



ELECTRONIC EVIDENCE

Nick Broadbent

Public Defenders Conference 2022



Prosecution Disclosure: ss 141 and 142 *Criminal Procedure Act 1986*

Section 142(1) provides, relevantly:

"For the purposes of section 141(1)(a), the prosecution's notice is to contain the following:

...

(i) *a copy of any information, document or other thing provided by law enforcement officers to the prosecutor, or otherwise in the possession of the prosecutor, that would reasonably be regarded as relevant to the prosecution case or the defence case, and that has not otherwise been disclosed to the accused person,*

...

(k) *a copy of any information in the possession of the prosecutor that is relevant to the reliability or credibility of a prosecution witness,*

..."

ODPP Guideline 13.2

Prosecutors are under a continuing obligation to fully disclose to the accused all material known to them in a timely manner that on their sensible appraisal:

1. is relevant or possibly relevant to an issue in the case
2. raises or possibly raises a new issue that is not apparent from the evidence the prosecution proposes to rely on
3. holds out a real as opposed to fanciful prospect of providing a lead to evidence that goes to either of the previous two situations.

The prosecution's duty of disclosure continues after trial and the conclusion of any appeal.

Edwards v The Queen [2021] HCA 28

- Although the Office of the Director of Public Prosecutions had informed the appellant's lawyer of the existence of a Cellebrite Download prior to the trial, it did not serve a copy of the Download or otherwise provide any information from the Download.
- The appellant's lawyer only became cognisant of the Download after the ODPP served a statement of a witness on the Friday before the trial was scheduled to commence. When questioned about how the prosecution had located the witness the ODPP told the appellant's lawyer that her details had been obtained from the Download. The appellant did not seek any relief following the late disclosure of Ms Birchill's statement.

Edwards v The Queen [2021] HCA 28

Kiefel CJ, Keane and Gleeson JJ:

“The difficulty for the appellant is that, with the benefit of access to the Cellebrite Download, he has been unable to identify how its contents, either as a whole or in relation to particular data, "would reasonably be regarded as relevant to the prosecution case or the defence case", or are "relevant to the reliability" of the complainant, or any respect in which his entitlement to a fair trial according to law was adversely affected by not being provided with a copy of the Download.

The appellant's argument as to the forensic value of the Cellebrite Download for his case was put at the level of speculation. Whatever the precise scope of s 142(1)(i), it plainly does not extend to all information in the possession of the prosecutor or to information that does no more than provide a potential avenue for inquiry.”

Edwards v The Queen [2021] HCA 28

Kiefel CJ, Keane and Gleeson JJ:

“On the other hand, if the appellant gave instructions suggesting inquiries that could have been pursued by searching his telephone, there was no impediment to the appellant calling for a copy of the Download, readily searchable, because its existence had been clearly identified by the ODPP.”

Edwards v The Queen [2021] HCA 28

Edelman and Steward JJ:

the failure of the prosecution to provide Mr Edwards with a copy of the Cellebrite download was a breach of the duty in s 141(1)(a) by reason of a failure to comply with s 142(1)(i).

However, there was no miscarriage of justice in the case. The relevant material on the phone could not have affected the result.

Lessons from *Edwards*:

- The failure to disclose electronic evidence will not give rise to a miscarriage of justice (nor perhaps even a breach of s142) if the failure only gives rise to a speculative prospect that the evidence would have assisted the defence.
- Take instructions from your client about phone use.
- Ask! Find out if police seized any phones.
- Seek disclosure of **all extractions**: it is not uncommon for there to be more than one extraction of the same device.
- Check that any relevant warrants permit the extraction that has taken place: you might have a s 138 exclusionary argument.
- Consider data preservation issues.
- Brief an expert.

Cellebrite Data Extraction

The screenshot displays the Cellebrite software interface. On the left is a dark sidebar with a tree view of data categories. The main window shows an 'Extraction Summary' for a device named 'GCHO spy van'. The summary includes a list of extractions (1) and a detailed 'Device Info' section with various system and user-related attributes.

