (1)
Recovered 0001 (1)
Recovered 0002 (4)
Recovered 0003 (1)
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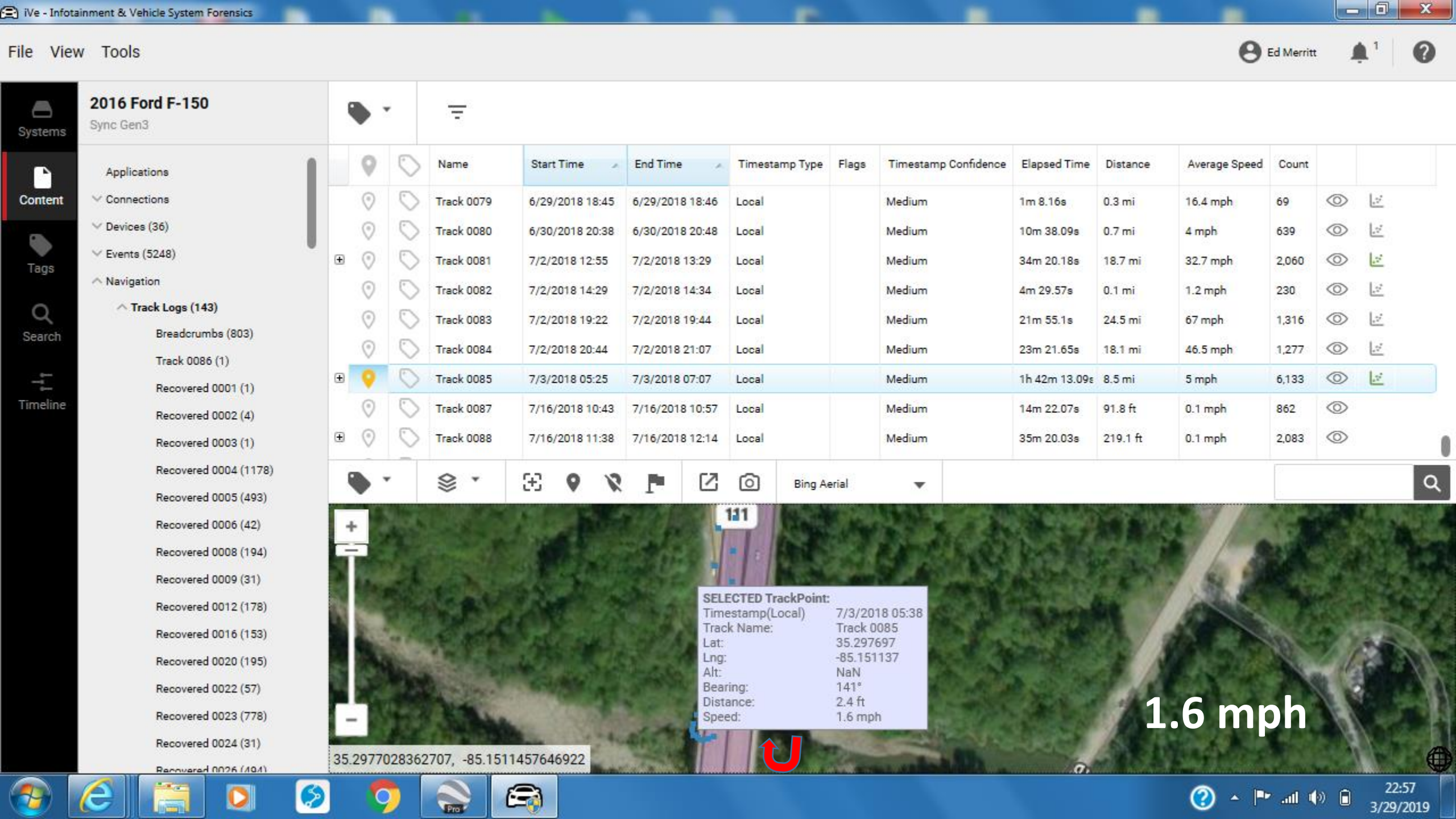
Track 0081 | 7/2/2018 12:55 | 7/2/2018 13:29 | Local | | Medium | 34m 20.18s | 18.7 mi | 32.7 mph | 2,060
Track 0082 | 7/2/2018 14:29 | 7/2/2018 14:34 | Local | | Medium | 4m 29.57s | 0.1 mi | 1.2 mph | 230
Track 0083 | 7/2/2018 19:22 | 7/2/2018 19:44 | Local | | Medium | 21m 55.1s | 24.5 mi | 67 mph | 1,316
Track 0084 | 7/2/2018 20:44 | 7/2/2018 21:07 | Local | | Medium | 23m 21.65s | 18.1 mi | 46.5 mph | 1,277
Track 0085 | 7/3/2018 05:25 | 7/3/2018 07:07 | Local | | Medium | 1h 42m 13.09s | 8.5 mi | 5 mph | 6,133
Track 0087 | 7/16/2018 10:43 | 7/16/2018 10:57 | Local | | Medium | 14m 22.07s | 91.8 ft | 0.1 mph | 862
Track 0088 | 7/16/2018 11:38 | 7/16/2018 12:14 | Local | | Medium | 35m 20.03s | 219.1 ft | 0.1 mph | 2,083
Bing Aerial
SELECTED TrackPoint:
Timestamp(Local) 7/3/2018 05:38
Track Name: Track 0085
Lat: 35.298019
Lng: -85.151063
Alt: NaN
Bearing: 186°
Distance: 47.7 ft
Speed: 32 mph
32 mph
35.2980375648006, -85.1510546254517
22:53
3/29/2019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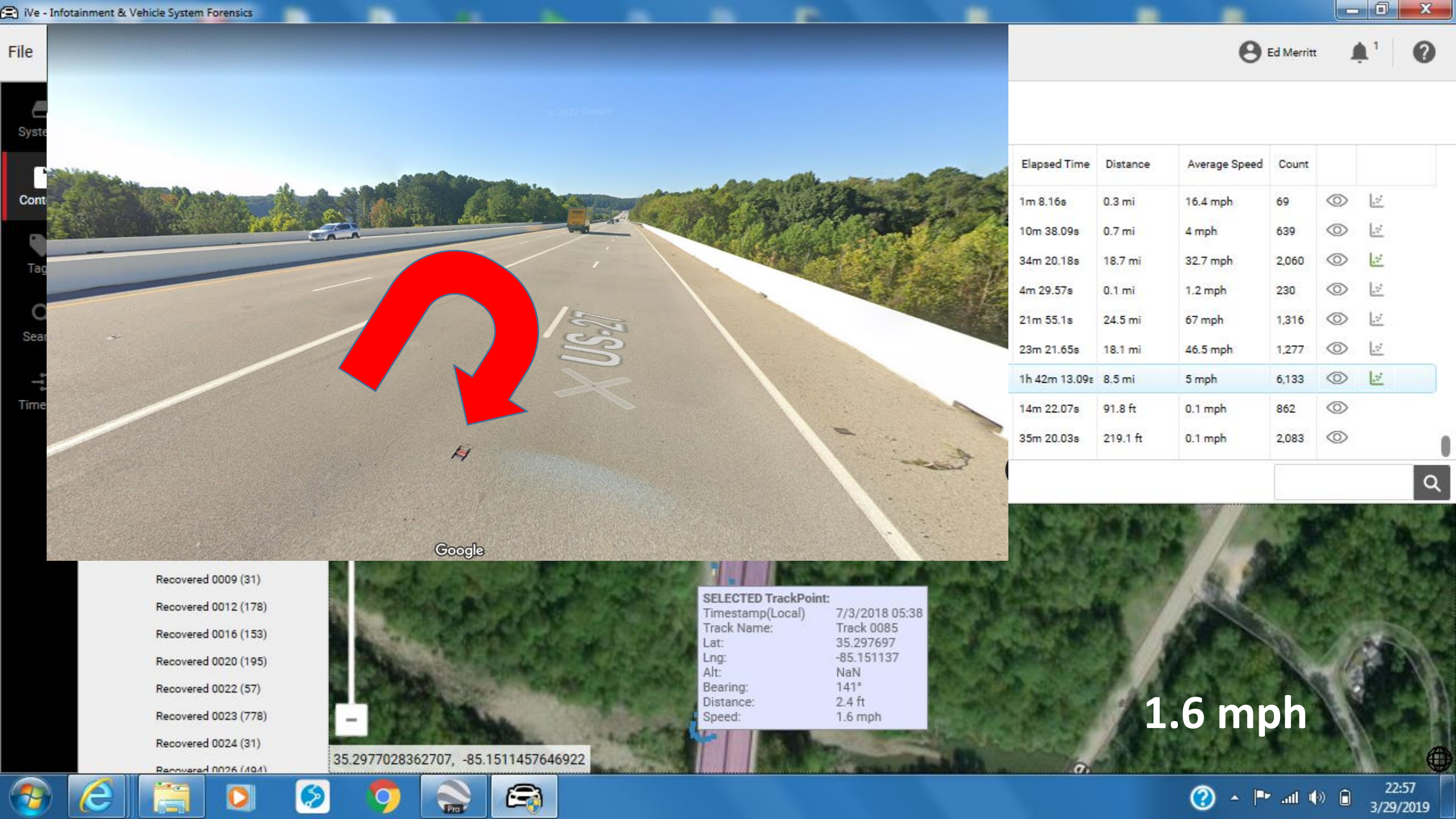
Track 0083 | 7/2/2018 19:22 | 7/2/2018 19:44 | Local | | Medium | 21m 55.1s | 24.5 mi | 67 mph | 1,316
Track 0084 | 7/2/2018 20:44 | 7/2/2018 21:07 | Local | | Medium | 23m 21.65s | 18.1 mi | 46.5 mph | 1,277
Track 0085 | 7/3/2018 05:25 | 7/3/2018 07:07 | Local | | Medium | 1h 42m 13.09s | 8.5 mi | 5 mph | 6,133
Track 0087 | 7/16/2018 10:43 | 7/16/2018 10:57 | Local | | Medium | 14m 22.07s | 91.8 ft | 0.1 mph | 862
Track 0088 | 7/16/2018 11:38 | 7/16/2018 12:14 | Local | | Medium | 35m 20.03s | 219.1 ft | 0.1 mph | 2,083
Bing Aerial
SELECTED TrackPoint:
Timestamp(Local) 7/3/2018 05:38
Track Name: Track 0085
Lat: 35.297697
Lng: -85.151137
Alt: NaN
Bearing: 141°
Distance: 2.4 ft
Speed: 1.6 mph
1.6 mph
35.2977028362707, -85.1511457646922
22:57
3/29/2019


