How do security analyst find someone location by image!

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Overview

There are several ways to track someone location. To perform this, it may require grabbing IP or we can just use the metadata stored in an image. Images store Data & Metadata called EXIF which can make tracking anyone much easier!

So… How can we obtain valuable data from image?

This program it only works on JPG file types. To view Metadata, it's quite simple:

Step one

Install EXIF BY run > `sudo apt-get install exif` command.

Step two

Extracting entire metadata of image shown in (figure 1)

Figure 1. I used this image for example to extract a bunch of information

By using the following command in the terminal: > `exif <file_name>` for more info type > `exif --help`

```
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Tag                |Value
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Image Width        |3000
Image Length       |4000
Bits per Sample    |8, 8, 8
Manufacturer       |HUAWEI
Model              |YAL-L21
Orientation        |Unknown value 0
X-Resolution       |72
Y-Resolution       |72
Resolution Unit    |Inch
Software           |YAL-L61 10.0.0.216(C185E3R3P1)
Date and Time      |2020:09:08 09:58:30
YCbCr Positioning  |Centered
Image Width        |384
Image Length       |512
Compression        |JPEG compression
Orientation        |Unknown value 0
X-Resolution       |72
Y-Resolution       |72
Resolution Unit    |Inch
Exposure Time      |1/50 sec.
F-Number           |f/1.8
Exposure Program   |Normal program
ISO Speed Ratings  |500
Exif Version       |Exif Version 2.1
Date and Time (Origi|2020:09:08 09:58:30
Date and Time (Digit|2020:09:08 09:58:30
Components Configura|Y Cb Cr -
Compressed Bits per |0.95
Shutter Speed       |29.90 EV (1/999963365 sec.)
Aperture            |1.69 EV (f/1.8)
Brightness          |0.00 EV (3.43 cd/m^2)
Exposure Bias       |0.00 EV
Maximum Aperture Val|1.69 EV (f/1.8)
Metering Mode       |Pattern
Light Source        |Daylight
```

```
FlashPixVersion    |FlashPix Version 1.0
Color Space        |sRGB
Pixel X Dimension  |3000
Pixel Y Dimension  |4000
Sensing Method     |One-chip color area sensor
File Source        |DSC
Scene Type         |Directly photographed
Custom Rendered    |Custom process
Exposure Mode      |Auto exposure
White Balance      |Auto white balance
Digital Zoom Ratio |1.00
Focal Length in 35mm|68
Scene Capture Type |Standard
Gain Control       |Normal
Contrast           |Normal
Saturation         |Normal
Sharpness          |Normal
Subject Distance Ran|Unknown
GPS Tag Version    |2.2.0.0
North or South Latit|N
Latitude           |              931
East or West Longitu|
Longitude          |              324
Altitude Reference |Sea level reference
Altitude           |0.00
GPS Time (Atomic Clo|07:58:28.00
Name of GPS Processi|CELLID
GPS Date           |2020:09:08
Interoperability Ind|R98
Interoperability Ver|0100
```

After getting the longitude and latitude we should converted from degrees minutes seconds to decimal degrees by using www.fcc.gov website.

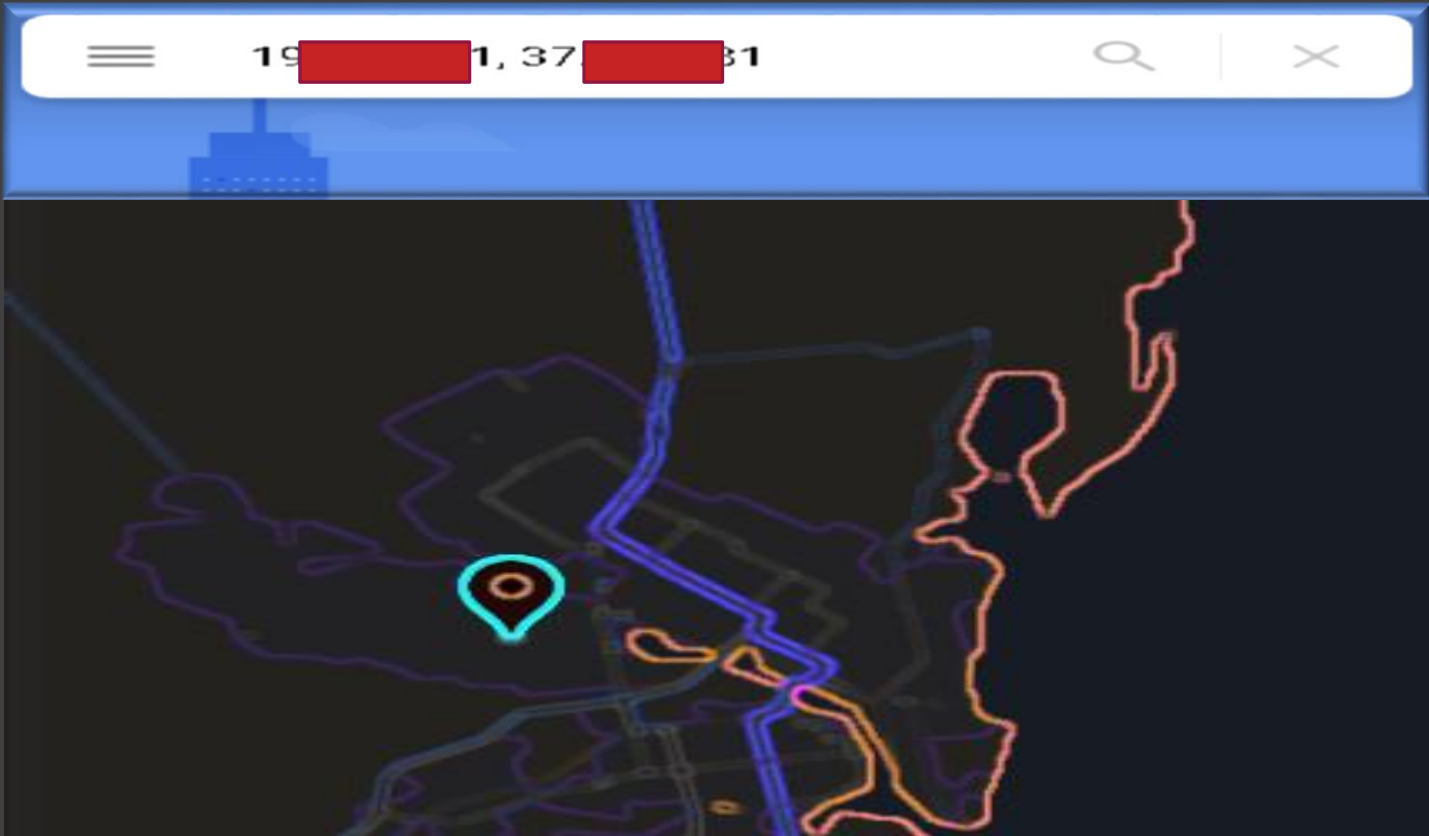| Enter Degrees Minutes Seconds latitude:		o		o
Enter Degrees Minutes Seconds longitude:		o		o

Convert to Decimal | Clear Values

Results: Latitude: | Longitude:

Last Step

In this step, we got the GPS Position, now just copy and paste this complete coordinate information over Google map and we will get the exact Location of the camera when the picture was taken

Conclusion

This was EXIF tool complete usability guide as a meta-data extractor. It is user-friendly and convenient because of its simple command-line implementation. It has thus become one of the best tools to extract meta-data data from a variety of file formats.