



PREPARED STATEMENT OF KESPRY

for the

**COMMITTEE ON SMALL BUSINESS
OF THE U.S. HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON INVESTIGATIONS, OVERSIGHT, AND
REGULATIONS**

on

**OPPORTUNITY RISING: THE FAA'S NEW REGULATORY
FRAMEWORK FOR COMMERCIAL DRONE OPERATIONS**

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Prepared Statement of Gabriel Dobbs

Chairman Hardy, Ranking Member Adams, and distinguished members of the Subcommittee, thank you for the opportunity to testify today on behalf of Kespry and the Small UAV Coalition. This is both an exciting and critical time for the commercial unmanned aerial systems (UAS) industry and I appreciate the opportunity to discuss Part 107, particularly as it impacts small businesses like Kespry. We applaud the Subcommittee's interest in this new framework as it underscores your commitment to ensure that the United States has a regulatory environment conducive to innovation and job creation for businesses of all sizes.

I would also like to thank the Small UAV Coalition – the first group of its kind focused solely on commercial drone operations – for its leadership in working with policymakers and regulators to develop a robust, yet flexible framework that will no longer be built around exemptions and exceptions. Thanks to their hard work, this industry is now “open for business.”

Like many small businesses across the country, Kespry was started on the floor of an apartment by a few college graduates passionate about the promise of drone technology and its potential to have meaningful impact on business in America and around the world. Today, we have been in business for over three years. We have customers operating drones in every state, generating millions in revenue. We now

employ over 60 people and continue to grow aggressively. Kespry is a “made in America” business. We design and manufacture our fully integrated drone systems entirely in the United States.

Kespry’s mission is to create technology that significantly advances the effectiveness, efficiency, and safety of workers in the real world. This can mean everything from creating a 3D model of hard-to-reach areas of construction, to inventory management, to identifying damage on structures faster to help homeowners and businesses get back on their feet after a major storm.

In less than 30 minutes, for example, a Kespry drone can provide aerial imaging and mapping solutions for a 150-acre construction site that allow project managers to track progress, manage resources, and complete projects on schedule and under budget. It takes less than five minutes for a Kespry drone to survey a roof to evaluate damage and thus inform repairs and claims adjustments, eliminating the need for insurance companies to put employees and contractors at risk of physical injury by climbing ladders and walking on damaged roofs. A quarry can use a Kespry drone to accurately measure the volume of stockpiles in a matter of minutes, rather than days. We save businesses time and money, and give workers an invaluable tool to improve safety and automate dangerous, time-consuming jobs.

The drone industry, particularly the commercial sector, also represents a largely untapped market that stands to add billions of dollars to our economy. One recent report estimated that the drone industry as a whole could be valued at \$100 billion by 2020. The largest area of growth lies in the commercial segment, which is estimated to grow to a \$21 billion industry within five years. This growth will allow American companies of all sizes, including small businesses, to create countless high-paying, highly-skilled jobs. These economic benefits will also permeate through other industries, from insurance to component manufacturers. But none of this is possible without Part 107 and subsequent rulemakings that open the skies to commercial drones while maintaining the highest safety standards.

Early FAA UAS Regulations

Two years ago, the drone revolution was just beginning and the FAA had devoted very limited resources to small UAS. Operators had to ask the Secretary of Transportation for permission to ignore certain federal regulations on the books relating to aircraft, since these regulations treated a small drone the same as a Boeing triple 7. An exemption was required from the requirement to maintain a paper flight manual on board the aircraft. Another one of the many regulations we requested exemption from required us to have a fourteen inch registration number or “N Number” on the “tail” of our aircraft. Since our aircraft had no tail, we found this difficult to comply with.

In late 2014, the first so-called section 333 exemptions were granted. The industry celebrated this milestone, but the fine print on the exemption grants made it clear that this was not the solution we had been waiting for. The exemptions required two persons for any drone flight, including one person who held a private pilot's license and a visual observer. The exemption also restricted flights to at least 500 feet from all persons and buildings. This was commercially impractical and failed to acknowledge the advances in autonomous flight technology.

