



Stewart Bruce

Alan German & Chris ~~Taylor~~
Ottawa PC Users' Group

March 4, 2026



iTunes and Zoom



- Can you transition iTunes music and playlists to a new Windows 11 computer?
- As an alternative, would iTunes and Zoom be supported if an old Windows 10 computer is running under Linux?



iTunes



- I use iTunes with Windows 11
- To bring my "library" over to a new computer, I copied the iTunes folder found in the Music folder to a hard drive and then copied it onto the new computer
- I can't remember all the details of exactly what I needed to do
- I think when you open iTunes you might have to point it to the specific library you want to use.

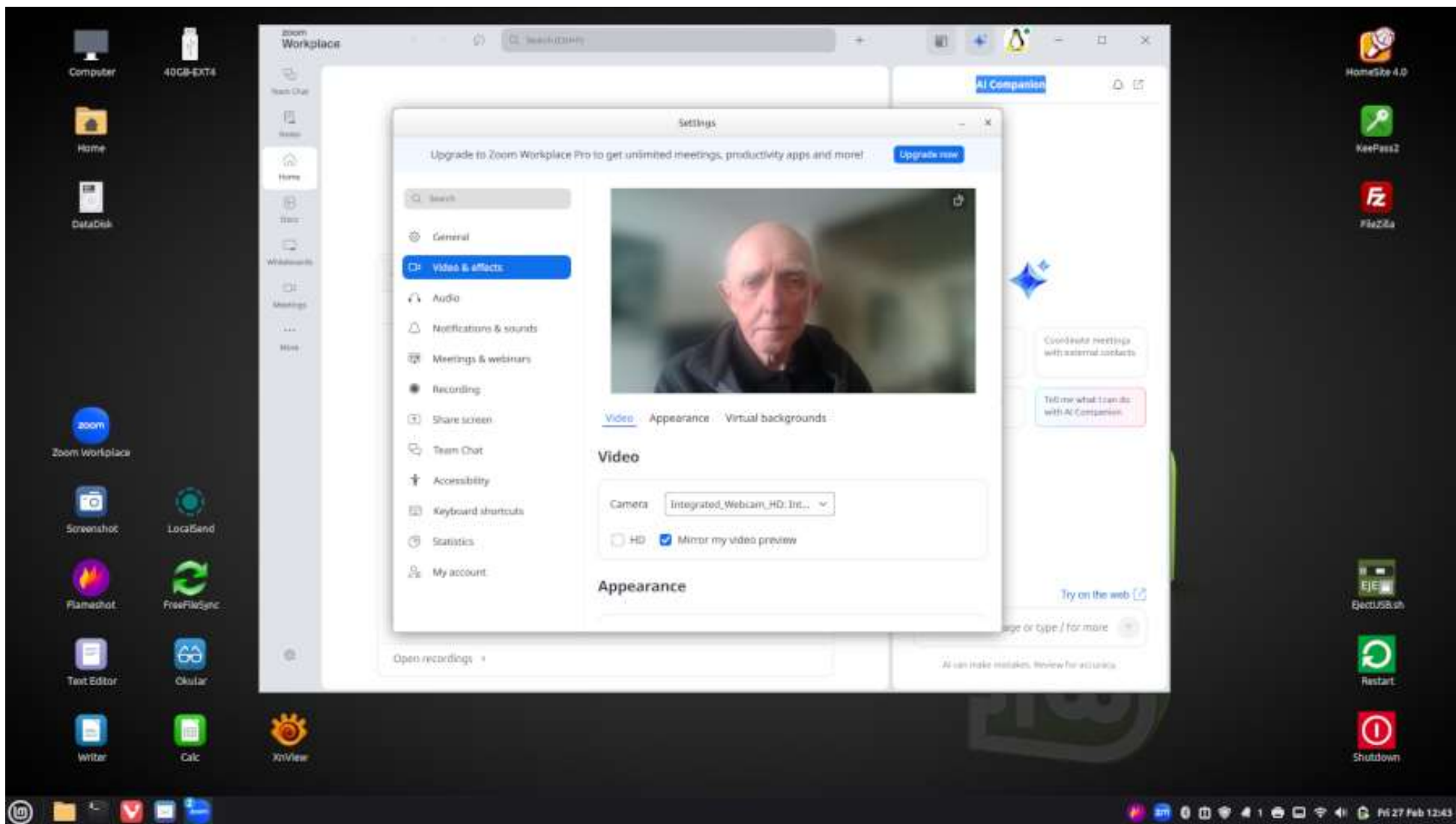
Allison Bryndza



Zoom



The screenshot shows the Zoom Linux download page. The browser address bar is 'zoom.us/download'. The page header includes navigation links like 'Products', 'Solutions', 'Resources', and 'Plans & Pricing', along with 'Contact Sales' and 'Sign Up Free' buttons. The main heading is 'Download Center' with the subtext 'Get the most out of Zoom by downloading our apps'. A red box highlights a dropdown menu for 'Linux Type' with the following options: Ubuntu, Debian, Mint, Oracle Linux, CentOS, and RedHat. Below the menu, the text 'Please Select a Linux type' is visible. The page also features a 'Zoom W' logo, a version number 'Version 6.7.5 (6)', and a description: 'Unlock the full power of Zoom with Team Chat, Whiteboard, Meetings and more'. A chat icon is located in the bottom right corner of the content area.



Follow Up



Translation Software

- Further along in my adventures in translation software I came across this web page which let me translate English into various Native American languages

<https://translormind.com/translator-tool/english-to-native-american-language-translator/>

- It seems to be a one way trip though as I have not found a way to translate Native American into English
- Anyway, aside from needing to know the name of the language you are translating, it is pretty simple
- This page however, is simply a subpage of the website Translator Mind and it can get pretty weird

Stewart Bruce

- Would you like to communicate in 1500's English?
No problem.

<https://translormind.com/translator-tool/1500s-english-translator/>

- Then if you are feeling a bit whimsical, you could try the Dr Seuss translator

<https://translormind.com/translator-tool/dr-seuss-translator/>

- The point of these examples is to show the website's emphasis not only on hard language skills but entertainment as well
- There are so many translations here that, if I found one useful (such as the First Nations translator), I would suggest bookmarking that page rather than try and find it again on the website



Loonie Links

kini mobile



- I just heard of kini, a Telus sub-brand, which seems to cater to new immigrants to Canada but will happily subscribe anyone
- Their basic plan is a \$25 for 25 GB with more expensive tiers if desired and an interesting loyalty program
- This adds data over time so you could wind up with a \$25 for 75 GB plan after a couple of years
- Not a bad deal at all

<https://www.kinimobile.com/ca/en/plans?type=G002#PA00081>



Password Managers



What is a good password manager that will work with a PC running Windows 11 and an iPhone running iOS 26?



AI tools for scanning



Are there any AI tools that I can use, along with a scanner, to extract elements from a photo or document and save these to files?





Cookie Control Pop-Ups



- TD bank's website has instituted what is an irritating manage-my-cookies pop up
- I have unchecked, checked all, and still it pops up again with every page change
- Does unchecking do anything similar pop-ups on any website?
- I appreciate the choice, but wish it wasn't every time.
- How can I manage such pop-ups on a one-time basis?

Must Have Computer Analysis Tools



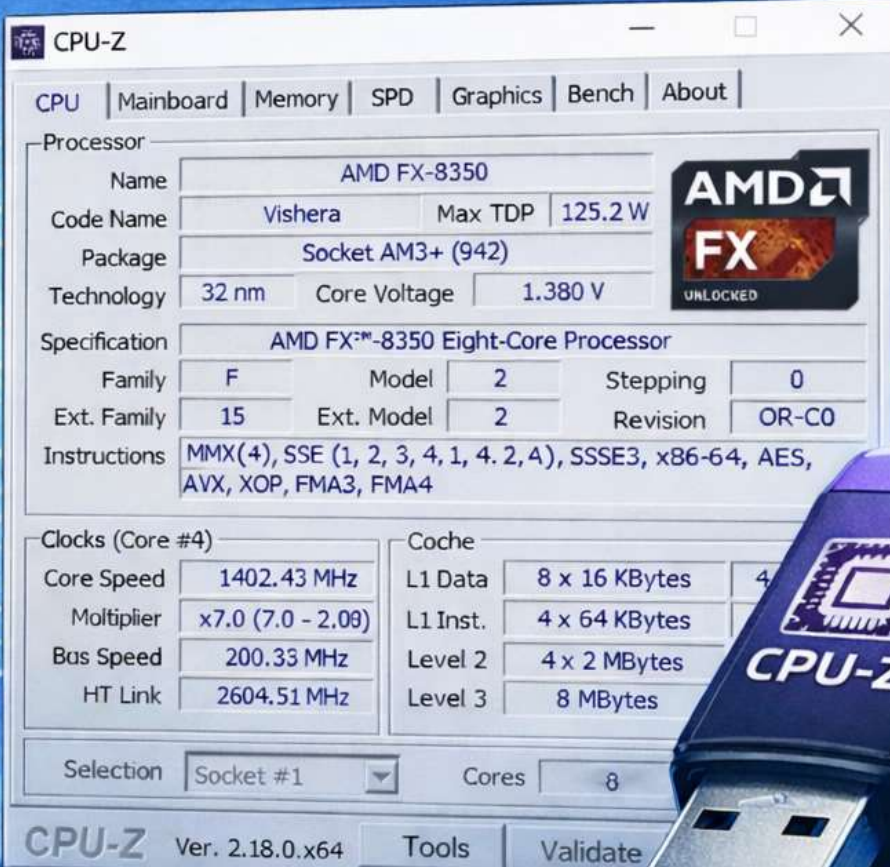
- ✓ CPUID CPU-Z
- ✓ Open Hardware Monitor
- ✓ PassMark RaMMon
- ✓ TechPowerUp GPU-Z
- ✓ Speccy

CPUID CPU-Z

Provides information on:

- ✓ CPU
- ✓ Mainboard
- ✓ Memory
- ✓ Graphics Adapter
- ✓ Benchmark Information.

