DJI Mavic Air Mobile Investigations

Overview

- DJI Mavic Air
- Analyze main flight record *.txt
- Analyze video cache *.mp4
- Analyze detailed flight record *.dat
- Analyze cached pictures

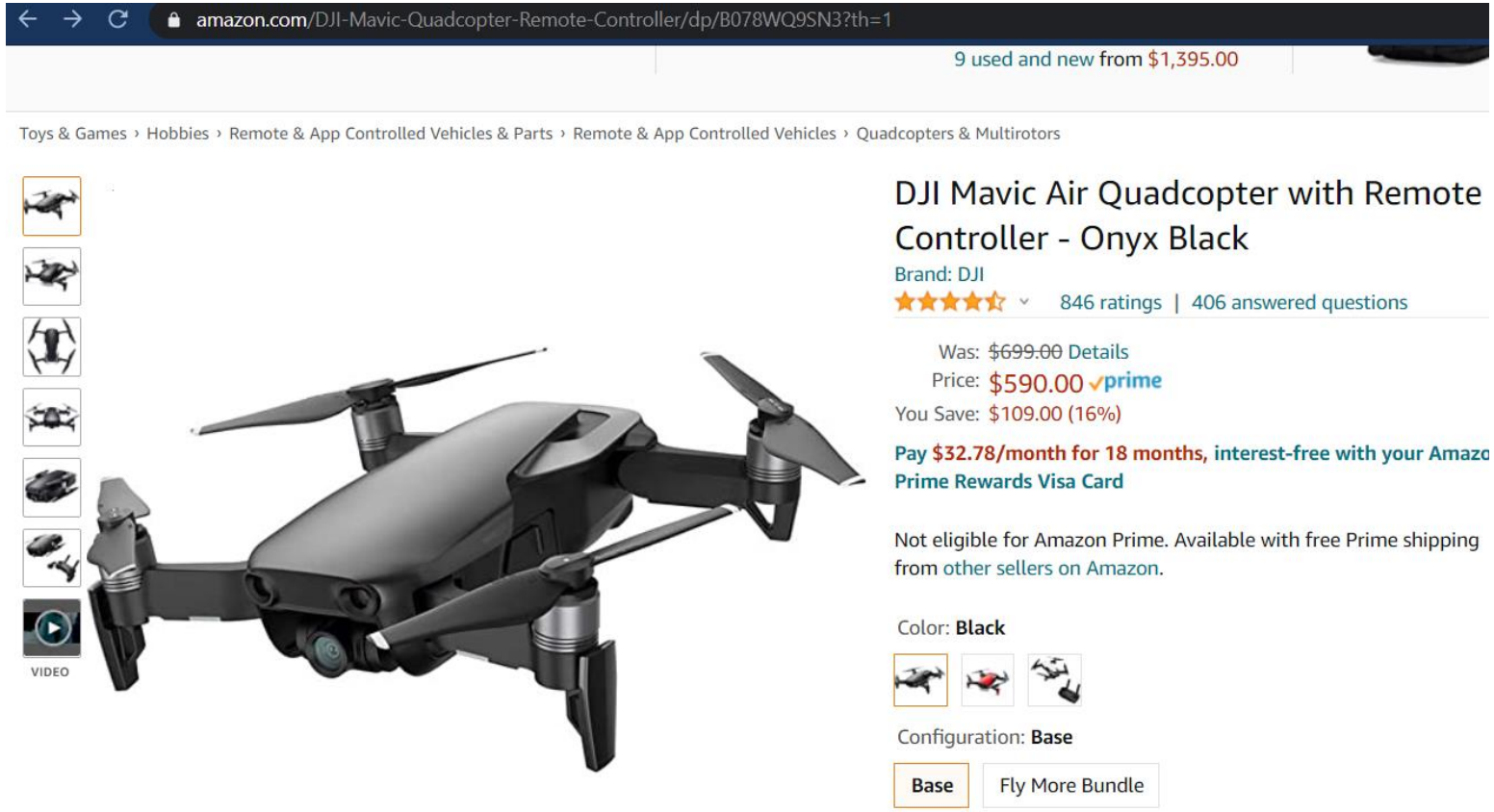
DJI Mavic Air

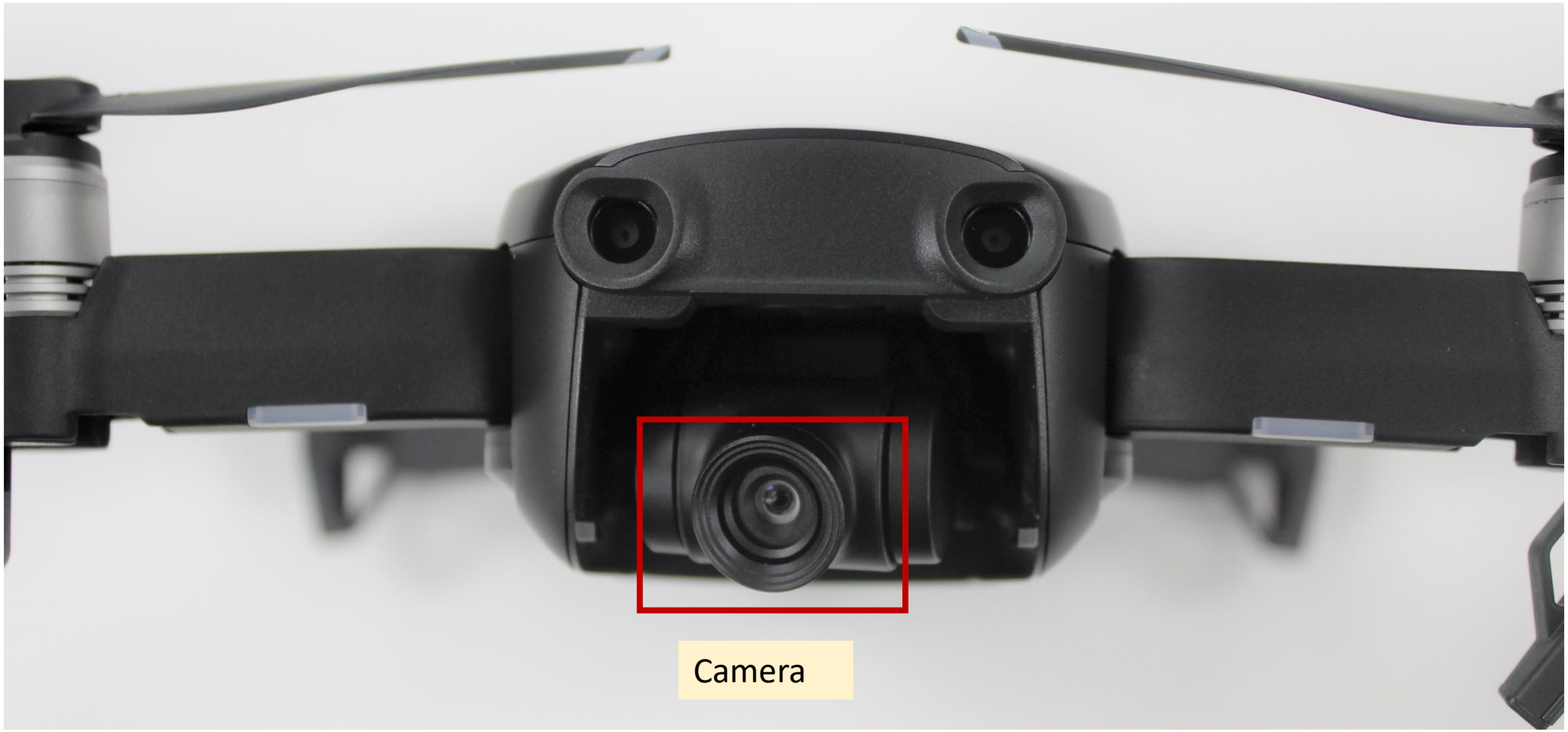
Content

- What is DJI Mavic Air?
- Mavic Air Specs
- Mavic Air Apps
- Forensic evidence types
- Data acquisition methods used for the lab

What is DJI Mavic Air?

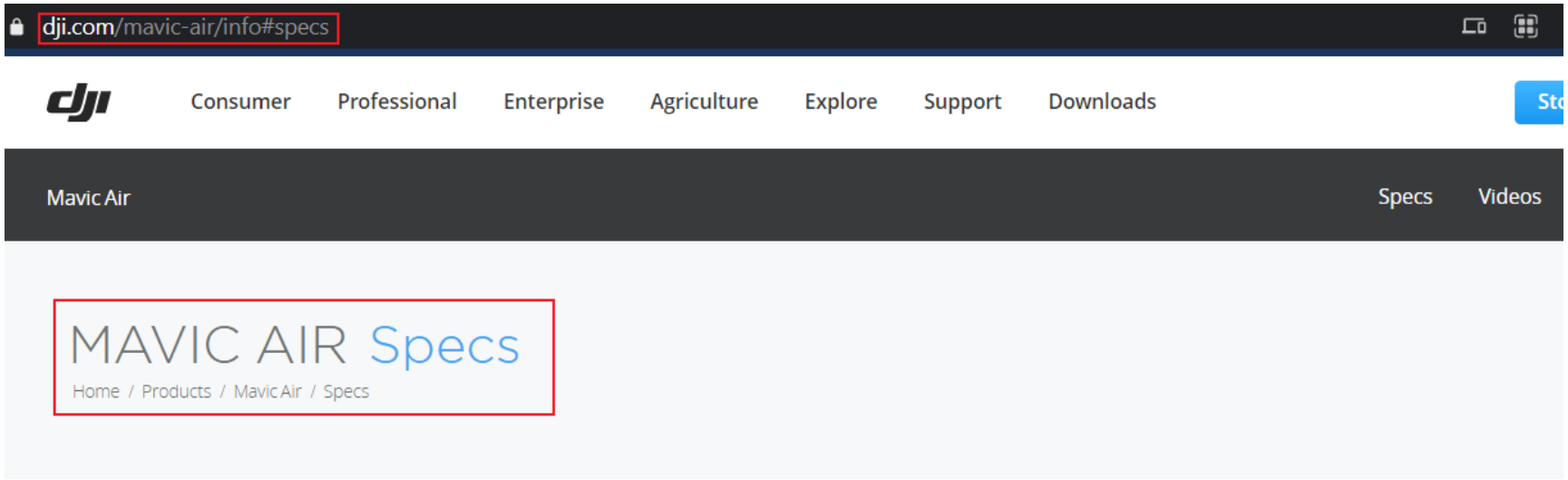
- The DJI Mavic Air was released in 2018.
  - It is the 3rd model in the DJI Mavic series.
- DJI is a leading drone technology company
  - Privately owned
  - in China




Camera

Mavic Air Controller

MAVIC AIR Specs



Aircraft

Takeoff Weight	430 g
Dimensions	Folded: 168×83×49 mm (L×W×H) Unfolded: 168×184×64 mm (L×W×H)
Diagonal Distance	213 mm
Max Ascent Speed	4 m/s (S - mode[1]) 2 m/s (P - mode) 2 m/s (Wi-Fi mode)
Max Descent Speed	3 m/s (S - mode[1]) 1.5 m/s (P - mode) 1 m/s (Wi-Fi mode)

Gimbal

Mechanical Range	Tilt: -100° to 22° Roll: -30° to 30° Pan: -12° to 12°
Controllable Range	Tilt: -90° to 0° (default setting) -90° to +17° (extended)
Stabilization	3-axis (tilt, roll, pan)
Max Control Speed (tilt)	120°/s
Angular Vibration Range	±0.005°

Camera

Sensor	1/2.3" CMOS Effective Pixels: 12 MP
Lens	FOV: 85° 35 mm Format Equivalent: 24 mm Aperture: f/2.8 Shooting Range: 0.5 m to ∞
ISO Range	Video: 100 - 3200 (auto) 100 - 3200 (manual) Photo: 100 - 1600 (auto) 100 - 3200 (manual)
Shutter Speed	Electronic Shutter: 8 - 1/8000s
Still Image Size	4:3: 4056×3040 16:9: 4056×2280
Still Photography Modes	Single shot HDR Burst shooting: 3/5/7 frames Auto Exposure Bracketing (AEB): 3/5 bracketed frames at 0.7EV Bias Interval: 2/3/5/7/10/15/20/30/60 s Pano: 3×1: 42°×78°, 2048×3712 (W×H) 3×3: 119°×78°, 4096×2688 (W×H) 180°: 251°×88°, 6144×2048 (W×H) Sphere (3×8+1): 8192×4096 (W×H)
Video Resolution	4K Ultra HD: 3840×2160 24/25/30p 2.7K: 2720×1530 24/25/30/48/50/60p FHD: 1920×1080 24/25/30/48/50/60/120p HD: 1280×720 24/25/30/48/50/60/120p
Max Video Bitrate	100Mbps
Supported File System	FAT32
Photo Format	JPEG/DNG (RAW)
Video Format	MP4/MOV (H.264/MPEG-4 AVC)

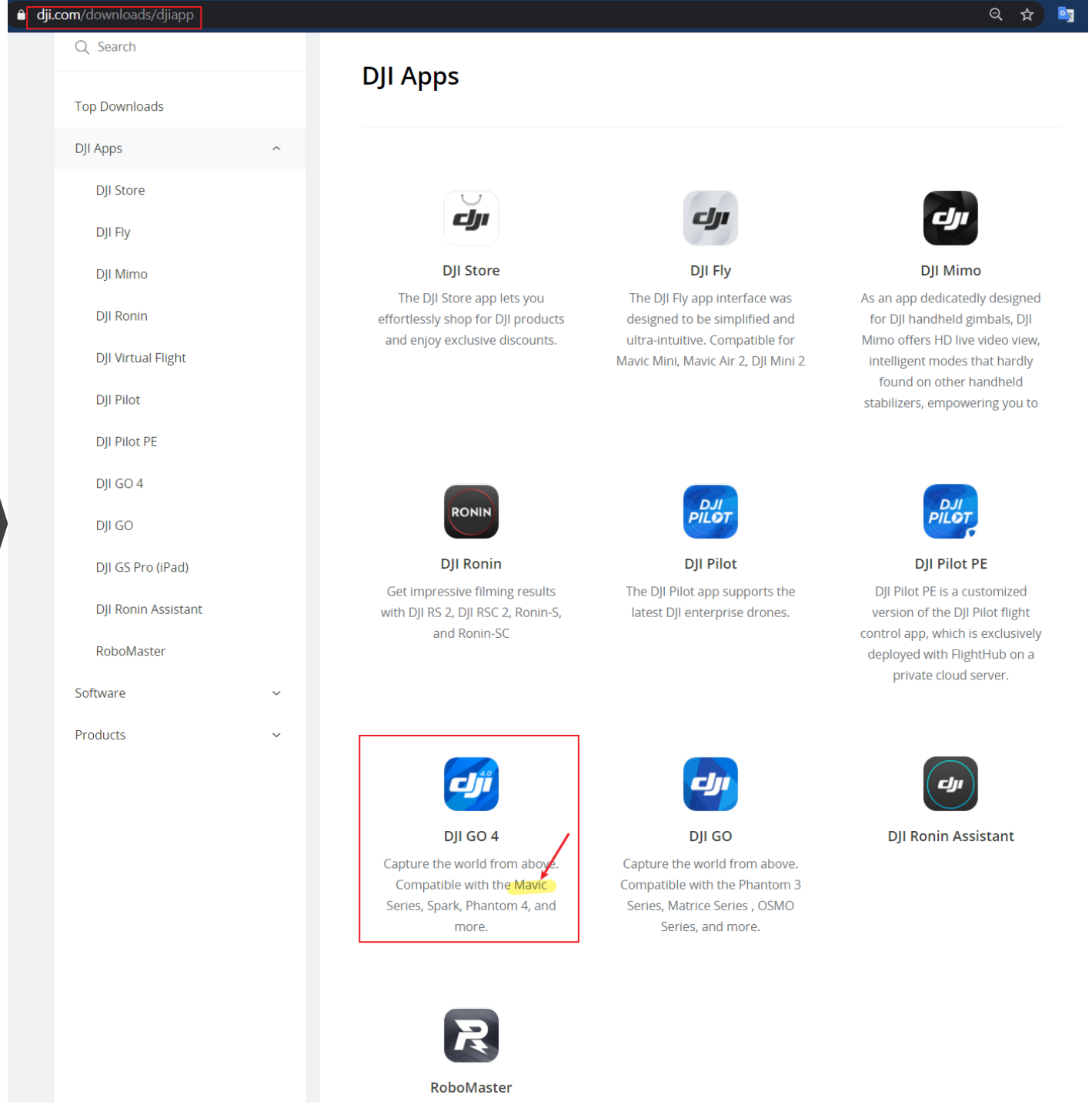
Supported SD Cards

Supported SD Cards	microSD Class 10 or UHS-1 rating required
Recommended microSD Cards	16G Sandisk Extreme Kingston 16GB SDHC-I SDCAC/16GB 32G Sandisk Extreme V30 Sandisk Extreme V30 A1 Sandisk Extreme V30 Pro A1 64G Sandisk Extreme V30 A1 Sandisk Extreme Pro V30 A1 128G Sandisk Extreme V30 A1 Sandisk Extreme Plus V30 A1