The many conditions and limitations on the FAA's exemption authority significantly limited the growth of the small UAS industry in this country and led many companies to conduct operations in other countries where regulatory advances have been made more quickly. For example, drones have been operating beyond the line of visual sight – a critical element of commercial operations – in France since 2012. The Japanese government is racing to implement a regulatory framework to have drone delivery in place in rural areas by 2018 and in urban areas in time for the 2020 Tokyo Olympics. Part 107, provided it is implemented to expand the nature and scope of operations, will help ensure that the United States does not continue to cede ground to our global competitors who are aggressively embracing this rapidly developing technology and its corresponding economic and consumer benefits.

Part 107 Benefits Both the Commercial Drone Industry and Consumers

Kespry worked with partners from the Small UAV Coalition to help the FAA create a rule that put robust safety precautions in place for small commercial drone operations, while eliminating many of the categorical restrictions in the proposed rule that would have been economically impractical with no material impact on safety. While the rulemaking process took longer than anticipated, the FAA was receptive to industry input and expertise; over two-thirds of the recommendations made by the Small UAV Coalition in response to the Notice of Proposed Rulemaking (NPRM) were incorporated into the final rule.

The moment it went into effect on August 29, Part 107 was a huge improvement over the Section 333 process, a laborious and lengthy for both industry and the FAA. First, commercial operators seeking to operate small UAVs no longer need to petition for FAA approval if they plan to operate within the scope of the rule. Second, the FAA no longer requires UAS pilots to have manned aircraft flying experience, which has little correlation to the skills required to operate a UAS. Instead, remote pilots must pass an aeronautical knowledge test to ensure they have the capability and knowledge required to safely and responsibly operate a drone for commercial purposes.

Operators may fly during daylight and within the visual line of sight in uncontrolled airspace without obtaining any additional FAA approvals. Operations can be conducted up to 400 feet above ground level, though a UAV may operate over a structure

up to 400 feet above that structure if it remains within 400 feet of that structure. These parameters allow Kespry to conduct many of our operations much more efficiently than under the Section 333 regime, enabling us to expand our offerings and widen our customer base.

We hope that Part 107 will allow the FAA to devote more resources to continued development of a regulatory framework that will pave the way towards critical components of widespread commercial drone operations that the final rule either does not address or permits only under limited circumstances.

Beyond Part 107

While Part 107 is a solid first step towards a comprehensive regulatory framework for commercial drone operations, there are several key components that the FAA must address expeditiously or United States companies will lose out to foreign competitors eager to invest in this developing technology.

Improving the Part 107 Waiver Process

As urged by the Small UAV Coalition, Part 107 allows operators to seek a waiver from several regulatory limitations, perhaps most notably to operate at night, directly over people, and beyond the visual line of sight. These elements are critical to the successful and widespread integration of commercial drones into the national airspace that will help create tens of thousands of jobs. The FAA has already granted 79 waivers,

the vast majority of them to allow operations at night. Time will tell whether the waiver process will be more efficient and flexible than the section 333 exemption process. We do not know whether the FAA's staffing and resources are sufficient to implement the waiver process to support the need for expanded operations that will save money, save time, and save lives.

Operations Beyond the Visual Line of Sight and Over People

While we appreciate that Part 107 allows for waivers to operate beyond the visual line of sight (BVLOS) and over people, the FAA's next phase of regulations must provide for even more efficient approval of these types of operations or the United States will fail to develop the robust commercial drone industry that other countries are actively pursuing. A rancher in Nevada or a farmer in North Carolina cannot fully benefit from drone technology if he must follow his drone in his truck to maintain the visual line of sight while inspecting his property.

France, Poland, Sweden, Norway, and the Czech Republic are just a few of the countries in which beyond visual line of sight operations have been taking place for years with high levels of safety. Technology already exists that ensures safe beyond visual line of sight operations and eliminates the need for operators to seek waivers on a case by case basis, a burdensome endeavor for both companies – especially small businesses – and the FAA.

Congress has also endorsed the need for expanded beyond visual line of sight operations. FAA reauthorization that passed the Senate 95-3 earlier this year included language that expressed the sense of Congress that “beyond visual line of sight...operations of UAS have tremendous potential to spur economic growth and development through innovative applications of technology and to improve emergency response efforts as it relates to assessing damage to critical infrastructure such as roads, bridges, and utilities, including water and power, ultimately speeding response time.”