 <https://www.cpuid.com/softwares/cpu-z.html>



The screenshot displays the CPU-Z application window with the following data:

Processor			
Name	AMD FX-8350		
Code Name	Vishera	Max TDP	125.2 W
Package	Socket AM3+ (942)		
Technology	32 nm	Core Voltage	1.380 V
Specification	AMD FX™-8350 Eight-Core Processor		
Family	F	Model	2
Ext. Family	15	Ext. Model	2
Instructions	MMX(4), SSE (1, 2, 3, 4, 1, 4.2, 4), SSSE3, x86-64, AES, AVX, XOP, FMA3, FMA4		

Clocks (Core #4)		Cache	
Core Speed	1402.43 MHz	L1 Data	8 x 16 KBytes
Multiplier	x7.0 (7.0 - 2.00)	L1 Inst.	4 x 64 KBytes
Bus Speed	200.33 MHz	Level 2	4 x 2 MBytes
HT Link	2604.51 MHz	Level 3	8 MBytes

Selection: Socket #1 Cores: 8

Ver. 2.18.0.x64 Tools Validate



Open Hardware Monitor

Provides information on:

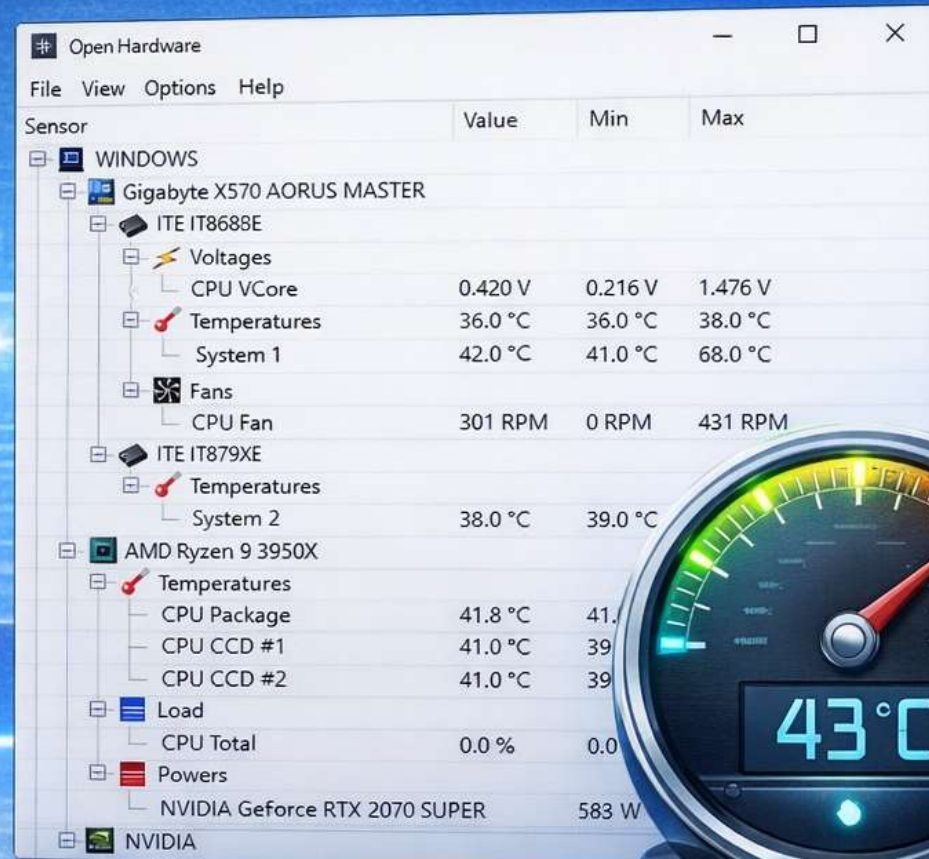
✓ CPU and GPU temperature

✓ Fan speeds

✓ Voltages

✓ Load and clock speeds

🌐 <https://openhardwaremonitor.org>



The screenshot shows the Open Hardware Monitor application window with a tree view on the left and a data table on the right. The tree view is expanded to show the following hierarchy: WINDOWS > Gigabyte X570 AORUS MASTER > ITE IT8688E > Voltages > CPU VCore (0.420 V). The data table below shows the following information:

Sensor	Value	Min	Max
WINDOWS			
Gigabyte X570 AORUS MASTER			
ITE IT8688E			
Voltages			
CPU VCore	0.420 V	0.216 V	1.476 V
Temperatures			
System 1	42.0 °C	41.0 °C	68.0 °C
Fans			
CPU Fan	301 RPM	0 RPM	431 RPM
ITE IT879XE			
Temperatures			
System 2	38.0 °C	39.0 °C	
AMD Ryzen 9 3950X			
Temperatures			
CPU Package	41.8 °C	41.0 °C	
CPU CCD #1	41.0 °C	39.0 °C	
CPU CCD #2	41.0 °C	39.0 °C	
Load			
CPU Total	0.0 %	0.0 %	
Powers			
NVIDIA Geforce RTX 2070 SUPER	583 W		
NVIDIA			

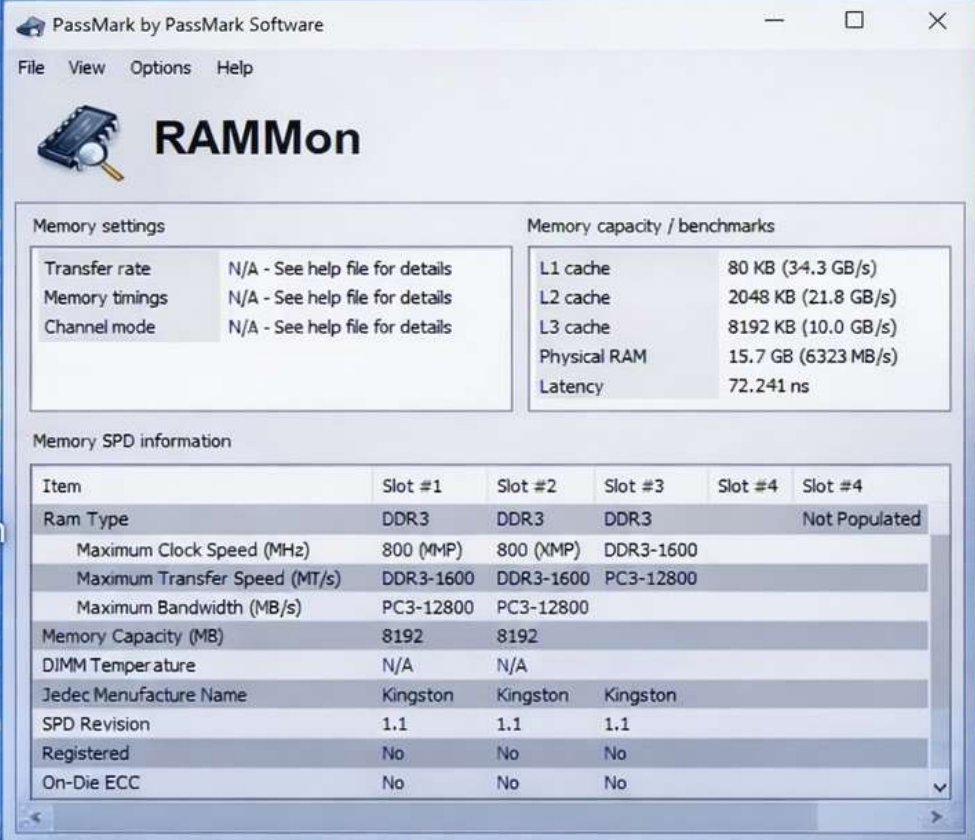




PassMark RAMMon


Provides detailed information about RAM: identifies manufacturer, capacity, speed, timings, and Serial Presence Detect (SPD) data.

 <https://www.passmark.com/products/rammon>



PassMark by PassMark Software

File View Options Help

 **RAMMon**

Memory settings		Memory capacity / benchmarks	
Transfer rate	N/A - See help file for details	L1 cache	80 KB (34.3 GB/s)
Memory timings	N/A - See help file for details	L2 cache	2048 KB (21.8 GB/s)
Channel mode	N/A - See help file for details	L3 cache	8192 KB (10.0 GB/s)
		Physical RAM	15.7 GB (6323 MB/s)
		Latency	72.241 ns


Memory SPD information

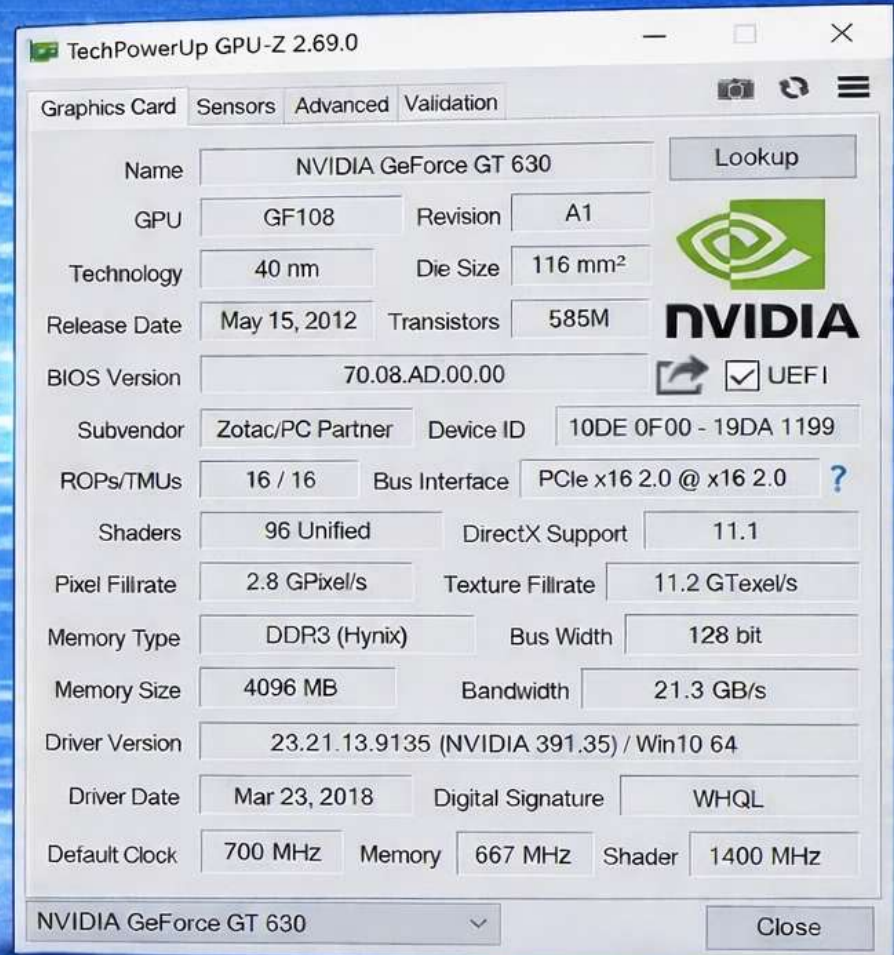
Item	Slot #1	Slot #2	Slot #3	Slot #4	Slot #4
Ram Type	DDR3	DDR3	DDR3	Not Populated	
Maximum Clock Speed (MHz)	800 (MMP)	800 (XMP)	DDR3-1600		
Maximum Transfer Speed (MT/s)	DDR3-1600	DDR3-1600	PC3-12800		
Maximum Bandwidth (MB/s)	PC3-12800	PC3-12800			
Memory Capacity (MB)	8192	8192			
DIMM Temperature	N/A	N/A			
Jedec Manufacture Name	Kingston	Kingston	Kingston		
SPD Revision	1.1	1.1	1.1		
Registered	No	No	No		
On-Die ECC	No	No	No		

TechPowerUp GPU-Z

Provides detailed real-time information on NVIDIA, AMD, ATI and Intel GPUs
Including:

- ▶ GPU name & BIOS version
- ▶ Memory size & Clock speeds
- ▶ Temperature & Fan speed
- ▶ Driver versions

