

# Distracted Driving

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# Distracted Driving

Number killed in Distracted Driving Crashes in 2022

3,308

Number killed in Distracted Driving Crashes between  
2011 to 2022

38,779



# Distracted Driving

- Why distraction is a problem?
- Types of distraction
- Who Drives Distracted?
- Patrol techniques
- Investigation, charging and prosecution



# Why the Problem

- “When a driver’s attention is diverted away from driving by a secondary task that requires focusing on an object, event or person not related to the driving task”
- Knowledge of the dangers and unreasonable/illegal actions by the driver
- Lack of uniform data collection
- People are dying and being permanently injured every day



# Why the Problem?

An estimated 26,151 people were injured in 2022 in traffic crashes involving cellphone use or other cellphone-related activities (9% of all people injured in distraction-affected traffic crashes).

**Table 4. People Injured in All Traffic Crashes and Distraction-Affected Crashes, 2018–2022**

Year	Total	Distraction-Affected (D-A) Crashes			
		Number	Percentage of Total	Cellphone Use	
				Number	Percentage of D-A
2018	2,710,059	400,303	15%	32,632	8%
2019	2,740,141	423,847	15%	28,300	7%
2020	2,282,209	324,663	14%	30,000	9%
2021	2,497,869	362,405	15%	29,000	8%
2022	2,382,771	289,310	12%	26,151	9%

Sources: FARS 2018–2021 Final File, 2022 ARF; CRSS 2018–2022



# Economic Impact

- Estimated cost of all motor vehicle collisions in 2019 was \$340 billion
  - \$98 billion related to Distracted Driving
- Influencers of Impact/Cost
  - Lost productivity
  - Workplace costs
  - Legal and court costs
  - Medical costs
  - Emergency medical services
  - Insurance administration costs
  - Congestion impacts
  - Property damage



# Types of Distraction

- External (Visual): objects and/or events outside the vehicle
  - Crash scene, billboards, pedestrians, other vehicles
- Internal (Visual & Manual): objects and/or events inside the vehicle
  - Cell phones, in-car technology (infotainment systems), occupants, eating, reaching for items
  - Texting!!!!
    - Taking your eyes off of the road for 5 seconds at 55 mph, you travel a football field



# Types of Distraction

- Cognitive distractions
  - Work
  - Home problems
  - Finances
    - Bills, Debt, Credit Cards
  - Fatigue
  - Upcoming Events
  - Day Dreaming