Extraction Summary (1)

All Content | Logical

Extraction Summary

Extractions: 1

Logical [Method1]

Extraction start date/time: 3/18/2018 12:09:03 PM
Extraction end date/time: 3/18/2018 12:11:24 PM
E:\My Reports\2018-03-18.13-24-36\Appl..

Device Info


GCHO spy van	
OS Version	11.2.6
Storage available (Bytes)	0.405 GB
Activation State	Activated
Bluetooth device address	[REDACTED]
Serial	[REDACTED]
Last backup date	3/18/2018 11:11:23 AM
Baseband version	6.30.04
SIM status	Ready
Model number	MP842
ICCID	[REDACTED]
Detected Phone Model	iPhone SE
Storage capacity (Bytes)	26.68 GB
Unique ID	[REDACTED]
IMEI	[REDACTED]
Owner Name	[REDACTED]
Time Zone	[REDACTED]
WiFi address	[REDACTED]
MSISDN	[REDACTED]
Detected Phone Model Identifier	iPhone8,4
Is encrypted	False
iCloud account present	True
Phone date/time	3/18/2018 11:09:04 AM(UTC+0)
Last user ICCID	[REDACTED]
ICCID	[REDACTED]
MSISDN	[REDACTED]
Tethering	
Last Activation Time	3/13/2018 5:20:54 PM(UTC+0)
Phone Settings	
Time Zone	[REDACTED]

- AppleDevice_AdvancedLogical
 - Extraction Summary (1)
 - Logical
 - File Systems
 - Analyzed Data
 - Autofill (19)
 - Bluetooth Devices (1204) (183)
 - Calendar (438) (170)
 - Call Log (486) (75)
 - Carved Strings (6) (6)
 - Chats (101) (11)
 - Contacts (2719) (3)
 - Cookies (3983) (16)
 - Device Locations (73) (6)
 - Locations (73) (6)
 - Form Data (2)
 - Installed Applications (399)
 - Log Entries (3601)
 - MMS Messages (2)
 - Notes (94) (7)
 - Recordings (32) (1)
 - Searched Items (625) (131)
 - SMS Messages (117)
 - User Accounts (17)
 - Web Bookmarks (102)
 - Web History (5538) (2200)
 - Wireless Networks (16)
 - Data Files
 - Audio (33)
 - Configurations (27722) (1)
 - Databases (191)
 - Documents (1)
 - Images (6761) (7 known files)
 - Text (105)

Extraction Summary (1) x
All Content
Logical

Extraction Summary

Extractions: 1



[Logical](#) ✎

Logical [Method1]

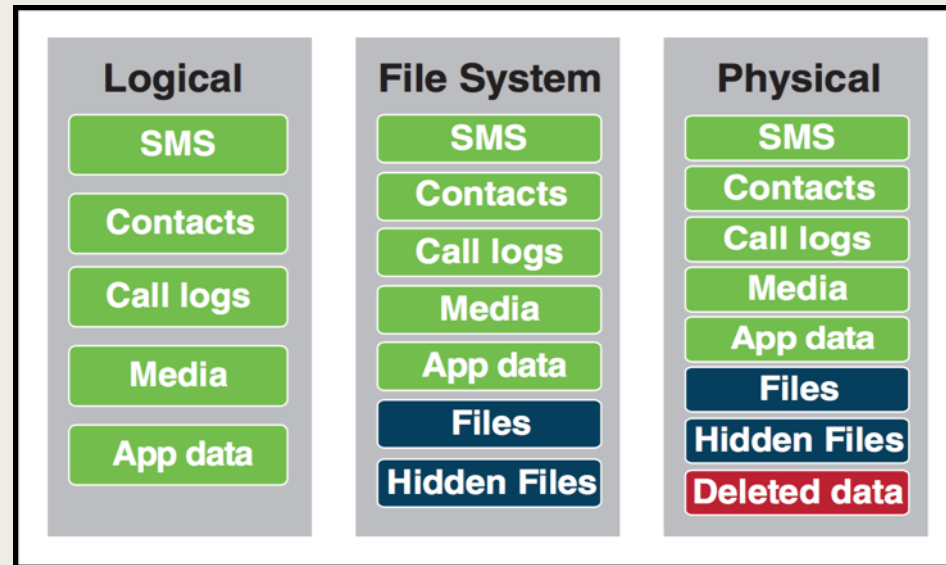
Extraction start date/time
 3/18/2018 12:09:03 PM
 Extraction end date/time
 3/18/2018 12:11:24 PM
 E:\My Reports\2018-03-18.13-24-36\Appl...