iVe - Infotainment & Vehicle System Forensics
File
Ed Merritt
Elapsed Time
Distance
Average Speed
Count
1m 8.16s 0.3 mi 16.4 mph 69
10m 38.09s 0.7 mi 4 mph 639
34m 20.18s 18.7 mi 32.7 mph 2,060
4m 29.57s 0.1 mi 1.2 mph 230
21m 55.1s 24.5 mi 67 mph 1,316
23m 21.65s 18.1 mi 46.5 mph 1,277
1h 42m 13.09s 8.5 mi 5 mph 6,133
14m 22.07s 91.8 ft 0.1 mph 862
35m 20.03s 219.1 ft 0.1 mph 2,083
US-27
Google
Recovered 0009 (31)
Recovered 0012 (178)
Recovered 0016 (153)
Recovered 0020 (195)
Recovered 0022 (57)
Recovered 0023 (778)
Recovered 0024 (31)
SELECTED TrackPoint:
Timestamp(Local) 7/3/2018 05:38
Track Name: Track 0085
Lat: 35.297697
Lng: -85.151137
Alt: NaN
Bearing: 141°
Distance: 2.4 ft
Speed: 1.6 mph
35.2977028362707, -85.1511457646922
1.6 mph
22:57
3/29/2019

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2016 Ford F-150
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  - **Track Logs (143)**
    - Breadcrumbs (803)
    - Track 0086 (1)
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Track 0083	7/2/2018 19:22	7/2/2018 19:44	Local		Medium	21m 55.1s	24.5 mi	67 mph	1,316
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Track 0085	7/3/2018 05:25	7/3/2018 07:07	Local		Medium	1h 42m 13.09s	8.5 mi	5 mph	6,133
Track 0087	7/16/2018 10:43	7/16/2018 10:57	Local		Medium	14m 22.07s	91.8 ft	0.1 mph	862
Track 0088	7/16/2018 11:38	7/16/2018 12:14	Local		Medium	35m 20.03s	219.1 ft	0.1 mph	2,083

Bing Aerial

SELECTED TrackPoint:

Timestamp(Local)	7/3/2018 05:39
Track Name:	Track 0085
Lat:	35.298228
Lng:	-85.150909
Alt:	NaN
Bearing:	6°
Distance:	49.1 ft
Speed:	33.4 mph

27

33.4 mph

35.2982421204428, -85.1509027267175

22:58
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Systems Content Tags Search Timeline

2016 Ford F-150
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Track 0080	6/30/2018 20:38	6/30/2018 20:48	Local		Medium	10m 38.09s	0.7 mi	4 mph	639
Track 0081	7/2/2018 12:55	7/2/2018 13:29	Local		Medium	34m 20.18s	18.7 mi	32.7 mph	2,060
Track 0082	7/2/2018 14:29	7/2/2018 14:34	Local		Medium	4m 29.57s	0.1 mi	1.2 mph	230
Track 0083	7/2/2018 19:22	7/2/2018 19:44	Local		Medium	21m 55.1s	24.5 mi	67 mph	1,316
Track 0084	7/2/2018 20:44	7/2/2018 21:07	Local		Medium	23m 21.65s	18.1 mi	46.5 mph	1,277
Track 0085	7/3/2018 05:25	7/3/2018 07:07	Local		Medium	1h 42m 13.09s	8.5 mi	5 mph	6,133
Track 0087	7/16/2018 10:43	7/16/2018 10:57	Local		Medium	14m 22.07s	91.8 ft	0.1 mph	862
Track 0088	7/16/2018 11:38	7/16/2018 12:14	Local		Medium	35m 20.03s	219.1 ft	0.1 mph	2,083

Bing Aerial

SELECTED TrackPoint:

Timestamp(Local)	7/3/2018 05:39
Track Name:	Track 0085
Lat:	35.300651
Lng:	-85.150718
Alt:	NaN
Bearing:	358°
Distance:	85.1 ft
Speed:	57.7 mph

