

Outer Temple



Running product liability, aviation and mass tort claims in the UK & US

Wednesday 4th September 2024



NATHAN TAVARES KC
**OUTER TEMPLE
CHAMBERS**



GERARD MCDERMOTT KC
**OUTER TEMPLE
CHAMBERS**



ALIYAH AKRAM
**OUTER TEMPLE
CHAMBERS**



OLINGA TAHZIB
**OUTER TEMPLE
CHAMBERS**



KEVIN P. DURKIN
CLIFFORD LAW



JOEL SMITH
**BOWMAN AND
BROOKE**



SARAH MOORE
LEIGH DAY

Machine Generated Data in Automobile Crash Reconstruction

September 4, 2024
London

Joel Smith
Partner, Columbia, SC





Solid State Flight Data Recorder

Power supply

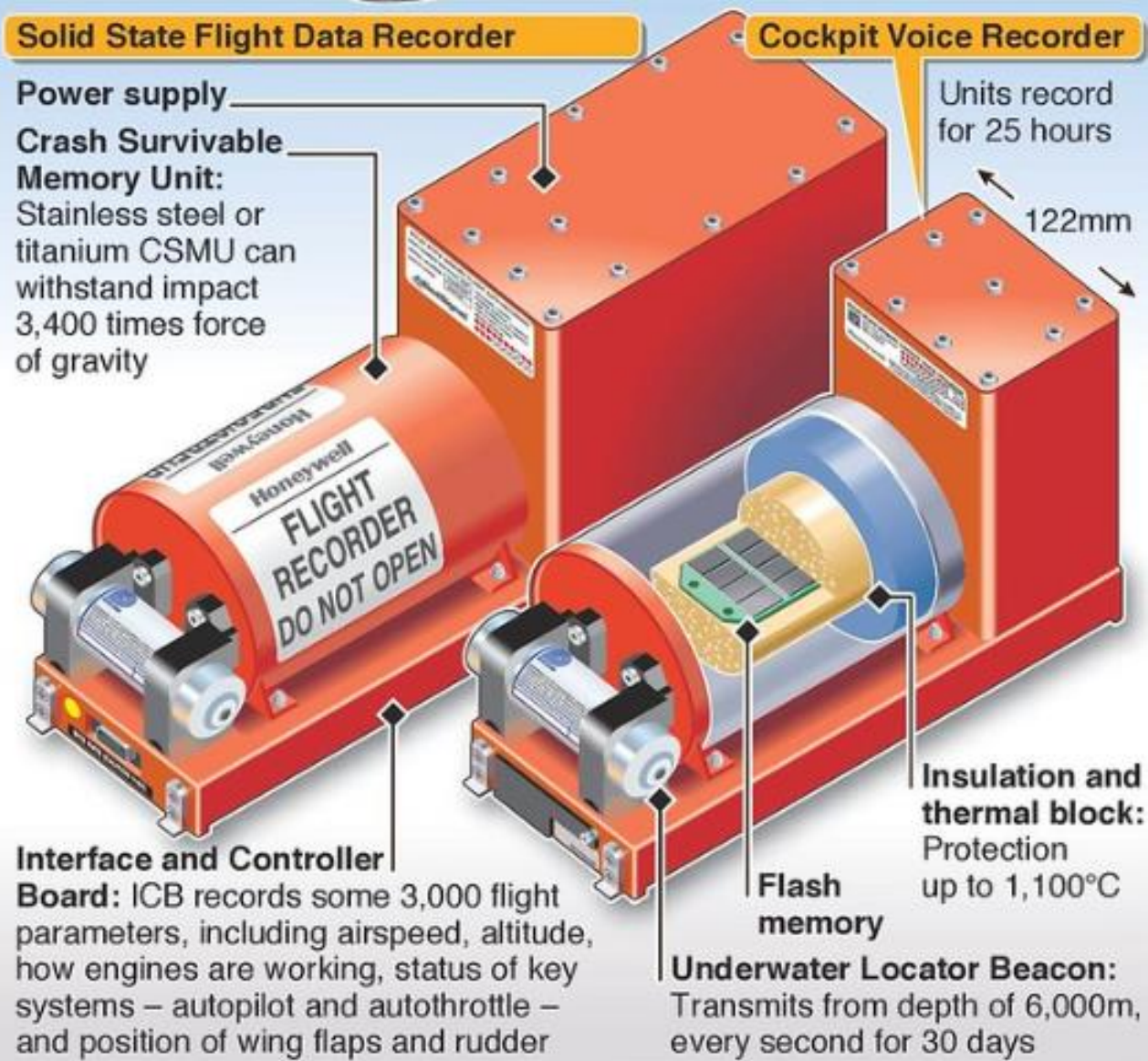
Crash Survivable Memory Unit:

Stainless steel or titanium CSMU can withstand impact 3,400 times force of gravity

Cockpit Voice Recorder

Units record for 25 hours

122mm



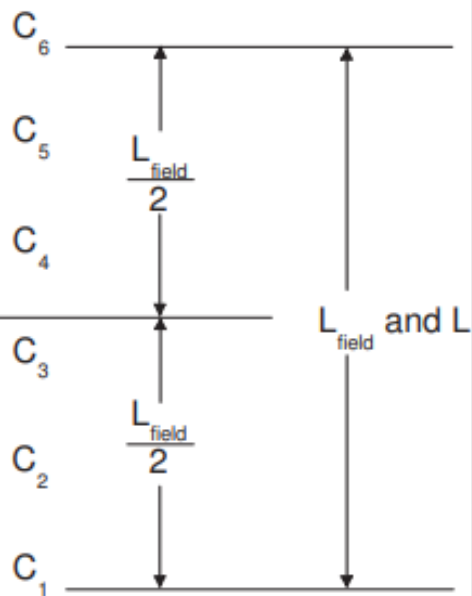
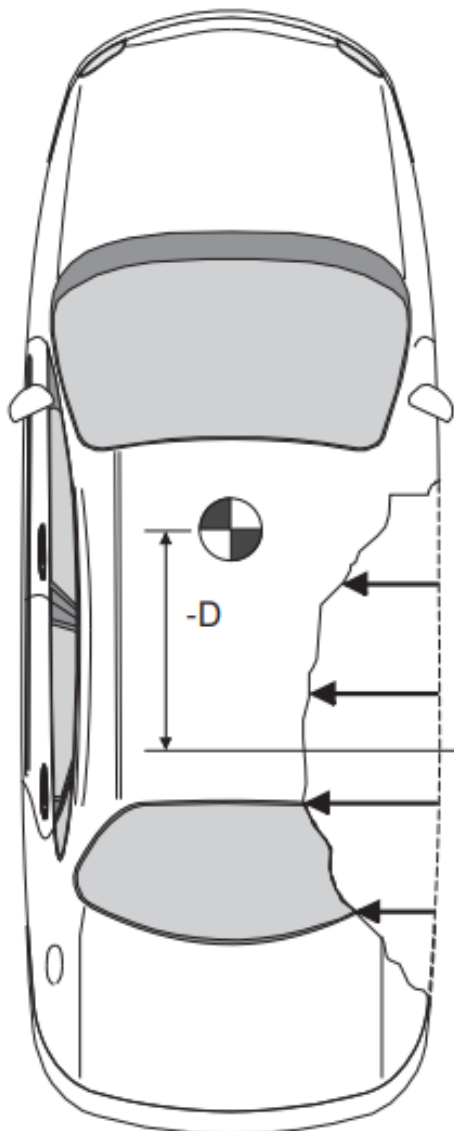
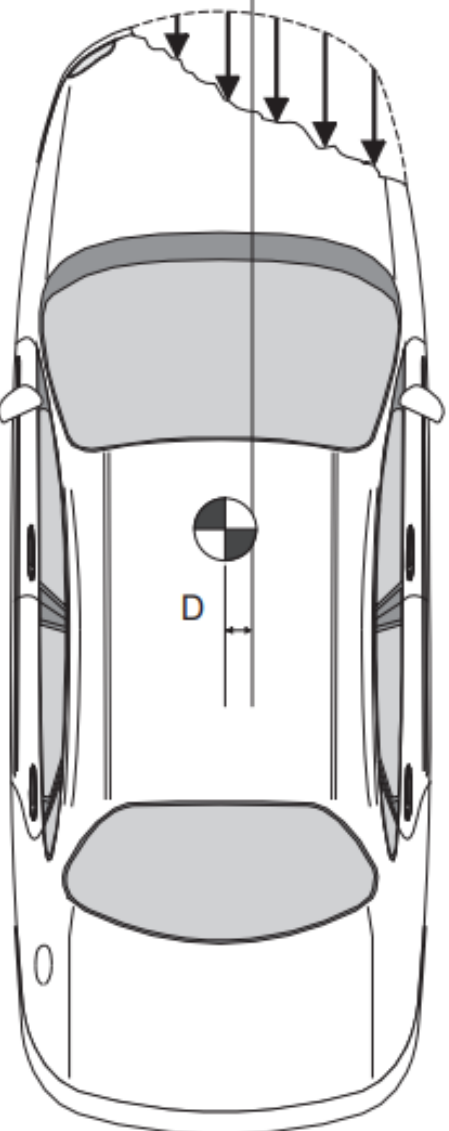
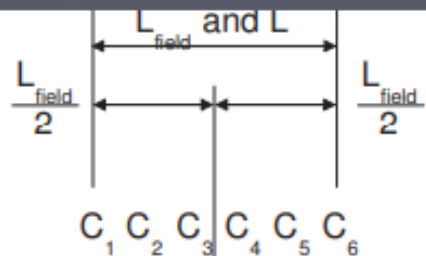
Interface and Controller Board:

ICB records some 3,000 flight parameters, including airspeed, altitude, how engines are working, status of key systems – autopilot and autothrottle – and position of wing flaps and rudder

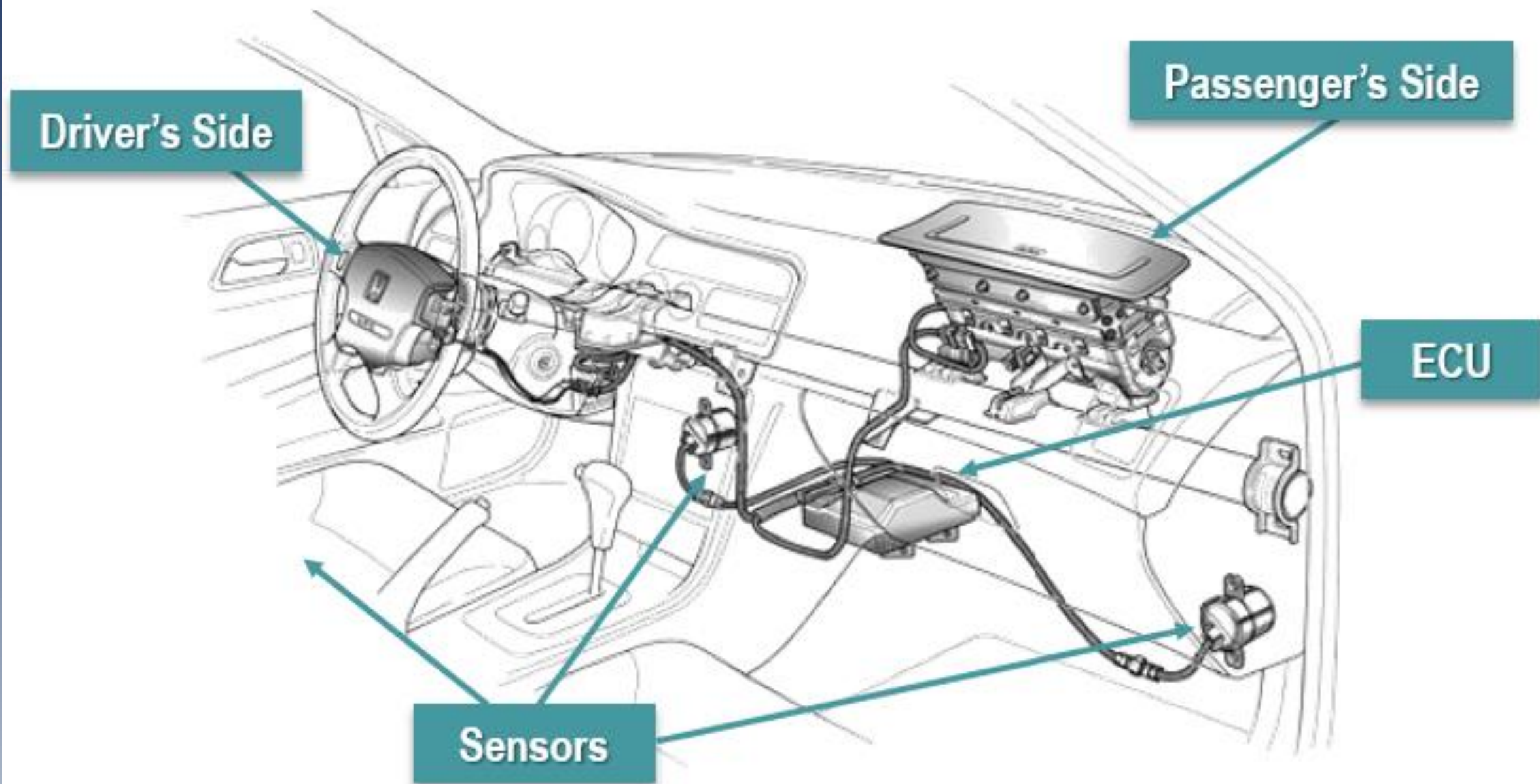
Flash memory

Insulation and thermal block:
Protection up to 1,100°C

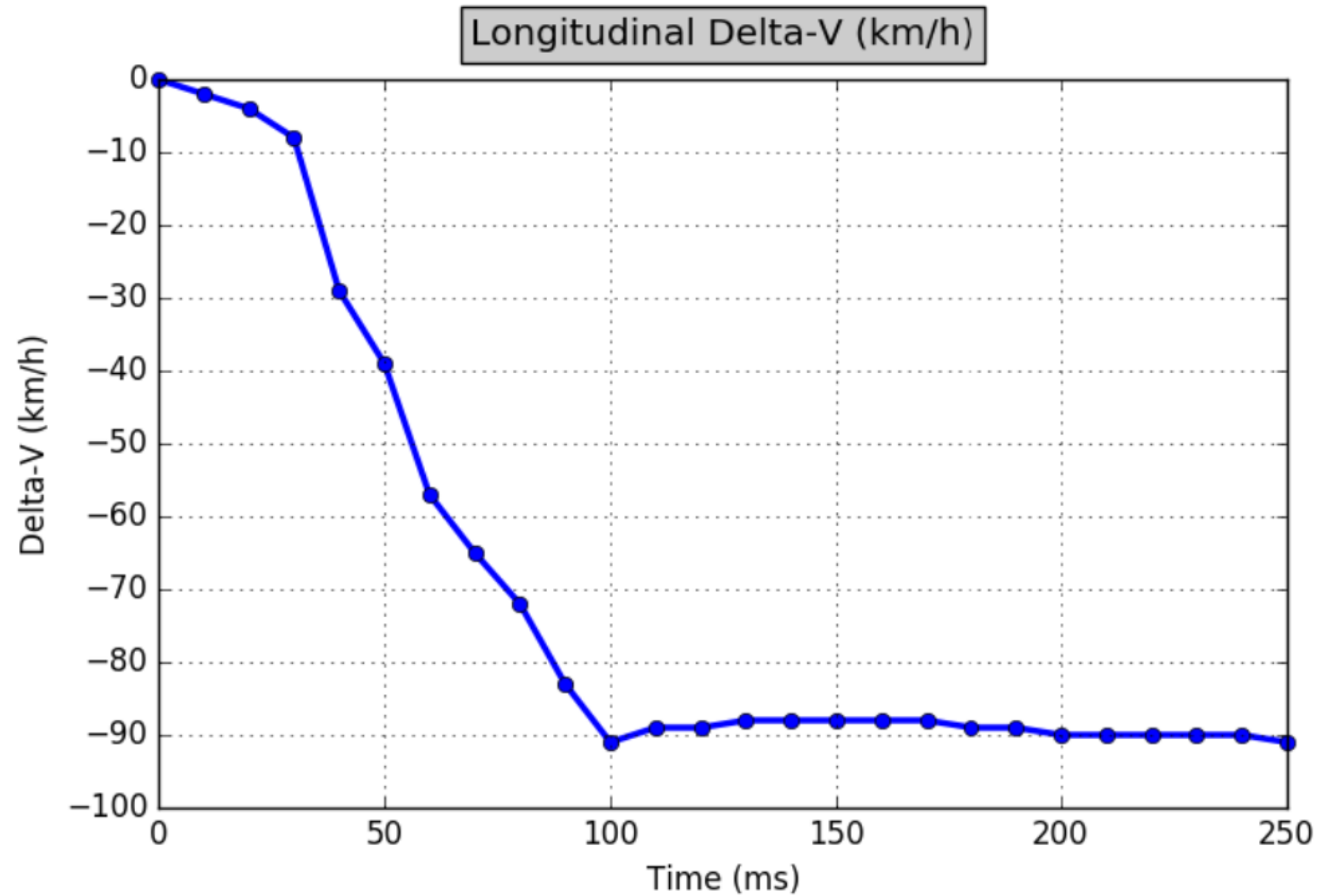
Underwater Locator Beacon:
Transmits from depth of 6,000m, every second for 30 days



Airbag Integrated System



Longitudinal Delta-V (Event 1)



Event 1 Data Record

Longitudinal Delta-V (Event 1)

Delta-V (km/h)

Time (ms)	Delta-V (km/h)	Time (ms)	Delta-V (km/h)
0	0	140	-88
10	-2	150	-88
20	-4	160	-88
30	-8	170	-88
40	-29	180	-89
50	-39	190	-89
60	-57	200	-90
70	-65	210	-90
80	-72	220	-90
90	-83	230	-90
100	-91	240	-90
110	-89	250	-91
120	-89		
130	-88		