# Who Drives Distracted?

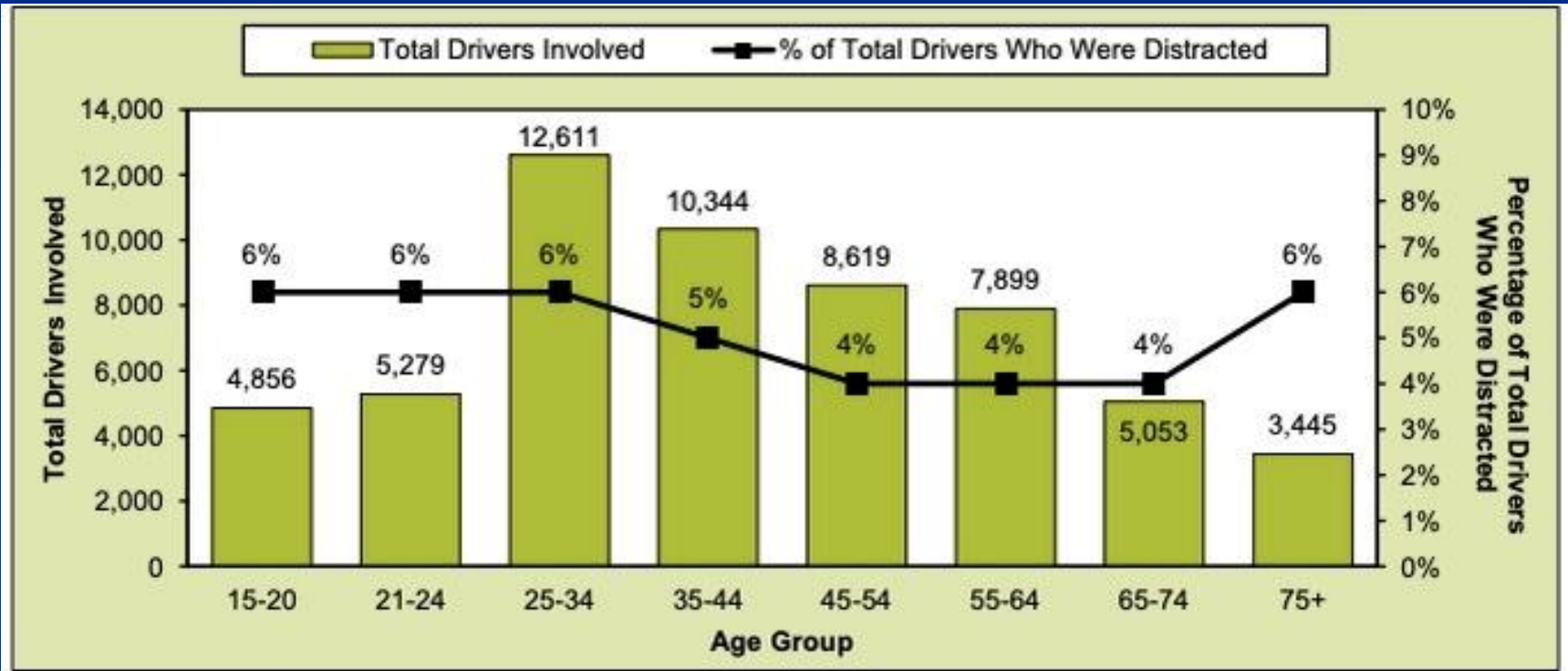
**Table 2. Drivers Involved in Fatal Traffic Crashes, by Age Group, Distraction, and Cellphone Use, 2022**

Age Group	Total Drivers		All Distracted Drivers			Drivers Using Cellphones		
	Number	Percentage of Total Drivers	Number	Percentage of Total Drivers in This Age Group	Percentage of All Distracted Drivers	Number	Percentage of All Distracted Drivers in This Age Group	Percentage of Drivers Using Cellphones
15–20	4,856	8%	296	6%	9%	41	14%	11%
21–24	5,279	9%	314	6%	10%	44	14%	12%
25–34	12,611	21%	729	6%	23%	105	14%	28%
35–44	10,344	17%	561	5%	18%	69	12%	18%
45–54	8,619	14%	380	4%	12%	55	14%	15%
55–64	7,899	13%	330	4%	11%	40	12%	11%
65–74	5,053	8%	225	4%	7%	13	6%	3%
75+	3,445	6%	198	6%	6%	7	4%	2%
<b>Total</b>	<b>60,048</b>	<b>100%</b>	<b>3,124</b>	<b>5%</b>	<b>100%</b>	<b>375</b>	<b>12%</b>	<b>100%</b>

