

GAME OF DRONES

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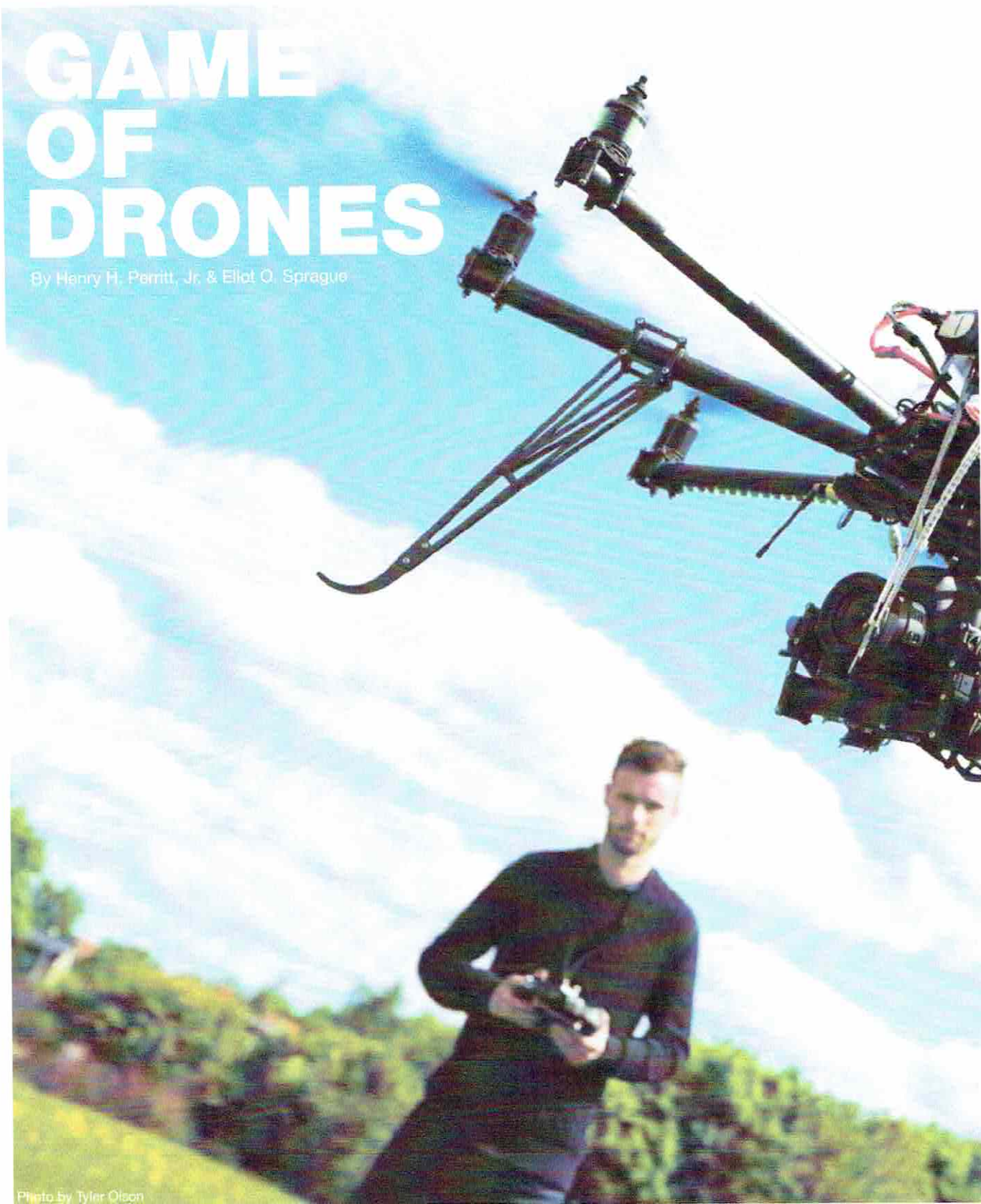


Photo by Tyler Olson



At Heli-Expo 2015, Lyn Burks of Rotorcraft Pro Media Network asked HAI President Matt Zuccaro for his take on unmanned aerial vehicles and their potential impact on the helicopter industry. **WATCH VIDEO NOW**



THE FAA HAS FORMALLY PROPOSED A NEW PART 107 TO THE FARs COVERING UNMANNED AIRCRAFT WEIGHING LESS THAN 55 POUNDS

It would allow these microdrones (what the FAA officially calls "small Unmanned Aircraft Systems" or "sUAS") to be flown for commercial purposes by certificated DRone OPERators (DROPs) as long as they fly below 500 feet AGL within their line of sight, during the daytime, and outside Class A, B, C, and D airspace. DROPs can obtain certification by passing a knowledge test and a security screening, but they need not hold conventional pilots' licenses, undergo skills testing or have minimum levels of flight experience. The public (obviously including the helicopter community) has until 24 April 2015 to submit comments, which can be done online at www.regulation.gov by searching for the docket number: FAA-2015-0150-0017.