APP

Video Transmission System	Enhanced Wi-Fi
Name	DJI GO 4
Live View Quality	Remote Controller: 720p@30fps Smart Device: 720p@30fps DJI Goggles: 720p@30fps
Latency (depending on environmental conditions and mobile device)	170 - 240 ms

DJI Apps


dji.com/downloads/djiapp
Search
Top Downloads
DJI Apps
DJI Store
DJI Fly
DJI Mimo
DJI Ronin
DJI Virtual Flight
DJI Pilot
DJI Pilot PE
DJI GO 4
DJI GO
DJI GS Pro (iPad)
DJI Ronin Assistant
RoboMaster
Software
Products
DJI Apps
DJI Store
The DJI Store app lets you effortlessly shop for DJI products and enjoy exclusive discounts.
DJI Fly
The DJI Fly app interface was designed to be simplified and ultra-intuitive. Compatible for Mavic Mini, Mavic Air 2, DJI Mini 2
DJI Mimo
As an app dedicatedly designed for DJI handheld gimbals, DJI Mimo offers HD live video view, intelligent modes that hardly found on other handheld stabilizers, empowering you to
DJI Ronin
Get impressive filming results with DJI RS 2, DJI RSC 2, Ronin-S, and Ronin-SC
DJI Pilot
The DJI Pilot app supports the latest DJI enterprise drones.
DJI Pilot PE
DJI Pilot PE is a customized version of the DJI Pilot flight control app, which is exclusively deployed with FlightHub on a private cloud server.
DJI GO 4
Capture the world from above. Compatible with the Mavic Series, Spark, Phantom 4, and more.
DJI GO
Capture the world from above. Compatible with the Phantom 3 Series, Matrice Series , OSMO Series, and more.
DJI Ronin Assistant
RoboMaster

DJI GO 4--For drones since P4


In Flight (GPS)
Position
HD
70%
18:25
100
1000
Auto
1080P/30 49:22
AFC/MF
AE
4.0
FIX
0:48
200m
D 301 m
H 39 m
H.S 29.1 km/h
V.S 0.0 m/s
307 m

DJI GO 4--For drones since P4

- Compatible with the Mavic Series, Spark, Phantom 4, and more.
- Features:
  - Near Real-time HD Image Transmission
  - Camera Settings Adjustment
  - Updated playback interface
  - Updated Editor with improved UI
  - More templates and music tracks in Editor
  - Convenient video downloading, editing and sharing
  - Integrated live streaming
  - Near real-time flight data recording

Forensic evidence types

Main Evidence Types	Other Evidence Types
Device (mobile/Drone) name Flight Timestamps/duration Flight speed Flight mode (e.g., Motor Started, AutoTakeoff, Autolanding, P-GPS, Manual) On Air Timestamps/duration Longitude, Latitude, Altitude Audio, Image, Video Distance To Home Flight Status/Mode Notification Battery name/information and Avoidance Weather (from timestamps)	Air pressure Altitude Acc X, Y, Z (Accelerometer) Gyro X, Y, Z (Gyroscope) Velocity North, East, Down, Valid Compass X, Y, Z Satellite Numbers Pitch, Roll, Yaw RC Input Pitch, Roll, Yaw RC Status RC Input Throttle Vision Height

P-GPS: The aircraft is using GPS for positioning.

Data Acquisitions

- The internal storage of the Mavic Air can be acquired by attaching the drone while powered on to your forensic workstation and imaging it as a standard USB drive.

	Description	Size	Note
1.	External microSD card	32GB	Aircraft Main Circuit Board
2.	eMMC component #1	16GB	Aircraft Main Circuit Board
3.	eMMC component #2	128Mb	Controller Main Circuit Board
4.	Mobile application	182MB/14.2GB	iOS and Android

Table : Flight Record Files

Device	Location	Desc	Example
Phone	Dji/dji.go.v4/FlightRecord	Main flight record (Motor on->Landed only)	DJIFlightRecord_2018-06-19_[14-50-34].txt
	Dji/dji.go.v4/DJI_Record	Video Cache (Takeoff->Landed only)	2018_06_19_14_50_39.mp4
	Dji/dji.go.v4/FlightRecord/ MCDatFlightRecords	Detailed flight record (PowerOn->PowerOff)	(20)18-06-19-02-47-38_FLY057.DAT
Mavic	Internal storage (DJI Assistant 2 to export)	Drone flight	DJI_ASSISTANT_EXPORT_FILE_2018_06_19_14_50_39.DAT

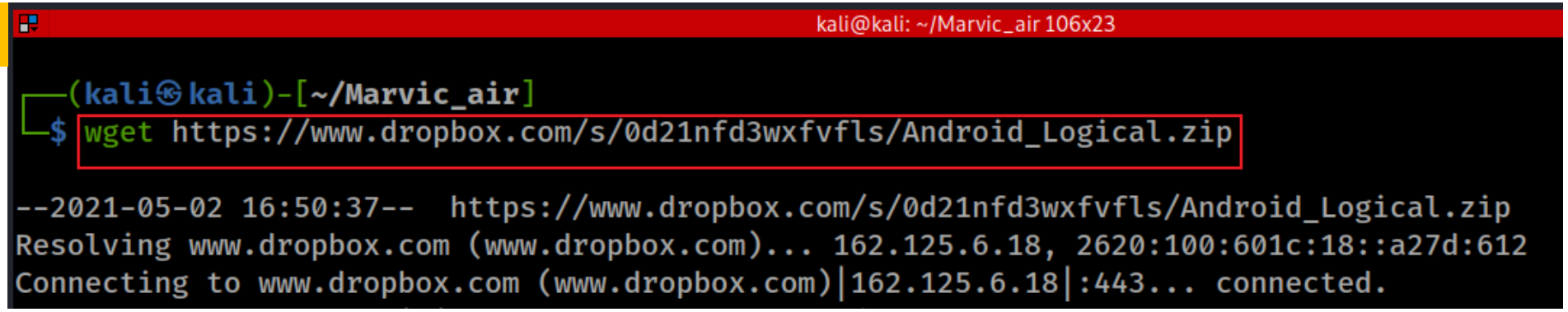
Analyze main flight record *.txt

Motor on -> Landed

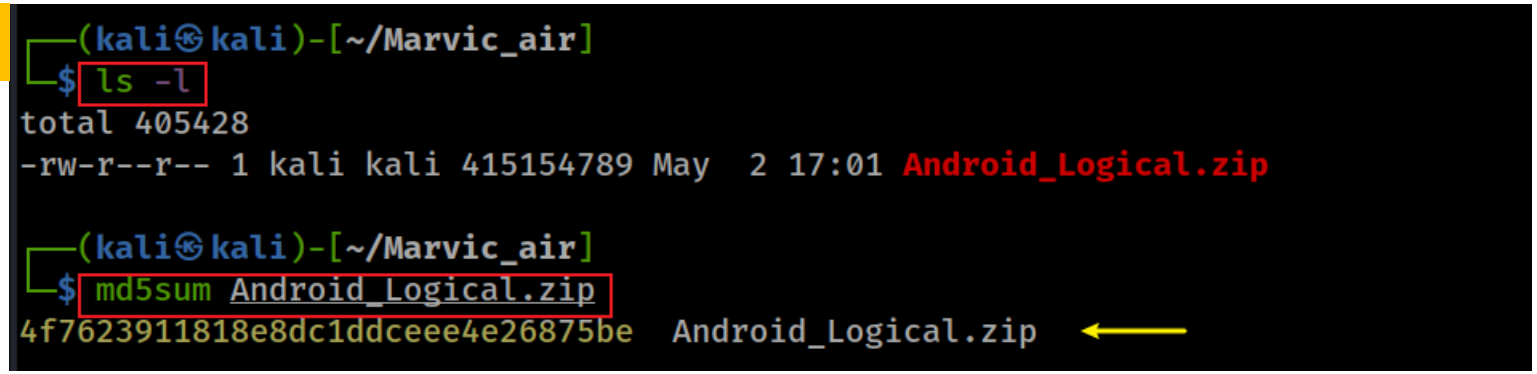
Create a working folder

Download Android logical

Download zip

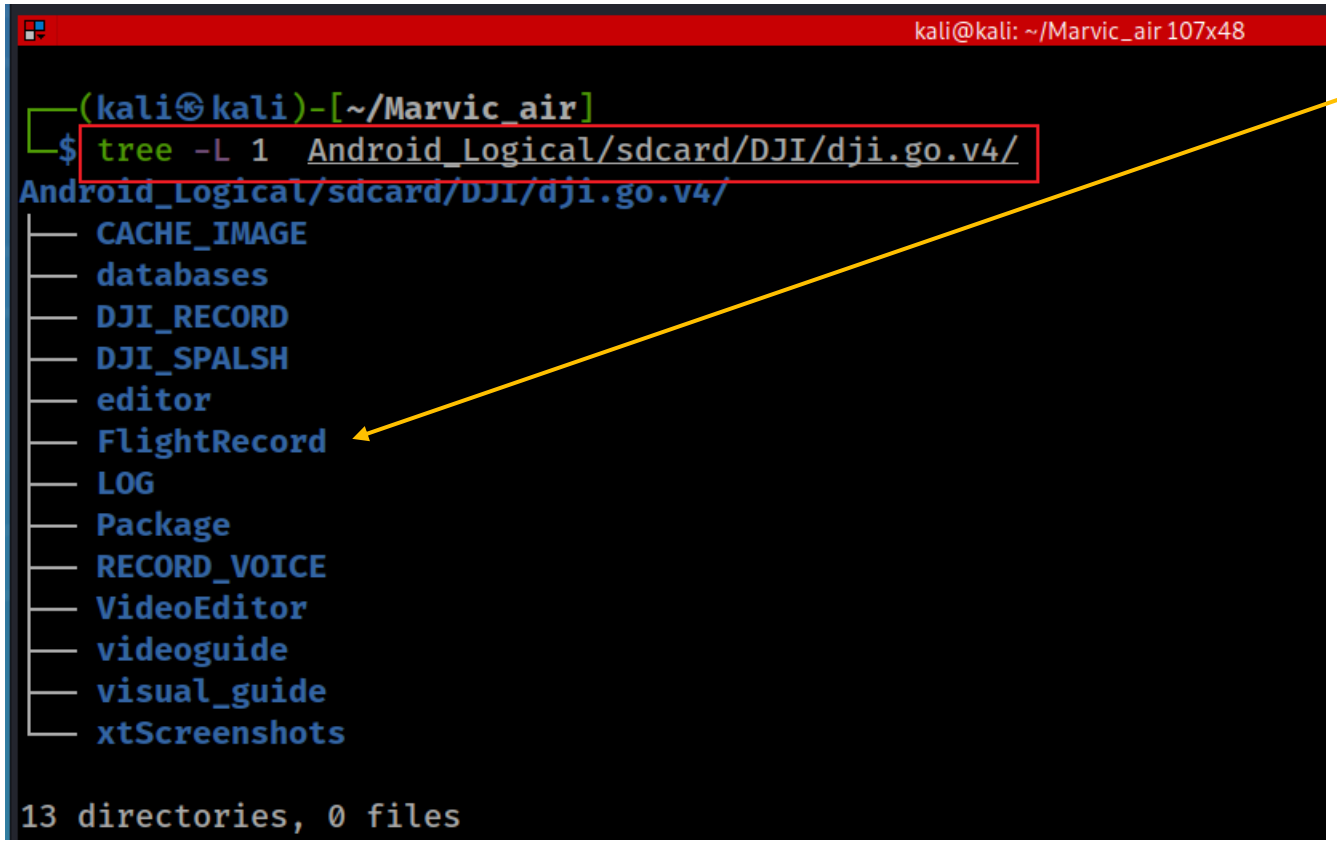


Verify md5



unzip

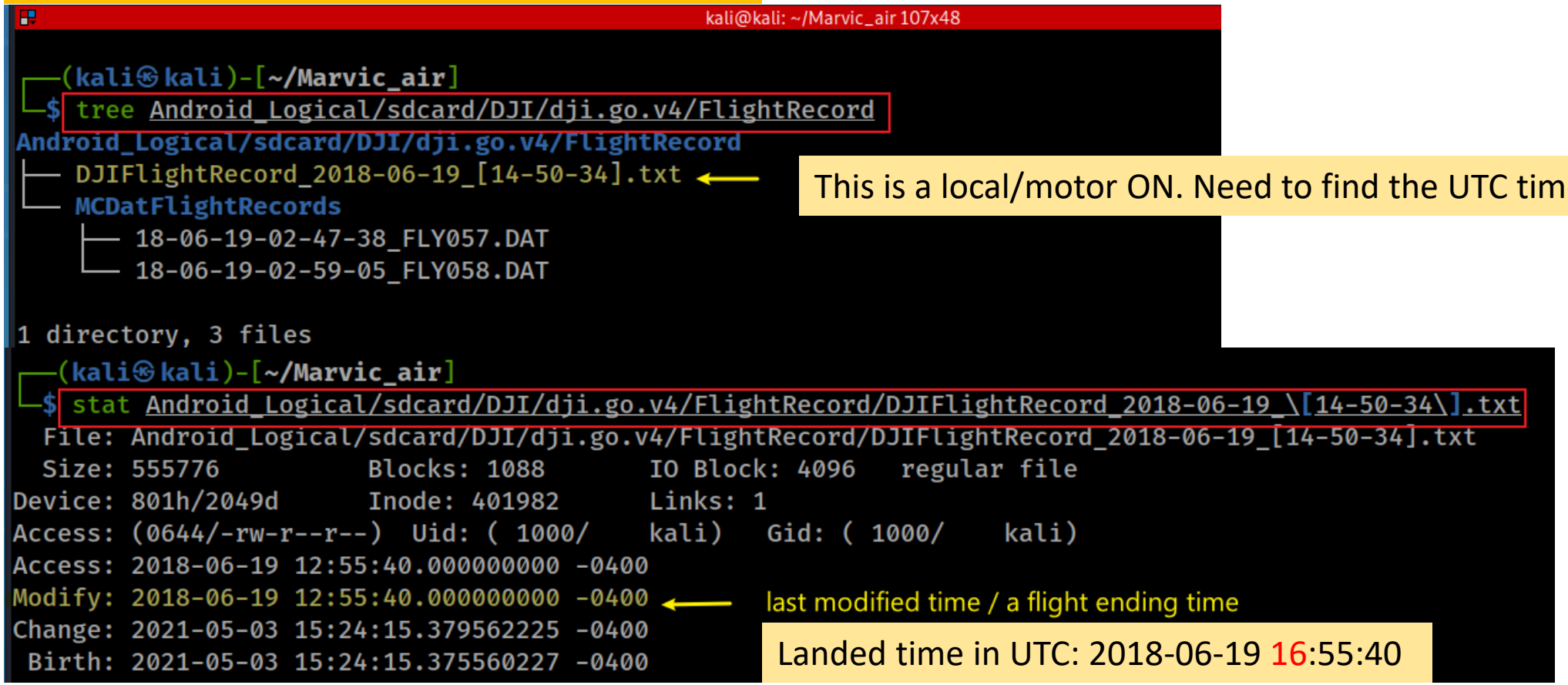
File Structure of DJI Go 4



- Recorded flights
- Definition of a flight
  - Motors ON-> Landed
- Evidence collected
  - Almost all types
  - Not include video