Device Info

GCHQ spy van	
OS Version	11.2.6
Storage available (Bytes)	0.405 GB
Activation State	Activated
Bluetooth device address	[REDACTED]
Serial	[REDACTED]
Last backup date	3/18/2018 11:11:23 AM
Baseband version	6.30.04
SIM status	Ready
Model number	MP842
ICCID	[REDACTED]
Detected Phone Model	iPhone SE
Storage capacity (Bytes)	26.68 GB
Unique ID	[REDACTED]
IMEI	[REDACTED]
Owner Name	[REDACTED]
Time Zone	[REDACTED]
WiFi address	[REDACTED]
MSISDN	[REDACTED]
Detected Phone Model Identifier	iPhone8,4
Is encrypted	False
iCloud account present	True
Phone date/time	3/18/2018 11:09:04 AM(UTC+0)
Last user ICCID	[REDACTED]
ICCID	[REDACTED]
MSISDN	[REDACTED]
Tethering	
Last Activation Time	3/13/2018 5:20:54 PM(UTC+0)
Phone Settings	
Time Zone	[REDACTED]

Cellebrite data extraction types

Source: *Privacy International*



Differences in extraction types

- *“What is the benefit of performing a full file system extraction instead of logical, file system or even an advanced logical extraction? There are three main benefits. Getting data from third party apps is the first one. WhatsApp, Facebook messenger, telegram. The data cannot be recovered unless a full file system extraction is performed. These apps and many more can hold critical information which can help close your case.”*
 - *Privacy International*

Some uses of device data

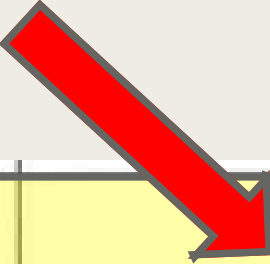
- Call logs
- Text exchanges
- Social media exchanges – Instagram, Snapchat, Facebook, Facebook Messenger, Whatsapp
- Internet search history
- Location data

The changeability of device data

- Deletion is not exactly “deletion”: more akin to “tagging for overwriting”.
- Destruction of data can take place immediately after deletion or much later – it appears to be quite random.

Text messages

327.	Instant Messages	13/06/2017 3:46:45 PM(UTC+10)	From: [REDACTED] Participants: [REDACTED] [REDACTED] [REDACTED]		Yes
328.	Call Log	13/06/2017 3:54:25 PM(UTC+10)	To: [REDACTED]	00:02:33	
329.	Call Log	13/06/2017 3:55:36 PM(UTC+10)	To: [REDACTED]	00:02:03	
330.	Instant Messages	13/06/2017 3:58:41 PM(UTC+10)	From: [REDACTED] Participants: [REDACTED]	Ok, but this is your farm. I have to leave	Yes



327.	Instant Messages	13/06/2017 3:46:45 PM(UTC+10)	From: [REDACTED] Participants: [REDACTED] [REDACTED] [REDACTED]		Yes
328.	Call Log	13/06/2017 3:54:25 PM(UTC+10)	To: [REDACTED]	00:02:33	
329.	Call Log	13/06/2017 3:55:36 PM(UTC+10)	To: [REDACTED]	00:02:03	
330.	Instant Messages	13/06/2017 3:58:41 PM(UTC+10)	From: [REDACTED] Participants: [REDACTED]	Ok, but this is your farm. I have to leave	Yes

What steps have the police taken to ensure data on a device has not changed?