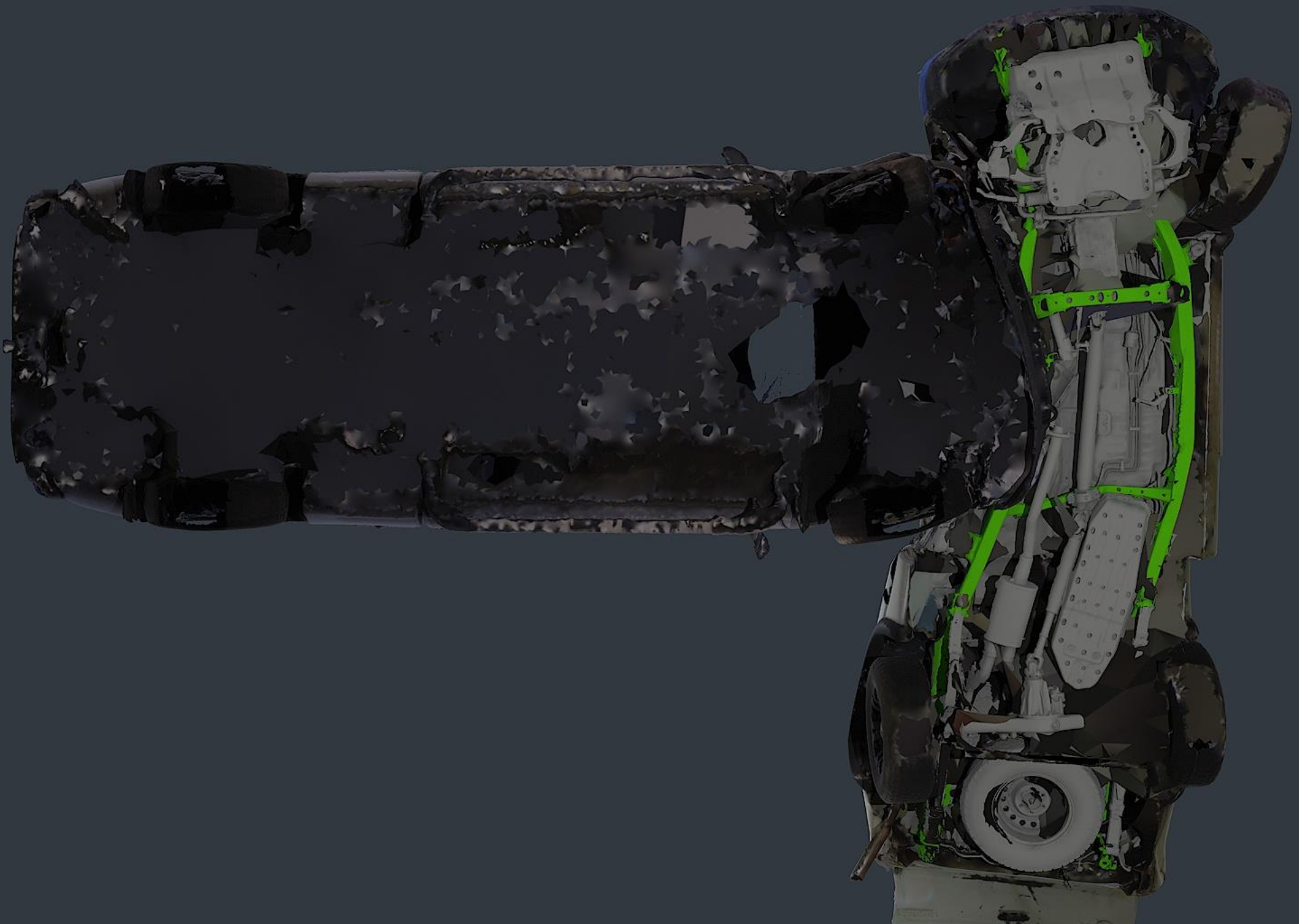
5818

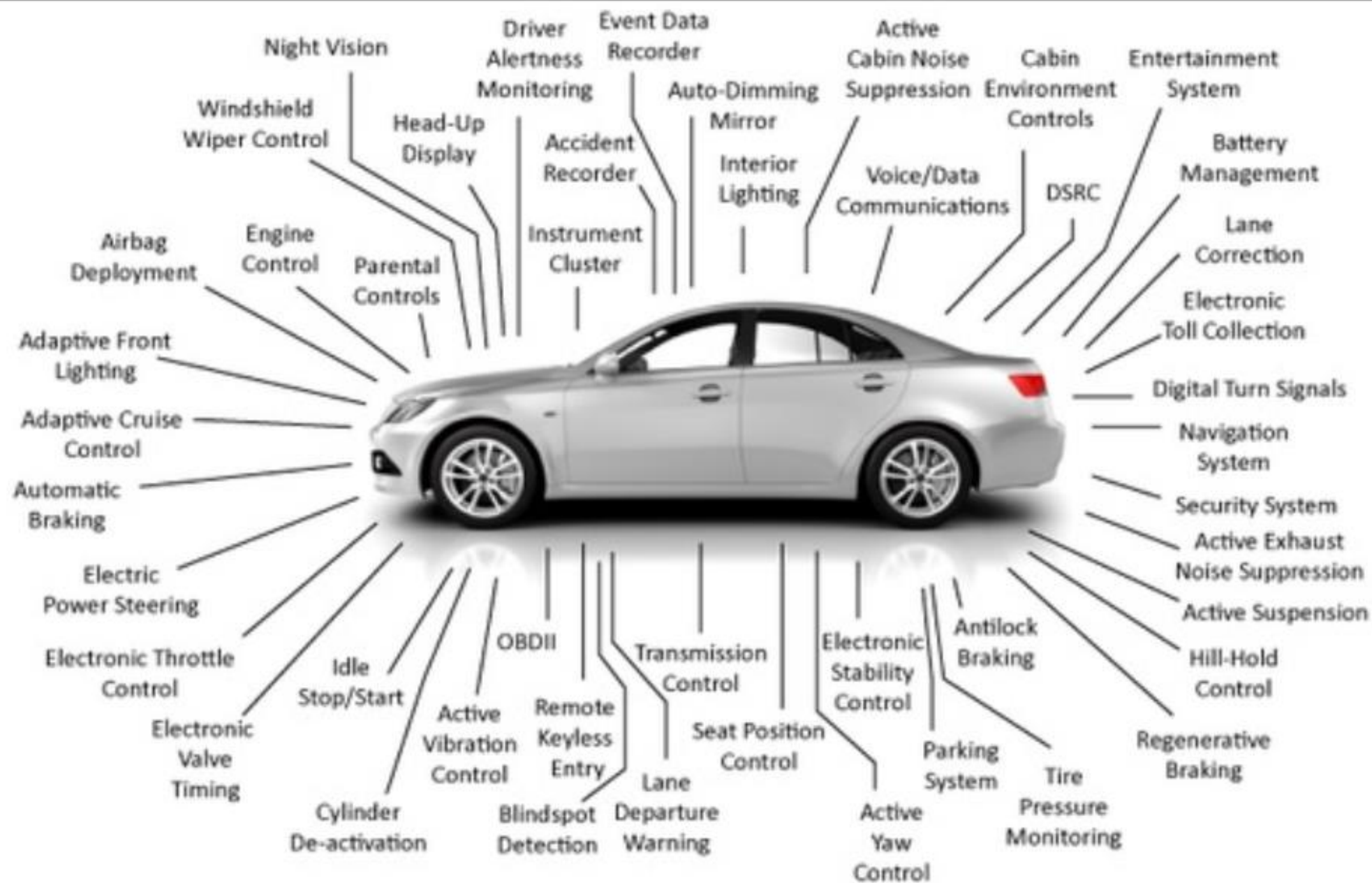
0000 FF FF FF FF
0028 FF FF FF FF
0056 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0084 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0112 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0140 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0168 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0196 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0224 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0252 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0280 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

1764 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
1792 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
1820 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
1848 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
1876 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
1904 FF FF FF FF 4C A5 E7 CB 70 8B 3C 6C FF FF FF
1932 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
1960 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
1988 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
2016 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF









***Admissibility
Preservation
Presentation***



Note: Autosteer is a BETA feature.


If you have purchased the optional Enhanced Autopilot or Full Self-Driving Capability packages, you can use Autosteer to manage steering and speed under certain circumstances. Autosteer builds upon Traffic-Aware Cruise Control (see [Traffic-Aware Cruise Control](#) on page 87), intelligently keeping Model X in its driving lane when cruising at a set speed. Using the vehicle's camera(s), the radar sensor, and the ultrasonic sensors, Autosteer detects lane markings and the presence of vehicles and objects, steering Model X based on the lane markings and the vehicle directly in front of you.

Warning: Autosteer is a hands-on feature. You must keep your hands on the steering wheel at all times.

Warning: Autosteer is intended for use only on highways and limited-access roads with a fully attentive driver. When using Autosteer, hold the steering wheel and be mindful of road conditions and surrounding traffic. Do not use Autosteer on city streets, in construction zones, or in areas where bicyclists or pedestrians may be present. Never depend on Autosteer to determine an appropriate driving path. Always be prepared to take immediate action. Failure to follow these instructions could cause damage, serious injury or death.

Operating Autosteer

Before you can operate Autosteer, you must enable it by touching **Controls > Settings > Driver Assistance > Autosteer > ON**.

52  To indicate that Autosteer is available (but not actively steering Model X), the instrument panel displays a gray Autosteer icon on the right side of the driving speed.

To initiate Autosteer, pull the cruise control lever toward you twice in quick succession.



Autosteer briefly displays a message on the instrument panel reminding you to pay attention to the road and be ready to take over at any time. To indicate that Autosteer is now actively steering Model X, the instrument panel displays the Autosteer icon in blue. When Autosteer is able to detect lane markings, it also displays the driving lane in blue.



Note: To initiate Autosteer when there is no vehicle in front of you, you must be driving at least 18 mph (30 km/h) on a roadway with visible lane markings. If a vehicle is detected ahead of you, you can initiate Autosteer at any speed, even when stationary (if you are at least 5 feet (150 cm) away from the vehicle).

The instrument panel displays a message indicating that Autosteer is temporarily unavailable if you attempted to engage Autosteer when driving at a speed that is not within the speed required for Autosteer to operate. Autosteer may also be unavailable if it is not receiving adequate data from the camera(s) or sensors.



Warning: Autosteer is a hands-on feature. You must keep your hands on the steering wheel at all times.



Warning: Autosteer is intended for use only on highways and limited-access roads with a fully attentive driver. When using Autosteer, hold the steering wheel and be mindful of road conditions and surrounding traffic. Do not use Autosteer on city streets, in construction zones, or in areas where bicyclists or pedestrians may be present. Never depend on Autosteer to determine an appropriate driving path. Always be prepared to take immediate action. Failure to follow these instructions could cause damage, serious injury or death.



When you see this message, **TAKE OVER STEERING IMMEDIATELY.**

Canceling Autosteer

Autosteer cancels when:

- You start steering manually.
- You press the brake pedal.
- You push the cruise control lever away from you.
- The maximum speed that Autosteer supports—90 mph (150 km/h)—is exceeded.
- You shift into a different gear.
- An Automatic Emergency Braking event occurs (see [Collision Avoidance Assist](#) on page 105).

When Autosteer cancels, it sounds chimes and the Autosteer icon either turns gray to indicate that Autosteer is no longer active, or disappears to indicate that it is not currently available.

Note: If Autosteer cancels because you started steering manually, Traffic-Aware Cruise Control remains active. Disengage Traffic-Aware Cruise Control as you normally would, by briefly pushing the cruise control lever away from you or pressing the brake pedal.

To disable Autosteer so it is no longer available, touch **Controls > Settings > Driver Assistance > Autosteer > OFF.**

Limitations

Autosteer is particularly unlikely to operate as intended when:

- Autosteer is unable to accurately determine lane markings. For example, lane markings are excessively worn, have visible previous markings, have been adjusted due to road construction, are changing quickly (lanes branching off, crossing over, or merging), objects or landscape features are casting strong shadows on the lane markings, or the road surface contains pavement seams or other high-contrast lines.
- Visibility is poor (heavy rain, snow, fog, etc.).
- A camera(s) or sensor(s) is obstructed, covered, or damaged.
- Driving on hills.
- Approaching a toll booth.
- Driving on a road that has sharp curves or is excessively rough.

- Bright light (such as direct sunlight) is interfering with the view of the camera(s).
- The sensors are affected by other electrical equipment or devices that generate ultrasonic waves.

Warning: Many unforeseen circumstances can impair the operation of Autosteer. Always keep this in mind and remember that as a result, Autosteer may not steer Model X appropriately. Always drive attentively and be prepared to take immediate action.

Limitations

Autosteer is particularly unlikely to operate as intended when:

- Autosteer is unable to accurately determine lane markings. For example, lane markings are excessively worn, have visible previous markings, have been adjusted due to road construction, are changing quickly (lanes branching off, crossing over, or merging), objects or landscape features are casting strong shadows on the lane markings, or the road surface contains pavement seams or other high-contrast lines.
- Visibility is poor (heavy rain, snow, fog, etc.).
- A camera(s) or sensor(s) is obstructed, covered, or damaged.
- Driving on hills.
- Approaching a toll booth.
- Driving on a road that has sharp curves or is excessively rough.

Gore Area

Crash Sequence



Crash attenuator was collapsed and nonoperational prior to the crash



GE March 2018

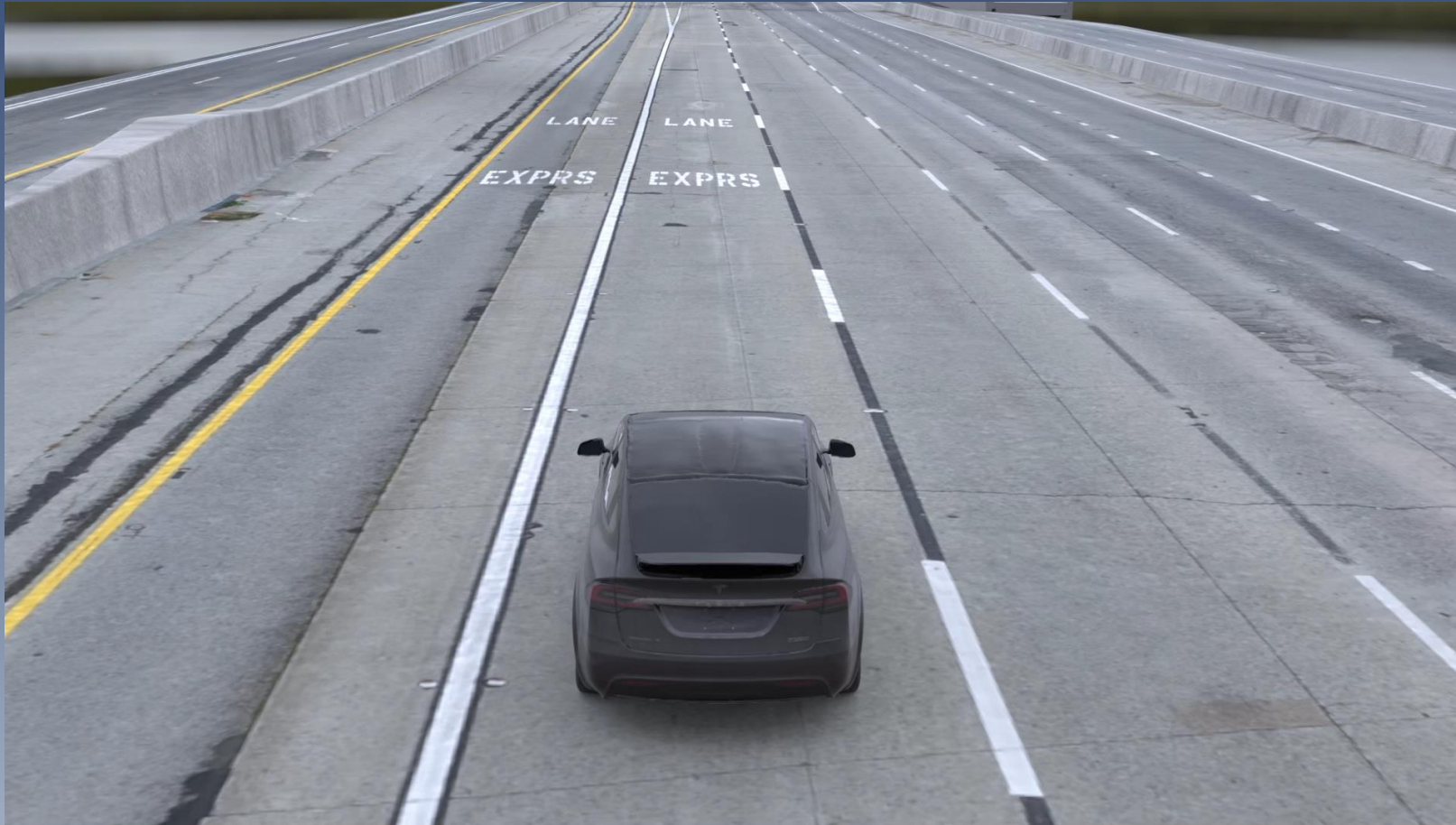
~640 feet

Huang v Tesla

Faded Lane Markings Branching Off



Trailing Track Video



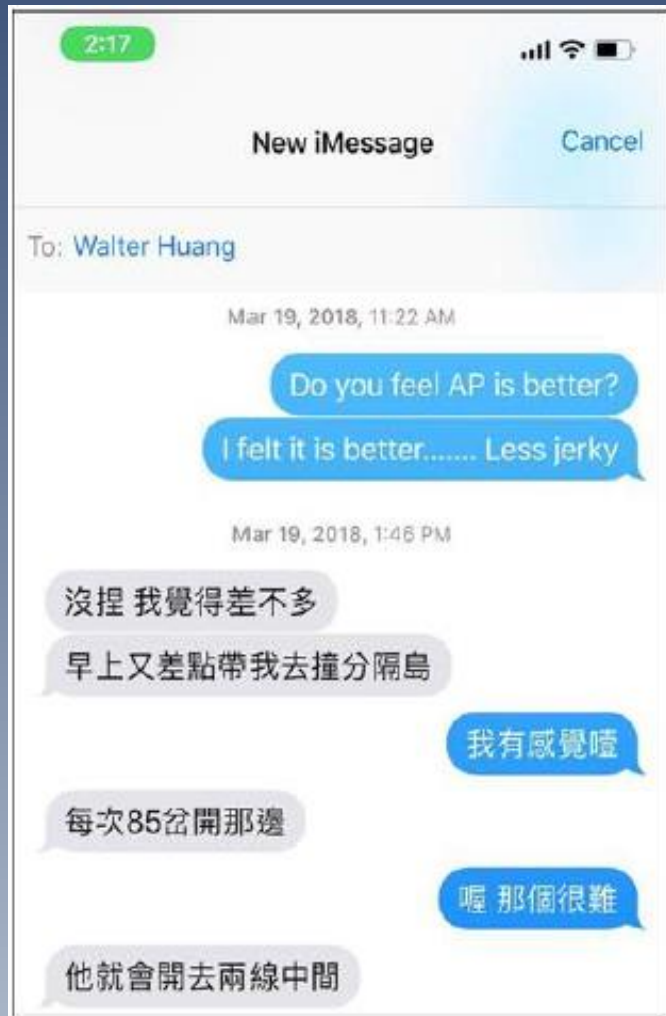


Police Photograph

POR



Walter Huang knew his vehicle's response at this exact location



沒捏我覺得差不多 (Walter Huang)

Nope, I feel almost the same

早上又差點帶我去撞分隔島(Walter Huang)

Almost led me to hit the median again this morning

我有感覺噠 (Hans Ting)

I can feel it

每次85岔開那邊 (Walter Huang)

Each time at the 85 separation

喔那個很難 (Hans Ting)

Oh, that is very difficult

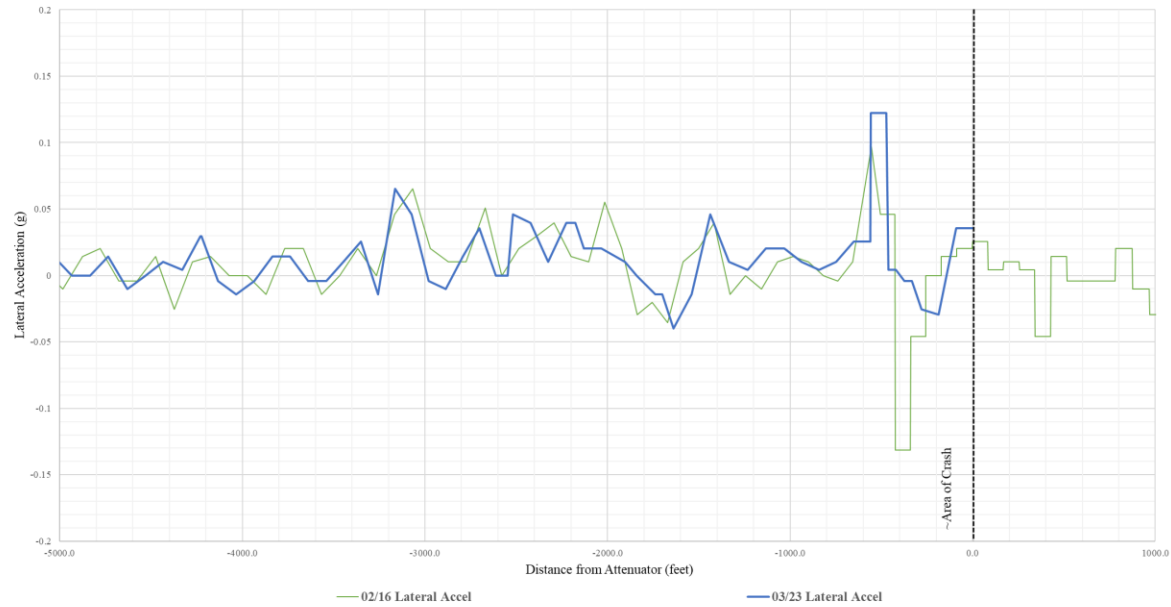
他就會開去兩線中間 (Walter Huang)

It would drive me towards the middle of the two lines

Huang vs. Tesla - SUBJECT TO PROTECTIVE ORDER

File: CNTRL_2145_0003515290.CSV File Date: Friday 03/23/2018 Driving Start: 12:44 AM UTC

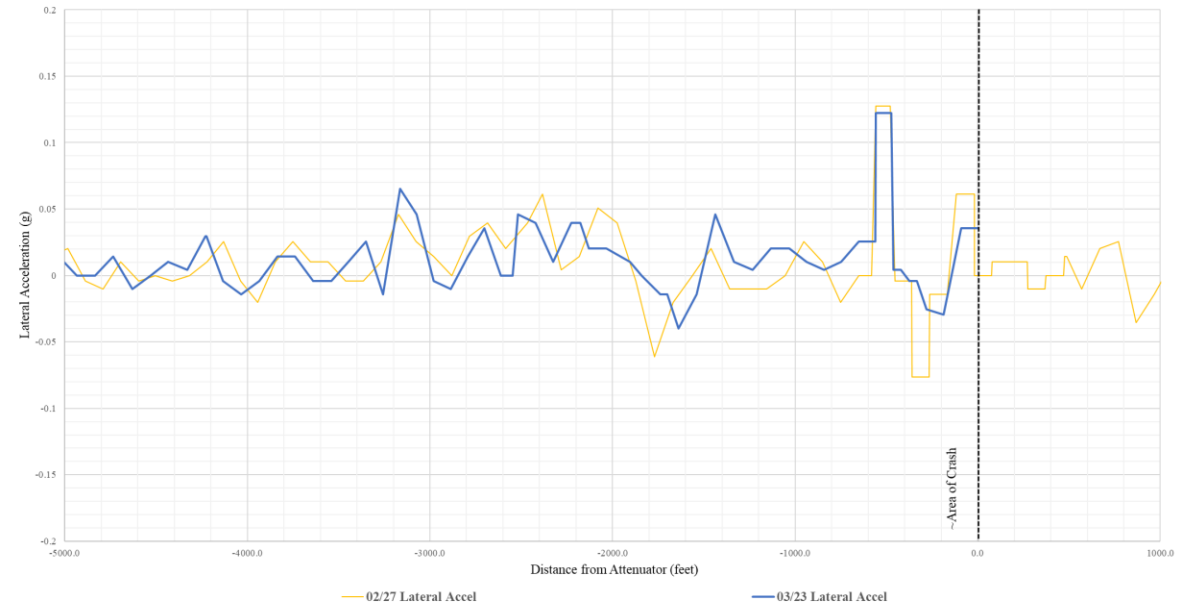
Lateral Acceleration Approaching Gore Area