57.7 mph

35.3006774372305, -85.1507359302237

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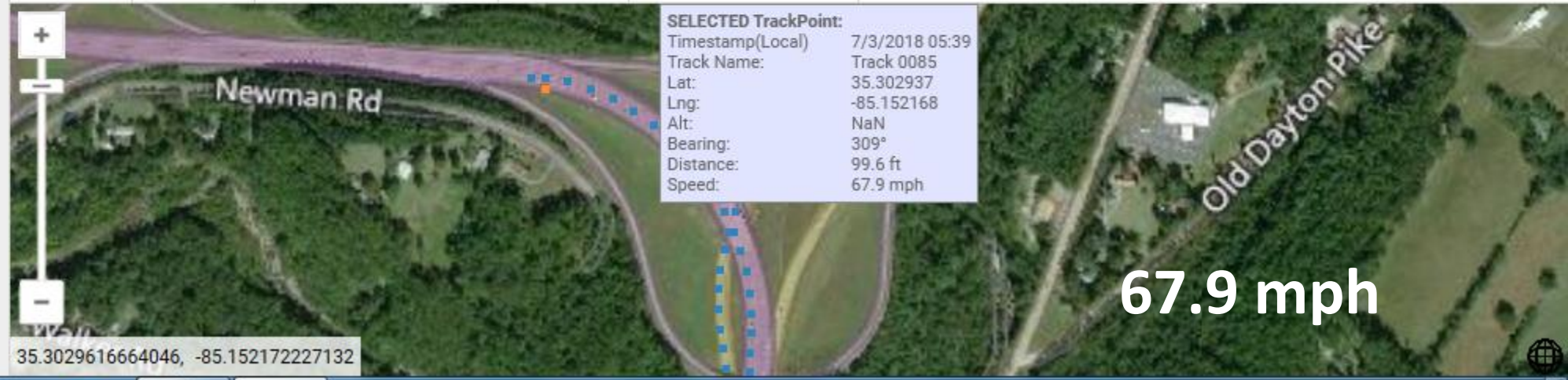
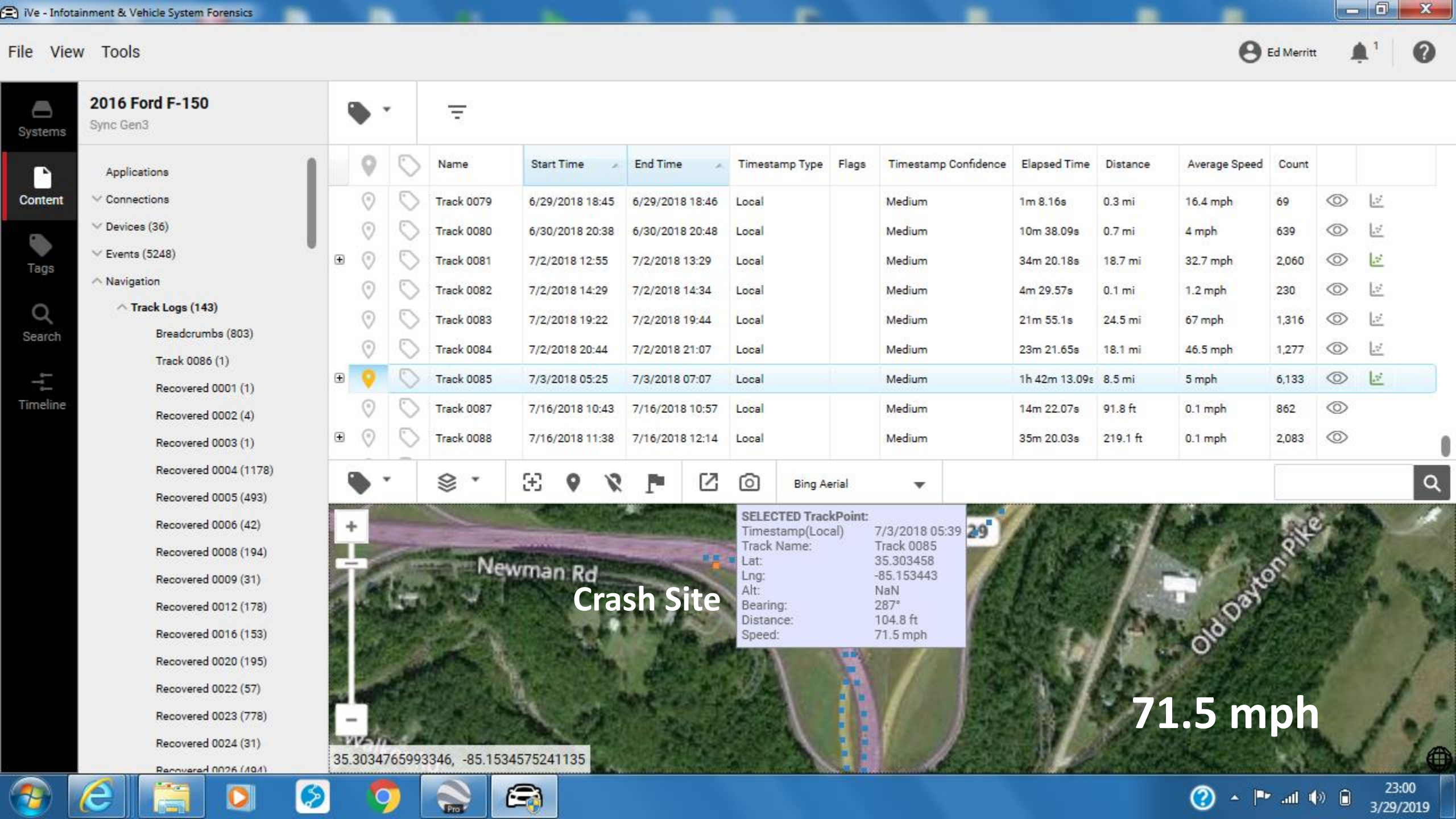
Bing Aerial



23:00
3/29/2019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Track 0088 | 7/16/2018 11:38 | 7/16/2018 12:14 | Local | | Medium | 35m 20.03s | 219.1 ft | 0.1 mph | 2,083
Bing Aerial
SELECTED TrackPoint:
Timestamp(Local) 7/3/2018 05:39
Track Name: Track 0085
Lat: 35.303458
Lng: -85.153443
Alt: NaN
Bearing: 287°
Distance: 104.8 ft
Speed: 71.5 mph
Newman Rd
Crash Site
Old Dayton Pike
71.5 mph
35.3034765993346, -85.1534575241135
23:00
3/29/2019

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2016 Ford F-150
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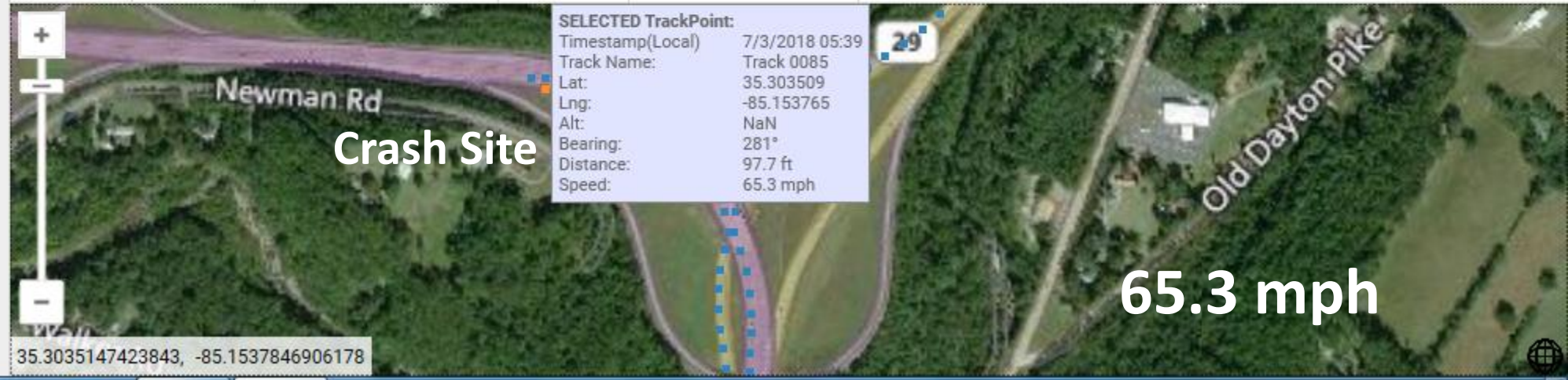
Bing Aerial



23:01
3/29/2019

iVe - Infotainment & Vehicle System Forensics

File View Tools

Ed Merritt 1

Systems Content Tags Search Timeline

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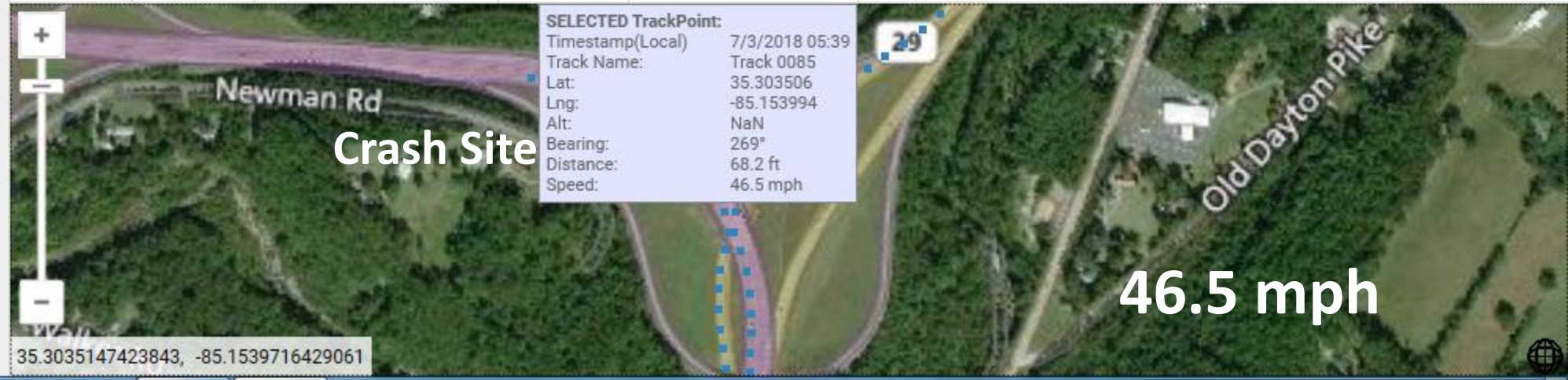
Bing Aerial

SELECTED TrackPoint:

Timestamp(Local)	7/3/2018 05:39
Track Name:	Track 0085
Lat:	35.303506
Lng:	-85.153994
Alt:	NaN
Bearing:	269°
Distance:	68.2 ft
Speed:	46.5 mph



