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Invasion of the Drones

s drone popularity, function and capabilities rise, it becomes increasingly apparent that unmanned aerial vehicles will have a hand in transforming the way that campus security is conducted. Drones simply provide more accurate and widespread coverage than stationary cameras. That's why some higher education facilities and campus security executives are quickly adopting (and even developing) camera drones to assist them in keeping campuses safe.

The University of Alabama in Huntsville (UAH) has already announced that the school would be using drones to assist campus police in maintaining a safe campus environment. Additionally, there are at least 25 universities in the U.S. that have been approved by the Federal Aviation Administration to fly drones in U.S. airspace.

I recently spoke with John Minor, Provost at Unmanned Vehicle University (UVU), about the benefits that drones can offer enterprise security. UVU is the first University in the world licensed to grant Doctorate of Science Degrees in Unmanned Systems, Masters of Science Degrees in Unmanned Vehicle Systems Engineering, and a Professional Certificate in Unmanned Aircraft Systems Project Management.

The University's goal is to educate and train the next generation of drone pilots in the security sector (and beyond) to make sure that they are prepared and properly trained to profit from drones capabilities once approved for use by the FAA.

Why does UVU want to educate and train the next generation of drone pilots in the security sector?

UVU's mission is to be "the World's Best Provider of Unmanned Systems Education & Training." We educate and train individuals, corporations and government organizations to excel in more than 300 commercial applications. Security is just one of those applications – albeit a critical one, that covers the spectrum between national and private security during a period of geopolitical and economic volatility.

What is to be done about people who don't want to limit their drone use, who don't want to be educated about proper drone use?

Regulation versus freedom. We hope to support the minimum regulation that provides safety and security while encouraging the entrepreneurial spirit and economic growth. This is a "thin line" at times; with the correct balance of regulation and enforcement, those who choose to abuse their "technological" freedom may not be able to tolerate the consequences.

How can drones benefit the security industry? Which part of the industry in particular?

Global vigilance. High-quality, persistent and human factor-friendly intelligence and surveillance (ISR) drones, from the micro-UAV to high-altitude longendurance (HALE) platforms, are an extremely cost-effective means of accomplishing the majority of security tasks. Among the many sub-missions under the ISR umbrella, Customs and Border Protection, in addition to Homeland Security, are rising above the rest due to controversial and compounding issues such as: immigration, counter-drug operations, proliferation of smaller weapons of mass destruction and domestic or "homegrown" terrorism.

What are your thoughts to stop rogue drones – operators who invade airspace (JFK and LaGuardia) and private property?

Specific techniques in regards to regulation enforcement have been tested in the automobile, aircraft and naval vessel transportations sectors. Individuals have owned and operated these manned vehicles and the public has "tolerated" the accident,



fatality, injury and financial accountability data thus far. One potential solution includes mandating technological safety equipment (i.e, collision avoidance, redundant systems and lost link logic) as a main component of integrating drones into the national airspace (NAS).

In your experience, what is the best drone application in the industry to date?

Real estate, aerial surveying, aerial photography and precision agriculture are trending incredibly well, have incredible market growth figures, and are expected to be in the top 10 commercial applications for the foreseeable future.

What do you think of the concept of certain "airspace" for drones, like Amazon has proposed, and what implications would that have for the security industry?

As of 2015, the FAA has released a notice of proposed rulemaking (NPRM) in regards to the commercial operation of drones in the NAS. It specifically limits operators to control only a small unmanned aerial system (sUAS) in the NAS. In defense of the FAA, their ultimate responsibility is the protection of people and property in the air and on the ground. This NPRM puts our first wave of commercial drone operators in a relatively small "pen" - drone weighs less than 55 lbs (25 kg), travels less than 100 mph (87 knots), and achieves an altitude less than 500 feet above ground level (AGL) all within visual line of sight (VLOS). As time goes by and accident statistics are available, the FAA will likely modify and expand the current regulation to eventually "satisfy" the public need; balanced with the protection of the masses. §