How to view a fight router information?
(option 1: manual)

Find the flight starting and ending time



This is a local/motor ON. Need to find the UTC time.

last modified time / a flight ending time

Landed time in UTC: 2018-06-19 16:55:40

Find the flight device name

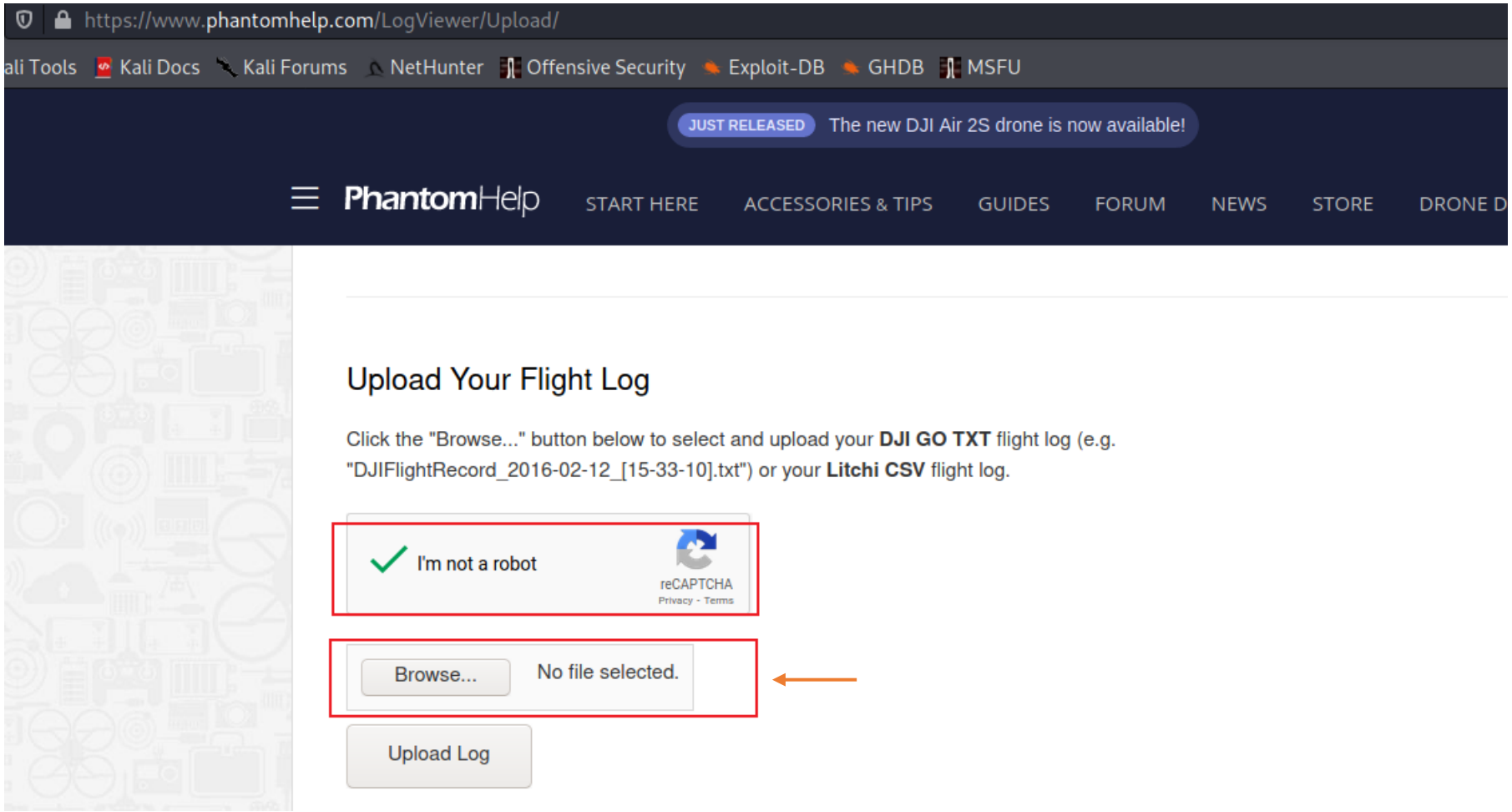
```
┌──(kali㉿kali)-[~/Marvic_air]
└─$ file  Android_Logical/sdcard/DJI/dji.go.v4/FlightRecord/DJIFlightRecord_2018-06-19_\[14-50-34\].txt
Android_Logical/sdcard/DJI/dji.go.v4/FlightRecord/DJIFlightRecord_2018-06-19_[14-50-34].txt: data

┌──(kali㉿kali)-[~/Marvic_air]
└─$ xxd  -s -200 Android_Logical/sdcard/DJI/dji.go.v4/FlightRecord/DJIFlightRecord_2018-06-19_\[14-50-34\].txt
00087a38: 3239 4596 bb46 2680 10f6 e274 c7ff ff64  29E..F&....t...d
00087a48: 726f 6e65 666f 2e2e 2e2d 4d61 7669 6320  ronefo...-Mavic
00087a58: 4169 7200 0000 0000 0000 0000 0000 0030  Air............0
00087a68: 4b31 4446 3331 3342 4434 5052 3100 0000  K1DF313BD4PR1...
00087a78: 0000 0000 0000 0000 0000 0000 0000 0000  ................
00087a88: 0000 0000 0000 0000 0000 0000 0000 0030  ...............0
00087a98: 4b34 4145 4251 4133 3430 3044 5400 0002  K4AEBQA3400DT...
00087aa8: 0402 1000 0000 0000 0000 0000 0100 0000  ................
00087ab8: 0000 0000 0000 000f 3ed6 0d40 42ac 1967  ........>..@B..g
00087ac8: 3db7 0c41 44e6 124d 38f1 0e44 41a1 1a4e  =..AD..M8..DA..N
00087ad8: 3eb4 0540 42a6 194c 35b7 0d42 43a6 154c  >..@B..L5..BC..L
00087ae8: 38b5 0d41 4ea5 184f 38b6 0043 43a5 184c  8..AN..O8..CC..L
00087af8: 22b7 0c40 42a7 fcff                      "..@B...
```

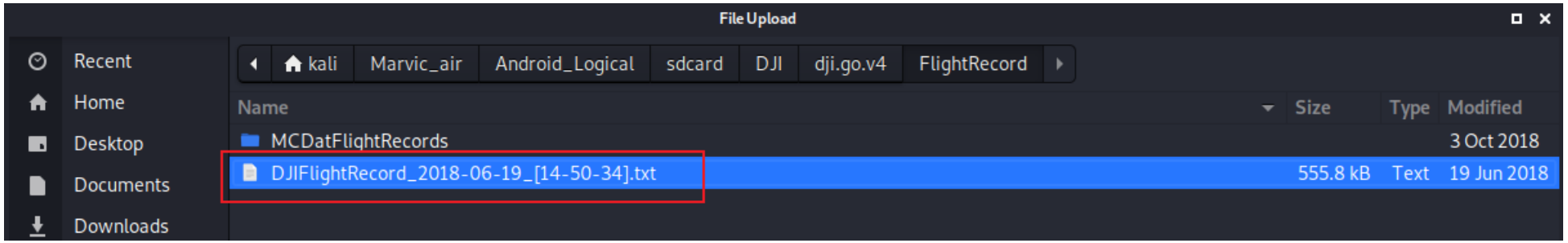
device name

this .txt format has special format, we can't interpreter the data without a parser/tool.

How to view a fight router information?

(option 2: www.phantomhelp.com)





Upload Your Flight Log

Click the "Browse..." button below to select and upload your **DJI GO TXT** flight log (e.g. "DJIFlightRecord_2016-02-12_[15-33-10].txt") or your **Litchi CSV** flight log.

I'm not a robot

reCAPTCHA
Privacy - Terms

Browse... DJIFlightRecord_2018-06-19_[14-50-34].txt

Upload Log

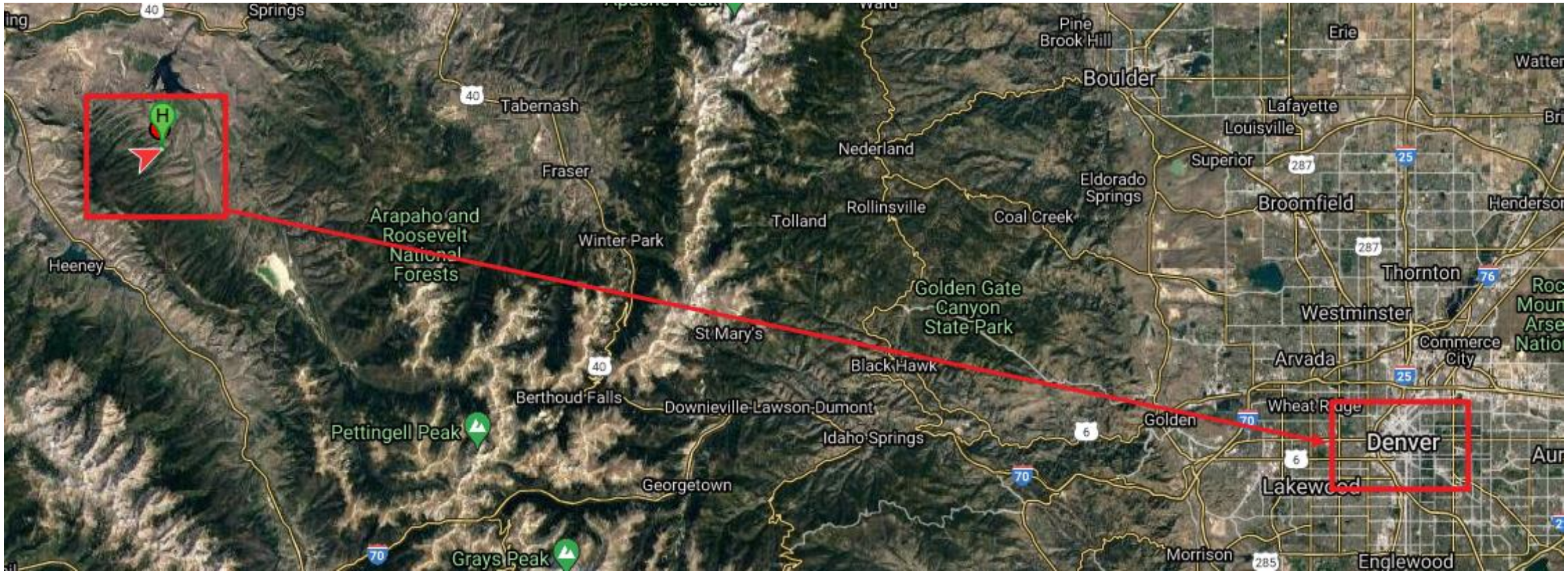
Inertial measurement unit (IMU)
visual Positioning System (VPS)

Download KML | Download CSV | Download Verbose CSV | Download Flight Log

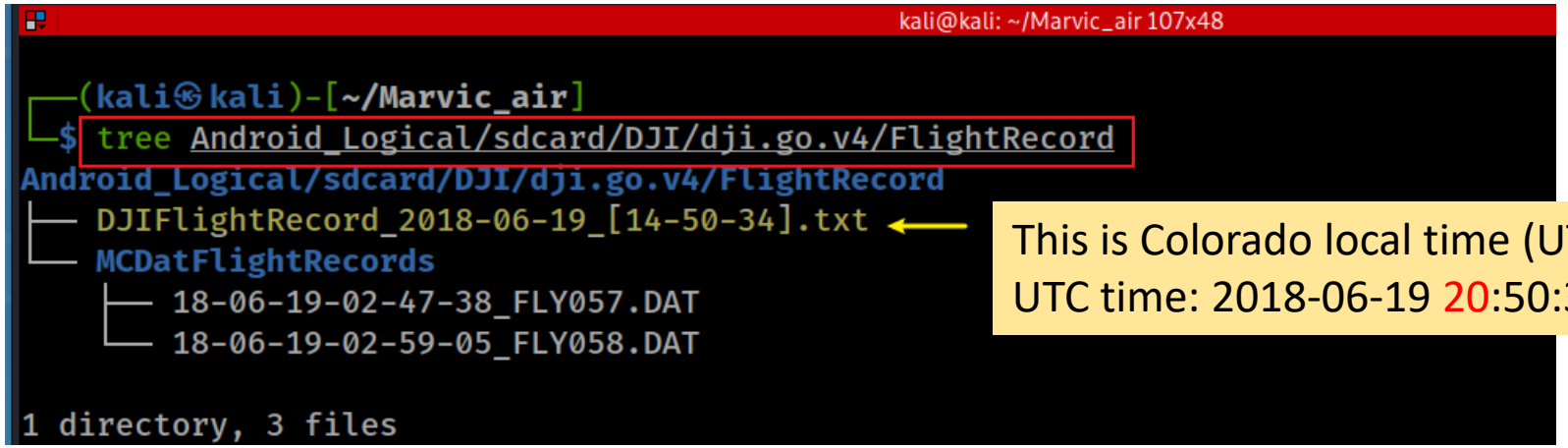
Time	Flight Mode	GPS	IMU Altitude	VPS Altitude	Speed	Home Distance	Battery	Battery Voltage	Cell 1	Cell 2	Cell 3	Cell Deviation	Message
0m 0.2s	Starting Motors	15 satellites	0 ft	0.3 ft	0 mph	3.1 ft	95%	12.697 V	4.229 V	4.233 V	4.235 V	0.006 V	
0m 1.5s	Auto Takeoff	15 satellites	0 ft	0.3 ft	0 mph	3.2 ft	95%	12.692 V	4.225 V	4.232 V	4.235 V	0.01 V	
0m 2.1s	Auto Takeoff	16 satellites	0 ft	0.3 ft	0 mph	3.2 ft	95%	12.692 V	4.225 V	4.232 V	4.235 V	0.01 V	
0m 2.2s	Auto Takeoff	16 satellites	0 ft	0.3 ft	0.2 mph	0 ft	95%	12.692 V	4.225 V	4.232 V	4.235 V	0.01 V	Home Point Updated
5m 5s	Auto Landing	19 satellites	-6.6 ft	0.3 ft	0 mph	2.2 ft	68%	11.712 V	3.909 V	3.905 V	3.898 V	0.011 V	
5m 5.4s	P-GPS	19 satellites	0 ft	0.3 ft	0 mph	2.2 ft	68%	11.712 V	3.909 V	3.905 V	3.898 V	0.011 V	

5 min 6 sec

Find the location of the flight

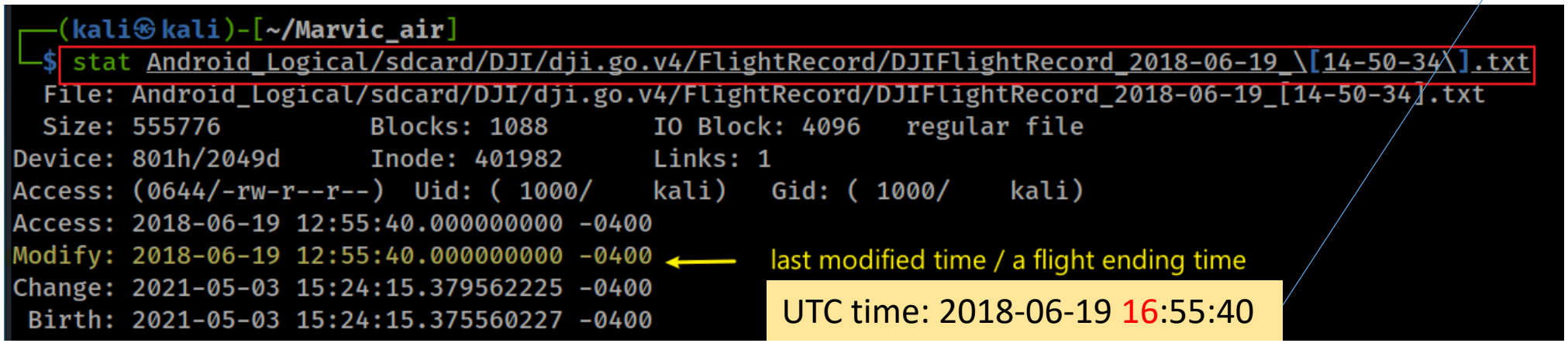


How to verify the flight starting and ending time?