 <https://www.techpowerup.com/download/techpowerup-gpu-z>



TechPowerUp GPU-Z 2.69.0

Graphics Card | Sensors | Advanced | Validation

Name: NVIDIA GeForce GT 630 Lookup

GPU: GF108 | Revision: A1

Technology: 40 nm | Die Size: 116 mm²

Release Date: May 15, 2012 | Transistors: 585M

BIOS Version: 70.08.AD.00.00 UEFI

Subvendor: Zotac/PC Partner | Device ID: 10DE 0F00 - 19DA 1199

ROPs/TMUs: 16 / 16 | Bus Interface: PCIe x16 2.0 @ x16 2.0

Shaders: 96 Unified | DirectX Support: 11.1

Pixel Fillrate: 2.8 GPixel/s | Texture Fillrate: 11.2 GTexel/s

Memory Type: DDR3 (Hynix) | Bus Width: 128 bit

Memory Size: 4096 MB | Bandwidth: 21.3 GB/s

Driver Version: 23.21.13.9135 (NVIDIA 391.35) / Win10 64

Driver Date: Mar 23, 2018 | Digital Signature: WHQL

Default Clock: 700 MHz | Memory: 667 MHz | Shader: 1400 MHz

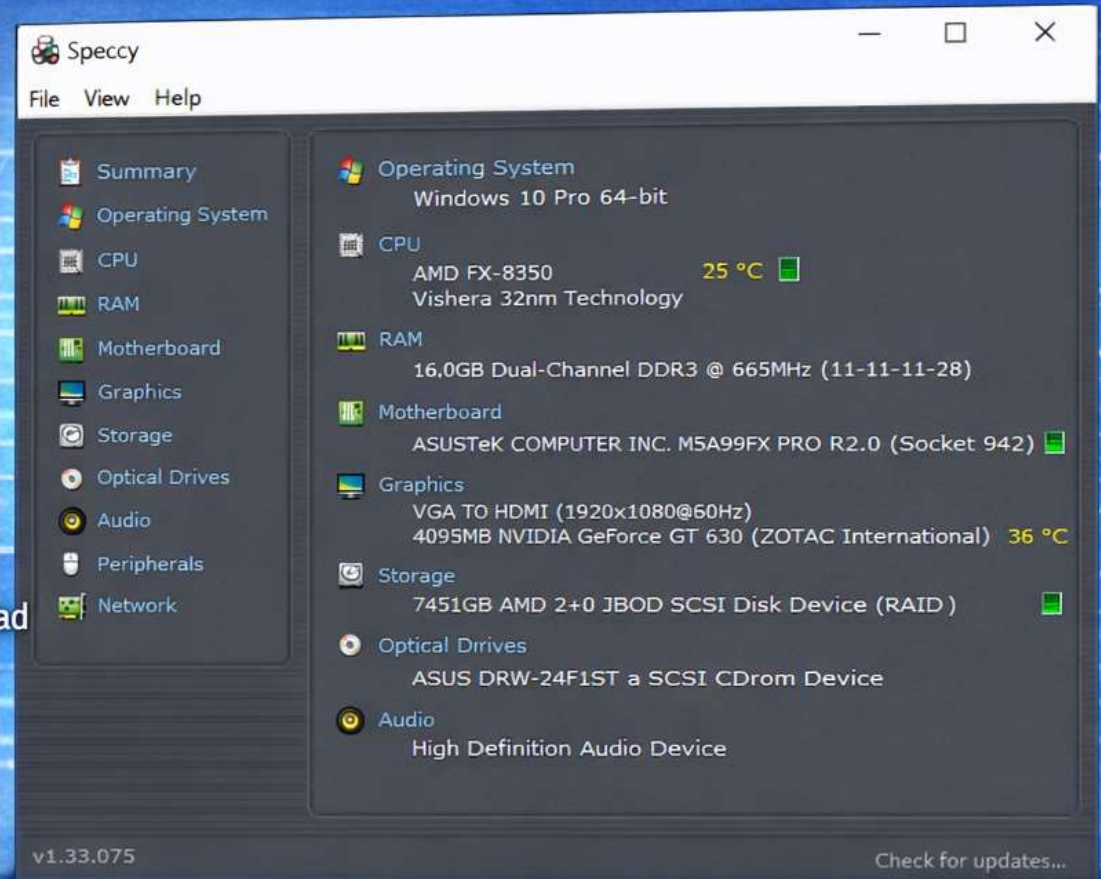
NVIDIA GeForce GT 630 Close

Speccy

Provide detailed information on:

- ✓ OS & Motherboard
- ✓ CPU, GPU, RAM & Audio
- ✓ Storage & Optical Devices
- ✓ Peripherals & Network

 <https://www.ccleaner.com/speccy/download>



The screenshot shows the Speccy application window with a dark theme. The window title is "Speccy" and it has a menu bar with "File", "View", and "Help". On the left is a sidebar with a list of system components: Summary, Operating System, CPU, RAM, Motherboard, Graphics, Storage, Optical Drives, Audio, Peripherals, and Network. The main area displays detailed information for each selected component. At the bottom left, the version "v1.33.075" is shown, and at the bottom right, there is a "Check for updates..." button.

Speccy
File View Help

- Summary
- Operating System
 - Windows 10 Pro 64-bit
- CPU
 - AMD FX-8350 25 °C
 - Vishera 32nm Technology
- RAM
 - 16,0GB Dual-Channel DDR3 @ 665MHz (11-11-11-28)
- Motherboard
 - ASUSTeK COMPUTER INC. M5A99FX PRO R2.0 (Socket 942)
- Graphics
 - VGA TO HDMI (1920x1080@60Hz)
 - 4095MB NVIDIA GeForce GT 630 (ZOTAC International) 36 °C
- Storage
 - 7451GB AMD 2+0 JBOD SCSI Disk Device (RAID)
- Optical Drives
 - ASUS DRW-24F1ST a SCSI CDrom Device
- Audio
 - High Definition Audio Device
- Peripherals
- Network

v1.33.075 Check for updates...

Computer Analysis Tools - Links

- CPID CPU-Z:

<https://www.cpubid.com/software/cpu-z.html>

- Open Hardware Monitor:

<https://openhardwaremonitor.org/>

- PassMark RaMMon:

<https://www.passmark.com/products/rammon/>

- TechPowerUp GPU-Z:

<https://www.techpowerup.com/download/techpowerup-gpu-z/>

- Speccy:

<https://www.ccleaner.com/speccy/download>

Computer Analysis Tools - Links

- Curated list of computing resources on my personal website:

jeffdubois.ca : A technological repository of information, tools & resources.



Computer Resources



What You Will Find Here:

This page offers a broad collection of computer-related software, tools, and reading material designed to help users explore and improve their digital experience. It brings together a variety of reliable resources that make everyday computing easier, safer, and more efficient while providing information for both newcomers and seasoned users.

Content is arranged into several main sections, including accessibility tools, analysis programs, backup and recovery utilities, connectivity and networking tools, desktop enhancements, file management resources, and office suites. You'll also find categories for internet and email tools, privacy and security software, operating systems, and other useful programs that don't fit elsewhere.

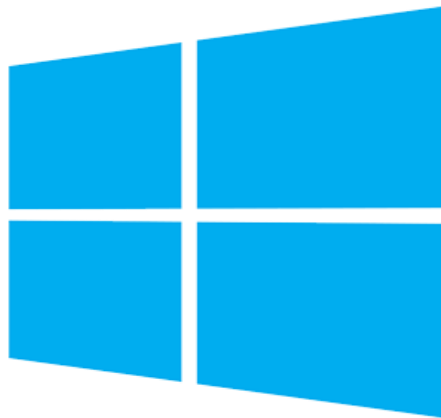
<https://jeffdubois.ca/computing.html>



Windows 10 and 11



- Is a switch from Windows 10 to Windows 11 absolutely necessary?





No (at least for now)

Windows Update



You're up to date

Last checked: Today, 4:44 PM

Check for updates

[View optional updates](#)



Get the latest updates as soon as they're available

Be among the first to get the latest non-security updates, fixes, and improvements as they roll out. [Learn more](#)



Off



Pause updates for 7 days

Visit Advanced options to change the pause period



Change active hours

Currently 7:00 AM to 11:00 PM



View update history

See updates installed on your device



Advanced options

Additional update controls and settings

Your PC is enrolled to get Extended Security Updates.

[Learn more about Extended Security Updates](#)

Your PC doesn't currently meet the minimum system requirements to run Windows 11

[Windows 11 system requirements](#)

[Learn about options to trade-in or recycle your PC](#)

Looking for info on the latest updates?

[Learn more](#)

Related links

[Check Storage](#)

But, for how long?

- The Extended Security Updates (ESU) program for Windows 10 provides customers with a more secure option to continue using their Windows 10 PCs after 14 October, 2025, **while they transition to Windows 11.**
- You can enroll in ESU any time until the program **ends on October 13, 2026.**



<https://www.microsoft.com/en-us/windows/extended-security-updates>

Who's spying on YOU?

All about counterspy
O&O Shutup10
fixing Microsoft
settings

See: [20260304_Shutup10.pdf](#)

Tom Trotter



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Carved In Stone

physicsworld

Topics ▾

Latest content ▾

Magazine

Physics World Live

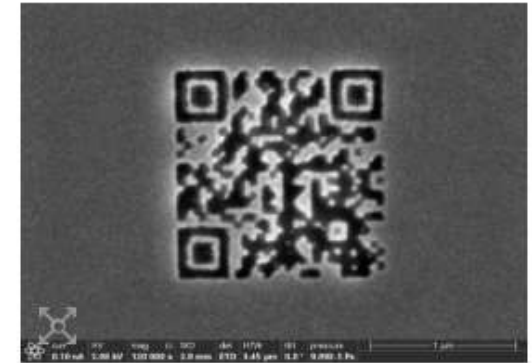
DEVICES AND STRUCTURES | BLOG

World's smallest QR code paves the way for ultralong-life data storage

20 Feb 2026 Tami Freeman

A team headed up at TU Wien in Austria has set the Guinness World Record for creating the world's smallest QR code.

Working with industry partner Cerabyte, the researchers produced a stable and repeatedly readable QR code with an area of just $1.977 \mu\text{m}^2$.



Invisible code The world's smallest QR code can only be read out using an electron microscope. (Courtesy: TU Wien)

<https://physicsworld.com/a/worlds-smallest-qr-code-paves-the-way-for-ultralong-life-data-storage/>

- When read out – using an electron microscope, as its structure is too fine to be seen with a standard optical microscope – the QR code links to a scientific webpage at TU Wien.
- Mayrhofer points out that the storage capacity of the ceramic data storage technology far surpasses that of a single QR code and says “Based on current estimates, a cartridge of **100 x 100 x 20 mm** with ceramic storage medium could potentially store on the order of **290 terabytes of raw data.**”
- Information stored in ceramic materials could endure for centuries, or even millennia.

Share

Big Brother is Watching You!



