

INTELLIGENCE TRADECRAFT:

Principles for Advanced Investigations



Ryan Johnson
Senior Partner
DigiStream Investigations

“THE INTs”

OSINT



GEOINT



SIGINT



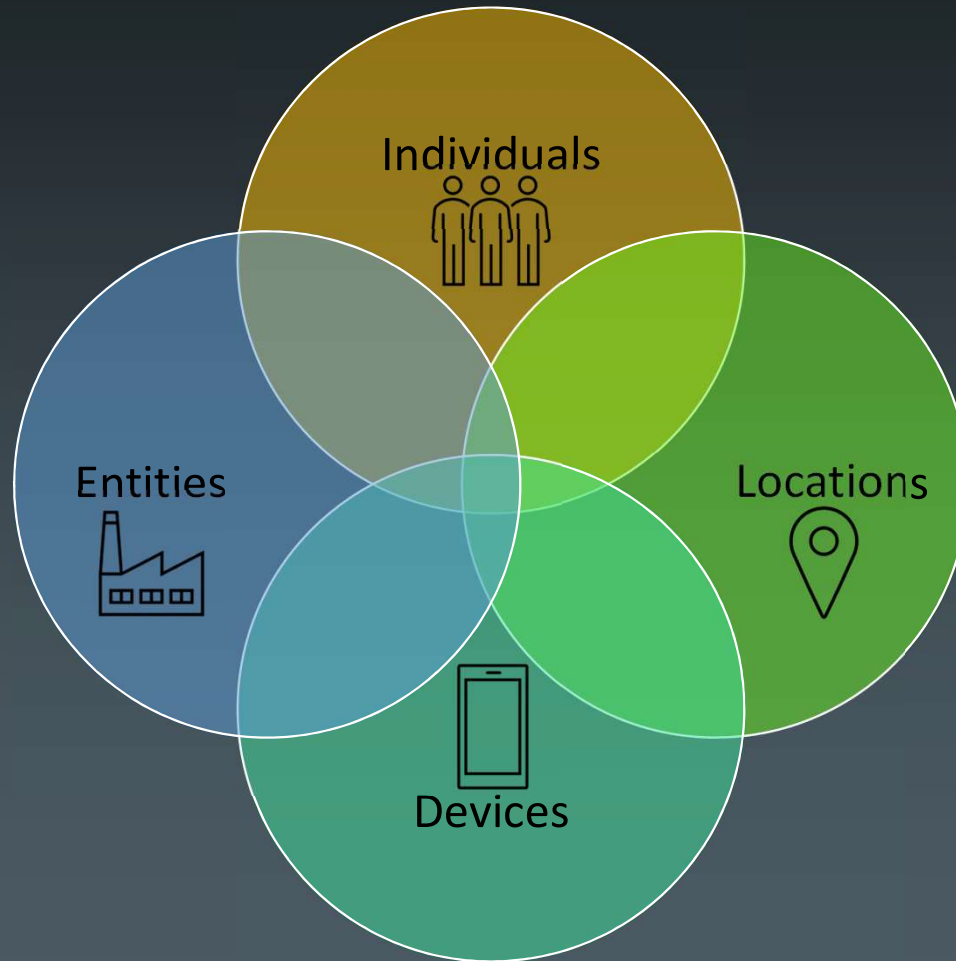
HUMINT



MASINT



INVESTIGATIVE BREADTH



“THE INTs”

OSINT



GEOINT



SIGINT



HUMINT



Sociologists have been studying the effects of social media on society and have coined the term “self surveillance” or “participatory surveillance” to encapsulate a widely-observed phenomenon:

For many people, the desire to promote their “personal brand” is greater than their desire for privacy.

Self-surveillance dominates the social habits of younger generations of “Digital Natives.” However, increasingly older generations are the most notable content posters.



THREE PILLARS OF OSINT

**IDENTITY
RESOLUTION**



**GEOGRAPHIC
RESOLUTION**



**CHRONOLOGIC
RESOLUTION**

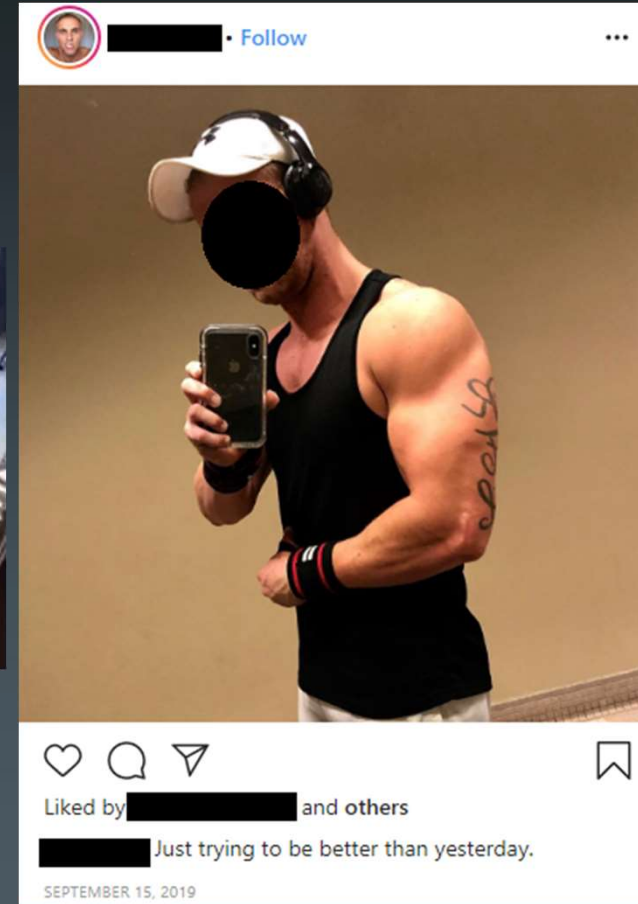




- 28 year-old trucker claimed a workers' compensation injury due to an alleged cumulative back injury.
- The subject was found to have an active lifestyle on social media.
- An Instagram account was located via a cell number and featured dozens of videos posted by the subject featuring him engaging in skydiving after the date of loss.

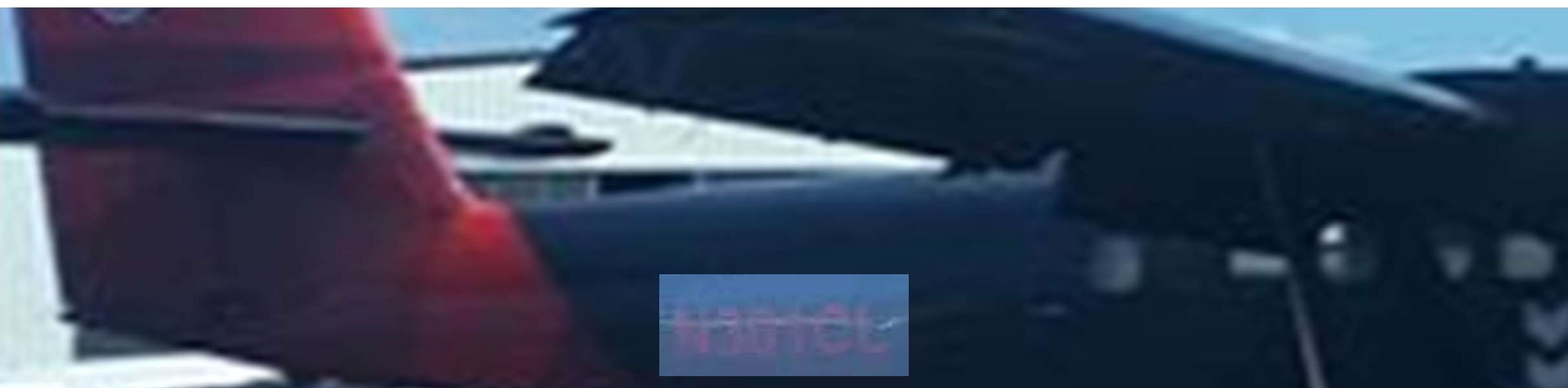


THE PROCESS OF IDENTITY RESOLUTION



THE PROCESS OF GEOGRAPHIC RESOLUTION





FAA REGISTRY
N-Number Inquiry Results

N301CL is Assigned

Data Updated each Federal Working Day at Midnight



Registered Owner

Name	WIN WIN AVIATION INC		
Street	7300 THOMPSON MILL RD		
City	WAKE FOREST	State	NORTH CAROLINA

SKYDIVE CITY INC. - Release of Liability and Agreement not to Sue

This is an important legal document! By signing it, you are giving up certain rights.

PLEASE READ IT CAREFULLY BEFORE SIGNING

In consideration of Skydive City Inc., allowing

First Name	Initial	Last Name

to utilize the facilities and participate in the skydiving/parachuting, aviation, and related activities (hereinafter referred to as 'activities covered by the Agreement'), I agree that:

1. **ASSUMPTION OF RISK.** I know and understand the scope, nature, and extent of the risks involved in the activities covered by this Agreement. I understand these risks include, but are not limited to: equipment malfunction and/or failure to function; defective and/or negligent design and/or manufacture of equipment; improper and/or negligent parachute packing and/or assembly; improper and/or negligent operation and/or use of the equipment; aircraft malfunction and/or negligent aircraft operation; carelessness and/or negligent instruction and/or supervision. I voluntarily, freely and expressly choose to incur all risks associated with the activities covered by this Agreement, understanding that those risks may include personal injury, damage to property, and/or death.