Huang vs. Tesla - SUBJECT TO PROTECTIVE ORDER

File: CNTRL_2145_0003515290.CSV File Date: Friday 03/23/2018 Driving Start: 12:44 AM UTC

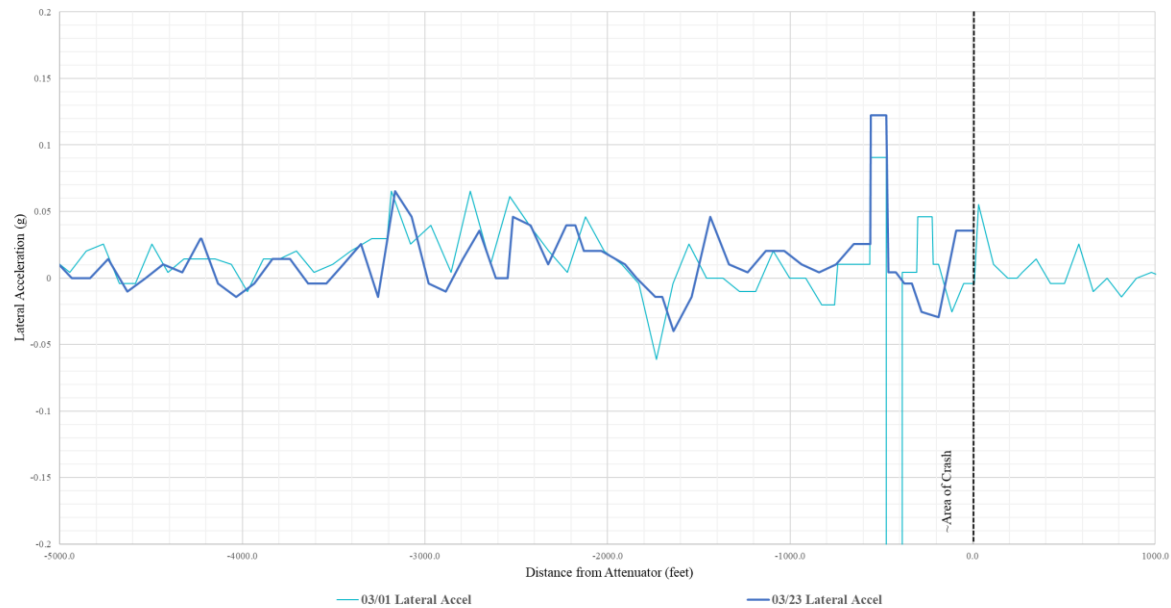
Lateral Acceleration Approaching Gore Area



Huang vs. Tesla - SUBJECT TO PROTECTIVE ORDER

File: CNTRL_2145_0003515290.CSV File Date: Friday 03/23/2018 Driving Start: 12:44 AM UTC

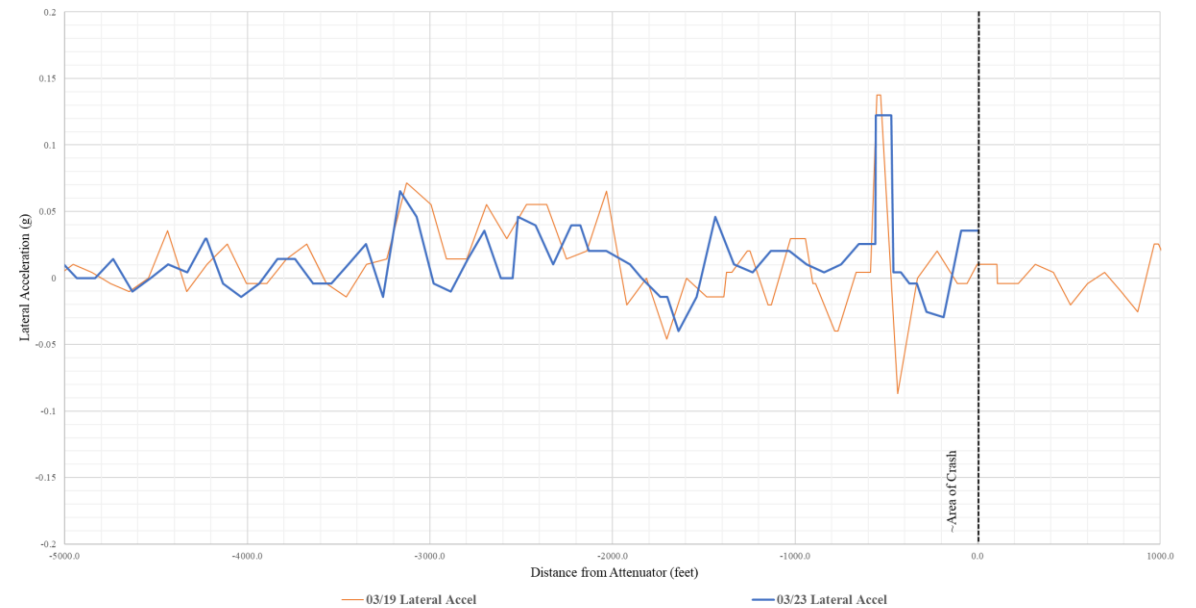
Lateral Acceleration Approaching Gore Area



Huang vs. Tesla - SUBJECT TO PROTECTIVE ORDER

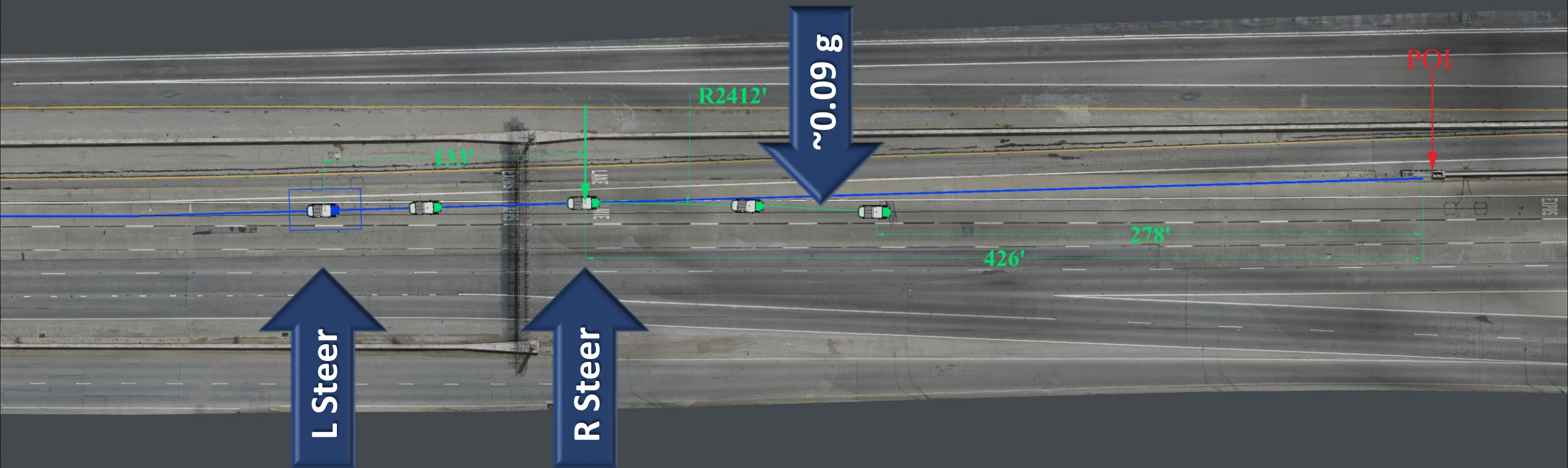
File: CNTRL_2145_0003515290.CSV File Date: Friday 03/23/2018 Driving Start: 12:44 AM UTC

Lateral Acceleration Approaching Gore Area



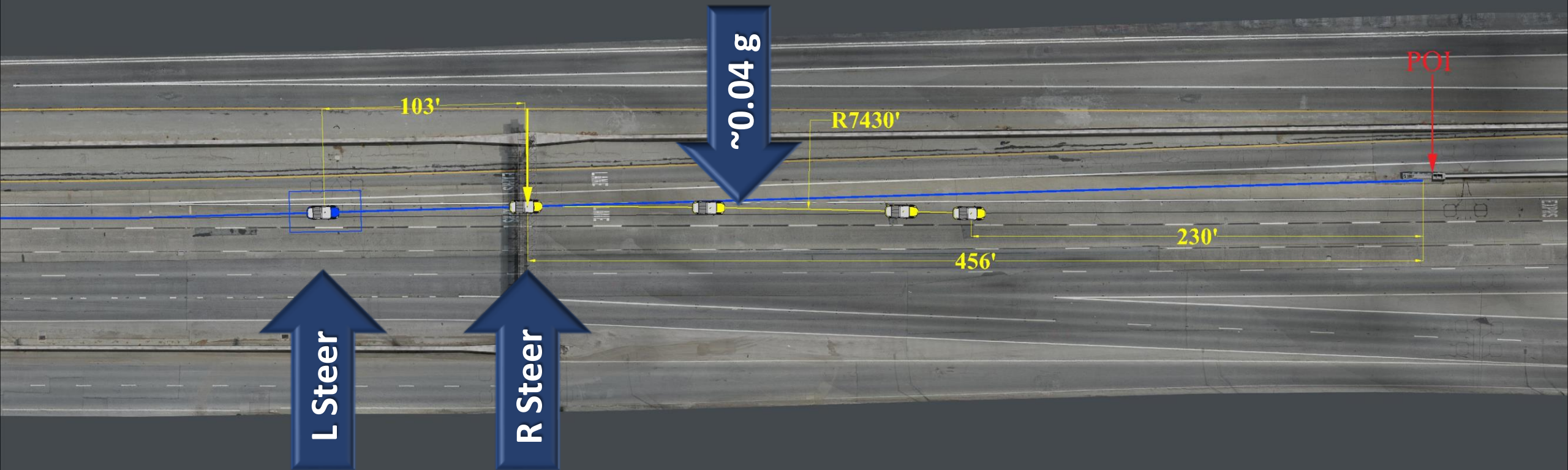
Tesla Carlog

February 16, 2018



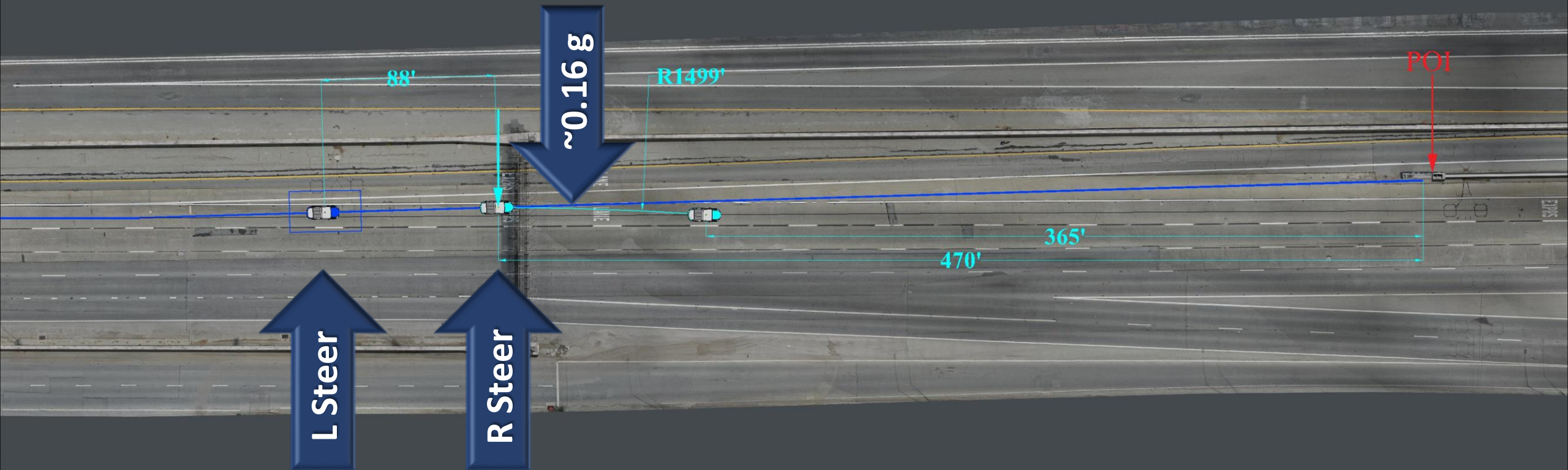
Tesla Carlog

February 27, 2018



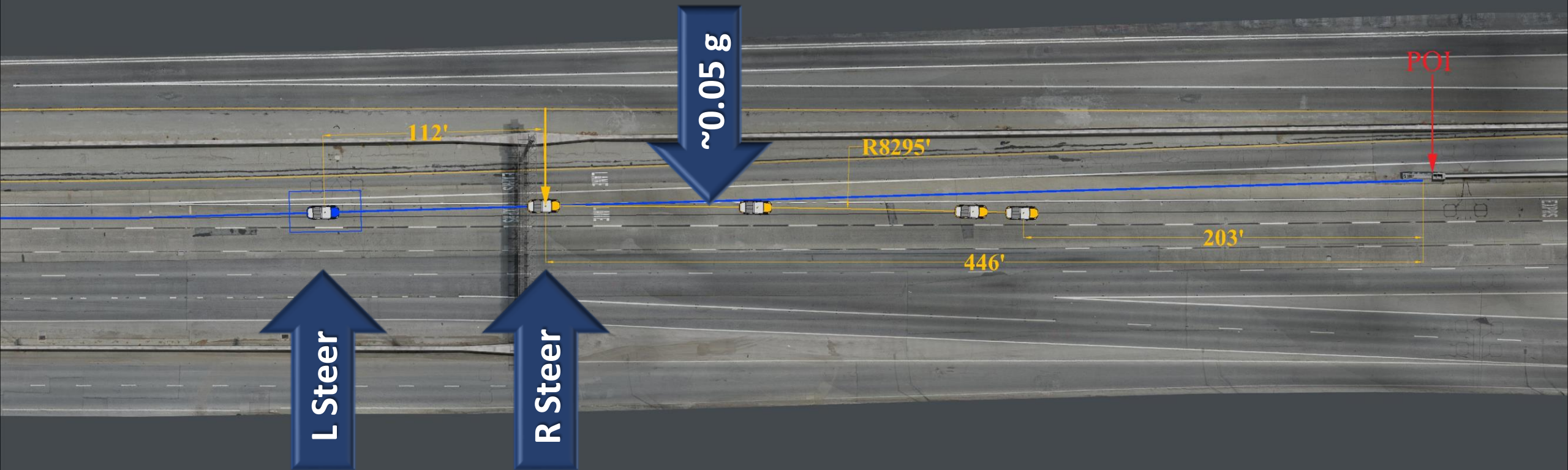
Tesla Carlog

March 1, 2018



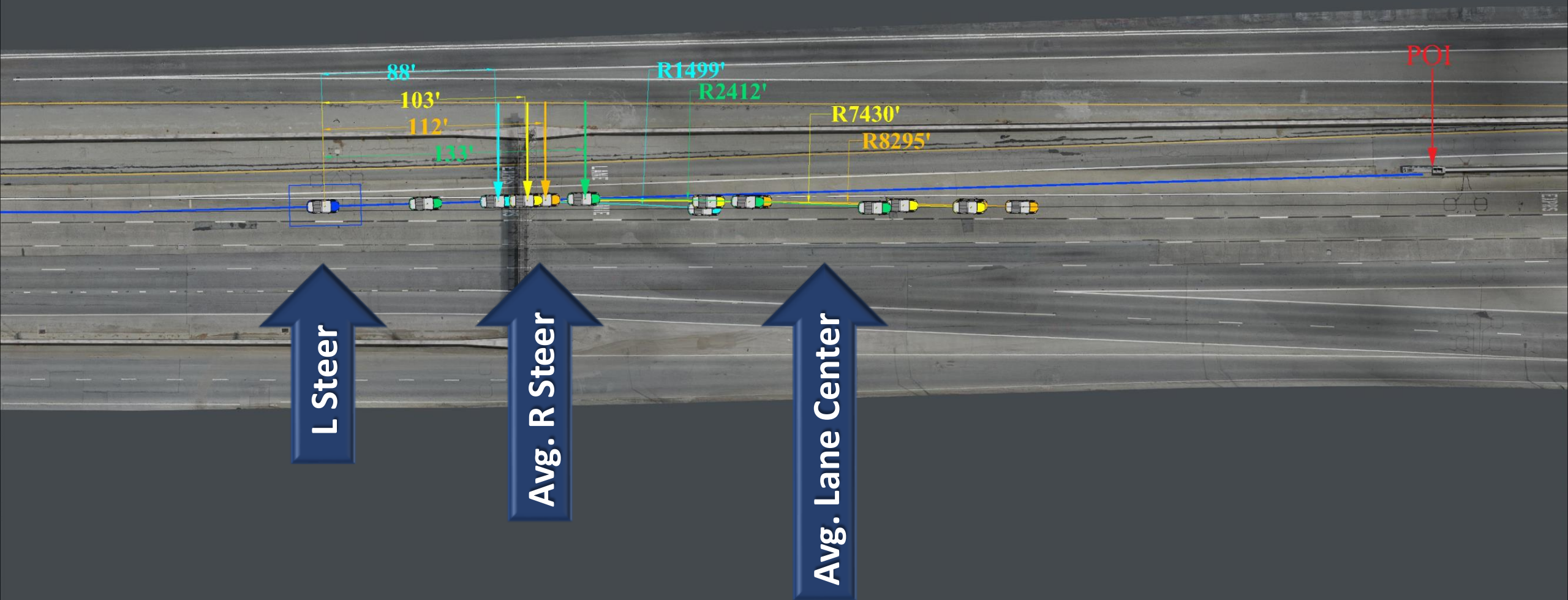
Tesla Carlog

March 19, 2018



Tesla Carlog

Combined



Date	Left Steer (°)	Time, Left Steer to Right Steer (s)	Distance (ft)
2/16/2018	-4.8	1.6	132.6
2/27/2018	-6.0	1.1	103.2
3/1/2018	-6.4	1.0	88.3
3/19/2018	-5.1	1.0	112.3
03/23/2018 (Incident)	-5.6	N/A	N/A