Available online at www.evu-online.org

EVU2025_XX

33rd Annual Congress of the European Association for Accident Research and Analysis (EVU)

Non-CDR Data Sources

D. Patrick Ryan, P.Eng.*

Graham Ryan Consulting Ltd. #34, 11410 – 27 Street SE Calgary AB T2Z3R6 CANADA

Black Boxes or Silver Bullets? Event Data Recorders in Passenger Vehicles

Alan German
Transport Canada

Roads, Routes and Responsibilities
Regina, August 27-29, 2001

These are Black Boxes



These are not Black Boxes

SDM-G



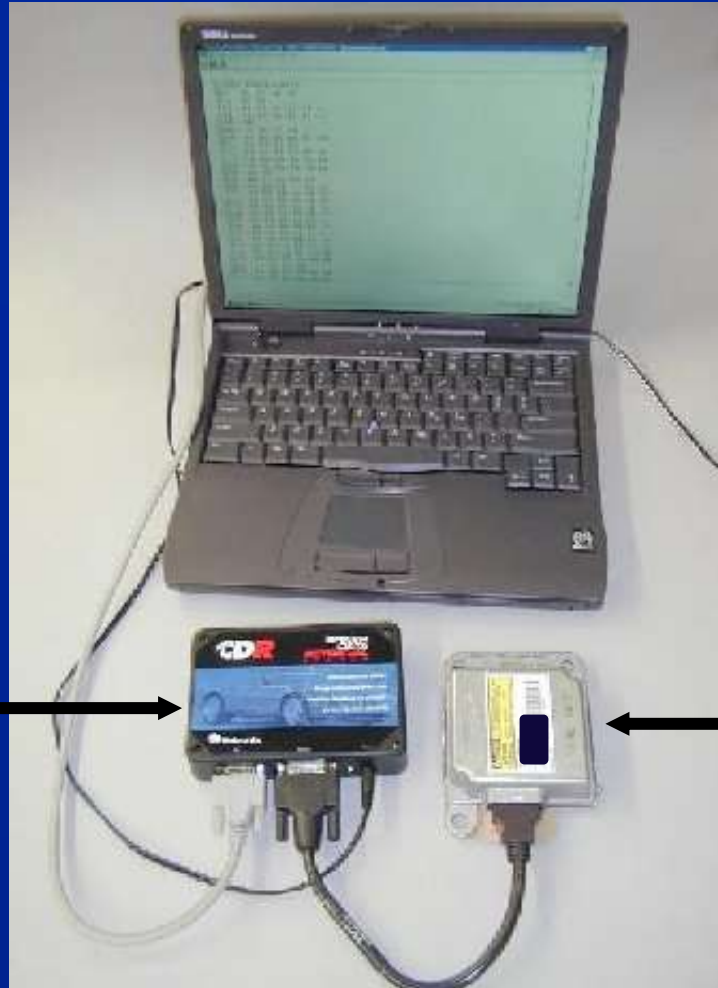
SDM-CL2

SDM-R

Crash Data Retrieval System

• Front view

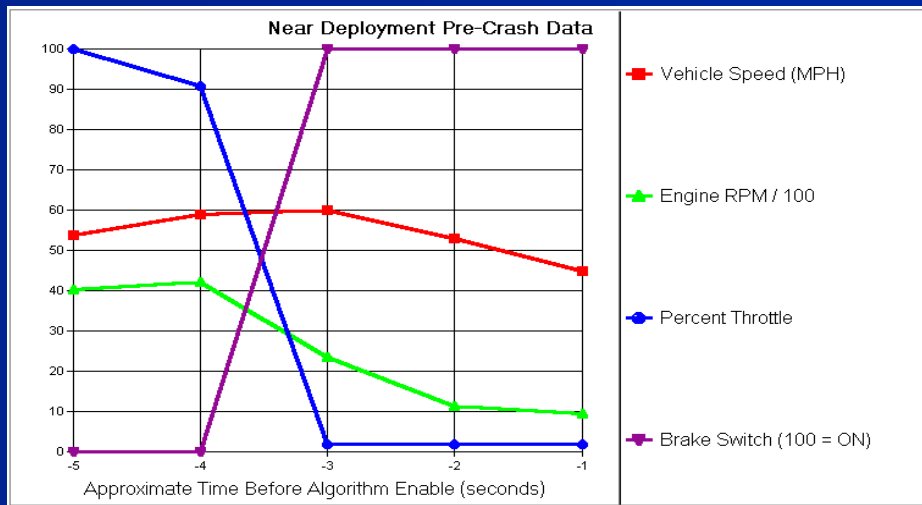
Caravan



CDR (Crash Data Retrieval System)

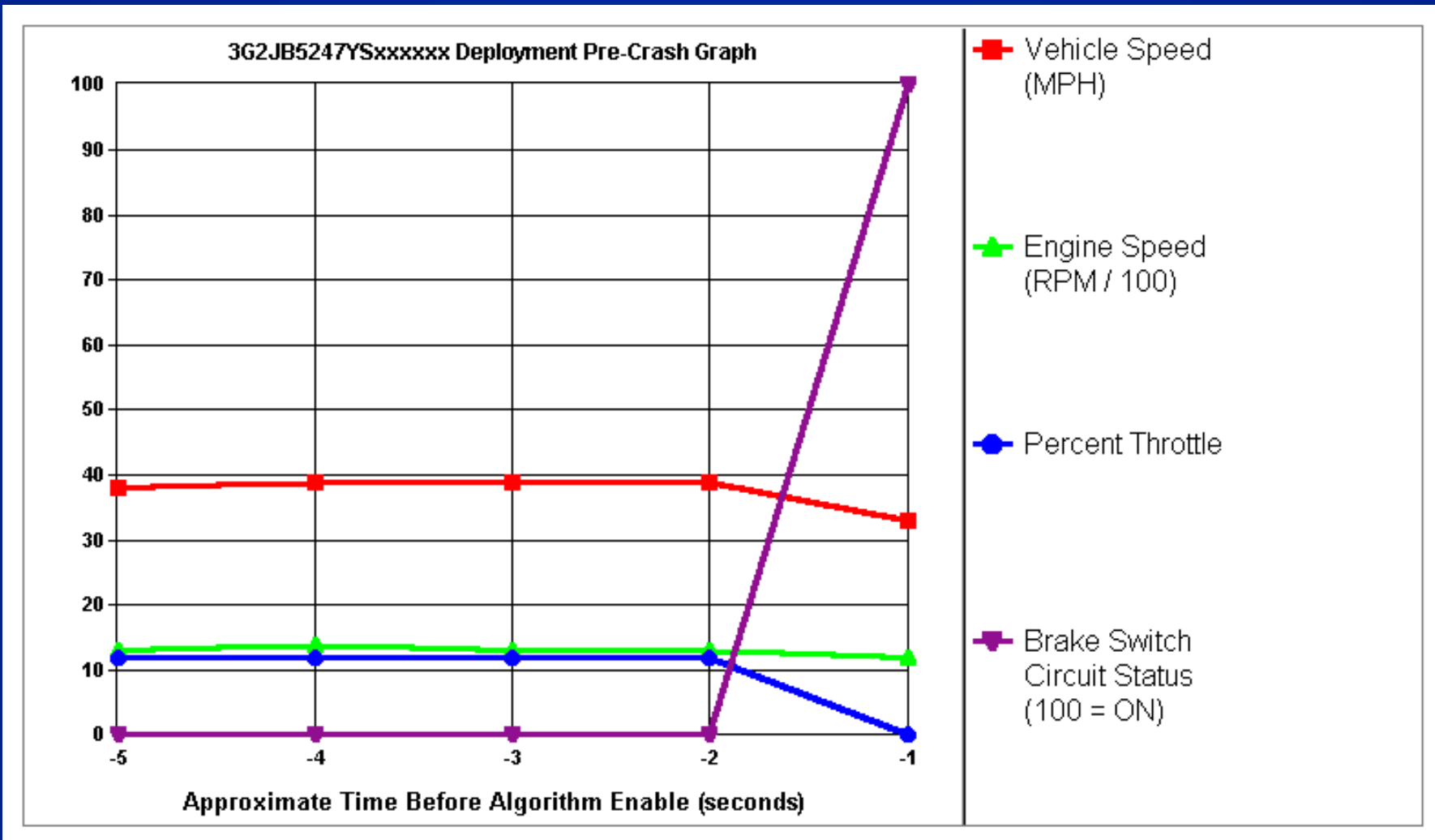
SDM (Sensing and Diagnostic Module)

Pre-Crash Data

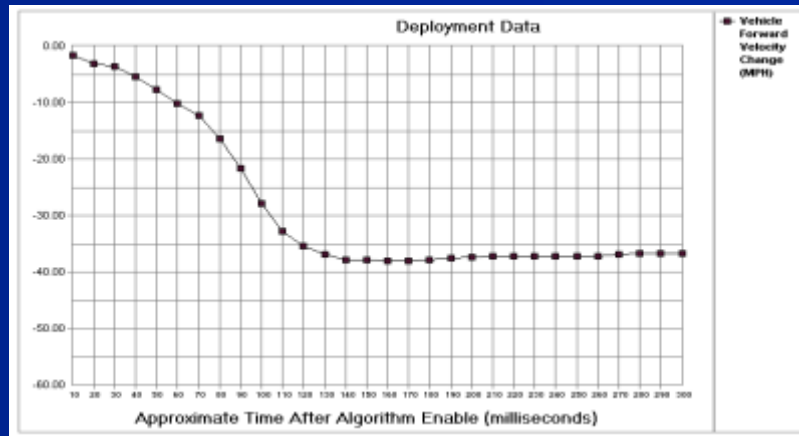


- **Vehicle speed (mph)**
- **Engine RPM**
- **Throttle position (0-100%)**
- **Brake switch (on/off)**
- **5 “spot” readouts at one second intervals**

Pre-Crash Data for Deployment

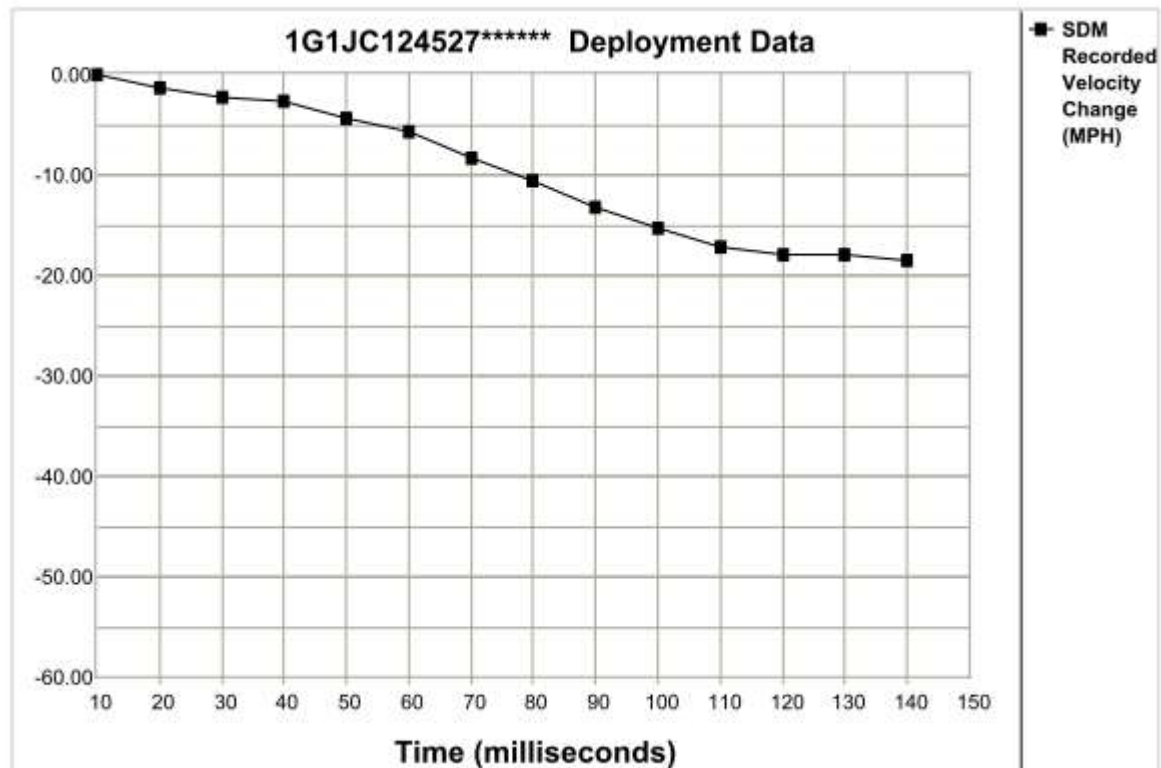


Change in Velocity



- Longitudinal velocity
- Cumulative delta-V
- Recorded every 10 ms
- 80-300 ms time frame*

* *Varies with SDM type*



System Status At Deployment

SIR Warning Lamp Status	OFF
Driver's Belt Switch Circuit Status	UNBUCKLED
Passenger SIR Suppression Switch Circuit Status (if equipped)	Air Bag Not Suppressed
Ignition Cycles At Deployment	15171
Ignition Cycles At Investigation	15172
Maximum SDM Recorded Velocity Change (MPH)	-18.45
Algorithm Enable to Maximum SDM Recorded Velocity Change (msec)	135
Time Between Non-Deployment And Deployment Events (sec)	0.8
Time From Algorithm Enable to Deployment Command Criteria Met (msec)	37.5

Case Study No. 2 - Sudden Acceleration Complaint

A 2016 Audi A6 was stopped in traffic. The driver reported that he took his foot off the brake and the vehicle “bolted forward” such that the front of his vehicle struck the rear of the vehicle ahead. The pre-crash data captured by the Audi’s EDR included records of activation of both the brake and accelerator pedals every half second for five seconds prior to impact.