() Please initial when read

2. **EXEMPTION AND RELEASE FROM LIABILITY** I exempt and release all (but not limited to), the following persons, corporations, organizations including any and all manufacturers: Skydive City Inc., Sunshine Factory Inc., Sunrise Manufacturing Int'l Inc., JST Management LLC, Desert Sand Aircraft Leasing Co., Inc., Vertical Air Inc., J.R.'s Sky Inc., Alabama Skydiving Inc., Eagle Air Transport Inc., Win Win Aviation Inc., Jump Run Aviation LLC, Sky Sport Aviation LLC, United States Parachute Association, Alt-2 Incorporated, S.E. Inc. (dba Strong Enterprises), SunPath Products Inc., Uninsured United Parachute Technologies (dba UPT) LLC, Tandem Solutions Inc (dba Wings Tandem), all USPA, Strong, Wings & UPT Tandem Instructors, Airtec GmbH, SSK Industries Inc., Vigil USA LLC, skydiveratings.com LLC, Sally Hathaway (dba Paragon Rigging), Nylon City LLC, VGT Research LLC, Aero Adventures LLC, the City of Zephyrhills, Zephyrhills Municipal Airport; and including all of each person's, corporation's, and organization's officers, agents, servants, employees, representatives, lessors; (hereinafter

collectively referred to as "Releasees"), from any and all liability, claims, demands or actions or causes of action whatsoever arising out of any damage, loss or injury to me or my property, or my death, while upon the premises or aircraft or while participating in any of the activities covered by this Agreement, whether resulting from the negligence and/or other fault, either active or passive, of any of Releasees, or from any other cause.

() Please initial when read

3. **COVENANT NOT TO SUE.** I agree never to institute any Suit or action at law or otherwise against any of Releasees, or to initiate or assist in the prosecution of any claim for damages or cause of action which I may have by reason of injury to my person or property, or my death, arising from the activities covered by this Agreement, whether caused by the negligence and/or other fault, either active or passive, of any of Releasees, or from any other cause. I further agree that my heirs, executors, administrators, personal representatives, and/or anyone else claiming on my behalf, shall not institute any suit or action at law or otherwise against any of Releasees, nor shall they initiate or assist the prosecution of any claim for damages or cause of action which my heirs, executors, administrators, personal representatives, and/or anyone else claiming on my behalf may have by reason of injury to my person or property, or my death, arising from activities covered by this Agreement, whether caused by the negligence and/or other fault, either active or passive, of any of Releasees, or from any other cause. I hereby so instruct my heirs, executors, administrators, personal representatives and/or anyone else claiming on my behalf. Should any such suit or action at law or otherwise be instituted against any of Releasees, I agree that such Releasees shall be entitled to recover attorneys' fees and costs incurred in defense of such suit or action, including any appeals therefrom.

() Please initial when read

4. **INDEMNITY AGAINST THIRD PARTY CLAIMS.** I will indemnify, save and hold harmless Releasees from any and all losses, claims, actions, or proceedings of every kind and character, including attorney's fees and expenses, which may be presented or initiated by any other persons or organizations and which arise directly or indirectly from my participation in the activities covered by this Agreement, whether resulting from the negligence and/or other fault, either active or passive, of any of Releasees or from any other cause.

