



THE FORCON EDITION NEWSLETTER

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- August 2019 -

SERVICE WITH VISION - DRONES

YOU'VE likely seen a tourism promotional video or an ad for a large scale real estate development that takes advantage of drone mounted cameras. What about more industry specific uses? The current and very near abilities of drone use in the insurance, construction and forensic investigation industries are numerous. With drones the sky is the limit... well technically, [Class G airspace](#) is the limit.

WHEN it comes to viewing a large area, whether it be construction, an accident or a production facility flying a drone over the site can give you a current and all-encompassing look at the area. For construction purposes this could be useful to verify the progress of a project. For an accident site it's a great way to get a clear view of where all the debris is right after the accident and before clean up or abatement efforts begin. This nearly instant imaging means that both the site review and clean up can be done as quickly as possible since it allows for measurements to be taken later and models of the area to be created. These recreations can even be done in a 3-dimensional view.



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DIFFICULT to access structures and facades are now more quickly, safely and completely viewable. If it involves a steep pitch, multiple stories or out of the ordinary structures like smoke stacks or bridge decks, drones are an excellent tool employ. The inspection process can not

only be done safer as there is no need for ladders or lifts, but it can also be done faster. Within 20 minutes of getting on site you can be looking at photos or even videos. That speed is also due in part to not needing scaffolding

approved and erected, which means inspections can be done within days instead of weeks or even months. Also, rapid identification of problems or damage allows the source/cause to be determined and corrected more quickly than before. With diminished cost and time requirements for drone inspections over traditional inspection methods it allows for increased ability to conduct proactive and routine inspections. That has the added advantage of minimizing claims and lawsuits that could arise as a result of business interruption or injuries if problems go unidentified and uncorrected.

WITH a max payload of 55 pounds for commercial drones there is nearly no limit to the types of attachments that can be added. Every type of sensor you can dream is being devised for use on drones, from radiation, gases, and chemicals, to topography and bathymetry. If there is a large scale version someone is finding a way to miniaturize it and put it on a drone. Gas leaks can be more quickly detected and located resulting in the necessary repairs being made sooner. From charting water levels that could relate to pre and post flood levels and shoreline erosion to measuring and possibly even predicting heavy metal accumulations, the use of drones in measuring and predicting high risk areas for insurance purposes is ever expanding. The jurisdictional requisites of the Miller Act have been met.

ALTHOUGH the pros of incorporating drones into the standard toolbox of many industries are seemingly boundless, there are some aspects of drone use that can potentially take the fun out of using them. Flying next to a property whose owner thinks you've trespassed or taken pictures you didn't have permission to take is one example. Flying over disputed land is an even more thorny example. Issues like these magnify the concerns over personal property rights and permission issues in

general and in our industry. This new method of observation and data collection also opens a whole new avenue of liability and insurance issues.

A way to help with permissions and property rights issues, especially for larger and more public places is geofencing. Geofencing for drone restriction purposes uses GPS or RFID to create a virtual boundary around a specific area, like the stadium hosting the Super Bowl, which restricts a drone from going farther up in the air space or closer towards the “fenced” area.

WHEN it comes to security, geofencing is just one part. Researchers, industry leaders and law enforcement agencies are finding ways to keep drones out of private airspace. According to the February 2018 study by Arthur



Holland Michel,

[Counter-Drone Systems](#) there are over 230 counter-UAS (C-UAS) products on the market. Some work by detection, interdiction or a combination. From simple tactics like nets to more advanced spoofing techniques

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and everything in between (including RF and GNSS jammers, lasers and radar detection) C-UAS is a fast-growing industry in its own right. There’s even been some research into using birds of prey to snatch drones out of the air, though most have not pursued it due to its high cost and extensive training requirements.

WITH the rise in popularity in drone use for commercial purposes it’s important to note that the Federal Aviation Administration has very strict regulations on drone usage. You might be surprised to learn that to fly a drone commercially one needs a Remote Pilot Certificate. There is also a full set of operating rules as spelled out under **Part 107 of the Code of Federal Regulation (CFR)**. For our purposes today, we will be only addressing the requirements and regulations of a commercial drone.

RPC requires the pilot to be at least 16 years old, pass an aeronautical knowledge test and undergo Transportation Safety Administration (TSA) security screening.

Code 107 includes restrictions on the craft itself and its movement and location during flight:

- Unmanned aircraft must weigh less than 55 pounds, including payload, at takeoff
- Fly in Class G airspace*
- Keep the unmanned aircraft within visual line-of-sight*
- Fly at or below 400 feet*
- Fly during daylight or civil twilight*
- Fly at or under 100 mph*
- Yield right of way to manned aircraft*
- Do not fly directly over people*
- Do not fly from a moving vehicle, unless in a sparsely populated area*

ALL the above asterisks note that you can get a [waiver](#) that exempts you from those restrictions, if properly submitted and with FAA approval, though some are more readily approved than others.

AS the development of additional scanners and software focused for project site progression tracking and claims reporting continues to grow, the usefulness of drones, despite its initial barrier to entry, will become undeniable and even the risk adverse insurance industry will openly welcome this technological advance. If you are looking into using a drone, whether it be commercially or recreationally, check out the [FAA website](#) for your first steps.