



LEVERAGING INVESTIGATIONS AND SURVEILLANCE WITH ADVANCED TECHNOLOGY

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Taking the knowledge of old investigative techniques and combining that with new technology is creating a better investigation. Technology has provided the investigative world with leverage in identifying fraud at various levels. Social media, privileged database searches and high-definition cameras have revolutionized the investigative industry and will continue to do so as technology continues to advance.

When I started in this industry in 1985, surveillance was done with a super 8 movie camera. On the horizon was the video camera and the VHS bag recorder. We had very little information to start a case as the Internet was still waiting for Al Gore to invent it and social media had not been considered as Mark Zuckerberg was age 1. An investigation started by talking to neighbors and going door to door with a frayed dog leash and picture of a cute dog and asking, "Have you seen my dog? My dog ran into your neighbor's yard, do you possibly know when they will be home or do you have a

work number where I could contact them?" This would then transition into a conversation about the subject in question.

POWER OF THE INTERNET



Today the Internet provides us with information through social media, relevant database searches and a variety of other websites that can give us a profile of the subject's activity level. We investigate insurance claims by starting with the Internet to develop leads, which we can then verify and produce a more substantive lead. The

Internet has made it easier for an investigator to pull video from sites (such as Instagram) that serve as a "selfie surveillance" as demonstrated in this photo. Sites like Tumblr, YouTube and Flickr also provide photos and videos that can cast doubt on a subject's case and help the client determine the merit of a claim.

WHERE DO INVESTIGATIONS BEGIN?

Profiling an individual under investigation is crucial in order to determine exactly where to look for social media. For example, if an individual was from Eastern Europe or Russia we would check Facebook, but also VK.com, which is one of the largest Russian social networks in Europe with almost 100,000,000 members. In fact, VK.com has become even more popular than Facebook in certain countries, like Israel, and others regions around the world. A comparison of the two sites is done to determine if the rhetoric used on Facebook is consistent with what is written on VK.com. Social media

monitoring is a method of investigation that can be advantageous to the client if used on the right individual. We monitor a subject's social media sites daily for up to four months. Once the URLs are determined on a socially active site, we catalog them and they are reviewed daily in hopes of finding an upcoming event in which he/she will be participating. This type of monitoring should only be used for a subject who is a very active user of social media.

A major part of the activities check involves personal surveillance made by an investigator. This usually requires one or more days of stealth monitoring of the subject's residence and/or place of business.

EVOLUTION OF DRONE TECHNOLOGY

Drone technology is revolutionizing the way we will fight in combat and how we may receive packages delivered to our homes and businesses. Drones are used primarily in investigations to get a better view of an area of the subject's property that is not visible from the street. The drone provides an image that can determine the best location to set up our surveillance. These "flying cameras in the sky" vary from large noticeable units to small palm size ones. Size does matter when talking about drones. When a drone is much larger, it has the capability to carry larger, more powerful batteries which can accommodate longer flight times. When you are using smaller drones that are the size of your palm, but are covert, you might only get 7-10 minutes of flight time out of them.

CAMERAS, SURVEILLANCE & NEW TECHNOLOGY



Covert cameras have been around for many years. They started with heavy cumbersome equipment that had to be attached to your body in some way. This equipment came with a transmitter that was attached to the camera by a long wire. For example, a pen camera would be placed in your top pocket and a hole would be cut out inside the pocket to run a wire to the transmitter taped to your body. Today technology has eliminated all the wires mainly due to the ability to compress data onto small chips

called mini SD cards. We can have a camera made out of just about anything today. Our agents carry key fob cameras, watch cams, phone cams, and hat cams plus a variety of others. These cameras usually run at a very low voltage so that they can operate for over an hour of recording time without a charge.

Traditional surveillance is used to determine a subject's level of activity, but in some instances surveillance might yield very little information or perhaps no activity for the client at all. With the advent of state of the art video cameras, wireless communication, and specialized software, surveillance can now be accomplished with remote controlled video systems.

The Marshall Investigative Group has developed such a system called the R.O.V.R (Remote Operated Video Recorder). This system is comprised of four basic components.

1. The first element consists of a high resolution Axis PTZ (Pan, Tilt, and Zoom) video camera. The camera functions are remotely controlled from operating software provided by the camera manufacturer.
2. The second component is a web-based camera server. This allows additional functionality of the camera which is provided by specialized video recording software.
3. The third component is a cellular-based communication link which allows the remote system to connect to the Internet over the cell phone network and makes it available to one or more operators or monitoring stations.

These three components are powered by one or more standard 12 volt car batteries which are hidden in an unmanned vehicle parked at the observation site. Depending on the amount of battery capacity, the system can run up to five days for 24 hours a day or perhaps longer with no charging. The system is discreetly disguised so as to not arouse suspicion and to prevent detection.

4. The fourth and final factor is client-based software in the investigator's office or another remote location.

The client-based software is provided by a vendor who specializes in video surveillance and can use a range of Ethernet cameras from a variety of vendors. The advantage of this software is that it can be configured to provide several pieces of information. First the camera can be told to record video only when there is motion in certain fields of view. The video can be configured for various resolutions conserving cellular bandwidth and cost. Two-way audio

can also be utilized if required in the setup or monitoring. After the video is recorded, investigators can visually see, on time lines, when and if there was activity during the surveillance. Only the video of the activity is reviewed, saving hours of time. After several days of video monitoring it may be possible to determine the subject's activity pattern. Then, if required, a surveillance investigator can be at the site at specific times to document more detailed information and follow the subject.

WORKING IN THE CLOUD

All of the stored data on the camera can be monitored and activity can be pulled from the camera through the cloud. This can be done at any time. Activity patterns at night are determined from disturbances in the megapixels. When these disturbances occur we are alerted and that video can be reviewed and downloaded to any remote location that possesses the proper software.

This technology is going to be a key tool in the future, as cameras become more sophisticated they will be smaller for stealth advantages and still produce very high resolutions with low IR (infrared camera) capabilities. It is the improvement in the IR capabilities that will give us an exceptional image day or night.

WHAT DOES THE FUTURE HOLD?

Technology is always changing and improving. Investigators will need to stay on the cutting edge of those changes in order to provide the highest quality investigations. There are cameras in every urban area watching our every move. The way we police our streets and investigate real cases will continue to change with the continued improvements that are being made within the video and audio technology industry. We are truly going where no one has gone before.



Doug Marshall is the founder of Marshall Investigative Group and has been investigating claims for 30 years. Often invited to present at key industry events, he has been a guest speaker at TIDA, the

Chicago TLA, Saint Louis Claims Manager, TLP & SA and USLAW NETWORK conferences among others. Marshall Investigative Group, a USLAW NETWORK corporate partner, specializes in insurance fraud investigations providing coverage throughout the United States.