Pre-Crash Data -5 to 0 sec (Record 1, Most Recent)

Time (sec)	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal (%)	Service Brake Activation
-5.0	0 [0]	0	On
-4.5	0 [0]	0	On
-4.0	0 [0]	6	On
-3.5	0 [0]	0	On
-3.0	0 [0]	0	On
-2.5	0 [0]	0	On
-2.0	0 [0]	0	On
-1.5	0 [0]	52	Off
-1.0	5 [8]	73	Off
-0.5	14 [22]	99	Off
0.0	12 [20]	0	Off

Figure 10 Brake and accelerator pedal application for the 2016 Audi A6
(Brake pedal = Red; Accelerator pedal = Green)

The EDR data shown in Figure 10 clearly demonstrate that, after releasing the brake, the driver initially pressed down on the accelerator pedal. The accelerator was 99% engaged at $t=-0.5$ s and the vehicle’s speed had increased from 0 to 22 km/h. The data also show that pressure on the accelerator was completely removed (Accelerator Pedal = 0) at $t=0.0$ s.

Case No.	Brake						Accelerator					
	-5	-4	-3	-2	-1	0	-5	-4	-3	-2	-1	0
6	Off	Off	Off	Off	Off	Off	High	High	High	High	High	High
19	Off	Off	Off	Off	Off	Off	High	High	High	High	High	High
12	Off	Off	Off	Off	Off	Off	High	High	High	High	High	High
15	Off	Off	Off	Off	Off	Off	High	High	High	High	High	High
11	Off	Off	Off	Off	Off	Off	Medium	High	High	High	High	High
10	Off	Off	Off	Off	Off	Off	Medium	High	High	High	High	High
13	Off	Off	Off	Off	Off	Off	High	High	High	Low	High	High
16	Off	Off	Off	Off	Off	Off	Off	Low	High	High	High	High
2	Off	Off	Off	Off	Off	Off	Off	Off	Low	High	High	Medium
3	Off	Off	Off	Off	Off	Off	Off	Off	Off	High	Medium	High
7	Off	Off	Off	Off	Off	Off	Low	Low	Low	Low	High	High
18	Off	Off	Off	Off	On	Off	Off	Low	Low	Medium	Off	High
4	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Medium	High
9	Off	Off	Off	Off	Off	On	Off	Off	Low	Low	High	Off
22	On	On	Off	Off	Off	Off	Medium	Medium	Medium	Medium	Medium	Medium
1	Off	Off	Off	Off	Off	Off	Off	Low	Medium	Low	Low	Medium
17	Off	Off	Off	Off	Off	Off	Off	Off	Off	Low	Medium	Off
14	On	Off	Off	Off	Off	On	Off	Off	Off	Medium	Off	Off
20	Off	Off	Off	Off	Off	On	Low	Low	Low	Low	Low	Low
21	Off	Off	Off	Off	Off	Off	Off	Low	Low	Low	Low	Low
8	Off	Off	Off	Off	Off	Off	Low	Low	Low	Low	Off	Off
5	Off	Off	Off	On	On	On	Off	Off	Off	Off	Off	Off

Figure 3. Pre-Crash EDR Data

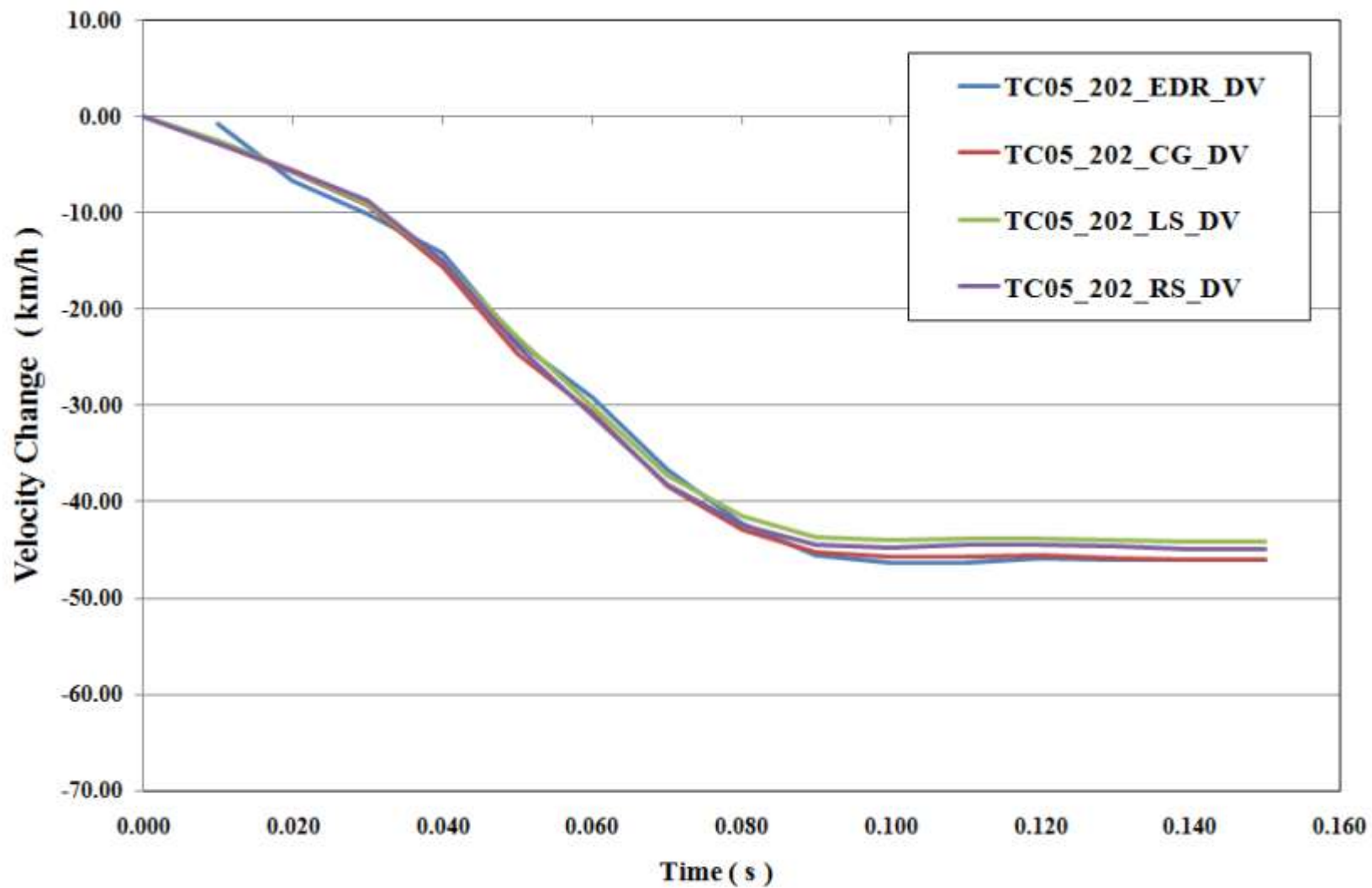


Figure 9. 2005 Toyota Camry (TC05-202)

Air Bag Research in Canada

The Development of Knowledge-Based Countermeasures

**Alan German
Suzanne Tylko
Dainius Dalmotas
Jean-Louis Comeau
Brian Monk**



Transport Canada
Transports Canada

Canadian Injury Prevention and
Safety Promotion Conference
Ottawa, Ontario, 2003

1995 Hyundai Accent



Range of Airbag Fire Decision Times Observed in Crash Tests and Field Collisions

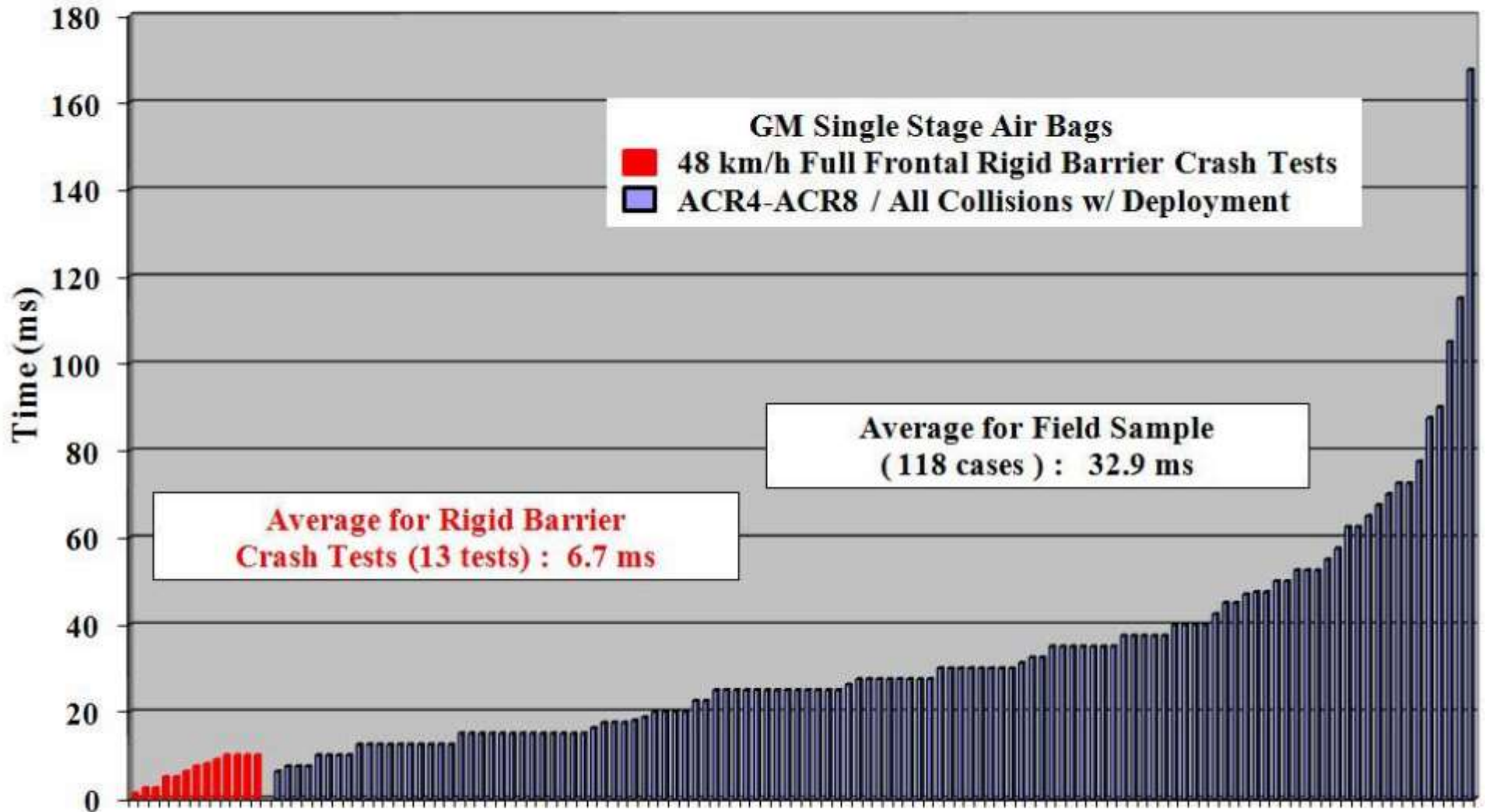


Figure 1. Range of Air Bag Fire Decision Times

Countermeasures

- Safety leaflets
- Videotapes
- Web site
- Community involvement
(coroners, police, schools)
- Second generation
(depowered) air bags
- National deactivation programme