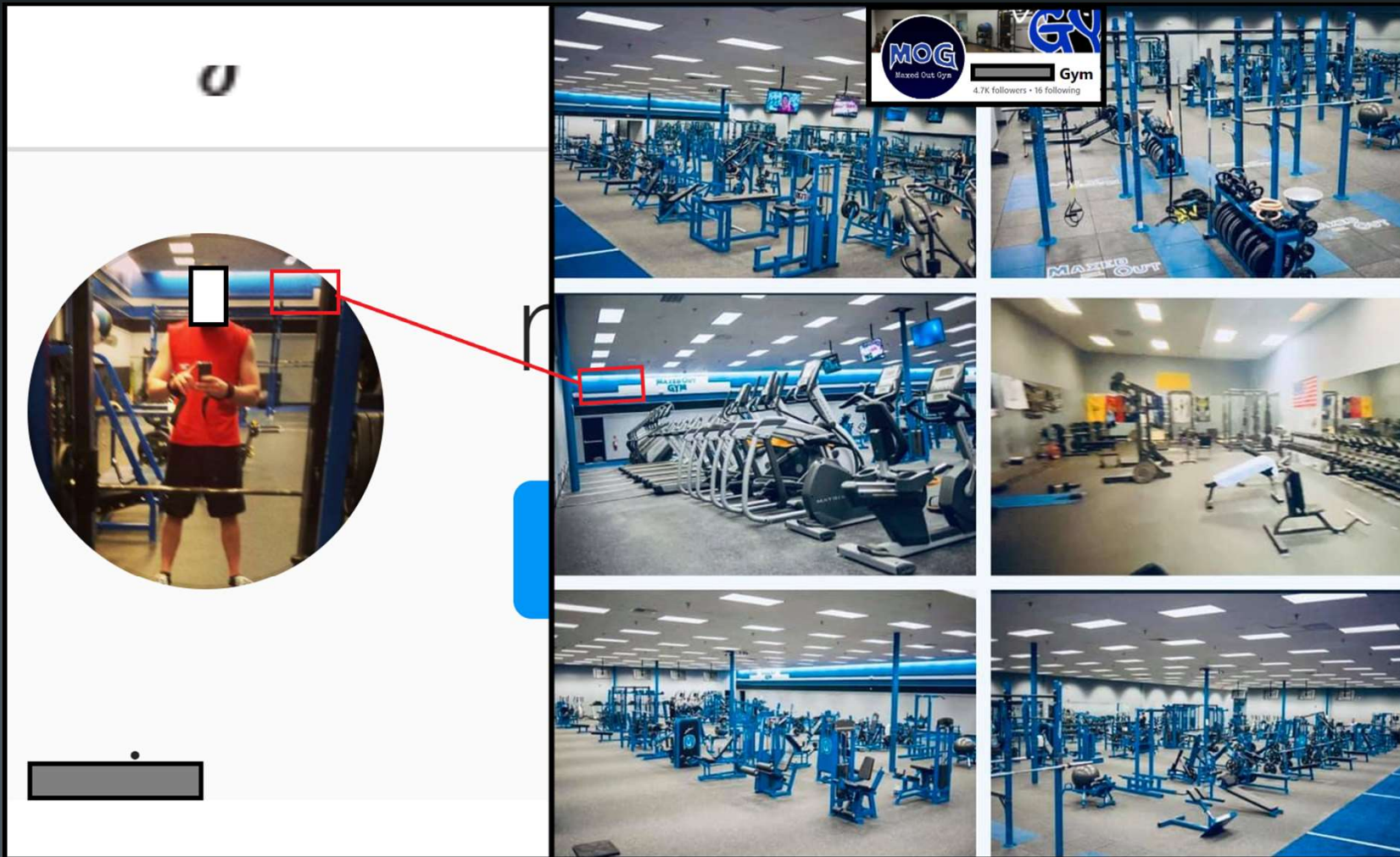
() Please initial when read

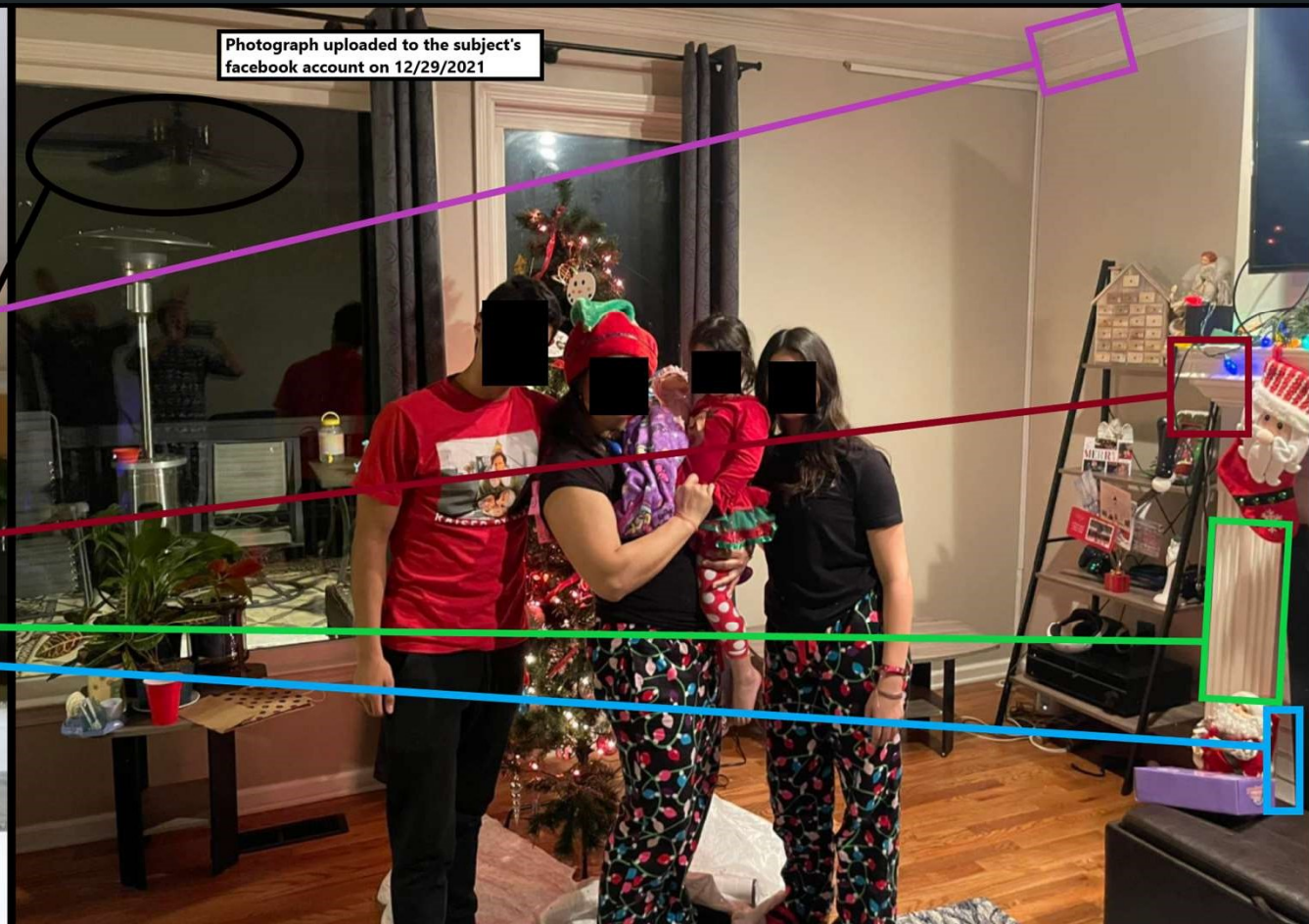
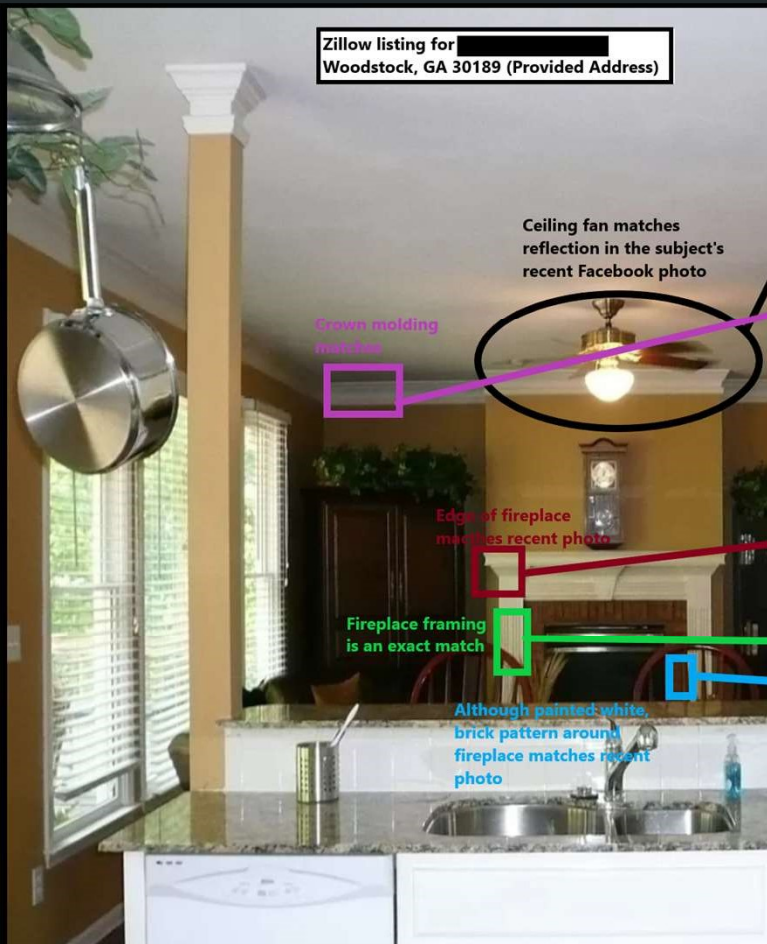
5. **VALIDITY OF WAIVER.** I understand and agree that if I institute, or anyone on my behalf institutes, any suit or action at law or any claim for damages or cause of action

2. **EXEMPTION AND RELEASE FROM LIABILITY** I exempt and release all (but not limited to), the following persons,

6. **REPRESENTATIONS AND WARRANTIES.** I represent and warrant that (a) I have no physical infirmity, except those listed below, am not under treatment for any other physical infirmity or chronic ailment or injury of any nature, and have never been treated for any of the following: cardiac or pulmonary conditions or disease, diabetes, fainting spells or convulsions, nervous disorder, kidney or related diseases, high or low blood pressure, (b) I am not under any medication of any kind at the present time, and







“THE INTs”