This is Colorado local time (UTC -6 hours)
UTC time: 2018-06-19 20:50:34

Did the flight last 4 hours 5 minutes and 6 second?



last modified time / a flight ending time

UTC time: 2018-06-19 16:55:40

All News Shopping Videos Images More Settings Tools

About 32,000 results (0.61 seconds)

https://forum.dji.com › thread-183553-1-1

Flight Logs Showing wrong date | DJI FORUM

Mar 11, 2019 — - Has anyone else noticed this with the Smart Controller and the **Mavic** 2 Pro? All the settings are correct as far as Date & Time go in the controller ...

40 posts · Hi All, Did an 11-minute flight today (3/11/19) and when I got home and checked the ...

Missing: ~~txt~~ | Must include: txt

https://forum.dji.com › thread-174491-1-1

Timestamp on video is incorrect,while pictures are fine | DJI ...

Dec 11, 2018 · 17 posts · 12 authors

Hi,On **Mavic** 2 Pro,latest firmware,the media creation **timestamp** on the video files ... The metadata actually shows the correct time within the MP4/MOV and if you **record** a caption/SRT, it also shows the correct time. ... so I suspect this is an **issue** with the Android version of the **DJI Fly** app. ... Bold **Text** Color.

Missing: ~~txt~~ | Must include: txt

forum.dji.com/thread-53966-1-1.html

DJI FORUM Tutorials & Tips Works Products Events Social Service Login Regist

video timestamp incorrect

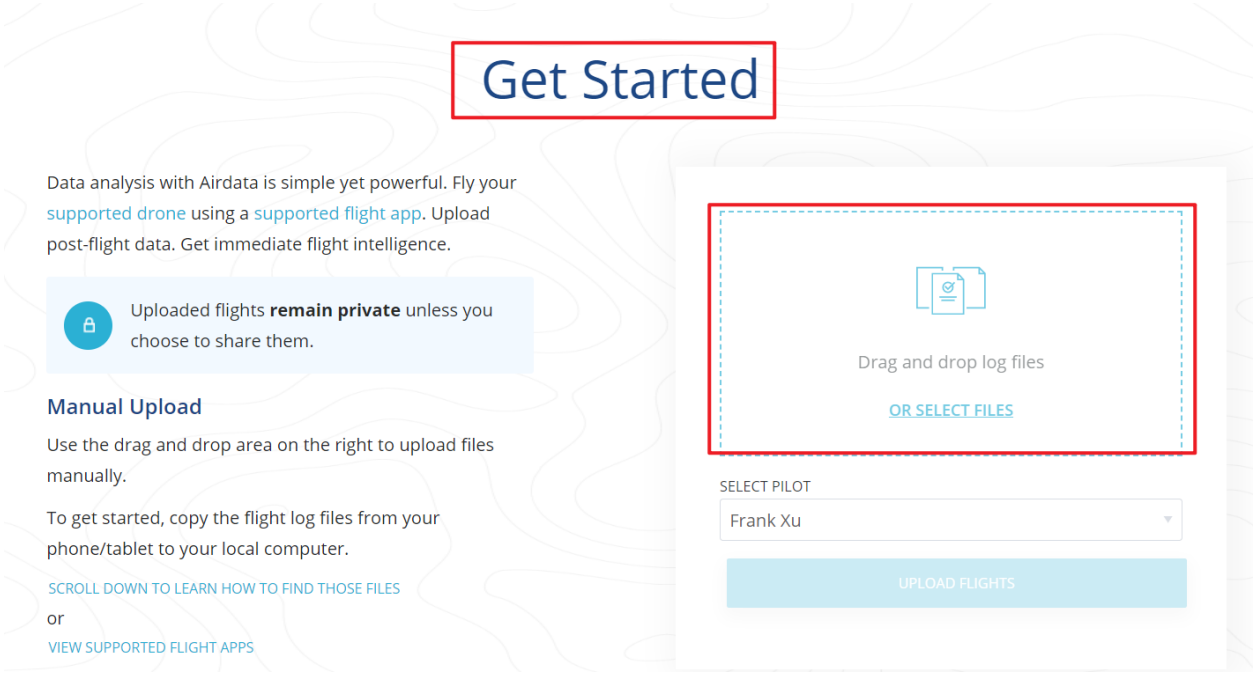
Home / Products / Phantom / Phantom 3 Pro/Adv 4020 23 2016-

I have noticed that after I import the photos and videos off the SD card, the timestamp for the videos is off by 4 hours. The photos are correct. For example, I was flying around 7 PM last night. The videos indicate they were taken around 3 PM, but the photos correctly indicate 7 PM. Is there some setting where I can get the clock for the videos set correctly?

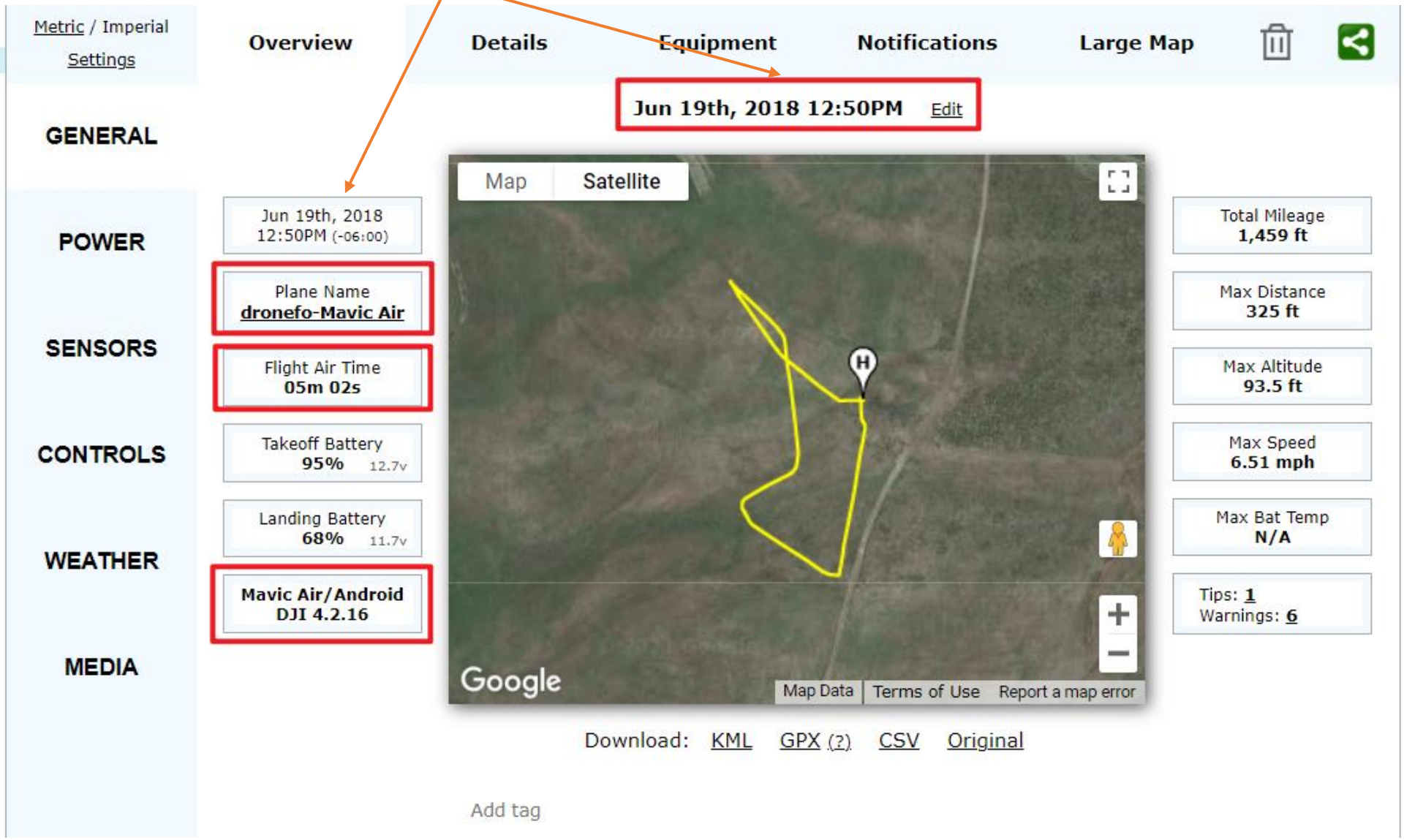
it seems the time zone did not set up correctly.

How to view a fight router information?
(option 3: airdata.com)

- Provide more information than options 1 and 2
- Free for personal use
- Need to register



is the timestamp correct?



Metric / Imperial
Settings

Overview | Details | Equipment | Notifications | Large Map

GENERAL

POWER

SENSORS

CONTROLS

WEATHER

MEDIA

Associated Pilots: [redacted]
PILOT-IN-COMMAND

Take Off Location: **39.961198,-106.216468**
Above Sea Level: **8127.8 ft**

Address: **Unnamed Road, Parshall, CO 80468, USA**
Edit Address

Last Known Location: **39.961197,-106.216476**
at log time of **05m 05s**
and altitude of **0.0 ft**

Log Duration: **05m 05s** (time in the air and on the ground)

Air Duration: **05m 02s** (time in the air only)


United States

Metric / Imperial

Settings

Overview | Details | Equipment | Notifications | Large Map

GENERAL

POWER

SENSORS

CONTROLS

WEATHER

MEDIA

Associated Drone: **dronefo-Mavic Air**

Type **Mavic Air**

Associated Batteries: **Bat-MavicAir-3400DT**

GENERAL

POWER

SENSORS

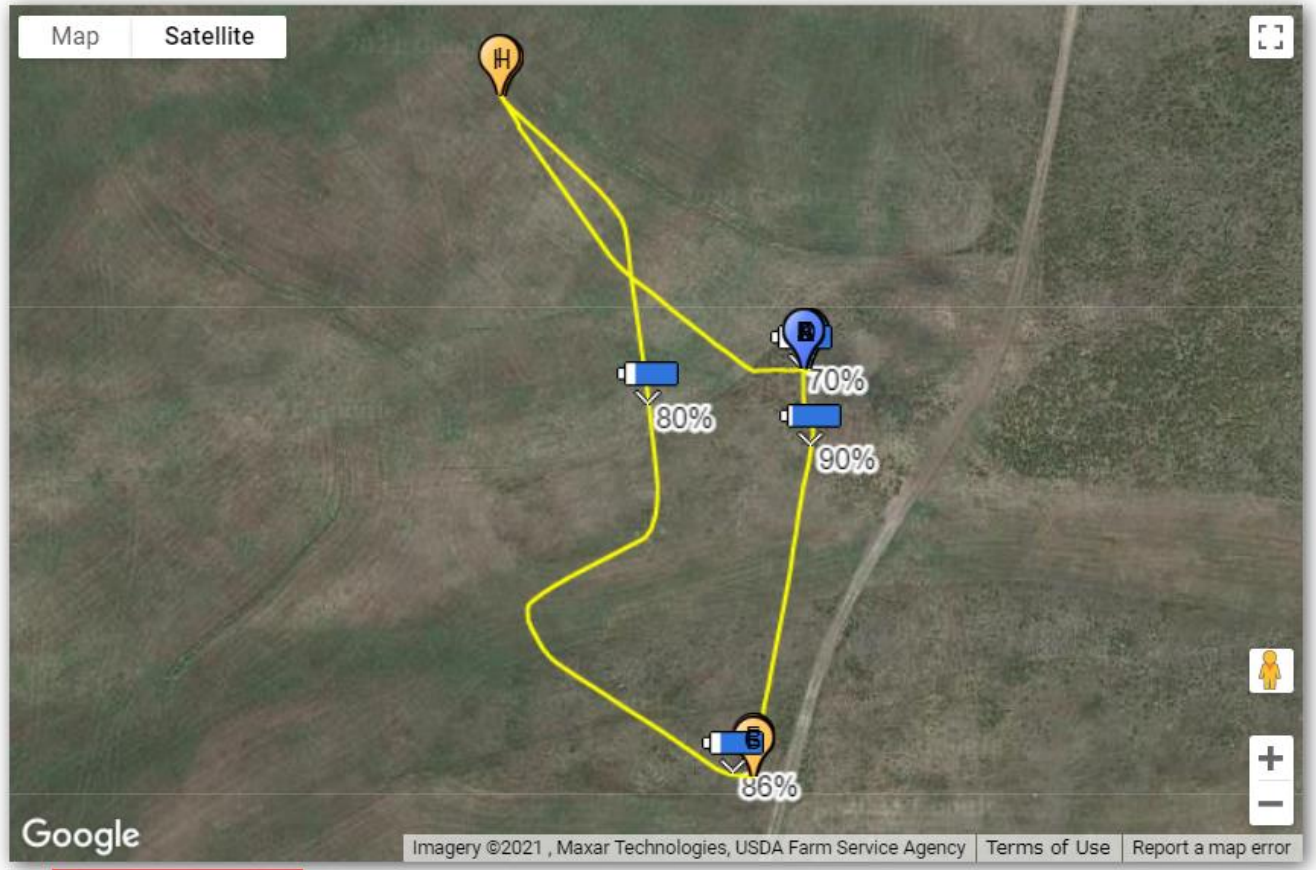
CONTROLS

WEATHER

MEDIA

HD Flight Player

Review notification highlights from the flight.
Click "HD Flight Player" to view detailed flight info.



