Police Use of Drone Surveillance Technology

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ABSTRACT

Technology in the 21st Century has many advantages for society; however, the advantages available to law enforcement are far more prevalent than those for everyday society. The use of unmanned aircrafts or “drones” has seen a significant rise among law enforcement and has proven to be a successful tool in many aspects of the job. Drones are being used by not only law enforcement, but other first responders, such as fire departments and emergency medical services, for a wide variety of reasons. These unmanned aircrafts have been drafted and adapted for use in finding lost citizens in areas that are inaccessible to pedestrian or motor traffic during searches. There have been instances where video cameras and FLIR infrared cameras have been attached to drones to find subjects at large or to track heat signatures in hostage situations. The use of the surveillance technology is immeasurable in value in the aspect of public safety. The ability to survey an area during an active crime or investigation is imperative, with the added benefit of having low visibility by suspects or wanted persons.

The concerns that the public has in the use of drones with any surveillance operation would be infringing on a person’s civil rights and if it is protected against unlawful searches or seizures. Some feel that the use of a drone with a camera attached, to monitor an area, may be a very intrusive action. Law enforcement officers must keep to their oath to protect and defend the constitution of the United States as well as all civil liberties afforded to those we are sworn to protect.
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INTRODUCTION

A drone is an aircraft that is operated without a human pilot (remote control) also known as unmanned aerial vehicle (UAV) or Remote Piloted Aircraft Systems (RPAS) (Unmanned Aerial Vehicle, 2014). Drones are well known as a remotely piloted aircraft. Austrians launched unmanned bomb-filled balloons to attack Venice in the mid-1800’s; this is when the concept of drones came about.

To train personnel, the military utilized drones beginning in the early 1900’s, for use in target practices (Propel, 2021). The drones were operated by either remote control or by preset on board computer programs (Propel, 2021). Companies that own pipelines are using drones for surveillance as well as asset protection (Landpoint, 2017).

Drones can be programmed with automatic character recognition software that allows for the scanning of license plates with extreme accuracy, thus, adding another benefit to the use of drones, especially in stolen vehicle recovery. Many police agencies have developed the use of global positioning system (GPS) signals being tacked onto evading vehicles to track the movements of suspects, all while maintaining as much public and motorist safety as possible (Congressional Research Service, 2011). The same technology can be applied and used with unmanned aircrafts to help terminate vehicle pursuits in a timely manner at the risk of becoming too dangerous for public roadways.

Drones can be easily disguised for a multitude of purposes, with some even being as small as a bird. The small size and easy cloaking of the aircrafts present an advantage unprecedented since the utilization of undercover police officers. These
devices can be purchased or ordered with simply a standard camera, or they can be built with more advanced options that allow for a variety of surveillance needs and options.

In the very near future, law enforcement will take an aggressive turn to the use of drone surveillance as a safe and more practical alternative to undercover operations. The United States military and various governmental agencies began using these modern-day unmanned aircrafts to locate suspects in Operation Iraqi Freedom and other operations launched around the globe (Tucker, 2014). However, organizations such as People for the Ethical Treatment of Animals (PETA) have found use for these drones to track and help prosecute poachers, which threaten to endanger the nation’s wildlife (PETA, 2013). Also, to no surprise, the drone technology has also made an appearance in agricultural farming operations, as farmers are utilizing drones to measure crop production and growth remotely (Guma, 2013).

One day drones will be flying all over and be visible across our home skies. Drones have also flown through the skies of the United States since the President used the drones for behavior struggles on terror and the people affiliated with terrorism. In 2020, the Federal Aviation Administration (FAA) took part of the 30,000 unmanned aerial vehicles (UAV) flying in the sky. The drones can be tracked in the American airspace but is rare to see through the public’s eye across towns and cities. Although many drones can be airborne, there can be many drones used by nearby regulation enforcement employees for policing activities. Regulation enforcement employees ought to permit significant independence and get admissions to the drone surveillance technologies (Wolverton, 2012).
When drones had been utilized in locations like Afghanistan and Yemen, Americans began to pay attention to such aircraft. Drones are helping cameras to boost the anticipation of a fantastic new road to the notice of American living. The Federal Aviation Administration is under business and government pressure to open the way for domestic deployment of drones, due to security concerns.

The drones in the 21st Century are quickly becoming less expensive and more powerful. Police departments are deploying drones more than before, and our secluded legal guidelines aren’t sufficient to make certain that the brand-new generation may be used responsibly. Policing is about the protection of rights, prosecution of law violators, and public safety. With this improved technology, law enforcement can develop new and creative ways to continue to protect such freedoms.