OSINT



GEOINT

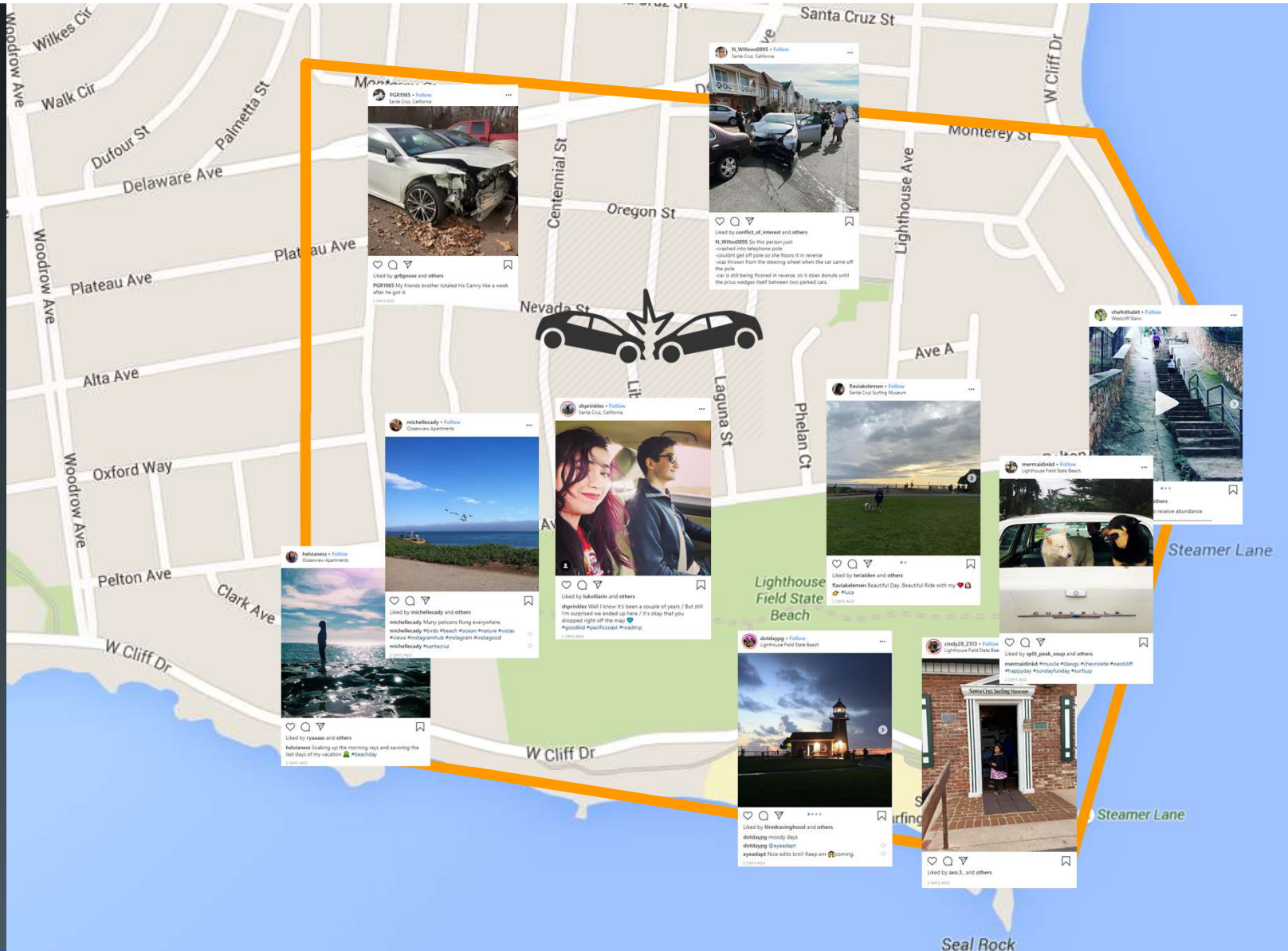


SIGINT



HUMINT

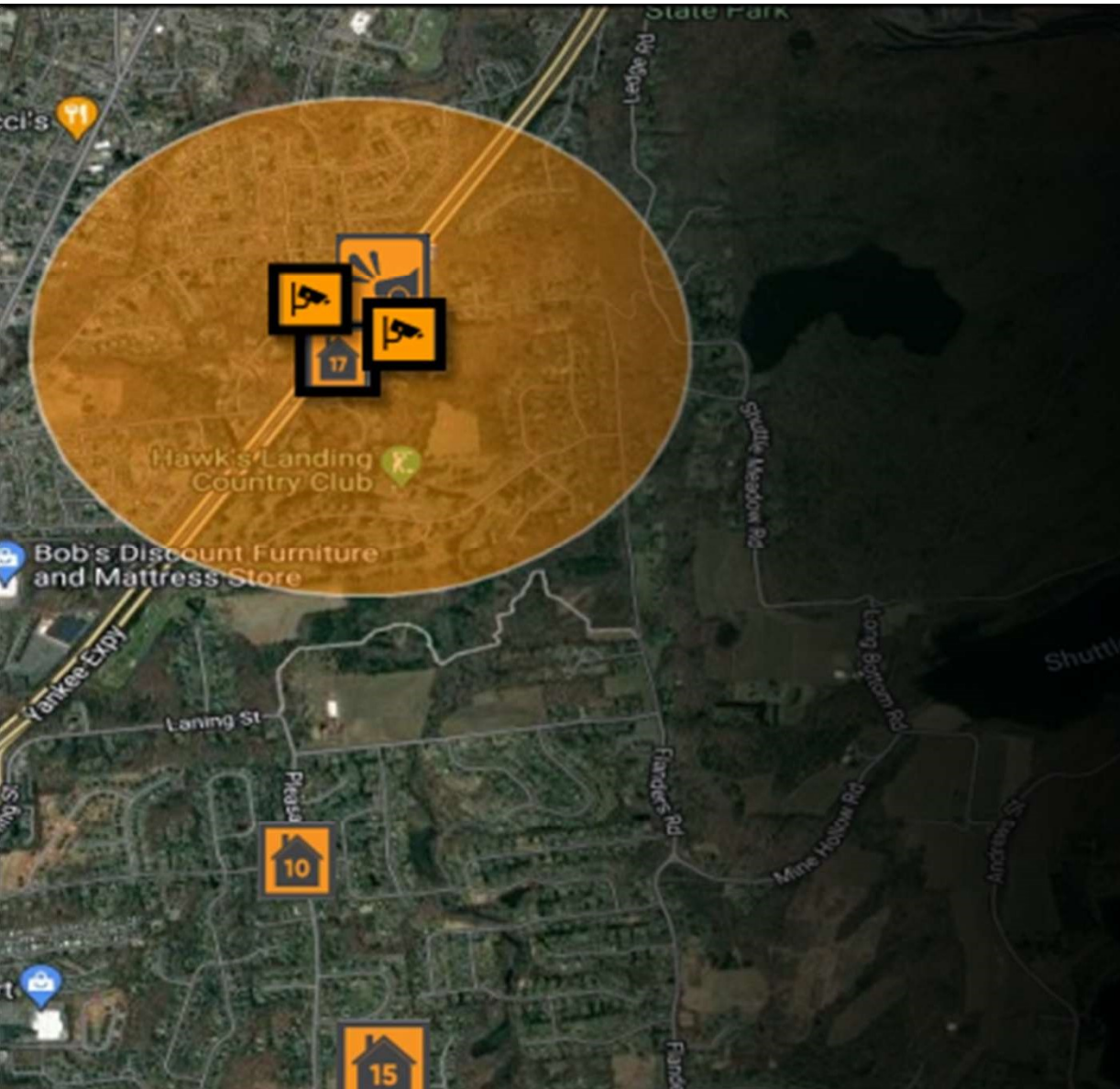






GEOINT CASE EXAMPLE:

EVIDENCE
COLLECTION &
WITNESS
IDENTIFICATION





Southington

I-84 East @ shuttle meadow bridge

Squad 5 on scene 2 car MVA involving a semi truck with confirmed entrapment

11:18 Am

Update squad 5 requested Cheshire and plainville for cover.

11:22 am

Photo by



   350

121 comments 59 shares



  Top fan
[Redacted]
My son's car was hit by debris from the car that hit the truck. That car was racing another idiot and plowed into the truck.
Like Reply 6d Edited   2

 [Redacted]
[Redacted] WHAT? Is he okay????? ***
Like Reply 6d

  Top fan
[Redacted]
[Redacted] he is fine. Emotionally shaken up. Both cars passed him doing 100+mph and he saw the car slam into the unsuspecting truck
Like Reply 6d   2

  Top fan
[Redacted]
[Redacted] just so you are aware, this car and another were racing at speeds over 100mph per the person they flew past and then he cut to right lane and TT going 65. So yes it is the cars fault.
Like Reply 5d Edited

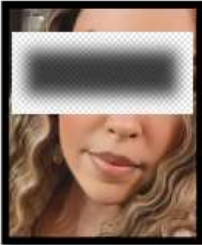


Persons/Locations of Interest

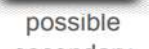
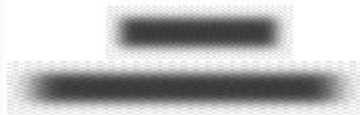
Possible Witnesses

Party #	Name/Handle	Photo	Role	Address and Distance from Incident	Contact Information	Link to Post
1	[REDACTED]		Possible Secondary Witness "yes he was extricated way before i got there"	[REDACTED] 10.9 miles	[REDACTED] @AOL.COM	https://www.facebook.com/NBCConnecticut/posts/10160653037489330?comment_id=3448244878776413
2	[REDACTED]		Possible Secondary Witness "Was just there they are using jaws of life to get"	[REDACTED] 39.3 miles	[REDACTED] @GMAIL.COM *	https://www.facebook.com/groups/BreakingNow/posts/1455966911809153/?comment_id=1455970401808804



3			Possible Secondary Witness "Car 4 calling working fire protocol"			https://www.facebook.com/groups/BreakingNow/posts/1455966911809153/?comment_id=1455970598475451
4			Possible Secondary Witness Uploaded photo of incident	 18.6 miles	  @HOTMAIL.COM	https://www.facebook.com/groups/BreakingNow/posts/1455966911809153/?comment_id=1455978865141291
5			Spouse of possible Secondary Witness  saw it literally right after it happened, he was driving by."	 9.5 miles	  @YAHOO.COM *	https://www.facebook.com/groups/BreakingNow/posts/1455966911809153/?comment_id=1455994128473098&reply_comment_id=145600411805433



6			Spouse of  possible secondary witness	 9.5 miles		https://www.facebook.com/groups/BreakingNow/posts/1455966911809153/?comment_id=1455994128473098&reply_comment_id=1456004111805433
7			Relative of possible eyewitness "my son's car was hit by debris from the car that hit the truck. That car was racing another idiot and plowed into the truck" "both cars passed him doing 100+ and he saw the car slam into the unsuspecting truck"	 15.7 miles		https://www.facebook.com/NBCConnecticut/posts/10160653037489330?comment_id=1377892829714236
8			Possible secondary witness "I went by this one"	 41.2 miles		https://www.facebook.com/groups/BreakingNow/posts/1455966911809153/?comment_id=1456158978456613

CCTV Cameras

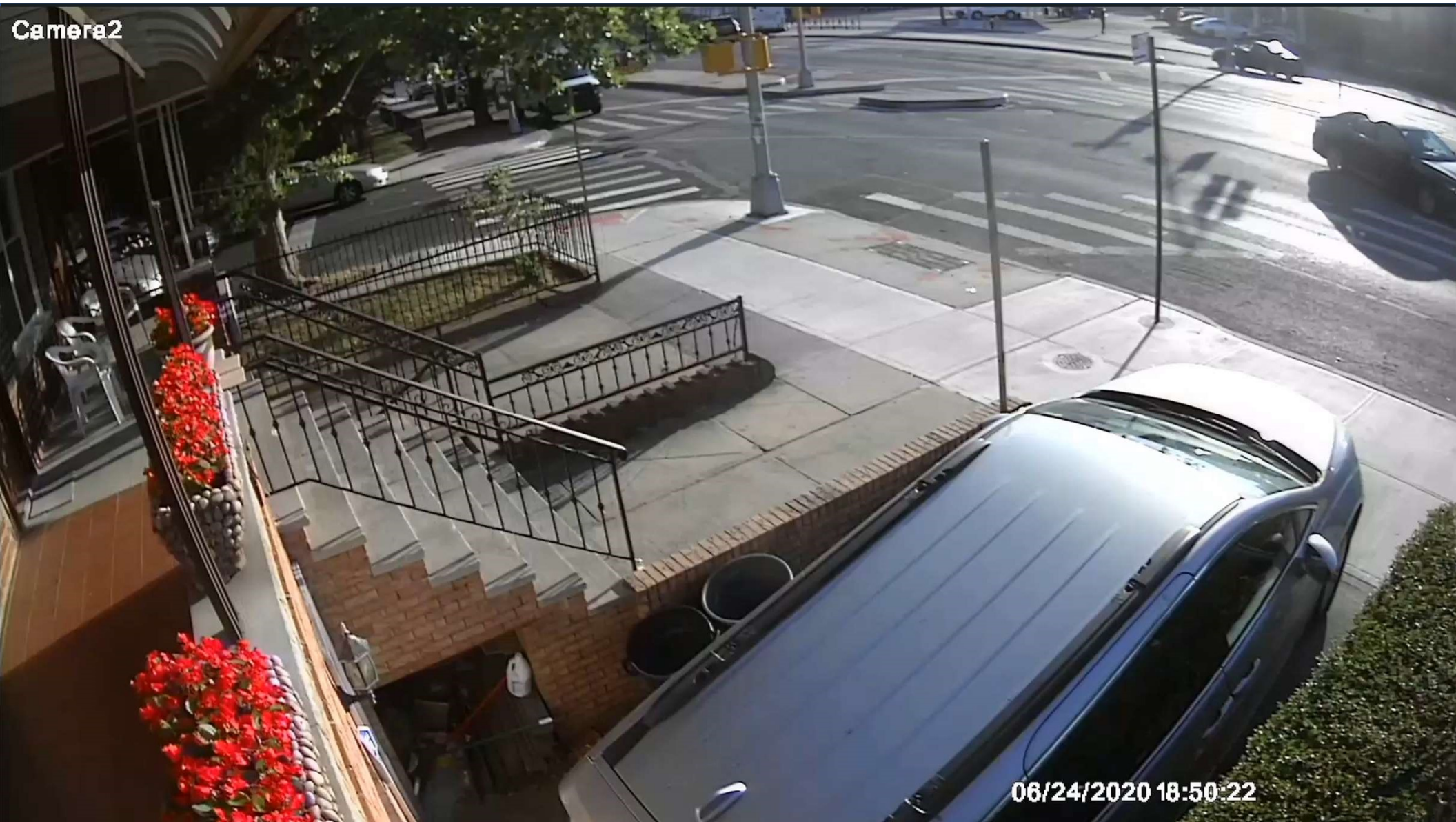
Camera Location	Photo	Distance from Incident	Notes
Exterior of [REDACTED]		250 ft	Possibly in view of the incident
Exterior of [REDACTED]		210 ft	Possibly in view of the incident
Exterior of [REDACTED]		180 ft	Possibly in view of the incident