- Consider:

- *Time(s) of download of material*
- *Turning the phone on can destroy data permanently*
- *What steps were taken to prevent any change to data*
- *“Thumb forensics” – an officer thumbing through a device at the scene*



Extraction Report

Apple iPhone Logical

Summary

























UFED Physical Analyzer version	6.3.5.27
Report creation time	22/12/2017 3:39:34 AM +11:00
Time zone settings (UTC)	(UTC+10:00) Sydney (Australia)
Examiner name	SEEB

Source Extraction

Logical	
Extraction start date/time	3/08/2017 5:34:51 PM(UTC+10)
Extraction end date/time	3/08/2017 5:42:16 PM(UTC+10)
Selected Manufacturer	Apple
Connection Type	Cable No. 220
Is encrypted	Encrypted by UFED Physical/Logical Analyzer during the extraction process for user credentials information
Backup password	1234
Extraction Type	Logical [Method1]
Extraction ID	321ac542-3a32-4deb-8def-14961ab2d69e

Device Information

Contents

Type	Included in report		Total	
 Bluetooth Devices	604	(13 Deleted)	604	(13 Deleted)
 Calendar	138	(7 Deleted)	138	(7 Deleted)
 Call Log	2771	(108 Deleted)	2771	(108 Deleted)
 Carved Strings	558	(558 Deleted)	558	(558 Deleted)
 Chats	961	(342 Deleted)	961	(342 Deleted)
● Facebook Messenger	40	(17 Deleted)	40	(17 Deleted)
● iMessage: [REDACTED]	1	(1 Deleted)	1	(1 Deleted)
● iMessage: [REDACTED]	326	(324 Deleted)	326	(324 Deleted)
● iPhoneRecentsLog	594		594	
 Contacts	1433	(442 Deleted)	1433	(442 Deleted)
 Cookies	3498	(13 Deleted)	3498	(13 Deleted)
 Device Notifications	141		141	
 Emails	342		342	
 Installed Applications	258		258	
 Locations	1977	(147 Deleted)	1977	(147 Deleted)
 Log Entries	1037		1037	
 MMS Messages	64	(56 Deleted)	64	(56 Deleted)
 Notes	19	(16 Deleted)	19	(16 Deleted)
 Passwords	188		188	
 Recordings	4		4	
 Searched Items	790	(724 Deleted)	790	(724 Deleted)
 SMS Messages	260	(81 Deleted)	260	(81 Deleted)
 User Accounts	23		23	
 Web Bookmarks	21		21	
 Web History	6206	(6032 Deleted)	6206	(6032 Deleted)
 Wireless Networks	7		7	
 Timeline	15558	(6210 Deleted)	15558	(6210 Deleted)
 Data Files	39901	(2 Deleted)	39901	(2 Deleted)
● Audio	15		15	

“Thumb Forensics”

- This is poor forensic practice. It may become impossible to tell whether:
 - *Data has been created*
 - *Data has been deleted*
 - *Data has been manipulated or changed*

Exclusion of evidence

- Consider part 3.11 *Evidence Act* exclusions for:
 - *Warrantless search*
 - *“Thumb Forensics”*
 - *Unreliability of Cellebrite download as a reflection of the state of data at a particular time.*

Location Data

- The location of mobile devices is primarily determined using three different technologies:
 - **satellite radio navigation (GNSS), using GPS and A-GPS**
 - **cellular telephone networks**
 - **Wi-Fi access points.**
 - Other methods are available such as those using phone sensors and Bluetooth.
- Each of these technologies provide different levels of varying accuracy i.e., distance from the actual location of the phone.