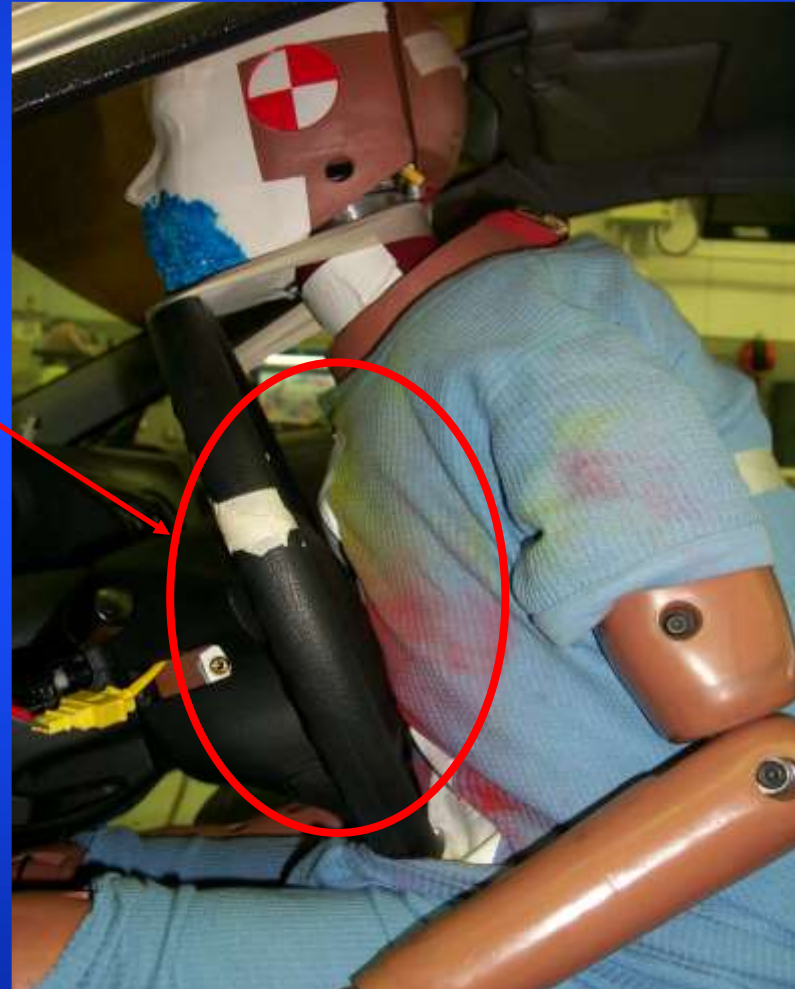


Test 00-204



TC Chest on Module Test

Chest on module



System Status at Event (Event Record 1)

Life Time Counter (sec)	7413951
Complete File Recorded (Yes/No)	Yes (Complete)
Ignition Cycle, Crash	8172
Ignition Cycle, Download	8177
Multi-Event, Number of Events (1, 2)	1
Time from Event 1 to 2 (sec)	N/A
Safety Belt Status, Driver	On (Fastened)
Safety Belt Status, Right Front Passenger	Off (Unfastened)
Frontal Air Bag Warning Lamp (On, Off)	Off
Frontal Air Bag Suppression Switch Status	On (AS airbag inhibit)
Maximum Delta-V, Longitudinal (MPH [km/h])	-22 [-35]
Time, Maximum Delta-V, Longitudinal (msec)	105
Maximum Delta-V, Lateral (MPH [km/h])	-11 [-17]
Time, Maximum Delta-V, Lateral (msec)	80
Maximum Acceleration, Longitudinal (g)	-32.5
Time, Maximum Acceleration, Longitudinal (msec)	45
Maximum Acceleration, Lateral (g)	-27
Time, Maximum Acceleration, Lateral (msec)	47.5

Deployment Command Data (Event Record 1)

Frontal Air Bag Deployment, Time to Deploy/First Stage, Driver (msec)	28
Frontal Air Bag Deployment, Time to Deploy/First Stage, Passenger (msec)	N/A
Frontal Air Bag Deployment, Time to 2nd Stage, Driver (msec)	31
Frontal Air Bag Deployment, Time to 2nd Stage, Right Front Passenger (msec)	N/A
Side Air Bag Deployment, Time to Deploy, Driver (msec)	N/A
Side Air Bag Deployment, Time to Deploy, Right Front Passenger (msec)	N/A
Side Curtain/Tube Air Bag Deployment, Time to Deploy, Driver Side (msec)	N/A
Side Curtain/Tube Air Bag Deployment, Time to Deploy, Right Side (msec)	N/A
Pretensioner Deployment, Time to Fire, Driver (msec)	28
Pretensioner Deployment, Time to Fire, Right Front Passenger (msec)	28

Pre-Crash Data (Most Recent 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	2,334	18 [30]	19	79.20	Off	Off	Off
-4.9	Complete	2,357	19 [30]	19	77.60	Off	Off	Off
-4.8	Complete	2,383	19 [30]	19	75.20	Off	Off	Off
-4.7	Complete	2,399	19 [31]	19	74.40	Off	Off	Off

Pre-Crash Data (Most Recent Event - table 2 of 5)

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

Time Stamp (sec)	Service Brake	ABS Activity	Stability Control	Steering Input (deg)	Yaw Rate (deg/sec)
-5.0	Off	No	On	-1	0.00
-4.9	Off	No	On	-1	-0.24
-4.8	Off	No	On	-1	0.00
-4.7	Off	No	On	-1	0.00

Pre-Crash Data (Most Recent Event - table 3 of 5)

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

Time Stamp (sec)	Wheel Speed LF (km/h)	Wheel Speed RF (km/h)	Wheel Speed LR (km/h)	Wheel Speed RR (km/h)	PRNDL Display Status	Reverse Gear (Manual Only)
-5.0	30	30	30	30	Drive	No
-4.9	31	31	30	30	Drive	No
-4.8	31	31	31	31	Drive	No
-4.7	31	31	31	31	Drive	No

Pre-Crash Data (Most Recent Event - table 4 of 5)

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

Time Stamp (sec)	Tire Pressure Position 1	Tire Pressure Position 2	Tire Pressure Position 3	Tire Pressure Position 4	Tire Pressure Status 1	Tire Pressure Status 2	Tire Pressure Status 3	Tire Pressure Status 4
-5.0	LHR	RHR	LHF	RHF	Normal	Normal	Normal	Normal
-4.9	LHR	RHR	LHF	RHF	Normal	Normal	Normal	Normal
-4.8	LHR	RHR	LHF	RHF	Normal	Normal	Normal	Normal
-4.7	LHR	RHR	LHF	RHF	Normal	Normal	Normal	Normal

Pre-Crash Data (Most Recent Event - table 5 of 5)

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

Time Stamp (sec)	Tire Pressure Value 1 (psi)	Tire Pressure Value 2 (psi)	Tire Pressure Value 3 (psi)	Tire Pressure Value 4 (psi)	Cruise Control Lamp Status	Cruise Control Engaged	Park Brake
-5.0	33	35	33	33	Off	Not Engaged	Off
-4.9	33	35	33	33	Off	Not Engaged	Off
-4.8	33	35	33	33	Off	Not Engaged	Off
-4.7	33	35	33	33	Off	Not Engaged	Off
-4.6	33	35	33	33	Off	Not Engaged	Off

Some vehicles even take photos!

-5.400s



-3.000s



-2.400s





Available online at www.evu-online.org

EVU2025_XX

33rd Annual Congress of the European Association for Accident Research and Analysis (EVU)

Non-CDR Data Sources

D. Patrick Ryan, P.Eng.*

Graham Ryan Consulting Ltd. #34, 11410 – 27 Street SE Calgary AB T2Z3R6 CANADA

Limitations of EDR's

- Minor crash severity may not trigger a recording
- A particular problem for vulnerable road users (pedestrians and cyclists) impacted by vehicles
- Vehicle theft/insurance fraud
- Author considers alternative data sources
 - Navigation systems (GPS)
 - Infotainment/telematics systems
 - Bicycle computers
 - Mobile phones

Berla iVe

- Specialized digital forensics toolkit able to extract and analyze data from modern in-vehicle infotainment, navigation, and telematics systems
 - trip logs, saved and recent destinations, active routes, speed and direction
 - call logs, contact lists, SMS messages, social media and email metadata synced via a paired phone
 - records of phones and other devices connected via Bluetooth, Wi-Fi, or USB
 - door open/close events, light usage, and similar vehicle-use events with associated timestamps and locations