In short, all portions appear like lining up for the eventual advent of recurring aerial surveillance in American lifestyles, an improvement that could profoundly alter the man or woman of public lifestyles within the United States. The Fourth Amendment set outlines to what we trust to defend Americans’ non-public lives while partaking in the use of drones (U.S. Const. amend IV). The United States wishes to provide individuals with recommendations that will nevertheless revel in their lives, even though drones can watch each flow and now no longer be scrutinized via way of means of neighborhood authorities. Eventually, the authorities will no longer carry law enforcement as a top-notch step in the direction of a “surveillance society” due to the drones. For a long time, unmanned aircrafts were doing aerial surveillance. The Wright Brothers constructed a surveillance plane and brought it to the military, and it is believed to be one of the first aircrafts that the Wright Brothers constructed.
Many matters are useful to regulation enforcement and the usage of drones are inclusive of finding and rescuing victims or suspects and combating wildfires and floods as well as some risky tactical police operations. To aid in policing efforts, law enforcement personnel should be given more latitude and access to drone surveillance technologies.

The Supreme Court dominated within the 1980’s, and the Fourth Amendment does categorically rule out the authorities from transferring out warrantless examinations of personal property (U.S. Const. amend. IV). Some drones are so small and quiet that they can get away without notice. The regulation enforcement and military are searching for ways to enhance and grow smaller drones. The smaller drones have the gain of being mobile, less luxurious to buy and maintain, in addition to utilizing stealth beliefs to help in operations. The aircraft themselves are constantly becoming better, as a lot have up to date technology which is likely to continue. These modern-day drones have advanced energy with a widespread potential to last for an extended length of time. They are operating to tech robots on the way to disguise and creep upon a subject.

To carry out secret or high-profile missions, drones will more than likely be outfitted, programmed, and designed with a greater amount of artificial intelligence to be able to conduct these high-risk operations. The fact that drones are becoming more and more intelligent is one reason why the military and law enforcement are using them in such a vast variety and frequency. The main utilization of drones is for their surveillance capabilities; however, the most prevalent use of drones has been by the United States military during overseas, ground, and aerial events. To prevent possible failures due to
fuel depletion, it is thought that drones should be outfitted with solar panels, or even to be launched mid air by other flighted vehicles (Regan, 2018).

Law enforcement agencies should use unmanned aerial vehicles, also known as drones. By the 25th Century, drones that utilize cameras all the time and have different emulsion technologies, will have broader capabilities. The massive, large drones may be contoured to hold guns or heavy payloads. It is important for law enforcement to have drone technology. Law enforcement can benefit on many levels due to drones being used for ground operations and officer safety to prevent as much officer and first responder harm as possible. Additionally, drones can be deployed to provide critical incident surveillance during a developing incident. Utilization by the forestry service can show how drones can be of use in the event of a forest fire or flooding. However, most of all, drones can be used in the critical location of missing persons, especially small children in dense or thick areas.

**POSITION**

Drones are legal, and aid in combating and managing natural catastrophes such as wildfires and floods. Drones have proven to be valuable in giving humanitarian aid in the wake of natural catastrophes, and unmanned aerial vehicles (UAVs) have proven to be quite efficient and helpful in detecting victims and delivering necessary aid.

They can survey an area before entering, allowing firefighters to assess the risk and determine the supplies needed to effectively fight the disaster. This gives them a better understanding of the situation. It’s also important for emergency operations centers (EOC) to communicate effectively. The drones can promptly notify EOC of any rapid changes that need to be communicated to other advanced teams, allowing EOC
to send backup if necessary. For instance, if a firefighter in a wildfire is designated to carry a transceiver, drones can help teams carry less weight. Thermal imaging in drones also provides for the detection and extinguishment of the fire, lowering the chance of fires re-igniting. There is a lot of support and use of drones during these natural disasters that can help the EOC, and the first responders do their jobs safe and efficient.

Another benefit with the use of drones is that they can assist the officers with reactive and proactive policing. Reactive policing includes situations such as tactical operations, crime scene photography, and even search and rescue operations. Proactive policing includes traffic monitoring, crowd management, or even detecting crime in public places (National Academies of Sciences, Engineering and Medicine, 2018). Drones can carry facial recognition cameras, registration code scanners, thermal imaging cameras, open Wi-fi sniffers, and various sensors, and can be armed. Drones can record video and provide temperature maps, which might be valuable in locating fugitives, stranded hikers, or even political demonstrators. To assist with internal policing actions, law enforcement personnel should be given more latitude and access to drone surveillance technologies.