Source: FARS 2022 ARF



# Who Drives Distracted?

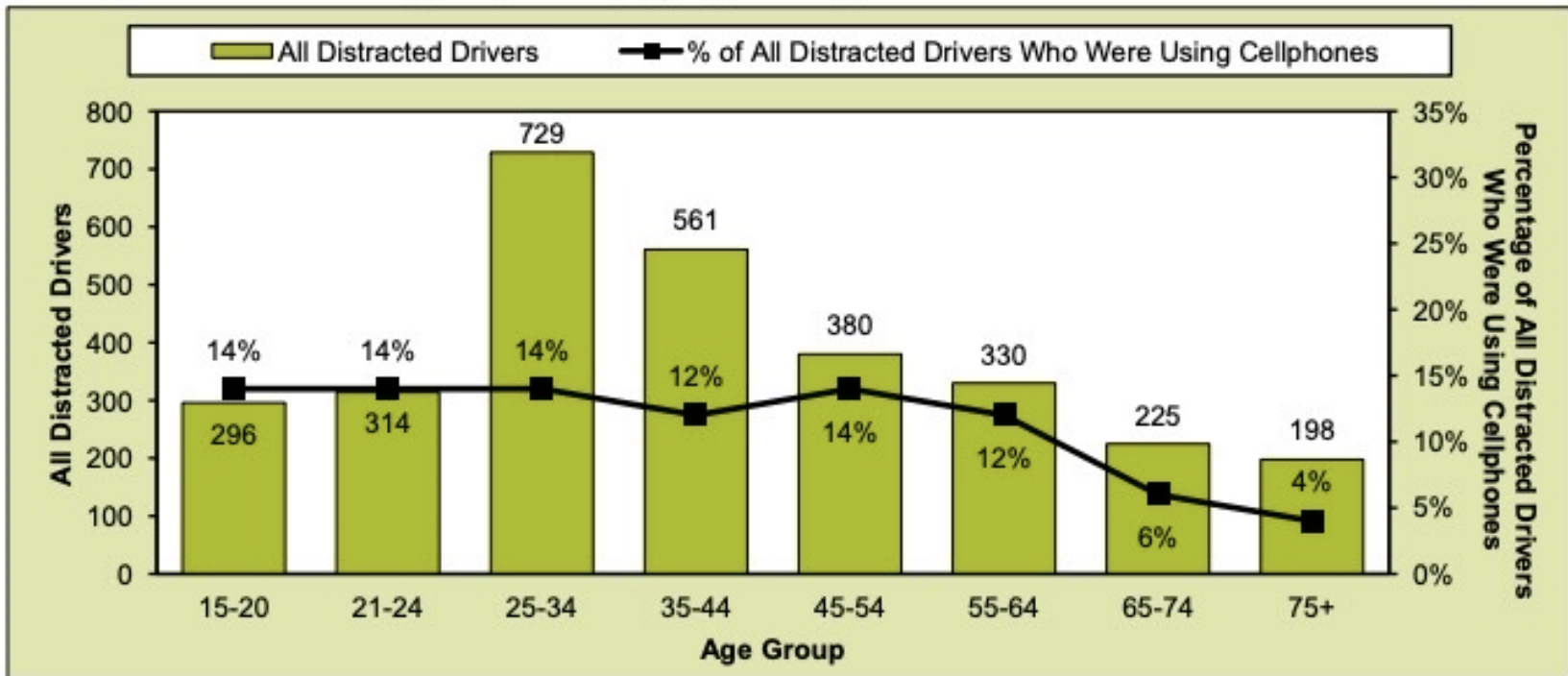


Source: FARS 2022 ARF



# Who Drives Distracted?

Figure 1b. Distracted Drivers and Percentage of Distracted Drivers Involved in Fatal Traffic Crashes Who Were Using Cellphones, by Age Group, 2022



Source: FARS 2022 ARF



# Patrol Techniques

## ➤ Two Basic Ways an Officer may be alerted:

- Observe the violation
- Observe Vehicle Cues

## ➤ Visual Cues

- Nearly striking an object or vehicle
- Failure to safely maintain lane control
- Driving into opposing or crossing traffic
- Slow response to traffic signal
- Turning abruptly or illegally
- Failure to maintain consistent speed
- Failure to signal
- Intermittently looking down
- Night time glow of the device
- Hand to ear with device in hand



# Patrol Techniques

- High Visibility Enforcement
  - Increase perception of being ticketed for violation
  - Include Media in campaign
    - Makes public aware of enforcement
    - Motorist cognizant of purpose of heightened law enforcement presence
  - Targeted Areas
- Use of marked and unmarked patrol vehicles
  - Force multiplier, motorist usually look for marked vehicles



# Distracted Driving Collisions – Investigatory Techniques

Does the crash involve distraction?