GM Human Machine Interface (HMI) and OnStar ECU's

**POI and time stamps determined from track log
(scatter is GPS uncertainty)**

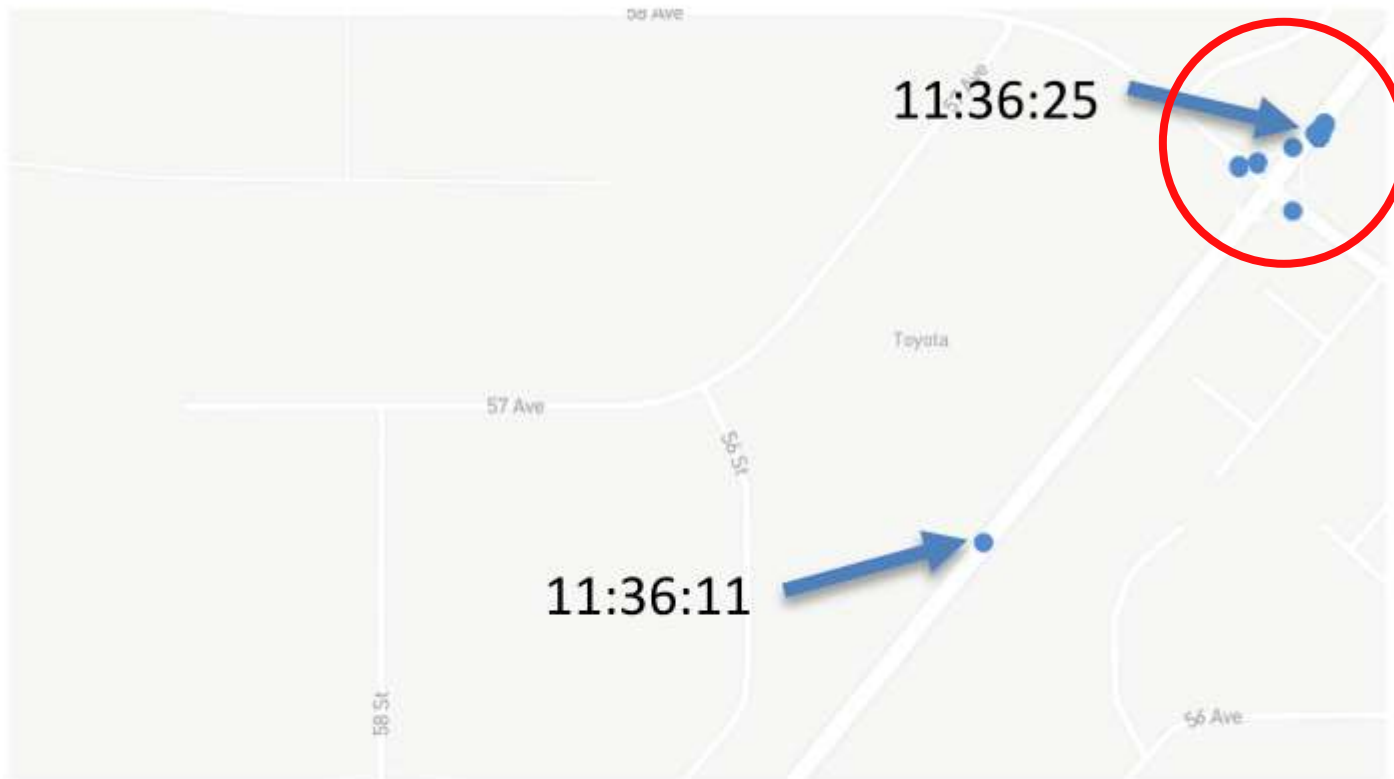


Figure 3: Collision Site

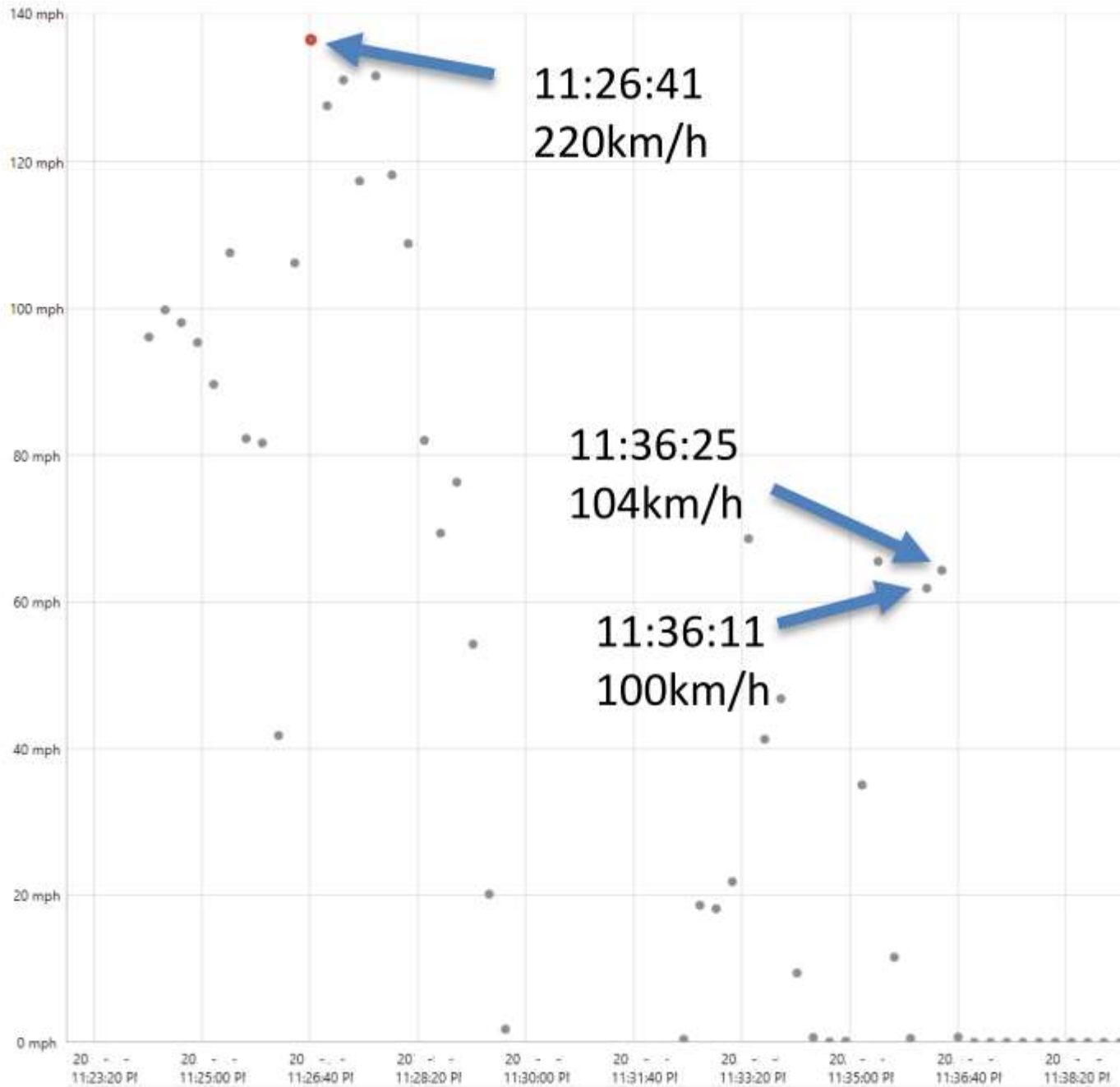


Figure 4: Velocity log

SYNC Gen 3 Infotainment Module



Figure 8: Final Track Log

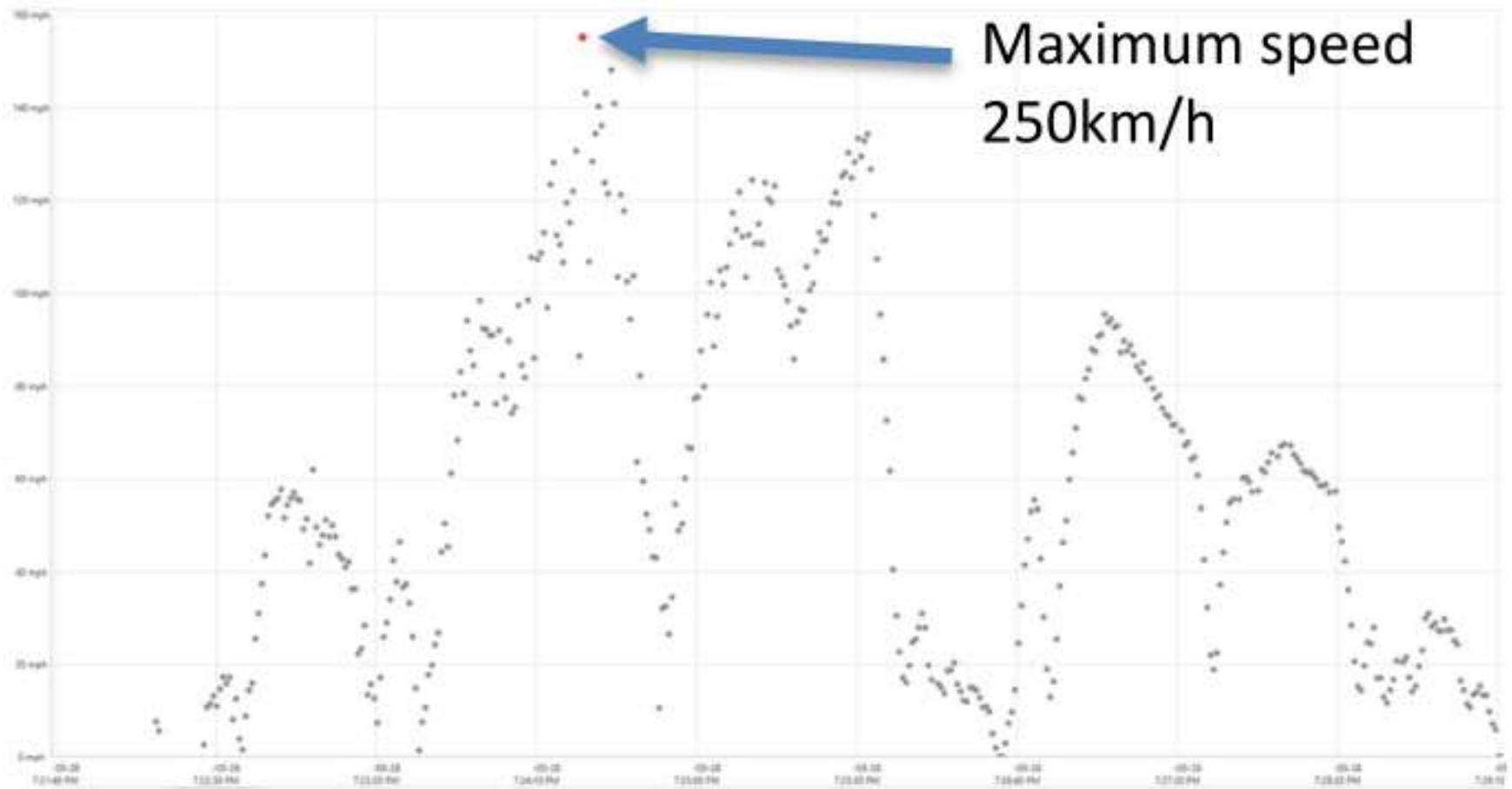


Figure 9: Final Velocity Log



99 km/h

Figure 10: Path Deviation

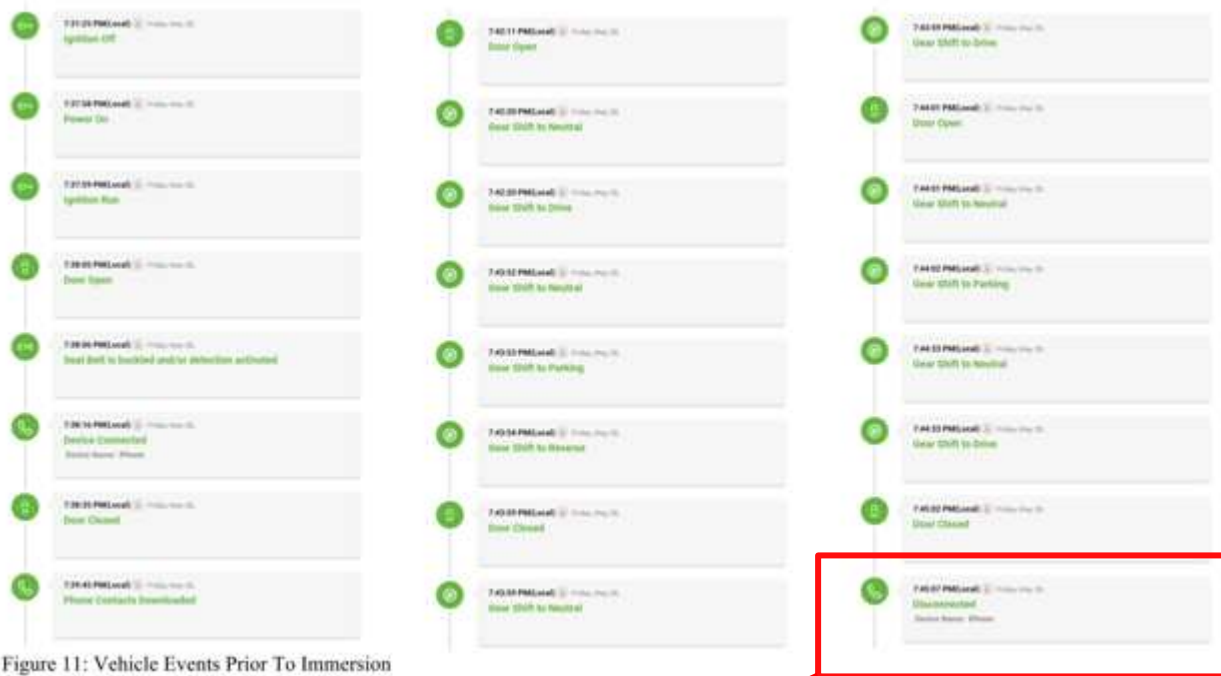
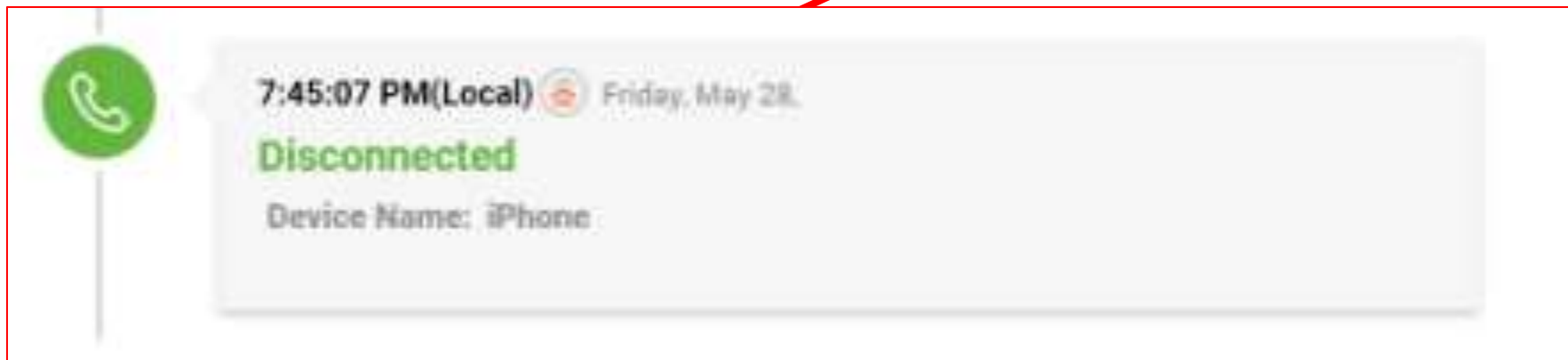


Figure 11: Vehicle Events Prior To Immersion



Garmin Edge 130



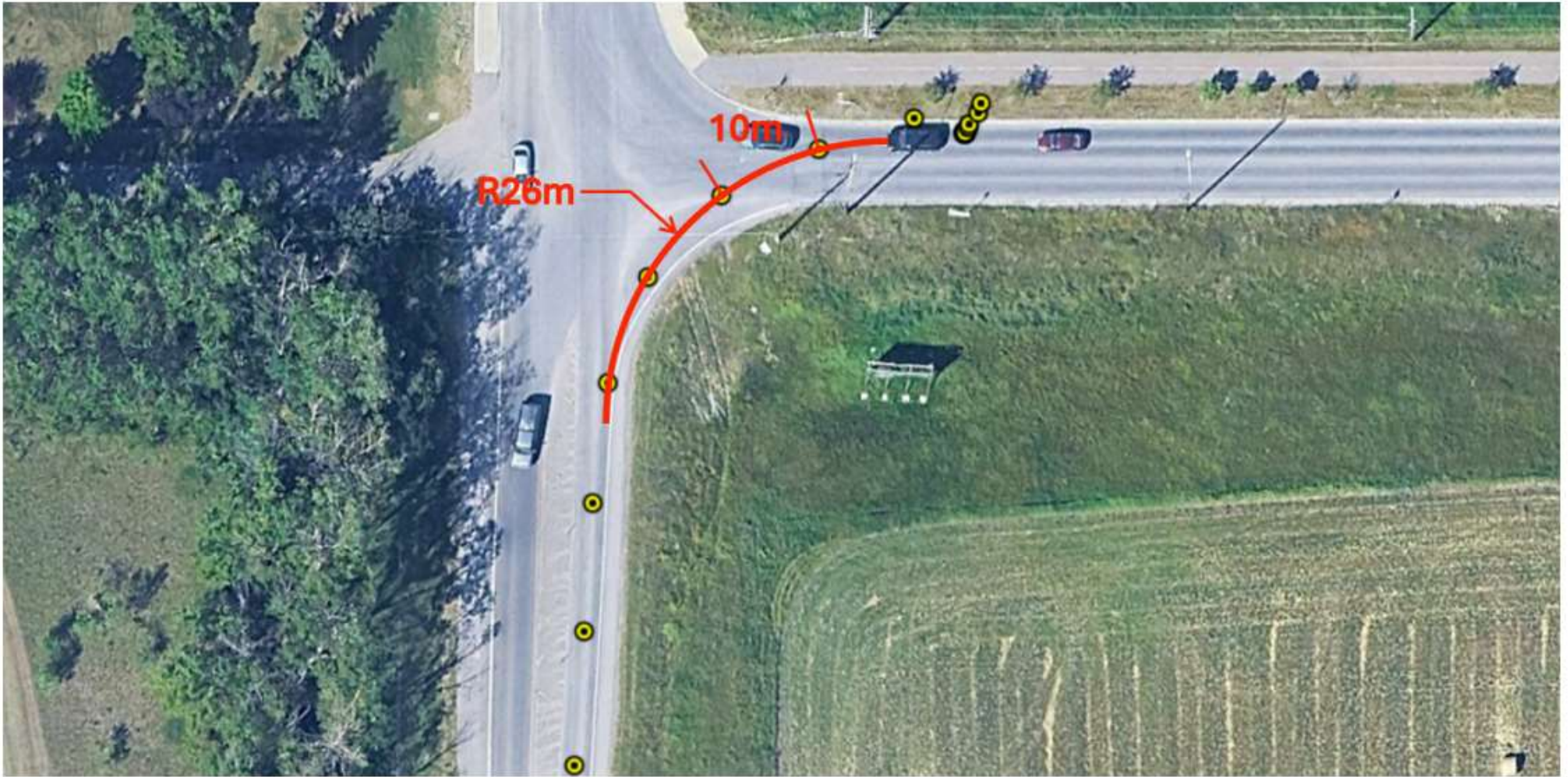


Figure 29: KML Export on Google Earth Aerial

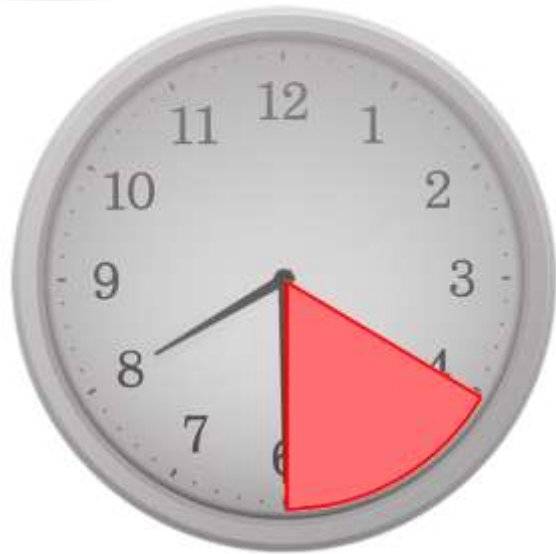
Strava App on Mobile Phone



Figure 35: Strava™ report figure



E-bike collision with pedestrians around a blind curve. Posted speed limit was 20 km/h



**Any other:
Questions
Comments
Shares?**

Share

Share Your Must-Have App!

Do you have an application you can't live without?
Whether it's for productivity, creativity, fun, or something totally unique – **we want to hear about it!**



Give a short 5-10 minute presentation



Show us how it works and why you love it



Inspire others with your favorite tech tool

Sign up today – your app might be
someone else's next favorite!

SuggestionBox@opcug.ca

SPECIAL
OFFER



- Join OPCUG before March 31st
- Pay the annual membership fee of \$20.00
- Receive an additional free-year's membership

Two years for the price of one!

<https://opcug.ca/join-or-renew/>

Current OPCUG members - Don't do anything - You will have auto-renewal



Computer Hardware