Front



Back

```
{"bug_type": "298", "timestamp": "2018-03-23 09:06:50.13",  
-0700", "os_version": "iPhone OS 11.2.6 (15D100)", "incident_id": "6BBC69D3-9DBE-42B1-9AE9-953F09ECAAAF"}  
{  
  "crashReporterKey" : "d8e957be8e45c10f5a9b6ff8644fcf6165d17bdb",  
  "kernel" : "Darwin Kernel Version 17.4.0: Fri Dec 8 19:35:51 PST  
2017; root:xnu-4570.40.9~1/RELEASE_ARM64_T8015",  
  "product" : "iPhone10,2",  
  "incident" : "6BBC69D3-9DBE-42B1-9AE9-953F09ECAAAF",  
  "date" : "2018-03-23 09:06:50.13 -0700",  
  "build" : "iPhone OS 11.2.6 (15D100)",  
  "timeDelta" : 6,  
  "memoryStatus" : {  
    "compressorSize" : 41413,  
    "compressions" : 30916276,  
    "decompressions" : 23128651,  
    "zoneMapCap" : 402653184,  
    "largestZone" : "APFS_4K_OBJS",  
    "largestZoneSize" : 41238528,  
    "pageSize" : 16384,  
    "uncompressed" : 101929,  
    "zoneMapSize" : 165412864,  
    "memoryPages" : {  
      "active" : 71077,  
      "throttled" : 0,  
      "fileBacked" : 24208,  
      "wired" : 29036,  
      "anonymous" : 81915,  
      "purgeable" : 662,  
      "inactive" : 34642,  
      "free" : 5367,  
      "speculative" : 404
```

```
},  
  "largestProcess" : "sgz",  
  "genCounter" : 0,  
  "processes" : [  
    {  
      "uuid" : "6a49b8c7-5e7f-38f6-b54d-3858ef36bcf9",  
      "states" : [  
        "suspended"  
      ],  
      "lifetimeMax" : 758,  
      "age" : 129776198467,  
      "purgeable" : 0,  
      "fds" : 25,  
      "coalition" : 80,  
      "rpages" : 282,  
      "pid" : 10012,  
      "idleDelta" : 129272361,
```

```
},  
  "largestProcess" : "sgz",  
  "genCounter" : 0,  
  "processes" : [  
    {
```



```
Architecture: armv6
Report Version: 19
Command: sgz
Path: /private/var/mobile/containers/Bundle/Application/
4C8004F1-7BA5-4681-804A-442385516F50/sgz.app/sgz
Version: 1.4.0 (1.4.0)
Beta Identifier: 00B32568-B8F2-4887-9491-A326D0810066
Parent: launchd [1]
PID: 10142
Event: wakeups
Wakeups: 45001 wakeups over the last 299 seconds (150 wakeups
per second average), exceeding limit of 150 wakeups per second over
300 seconds
Action taken: none
Duration: 299.14s
Steps: 115
Hardware model: iPhone10,2
Active cpus: 6
Powerstats for: sgz [10142]
UID: 29482A54-7129-3FF9-A344-C
Start time: 2018-03-23 09:08:55 -0700
End time: 2018-03-23 09:10:25 -0700
Microstackshots: 115 samples (100%)
Primary state: 41 samples Frontmost App,
QoS User Interactive, Requested Thread QoS
Thread QoS Unspecified
User Activity: 0 samples Idle, 115 samples
Power Source: 0 samples on Battery, 115
56 ??? (libsystem_dyld.dylib + 8854)
41 7?? (sgz + 28444768) [0x103c0e03a]
40 7?? (sgz + 25814112) [0x103a9e46e]
28 7?? (sgz + 25816560) [0x103a9e43a]
28 7?? (sgz + 25816392) [0x103a
28 7?? (sgz + 25815408) [0x10
25 7?? (sgz + 25815556) [0x10
8 7?? (sgz + 27939864) [
8 7?? (sgz + 25811684) [
8 7?? (sgz + 25818080) [
6 7?? (sgz + 25815
6 7?? (sgz + 279
```

```
{
  "app_name": "sgz",
  "timestamp": "2018-03-23 09:10:26.11-0700",
  "app_version": "1.4.0",
  "slice_uuid": "29482A54-7129-3FF9-A3A4-C15D5532154E",
  "adam_id": 1280275611,
  "build_version": "1.4.0",
  "bundleID": "com.bbgame.sg2017.tw",
  "share_with_app_devs": true,
  "is_first_party": false,
  "bug_type": "142",
  "os_version": "iPhone OS 11.2.6 (15D100)",
  "incident_id": "506FBB9C-2385-4B3C-9A2B-9F43A1AB7E3C",
  "name": "sgz"
}
```

[illegible]

```

Thread QoS Unspecified=
1 ??? (sgz + 34182504) [0x104299568]
1 -Effective Thread QoS Unspecified, Requested Thread QoS
Unspecified
52 ??? (sgz + 177736) [0x10222b648]
52 ??? (UIKit + 472516) [0x18e2c95c4]
52 ??? (GraphicsServices + 44932) [0x186a1cf84]
52 ??? (CoreFoundation + 35928) [0x184c5c58]
37 ??? (CoreFoundation + 954328) [0x184c50f48]
37 ??? (CoreFoundation + 963844) [0x184c3504]
37 ??? (CoreFoundation + 966144) [0x184c53e0]
37 ??? (CoreFoundation + 955208) [0x184c5900]
34 ??? (QuartzCore + 789516) [0x188cd80c]
30 ??? (QuartzCore + 50764) [0x188bd964c]
30 ??? (sgz + 1669924) [0x10238904c]
26 ??? (sgz + 1610200) [0x102391b0]
26 ??? (sgz + 29695564) [0x103e51e4c]
6 ??? (sgz + 25935944) [0x103abc048]
6 ??? (sgz + 28902732) [0x103d9054c]
6 ??? (sgz + 24001876) [0x1038e3d54]
6 ??? (sgz + 23776940) [0x1038ceac]
[0x1038ceac]
6 ??? (sgz + 23774164)
[0x1038ceac304]
4 ??? (sgz + 24214664)
[0x103917c88]
4 ??? (sgz + 24166312)
[0x10390bfaf8]
4 ??? (sgz + 24163368)
[0x10390b428]
4 ??? (sgz + 24158732)
[0x10390a20c]
4 ??? (sgz + 24716388)
[0x103992464]
4 ??? (sgz +
24162284) [0x10390afec]
4 ??? (sgz +
24130864) [0x103903530]
4 ??? (sgz +
27274688) [0x103c02dc0]
1 ??? (sgz +
27521952) [0x103c3f3a0]
1 ??? (sgz +
29984704) [0x103e987c0]
1 ??? (sgz +
+ 30022500) [0x103ealb64]
(sgz + 29964228) [0x103e937c4]
1 ???

```

```

2 <Effective Thread QoS Default, Requested Thread
QoS Default>
2 ??? (sgz + 27945460) [0x103ca65f4]
2 <Effective Thread QoS Default, Requested Thread
QoS Default>
2 ??? (sgz + 27947668) [0x103ca7294]
2 <Effective Thread QoS Default, Requested Thread
QoS Default>
2 ??? (sgz + 27941048) [0x103cae5b8]
2 <Effective Thread QoS Default, Requested Thread
QoS Default>
2 ??? (sgz + 25429736) [0x103ba40e8]
2 ??? (sgz + 27878260) [0x103c56374]
2 <Effective Thread QoS Default, Requested
Thread QoS Default>
1 ??? (sgz + 27945964) [0x103cae6ec]
1 <Effective Thread QoS Default, Requested Thread
QoS Default>
1 ??? (sgz + 26665772) [0x103b6e32c]
1 ??? (sgz + 26666724) [0x103b6ee64]
1 ??? (sgz + 26659420) [0x103b7669c]
1 ??? (sgz + 26673032) [0x103b6f88]
1 ??? (sgz + 26669472) [0x103b6f1a0]
1 ??? (sgz + 26670692) [0x103b6f664]
1 <Effective Thread QoS Default,
Requested Thread QoS Default>
1 ??? (sgz + 24200716) [0x10391460c]

23 09:10:26.11
d":"29482A54-7129-3F
dleID":"com.bbgame.s
rty":false,"bug_type
4B3C-9A2B-9F43A1AB7E

1 ??? (GLEngine + 610576) [0x1a5d1110]
299802904) [0x103e980b8]
27521924) [0x103c3f384]
24941784) [0x1039c94d8]
+ 24720148) [0x103993314]
(sgz + 24720928) [0x103993620]
(sgz + 22948792) [0x1037e2bb8]
27522048) [0x103c3f400]
27531388) [0x103c4187c]
+ 29980576) [0x103e977a0]
(sgz + 30014668) [0x103e9fccc]
(sgz + 22943132) [0x1037e159c]
1 ??? (sgz + 22948120) [0x1037e2918]
1 ??? (libsystem_malloc.dylib + 74520) [0x184807318]
2 ??? (sgz + 24214576)
[0x103917c30]
2 ??? (sgz + 24166312)
[0x10390bfa8]
2 ??? (sgz + 24163368)
[0x10390b428]
2 ??? (sgz + 24158732)
[0x10390a20c]
2 ??? (sgz + 24716388)
[0x103992464]
1 ??? (sgz +
24160888) [0x10390aa78]
1 ??? (sgz +
24919508) [0x1039c3e24]
1 ??? (sgz +
29999072) [0x103e9bfe0]
1 ??? (sgz +
29998416) [0x103e9bds0]
(GLEngine + 362068) [0x1a5194654]

```

```
[0x1848db8a4] 1 ??? (libsystem_kernel.dylib + 139576)
[0x1847c0138] 1 <Kernel mode, Effective Thread QoS
Default, Requested Thread QoS Default-
2 ??? (sgz + 27843336) [0x103c8db08]
2 <Effective Thread QoS Default, Requested Thread QoS
Default>
5 ??? (sgz + 25816612) [0x103ae0ee24]
5 ??? (sgz + 30074656) [0x103ee720]
5 ??? (libdispatch.dylib + 211072) [0x18465c880]
5 ??? (libsystem_kernel.dylib + 5540) [0x18479f5a4]
5 <Kernel mode, Effective Thread QoS Default,
Requested Thread QoS Default-
2 ??? (sgz + 25816540) [0x103a9edd4]
2 <Effective Thread QoS Default, Requested Thread QoS
Default>
1 ??? (sgz + 25862940) [0x103aea31c]
1 ??? (sgz + 22948120) [0x1037e2918]
1 ??? (sgz + 22941416) [0x1037e0ee8]
1 ??? (sgz + 28898296) [0x103d8f3f8]
1 ??? (libsystem_pthread.dylib + 39076) [0x1848db8a4]
1 ??? (libsystem_kernel.dylib + 139576)
[0x1847c0138] 1 <Kernel mode, Effective Thread QoS Unspecified,
Requested Thread QoS Unspecified, Override Thread QoS User
Interactive>
4 ??? (sgz + 33925584) [0x104299594]
0 [0x10427fe4d]
268 [0x10427e6cc]
14640 [0x1042705b0]
3947896 [0x1042600f8]
33947896 [0x1042500f8]
+ 33947896 [0x1042600f8]
sgz + 33947896 [0x1042600f8]
(sgz + 33947896) [0x1042600f8]
7 (sgz + 33947896) [0x1042600f8]
777 (sgz + 33947896) [0x1042600f8]
777 (sgz + 33947896) [0x1042600f8]
4 777 (sgz + 33947896) [0x1042600f8]
4 777 (sgz + 33947896) [0x1042600f8]
3 777 (sgz + 33988416) [0x104269f40]
3 777 (sgz + 33925188)
3 777 (sgz + 33779288)
3 777 (sgz + 34288548)
3 777 (sgz + 34727120)
...
c880] 1 ???
1 ???
(AppleMetalGLRenderer + 93072) [0x1a440ab90] 1 ???
(AppleMetalGLRenderer + 57704) [0x1a4402168] 1 ???
1 ??? (libdispatch.dylib + 375560) [0x184864b08] 1 ??? (sgz +
24162284) [0x10390afec] 1 ??? (sgz +
1308064) [0x103903530] 1 ??? (sgz +
27274688) [0x103c02cdc] 1 ??? (sgz +
27521832) [0x103c3f328] 1 ??? (sgz +
27532992) [0x103c41cec] 1 ???
5 777 (sgz + 25934820) [0x103abbbe4]
4 777 (sgz + 25661272) [0x103a78f58]
4 777 (sgz + 29691864) [0x1039f270]
4 777 (sgz + 29691732)
[0x103be50f54] 4 ??? (libsystem_kernel.dylib +
124088) [0x1847c0b08]
4 <Kernel mode>
1 ??? (sgz + 28904272) [0x103d90b50]
1 ??? (sgz + 27946612) [0x103cae74]
5 777 (sgz + 2593512) [0x103abb898]
5 777 (sgz + 24638064) [0x1039f270]
5 777 (sgz + 28934032) [0x103d97f90]
5 777 (sgz + 27148504)
[0x103be40d8] 5 777 (sgz + 27180836)
[0x103bebf24] 5 777 (sgz + 34963044)
[0x104357e64] 5 777 (sgz + 3503828)
[0x1025576d4] 3 777 (sgz + 2570428)
[0x1024738bc] 3 777 (sgz + 2572040)
[0x102473f08] 3 777 (sgz + 2564208)
[0x102472070] 3 777 (sgz +
2545232) [0x10246d650] 3 777 (sgz +
2639796) [0x1024847b4] 3 777 (sgz +
2 777 (sgz +
```

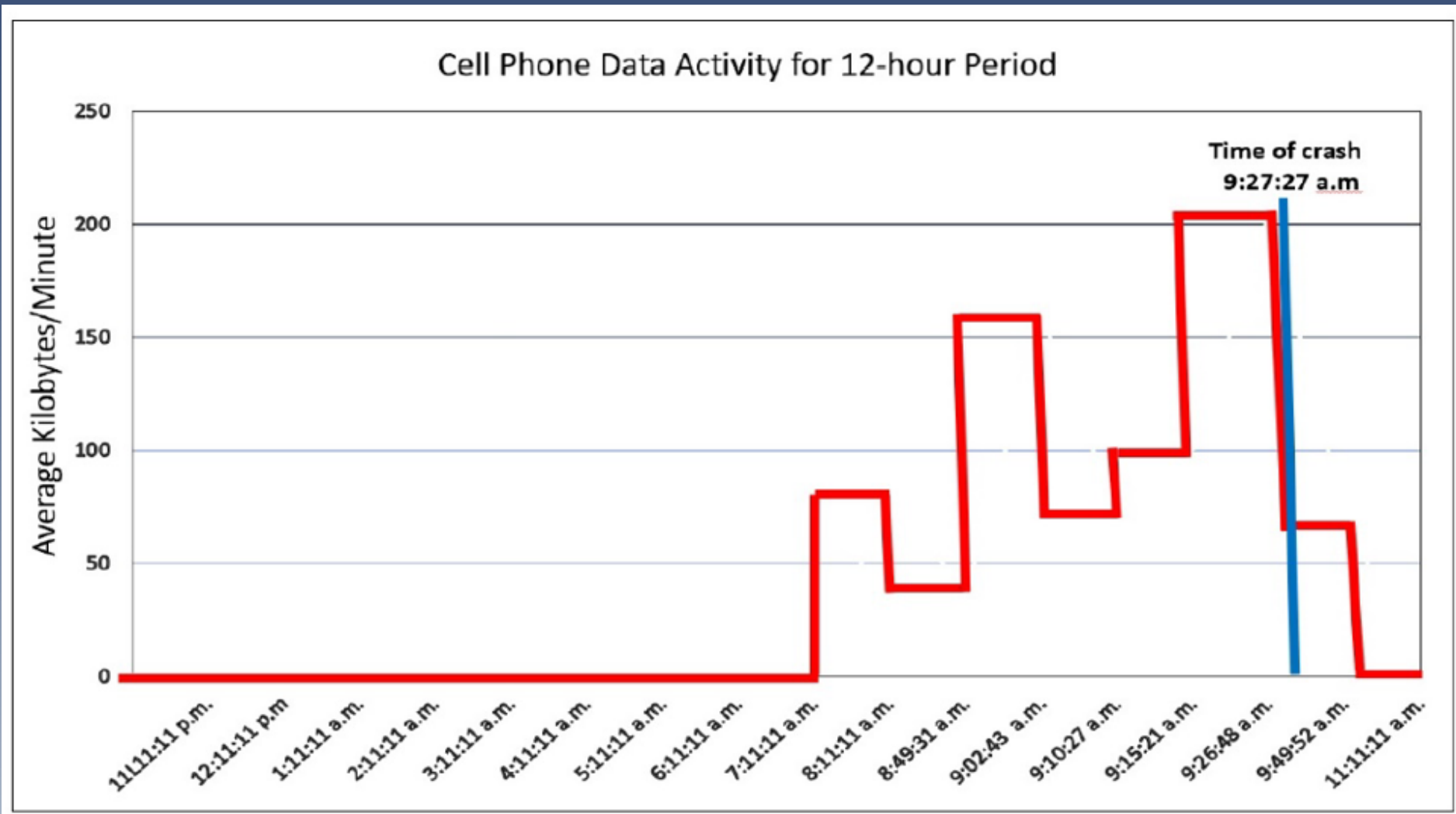

SGZ

Sanguozhi

Records of the Three Kingdoms

言多寡齊願未為九年
門生手不釋書被服居處有如儒生然門
生服勞者終類以此見謀在西陵廿年
其信性寬和得無喜怒不刑聲色而內
然上羊卒子協嗣統騰所領撫軍將軍賜卒
子環嗣襲協弟蘭繼業為西陵督加昭武將軍
封西亭侯鳳皇元年名為統帳開黑世在西
卒校徵命自以失職入懼有譏稱於是槐城詣所
參晉遣環弟瑁詣洛陽為任晉聞為都督西
陵諸軍事備將儀同三司加侍中假節領交州
牧封宜都公環監西陵諸軍事左將軍加散騎常
侍領江入守府以江陵侯瑁給事中宣威將軍
封都侯命車將軍羊祐弟弟刺史楊厚往
赴救關縣時遣阮阮西行祐等直進阮陷城禽
斬關等出氏氓波唯瑁結祀
類凡周昭字恭遠字韋曜羊家瑩並述吳書
三編出騰寵駿諸葛瑾顧劭張承古今賢士
大夫所以失名意來顧家害國者由北一然要
其大節想其常患四音而已急論議一也華名男
二也重男三也勢敵速四也急論議則傷人華
名男則敗矣重男堂則華主勢敵速則失德也四者
不除未有能全者當世君子能不然否
之豈獨古人乎然論其

Twelve Hour Cell Phone Data Usage



AT&T Estimated Data Usage by Activity

• 1 e-mail (no attachments)	20 KB
• 1 e-mail (with standard attachments)	300 KB
• 1 minute of “surfing” the web	250 KB (15 MB/hr.)
• 1 song download	4 MB
• 1 photo upload to social media	5 MB
• 1 min. of streaming standard-definition video	11.7 MB (700 MB/hr.)
• 1 min. of streaming high-definition video	41.0 MB (2500 MB/hr.)
• 1 min. of streaming 4K video	97.5 MB (5850 MB/hr.)
• 1 min. of online games	200 KB (12 MB/hr.)

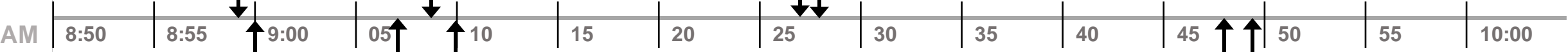
TESLA DATA

8:58:54
Beginning of drive cycle

9:08:32
Autopilot engaged (75 mph)

9:27:21
Autosteer 5.6 degrees to the left (~ 560 ft. from barrier)

9:27:27
Impact with damaged crash attenuator



Approx. 9:00
Three Kingdoms video game launched on iPhone

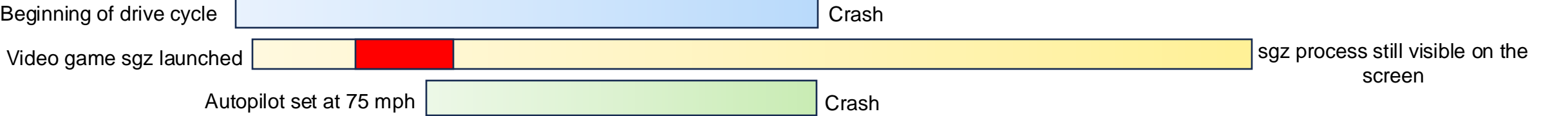
9:10:25
Wakeups resources log showed sgz 1.4.0. Extremely active for 5 mins.

9:47:08
Siri home button engaged

iPhone DATA

9:06:50
Jetsam log showed sgz process in foreground. Visible on iPhone for ~ 6 mins.

9:49:51
Jetsam log showed sgz still in foreground and visible on iPhone



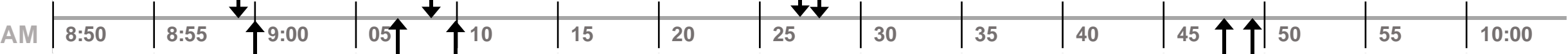
TESLA DATA

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Approx. 9:00
Three Kingdoms video game launched on iPhone

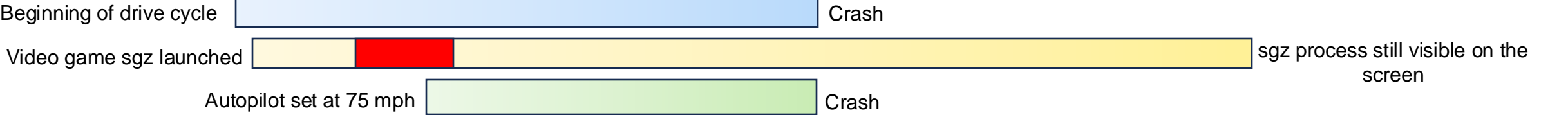
9:10:25
Wakeups resources log showed sgz 1.4.0. Extremely active for 5 mins.