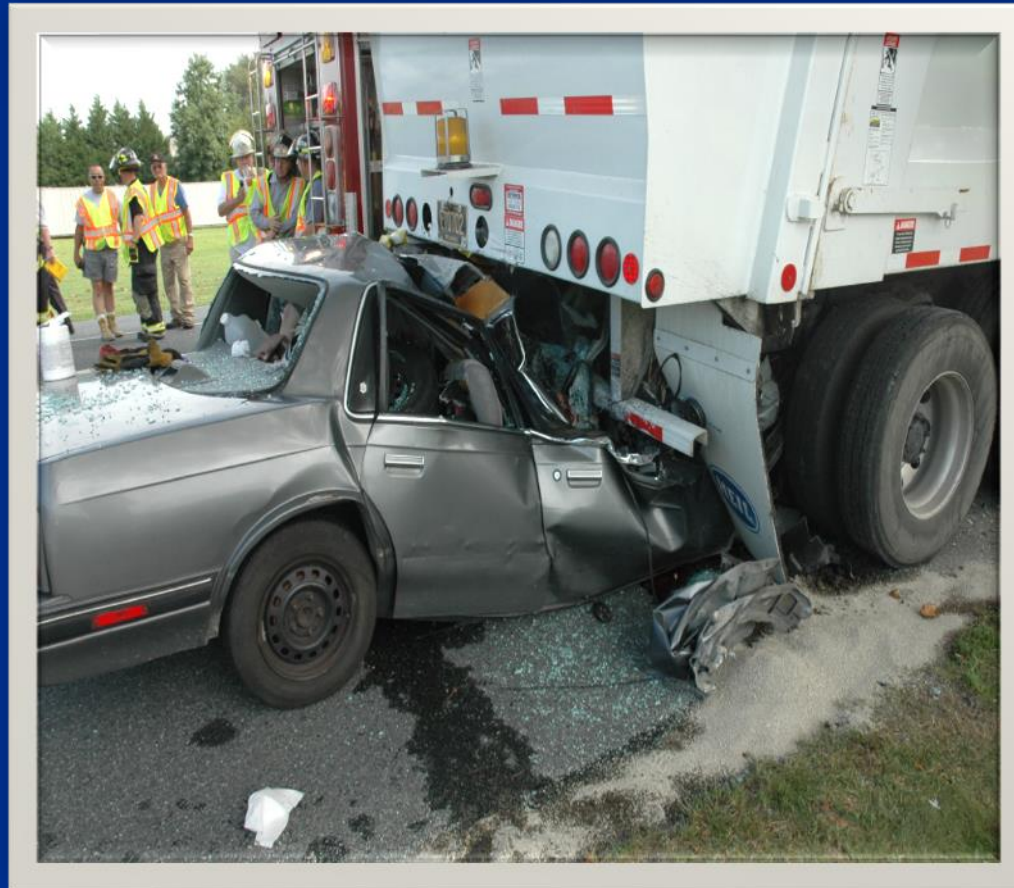




# Distracted Driving Collisions – Investigatory Techniques

Crashes that are predominately the result of distracted driving

## High Speed Rear End Impact





# Distracted Driving Collisions – Investigatory Techniques

Crashes that are predominately the result of distracted driving

## Head - On







# Distracted Driving Collisions – Investigative Techniques

## Failure to Maintain Lane

Types of pre-impact evidence is extremely important to discern:

- Free rolling tire (critical speed vs. locked wheel)
- Tire scrub marks as result of hard steering.



No pre-impact evidence



# Distracted Driving Collisions – Investigative Techniques

Crashes that are predominately the result of distracted driving

## Stale Red Light / Blatant Stop Sign







Pre-Impact  
Braking





# Distracted Driving Collisions – Investigatory Techniques

- Cell phone recovery
- Cell phone records
- Forensic Imaging
- Interview process
- Air bag control module data
- Infotainment Imaging
- Search warrants



# Distracted Driving Collisions – Investigatory Techniques

## Cell Phone Recovery

Is the cell phone still on scene, or has it remained with the driver?

- Easily determined by first responders. Ask EMS personnel if phone is on driver's person. Have first responding officers secure the device per your departments policy.
- If crash mechanism is high, and distracted driving is likely, there is great probability of locating phone in the wreckage. **\*\*Keep this in mind and don't give up easily\*\***
- Section the interior of the vehicle, similar to a terrain search. Include roadside debris field.
- Use of operator kinematics and direction of force may be helpful. However, due to internal crash forces and air bag deployment these may not be completely reliable.
- Ascertain the telephone number and call the phone. If the driver is a frequent phone user, it will be ringing repeatedly anyway.
- If cell cannot be located either on scene or on the driver's person, make sure tow company properly secures and covers the wreckage.