23:02
3/29/2019

iVe - Infotainment & Vehicle System Forensics

File View Tools

Ed Merritt

Systems
Content
Tags
Search
Timeline

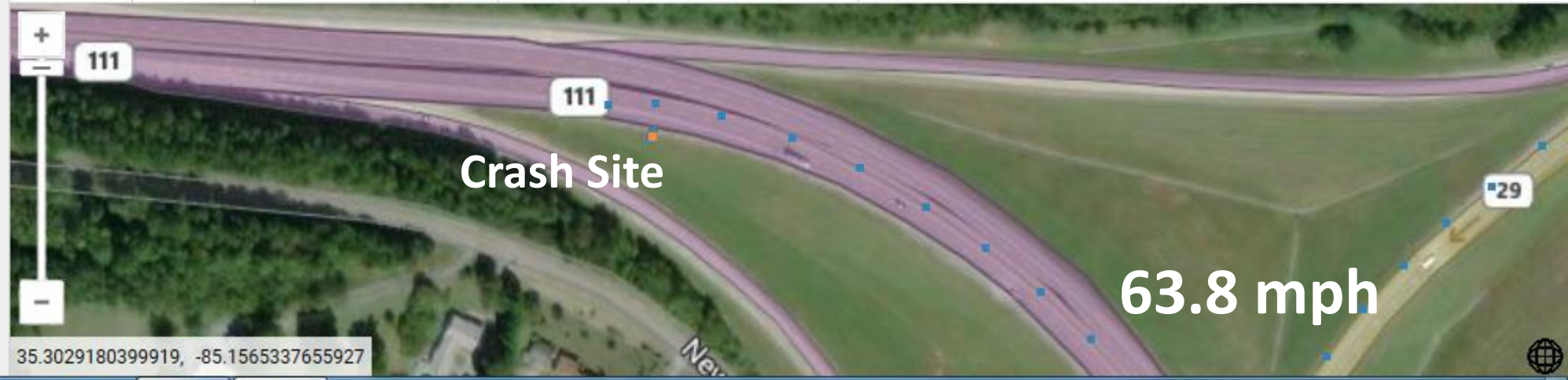
2016 Ford F-150
Sync Gen3

- Applications
- Connections
- Devices (36)
- Events (5248)
  - Device (83)
  - Media (413)
  - Driver Distraction Prevention (669)
  - Gear Shift (1754)
  - Door (723)
  - System Information (23)
  - Odometer (1309)
  - Power (94)
  - Call Log (59)
  - Wheel Traction (14)
  - Hard Acceleration (71)
  - **Hard Braking (35)**
  - Reboot (1)
- Navigation
  - Track Logs (143)
  - Locations (10)
  - Routes
  - Velocity Logs (178)

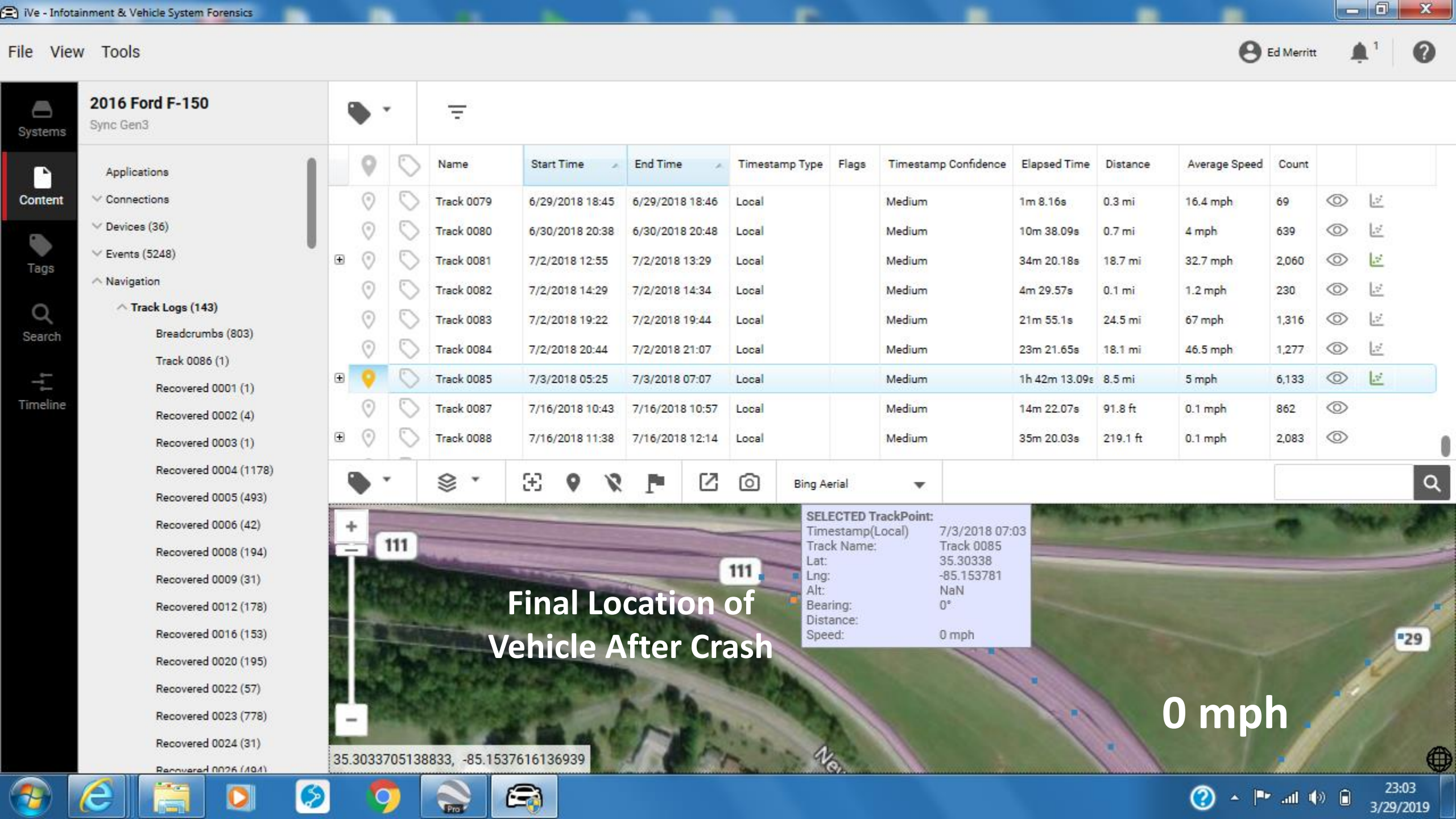
Hard Braking Events

Date/Time	Timestamp Type	Event Identifier	Event Type	Action	Latitude	Longitude	Flags	Timestamp C
6/23/2018 09:10	Local	Hard Braking: Wheel speed = 4.7 MPH, Decel = -0.64 G's (implied)	Hard Braking	Above -0.45 G's	35.550353000	-85.474201000		Medium
6/23/2018 09:10	Local	Hard Braking: Wheel speed = 2.9 MPH, Decel = -0.83 G's (implied)	Hard Braking	Above -0.45 G's	35.550353000	-85.474201000		Medium
6/23/2018 09:10	Local	Hard Braking: Wheel speed = 1.3 MPH, Decel = -0.68 G's (implied)	Hard Braking	Above -0.45 G's	35.550353000	-85.474201000		Medium
6/23/2018 15:52	Local	Hard Braking: Wheel speed = 0.9 MPH, Decel = -0.49 G's (implied)	Hard Braking	Above -0.45 G's	35.552415000	-85.476151000		Medium
6/23/2018 15:52	Local	Hard Braking: Wheel speed = 1.5 MPH, Decel = -0.55 G's (implied)	Hard Braking	Above -0.45 G's	35.552536000	-85.476141000		Medium
7/3/2018 05:39	Local	Hard Braking: Wheel speed = 63.8 MPH, Decel = -0.91 G's (implied)	Hard Braking	Above -0.45 G's	35.303375000	-85.153106000		Medium
7/3/2018 05:39	Local	Hard Braking: Wheel speed = 59.7 MPH, Decel = -0.61 G's (implied)	Hard Braking	Above -0.45 G's	35.303375000	-85.153106000		Medium
7/3/2018 05:39	Local	Hard Braking: Wheel speed = 55.2 MPH, Decel = -0.89 G's (implied)	Hard Braking	Above -0.45 G's	35.303458000	-85.153443000		Medium