Assisted GPS

- Modern smartphones are equipped with Assisted GPS (A-GPS) capability.
- A-GPS uses smartphone networks in combination with a GPS antenna to increase the speed of determining or fixing position
- However, data collected using A-GPS is less accurate than traditional GPS receivers.
- Location based services (LBS) allows a user to access spatial positioning on a phone via mobile networks. Depending on the user's phone settings, these are activated when permitted apps are in use (e.g., while using map apps).

Location accuracy

Source: Casey, Jaquet-Chiffelle, Spichiger, Ryser, Souvignet, 'Structuring the Evaluation of Location-Related Mobile Device Evidence', *Forensic Science International: Digital Investigation*, Volume 32, Supplement, 2020, (<https://www.sciencedirect.com/science/article/pii/S2666281720300238>)

Technology	"Best case" accuracy without interference
GPS (civilian)	5 m–10 m
A-GPS	5 m–30 m
WiFi	30 m–75 m
Cellular	>100 m
Bluetooth Low-Energy	<1 m - 10 m

A short case study in location data

Apple Iphone search data

https://api-glb-syd.smoot.apple.com/16/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_ime=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=blood%20results%20ck&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=S	31/07/2017 11:11:16 AM	blood results ck
---	------------------------	------------------

https://api-glb-syd.smoot.apple.com/16/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_ime=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=blood%20results%20ck&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=S
I

https://api-glb-syd.smoot.apple.com/16/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_ime=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=blood%20results%20ck&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=S
I

https://api-glb-syd.smoot.apple.com/16/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_ime=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=blood%20results%20ck&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=S

https://api-glb-syd.smoot.apple.com/16/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_ime=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=blood%20results%20ck&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=S
I

Iphone search data

https://api-glb-syd.smoot.apple.com/58/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=can%20your%20internet%20history%20iphonbe%20tracked%20by%20internet%20provider&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	31/07/2017 7:57:54 PM	can your internet history iphonbe tracked by internet provider
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=elq&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:07:40 AM	elg
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=elqass&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:07:44 AM	elgass
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=hel&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:02 AM	hel
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heli&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heli
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heliu&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heliu
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=sui&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	sui
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suic&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suic
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suicide
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide%20&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:30:14 PM	suicide

Iphone search data

https://api-glb-syd.smoot.apple.com/58/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=can%20your%20internet%20history%20iphonbe%20tracked%20by%20internet%20provider&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	31/07/2017 7:57:54 PM	can your internet history iphonbe tracked by internet provider
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=elq&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:07:40 AM	elg
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=elqass&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:07:44 AM	elgass
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=hel&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:02 AM	hel
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heli&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heli
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heliu&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heliu
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=sui&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	sui
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suic&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suic
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suicide
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide%20&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:30:14 PM	suicide