# Distracted Driving Collisions – Investigatory Techniques

## Cell Phone Recovery

Cell phone has accompanied driver to hospital.

- Drivers involved in crashes have not considered the possibility that police are going to seize their telephone. This is helpful, as the urge to delete data is not forthright.
- Make sure an officer responds to the hospital to secure the telephone under exigent circumstances if necessary. A search warrant can be obtained shortly thereafter.





# Distracted Driving Collisions – Investigatory Techniques

## Cell Phone Recovery Cont.

- Should the cell phone still be in the driver's possession, and he/she is uncooperative:
  - Maintain an officer's presence to assure data is not deleted. Do not allow subject to use their phone.
  - Have investigator complete search warrant immediately. In the interest of time, it is helpful if investigator has a generic S.W. template partially complete on in-car computer.
  - If attempts are made to destroy telephone or manipulate data, react according to departmental policy regarding tampering with evidence.



# Distracted Driving Collisions – Investigative Techniques







# Distracted Driving Collisions – Investigatory Techniques

## Cell phone recovery

### Damaged Cell Phones





# Distracted Driving Collisions – Investigatory Techniques

## Cell Phone Records

➤ **\*\*Obtain phone number and carrier information ASAP\*\***

This information is much easier to establish during the initial stages of investigation and can create lengthy delays if wrong #'s and carriers are issued subpoenas for records.

### (Deceased/Critically Injured or if Miranda is invoked)

1. Initial interview with family members at hospital is a good time to obtain. (If underage they are probably responsible for telephone bill anyway.)
2. Personal effects in the vehicle, documents, legal notices, prior traffic summonses, intel.
3. If phone is operable, call the 911 center (Caller I.D. will give # and usually the carrier)
4. Utilize Fonefinder.com which is a free web-based service. If subscriber switched carriers and kept the same phone #, this information could be wrong.
5. To determine if Verizon, Sprint, or AT&T is the carrier, use these suffixes in a test email. Subsequently monitor device to determine if message arrived.
  - a. vtext.biz
  - b. messaging.sprintpcs.com
  - c. txt.att.net
7. Simply power off then on. Some shut down/start up animations will indicate carrier.

(If you call 911 center to determine phone # and carrier, this should be done after search warrant is obtained)



# Distracted Driving Collisions – Investigatory Techniques

## Text Content

- Currently Verizon is the only carrier where we can still get texting content.
- Extremely important to send a letter of preservation ASAP. (A.G. Office)
- Data is gone 5 days after delivery, if not preserved.
- Other carriers, texting content is volatile.
- Typically deleted as soon as message is received unless phone is off.
- Search Warrant signed by a judge required.
- Apple to Apple iMessage's not present on records, must perform cell imaging.
- Investigator must establish if message was physically opened.

**\*The best avenue for obtaining texting content is through Forensic Imaging\***



# Distracted Driving Collisions – Investigatory Techniques

- Forensic Imaging
  - Chats
  - Text/Instant Messages
  - Contacts
  - Emails
  - Data Files
  - Web pages used (social media)





# Distracted Driving Collisions – Investigatory Techniques

311 1	➔ SMS Messages	01/28/2014 7:39:41 PM(UTC-5)	To: [REDACTED]	Still got those?	
311 2	➜ SMS Messages	01/28/2014 7:40:33 PM(UTC-5)	From: [REDACTED]	Yea told her to save you those	
311 3	➔ SMS Messages	01/28/2014 7:41:32 PM(UTC-5)	To: [REDACTED]	OK I'll be thru soon. Does she only have ten?	
311 4	➜ SMS Messages	01/28/2014 7:42:07 PM(UTC-5)	From: [REDACTED]	Na she got more	
311 5	➔ SMS Messages	01/28/2014 7:43:39 PM(UTC-5)	To: [REDACTED]	Aight I want 15 but I have [REDACTED] with me. So you think you could meet MD somewhere so she doesn't tell on me	
311 6	➜ SMS Messages	01/28/2014 7:44:50 PM(UTC-5)	From: [REDACTED]	Where? You kno i dont feel safe doin the store thing	
311 7	➔ SMS Messages	01/28/2014 7:49:04 PM(UTC-5)	To: [REDACTED]	I don't know you tell me	
311 8	➜ SMS Messages	01/28/2014 7:49:57 PM(UTC-5)	From: [REDACTED] [REDACTED]	Where the [REDACTED] are you?	
311 9	➔ SMS Messages	01/28/2014 7:50:01 PM(UTC-5)	To: [REDACTED]	I have to stop somewhere and get her dinner	
312 0	➔ SMS Messages	01/28/2014 7:50:46 PM(UTC-5)	To: [REDACTED]	On my way just left	
312 1	➔ SMS Messages	01/28/2014 7:51:11 PM(UTC-5)	To: [REDACTED]	Sorry wrong text lol	
312 2	➔ SMS Messages	01/28/2014 7:51:28 PM(UTC-5)	To: [REDACTED] [REDACTED]	On my way just left	