Bing Aerial



23:07
3/29/2019


iVe - Infotainment & Vehicle System Forensics
File View Tools
Ed Merritt
2016 Ford F-150
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Applications
Connections
Devices (36)
Events (5248)
Navigation
Track Logs (143)
Breadcrumbs (803)
Track 0086 (1)
Recovered 0001 (1)
Recovered 0002 (4)
Recovered 0003 (1)
Recovered 0004 (1178)
Recovered 0005 (493)
Recovered 0006 (42)
Recovered 0008 (194)
Recovered 0009 (31)
Recovered 0012 (178)
Recovered 0016 (153)
Recovered 0020 (195)
Recovered 0022 (57)
Recovered 0023 (778)
Recovered 0024 (31)
Name
Start Time
End Time
Timestamp Type
Flags
Timestamp Confidence
Elapsed Time
Distance
Average Speed
Count
Track 0079 6/29/2018 18:45 6/29/2018 18:46 Local Medium 1m 8.16s 0.3 mi 16.4 mph 69
Track 0080 6/30/2018 20:38 6/30/2018 20:48 Local Medium 10m 38.09s 0.7 mi 4 mph 639
Track 0081 7/2/2018 12:55 7/2/2018 13:29 Local Medium 34m 20.18s 18.7 mi 32.7 mph 2,060
Track 0082 7/2/2018 14:29 7/2/2018 14:34 Local Medium 4m 29.57s 0.1 mi 1.2 mph 230
Track 0083 7/2/2018 19:22 7/2/2018 19:44 Local Medium 21m 55.1s 24.5 mi 67 mph 1,316
Track 0084 7/2/2018 20:44 7/2/2018 21:07 Local Medium 23m 21.65s 18.1 mi 46.5 mph 1,277
Track 0085 7/3/2018 05:25 7/3/2018 07:07 Local Medium 1h 42m 13.09s 8.5 mi 5 mph 6,133
Track 0087 7/16/2018 10:43 7/16/2018 10:57 Local Medium 14m 22.07s 91.8 ft 0.1 mph 862
Track 0088 7/16/2018 11:38 7/16/2018 12:14 Local Medium 35m 20.03s 219.1 ft 0.1 mph 2,083
Bing Aerial
SELECTED TrackPoint:
Timestamp(Local) 7/3/2018 07:03
Track Name: Track 0085
Lat: 35.30338
Lng: -85.153781
Alt: NaN
Bearing: 0°
Distance:
Speed: 0 mph
111
111
29
Final Location of Vehicle After Crash
0 mph
35.3033705138833, -85.1537616136939
23:03
3/29/2019

Elapsed Time	Distance	Average Speed	Count
1m 8.16s	0.3 mi	16.4 mph	69
10m 38.09s	0.7 mi	4 mph	639
34m 20.18s	18.7 mi	32.7 mph	2,060
4m 29.57s	0.1 mi	1.2 mph	230
21m 55.1s	24.5 mi	67 mph	1,316
23m 21.65s	18.1 mi	46.5 mph	1,277
1h 42m 13.09s	8.5 mi	5 mph	6,133
14m 22.07s	91.8 ft	0.1 mph	862
35m 20.03s	219.1 ft	0.1 mph	2,083

Recovered 0008 (194)
Recovered 0009 (31)
Recovered 0012 (178)
Recovered 0016 (153)
Recovered 0020 (195)
Recovered 0022 (57)
Recovered 0023 (778)
Recovered 0024 (31)
Recovered 0026 (494)

111
111
35.3033705138833, -85.1537616136939

Track Name: Track 0085
Lat: 35.30338
Lng: -85.153781
Alt: NaN
Bearing: 0°
Distance:
Speed: 0 mph

Final Location of Vehicle After Crash

0 mph

29

Ed Merritt

23:03
3/29/2019

Cellular Device Connection Log; Able To Tie Vehicle to Suspect's Cell Phone via Serial Number

iVe - Infotainment & Vehicle System Forensics

File View Tools

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2016 Ford F-150
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  - Reboot (1)
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  - Track Logs (143)
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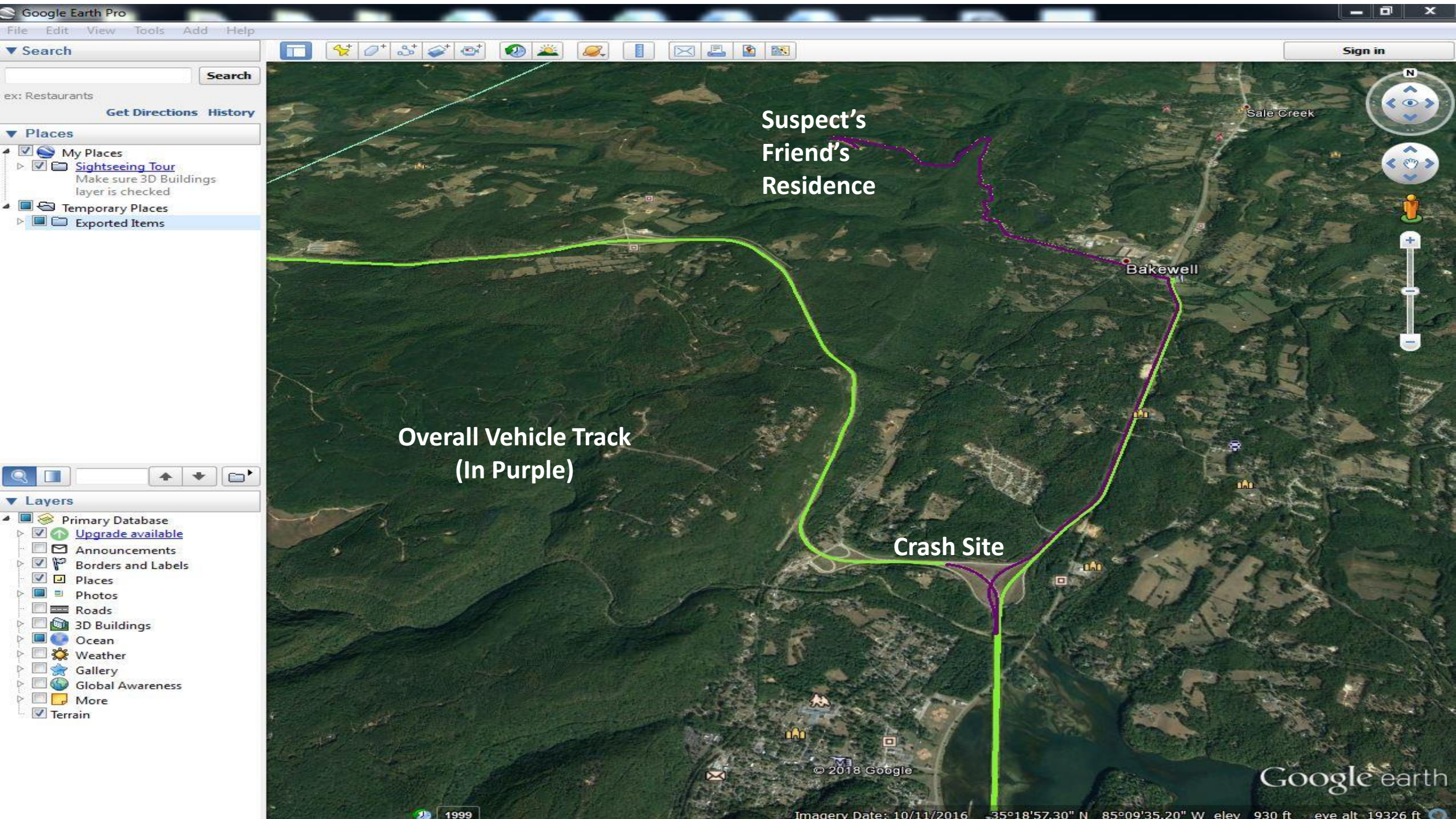
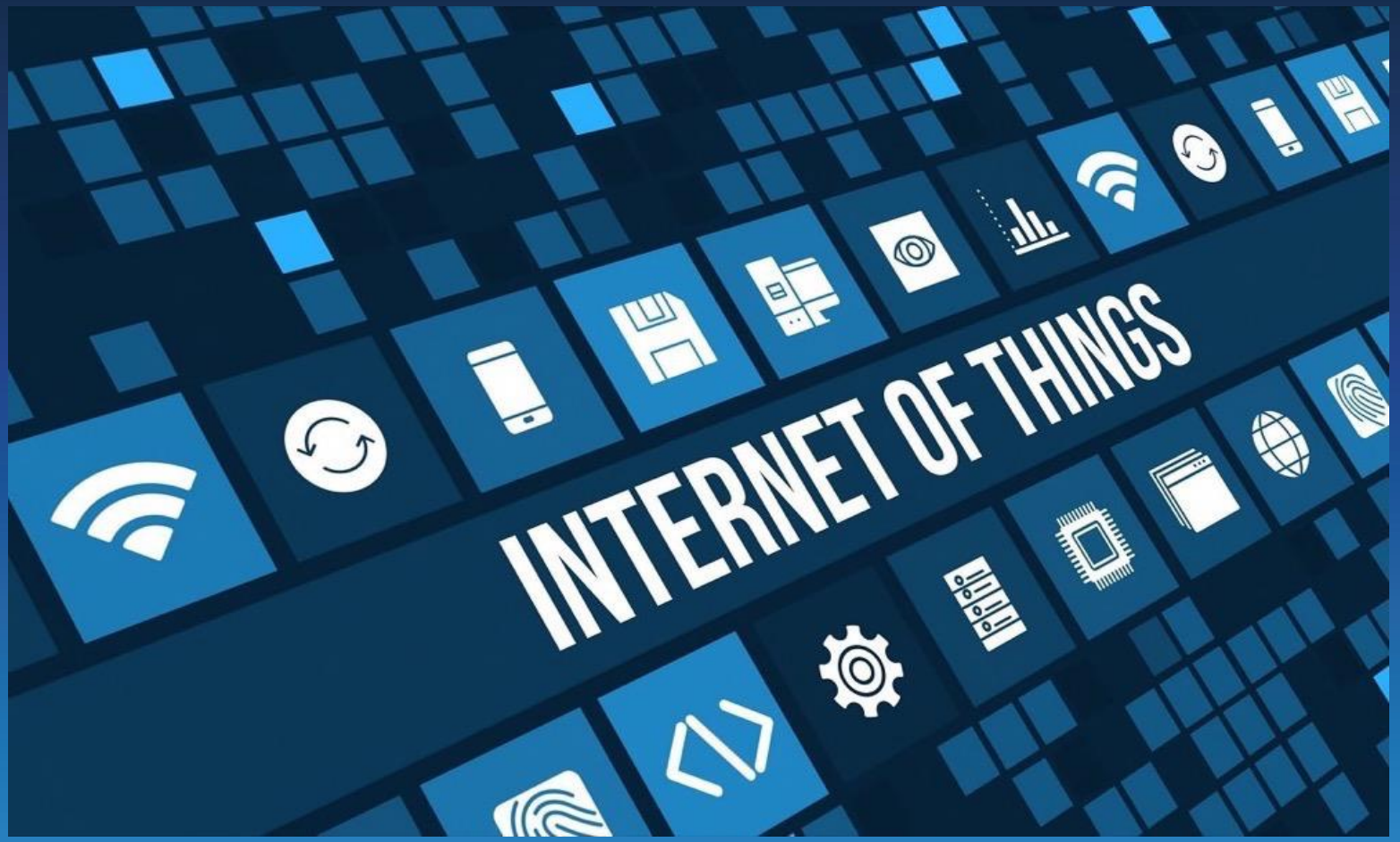
  - Routes
  - Velocity Logs (178)

