11Jul16

Drone Regulators Struggle to Keep Up With the Rapidly Growing Technology

Officials have been slow to create rules that ensure safety—as well as innovation

By Andy Pasztor and Robert Wall Udated July 10, 2016 7:52 p.m. ET

Drone technology is developing so quickly—and morphing into commercial uses never before contemplated—that aviation regulators are having trouble keeping pace. Air-safety authorities on both sides of the Atlantic have acknowledged that traditional rule making is too slow and rigid to cope with the rapidly expanding applications of the flying machines, from bridge inspections to land surveys to news photography. Federal Aviation Administration chief Michael Huerta emphasizes the importance of adjusting and speeding up regulatory efforts. For an industry that "moves at the speed of imagination," he said recently at a conference in Washington, "we need to do this in a way that doesn't stifle the kind of innovation we are seeing."

The desire to satisfy industry appears similar in the U.S. When the FAA recently issued its first comprehensive rules covering operation of drones under 55 pounds—limiting them to 400 feet altitude and a maximum range of 3 miles from the operator—the regulation itself invited companies to seek myriad waivers to test safety boundaries. The agency will use such requests for special treatment "as one means by which to evaluate new technologies," according to the document. Still, proponents want faster action. A group representing small drone suppliers and users on Thursday said pending U.S. legislation fails to include provisions "to fully realize the immense economic potential and consumer benefits" of drones.

http://www.wsj.com/articles/drone-regulators-struggle-to-keep-up-with-the-rapidly-growing-technology-1468202371

Policymakers Struggle To Develop Regulations For Rapidly Growing Drone Industry.

The Wall Street Journal (7/10, Subscription Publication) reports that aviation regulators are struggling to keep up with developing new rules and procedures for rapidly expanding drone technology, potentially stifling economic potential and innovation within the industry. Policymakers are attempting to satisfy the drone industry by addressing some of the main concerns with safety and privacy. In a recent conference, FAA Administrator Michael Huerta said that the drone industry "moves at the speed of imagination" and that policymakers "need to do this in a way that doesn't stifle the kind of innovation we are seeing." These comments come on the heels of the FAA's recent release of the first set of comprehensive rules for drones under 55 pounds.

Impact Of New Commercial UAS Rules On Local TV Markets Examined. The Indianapolis Business Journal (7/9) reports on the impact of FAA's commercial UAS rules on the Indiana television market, noting that only one TV station, WISH-TV, currently uses "a drone for news coverage. And it uses the device only sparingly." After the new FAA rules go into effect on August 29, a pilot's license will no longer be required for commercial UAS operation and drones won't need to be operated exclusively during daytime hours. With these changes, WISH-TV's News Director Al Carl believes that every news station in the country will likely have at least one UAV of its own. National news outlets, on the other hand, "routinely" use UAS for reporting, the story notes. The article also reports on lingering "privacy concerns" surrounding the FAA's new rules, although "the agency will provide users with recommended privacy guidelines as part of the registration process" for new UAS users.

Kansas DOT Names UAS Program Director.

The AP (7/9) reported that the Kansas Department of Transportation (DOT) has selected retired Air Force officer Bob Brock to be the first director of the state's unmanned aircraft systems program. Brock "was introduced Tuesday at the

Kansas State University Polytechnic Campus in Salina, which recently was ranked second in the nation among UAS-training colleges." In his new role, "Brock will oversee establishment of policies and procedures for the operation of UAS in Kansas."

12Jul16

FAA Bill Looks To Study Risk Of Drones Near Airports. USA Today (7/11) reports that under the bill approved by the House, the FAA will "study ways to reduce the risk of drones flying near airports and to create an air-traffic control system for remote-controlled aircraft." The article mentions that the FAA is already testing technology by CACI International, which can detect and disable drones. The bill also includes a $20,000 fine for "flying a drone too close to wildfire aircraft, police or other emergency responders."