- If buying a PC, tablet, or phone today what are the minimum standards a customer should be looking for?
- I have heard occasional banter on OPCUG calls about computer chips - Intel is bad; AMD is Good. What is the overall consensus about computer chips for x86 architecture with regard to Intel and AMD?



OPCUG PRESENTATIONS AT THE OTTAWA PUBLIC LIBRARY

Armchair Travel: Newfoundland

Lynda Buske

Greenboro, Thursday Mar 5, 2026 at 10:30am

Fun with fonts - the art and science of typography

Chris Taylor

Beaverbrook, Thursday Mar 5, 2026 at 6:00pm

How to Buy a PC

Chris Taylor

Orléans, Friday Mar 6, 2026 at 2:00pm

<https://booking.biblioottawalibrary.ca/en/program?text=ottawa+pc>

Share

Bonus Presentation 3



Armchair Travel: Newfoundland

with Lynda Buske, OPCUG

- Description:
 - Photos and narration from multiple car trips around this wonderful province. Sights from north, south, east and west coasts.
 - Highlights include the Viking settlement in L'Anse aux Meadows, the fjord at Western Brook Pond, the Tablelands, Bonavista, Twillingate, Cape Spear, icebergs, puffins, and more.
 - Experience *The Rock* with photos by club member Lynda Buske.
- When:
 - **Tuesday, March 31, 7:30pm** & will last approximately one hour
- Where:
 - hosted on Zoom at <https://tinyurl.com/opcug-bonus3>
- Details:
 - <https://opcug.ca/mec-category/bonus/>

March Meeting



NAS in the Home Environment

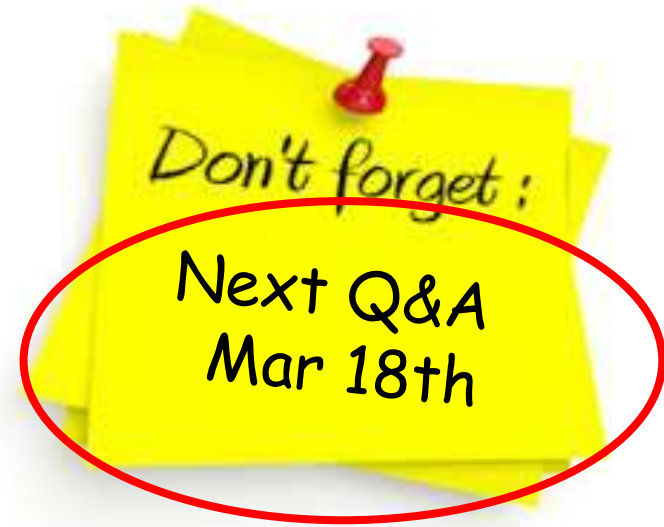
Bill Van Dijk
OPCUG

March 11, 2026
7:30 pm





No Q&A on
March 11
(Monthly Meeting)



**Send your questions,
answers, and topics
you wish to share to:**

SuggestionBox@opcug.ca