HD Flight Player *NEW!*

Download notifications KML

	Flight time	Altitude	Home Dist	Type	Notification
A	00m 00s	0.0 ft	0 ft	Mode	Mode changed to Motors Started
B	00m 00s	0.0 ft	0 ft	Tip	✔ Setting new Return-To-Home altitude to 30m (98 ft). ✔ Data Recorder File Index is 57. ✔ Setting new Maximum Flight Altitude to 50m (164 ft)
C	00m 01s	0.0 ft	0 ft	Mode	Mode changed to AutoTakeoff

	Flight time	Altitude	Home Dist	Type	Notification
A	00m 00s	0.0 ft	0 ft	Mode	Mode changed to Motors Started
B	00m 00s	0.0 ft	0 ft	Tip	✔ Setting new Return-To-Home altitude to 30m (98 ft). ✔ Data Recorder File Index is 57. ✔ Setting new Maximum Flight Altitude to 50m (164 ft)
C	00m 01s	0.0 ft	0 ft	Mode	Mode changed to AutoTakeoff
D	00m 10s	12.8 ft	1 ft	Mode	Mode changed to P-GPS
	00m 54s	14.4 ft	62 ft		90% Battery
E	01m 31s	73.2 ft	322 ft	Warning	Maximum flight distance reached. Adjust the distance in MC Settings if required
F	01m 33s	73.5 ft	324 ft	Low Risk	⚠ Weak signal. Avoid blocking the antennas and keep the antennas parallel to and facing toward the aircraft during flight
G	01m 39s	72.2 ft	324 ft	Warning	High wind velocity. Ensure the aircraft remains within your line of sight and fly with caution
	01m 44s	72.5 ft	325 ft		86% Battery at maximum distance
	02m 42s	81.7 ft	128 ft		80% Battery
H	03m 16s	82.3 ft	323 ft	Warning	Maximum flight distance reached. Adjust the distance in MC Settings if required
I	03m 31s	82.7 ft	324 ft	Warning	High wind velocity. Ensure the aircraft remains within your line of sight and fly with caution
	04m 33s	-3.3 ft	4 ft		70% Battery
J	04m 57s	-3.0 ft	3 ft	Mode	Mode changed to AutoLanding
K	04m 57s	-3.0 ft	3 ft	Warning	Obstacle Sensing will be disabled when aircraft is landing. Fly with caution
L	05m 05s	0.0 ft	2 ft	Mode	Mode changed to P-GPS

Start recording Mode

End recording GPS Position Mode

Metric / Imperial

Settings

GENERAL

POWER

SENSORS

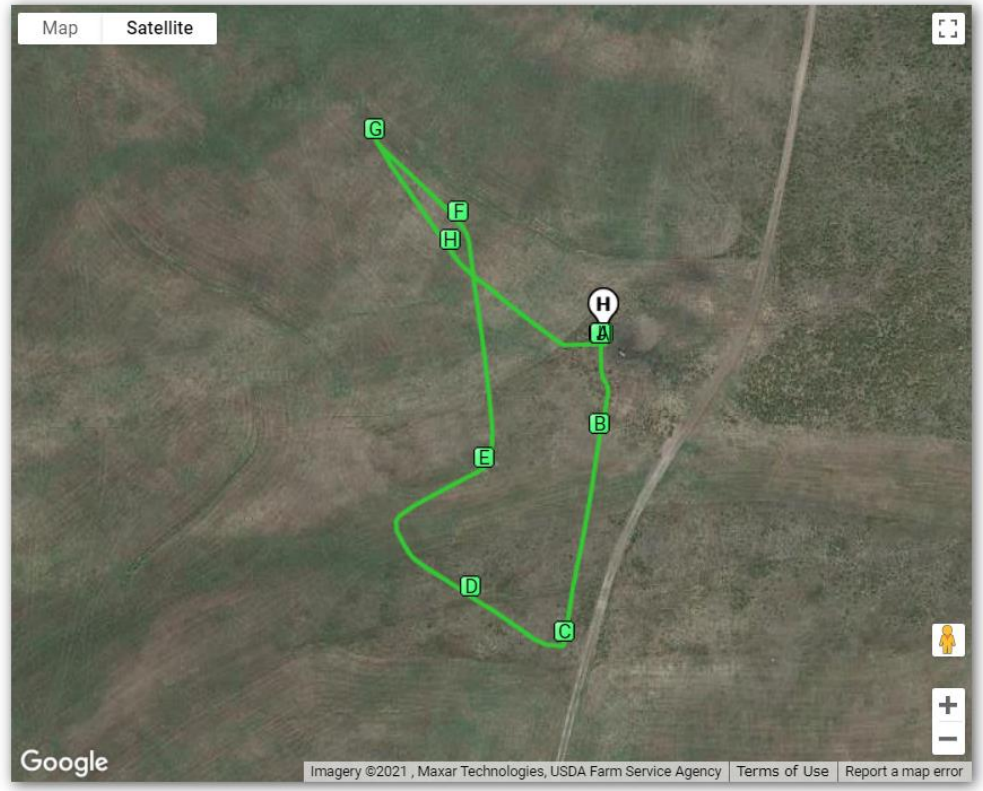
CONTROLS

WEATHER

MEDIA

Signal Map | Signal Score | GPS | Compass

Signal Strength Map - green is good signal, orange is fair, red is poor and purple is very poor. It calculates signal strength based on the connection to the remote - it searches for signal loss based on minor signal interruptions:



Download color coded Signal Strength KML

	Flight time	Altitude	Home Distance	Minor Signal Errors	Calculated Signal
A	00m 30s	13.1 ft	1 ft	0	100%
B	01m 00s	14.8 ft	96 ft	0	100%
C	01m 30s	73.2 ft	319 ft	0	100%
D	02m 00s	81.4 ft	304 ft	0	100%
E	02m 30s	82.0 ft	183 ft	0	100%
F	03m 00s	81.7 ft	202 ft	0	100%
G	03m 30s	82.7 ft	325 ft	0	100%
H	04m 00s	64.3 ft	192 ft	0	100%
I	04m 30s	-3.3 ft	4 ft	0	100%
J	05m 00s	-4.3 ft	2 ft	0	100%

Metric / Imperial

Settings

GENERAL

POWER

SENSORS

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WEATHER

MEDIA

Ground Weather | Kp Index | InFlight Wind | Wind Map | Alt. Profile

Temperature

70.5 °f

Clear

24% Cloud Cover

Visibility

Excellent

7 Miles

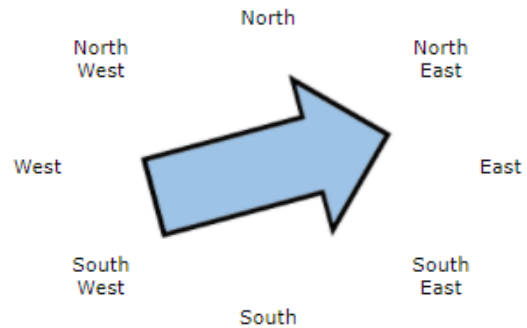
Wind Speed

12.1 mph

05:37am Sunrise

08:38pm Sunset

Wind Direction



Direction: **258°**

Humidity

18 %

Waxing Crescent Moon

48% visible

Feels like : **70.5** °f

Dew Point : **25.2** °f

Pressure: Not Reported

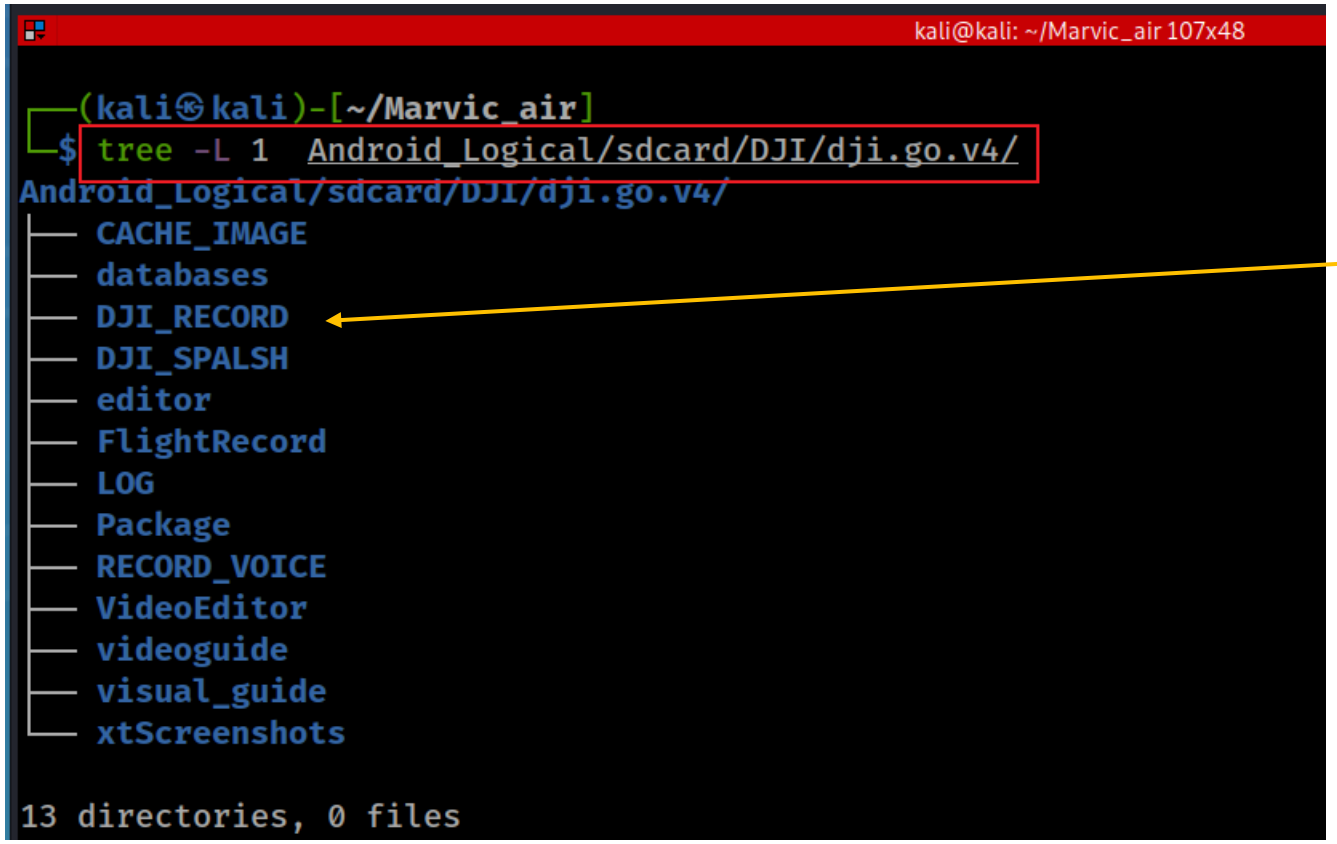
Rain Rate : **0.00** in/h

Chance : **0** %

Analyze Video Cache *.mp4

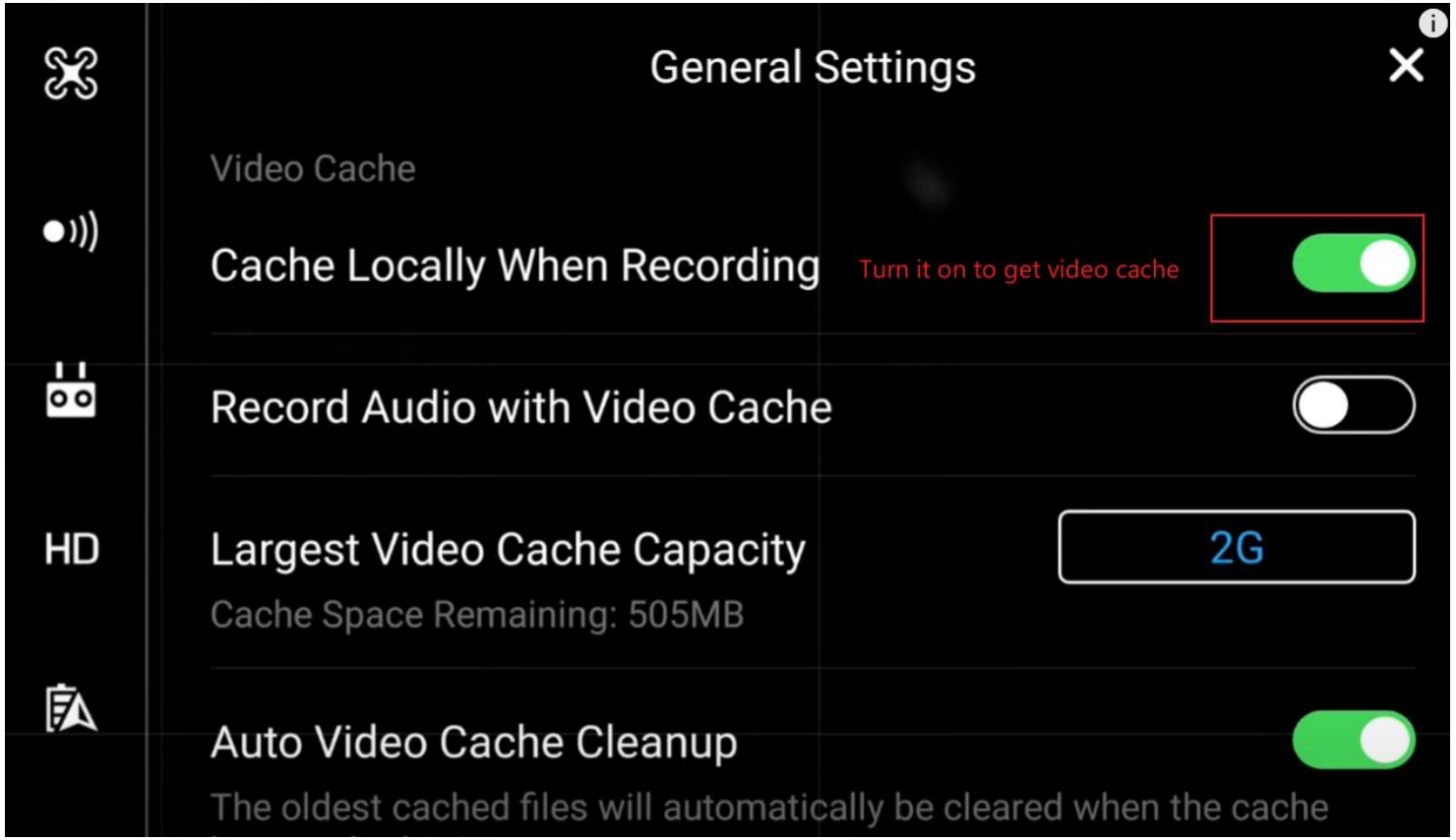
Take off -> Landed

Where are flight videos (.mp4) saved?