With the usage of drones through the government, it became useful to the arresting of Rodney Brossart with the aid of using a neighborhood police department. There was a constitutional dispute among regulation enforcement and the network due to the fact of the home deployment of drones, which was placed in the courtroom docket on Rodney Brossart. Police dispatched off a drone after Brossart held regulation enforcement at bay for sixteen hours (Wolverton, 2012). When Grand Forks Police Swat
desired to cease the standoff, they requested for help from the Grand Forks Air Base, which is home of the Department of Homeland Security’s squadron of predator drones (Wolverton, 2012). After the drone became launched, the drone placed Brossart’s specific vicinity, and the SWAT officials dashed in and arrested Brossart on distinctive charges (Wolverton, 2012).

To get a license to fly a drone, the FAA has two processes. These processes are the employer making use of applying for authorization ought to pick out one or the opposite and ought to perform beneath positive regulations carried out to all publicly owned aircraft (Federal Aviation Administration, 2019). The Certificate of Authorization (COA) requests the employer to record and self-certify their drones, pilots, and places of operation (Federal Aviation Administration, 2019). The law enforcement applicant ought to certify with their very own drone (Federal Aviation Administration, 2019).

In the Federal Aviation Administration Regulations, to get certified as a remote pilot, one must be sixteen years of age and know how to read, write, and speak English (CFR, 2019). The pilot must take an aeronautical knowledge exam at an authorized Federal Aviation Administration testing center and must go through a TSA background check. (Federal Aviation Administration, 2017). The schooling is usually factored into the acquisition of the drone and through the manufacturer depending on the form of drone. The schooling will vary from $1000-$3000 at the side of the examination for the faraway pilot’s certificate fee of $150 (Federal Aviation Administration., 2017). The drone must weigh less than 55 pounds and be registered as an aircraft under Part 107. The agency can operate under the requirements of Part 107 after the pilot is certified,
including quick airspace exemptions, through the future low altitude authorization and notification capability program (Federal Aviation Administration, 2017).

**COUNTER ARGUMENTS**

The Constitution, via the Fourth Amendment, is part of the Bill of Rights (U.S. Const. amend. IV). It prohibits unreasonable search and seizures (U.S. Const. amend. IV). The Fourth Amendment, however, isn’t always an assurance in opposition to all searches and seizures (U.S. Const. amend. IV). The United States government needs to undertake modifications to which state, federal, and private need to be allowed more freedom and get admissions to drone surveillance technology to help within the police activities.

The Fourth Amendment was created to protect each person’s home from government searches and seizures (U.S. Const. amend. IV). It safeguards against arbitrary detention and serves as the foundation for laws governing search warrants, stop-and-frisk, security inspections, wire taps and other types of monitoring (Cornell University Law School, 1992). When flying in airspace, in at least 1,000 feet, someone’s personal estate is not protected by the Fourth Amendment, accordingly to a Supreme Court decision in 1986 (California Vs. Ciraolo 246 U.S 207, 1986). The Fourth Amendment now no longer needs regulations enforcement touring within the public airlines to achieve a warrant for a person to notice what’s seen to the bare eyes, the courtroom docket said (California Vs. Ciraolo 246 U.S 207, 1986).

Regardless of the fourth amendment message, drones are not always a clear-cut answer to technology as it is a higher-tech surveillance. An unmanned aerial aircraft can see clearly into your backyard and can also take thermal-sensitive photographs. As
a result, according to Scott Bomboy, it will improve drones’ ability to learn digital communications, locate GPS data, and apply recognition technologies (Bomboy, 2014). Drones can do state of the art surveillance. While the local government is already using drones, they can transport a variety of equipment, including cameras with heat sensors, radar, and infrared systems.

Another argument against the use of drones, to the various useful factors of drone surveillance to law enforcement is the amount of money required to operate a drone. Police departments that are strapped for cash in their yearly budget may turn to drone surveillance as a cost-effective alternative to helicopters (Carter, 2012). In a small law enforcement town, where there are financial problems, it would be a useful tool to use drones because they are cheap. To help law enforcement out, it is wise to fly drones in high crime rate areas to possibly stop burglaries, auto thefts or to watch known criminals in the area. As law enforcement is conducting undercover stings, they can send in drones for surveillance to ensure the officer’s safety. To help law enforcement out, they can use drones to observe traffic patterns to make sure they are working right; report violations of ecological safety rules, violations of building codes, and other safety and building activities. Law enforcement prefers drones because of their low cost. One of the reasons why law enforcement prefers to use drones is to save money on fuel and maintenance while also reducing labor.