Thunderbolts Way

Thunderbolts Way

Thunderbolts Way

Way



Pandora

Google

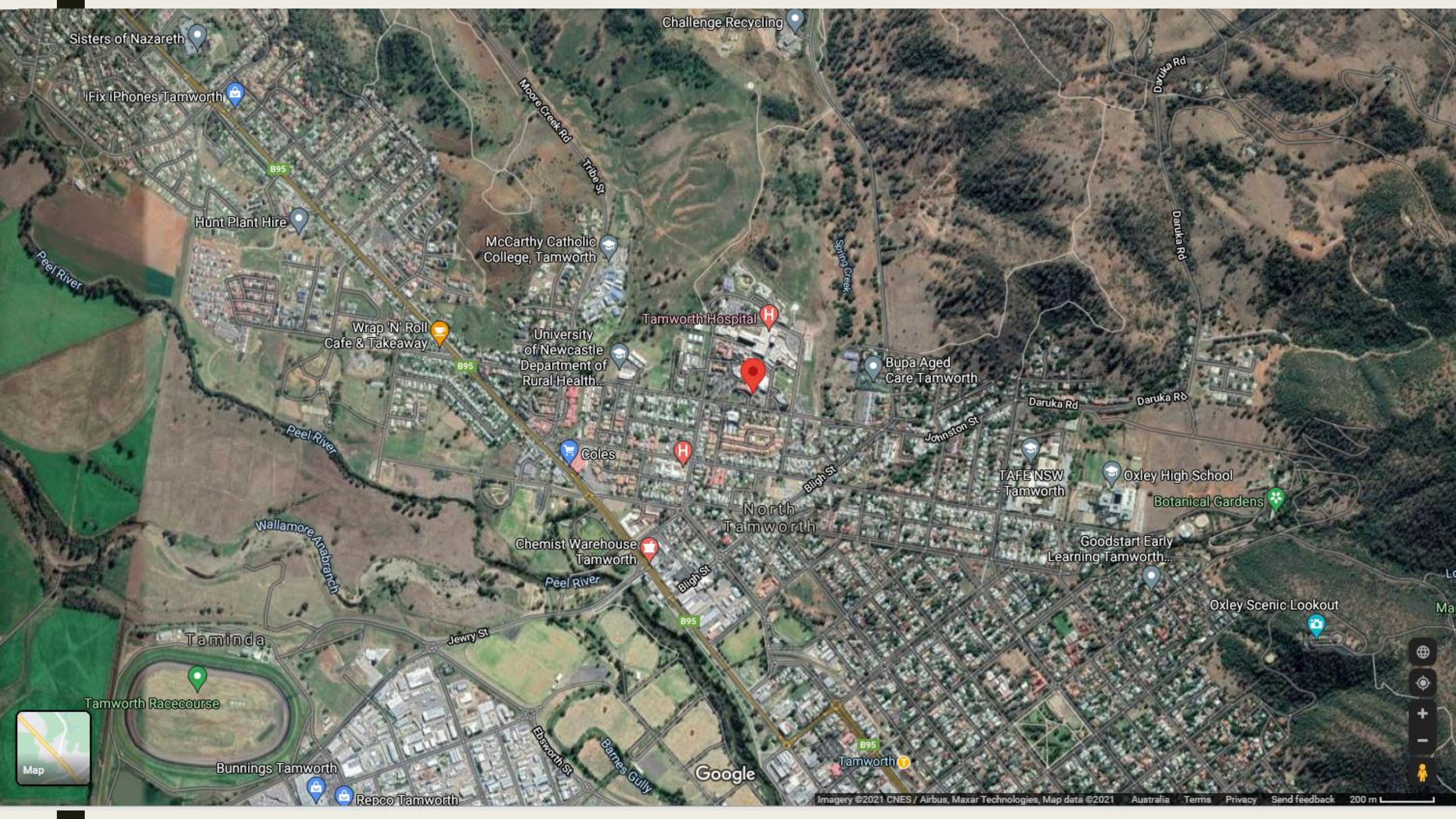
Iphone search data

https://api-glb-syd.smoot.apple.com/58/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=can%20your%20internet%20history%20iphonbe%20tracked%20by%20internet%20provider&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	31/07/2017 7:57:54 PM	can your internet history iphonbe tracked by internet provider
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=elq&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:07:40 AM	elg
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=elqass&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:07:44 AM	elgass
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=hel&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:08:02 AM	hel
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heli&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heli
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heliu&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heliu
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=sui&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	sui
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suic&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suic
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suicide
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide%20&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:30:14 PM	suicide

Iphone search data – the location “glitch”

https://api-glb-syd.smoot.apple.com/58/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=can%20your%20internet%20history%20iphonbe%20tracked%20by%20internet%20provider&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	31/07/2017 7:57:54 PM	can your internet history iphonbe tracked by internet provider
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=elq&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:07:40 AM	elg
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=elqass&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:07:44 AM	elgass
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=hel&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:02 AM	hel
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heli&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heli
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heliu&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heliu
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=sui&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	sui
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suic&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suic
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suicide
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide%20&storefront=143460,29&temp=C&time zone=Australia/Sydney&units=SI	1/08/2017 12:30:14 PM	suicide





Sisters of Nazareth

Challenge Recycling

iFix iPhones Tamworth

Hunt Plant Hire

McCarthy Catholic College, Tamworth

Wrap 'N' Roll Cafe & Takeaway

University of Newcastle Department of Rural Health...