9:47:08
Siri home button engaged

iPhone DATA

9:06:50
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9:49:51
Jetsam log showed sgz still in foreground and visible on iPhone

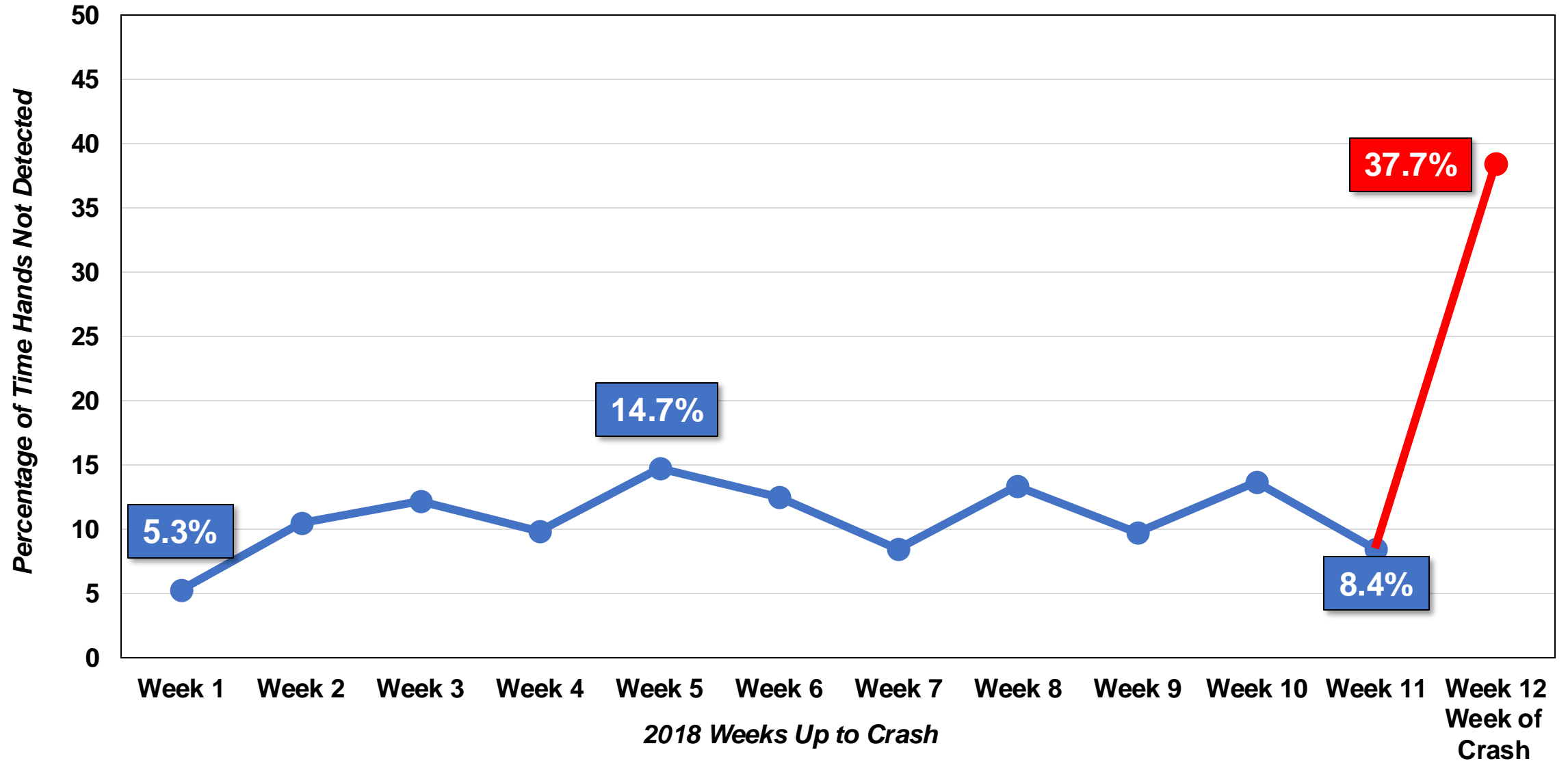


What Changed?

Walter Huang's 2018 Weekly Autopilot Use

Week		No. of Times Autopilot Activated	Total Time in Autopilot (hh:mm:ss)	Number of Visual Hands Off Alert	Number of Chimes
1/1/2018	1/7/2018	11	2:36:52	0	0
1/8/2018	1/14/2018	20	4:15:46	1	0
1/15/2018	1/21/2018	21	3:14:57	4	1
1/22/2018	1/28/2018	21	4:21:19	4	1
1/29/2018	2/4/2018	37	4:59:25	4	2
2/5/2018	2/11/2018	33	5:15:54	5	0
2/12/2018	2/18/2018	34	4:05:45	2	1
2/19/2018	2/25/2018	25	2:49:37	5	1
2/26/2018	3/4/2018	26	4:19:01	4	0
3/5/2018	3/11/2018	6	1:03:51	2	0
3/12/2018	3/18/2018	18	2:51:21	2	0
3/19/2018	3/23/2018	25	3:32:16	15	5

Walter Huang's 2018 Weekly Autopilot Use





新三國志手機版-光榮特庫摩正版授權

2018年3月22日 · 🌐

🔨🔨 1.4.0版本更新完成公告 🔨🔨

親愛的主公，安安：

1.4.0版本內容已於3月22日13:10更新完畢，目前已可正常登入遊戲了喔。

登入時需重新安裝遊戲，如遇到無法更新，請將遊戲刪除後，在商店重新下載。

造成您的不便十分抱歉，為所有在耐心等待的玩家們奉上精美禮包一份，以及贈送8小時免戰保護。

【維修禮包】元寶*268，一籠包子*1，大捆行軍令*1，高級遷都令*1，高級資源箱*5，玄鐵兵符*5

【維修延遲禮包】元寶*188，一籠包子*1，大捆行軍令*1，高級遷都令*1

【禮包

感謝

果您

【聯

客服

遊戲

《新



...

🔨🔨Version 1.4.0 update completion announcement🔨🔨

Dear lord, Ann:

The content of version 1.4.0 has been updated at 13:10 on March 22, and you can now log in to the game normally.

You need to reinstall the game when you log in. If you cannot update it, please delete the game and download it again from the store.

We are very sorry for the inconvenience caused. For all the players who are waiting patiently, we present a beautiful gift package and 8-hour free protection.

[Maintenance gift package] Yuanbao*268, a cage of buns*1, a large bundle of marching orders*1

🔨🔨Version 1.4.0 update completion announcement🔨🔨

Dear lord, Ann:

The content of version 1.4.0 has been updated at 13:10 on March 22, and you can now log in to the game normally.

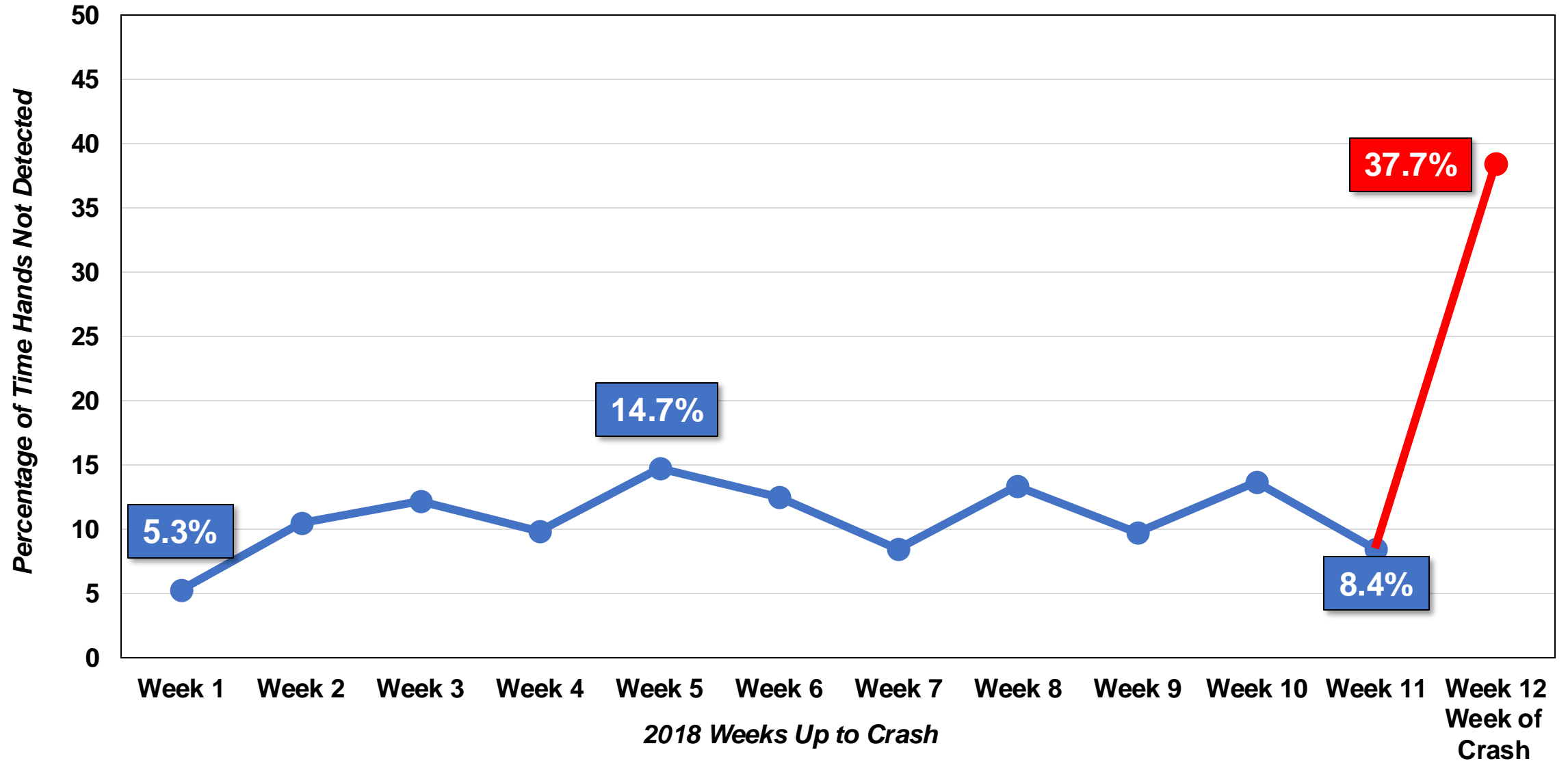
[Contact information]Service hours: 9:30a.m. to 7:00p.m.

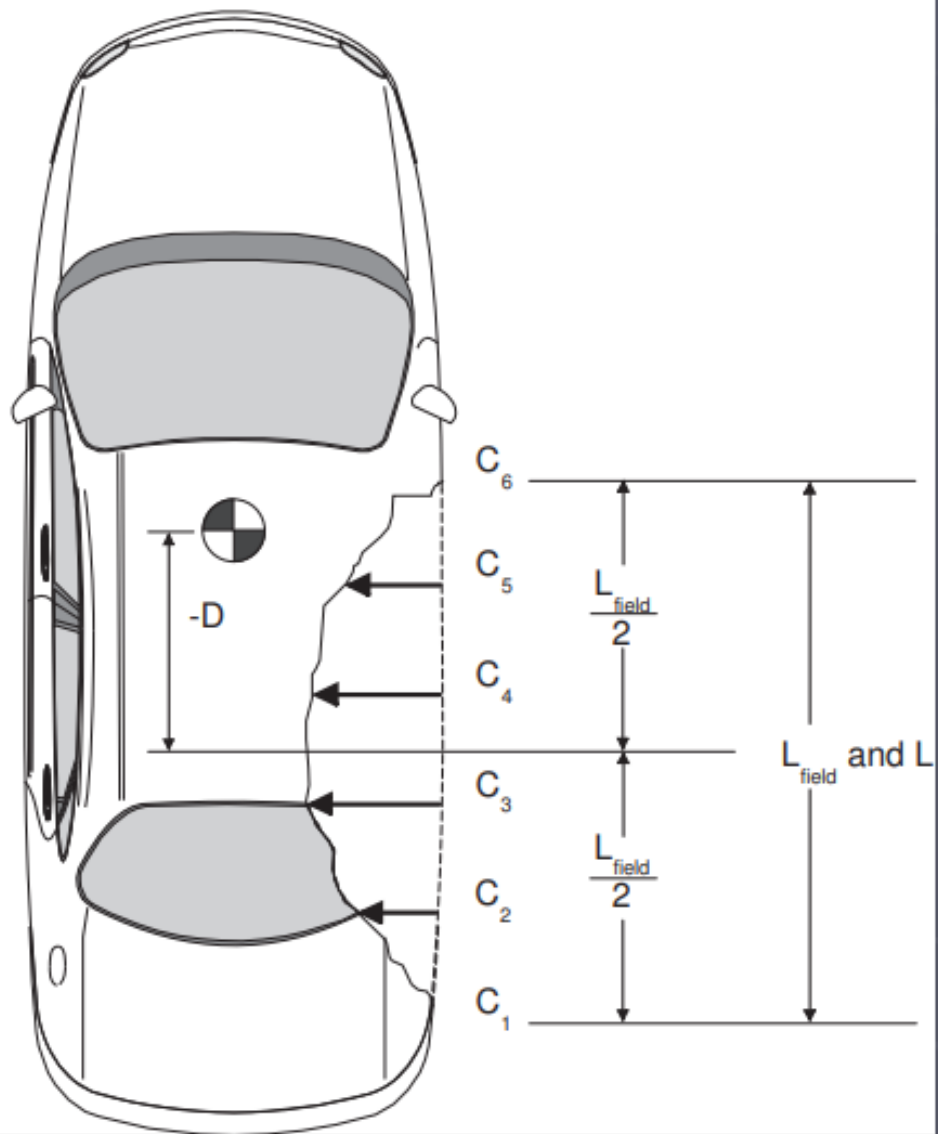
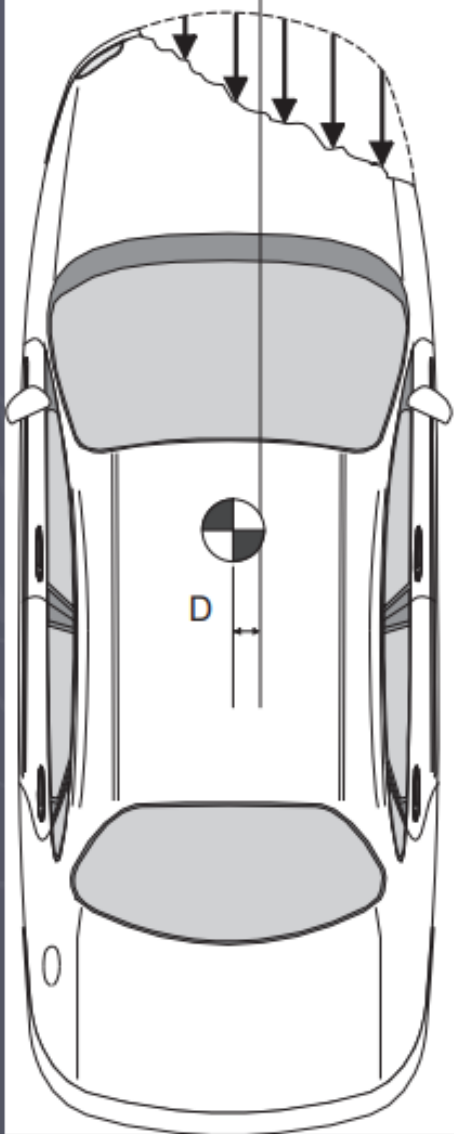
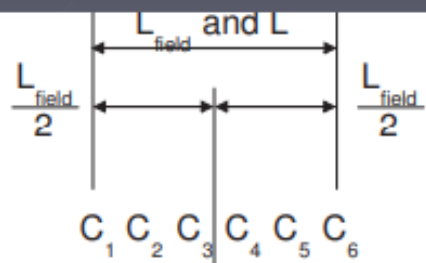
Customer Service Mailbox: cs@bbgameonline.com

In-game: Click the customer service icon on the main interface of the game

Sincerely, the operation team of "New Romance of the Three Kingdoms Mobile Edition" March 22, 2018

Walter Huang's 2018 Weekly Autopilot Use





The image is a collage of overlapping screenshots from a forensic investigation. The top screenshot shows a 'Tesla Carlog' window. Below it, a 'Period' window is partially visible. The main focus is a 'Time of crash' window showing a crash time of 9:27:37 a.m. The background is a dark blue gradient with a red border.

Subject

Cell Phone Data

TESLA DATA

Cell Phone Data Activity for 12-hour Period

TESLA DATA

9:27:21

Duang's 2018 Weekly Autopilot Use

Time	Autopilot Use (%)
9:27:21	14.7%
9:48:51	8.4%
10:00	37.7%

Timeline events:

- 9:48:51: Jetsam log showed sgx still in foreground and visible on iPhone
- sgx process still visible on the screen

8:27:21

Time of crash

9:27:27 a.m.

4:30 a.m.

9:49:52 a.m.

11:11:11 a.m.

Time of crash

9:27:27 a.m.

4:30 a.m.

9:49:52 a.m.

11:11:11 a.m.

Walter Huang's 2018 Weekly Autopilot Use

Week	Percentage of Time Hands Not Detected
Week 1	5.3%
Week 2	10.5%
Week 3	12.5%
Week 4	10.0%
Week 5	14.7%
Week 6	13.5%
Week 7	8.5%
Week 8	14.0%
Week 9	10.0%
Week 10	14.0%
Week 11	8.4%
Week 12	37.7%

Walter Huang's 2018 Weekly Autopilot Use

Week	Percentage of Time Hands Not Detected
Week 1	5.3%
Week 2	10.5%
Week 3	12.5%
Week 4	10.0%
Week 5	14.7%
Week 6	13.5%
Week 7	8.5%
Week 8	14.0%
Week 9	10.0%
Week 10	14.0%
Week 11	8.4%
Week 12	37.7%

UPDATE ON BOEING 737 MAX LITIGATION

BY: Kevin P. Durkin



CLIFFORD LAW OFFICES®





Lion Air Flight 610

October 29, 2018
Jakarta, Indonesia
1:18-cv-07686



LION AIR FLIGHT 610

- October 29, 2018
- Departed from Jakarta, Indonesia to arrive in Pangkal Pinang, Indonesia
- 189 deaths (no survivors), 188 Indonesian & 1 Italian
- Human remains and debris spanned 100 nautical miles



LION AIR FLIGHT 610

- The case is pending before the Hon. Thomas M. Durkin in the Northern District of Illinois, *In re Lion Air Flight JT 610*, 18-CV-07686.
- The parties have settled all but one case. That case went to the 7th Circuit on the right to a jury trial on DOHSA. **RESULT** – No Jury Trial.
- Girardi issue – Just last week, convicted in an LA Court.



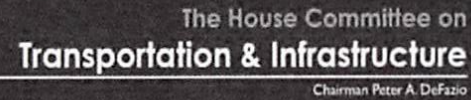
DISCLAIMER

Judge



Me





Slide based on FAA's Post-Lion Air
"Quantitative Risk Assessment," Dec. 3, 2018

**After the Lion Air Crash FAA Predicted
15 More Fatal Crashes even after they issued
an Emergency Airworthiness Directive -**

15.373

**Over the Lifetime of the
Entire 737 MAX Fleet of 4,800 Aircraft
Assuming No Software Fix to MCAS**

[illegible]



Ethiopian Airlines Flight 302

March 10, 2019

Addis Ababa, Ethiopia

1:19-cv-02170



Ethiopian Airlines Flight 302

- March 10, 2019
- Departed from Addis Ababa, Ethiopia to arrive in Nairobi, Kenya
- 157 deaths (no survivors), 9 U.S. citizens
- 35 different countries represented [Choice of Law Issues]



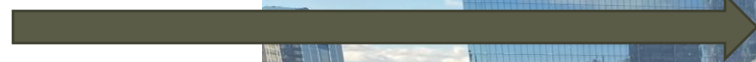
Ethiopian Airlines Flight 302

- Pending in the United States District Court for the Northern District of Illinois
- Assigned to the Honorable Jorge L. Alonso and Magistrate M. David Weisman
- 144 Decedents filed cases – 28 Decedents' cases remain
- Clifford Law Offices represents 71 of the victims



WHY ARE CASES IN CHICAGO?

Boeing Corporate
Headquarters



WHY ARE CASES IN FEDERAL COURT, NOT STATE COURT?

Multiparty, Multiforum Trial Jurisdiction Act of 2002

- 28 USC §1369
- Grants the District Courts original jurisdiction for a single accident involving 75 or more deaths with minimal diversity between adverse parties, if:
 1. Defendant resides in a State and a substantial part of the accident took place in another State or other location, regardless of whether that defendant is also a resident of the State where a substantial part of the accident took place
 2. Any two defendants reside in different States, regardless of whether such defendants are also residents of the same State or States
 3. Substantial parts of the accident took place in different States



Multiparty, Multiforum Trial Jurisdiction Act of 2002

- The action should be removed to district court, if:
 - The action could have been brought in a United States district court under section 1369 of this title
 - The defendant is a party to an action which is or could have been brought, in whole or in part, under section 1369 in a United States district court and arises from the same accident as the action in State court, even if the action to be removed could not have been brought in a district court as an original matter
 - 28 U.S.C.A. § 1441(e)
- Allows cases that do not meet minimal diversity requirement to be removed to federal court



Boeing Compensation

- Boeing Financial Assistance Fund (BFAF) - \$144,500.00 per decedent
- Boeing Community Investment Fund (BCIF) - \$144,500.00 per decedent
- No set-off



Ethiopian Airline Compensation

- \$50,000 advance per decedent on Montreal Convention
- No cases filed against Ethiopian Airlines



Ethiopian Airlines Flight 302 Crash Near Bishoftu, Ethiopia March 10, 2019



- Extensive written discovery
- Multiple depositions of Boeing employees



Ethiopian Flight 302 Stipulation

- Entered November 15, 2021
- Boeing admits liability for compensatory damages
- Parties agree damages will be determined under Illinois law
- Boeing agrees it will not blame third parties
- Plaintiffs waive punitive damages

IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

IN RE: ETHIOPIAN AIRLINES FLIGHT ET
302 CRASH

Plaintiffs,

v.