The average cost of a helicopter outfitted for police use is anywhere between $120,000 to $3,000,000 dollars, and, additionally, it can cost a department upwards of $400 per hour to operate said aircraft (Guma, 2014). The utilization of drones is more affordable (Guma, 2014). It can be a costly measure to invest in, function, and keep in
good condition. However, the cost and risk of the utilization of these devices is much lower than that of a standard rotating wing aircraft. The idea of a less expensive, tiny, mobile flying drone threatens to eliminate existing practical limits on space tracking and allows aerial photos. Law enforcement fishing voyages and abusive use of these instruments could put an end to Americans’ privacy. The surveillance generation connected drones (UAV) is becoming much less steeply priced with the cost of electronics becoming cheaper. The drones are extra effective with mass productions. The aircraft that delivers the one electronic becomes less expensive and sufficient for a police branch to fill the skies over a city with them. (7 Pros and Cons of Drones and Unmanned Aerial Vehicle, Ohio University, 2021).

When flying in the skies or space, some government drones can stay in the air for hours and days at a time, and, with their technology, they can survey entire cities. Furthermore, at 60,000 feet, some military drones can magnify and read a milk carton. (Kamimura, 2014) If government authorities wanted to identify their whereabouts or prevent them from texting or calling, they could employ drones to hold wireless crackers and impersonate mobile cell phone towers to determine those facts and their location. Drone manufacturers are aware that they are made to carry much less deadly weaponry, such as tasers or foam bullets.

The FAA is drafting policies for the use of domestic drones. Defending dissent believes that jurisdiction is limited within the government agency. Institutions of a public database of drone operators, records about the surveillance technology used, and the operator’s data minimization method should provide safeguards with the Fair Information Practice attempting to stay within compliance for licensing (Guma, 2013).
RECOMMENDATION

Law enforcement agencies should use unmanned aerial vehicles, also known as drones. There are more benefits to the use of drone technology than the obvious negative benefits. A crucial function in crime prevention comes from everyday patrol of the streets that occur with the aid of using law enforcement. With drone guidance, and no longer for courtroom docket supervision, the latter may be substantially appreciably increased. The use of drones is to cover. Nobody’s civil liberties may be overstepped if using drones is covered with the aid of using cautiously crafted policies and oversight. When using drones, the main purpose is to catch criminals that are in the act of committing crimes or to possibly stop the crimes from happening by using an eye in the sky.

Don’t allow the invasion of privacy to keep them from taking advantage of a drone. First responders and law enforcement personnel should know the ruling of the Fourth Amendment regarding UAVs and use them to assist with what they are needing. They will benefit the department in emergency situations, including reactive and proactive policing. Drones can be used in tragic situations, such as natural disasters, and will be effective in aiding law enforcement and other first responders.

There are legitimate concerns about intrusion into one’s personal life and people do not want their privacy invaded by law enforcement by using drones to look into their bedrooms for reasons other than surveillance. However, these issues of those in opposition to drone utilization in the United States need to no longer be allowed to crush the societal advantages which could be collected from the technology (Bommarito, 2012).
Every agency will be able to purchase a drone, either by their own budget or through a grant. Agencies need to do their research on the grants and apply for one through the Department of Homeland Security. The cost is not that extravagant and will be an asset to the department for a variety of incidents throughout the department.

Law enforcement will continue to believe that they can use drones to check on Citizens, regardless of what the situation is, without getting a warrant or legal process. The privacy law has not been able to keep up with the rapid advancements in drone technology. Several legislations are making their way through Congress and are attempting to provide privacy rights to Americans who may be caught up in drone monitoring. As the number of companies authorized to fly drones grew, the FAA predicted that as many as 30,000 drones may be flying in the skies of the United States via various means soon (Electronic Frontier Foundation, 2019).
REFERENCES


_California V. Ciraolo* (1986). 246 U.S. 207


Federal Aviation Administration. (February 2019).


http://muckraker-gg.blogspot.com/2013/04/rebel-news-41913drone-wars-privacy-vs.html

https://blogs.unicef.org/blog/drones-to-the-rescue/


https://www.propelrc.com/history-of-drones/


U.S. Const. amend. IV. https://www.law.cornell.edu/constitution/fourth_amendment