# Distracted Driving Collisions – Investigatory Techniques

312 3	← SMS Messages	01/28/2014 7:51:50 PM(UTC-5)	From: [REDACTED] [REDACTED]	You just left where?	
312 4	← SMS Messages	01/28/2014 7:52:06 PM(UTC-5)	From: [REDACTED]	You comin to milford	
312 5	→ SMS Messages	01/28/2014 7:52:55 PM(UTC-5)	To: [REDACTED]	Milford or harrington	
312 6	→ Call Log	01/28/2014 7:53:31 PM(UTC-5)	To: [REDACTED] [REDACTED]		
312 7	← SMS Messages	01/28/2014 7:54:29 PM(UTC-5)	From: [REDACTED]	I jus dont wanna meet at ah store.. Read Shit in the paper bout that all the time	
312 8	← SMS Messages	01/28/2014 7:54:45 PM(UTC-5)	From: [REDACTED] Baby	I'm leaving as soon as you get here	
312 9	→ SMS Messages	01/28/2014 7:55:40 PM(UTC-5)	To: [REDACTED]	Unless you want to come thru or meet me somewhere on 15	
313 0	← SMS Messages	01/28/2014 7:57:57 PM(UTC-5)	From: [REDACTED]	Go to da mcdonalds jus hit me wen you close	
313 1	→ SMS Messages	01/28/2014 7:58:41 PM(UTC-5)	To: [REDACTED] Baby	U want pizza?	

313 3	← SMS Messages	01/28/2014 7:59:05 PM(UTC-5)	From: [REDACTED] [REDACTED]	I'm f [REDACTED] leaving!!!	
313 4	→ Call Log	01/28/2014 8:05:21 PM(UTC-5)	To: [REDACTED]		
313 5	← SMS Messages	01/28/2014 8:06:58 PM(UTC-5)	From: [REDACTED]	My bad i was thinkin 14.. Where you at now	
313 6	→ SMS Messages	01/28/2014 8:07:24 PM(UTC-5)	To: [REDACTED]	I ordered pizza from DAT spot by your crib	
313 7	← SMS Messages	01/28/2014 8:08:08 PM(UTC-5)	From: [REDACTED]	Ok ill come around there.. You there now?	
313 8	→ SMS Messages	01/28/2014 8:08:49 PM(UTC-5)	To: [REDACTED]	Nah bout 5 mins tho	
313 9	← SMS Messages	01/28/2014 8:09:23 PM(UTC-5)	From: [REDACTED]	Ok	



# Distracted Driving Collisions – Investigatory Techniques

314 2	← SMS Messages	01/28/2014 8:20:56 PM(UTC-5)	From: [REDACTED]	If you hav dat change ready ill pull up to front wen you walkin out it would jus look like i stopped to you	
314 3	← SMS Messages	01/28/2014 8:21:28 PM(UTC-5)	From: [REDACTED] [REDACTED]	I swear to [REDACTED] god if you don't get the [REDACTED] home someone is getting hurt! I [REDACTED] hate your ignorant ass	
314 4	→ SMS Messages	01/28/2014 8:26:56 PM(UTC-5)	To: [REDACTED] [REDACTED]	Had to wait for Tue food elissa	
314 5	← SMS Messages	01/28/2014 8:28:31 PM(UTC-5)	From: [REDACTED] [REDACTED]	Your an ignorant selfish mother [REDACTED]! This is exactly why I will never sleep with you!! I'm done!! I can't stand you	
314 6	SMS Messages	01/28/2014 8:29:01 PM(UTC-5)		.....,iiu7.....	
314 7	← SMS Messages	01/28/2014 8:38:36 PM(UTC-5)	From: [REDACTED] [REDACTED]	It has been a [REDACTED] hour!!	
314	← Call Log	01/28/2014 8:48:45	From: 3022720000 M...		