NEIGHBORHOOD CANVAS



Camera2

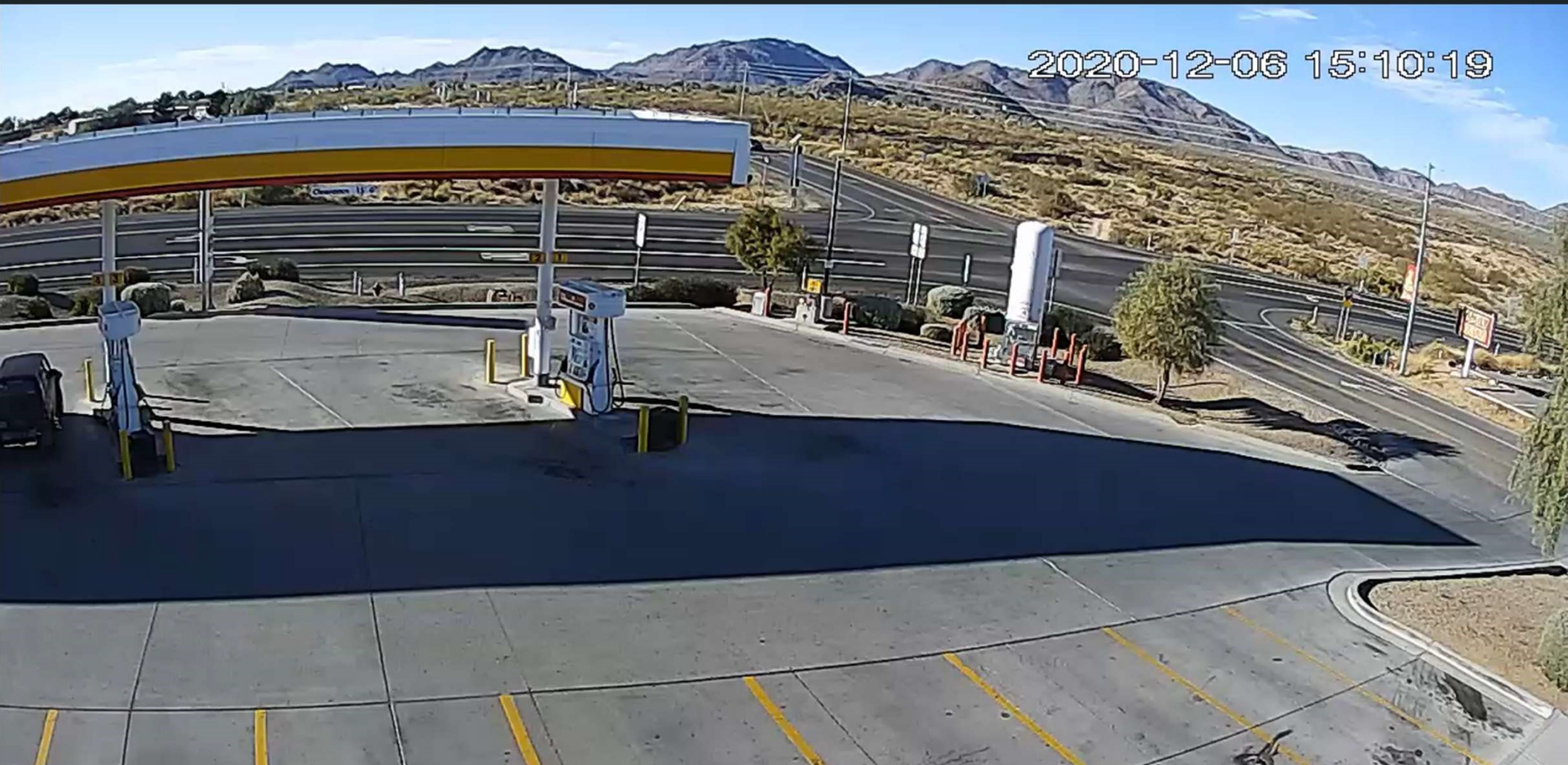


06/24/2020 18:50:22



OBTAINING CCTV IN THE PRIVATE SECTOR

2020-12-06 15:10:19





Imagery & Video Enhancement

Extracting & enhancing intel from
degraded content

Image Enhancement: Motion Deblurring



Image Enhancement: Optical Deblurring



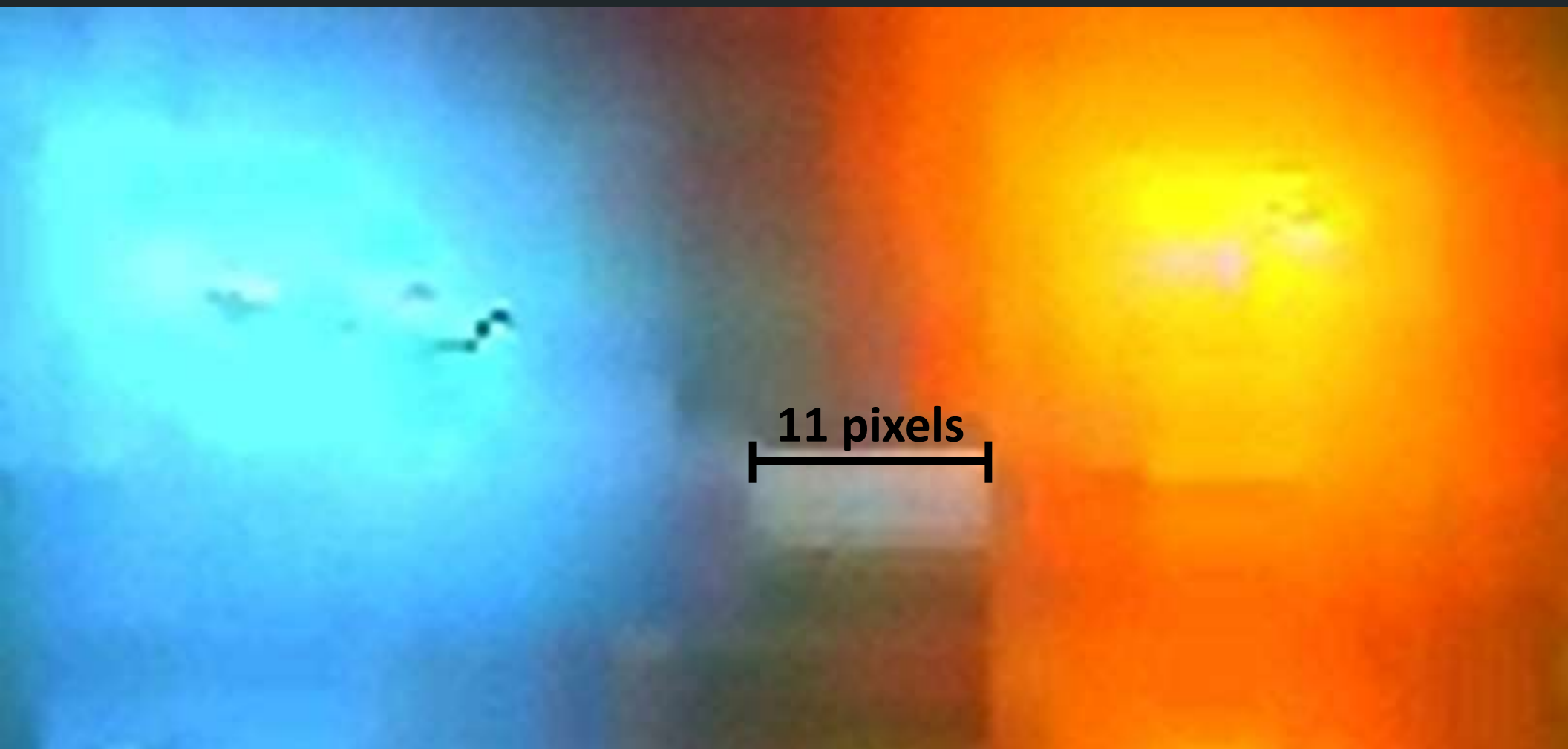


Image Enhancement: Correct Perspective









“THE INTs”

OSINT



GEOINT



SIGINT



HUMINT





DUE DILIGENCE

“A competent attorney needs to recognize the potential treasure trove of relevant information that mobile digital devices contain and to take steps to specifically request discovery of mobile devices and to preserve the digital information that is stored on them.” – ABA, 2016



SCOPE

Mobile Phone Capabilities:

- Device state (face-up/face-down)
- Text logs
- Call logs
- App data
- Location data
- Health data
- Photo/Video metadata
- Private chat data
- Deleted Data





PROCESS



DEVICE RECEIVED

Smaller devices are often shipped to UpStream using chain-of-custody measures.

On-site examination is available for larger projects.



DATA IMAGING

All data stored on the device is retrieved and stored electronically for analysis using industry-standard technology.



DEVICE RETURNED

As soon as the data retrieval is complete and checked for accuracy, the device is returned to the client/owner.



DATA ANALYSIS

Captured data is analyzed and report compiled that directly identifies the goals of the investigation and results.



REPORTING

Case-relevant data is identified and included in a written report to clearly summarize the most notable investigative findings.