Tamworth Hospital

Bupa Aged Care Tamworth

Coles

North Tamworth

TAFE NSW - Tamworth

Oxley High School

Botanical Gardens

Chemist Warehouse Tamworth

Goodstart Early Learning Tamworth...

Oxley Scenic Lookout

Taminda

Tamworth Racecourse

Bunnings Tamworth

Repco Tamworth

Google

Iphone search data

https://api-glb-syd.smoot.apple.com/58/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=can%20your%20internet%20history%20iphonbe%20tracked%20by%20internet%20provider&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	31/07/2017 7:57:54 PM	can your internet history iphonbe tracked by internet provider
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,221.867077&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.086000,151.584000&locale=en_AU&q=elq&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:07:40 AM	elg
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=elqass&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:07:44 AM	elgass
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=hel&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:08:02 AM	hel
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heli&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heli
https://api-glb-syd.smoot.apple.com/19/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.075000,150.925000&locale=en_AU&q=heliu&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 10:08:05 AM	heliu
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=sui&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	sui
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suic&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suic
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:24:27 PM	suicide
https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_jme=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=suicide%20&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI	1/08/2017 12:30:14 PM	suicide

Iphone search data

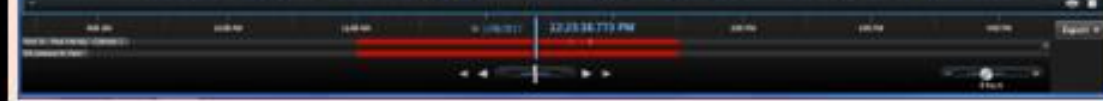
```
.latlng=-31.095000,150.875000
```



Google

Imagery ©2021 CNES / Airbus, Maxar Technologies, Map data ©2021 Australia Terms Privacy Send feedback 200 m

CCTV Corroboration?