Equally as critical to realizing the full potential of commercial drone applications is the ability to safely operate UAS over populated areas and people not directly involved in the operation of the UAS. The FAA has announced its intention to publish a proposed rule for Operations of Small Unmanned Aircraft Over People for public comment before the end of the year. The proposed rule is to be informed by an Aviation Rulemaking Committee report produced earlier this year by a task force comprised of FAA, industry and other aviation stakeholders. The report recommends risk-based performance based standards, manufacturer compliance requirements, and operational provisions that we hope to see incorporated into the proposed rule. We also hope that the proposed rule will recognize that very light weight, so-called micro UAVs pose the least risk and therefore can be permitted to operate over people under certain circumstances without compromising safety.

Risk-Based Regulations: Micro UAS Classification

Industry has been pleased to see the FAA taken an increasingly risk-based approach to UAS regulations, but it has yet to acknowledge in regulation the risk differentiation between very small UAS that weigh only a few pounds or less and a drone that pushes the 55 pound limit of vehicles subject to Part 107. A micro UAS classification would create an even more efficient regulatory framework, further reducing the burden on small UAS operators without creating any significant safety concerns.

In the preamble to the proposed rule, the FAA put forth the idea of a micro UAS classification for vehicles weighing up to 4.4 pounds, including payload, based on concepts put forth in other countries. Kespry and the Small UAV Coalition endorsed this idea, the basis for which was the belief by some at the FAA that a small UAS operation should be given more leeway where the safety risks of operating such a small vehicle are negligible. We were disappointed to see that despite receiving strong support for its micro UAS proposal, the FAA chose not to include it in the final rule.

Congress has also endorsed the concept of micro UAS classification. FAA reauthorization bills approved earlier this year by the Senate and the House Transportation and Infrastructure Committee both included provisions directing the FAA to establish a micro UAS category. Unfortunately, this direction was stalled despite strong, bipartisan support when the effort to enact comprehensive, long-term FAA reauthorization legislation was derailed and a short-term extension of current FAA

authorities was enacted in its place. While we appreciate congressional support for the concept, industry cannot afford to wait for Congress to again make its intention clear when it again works to reauthorize the FAA a full year from now. We urge the FAA to include a micro UAS classification in its forthcoming Notice of Proposed Rulemaking for operations over people.

Improving Testing and Training

Early reports from the FAA indicate that the first round of individuals who have taken the aeronautical knowledge test to obtain a remote pilot certificate have experienced a high rate of passage. While this is good news, there is evidence to suggest that these numbers will decline as more people pursue a certificate. Many of us in the industry have heard that the volume of information provided by the FAA to prepare for the test is not only overwhelming, but also largely focused on manned aviation, therefore discouraging people from signing up for the test. It is also a safe assumption that many of those who signed up to take the aeronautical knowledge test at its earliest availability are individuals with experience in the industry who have a strong foundation in the knowledge and skills required to pass the test. It will take time for realtors and other professionals who don't have this experience and awareness, yet stand to benefit enormously from this technology, to endeavor to take the test and they will likely not experience the same levels of success.

Further, remote pilot applicants must take the test in person at a designated FAA testing center. In addition to the \$150 test fee, this is a burdensome and costly deterrent to compliance. The FAA acknowledged in the preamble to Part 107 that it may authorize online testing in the future if it can be conducted securely to prevent fraud and cheating. This type of security technology already exists and is used for testing and certification in other industries. The FAA should prioritize standing up an online testing program as soon as possible.

Conclusion

Thank you for holding this hearing and for the opportunity to testify on behalf of Kespry and the Small UAV Coalition. As you can see, the commercial drone industry stands to deliver major economic and consumer benefits that will allow businesses of all sizes to thrive. Part 107 is a strong and positive first step in developing a comprehensive regulatory framework for small commercial drone operations. It is also proof that it is possible to boost opportunities for American innovation and manufacturing without being overly prescriptive and hindering industry's ability to innovate and compete. We look forward to continuing to work with the FAA and Congress to ensure the United States develops and implements a comprehensive regulatory framework that allows for the safe and expedited integration of drones into the national airspace.