

Coming Soon to a Neighborhood Near You

By: William F. Garcia

In the beginning of Star Wars, when Princess Leia programmed R2-D2 with secret plans and sent him to deliver them to Ben Kenobi, R2-D2 crossed in front of a blaster battle and went straight to the escape pod to complete his mission. As a kid, I watched and wondered why he would do that, rather than wait for the shooting to stop. Our world has changed since 1977 and the subject of airborne robots is now a heated topic for aviators, hobbyists and the Federal Aviation Administration. A computerized automaton obeys its programming without concern for itself or others. This is evidenced by the debate and recent lawmaking efforts regarding Unmanned Aircraft Systems, called UAS or drones.

In the near future, pizza, an Amazon book order, or mail may arrive at your doorstep by UAS. This is the future that Amazon envisions, and the FAA provided approval for Amazon to begin testing such a delivery method on March 19, 2015. Under the current FAA testing guidelines, Amazon is permitted to fly drones only during the day, within 400 feet of the ground, and within sight of an operator who has a traditional pilot's license. Amazon's vision for the future, first announced in 2013, includes delivering packages weighing up to 5 pounds within a 10-mile radius in an automated fashion. This would mean that Amazon could deliver packages over an area greater than 300 square miles using automated drones controlled from one central location.

The FAA's approval with limitations is in keeping with a proposed rulemaking that was released by the FAA on February 15, 2015. However, the FAA's rulemaking applies only to small UAS (less than 55 pounds) engaged in non-recreational activities. There are not state laws in Colorado to fill in any gaps left open by the FAA's proposed rulemaking. Colorado's laws related to aircraft, found in the Aeronautics Act of 1937 at Title 41 of the Colorado Revised Statutes, defer almost entirely to "the lawful rules and regulations of the United States government then in force."

These technologies, and the laws applicable to them, may become something of practical concern over the next few years for many businesses. If such commercial uses are approved, there also could be many uses applicable to agriculture. A local farmer flying a UAS carrying a camera with infrared capabilities could observe crops, determine whether disease is present, or tell how effective the farm's irrigation systems are. There are, however, several obvious hurdles to overcome before commercial use of UAS can become part of everyday life.

The FAA's main concern is the safety of the air traveling community and of those of us on the ground. Absent improvements in collision-avoidance technology, an autonomous drone would proceed directly from point A to point B regardless of what crosses its path. A drone striking an airplane or helicopter could mean disaster for the passengers involved. President Obama found out on the morning of January 26 that a UAS can lose control, go off course and crash on the White House lawn.

The danger to the public that the FAA is not addressing is the threatened erosion of privacy rights by autonomous eyes in the sky. These questions are for other segments of our government to answer. Do Peeping Tom laws apply to UAS and their operators? Do the police need a warrant to conduct UAS surveillance? Can a private person or company conduct surveillance? The current proposed FAA rules will apply to governmental, commercial and research usage but not to a hobbyist.

The hobbyist, like the one who crashed a drone on the White House lawn, need not have any training or demonstrate any skill in safely handling a UAS before piloting it around the park or the neighborhood. Operator certification, flight ceiling limits and aircraft registration and marking are also addressed in the proposed rulemaking. The comment period ended April 24, 2015. The proposed rulemaking can be found at www.faa.gov/uas/nprm/.

Technological advancements have brought significant benefits to our lives but can also have negative impacts that are not immediately recognized. Commercial drone use could become a common part of everyday life over the coming years. We should consider the benefits that UAS technology can provide and how to best integrate it into our lives.