THE BOEING COMPANY, a Delaware
corporation; ROSEMOUNT AEROSPACE,
INC., a Delaware corporation; ROCKWELL
COLLINS, INC., a Delaware corporation.

Lead Case: 1:19-cv-02170 (Consolidated)

Honorable Jorge L. Alonso

Magistrate Judge M. David Weisman

This Stipulation Relates to All Actions

CONFIDENTIAL

AGREED STIPULATION OF THE PARTIES

The parties in this consolidated matter have had ongoing discussions regarding the Defendants' responsibility for the subject accident and the jurisdiction whose law shall determine Plaintiffs' damages. As a result of those discussions, the parties have agreed to a stipulation for the purposes of this case only in which Defendant the Boeing Company ("Boeing") admits and stipulates to its liability for the compensatory damages proximately caused by the ET 302 accident, and the parties agree that the measure and elements of Plaintiffs' damages are to be determined under Illinois law without regard to the nationality, citizenship, domicile or residency of Plaintiffs or their decedents.



Ethiopian Flight 302

Admission of liability

decide in this case.” The parties have agreed that they will jointly propose to the Court the use of Illinois Pattern Jury Instruction 23.01B as tendered in each damages trial: “Boeing admits that it produced an airplane that had an unsafe condition that was a proximate cause of Plaintiff’s compensatory damages caused by the Ethiopian Airlines Flight 302 accident. Boeing does not blame any other person for the Ethiopian Airlines Flight 302 accident, nor will Boeing argue that anyone else is responsible for Plaintiff’s damages, in this trial. You need only decide what amount of money will reasonably and fairly compensate Plaintiff for those damages.” Except as specifically provided herein, the jury shall not hear evidence



Ethiopian Flight 302

Jury Trial Settings

March 2023	Eight (8) Cases Were Selected All cases settled
June 2023	Six (6) Cases Were Selected All cases settled
November 2023	Six (6) Cases Were Selected All cases settled
November 12, 2024	Five (5) Cases Selected
April 7, 2025	Awaiting Trial Case Selections



Ethiopian Flight 302

Compensatory Damages

The parties have stipulated and agreed that each and every Plaintiff is entitled to recover, whether by voluntary settlement or trial, the full measure of damages permitted under Illinois law and pursuant to the elements of recoverable damages under Illinois law—including but not limited to loss of economic support; loss of services; loss of society; grief, sorrow and mental suffering of the decedent's next of kin; loss of consortium; loss of instruction, moral training, and superintendence; burial expenses; pain and suffering and emotional distress of the decedent; and all other damages recognized under Illinois law—regardless of the citizenship, residency, domicile or nationality of any Plaintiff or decedent.

- Economic support
- Loss of services
- Loss of society
- Grief, sorrow, and mental suffering of next of kin
- Loss of consortium
- Loss of instruction, moral training, and superintendence
- Burial expenses
- Pain and suffering and emotional distress of the decedent



Ethiopian Flight 302

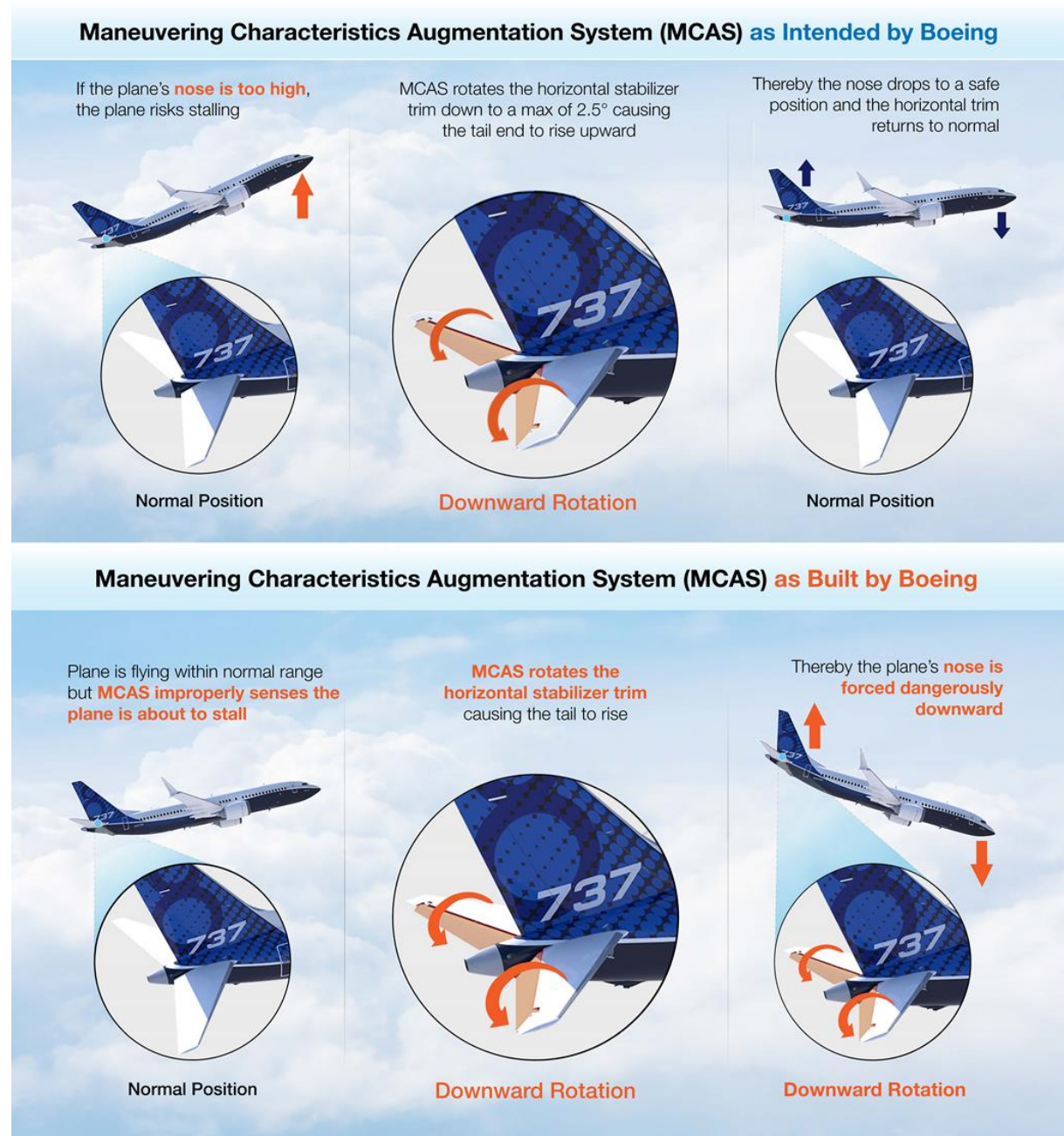
Survival Action

It is agreed and stipulated that the parties will be permitted to introduce all relevant and admissible evidence at trial regarding the decedents and their beneficiaries' alleged compensatory damages. This may include evidence of economic and non-economic damages for the beneficiaries, as well as the pre-impact, pre-death pain and suffering and emotional distress of the decedent as permitted under Illinois law. The parties agree that damages discovery will continue after this stipulation is executed and entered. The parties will have a right to discovery, including discovery propounded on third parties, regarding issues relevant to wrongful death damages and survival damages. The parties are in no way giving up the right to discovery related to compensatory damages. It is understood that the Plaintiffs intend to present an animation of the accident flight, with both interior and exterior views, to the jury. This animation may include, but need not be limited to, Flight Data Recorder data and any animation produced by Boeing. Boeing agrees it will not object under Federal Rule of Evidence 901 to the authenticity of the Flight Data Recorder data or any Cockpit Voice Recorder audio or any animation or simulation it produces.

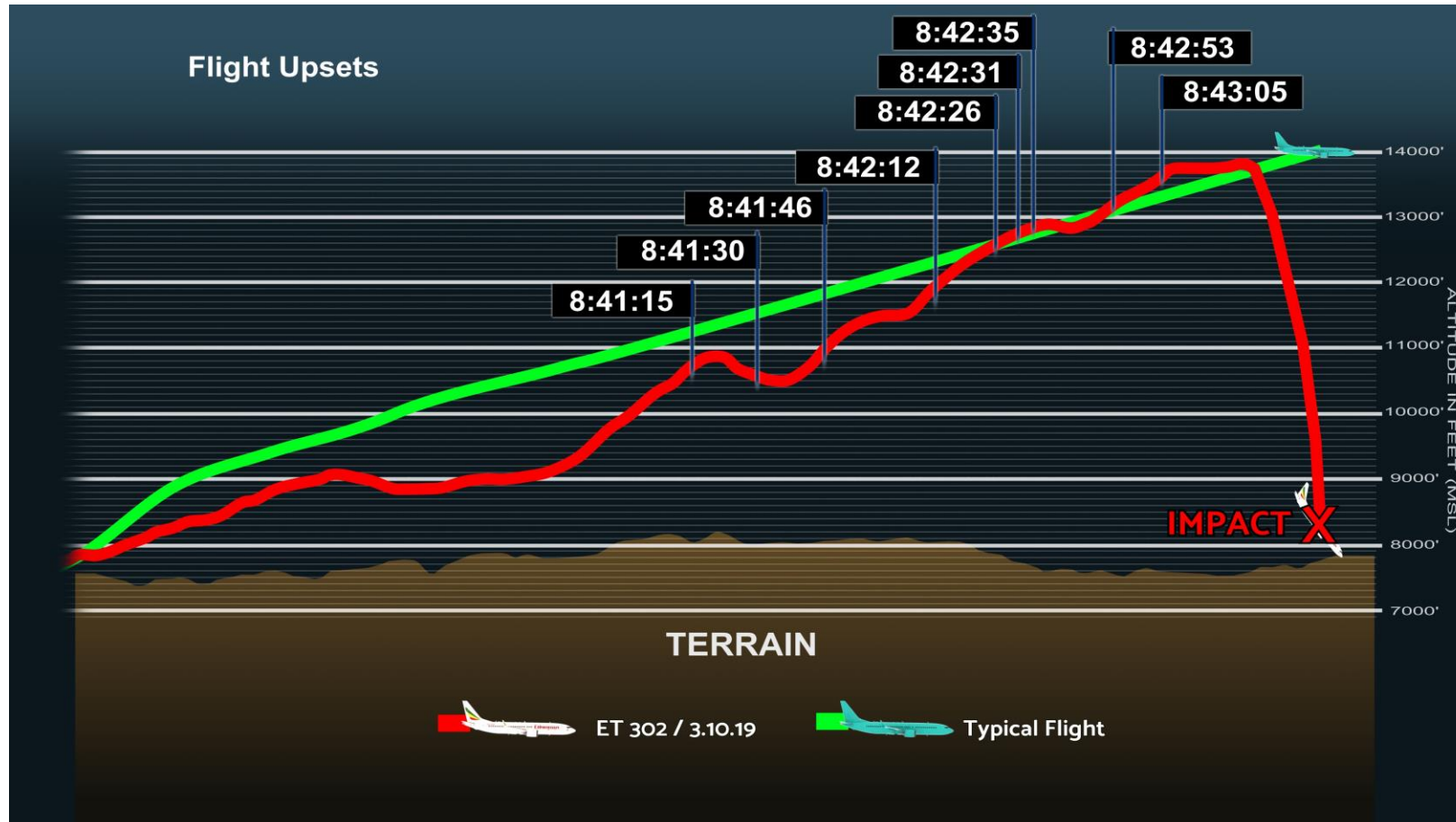


Ethiopian Airlines Flight 302 Crash Near Bishoftu, Ethiopia (March 10, 2019)

- Angle of Attack (AOA) sensor failure during takeoff – false high values
- Subsequent Activation of Maneuvering Characteristics Augmentation System, aka MCAS, in response to false high AOA values
- MCAS seeks to reduce AOA values via nose-down horizontal stabilizer trim movement



Ethiopian Airlines Flight 302 Crash Near Bishoftu, Ethiopia (March 10, 2019)



Ethiopian Airlines Flight 302

Current Proceedings

Plaintiffs' Experts

- FDR expert
- Aerospace physiologist
- Medical doctor (OUT)
- 737 Captain
- Biomechanical engineer

Boeing's Experts

- FDR expert (OUT)
- Aerospace physiologist
- Medical doctor
- Research scientist–psychoacoustics (OUT)
- Annex 13 investigation expert (OUT)



Boeing's Legal Dispute: Did 737 MAX Victims Suffer Pain Before the Crash?

Dispute focuses on whether relatives of crash victims are legally entitled to damages beyond their own grief and loss



Did Victims In 737 Max Crash Suffer Before They Died? Boeing Lawyers Say No.

The aerospace giant wants to avoid paying pain and suffering damages to the families of victims aboard Ethiopian Airlines Flight 302.



By Ryan Grenoble

Mar 17, 2023, 04:47 PM EDT



Boeing REFUSES to pay out more money to families of 157 victims of its killer 737-MAX after insisting the six-minute plunge to the ground they suffered does not constitute 'pain and suffering'

- The argument was aired by the manufacturer's attorneys in Chicago federal court on February 27, days before the four-year anniversary of the Ethiopia crash
- The filing serves as [the latest development](#) in a years-long legal saga involving the airliner and that 2019 crash, as well as an earlier one in Indonesia in 2018
- The two crashes killed a total of 346 people, and left all Max jets grounded for two years - as Boeing faced [federal investigations](#) and civil claims from families

By ALEX HAMMER FOR DAILYMAL.COM

PUBLISHED: 20:57 EDT, 15 March 2023 | UPDATED: 08:19 EDT, 16 March 2023



Share



69 shares

295 View comments

Aircraft manufacturer Boeing has argued it should not have to pay more money to families of the people who died in a 2019 crash involving its 737-MAX jet, after insisting the victims died instantly and therefore did not suffer before they perished.

The argument was aired by the company's attorneys last month in documents filed in [Chicago](#) federal court, days before relatives of the 157 victims descended on Boeing's Virginia headquarters for the four-year anniversary of the Ethiopian Airlines

May 30, 2023, Court Order

“The Court has taken a different tack because it finds that much of the debate in the *Daubert* briefing is over whether plaintiffs suffered a pre-impact physical injury, a question that, the Court now concludes, has no bearing on whether plaintiffs can recover pre-impact emotional distress damages. A jury could reasonably infer from the evidence that will be presented at trial that the passengers on ET 302 perceived that they were going to crash, horrifically, to their certain death. Boeing has not demonstrated that Illinois authority bars plaintiffs from recovering for the pre-impact emotional distress they suffered as a result, and the Court concludes that the Illinois Supreme Court likely would permit recovery of such damages.”



January 6, 2021



IN THE UNITED STATES DISTRICT COURT FOR THE

NORTHERN DISTRICT OF TEXAS

FILED

Fort Worth Division

January 7, 2021

KAREN MITCHELL

CLERK, U.S. DISTRICT COURT

COUS

UNITED STATES OF AMERICA

4:21-CR-005-O

v.

THE BOEING COMPANY,

Defendant.

DEFERRED PROSECUTION AGREEMENT

Defendant The Boeing Company (the "Company"), pursuant to authority granted by the Company's Board of Directors reflected in Attachment B, the United States Department of Justice, Criminal Division, Fraud Section (the "Fraud Section"), and the United States Attorney for the Northern District of Texas (the "USAO-NDTX") enter into this deferred prosecution agreement (the "Agreement"). The terms and conditions of this Agreement are as follows:

Criminal Information and Acceptance of Responsibility

IN THE UNITED STATES DISTRICT COURT FOR THE

NORTHERN DISTRICT OF TEXAS

FILED

January 7, 2021

KAREN MITCHELL

CLERK, U.S. DISTRICT COURT

bb

Fort Worth Division

UNITED STATES OF AMERICA

4:21-CR-005-O

v.

THE BOEING COMPANY,

Defendant.

Count 1: 18 U.S.C. § 371

CRIMINAL INFORMATION

The United States of America charges:

COUNT ONE

(Conspiracy to Defraud the United States)

1. From at least in or around November 2016 through at least in or around December 2018, in the Northern District of Texas and elsewhere, the Defendant,

THE BOEING COMPANY,



Boeing Deferred Prosecution Agreement

- A Deferred Prosecution Agreement was entered into between the Boeing Company and the United States Department of Justice, Criminal Division, Fraud Section
- A statement of 54 facts was agreed to by Boeing
- Boeing admitted that the company 737 MAX flight technical pilots deceived the FAA's Aircraft Evaluation Group (AEG) about MCAS



From: Forkner, Mark A
Sent: Wed 11/16/2016 2:55:56 AM (UTC)
Subject: Conversation with Forkner, Mark A

Mark Forkner 6:46 PM:
dude, log off!

\

Gustavsson, Patrik H 6:46 PM:
You too!!!

I just logged on to check my schedule. I have so much to do that I want to work from home
I just cant get stuff done in the office

Mark Forkner 6:47 PM:

nah, I'm locked in my hotel room with an ice cold grey goose, I'll probably fire off a few dozen inappropriate emails before I call it a night

Gustavsson, Patrik H 6:47 PM:
LMAO!!!!

Mark Forkner 6:47 PM:
this job is insane

Gustavsson, Patrik H 6:47 PM:

So did you get anything done in the sim today?
Or what is the normal chaos there?

Mark Forkner 6:48 PM:

although it must be easy compared to working as a tech pilot for RYR

Gustavsson, Patrik H 6:48 PM:

Well it's different here. We are pretty busy here for sure.

Mark Forkner 6:48 PM:

actually this one is pretty stable, and I signed off some DRs, but there are still some real fundamental issues that they claim they're aware of

Gustavsson, Patrik H 6:48 PM:

What I hated about Ryanair was the extreme pressure they put on people
Ok, that's good

Mark Forkner 6:49 PM:

so I just need to start being a dick to make you quit?

Gustavsson, Patrik H 6:49 PM:

LOL, that's it!

Mark Forkner 6:49 PM:

alright, no more mr nice guy!
actually I'd cry uncontrollably if you left
I'd ask for a job in sales where I can just get paid to drink with customers and lie about how awesome our airplanes are

Gustavsson, Patrik H 6:50 PM:

I'd cry if anyone in our group left.

Mark Forkner 6:50 PM:

Oh shocker alert!
MCAS is now active down to M .2
It's running rampant in the sim on me
at least that's what Vince thinks is happening

Gustavsson, Patrik H 6:51 PM:

Oh great, that means we have to update the speed trim description in vol 2

Mark Forkner 6:51 PM:

so I basically lied to the regulators (unknowingly)

Gustavsson, Patrik H 6:51 PM:

it wasnt a lie, no one told us that was the case

Mark Forkner 6:51 PM:

I'm levelling off at like 4000 ft, 230 knots and the plane is trimming itself like crazy
I'm like, WHAT?

Gustavsson, Patrik H 6:52 PM:

that's what i saw on sim one, but on approach

Oh shocker alert! MCAS is now active down to M .2. It's running rampant in the sim and on me at least that's what Vince thinks is happening.

Oh great, that means we have to update the speed trim description in vol 2

so I basically lied to the regulators(unknowingly)





The House Committee on
Transportation & Infrastructure

Chairman Peter A. DeFazio

Slide based on Boeing E-mail, from Mark
Forkner to individual at FAA,
November 3, 2016

“...jedi-mind tricking regulators into accepting
the training that I got accepted by FAA...”

-- Boeing Chief Technical Pilot Mark Forkner, November 2016



Boeing Deferred Prosecution Agreement

- The purpose of the conspiracy was to defraud the FAA AEG by impairing, obstructing, defeating and interfering with the lawful function of the FAA AEG by dishonest means...in order to bring about a financial gain to Boeing
- Resolution was Boeing would be given a criminal monetary penalty in the amount of \$243,600,00
- Boeing would pay \$1,770,000,000 in compensation to the airline customers and \$500,000,000 in compensation to heirs and relatives of victims of Lion Air Flight 610 and ET302. This comes to about \$1.4 million per Estate
- Corporate compliance program for 3 years



US v. Forkner



737 MAX Crashes Exposed MCAS's Low-Speed Expansion to the FAA AEG

35. On or about October 29, 2018, after the FAA AEG learned that Lion Air Flight 610—a 737 MAX—had crashed near Jakarta, Indonesia, shortly after takeoff and that MCAS was operating in the moments before the crash, the FAA AEG discovered that MCAS was no longer limited to high-speed, wind-up turns and could operate at speeds lower than Mach 0.7. After the Lion Air crash, the FAA AEG began reviewing and evaluating MCAS's true operational scope.