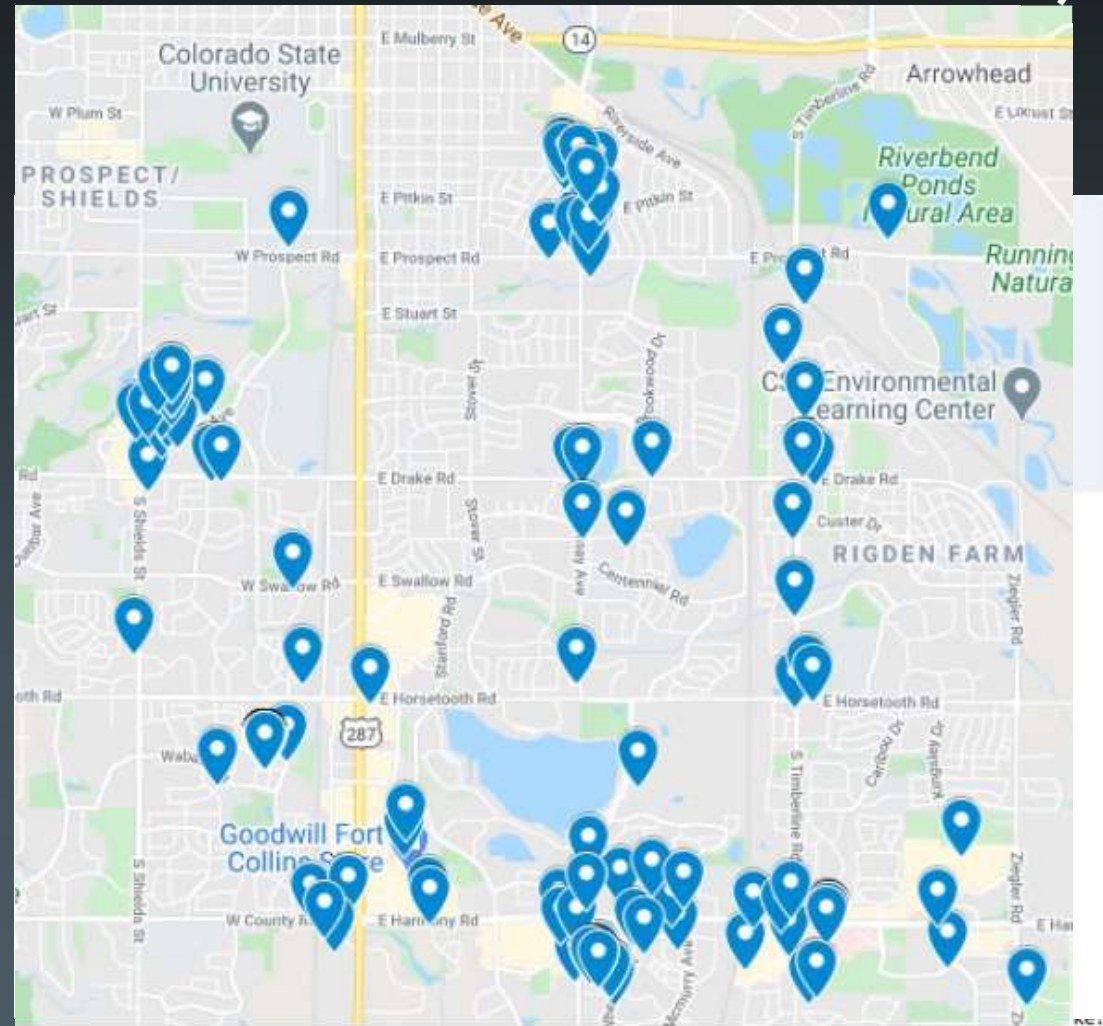


CASE STUDIES



MOBILE PHONE

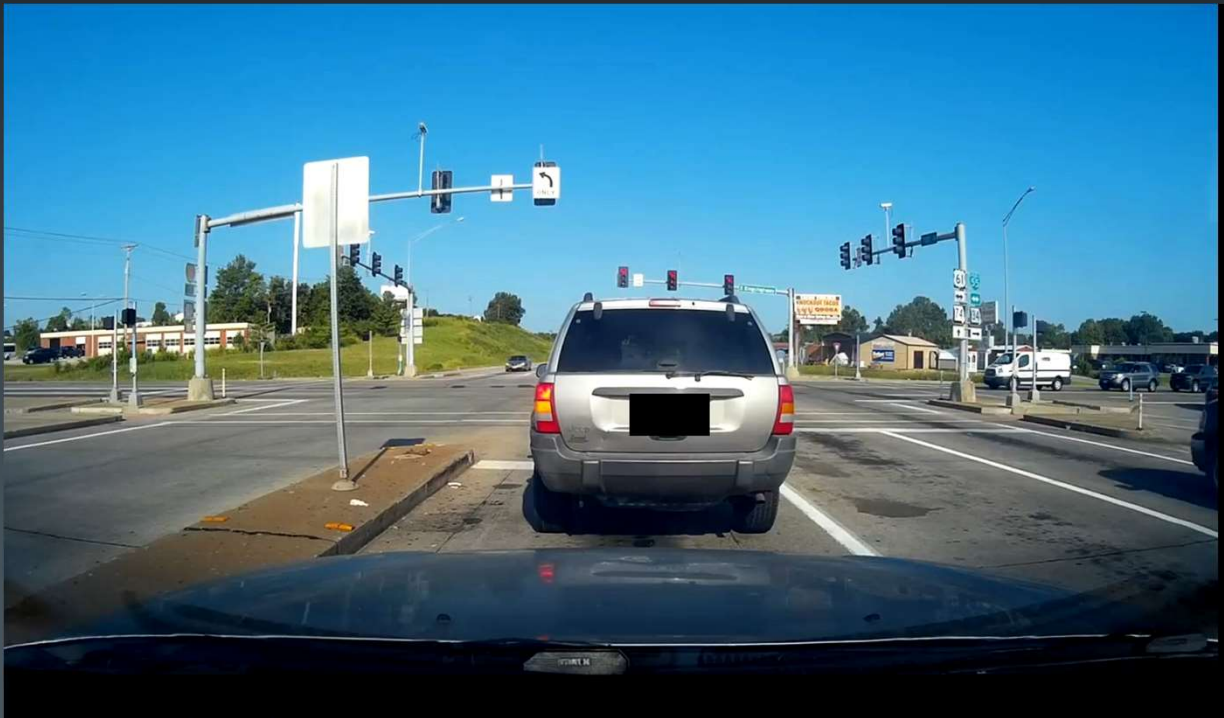
- Background: Subject allegedly contracted COVID-19 at work. We were asked to investigate his phone to trace his movements and activities leading up to his diagnosis.
- Forensics revealed emails suggesting involvement in community social events, and GPS data placed the device near addresses associated with these events.





MOBILE PHONE

- Background: Subject driving a commercial truck ran a stop sign, injuring a young woman in another vehicle.
- Forensics revealed that at the time of the incident, the subject's cell phone was playing a continuous stream of SnapChat videos, many of which contained adult content.

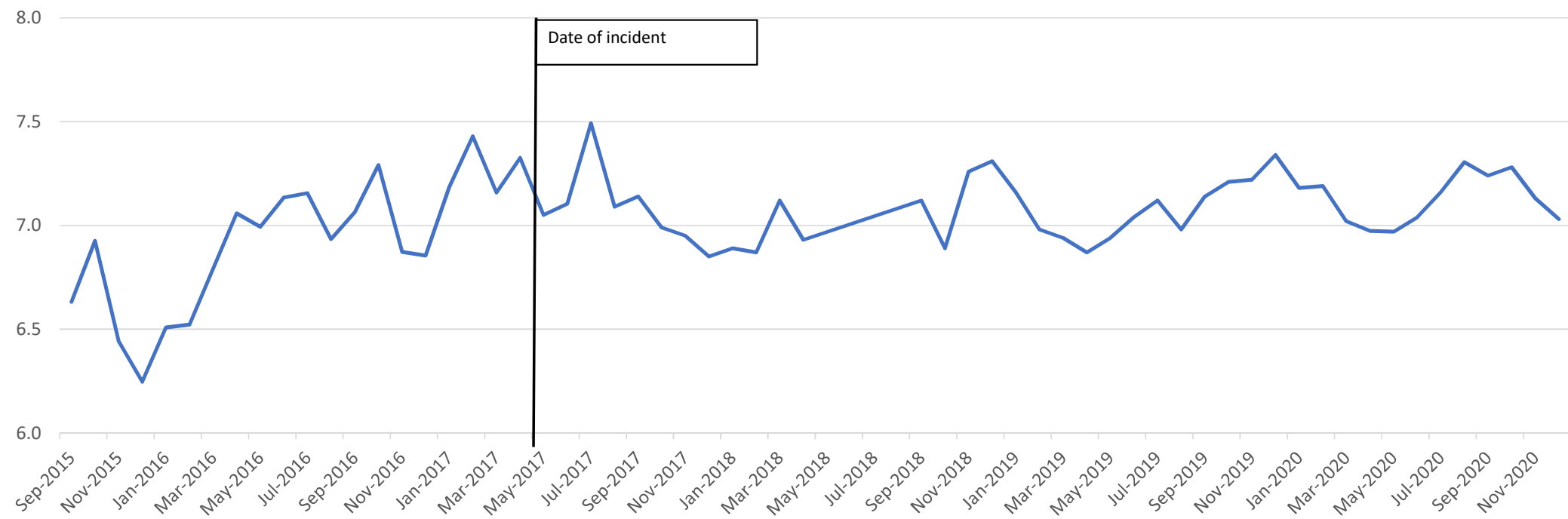


At 11:29:53 A.M. on August 13, 2013, [REDACTED] began viewing the Snapchat story of Triple B Nation on his Android smartphone which had processed the account earlier as photos and videos had arrived.



INTERNET OF THINGS

Hour Total of all Sleep Stages





SUMMARY

A competent attorney must recognize when data collected from mobile devices, computers, and IoT may be useful to their case.

Sample interrogatories are available, as well as a one-page explainer that can be used in court to obtain a subpoena.

Questions can be directed to DigiStream or UpStream and one of our technical experts can guide you through the process.

Device Location Forensics

Utilizing signal datasets to locate witnesses

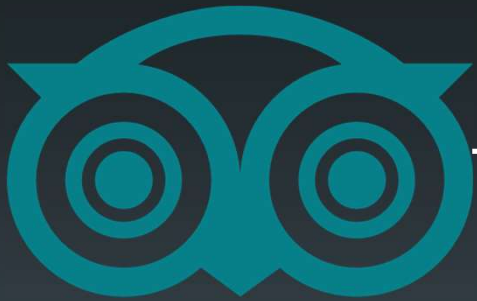


**DRAFT
KINGS**



Sorry! Sports betting is
not allowed in California!