The Proxdynamics PD-100 Personal Reconnaissance System (PRS) provides law enforcement agencies with a pocket-sized capability. With a total weight of 1.3 kg and no assembly required by the operator, the PD-100 PRS is a completely organic system.

Crafting the NPRM occasioned much conflict across the federal government and within the FAA itself. The White House showed significant interest. OMB pressed the FAA to refine its quantification of costs and benefits. Many stricter limitations couldn't withstand the scrutiny. Requiring a traditional pilot's license is a good example. The costs of such a requirement are not difficult to quantify, and any alleged benefits begin to fall apart as soon as one looks hard at the congruence between what a pilot must know and what a DROP needs to know. The same thing is true with airworthiness certification. It is relatively easy to quantify how long it takes and how much it costs. Any asserted benefits are qualitative, speculative, and almost impossible to quantify credibly. As the NPRM points out, airworthiness and type certification would take 2-3 years, and the technology would be obsolete by the time a vehicle is certificated.

The arguments back and forth looked like they might take forever. On 21 December

2014, the *Washington Post* quoted an unnamed FAA "whistleblower" saying that the FAA was under "political pressure" to scuttle bona-fide safety concerns. "Political pressure" often means direction from policy-level officials working to displace the status quo.

The FAA repeatedly promised release of an NPRM before the end of 2014, but New Year's Eve came and went with no NPRM. Then the DJI Phantom (a 2-foot-by-2-foot "quadcopter") crashed on the White House lawn and at least one FAA official said to himself, "Thank goodness, now we'll get something out!"

CONFLICTS

One can see the conflict in the text of the NPRM. The generally well-written preamble (where the agency explains why it elected to draft the proposed rule as it did) shows repeated instances of verbal 180-degree reversals of course from one sentence or paragraph to the next one. For example, the NPRM explains that the

FAA's initial approach was to segment microdrones by weight category and to impose on even the lightest-weight subcategory (those that "posed the least safety risk") the following: airworthiness certification, pilots' certificates, NOTAMs for certain flights, and records requirements documenting the full maintenance history of the vehicles. After describing these requirements, the NPRM then says "After extensive deliberation, the FAA ultimately determined that such a regulatory framework was too complex, costly, and burdensome for both the public and the FAA."

Within the executive branch agencies, no one has been eager to get out in front. The conflict is intense and no governmental official welcomes wading into a battle where she will get bloodied more than the combatants. Everyone knows that accidents are inevitable; when the first one occurs, the press, media, and the public are not going to be giving credit to the regulator who failed to prevent it. It would

be just as well to kick the can down the road.

On the other hand, the Congress has ordered the FAA to integrate drones into the National Airspace System by 2017, and there is growing alarm in the aviation community and elsewhere that allowing drones to proliferate without meaningful regulation would jeopardize safety more than even relatively lenient regulation. The small DJI Phantom is reportedly selling in quantities of more than a thousand per month. Constituents are pressing their elected representatives to open up the opportunity for commercial drones. Farmers, agricultural suppliers and insurers, and other supporting actors are universally in favor of this new tool to improve agricultural productivity. Likewise, the journalism community favors more flexible use of drones. Realtors want to use them to help sell real estate. The members of Congress are listening.