- Recorded flight videos
- Definition of a flight video
  - TakeOff -> Landed
  - Not recording until Altitude >0

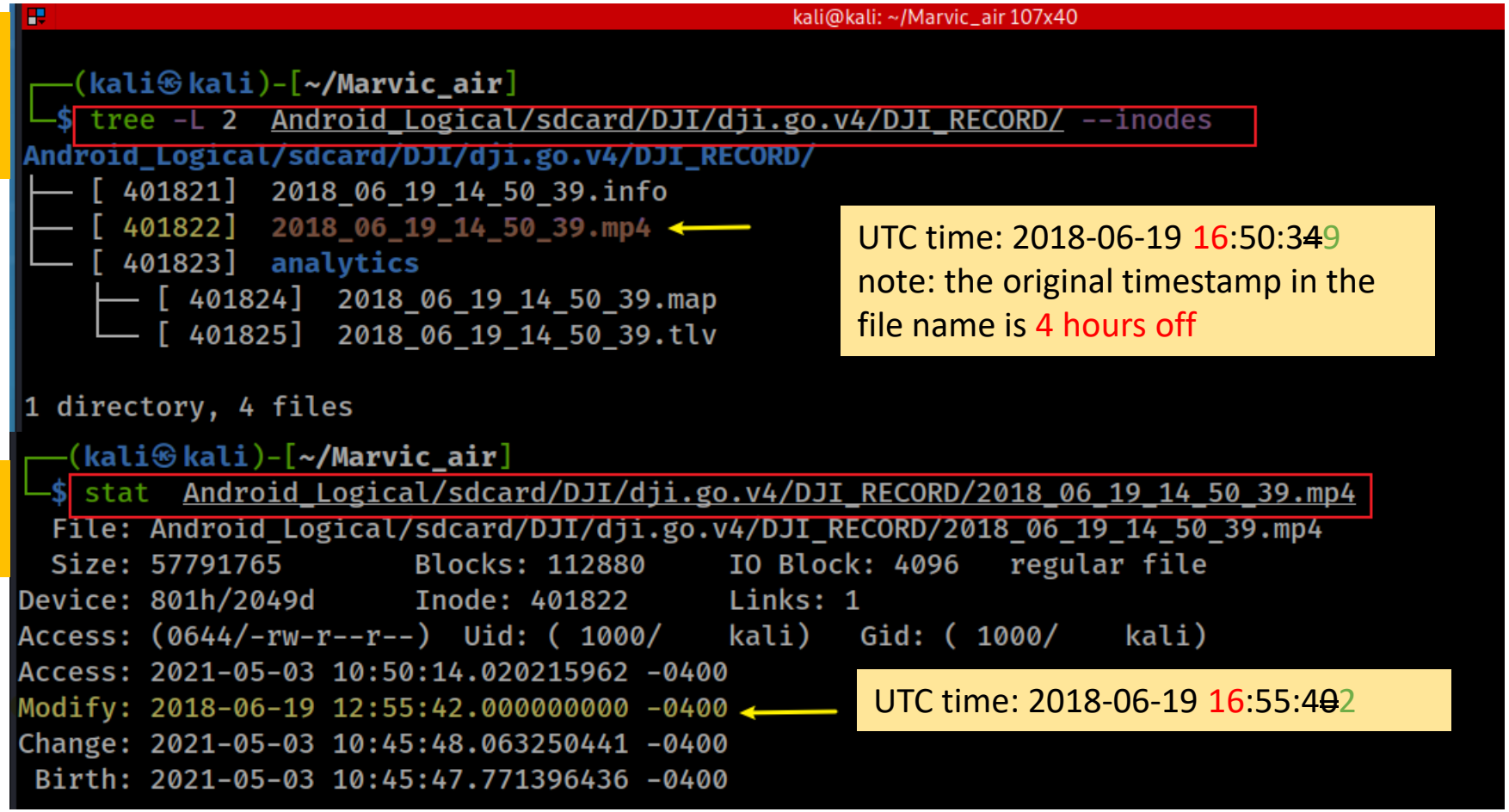
Video Cache setting



When was the flight video (.mp4) recorded?

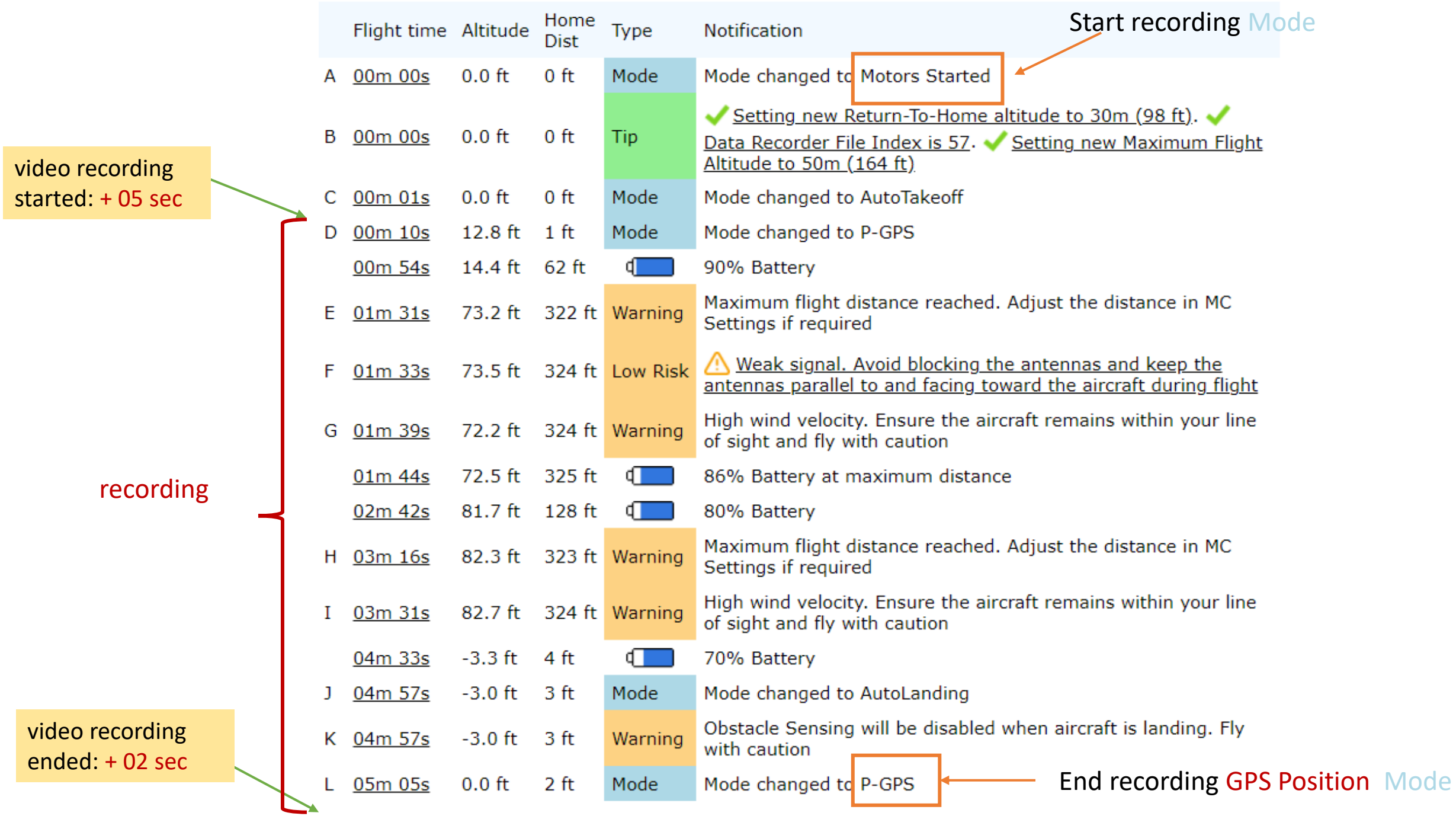
Show folder/files and start recording time

Show recording ends time

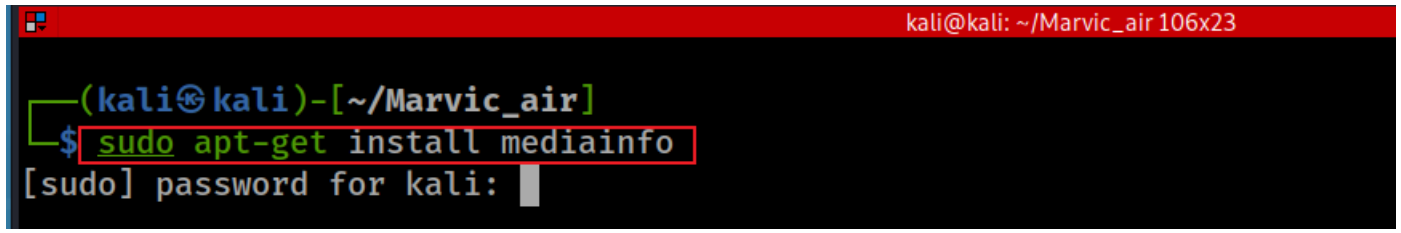


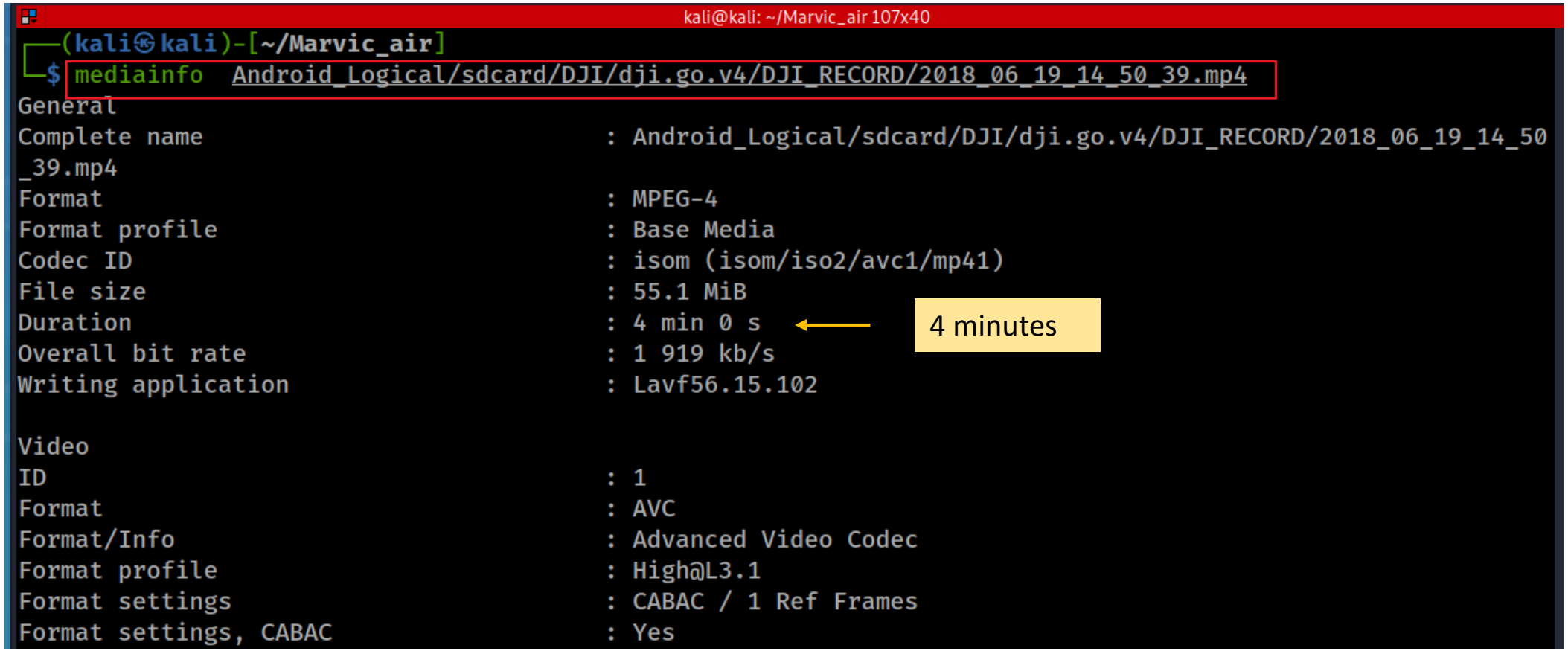
UTC time: 2018-06-19 16:50:34~~4~~9
note: the original timestamp in the file name is 4 hours off

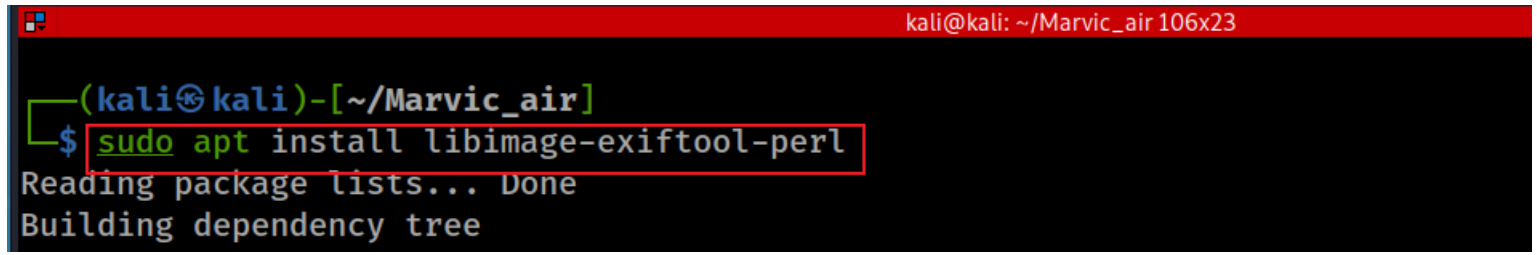
UTC time: 2018-06-19 16:55:4~~0~~2

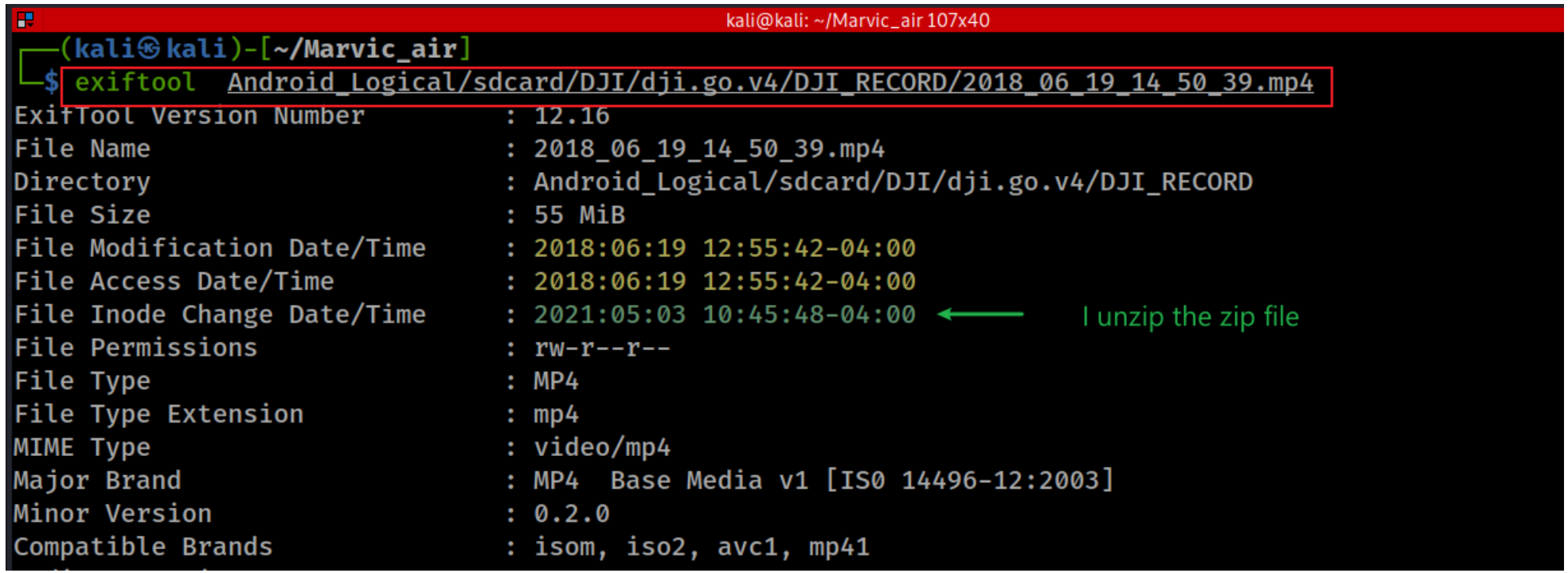


	Flight time	Altitude	Home Dist	Type	Notification
A	00m 00s	0.0 ft	0 ft	Mode	Mode changed to Motors Started
B	00m 00s	0.0 ft	0 ft	Tip	✔ Setting new Return-To-Home altitude to 30m (98 ft). ✔ Data Recorder File Index is 57. ✔ Setting new Maximum Flight Altitude to 50m (164 ft)
C	00m 01s	0.0 ft	0 ft	Mode	Mode changed to AutoTakeoff
D	00m 10s	12.8 ft	1 ft	Mode	Mode changed to P-GPS
	00m 54s	14.4 ft	62 ft		90% Battery
E	01m 31s	73.2 ft	322 ft	Warning	Maximum flight distance reached. Adjust the distance in MC Settings if required
F	01m 33s	73.5 ft	324 ft	Low Risk	⚠ Weak signal. Avoid blocking the antennas and keep the antennas parallel to and facing toward the aircraft during flight
G	01m 39s	72.2 ft	324 ft	Warning	High wind velocity. Ensure the aircraft remains within your line of sight and fly with caution
	01m 44s	72.5 ft	325 ft		86% Battery at maximum distance
	02m 42s	81.7 ft	128 ft		80% Battery
H	03m 16s	82.3 ft	323 ft	Warning	Maximum flight distance reached. Adjust the distance in MC Settings if required
I	03m 31s	82.7 ft	324 ft	Warning	High wind velocity. Ensure the aircraft remains within your line of sight and fly with caution
	04m 33s	-3.3 ft	4 ft		70% Battery
J	04m 57s	-3.0 ft	3 ft	Mode	Mode changed to AutoLanding
K	04m 57s	-3.0 ft	3 ft	Warning	Obstacle Sensing will be disabled when aircraft is landing. Fly with caution
L	05m 05s	0.0 ft	2 ft	Mode	Mode changed to P-GPS