36. On or about March 10, 2019, while the FAA AEG was still reviewing MCAS, the FAA AEG learned that Ethiopian Airlines Flight 302—a 737 MAX—had

NOT GUILTY SCAPEGOAT!!



Crime Victims' Rights Act



The screenshot shows the official website of the U.S. Department of Justice, Environment & Natural Resources Division. The header features the Department of Justice seal and the text "THE UNITED STATES DEPARTMENT of JUSTICE". The navigation bar includes links for "ABOUT", "OUR AGENCY", "OUR WORK", "NEWS", and "RESEARCH". The breadcrumb trail reads: "Home » Environment and Natural Resources Division » About The Division » Environmental". The left sidebar lists "Environment & Natural Resources Division" and "About the Division" with sub-links for "Organizational Chart", "Appellate", and "Environmental". The main content area has a black header with the text "RIGHTS OF VICTIMS" in white. Below this, the section is titled "What Federal Rights Do Crime Victims Have?". The text states: "Two federal statutes describe the federal Government's responsibilities. (34 U.S.C. § 20141) describes the services the federal government provides. The Crime Victims Rights Act (CVRA) (18 U.S.C. § 3771) sets forth the rights that a person who is a victim of a crime has. The Act defines victims in specific ways in the law."

- The reasonable right to confer with the attorney for the government in the case
- The right to be treated with fairness and with respect for the victim's dignity and privacy
- The right to be informed in a timely manner of any plea bargain or deferred prosecution agreement



Boeing Deferred Prosecution Agreement Challenge

Three motions under CVRA:

1. Motion For Findings That The Proposed Boeing Deferred Prosecution Agreement Was Negotiated In Violation Of The Victims' Rights And For Remedies For Those Violations
2. Motion For Exercise Of The Court's Supervisory Power Over The Deferred Prosecution Agreement
3. Motion For An Arraignment of Boeing And A Hearing On Conditions of Release



Boeing Deferred Prosecution Agreement Challenge

Motion For Findings That The Proposed Boeing Deferred Prosecution Agreement Was Negotiated In Violation Of The Victims' Rights And For Remedies For Those Violations

- Families called the DOJ and were told there was no investigation
- In agreeing to the Statement of Facts, Boeing has admitted its crime caused these crashes
- Requested remedies



Boeing Deferred Prosecution Agreement Challenge



Families are not crime victims under CVRA



- Prosecutorial discretion
- No judicial authority over DPA terms
- We don't want an arraignment right now



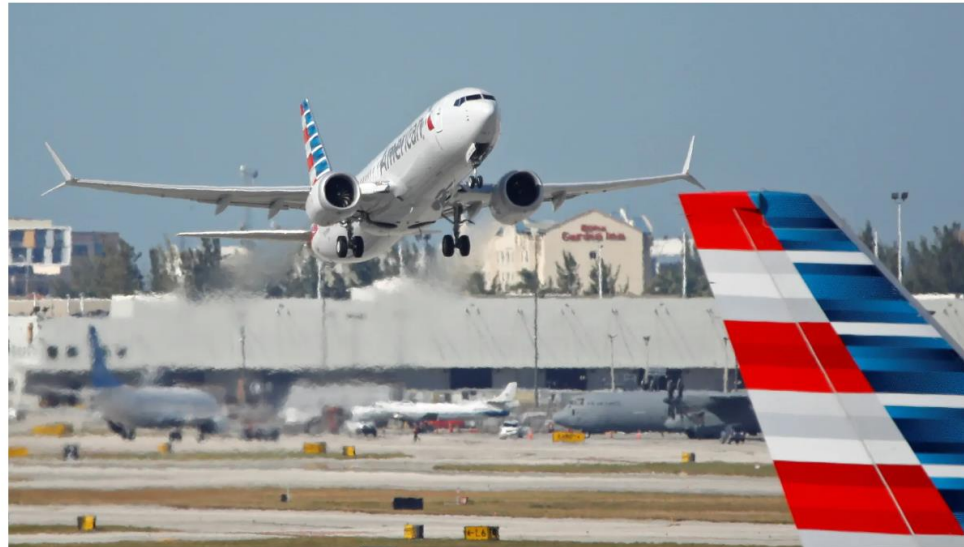
US v. Forkner

Jury Finds Former Boeing Pilot Not Guilty of Fraud in 737 Max Case

The pilot, Mark Forkner, was the only person to face criminal charges for flaws that resulted in two fatal crashes of one of Boeing's most important planes.



Give this article



Boeing Deferred Prosecution Agreement Challenge

Oct. 21, 2022 Order:

“Movants have established adequate direct causal connection between Boeing’s criminal conspiracy and the resulting crashes the Court finds that the tragic loss of life that resulted from the two airplane crashes was a reasonably foreseeable consequence of Boeing’s conspiracy to defraud the United States”



Boeing Deferred Prosecution Agreement Arraignment



Boeing Deferred Prosecution Agreement Challenge

Feb. 9, 2023 Order:

“The Court holds that it lacks both statutory and inherent authority that would permit any substantive review and disapproval or modification of the DPA at issue in this case. Thus, even if it held legitimate concerns about the substance of the Government’s negotiated agreement, the Court has no occasion to address whether the DPA is in fact grossly incommensurate with Boeing’s egregious criminal conduct.”



Boeing Deferred Prosecution Agreement Challenge

Feb. 9, 2023 Order:

“As the representatives point out, Boeing’s crime may properly be considered the deadliest corporate crime in U.S. history.”

“Had Congress vested this Court with sweeping authority to ensure that justice is done in a case like this one, it would not hesitate. But neither the Speedy Trial Act nor this Court’s inherent supervisory powers provide a means to remedy the incalculable harm that the victims’ representatives have suffered. And no measure of sympathy nor desire for justice to be done would legitimize this Court’s exceeding the lawful scope of its judicial authority.”



Boeing Deferred Prosecution Agreement Challenge

Feb. 9, 2023 Order:

“The Speedy Trial Act gives the Executive exclusive discretion to negotiate deferred prosecution agreements without judicial oversight, even in response to the most heinous crimes. Despite increasing and perhaps legitimate criticism of these agreements, Congress—not the courts—is the appropriate venue to redress the inadequacies of this statutory enactment. In our system of justice, a judge’s role is constitutionally confined to interpreting and applying the law, not revising it.”



Boeing Deferred Prosecution Agreement Challenge

In the
United States Court of Appeals
for the
Fifth Circuit

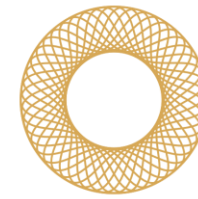
In Re Naoise Connolly Ryan, Emily Chelangat Babu and Joshua Mwazo Babu,
Catherine Berthet, Huguette Debets, Luca Dieci, Bayihe Demissie, Sri Hartati,
Zipporah Kuria, Javier de Luis, Nadia Milleron and Michael Stumo, Chris Moore,
Paul Njoroge, Yuke Meiske Pelealu, John Karanja Quindos, and Guy Daud
Iskandar Zen S.,

Crime Victims' Representatives-Petitioners.

**PETITION FOR A WRIT OF MANDAMUS PURSUANT TO
THE CRIME VICTIMS' RIGHTS ACT, 18 U.S.C. § 3771(d)(3)**

**Mandamus from the
United States District Court for the
Northern District of Texas
Case No. 4:21-cr-005-O**





Outer Temple

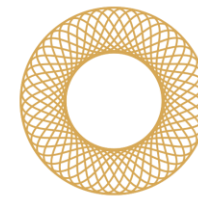
Asbestos and product liability litigation

– the challenges of historic claims

By:

Aliyah Akram
Olinga Tahzib

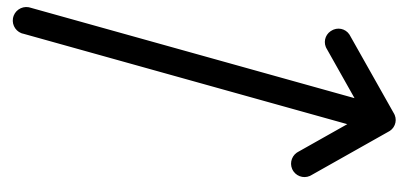
Outer Temple Chambers



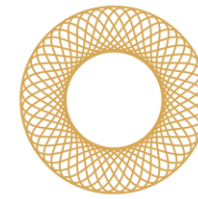
Tortfeasor no longer exists



Insurance

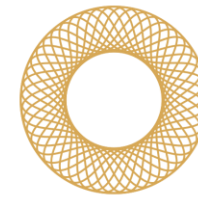


Parent company



Pursuing the insurer

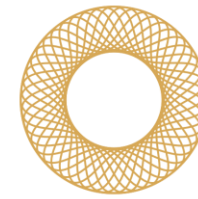
- Third Parties (Rights against Insurers) Act 2010
- OR
- Third Parties (Rights against Insurers) Act 1930
- Key date: **1 August 2016**



Pursuing the parent company

Sales LJ in **AAA v Unilever Plc** [2018] EWCA Civ 1532 at [36]

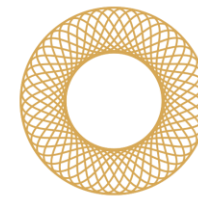
“There is no special doctrine in the law of tort of legal responsibility on the part of a parent company in relation to the activities of its subsidiary, vis-à-vis persons affected by those activities. Parent and subsidiary are separate legal persons, each with responsibility for their own separate activities. A parent company will only be found to be subject to a duty of care in relation to an activity of its subsidiary if ordinary, general principles of the law of tort regarding the imposition of a duty of care on the part of the parent in favour of a claimant are satisfied in the particular case.”



Pursuing the parent company

Chandler v Cape Plc [2012] EWCA Civ 525

- C employed as brick loader in late 1950s / early 1960s
- C employed by Cape Building Products Ltd: no longer in existence
- Claim against parent company – Cape Plc

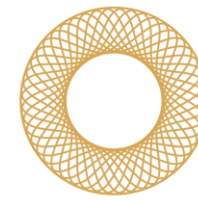


Pursuing the parent company

Chandler v Cape Plc [2012] EWCA Civ 525

Caparo test:

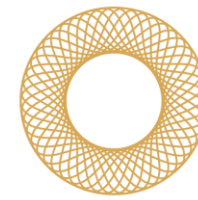
1. Damage foreseeable
2. Relationship of proximity
3. Fair, just and reasonable to impose duty



Pursuing the parent company

Relevant findings of fact:

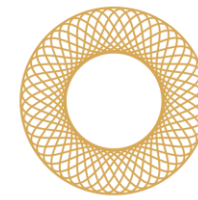
- Cape Plc maintained a level of control over the business carried on by Cape Products
- Product development carried out centrally through its Group Chief Chemist
- Cape had superior knowledge about the asbestos business
- Group Medical Adviser: Dr Smither



Pursuing the parent company

Arden LJ at [78]:

"Given Cape's state of knowledge ... and its superior knowledge about the nature and management of asbestos risks, I have no doubt that in this case it is appropriate to find that Cape assumed a duty of care **either to advise Cape Products on what steps it had to take in the light of knowledge then available to provide those employees with a safe system of work or to ensure that those steps were taken.** The scope of the duty can be defined in either way."



Pursuing the parent company

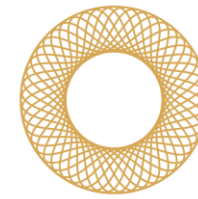
Arden LJ at [80]:

"(1) the businesses of the parent and subsidiary are in a relevant respect the same;

(2) the parent has, or ought to have, superior knowledge on some relevant aspect of health and safety in the particular industry;

(3) the subsidiary's system of work is unsafe as the parent company knew, or ought to have known; and

(4) the parent knew or ought to have foreseen that the subsidiary or its employees would rely on its using that superior knowledge for the employees' protection."

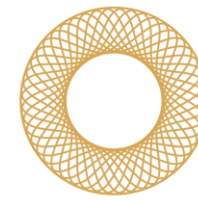


Pursuing the parent company

Vedanta Resources Plc and anor v Lungowe and ors [2019] UKSC 20

Konkola Copper Mines Plc – owner and operator of the mine

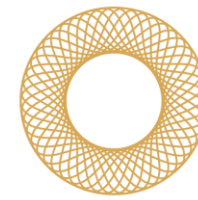
Vedanta Resources Plc – the parent company



Pursuing the parent company

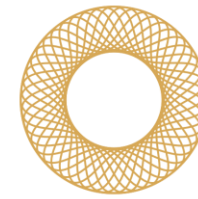
Vedanta argues :

1. It had not intervened sufficiently in the management of the mine owned by Konkola for a direct common law duty of care to arise.
2. The conclusion that Vedanta owed a duty would require a novel and controversial extension of the boundaries of the tort of negligence and required a detailed investigation of C's case



Pursuing the parent company

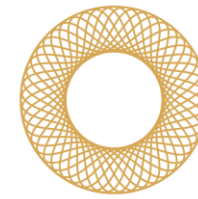
- Endorses summary by LJ Sales at [36] of **AAA v Unilever Plc** [2018] EWCA Civ 1532
- Clarifies that parent company liability in these circumstances isn't novel
- The factors set out in **Chandler** are nothing more than examples



Pursuing the parent company

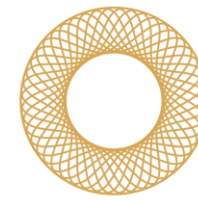
Lord Briggs at [51]:

“For my part, I would be reluctant to seek to shoehorn all cases of the parent's liability into specific categories of that kind, helpful though they will no doubt often be for the purposes of analysis.”



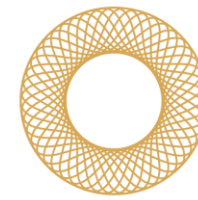
Pursuing the parent company

- Fast-developing area of law
- **Okpabi and ors v Royal Dutch Shell plc and anor** [2021] UKSC 3



Evidence

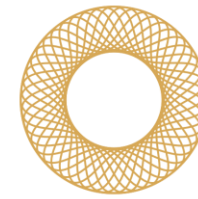
- witness evidence
 - depositions
- inter-party disclosure/inspection
- publicly available documents



Evidence

CPR 31.22

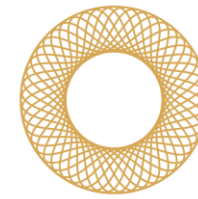
- (1) A party to whom a document has been disclosed may use the document only for the purpose of the proceedings in which it is disclosed, except where—
- (a) the document has been read to or by the court, or referred to, at a hearing which has been held in public;
 - (b) the court gives permission; or
 - (c) the party who disclosed the document and the person to whom the document belongs agree.



Evidence

Dring v Cape Intermediate Holdings Limited [2019] UKSC 38

<https://asbestosforum.org.uk/cape-documents/>



State of knowledge

Superior knowledge?

- Asbestosis Research Council
- Asbestos Information Committee

Collective redress in the UK

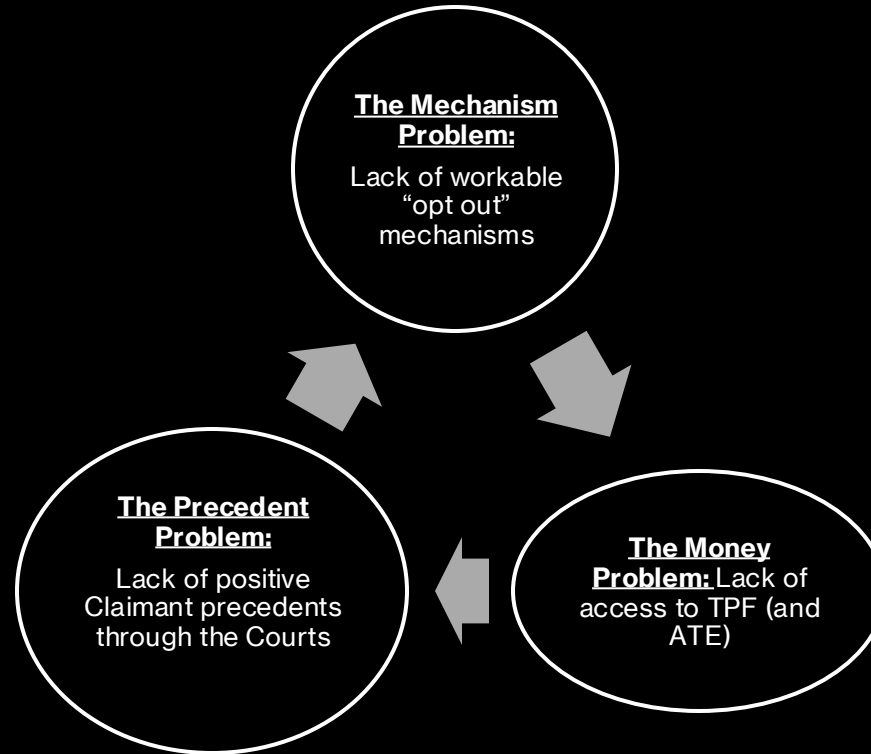
The shortcomings



LEIGH DAY

- (1) THE MECHANISM PROBLEM
- (2) THE PRECEDENT PROBLEM
- (3) THE MONEY PROBLEM

We have an “access to justice” issue in the UK:



The Mechanism Problem:

Group Litigation Order – CPR 19.21

- “Opt in” only
- Group management of a claim where there are similar issues of fact or law
- Group register
- *Mariana Dam case, Dieselgate*

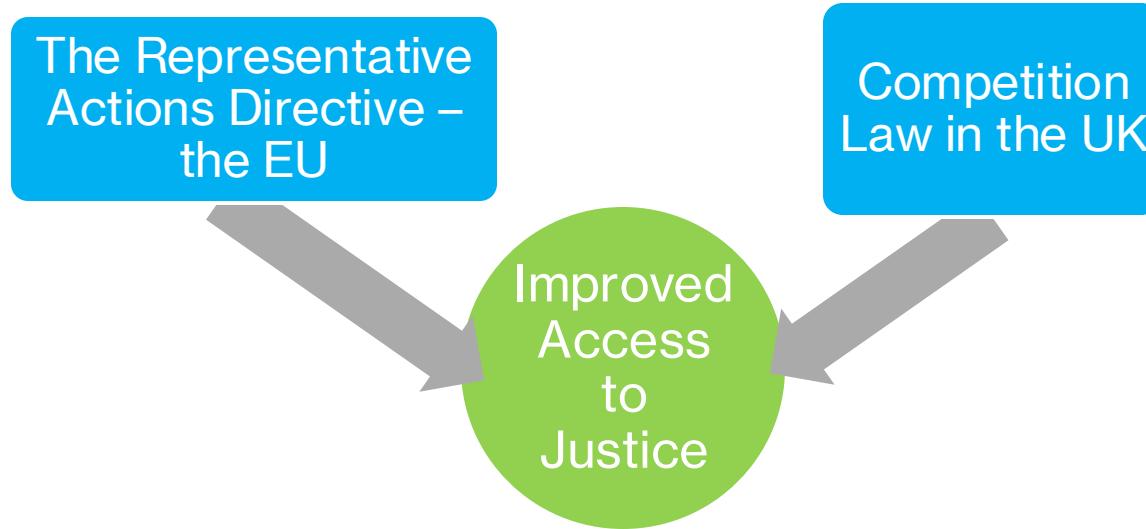
Representative Action – CPR 19.8

- “Opt out”
- Representative claimant for a wider group of persons with the “same interests” (no need to opt in)
- Stops the clock for the entire Claimant “class” represented.
- Novel in the UK...*Lloyd vs Google*.

The “Goldilocks Problem”:

- *Google LLC v Lloyd [2021]*
- *Barclays Bank UK Plc v Terry [2023]*
- “Bifurcation”

The Mechanism Problem: Through the Looking Glass



The Money Problem

- Lack of properly functioning “collective redress” mechanisms in the UK leads to a lack of third-party funding for non-competition cases:
- Contrast third party funding rates for competition claims (opt out) vs third party funding rates for conventional GLO cases (opt in):
- This is fundamentally a question of numbers:



The “competition world” bubble:

- Actions filed in the CAT (as at 9.8.24) equivalent to 8.1 actions per person in the UK
- Value of “opt out” cases in the UK jumped by 48% (cf. 1% opt-in cases)
- Note the regime only started in 2015
 - 8 yrs later 544m cases filed.
- UK “class actions” (all competition) 29%, Portugal 23%, Netherlands 18%

The “non competition” lead balloon:

- Value of opt-in cases rose **1%** in 2023 vs **48%** for opt out cases
 - 8.1 actions pp in UK via opt-out vs access to justice issues for no-competition claimants
- 

The Precedent Problem:

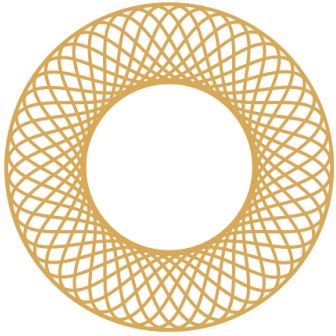
- No successful group claim (GLO) brought through the Courts for product liability claimants in the UK since 2001.
- Failure of the CPA 1987 in the UK.
- Reform of the Product Liability Directive in the EU: A New (Claimant Friendly) Product Liability Directive for the EU – March 2024:
- A prediction:



Diagnosis: UK as a PL *forum non conveniens*...