Date/Time	Timestamp Type	Event Identifier	Event Type	Action	Latitude	Longitude	Flags
6/29/2018 08:37	Local	Media Device Name <Gala[redacted]S8> is AVAILABLE, Serial Number <14:56:[redacted]3e:f8>	Device	Device Connected	35.279492000	-85.105427000	
6/29/2018 13:39	Local	Media Device Name <Gala[redacted]S8> is AVAILABLE, Serial Number <14:56:[redacted]3e:f8>	Device	Device Connected	35.549326000	-85.473407000	
6/29/2018 17:27	Local	Media Device Name <Gala[redacted]S8> is AVAILABLE, Serial Number <14:56:[redacted]3e:f8>	Device	Device Connected	35.550444000	-85.472447000	
6/29/2018 17:28	Local	Media Device Name <Gala[redacted]S8> has become UNAVAILABLE	Device	Disconnected	35.553831000	-85.473645000	
6/29/2018 18:45	Local	Media Device Name <Gala[redacted]S8> is AVAILABLE, Serial Number <14:56:[redacted]3e:f8>	Device	Device Connected	35.553829000	-85.473645000	
7/2/2018 19:21	Local	Media Device Name <Gala[redacted]S8> is AVAILABLE, Serial Number <14:56:[redacted]3e:f8>	Device	Device Connected	35.549279000	-85.473285000	
7/3/2018 05:25	Local	Media Device Name <Galaxy S8> is AVAILABLE, Serial Number <14:56:[redacted]3e:f8>	Device	Device Connected	35.366118000	-85.160042000	
7/3/2018 05:43	Local	Media Device Name <Galaxy S8> has become UNAVAILABLE	Device	Disconnected	35.303392000	-85.153779000	

Bing Aerial

23:10
3/29/2019


Google Earth Pro
File Edit View Tools Add Help
Search
Search
ex: Restaurants
Get Directions History
Places
My Places
Sightseeing Tour
Make sure 3D Buildings layer is checked
Temporary Places
Exported Items
Layers
Primary Database
Upgrade available
Announcements
Borders and Labels
Places
Photos
Roads
3D Buildings
Ocean
Weather
Gallery
Global Awareness
More
Terrain
Sign in
Suspect's Friend's Residence
Overall Vehicle Track (In Purple)
Crash Site
Sale Creek
Bakewell
© 2018 Google
Google earth
Imagery Date: 10/11/2016 35°18'57.30" N 85°09'35.20" W elev 930 ft eye alt 19326 ft



Vehicle Video Recording Systems / Devices

NCJTC National Criminal Justice Training Center *of* Fox Valley Technical College

Vehicle Video Recording Systems and Devices

- Many vehicle manufacturers are now including vehicle video recording systems to help owners protect their vehicle against vandalism and liability claims.
- Even vehicles that do not come with video recording systems may have after-market systems that may contain valuable evidence.

Vehicle Video Recording Systems and Devices

- Walking through a parking lot while investigating a crime may yield several of these vehicles that have excellent surveillance video.
- These videos are often superior to store or parking lot cameras as the they are closer to the suspects and often have very high-definition cameras.

After Market Surveillance Camera Examples

Cadillac – Surround Vision Recorder

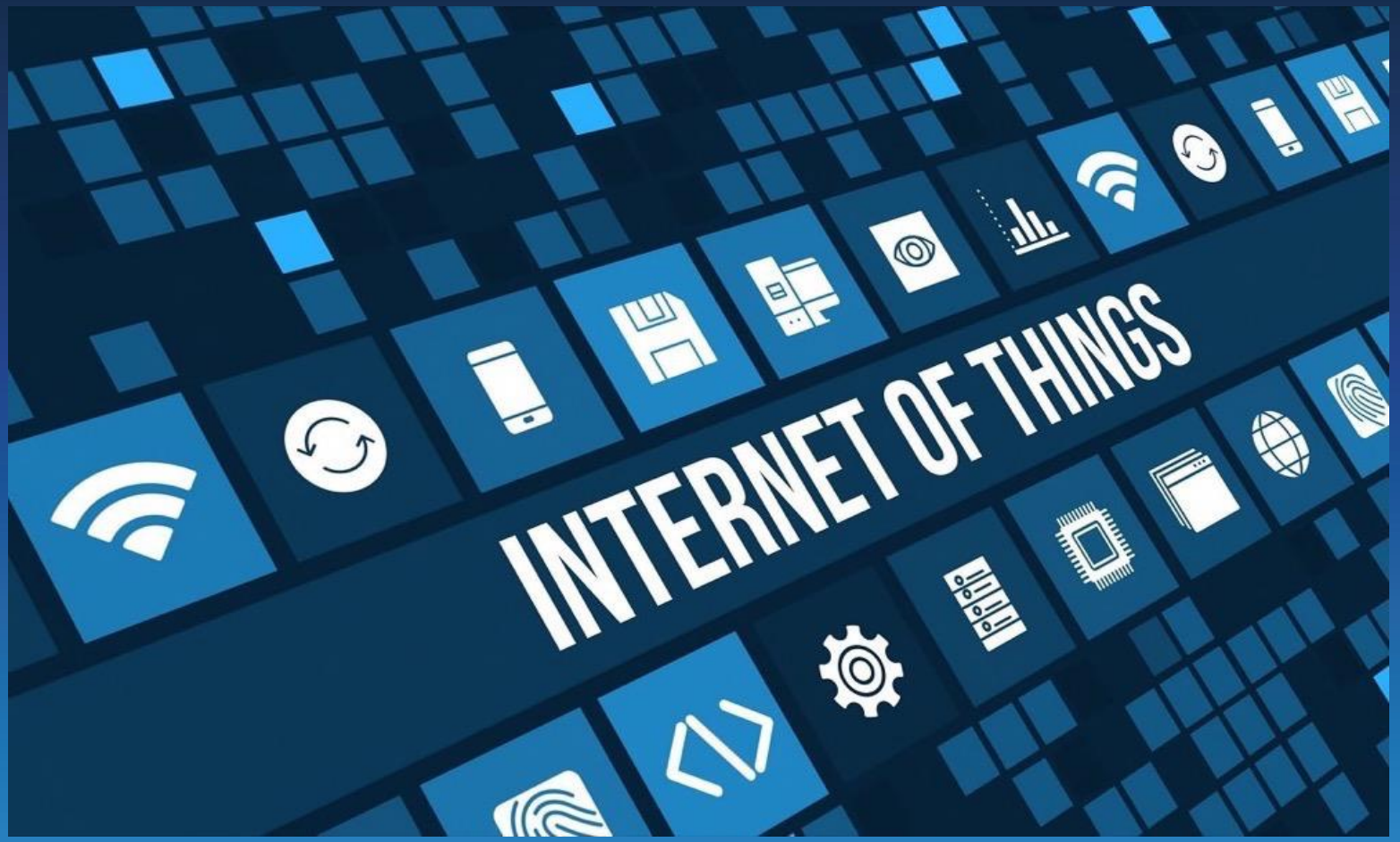
- Available in model CT6 (2016-2020), CT5 (2020-2023), XT6 (2021-2023), along with CT4, Lyriq, & Escalade (2023).
- Surround Vision Recorder utilizes 4 cameras, 1 on front grille, 1 on rear trunk lid, and 1 on each side mirror.
- Continuously records when vehicle is disturbed, or motion is detected within 1 foot of the vehicle.
- Surround Vision Recorder footage is stored on an external SD card. The system is programmed to overwrite old data when no more space is available. Overwritten data is non-retrievable.
- Footage is typically stored in 5-minute video files.
- Resolution is high definition in 2020 and newer and is standard definition is vehicles prior to 2020.