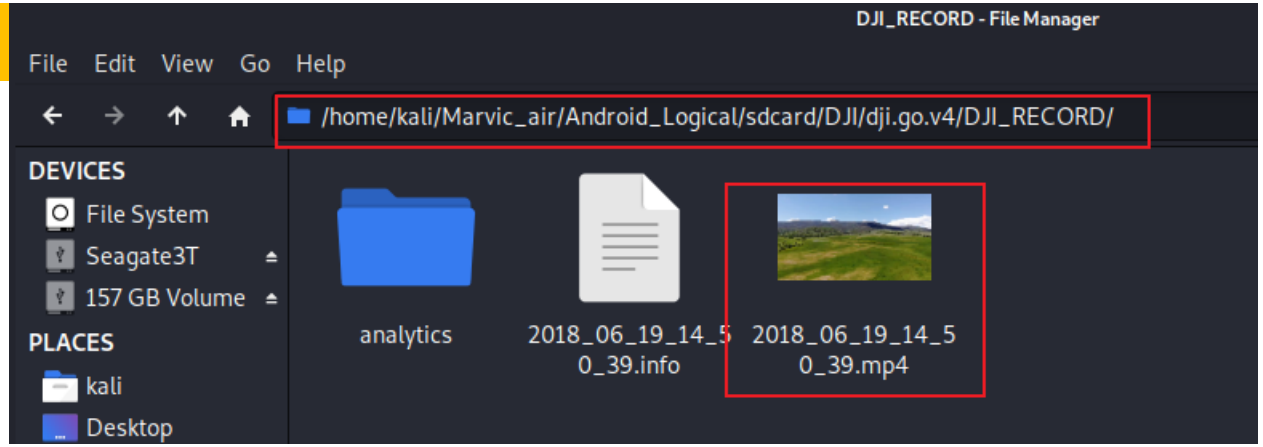

kali@kali: ~/Marvic_air 106x23
(kali㉿kali)-[~/Marvic_air]
$ sudo apt-get install mediainfo
[sudo] password for kali:


kali@kali: ~/Marvic_air 107x40
(kali㉿kali)-[~/Marvic_air]
$ mediainfo Android_Logical/sdcard/DJI/dji.go.v4/DJI_RECORD/2018_06_19_14_50_39.mp4
General
Complete name : Android_Logical/sdcard/DJI/dji.go.v4/DJI_RECORD/2018_06_19_14_50
_39.mp4
Format : MPEG-4
Format profile : Base Media
Codec ID : isom (isom/iso2/avc1/mp41)
File size : 55.1 MiB
Duration : 4 min 0 s
Overall bit rate : 1 919 kb/s
Writing application : Lavf56.15.102
Video
ID : 1
Format : AVC
Format/Info : Advanced Video Codec
Format profile : High@L3.1
Format settings : CABAC / 1 Ref Frames
Format settings, CABAC : Yes
4 minutes


kali@kali: ~/Marvic_air 106x23
┌──(kali㉿kali)-[~/Marvic_air]
└─$ sudo apt install libimage-exiftool-perl
Reading package lists... Done
Building dependency tree


kali@kali: ~/Marvic_air 107x40
┌──(kali㉿kali)-[~/Marvic_air]
└─$ exiftool Android_Logical/sdcard/DJI/dji.go.v4/DJI_RECORD/2018_06_19_14_50_39.mp4
ExifTool Version Number : 12.16
File Name : 2018_06_19_14_50_39.mp4
Directory : Android_Logical/sdcard/DJI/dji.go.v4/DJI_RECORD
File Size : 55 MiB
File Modification Date/Time : 2018:06:19 12:55:42-04:00
File Access Date/Time : 2018:06:19 12:55:42-04:00
File Inode Change Date/Time : 2021:05:03 10:45:48-04:00
File Permissions : rw-r--r--
File Type : MP4
File Type Extension : mp4
MIME Type : video/mp4
Major Brand : MP4 Base Media v1 [IS0 14496-12:2003]
Minor Version : 0.2.0
Compatible Brands : isom, iso2, avc1, mp41
I unzip the zip file

Play recorded flight



The video lasts 4 minutes

note: the video access time will be change after playing the video. Use *stat* command to verify

View information related to the video

```
┌──(kali㉿kali)-[~/Marvic_air]
└─$ tree -L 2  Android_Logical/sdcard/DJI/dji.go.v4/DJI_RECORD/ --inc

Android_Logical/sdcard/DJI/dji.go.v4/DJI_RECORD/
├── [ 401820]  2018_06_19_14_50_39.info
├── [ 401821]  2018_06_19_14_50_39.mp4
└── [ 401822]  analytics
    ├── [ 401823]  2018_06_19_14_50_39.map
    └── [ 401824]  2018_06_19_14_50_39.tlv
```

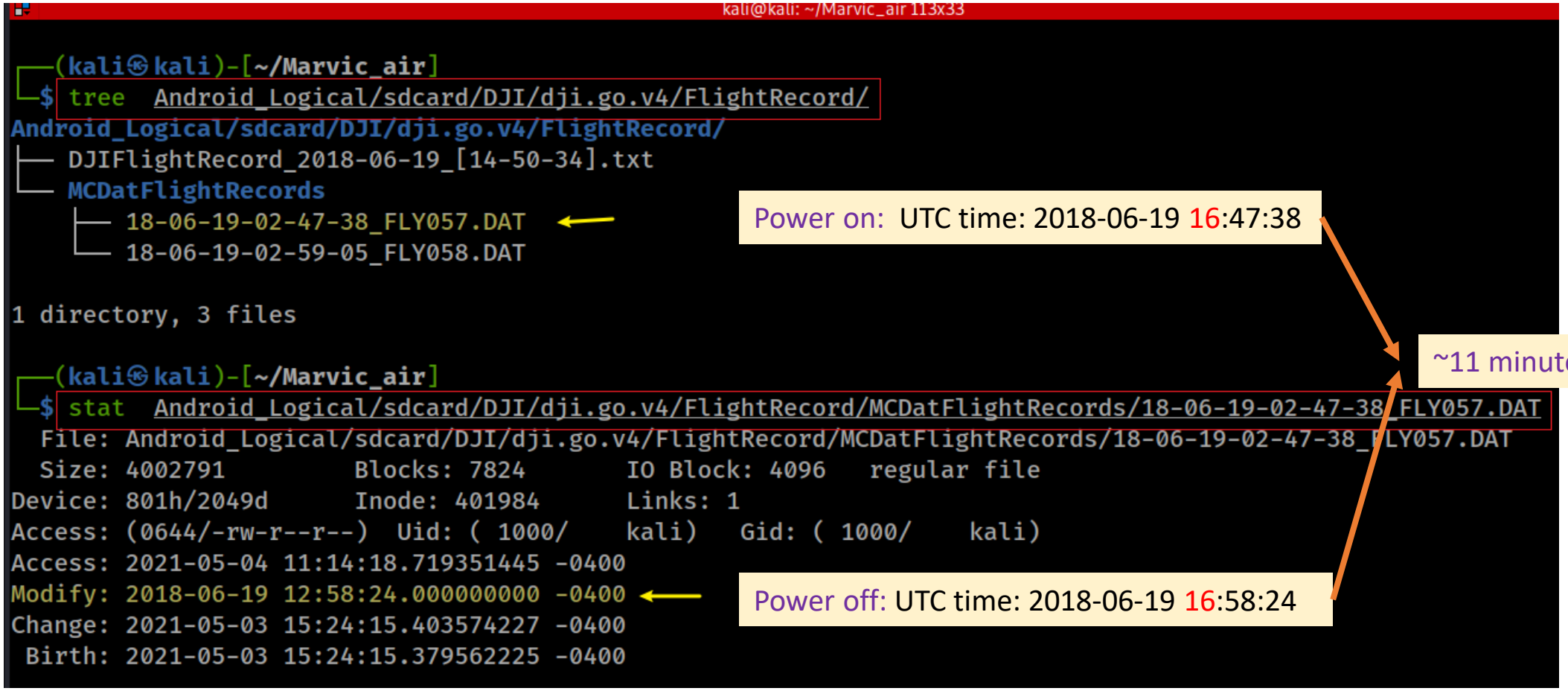
2018_06_19_14_50_39.info

File Edit Search Options Help

```
#Tue Jun 19 14:55:41 EDT 2018
CameraType=23
Source_File_Path=/storage/emulated/0/DJI/dji.go.v4/DJI_RECORD/2018_06_19_14_50_39.mp4
FPS_Drone=30
EndTimeMsec=234833
LocalFileName=2018_06_19_14_50_39
StartTimeMsec=0
FolderID_Drone=100
WhiteBalance=0
ImageDescription=
Is_HD=false
ISO=0
PixelXDimension_Drone=1920
PixelYDimension_Local=720
Video_Type=0
ExposureMode=1
PixelXDimension_Local=1280
Sync_Drone_Time=2798,21406,31080,40573,47491,51419,56131,62052,66403,72863,82480,89239,95
Version=1.0
Video_Resolution_Enum_Drone=10
FPS_local=30
CaptureDate=2018/06/19 14\:50\:39
UUID_Drone=3890597672
File_Source_Type=1
FileID_Drone=1
ProductType=38
LocationString=
PositionRelativeAlt=12.0
PositionGPSLat=39.96119532709023
FrameJumpped=14
ApertureSize=560
PixelYDimension_Drone=1080
Sync_Local_Time=0,17366,25766,33833,39466,42100,45166,50000,53233,58233,66266,71566,76566
ShutterSpeed=1/100
DeviceMaker=DJI
PositionGPSAlt=12.0
PositionGPSLng=-106.2164633258356
```

Analyze detailed flight record *.dat

Power on -> Power off


kali@kali: ~/Marvic_air 113x33
(kali㉿kali)-[~/Marvic_air]
$ tree Android_Logical/sdcard/DJI/dji.go.v4/FlightRecord/
Android_Logical/sdcard/DJI/dji.go.v4/FlightRecord/
├── DJIFlightRecord_2018-06-19_[14-50-34].txt
└── MCDatFlightRecords
    ├── 18-06-19-02-47-38_FLY057.DAT
    └── 18-06-19-02-59-05_FLY058.DAT
1 directory, 3 files
(kali㉿kali)-[~/Marvic_air]
$ stat Android_Logical/sdcard/DJI/dji.go.v4/FlightRecord/MCDatFlightRecords/18-06-19-02-47-38_FLY057.DAT
File: Android_Logical/sdcard/DJI/dji.go.v4/FlightRecord/MCDatFlightRecords/18-06-19-02-47-38_FLY057.DAT
Size: 4002791 Blocks: 7824 IO Block: 4096 regular file
Device: 801h/2049d Inode: 401984 Links: 1
Access: (0644/-rw-r--r--) Uid: (1000/ kali) Gid: (1000/ kali)
Access: 2021-05-04 11:14:18.719351445 -0400
Modify: 2018-06-19 12:58:24.000000000 -0400
Change: 2021-05-03 15:24:15.403574227 -0400
Birth: 2021-05-03 15:24:15.379562225 -0400
Power on: UTC time: 2018-06-19 16:47:38
~11 minutes
Power off: UTC time: 2018-06-19 16:58:24


Metric / Imperial
Settings
Overview
Details
Equipment
Notifications
Large Map
incorrect
Jun 19th, 2018 12:49PM
Edit
16:47:38
GENERAL
POWER
SENSORS
CONTROLS
WEATHER
MEDIA
Jun 19th, 2018
12:49PM (-06:00)
Plane Name
Default Mavic Air ..
Flight Air Time
05m 01s
Takeoff Battery
97% 12.6v
Landing Battery
65% 11.7v
Mavic Air
DJI DAT 1.17
Map
Satellite
H
Google
Map Data
Terms of Use
Report a map error
Total Mileage
155,605 ft
Max Distance
1,688 ft
Max Altitude
86.3 ft
Max Speed
7.65 mph
Max Bat Temp
110.8°f
Tips: 1
Warnings: 0
Download: KML GPX (?) CSV Original

Metric / Imperial
Settings

Overview | Details | Equipment | Notifications | Large Map

GENERAL

POWER

SENSORS

CONTROLS

WEATHER

Associated Pilots: [redacted]
PILOT-IN-COMMAND


United States

Take Off Location: **39.964941,-106.216820**
Above Sea Level: **8122.0 ft**

Address: **Unnamed Road, Parshall, CO 80468, USA**
Edit Address

Last Known Location: **39.962717,-106.217468**
at log time of **12m 16s**
and altitude of **-1.5 ft**

Log Duration: **12m 21s** (time in the air and on the ground)

Air Duration: **05m 01s** (time in the air only)