NASA Concludes UAS NAS Integration Flight Tests Published: 12 Jul 2016

NASA has confirmed that a two-month flight test series came to a close on Thursday, June 30, concluding an essential stage in the agency's research into technologies that support safe integration of UAS into the National Airspace System (NAS). Flight Test Series 4 (FT4), which took place at Armstrong Flight Research Center in Edwards, California, began on April 26, consisted of 19 flights over a nine-week period. The flights tested Detect-and-Avoid (DAA) algorithms developed by NASA, General Atomics Aeronautical Systems, Inc., Honeywell, and other industry partners that, for the first time, could validate Minimum Operational Performance Standards (MOPS), established by RTCA Special Committee 228. The algorithms successfully generated precise alerts necessary for the pilot controlling the Ikhana Unmanned Aircraft System (UAS) from the ground to remain well clear and avoid collisions.

"Flight Test 4 was the culmination of over five years of intense research and development on behalf of GA-ASI and our partners," said David R. Alexander, President, Aircraft Systems, GA-ASI. "We are very proud to be a part of this historic flight test campaign." Data collected from the flight test series will be used by RTCA SC-228 to define DAA performance standards as a first phase to enable routine NAS access for UAS.

http://www.unmannedsystemstechnology.com/2016/07/nasa-concludes-uas-nas-integration-flight-tests/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=89f697fbec-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-89f697fbec-111778317

13Jul16

Mississippi Maps Island Using Drones By AUVSI News posted 5 days ago

Mississippi's Department of Marine Resources and the Geosystems Research Institute at Mississippi State University released results from a study that used drones to map Deer Island, an area the state acquired 15 years ago that officials plan to open up for the local public and tourists.

"Today is a good day," Secretary of State Delbert Hosemann said at a ceremony in late June. "Mississippi acquired all of the island you see behind you about 15 years ago and that debt was paid off two years ago. Now it is free, clear, and owned by the state of Mississippi. It is a phenomenal jewel and with that, we believed that we needed to map the island entirely and provide for the citizens and tourists a detailed, visual presentation of what is available to them. Further, this mapping will show the island undergoing improvements, along with the great barrier islands that are not only a key in storm prevention, but also serves as a key for tourism and recreation." The goal, says Hosemann, is to increase tourism to the island, getting people "to stay one more time on the Gulf Coast.

Hosemann zeroed in on using unmanned aircraft systems to map the island, a measure the team thought necessary, after hearing about the drone program at Mississippi State University. The drone flights were conducted through the National Oceanic and Atmospheric Administration UAS program office.

http://www.auvsi.org/blogs/auvsi-news/2016/07/07/msunoaa

Honeywell, IAI Tapped for Sense-and-Avoid Demonstration AUVSI News posted 2 days ago by AUVSI News

Honeywell announced that it is partnering with Israel Aerospace Industries to develop a sense-and-avoid capability for IAI's Heron family of unmanned aircraft, and plans to demonstrate it in 2018. The deal, announced at the Farnborough Air Show in the United Kingdom, was selected by the Binational Industrial Research and Development Foundation following a competitive review process that evaluated projects from many companies, according to Honeywell. The BIRD Foundation was set up by the U.S. and Israel in 1977 to pursue industrial research and development useful to both countries.

"Sense-and-avoid solutions do not currently exist for UAS to operate in a national civilian airspace," Carey Smith, president of Honeywell Aerospace's Defense and Space division, said in a press release. With more manned and unmanned vehicles entering that airspace, the need for sense and avoid is increasing." The 2018 demonstration will be conducted by a Heron 1 UAS flying in Israeli airspace, with development work in Tel Aviv as well as Albuquerque, Minneapolis and Redmond, Washington. It will include Honeywell-developed software, algorithms, hardware and sensor fusion inputs embedded in a single prototype box that will fly on the Heron.

http://www.auvsi.org/blogs/auvsi-news/2016/07/11/honeywell-iai

Wildlife Biologists Set To Use ISS To Monitor Animals.

Digital Trends (7/12) reports that a team of wildlife researchers with the Max Planck Institute for Ornithology are in a "first-of-its-kind" effort set to use the International Space Station (ISS) "to track thousands of migratory animals in real time." Researcher Martin Wiselski told The Atlantic, "It will be the best ever possible sensing network of life on the planet." The article explains that after initially developing the concept for the International Cooperation for Animal Research Using Space (ICARUS), Wiselski and radio astronomer George Swenson "went to NASA and pitched the novel idea of using the International Space Station as a global observatory for radio-equipped animals." While the space agency initially deemed the project inconceivable, ICARUS managed to eventually receive funding from the German Aerospace Center and the Max Planck Society and "should kick into swing next year" when the researchers' radio monitor will be installed at the ISS. A new market for SmallSats?