Geolocation data in order to locate nearby events and venues.

SEAT GEEK

Geolocation data to confirm proximity to venue.

Uber

Geolocation data to locate nearby drivers, track ride, confirm drop off.



Device

037F85EF-2PHC-39D5-
A066-7D6UAC1EB308


**DRAFT
KINGS**

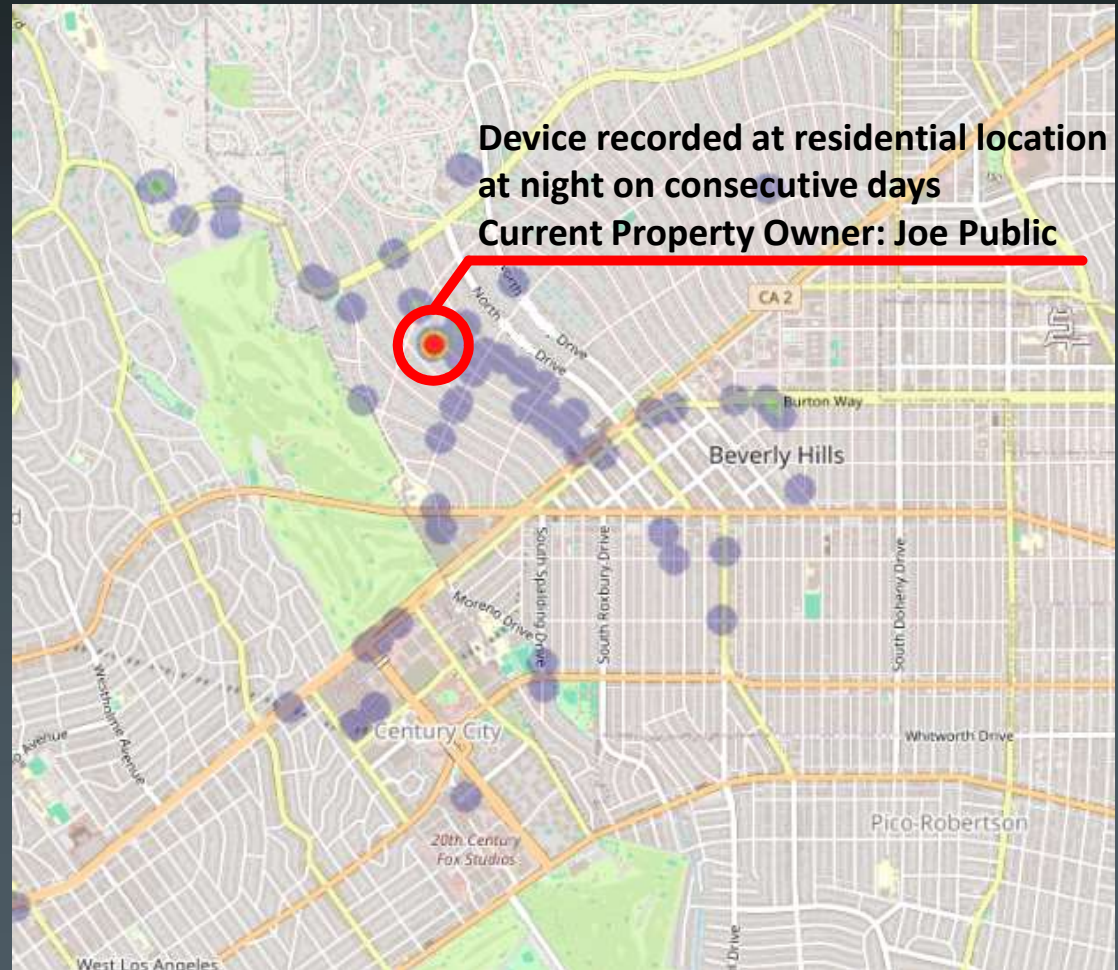
Geolocation data to confirm service eligibility.

Witness Location

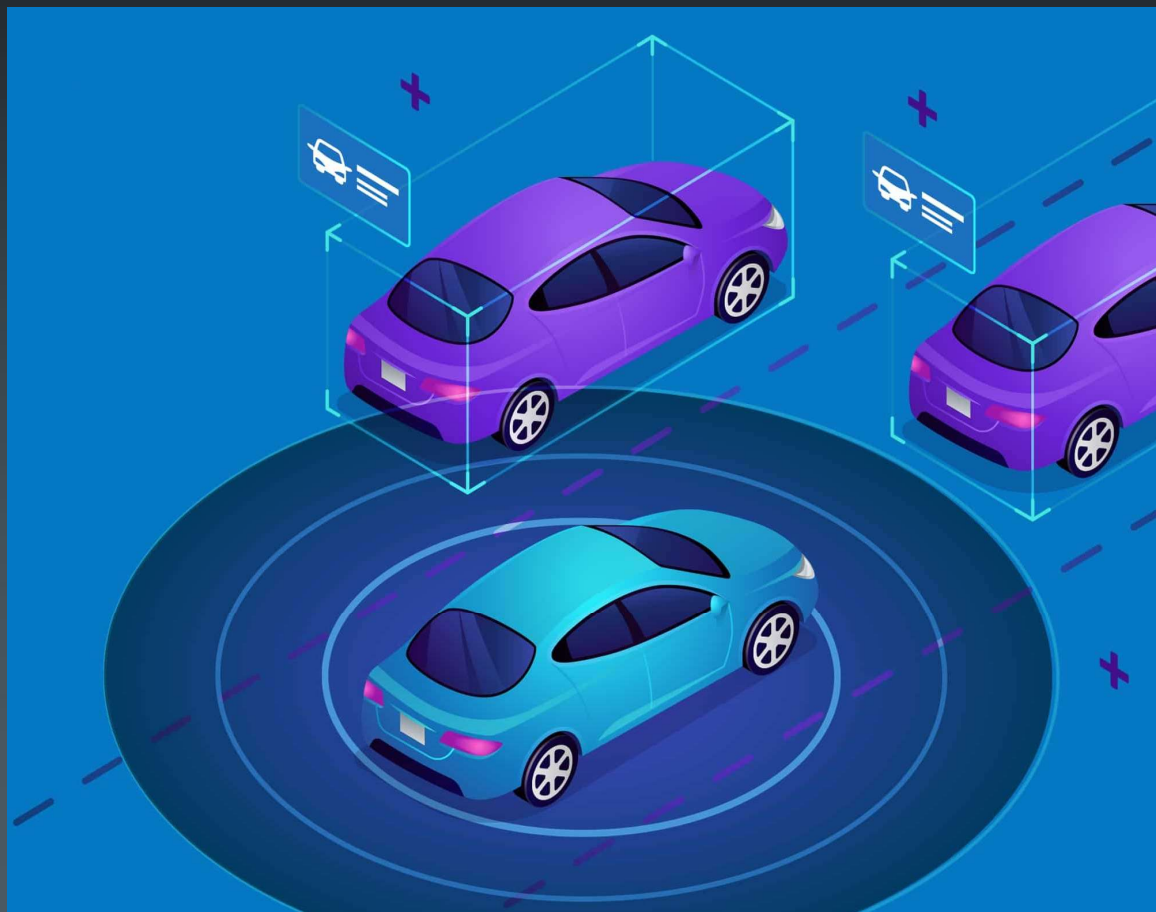
With a known location and time of incident, anonymized devices can be harvested within the area of interest

Once devices are harvested within the location, time filters can be applied to drill down even further

If a device is identified within the area of interest, and was present in the appropriate timeframe, analysis of the device's location history can be utilized to locate possible residences to deanonymize the device's owner.



VEHICLE SIGHTING REPORTS



What are VSRs?

- ALPR-generated list of locations, dates and times associated with specific vehicle sightings. 220 million records are added to the dataset monthly.

What are some investigative triggers?

- Surveillance confirms the subject or their vehicles not present at residence
- Background records uncover multiple addresses within a year
- Suspicion of outside or irregular employment
- Unpredictable patterns of activity