GENERAL

POWER

SENSORS

CONTROLS

Associated Drone: **Default Mavic Air Drone**

Type **Mavic Air**

Associated Batteries: **Default Mavic Air Battery**

GENERAL

POWER

SENSORS

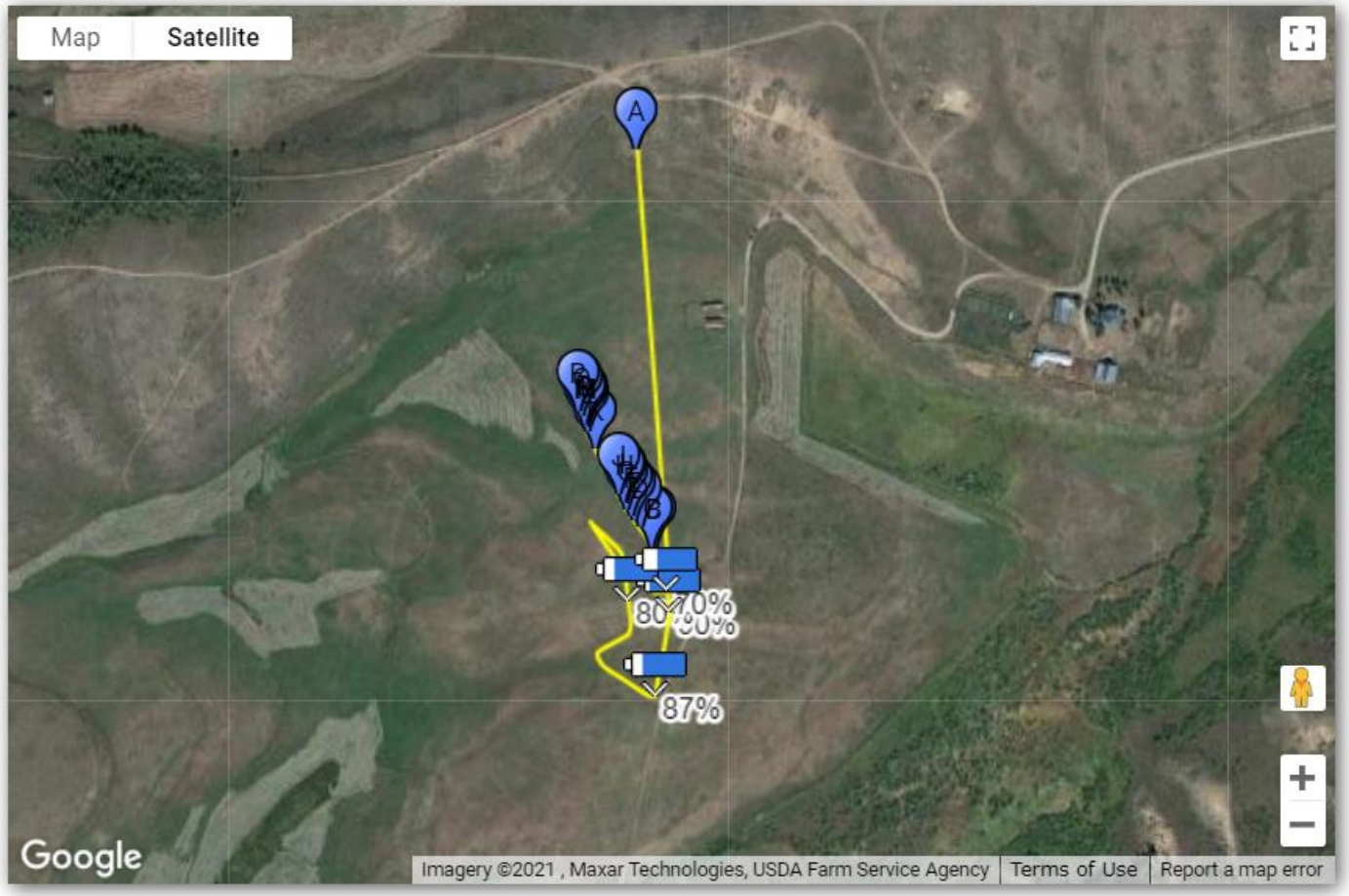
CONTROLS

WEATHER

MEDIA

HD Flight Player

Review notification highlights from the flight.
Click "HD Flight Player" to view detailed flight info.



HD Flight Player *NEW!*

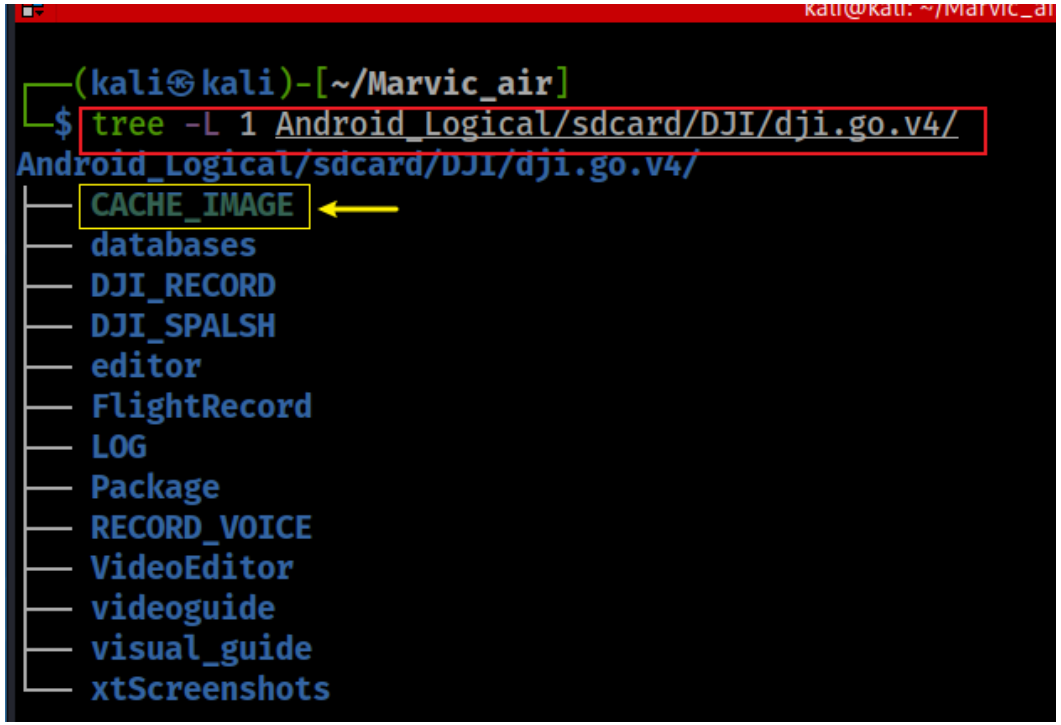
Download notifications KML

Flight time	Altitude	Home Dist	Type	Notification
00m 02s	0.0 ft	0 ft	Mode	Mode changed to Manual

	Flight time	Altitude	Home Dist	Type	Notification
	00m 02s	0.0 ft	0 ft	Mode	Mode changed to Manual
	00m 02s	0.0 ft	0 ft	Tip	Log filename: FLY057.DAT
A	03m 32s	-8.4 ft	0 ft	Mode	Mode changed to Manual
	05m 28s	4.0 ft	1,431 ft		90% Battery
	06m 07s	65.2 ft	1,688 ft		87% Battery at maximum distance
	07m 16s	73.9 ft	1,393 ft		80% Battery
	09m 07s	-9.5 ft	1,369 ft		70% Battery
B	10m 52s	-1.0 ft	1,366 ft	Mode	Mode changed to Manual
C	10m 52s	-1.3 ft	1,366 ft	Mode	Mode changed to Manual
D	11m 01s	-1.5 ft	1,366 ft	Mode	Mode changed to Manual
E	11m 05s	-1.0 ft	1,366 ft	Mode	Mode changed to Manual
F	11m 09s	-1.1 ft	1,366 ft	Mode	Mode changed to Manual
G	11m 13s	-1.5 ft	1,366 ft	Mode	Mode changed to Manual
H	11m 18s	-1.0 ft	1,366 ft	Mode	Mode changed to Manual
I	11m 18s	-0.8 ft	1,366 ft	Mode	Mode changed to Manual
J	11m 24s	-1.0 ft	1,366 ft	Mode	Mode changed to Manual
K	11m 53s	-0.0 ft	1,366 ft	Mode	Mode changed to Manual
L	12m 04s	-1.0 ft	1,366 ft	Mode	Mode changed to Manual
M	12m 06s	-1.1 ft	1,366 ft	Mode	Mode changed to Manual
N	12m 07s	-1.2 ft	1,366 ft	Mode	Mode changed to Manual
O	12m 08s	-1.3 ft	1,366 ft	Mode	Mode changed to Manual
P	12m 08s	-1.2 ft	1,366 ft	Mode	Mode changed to Manual
Q	12m 13s	-1.4 ft	1,366 ft	Mode	Mode changed to Manual
R	12m 16s	-1.5 ft	842 ft	Mode	Mode changed to Manual

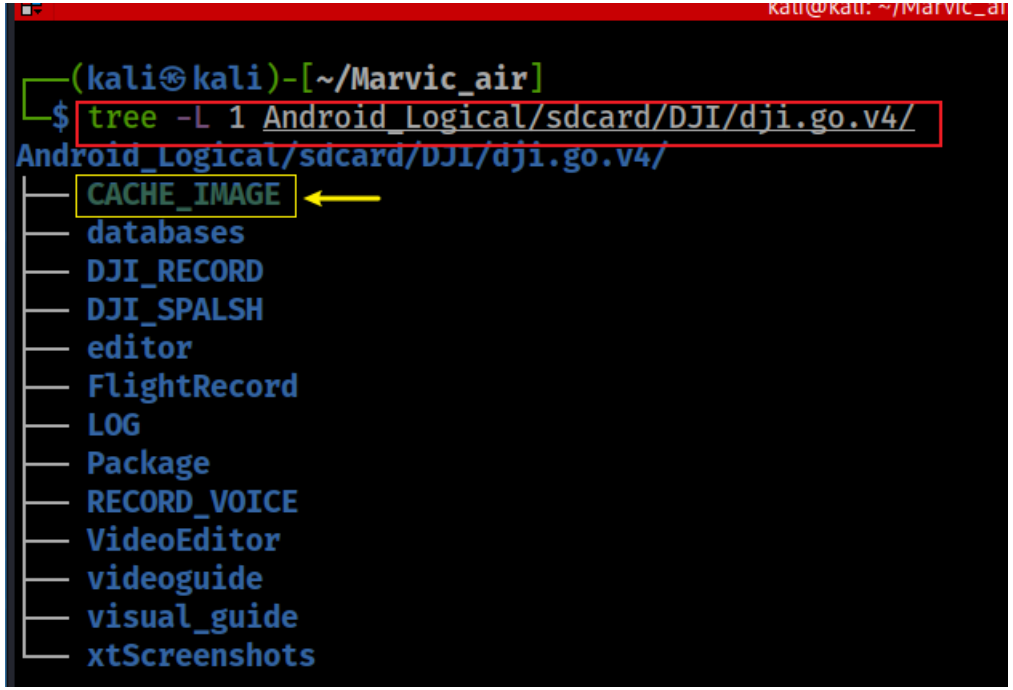
Analyze cached pictures

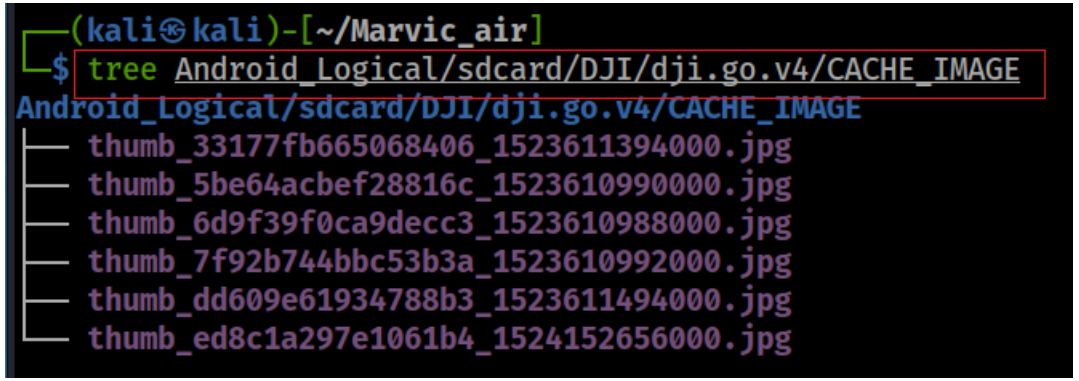
What is the location of cache pictures?



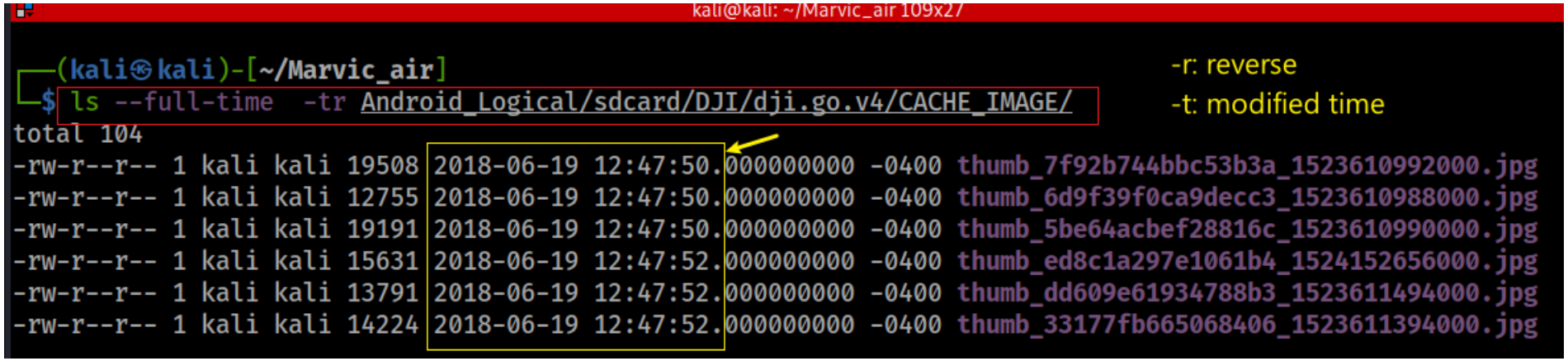
How many pictures contain people?

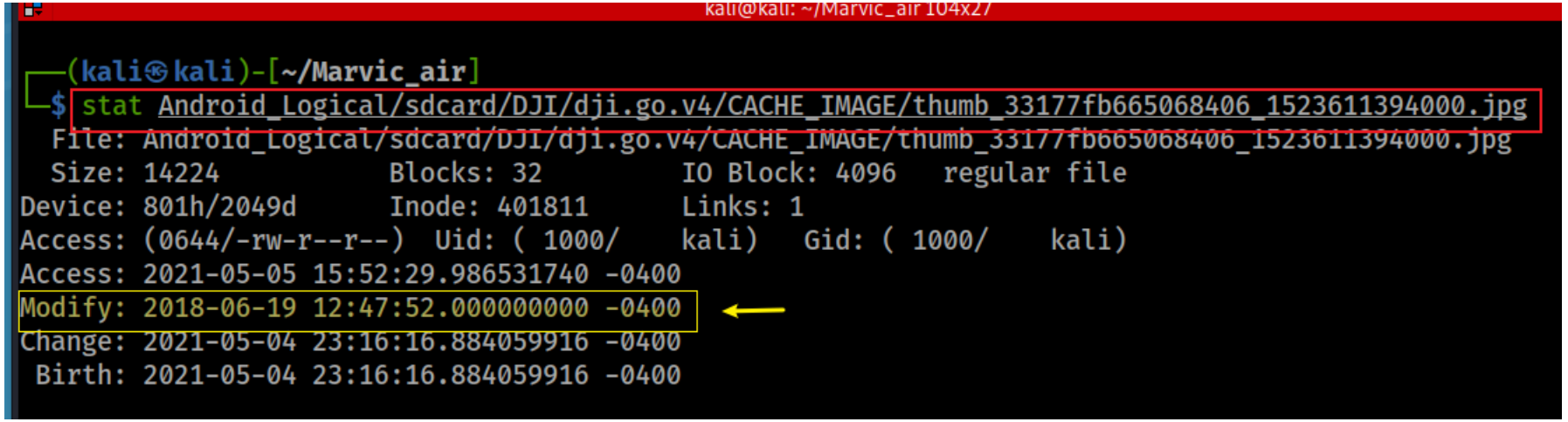
Any pictures taken on 2018-06-19?





The sequence of pictures were taken





Misc.

What was the last time dji.go.v4 updated?