12:23:38

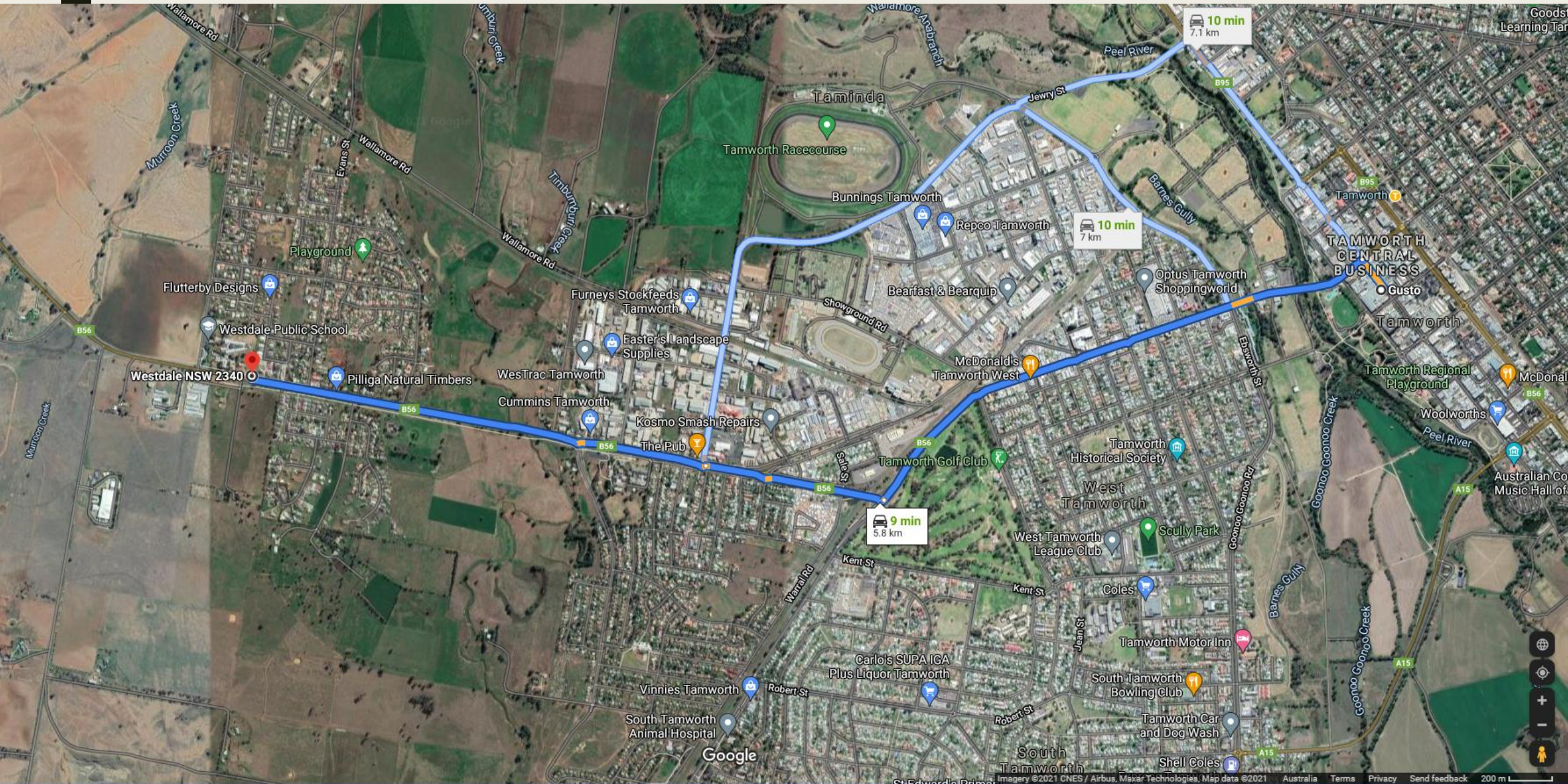
Accused sitting at Cafe, With closeup

Tamworth CCTV

https://api-glb-syd.smoot.apple.com/15/search?calendar=gregorian&card=1&cc=AU&esl=en-AU&geosrc=wifi,359.478789&kb_ime=en_AU@hw%3DAutomatic%3Bsw%3DQWERTY&key=beagle1626&latlng=-31.095000,150.875000&locale=en_AU&q=sui&storefront=143460,29&temp=C&time_zone=Australia/Sydney&units=SI

1/08/2017
12:24

sui



Risk and traps with location data

- The “location” is the location of the **device**, not the individual.
- There is always a margin of error – see previous table.
- Beware of “junk” data – Cellebrite aggregates “location data” without discriminating between incoming and outgoing location information
 - *eg: photographs sent to a phone user which contain location information buried within them, which gets saved to the device*
- Tracking is not constant – depends on use of location services. Sometimes it will take time for the device location to “update”, or there may be a glitch.

Online forensics education without compromise.

Explore the University of Florida's top-ranked graduate program.

Learn

[Home](#) > [News](#) > First-of-its-kind Digital Forensics Facility Opens in Australia

First-of-its-kind Digital Forensics Facility Opens in Australia

February 22, 2021

[Tweet](#)

[Share](#)

[Email](#)

The New South Wales (NSW) Police Force have unveiled a state-of-the-art digital forensics facility for Cybercrime Squad investigators. The purpose-built facility is the first of its kind in Australia and enables officers to securely conduct investigations into sophisticated technology-enabled crime.

The State Crime Command's Cybercrime Squad was established as a standalone unit in 2017 and provides specialist support to police area commands and police districts across the state. Since its inception, the unit has grown to nearly 70 specialist investigators, who now operate from a discreet facility in Sydney.



David Elliott, the Minister for Police and Emergency Services, said NSW Police are constantly adapting to the evolving behavior of criminals who attempt to conceal their identity by using technology.