Rivian – Gear Guard

- Available in all Rivian vehicles
- Gear Guard utilizes 5 cameras on the R1T Truck, 2 rear-facing on each side, 1 front, 1 rear, and 1 rear truck bed. The R1S SUV has all the same cameras, except the rear truck bed camera.
- Continuously records when motion is triggered.
- Gear Guard footage is stored on an internal hard drive and can be exported to an external drive. The system is programmed to delete data after 10 days.
- Footage is typically stored in 30-second video files.
- Recording resolution is in high definition.

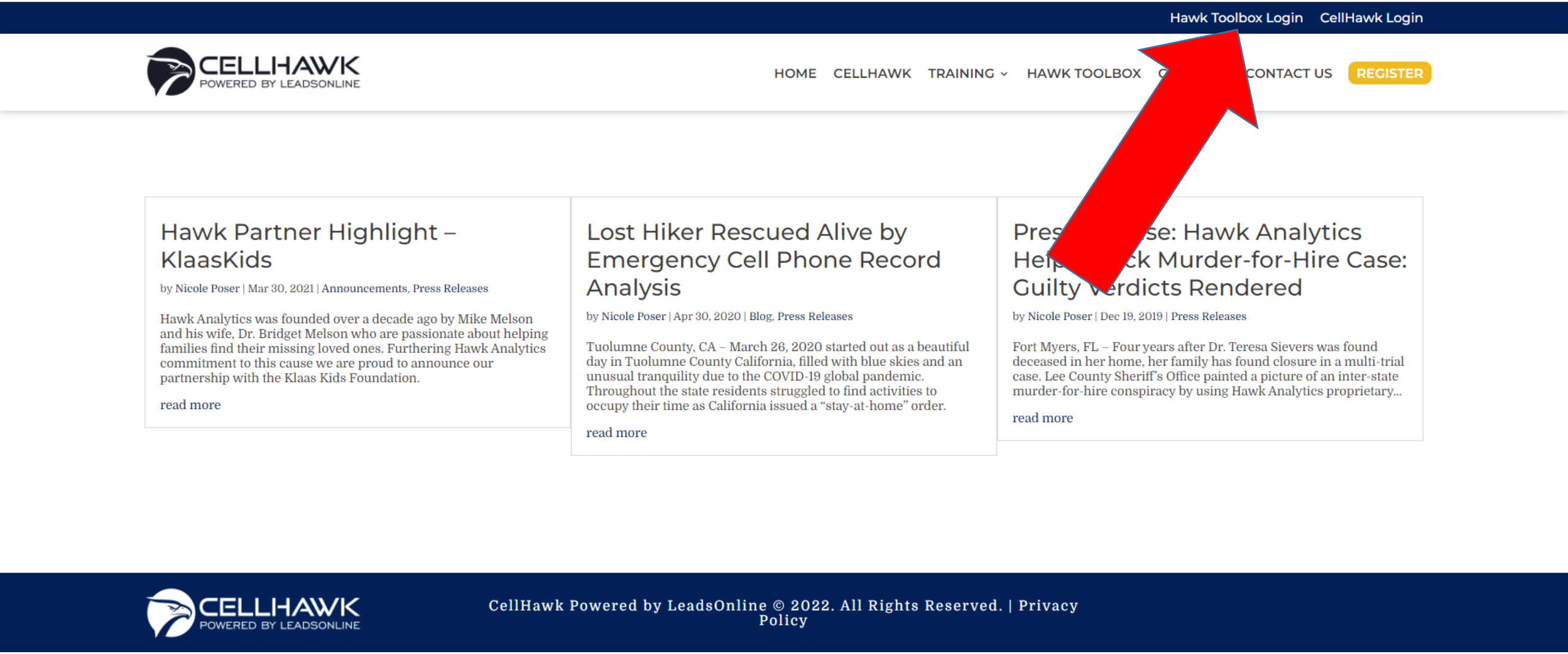
Tesla – Sentry Mode

- All Tesla models and versions August 2017 and newer
- Sentry Mode utilizes 5 cameras, 2 rear-facing on each side, 1 front, 1 rear, and 1 interior.
- Continuously records when motion is triggered, and vehicle owner can view a live feed on their mobile device.
- Sentry Mode footage is stored on a user provider flash drive or external drive. The system is programmed to overwrite old data when no more space is available. Overwritten data is non-retrievable.
- Footage is typically stored in 10-minute video files.
- Resolution is 1280 x 980 at 30 frames per second.



Legal Demands and Resources

https://www.hawkanalytics.com/hawk-toolbox/



https://www.hawkanalytics.com/hawk-toolbox/

Hawk Toolbox

Profile | Log Out

HAWK TOOLBOX
FREE INVESTIGATIVE RESOURCES

HOME | HAWK UNIVERSITY | MEDIA CENTER | LEGAL RESOURCES | INVESTIGATIVE RESOURCES | CARRIER INFO | CELLHAWK

2023 Training Classes Posted!

Posted November 17, 2022 by Nicole Poser

We are excited to be offering high quality training in the new year and have started adding 202 ... For the most up to date training offerings please refer to the website here: https://w4.leadsonline.com/...

IMPORTANT INFO: Updated T-Mobile Cost Reimbursement Rate Schedule Include New Fee for Timing Advance Records

Posted June 17, 2022 by Tom Bruce

As of May 20, 2022, T-Mobile updated their Cost Reimbursement Rate Schedule, which reflects adjusted pricing on some already charged for services, but this form now has a new service type reimbursement rate not seen in ... past, that frankly is rather troubling. Timing Advance (TDOA/PCMD) record requests will now require submission of their ...

LeadsOnline Acquires Hawk Analytics

Posted June 15, 2022 by Nicole Poser

LeadsOnline, LLC, a nationwide provider of data, technology and investigation tools used by law enforcement agencies and businesses, today announced the completion of its acquisition of Hawk Analytics, Inc., a provider of mapping and analytics technology built for law enforcement. Together, LeadsOnline and Hawk Analytics aim to provide law enforcement with expanded coverage and enhanced ...

Click Here to Read Past Announcements...

NEWS & EVENTS

FREE TRIAL

CHASING CONNECTED CARS CDR'S

An all-inclusive car look-up and Search Warrant Tool

Law Enforcement Technology Investigations Resource Guide

CLICK HERE FOR LATEST VERSION

POLICE LINE – DO NOT CROSS

Google Geofence Tool

With only a few clicks, you can create your Geofence map and download the completed Stage 1 Geofence Search Warrant

Stage 2 & 3 search warrant templates also available for download

CLICK HERE

Vehicle Search Warrants

- **Draw a Nexus**
- **Any and All (Don’t Do It!)**
- **Date Ranges / Time Ranges**
- **Affidavit/Warrant Mirror**

Search Warrant Templates

Evidence to be Searched and Seized

This application seeks permission to search for and seize evidence of the crimes described above, that are currently securely stored at the secure Property/Evidence facility of the **[insert law enforcement agency name]**, **[insert address/location]**, **[insert City]**, County of **[insert County]**, and State of **[insert State]**. The devices and vehicle to be searched are uniquely described as:

Vehicle / Devices to be Searched and Seized: **[*Describe vehicle in detail*]**

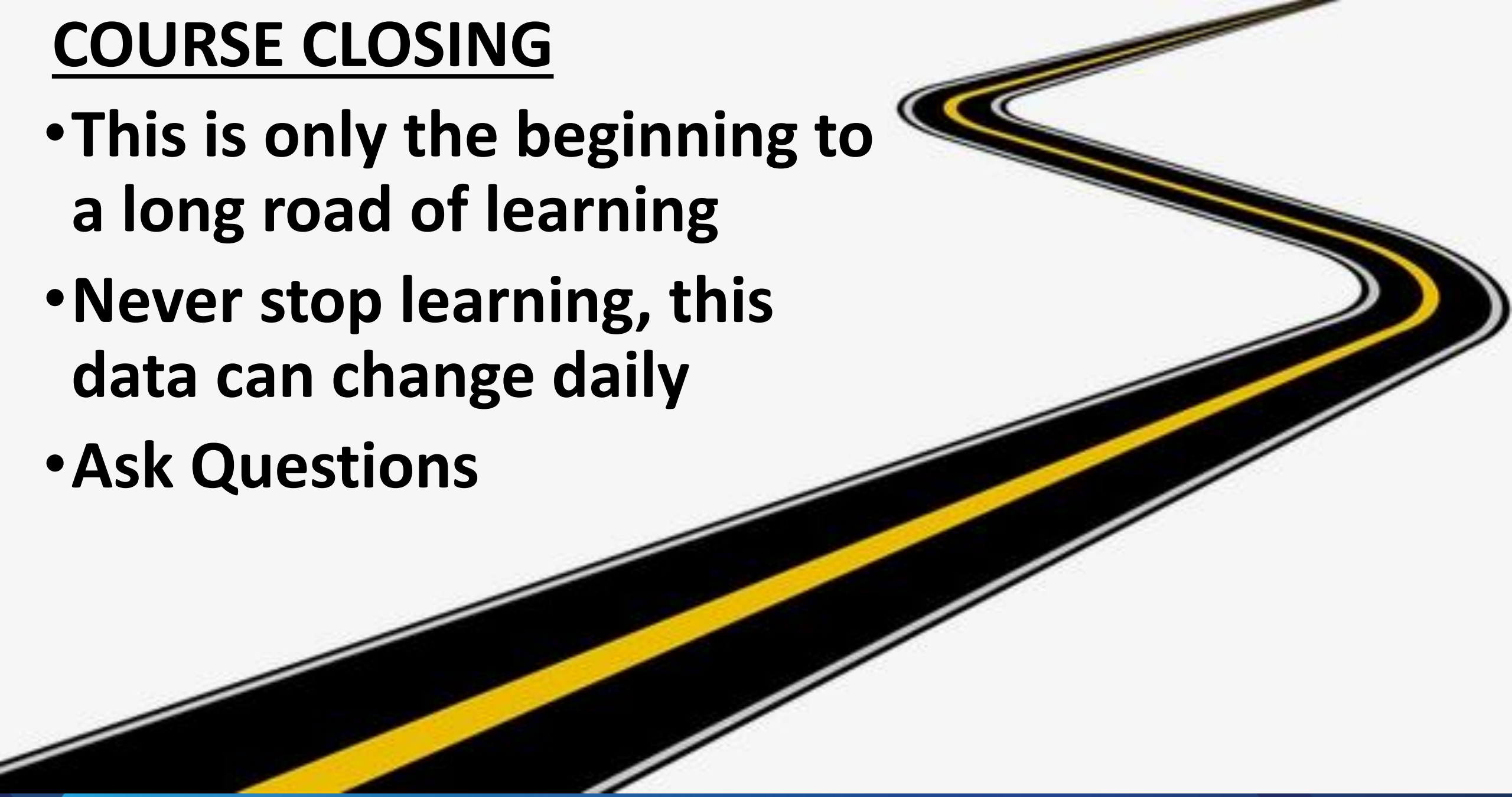
1. Vehicle year, make, model, color, license plate, VIN, etc.
2. Infotainment System and related digital storage media associated with the above described vehicle.

Course Closing

These investigations take a lot of work, but depending on your case it may well be worth it!

COURSE CLOSING

- This is only the beginning to a long road of learning
- Never stop learning, this data can change daily
- Ask Questions



All of the redacted slides, website links, and other documents will be available for download at:

https://bit.ly/NCJTC-Connected-Cars

Password: NCJTC#1

(Type Exactly as Shown; The Link and Password are Case Sensitive!)

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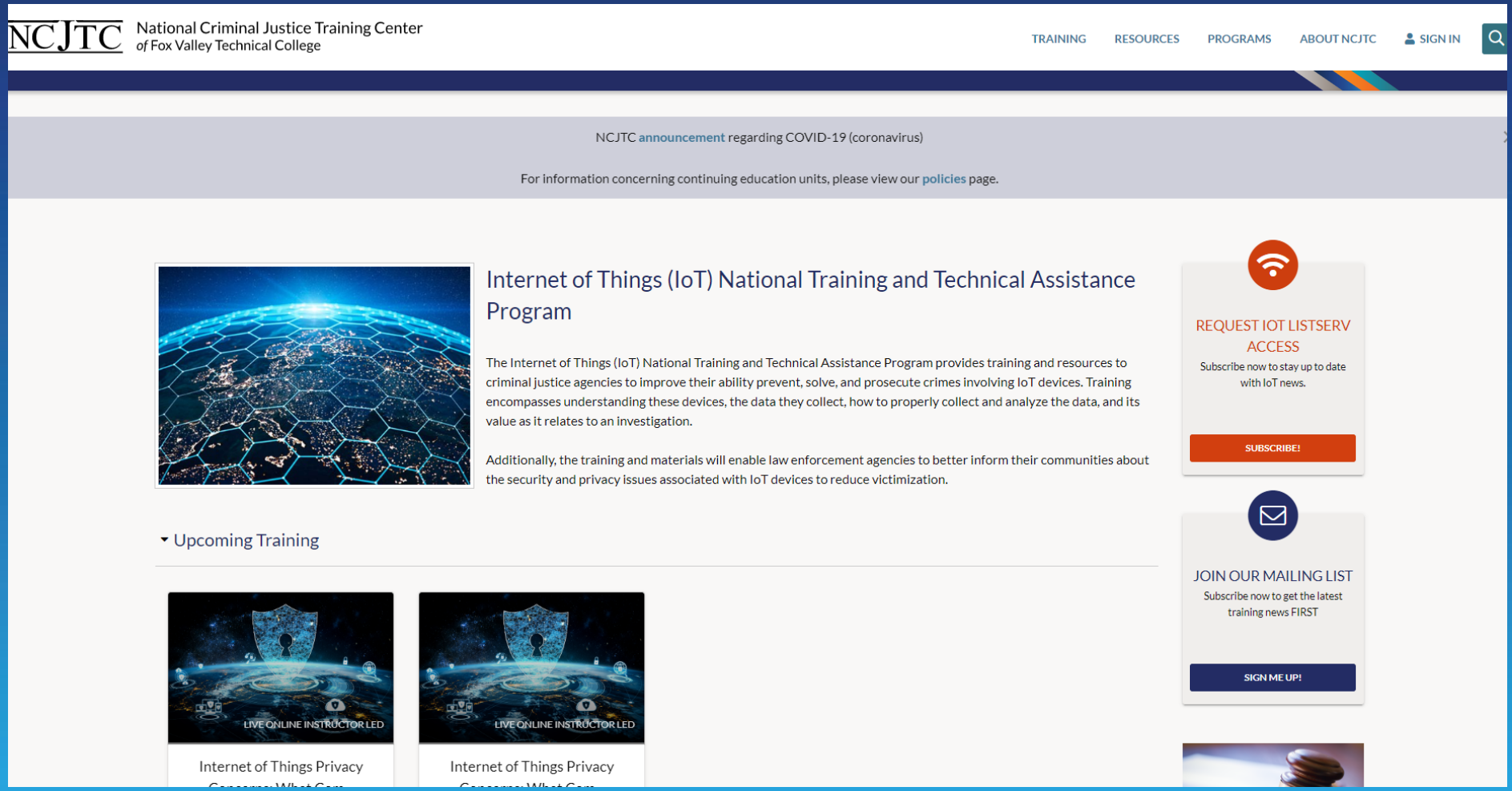
IoT ListServ and Other Trainings (https://ncjtc.org)



Questions?

info@ncjtc.org

www.ncjtc.org

(855) 866-2582

Post-Webinar Reminders

- A recording of this webinar will be available in the coming weeks at www.NCJTC.org.
- Please complete the brief evaluation at the conclusion of this webinar.
- A certificate of attendance will be sent to attendees within 2 weeks.

NCJTC Services & Opportunities

*Visit **www.ncjtc.org** for additional training and technical assistance services, offerings and opportunities.*

Watch your inbox for upcoming webinars and scheduled trainings!