SUPREME COURT OF THE STATE OF NEW YORK — NEW YORK COUNTY	
PRESENT: <u>MANUEL J. MENDEZ</u> Justice	PART <u>13</u>
IN RE: NEW YORK CITY ASBESTOS LITIGATION	
HANNAH LOUISE FLETCHER AND DUNCAN FLETCHER, -against- Plaintiffs,	INDEX NO. <u>190045/2019</u> MOTION DATE <u>03/18/2020</u> MOTION SEQ. NO. <u>001</u> MOTION CAL. NO. _____
AVON PRODUCTS, INC., et al., Defendants.	
The following papers, numbered 1 to <u>19</u> were read on this motion by defendants Clinique Laboratories, LLC, Estée Lauder Inc., Estée Lauder International, Inc., and The Estée Lauder Companies Inc., pursuant to CPLR §327(a) to dismiss this action for forum non conveniens:	

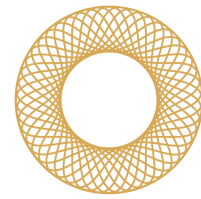
- “plaintiffs through the expert witness, Henry David Glyn Steinberg, QC, have also show that *the transfer of this action to England –where cases are not taken on contingency fee basis, where there are no jury trials or loss of consortium claims; where necessary discovery is limited, costly and to be paid out of pocket; ...and although there is product liability law in England, non-occupational exposure claims are typically not brought because there are no barristers or solicitors willing to proceed against a manufacturer or seller – will create a hardship on them as they have limited resources and would be unable to proceed if the case is required to be litigated in the UK*”.
- Justice Manuel J Mendez
- Hannah Louise Fletcher and Duncan Fletcher vs. Avon Products Inc. Et al.



Outer Temple

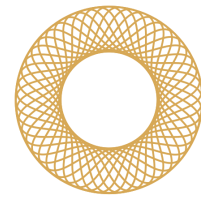
Managing the Claim

Gerard McDermott KC



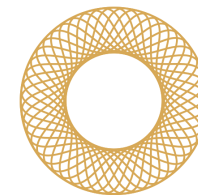
My perspective

- PI and Clin Neg Litigation for 30 + years
- Always an eye to product liability
- And to the US as a forum
- Active in American Bar for 35 + years
- And learnt much from them
- And the importance of group actions
- A claimant perspective



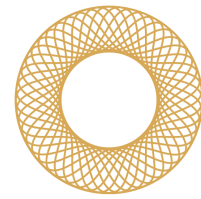
Managing a claim with multiple solicitors

- Importance of a representative steering committee
- With common counsel
- That meets regularly
- And keeps others informed
- Good minutes and agendas
- And someone taking a lead on correspondence with opposing parties and the court
- Important for Defendants to know this is in place to progress case



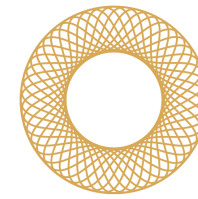
Use of Counsel

- Choice of counsel a strength of the Bar
- There will often be a lot of work
- Calling for different skills
- And for a whole team – often more than one KC
- Need the team to work and to play to strengths
 - Not only experience in the field
 - Also client management skills
- And in e.g. medical device claims GLO experience but also PI experience



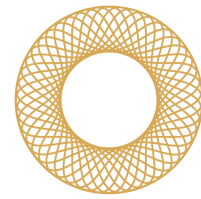
Keeping track of the case

- Part of role of steering committee
- As above – contact points for opposing parties
- And keeping clients informed
- And dealing with inevitable queries



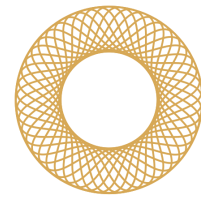
Gathering information

- Where a large number of Cs – common templates
- May not need everything at start – but need enough to see
 - Shape of the case
 - Value of case
 - And what more may be needed
- Information ...and enough of it ... properly organised ... vital



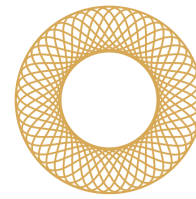
Costs and cost management

- Key to deal with this at the outset
- Appointing costs lawyers and consultants
- Ensuring CFAs with clients
- And ATE insurance where necessary]
- And clear funding arrangements
- And keeping track of costs



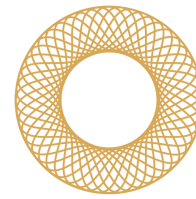
Managing Multiple Defendants

- There will be issues between them
- And key to recognise that
- Encourage some structure on their part
- And dialogue at all stages



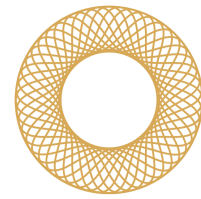
Using counsel effectively

- Where multiple parties
- And multiple issues
- And different interests and insurers
- A core group of counsel representing all parties may make things smoother



ADR and Mediation – KEY

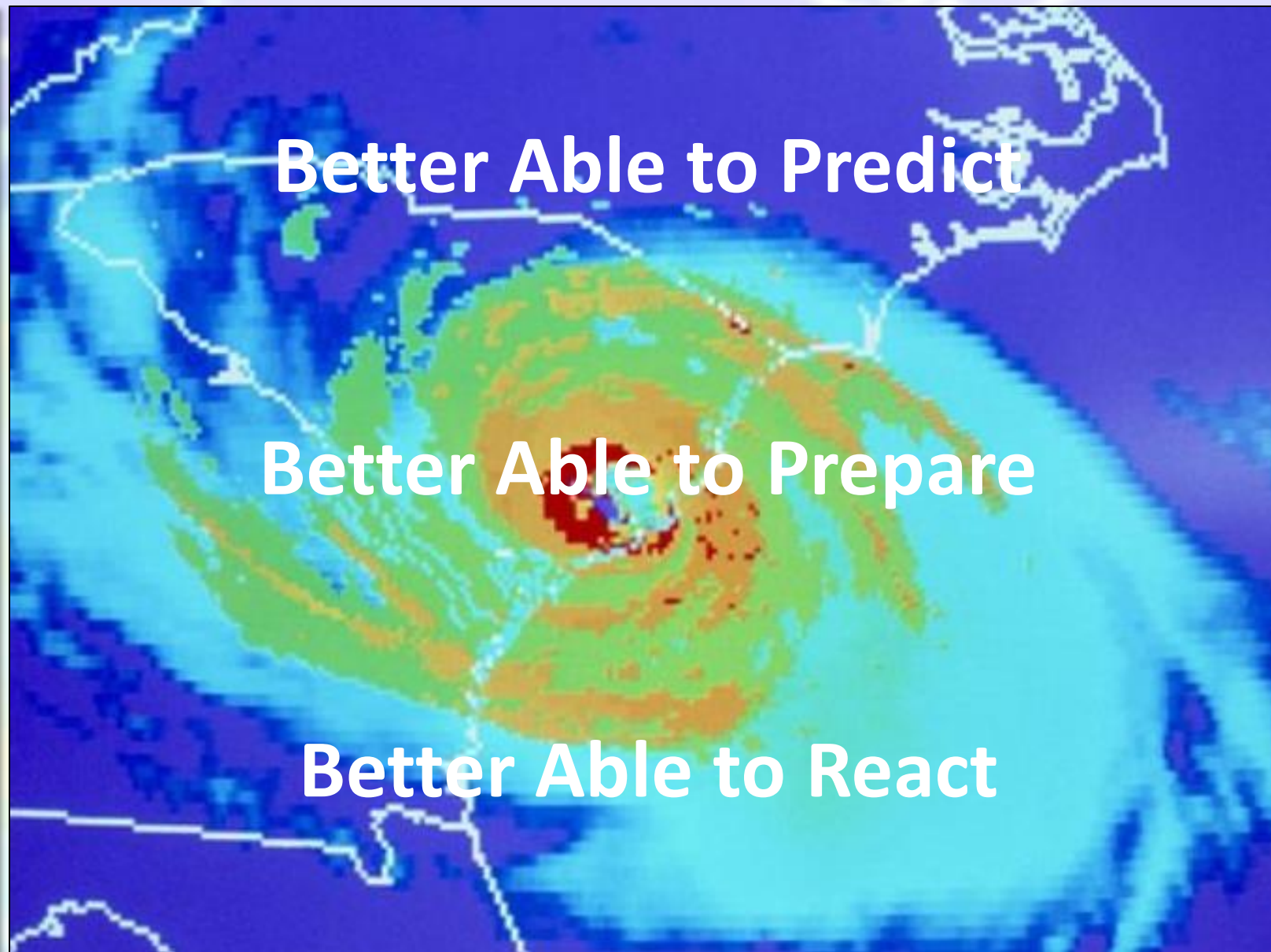
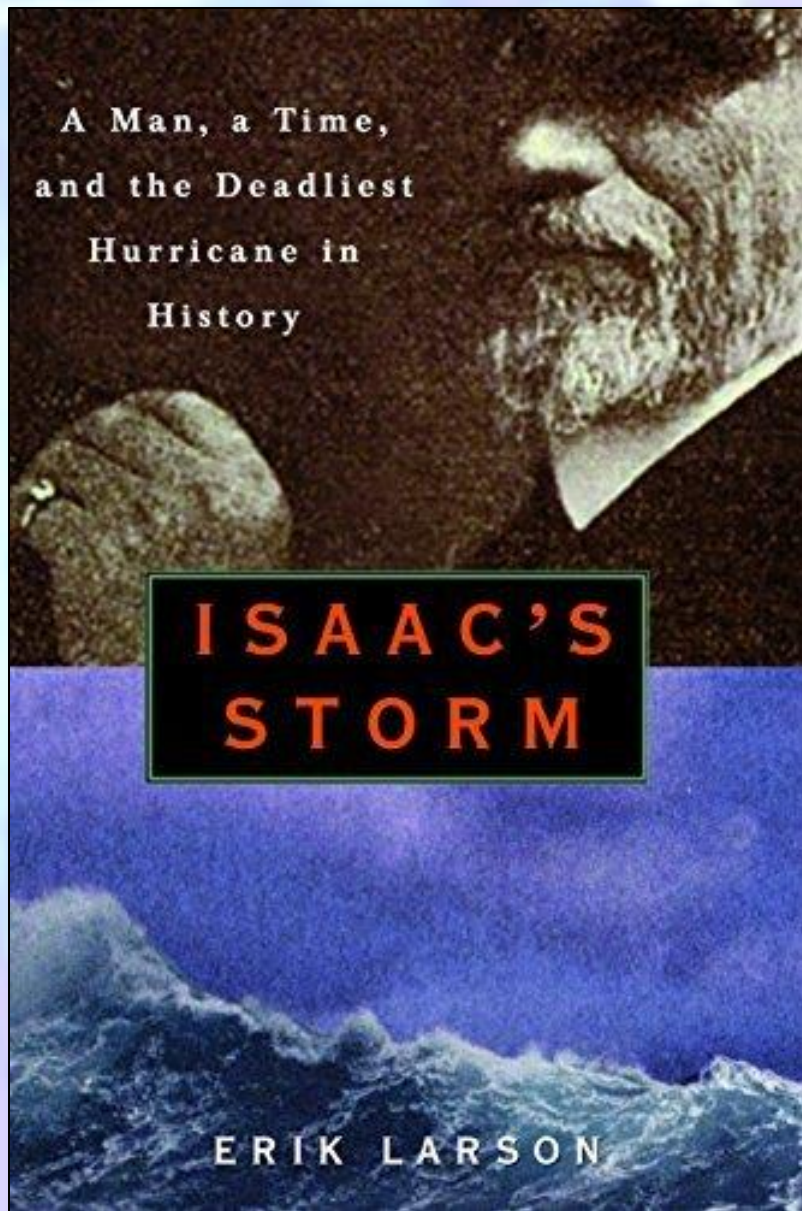
- Ds have a case to defend
- And will want to use appropriate tactics
- And this is adversarial
- But where a disaster has occurred the route to success for Cs may be clear
- And in many cases there will have been significant harm to a large number of people
- It will often be the case that ADR will help all from the outset – including discussions about what ADR will look like



ADR

Where to start ?

- Maybe initially as to how case will be managed
- And will often be room for a collaborative approach
- Ds may need their own ADR to deal with apportionment
- In cases of serious injury a collaborative approach is the rule rather than the exception – and benefits all
- Maybe appoint the right mediators at the outset
- Will likely benefit all



Better Able to Predict

Better Able to Prepare

Better Able to React

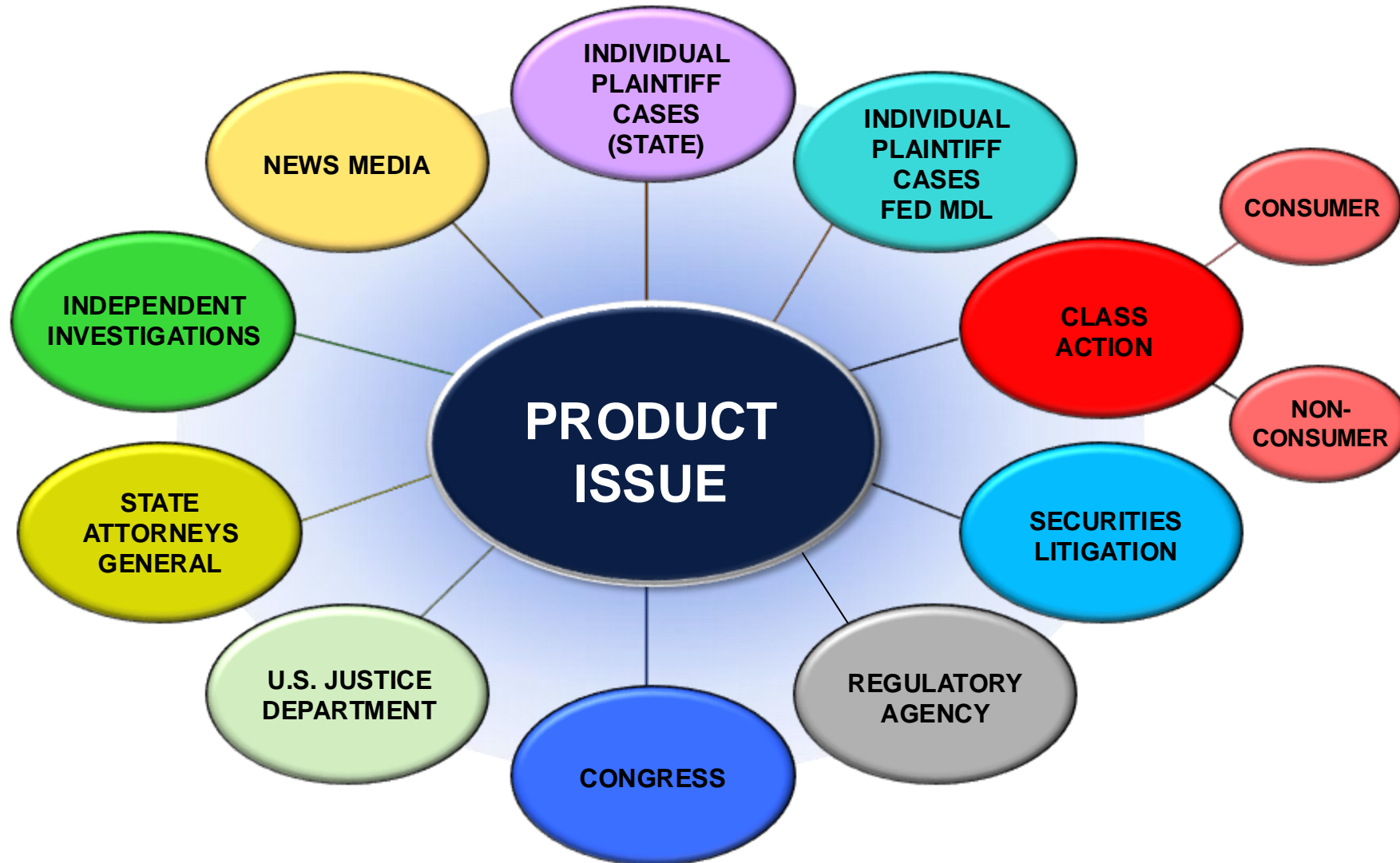
What's a Product Crisis?

- A claim of product defect causing injury or harm
- Widespread concern for public safety
- Media and political attention
- Litigation and investigation
- Threat to company trust

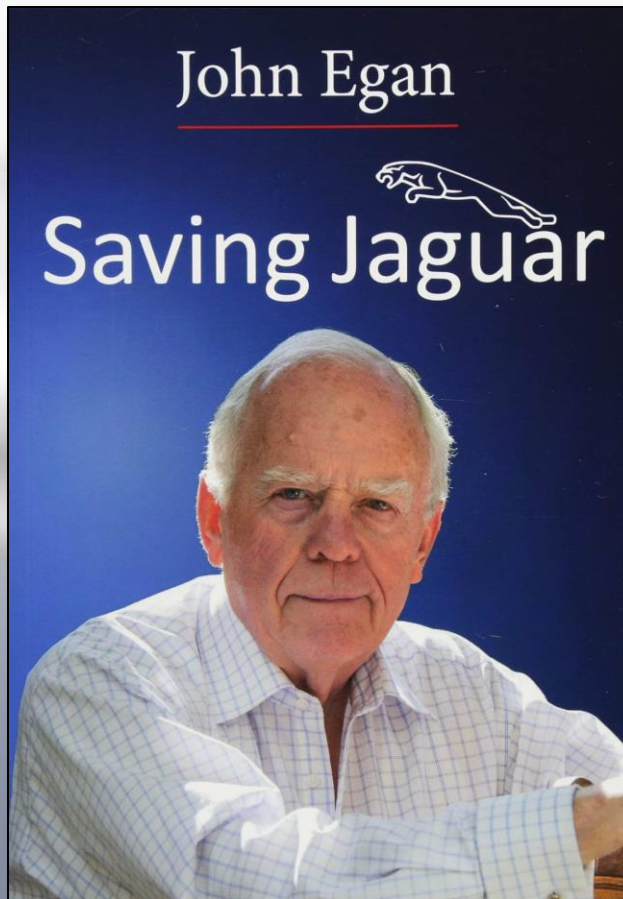




A Multi-Venued Crisis

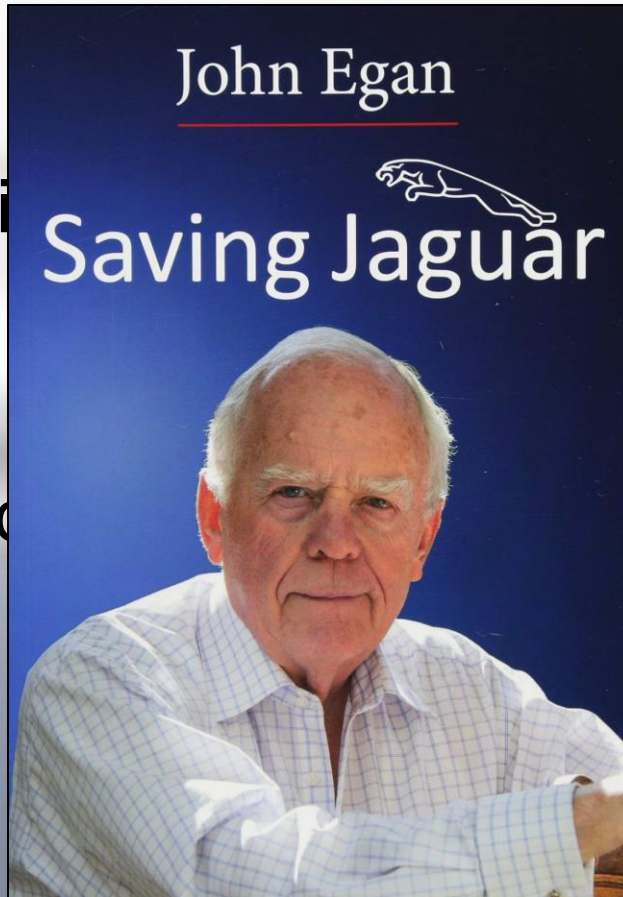


Sir John Egan: How a Company Responds to a Crisis



Sir John Egan: How a Company Responds to a Crisis

- Customer focus
- Gained in drops/Lost in storms
- Be Brutally Honest
- Crisis is Opportunity to Reinvent



Three Guiding Principles

1 Hope is Not a Strategy

2 Time is Not Your Friend

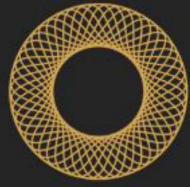
3 Truth is Your Only Currency



Responding to the Product Crisis

- Be Ready
- Be Urgent/Agile
- Value Accuracy
- Promote Consistency
- Customer Focus





Outer Temple



Thank you for attending

Running product liability, aviation and mass tort claims in the UK & US

For further information, please contact Paul Barton paul.barton@outertemple.com



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