14Jul16

Leonardo-Finmeccanica Announces New Falco Evo UAS Customers.

Aviation International News (7/13) reports that Leonardo-Finmeccanica announced on Wednesday at the Farnborough Airshow that two unidentified Middle East-based customers have ordered its Falco Evo UAS. The newest version of the Falco has a higher max take-off weight, a longer wingspan, and greater endurance than previous versions. According to the company, there are five current customers for the Falco, though only one, an aircraft supplied to the UN for humanitarian operations in the Democratic Republic of Congo, has been identified.

AT&T Could Deploy Drones To Offer Improved LTE Connectivity.

9 to 5 Mac (7/13) reports that under AT&T's new drone program, the company already is deploying the technology to "perform aerial inspections'" of several local cell towers, which it says could eventually improve LTE connectivity for cellular customers nationwide. The report mentions that the iPhone-controlled drones are only in the initial phase of deployment, though AT&T believes the program soon will be able to quickly enhance an LTE connection by accessing towers that would be difficult, if not impossible, for human employees – thereby resolving customer issues more quickly. The report adds, "We anticipate this will allow us to improve our customers' experience by enhancing our cell sites faster than ever before."

Senate FAA Bill Contains UAS Safety Provisions.

The Hill (7/13) reports that the US Senate passed a short-term FAA extension to authorize FAA programs at current funding levels through September 2017. The bill includes provisions that penalize UAS operators who interfere with firefighting operations, and establish a new program to "detect and mitigate" unauthorized UAS aircraft flown near airports and other critical infrastructure.

Proposed Utah Legislation Will Allow Authorities To Target Drones Near Wildfires.

The AP (7/13) reports that Utah Governor Gary Herbert is likely to sign a measure in the coming days to allow authorities in the state to "disable and crash drones for flying to close to wildfires." The AP notes that Utah would be the first state in the nation to give authorities that power. The law would also allow for "harsher penalties on people caught flying the aircraft,...if a drone causes a firefighting aircraft to crash." The bill's sponsor, state Sen. Evan Vickers, expects law enforcement will use technology to jam the signal and crash the drone, although the measure does allow law enforcement to shoot the drone down.

15Jul16

DJI Launches UAV Camera With Built-In Optical Zoom.

The Verge (7/14) reports that DJI has launched the new Zenmuse Z3 aerial camera for its UAVs, which is the first to feature a built-in optical zoom. According to the article, the Z3 sells for $899, weighs 262 grams, and "can shoot video at 4K at up to 30 frames per second and [capture] images at a resolution of 12-megapixels." In addition, the UAV-mountable camera has an up to 7x zoom capability, "combining a 3.5x optical zoom and a 2x digital zoom." The article explains that DJI is marketing the camera mainly as a tool for "industrial applications."

Orbital ATK To Launch First Rocket From Virginia Since 2014 Accident.

The AP (7/14) reports that NASA revealed on Thursday that Orbital ATK is set to launch a cargo spacecraft toward the International Space Station (ISS) around August 22, marking the commercial space venture's first launch from Virginia since "a 2014 mishap that destroyed a NASA payload and damaged Virginia's state-owned launch pad." According to NASA, the resupply vehicle will carry cargo and vehicle equipment to the crew at the ISS.

US Government To Use UAVs, M&Ms To Save Endangered Ferrets.

The Daily Beast (7/13) reports that the US Fish and Wildlife Service (FWS) is planning to save the black-footed ferret by using UAVs "to spray prairie dog habitats with peanut butter M&Ms." The article notes that ferrets feed on prairie dogs, which are "a popular host for sylvatic plague-carrying fleas." While immunizing the prairie dogs can be done "by feeding them delicious, vaccine-laden peanut butter M&Ms," disseminating the treatment across acres of wildland is "absurdly labor-intensive," although the process can be made easier through the use of UAVs. According to FWS Biologist Randy Machett, using UAVs is "the fastest, cheapest way to distribute the vaccine." The article adds that the hope is that the new initiative "will affect the ferrets in a positive way, and help take them off the endangered species list."