Aut
Pla
ed Li
ogni

018





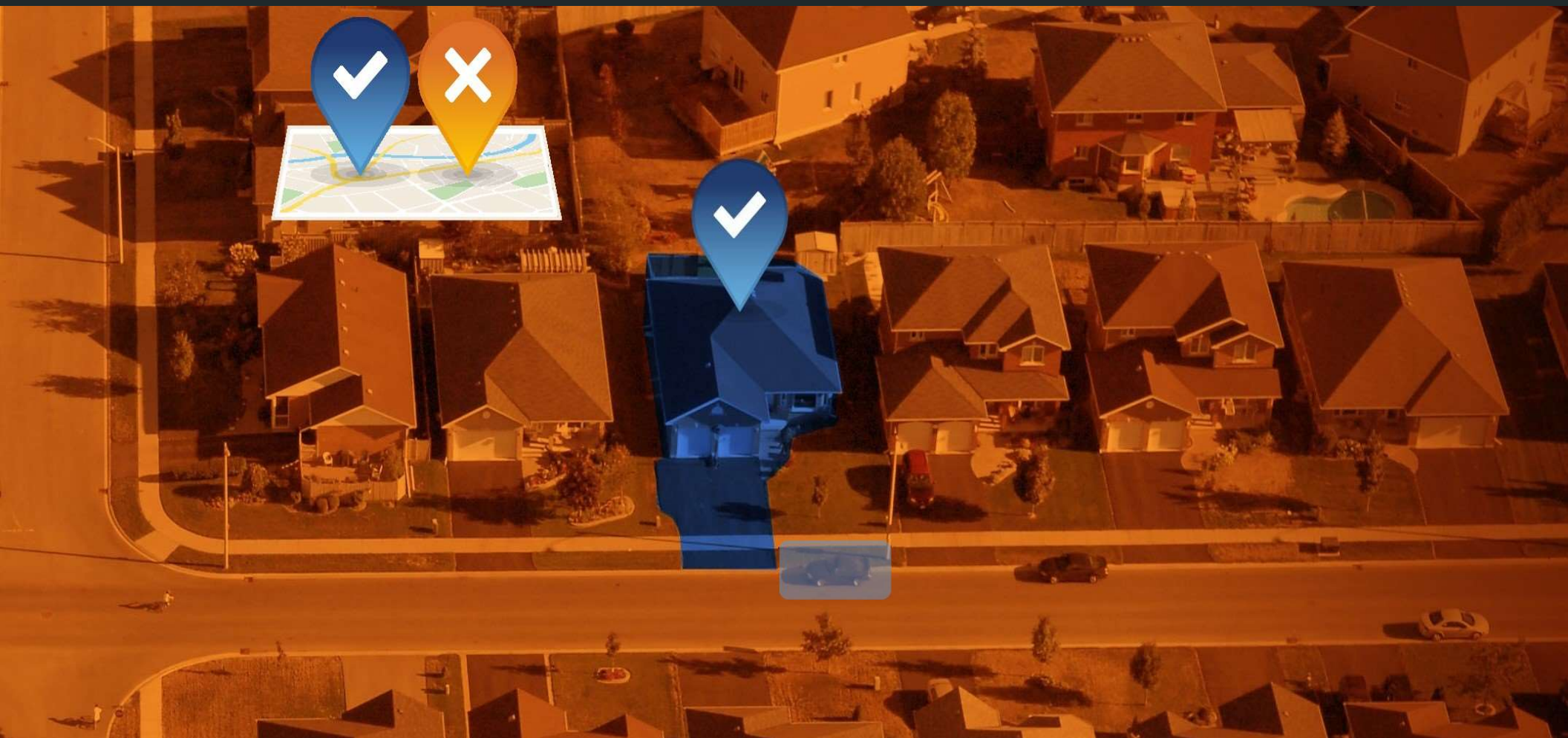
Vehicle Sighting Analytics – Case Study

SIGINT





Vehicle Sighting Analytics





MAY 20 2020 3:40:26 PM

“THE INTs”

OSINT



GEOINT

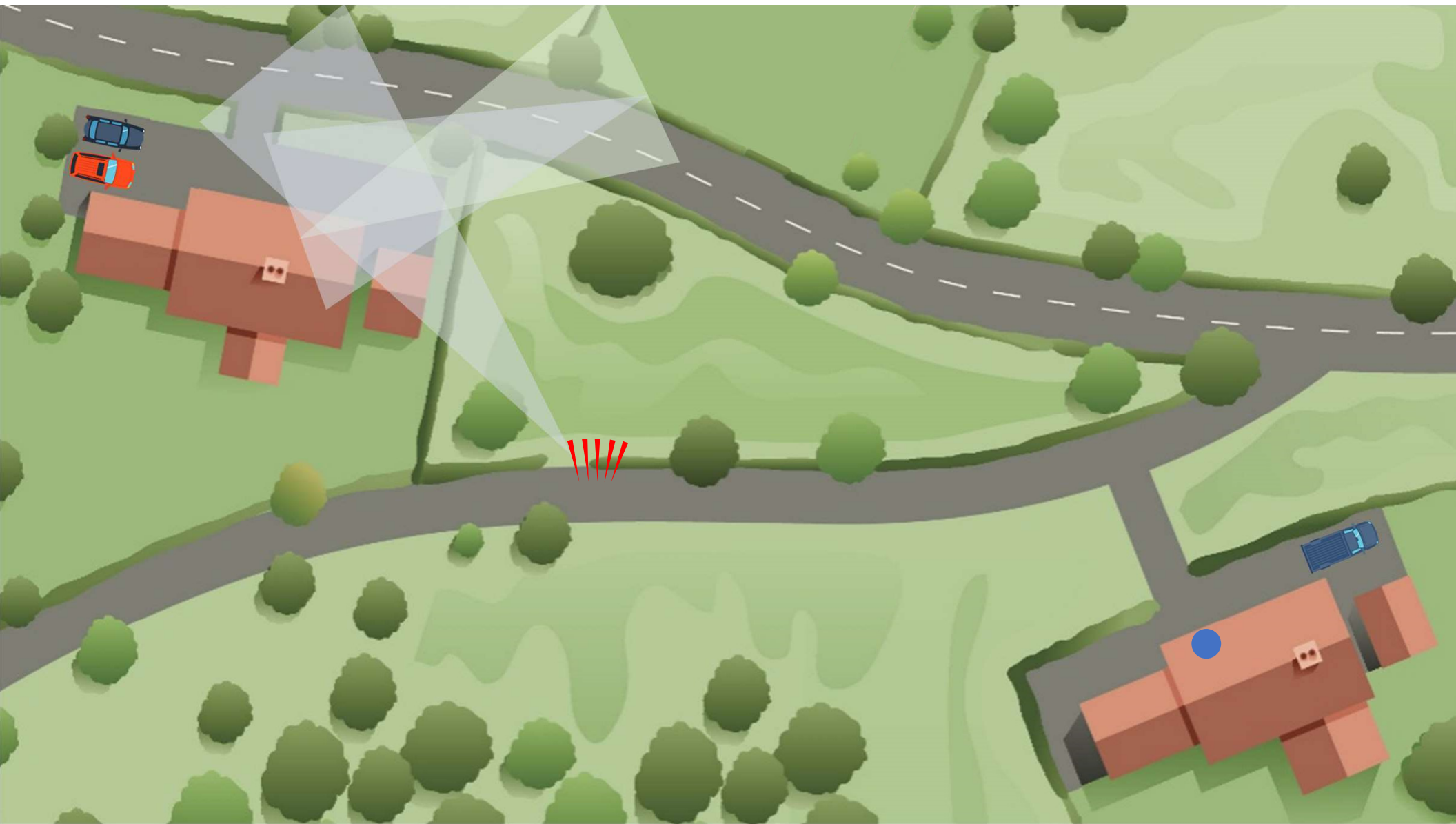


SIGINT



HUMINT

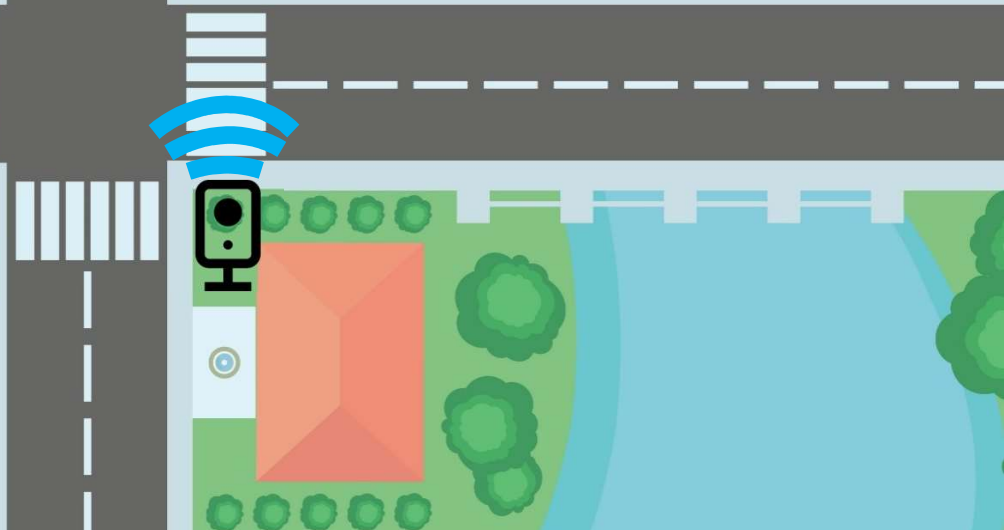
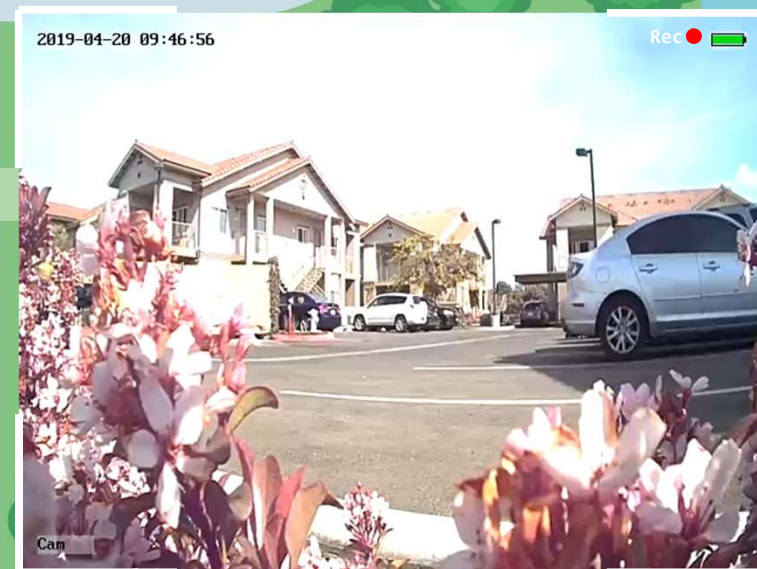




**Conducting better surveillance on fewer people
creates a healthy industry dynamic**

- Use of remote cameras mitigates the subject's suspicion in and around their residence





THANK YOU FOR YOUR KIND ATTENTION

Questions?

Ryan Johnson

Senior Partner

DigiStream Investigations

UpStream Intelligence

www.digistream.com

www.upstream-intelligence.com