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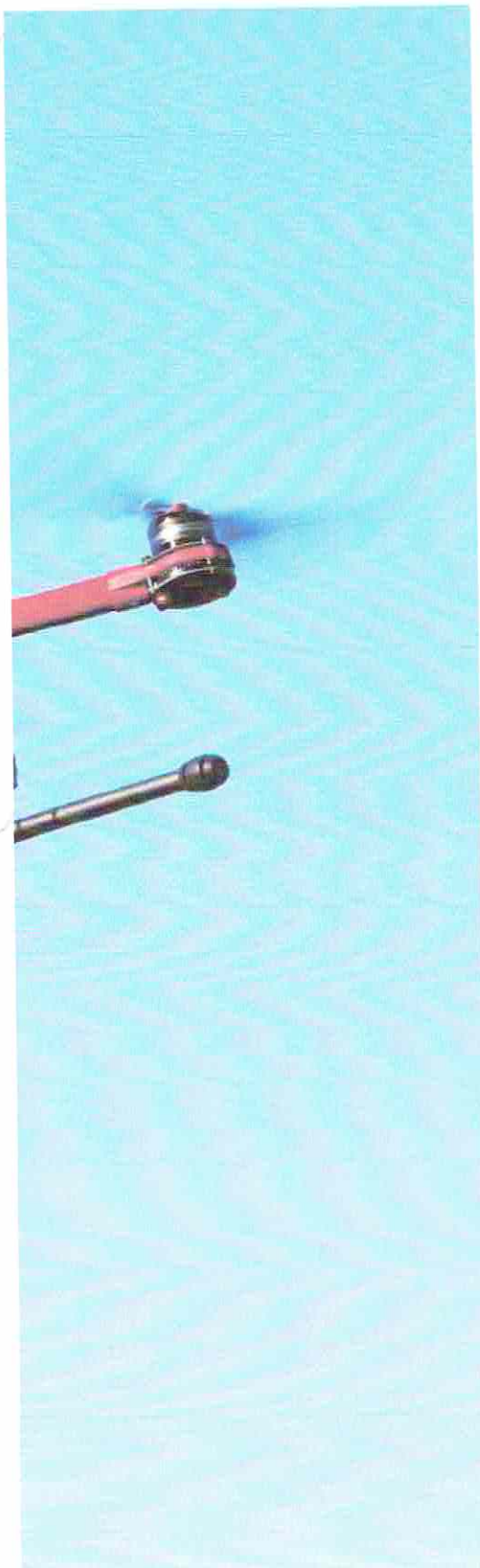
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Within the aviation community, and even within the minds of some aviation entrepreneurs, conflict exists. The owner of Heliphoto.net, Sibylle Allgaier, put it this way, "I have a love-hate relationship with them." She intends to add drone offerings to her helicopter-based aerial photography services for clients that want drone photography. Still, she says, "I'll always prefer flying."

PUBLIC OPINION

Release of the NPRM and the Phantom-on-the-White House lawn incident significantly heightened public interest in the subject of drones, which already was growing. A Reuters poll, taken in January 2015, showed 42 percent of the general public holding the view that private use of drones should be prohibited altogether. It's probably fair to say that many of those holding this view are thinking about a private person flying an armed 2,250-pound Predator or 3,800-pound Reaper around the neighborhood, rather than flying a 2.6-pound Phantom to take wedding photographs.

Misperceptions can be hard to shake. However, the pro-drone interests are getting more active and more sophisticated, and their numbers are likely to swell as more industries perceive the utility of drones and add their voices in favor.

IMPACT ON HELICOPTERS

How the helicopter industry weighs in is an open question. The light weight and limited operating radii of these small vehicles pose little safety threat—if they are operated in accordance with the FAA's proposed rules. Still, many helicopter pilots and the operators with whom they are affiliated instinctively fear that opening the market to microdrones threatens their market share and their jobs. They also have legitimate concerns about safety and the enforceability of any regulations.

Drones will have no impact on operations in which helicopters carry passengers, such as EMS, oil-and-gas, charters, and rides-and-tours. Some operators fear that aerial photography from helicopters will eventually die out, but others point out that they can cover more assignments in a day than a drone operator can do in a week, driving from point to point. TV stations will not ground their helicopters, but they may supplement them with drones assigned to the crews on ENG vans. Drones probably will eat into the market for helicopter support of agriculture.

Some operators will see in the microdrone revolution an opportunity for a new line of business to complement their helicopter operations—a new offering for customers who want aerial support but who cannot afford helicopter support or for whom the operator is not willing to fly because it is too dangerous.

The political arena is broader than the comment process on the rule. The Congress is in the early stages of considering legislation to reauthorize the FAA when its current statutory mandate expires later this year. Drones will be an active part of the congressional debate, and some state attorneys general are questioning whether the FAA's exclusive jurisdiction over aviation really extends right down to the surface of a neighborhood street—or a back yard.