# Distracted Driving Collisions – Investigatory Techniques

## Interview Process

- Establish what phone was in their possession, there may be more than one.
- If operator is cooperative, obtain the phone password.
- Obtain consent and review phone usage during audio/video recorded on-scene interview.
- How does driver use the phone in the vehicle?
- What type of messaging app is used (iMessage, snapchat, FB messenger, etc.)
- How does phone connect to vehicle? (cord, BT, - is cord present)
- Does driver have a smartwatch and if so, how does it answer/send messages? (independent research may be necessary)





# Distracted Driving Collisions – Investigatory Techniques







# Distracted Driving Collisions – Investigatory Techniques

## Collision Data Recorder

Along with many other vehicle systems captured by an Airbag Control Module, this tool can obtain the following pre-crash data, which can be used to formulate a distracted driving causation.

It is also extremely helpful for establishing probable cause for a cell record search warrant.

- Throttle percentage
- Steering angle
- Braking status



**BOSCH**

Invented for life





# Distracted Driving Collisions – Investigatory Techniques





# Distracted Driving Collisions – Investigatory Techniques

## Pre-Crash Data (1st Prior Event - table 1 of 5)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Pre-Crash Recorder Status	Engine RPM	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal, % Full	Raw Manifold Pressure (kPa)	ABS MIL	PCM MIL	ETC Lamp
-5.0	Complete	5,349	122 [196]	100	99.20	Off	Off	Off
-4.9	Complete	5,353	122 [196]	100	98.40	Off	Off	Off
-4.8	Complete	5,354	122 [196]	100	99.20	Off	Off	Off
-4.7	Complete	5,350	122 [196]	100	98.40	Off	Off	Off
-4.6	Complete	5,360	122 [196]	100	97.60	Off	Off	Off
-4.5	Complete	5,362	122 [196]	100	97.60	Off	Off	Off
-4.4	Complete	5,364	122 [196]	100	98.40	Off	Off	Off
-4.3	Complete	5,365	122 [196]	100	98.40	Off	Off	Off
-4.2	Complete	5,369	122 [196]	100	97.60	Off	Off	Off
-4.1	Complete	5,376	122 [196]	100	98.40	Off	Off	Off
-4.0	Complete	5,372	122 [196]	100	97.60	Off	Off	Off
-3.9	Complete	5,376	122 [197]	100	98.40	Off	Off	Off
-3.8	Complete	5,379	122 [197]	100	99.20	Off	Off	Off
-3.7	Complete	5,388	122 [197]	100	98.40	Off	Off	Off
-3.6	Complete	5,391	122 [197]	70	99.20	Off	Off	Off



# Distracted Driving Collisions – Investigatory Techniques







# Distracted Driving Collisions – Investigatory Techniques



**BERLA**



# Distracted Driving Collisions – Investigatory Techniques







# Distracted Driving Collisions – Investigatory Techniques

## Infotainment Systems

### Berla Corporation / Infotainment System Analysis

- GPS data
- Navigation history (H&R Investigations)
- Call logs
- Contact Lists
- SMS messages
- Emails
- Pictures
- Social media feeds
- Whether BT is connected

**BERLA**



# Distracted Driving Collisions – Case Preparation

## Search Warrant / Case Preparation

- Types of crashes known to be associated with Distracted Driving.
- Lack of pre-impact evidence, location of evidence well into event.
- Evidence within the vehicle.
- Physical location of cell phone.
- Damage to phone consistent with air bag interaction.
- Biological evidence on cell.
- Witness statements, independent and passengers.
- Cell/Text phone records.
- Forensic Imaging
- ACM data correlation (steering angle, brake switch status).



# Distracted Driving

Thank you for your time and attention

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