Company Launches UAV To Immobilize Rogue UAVs.

The Verge (10/14) reported that UAV company Airspace is introducing a "bounty hunter" UAV designed to "keep your property intruder-free." The company is marketing the devices to venues that want to "protect customers and guests from unwanted intruders," corporations that want to keep prying eyes away from sensitive happenings, and utility companies that want to prevent accidental operational issues. The company does not provide much information about its UAV on its website, but says that the UAV uses a "material that looks sticky, like Spider-Man's web, to render the" intruding UAV immobile.

NASA Testing First UAVs Flying Beyond-Line-Of-Sight Wednesday.

Avionics Magazine (10/14) reported that NASA will test the first UAS Traffic Management (UTM) research platform "to fly beyond-line-of-sight on Oct. 19, at Reno-Stead Airport in Reno, Nevada." The test will consist of five UAVs flying "beyond the line-of-sight of their operators in order to test the planning, tracking and alerting capabilities of NASA's UTM platform – what it sees as a critical step in the development of the technology and procedures for the safe management of drone air traffic." NASA, in collaboration with the FAA, will review data collected from the test to refine its research.

UK To Study What Would Happen If A UAV, Plane Collide.

The Daily Mail (10/16) reports that the UK's Department for Transport, Civil Aviation Authority, and the Ministry of Defense have "committed more than £250,000 to pay for a private study of what would happen if a drone struck a window or the fuselage of a plane." The Daily Mail adds that the "secretive tests" will be carried out by Qinetiq.

Raytheon Developing Disposable "Nano Satellites" To Help Ground Forces.

The Arizona Daily Star (10/15) reported that Raytheon Missile Systems is developing small, disposable military satellites that provide ground forces "the ability to get high-resolution satellite images of the battlefield via their smartphone or other hand-held devices within 90 minutes." The Space Enabled Effects for Military Engagements (SeeMe) program is managed by the Defense Advanced Research Projects Agency (DARPA) and each of the "nano satellites" weighs about 50 pounds and is expected to cost less than $500,000. Raytheon's project has lost government funding and experienced launch delays, but the company "still hopes its SeeMe satellite prototype will be flown in space sometime next year." The Pentagon is reportedly interested in the "fast-evolving commercial small-sat industry." Gen. John E. Hyten said in a keynote speech at the AIAA/Utah State University Conference on Small Satellites, "When the commercial sector starts investing money and starts proving capabilities, just like in the launch business, we're going to walk into that with eyes wide open and figure out how to take advantage of those capabilities."

24Oct16

Ohio To Form Advisory Group For Law Enforcement UAV Policy.

The AP (10/20) reports that last week Ohio Attorney General Mike DeWine announced the formation of an advisory group that will create overarching policy for the use of UAVs by law enforcement agencies. DeWine noted that UAVs can be used for investigations into crime scenes, traffic accidents, and missing persons, as well as active shooter situations. Comprising the group will be "individuals from the fields of aviation, education and law enforcement."

Nevada To Use UAVs To Photograph Crash Sites.

The AP (10/21) reported that the Nevada Highway Patrol is planning to use UAVs to capture aerial images of crash sites rather than using police helicopters, which are expensive to operate. The three UAVs will be based in Las Vegas, Reno and Elko.

The Las Vegas Review-Journal (10/21) quoted Trooper Daniel Marek, who said, "One of the things that we're highly motivated to do when we're out on a crash scene, because we know we're impacting the public, is to open up the crash scene faster." The Department of Public Safety's Office of Traffic Safety received a $10,000 federal grant to fund the purchase of the aircraft.

Authorities Fire At UAV During Dakota Access Pipeline Protests.

The AP (10/23) reports that law enforcement officials opened fire on a UAV Sunday at the site of a protest against the Dakota Access pipeline. The Morton County Sheriff's Office "said in a statement" that the UAV was fired upon with

non-lethal ammunition after a helicopter helping monitor the protest was approached by the UAV in a "threatening manner."

CNN (10/23) reports that Morton County Sheriff Kyle Kirchmeier said that the UAV was in violation of FAA rules and that "reports of drones not being operated within the FAA guidelines or in a reckless and unsafe manner are being investigated."

Bezos Receives Pathfinder Award, Discusses UAVs.

GeekWire (10/23) reports that the Museum of Flight honored Amazon CEO Jeff Bezos on Saturday night with a Pathfinder Award for his "contributions to preserving the past and building the future of flight." Bezos explained the relationship between Amazon and Blue Origin: "Amazon has been kind of a lottery winning for me. ... And by the way, the Amazon winnings are what I'm using on Blue Origin. So those winnings are going into developing space." The Amazon CEO also discussed Prime Air delivery UAVs, which are being tested in Cambridgeshire. He praised the UK Civil Aviation Authority's cooperation with the testing and said, "It's incredible. It's really cool."

25Oct16

NASA Testing UAVs Capable Of Controlling Air Traffic.

In continuing coverage, Business Insider (10/24) reports that NASA recently has conducted tests on UAVs as part of a larger research project led by the agency and the FAA to develop an unmanned air traffic control system. The tests, which were conducted in Reno, Nevada, "were designed to see whether a mapping alert platform could track drones in real time, report flight paths, and alert the drones of unanticipated hazards." Business Insider adds that the tests, according to NASA, "represented the first instance of drones flying beyond the line of sight of the operator while also being tracked by NASA's drone platform."

Fish And Wildlife Service Testing UAVs To Save Black-Footed Ferrets.

The Washington Post (10/24) highlights how the US Fish and Wildlife Service is testing an 18-pound, "750 mm umbrella style multi-rotor copter in an X8 (coaxial) configuration" to help protect the "endangered black-footed ferrets and their primary prey, prairie dogs," against the sylvatic plague. The Post features videos showing all-terrain vehicles and the UAV "being tested for use in firing blue, peanut-butter-flavored pellets that are the size of a gumball" that are "laced with plague vaccine." Fish and Wildlife said 60 to 90 percent of the prairie dogs consumed the pellets in recent tests. In a statement, the agency said, "These tests clearly indicated that these new mechanized vaccine delivery methods are practical, efficient and affordable."

Japanese Startup Develops Technology For Man-Made Meteors.

The Daily Express (UK) (10/24) reports that a Japanese startup, ALE, is developing "technology to deliver man-made meteors," and plans to launch its first satellite into orbit in 2018, which it plans to use to create meteor showers. ALE Research Director Shinsuke Abe said, "Imagine a future where you can use our meteors for international fireworks displays, a proposal for marriage, or a special memorial." The satellite will eject artificial pellets, which will travel at five miles per second to enter the atmosphere at a specific location in order to create a meteoric display. ALE sees "operators of sports games, theme parks, outdoor festivals, and other large scale events" as potential customers.

Swedish Court Classifies Camera-Equipped UAVs As Surveillance Devices.

Digital Trends (10/24) reports that Sweden's Supreme Administrative Court has ruled that consumer UAVs such as DJI's Mavic and GoPro's Karma "are a kind of surveillance camera," and that operators will need a special permit to fly them. The ruling overturns a lower district court decision "that said camera-equipped UAVs should not be classified as surveillance devices."

Aeryon SkyRanger sUAS Utilized for Aerial Intelligence During Summer Olympics 18 Oct 2016

Aeryon Labs has announced that the company successfully deployed its small unmanned aircraft systems (sUAS) solutions during the Summer Olympic Games in Rio. Operated by the Brazilian Federal Police Tactical Operations Command (COT), Aeryon sUAS were used to acquire high-resolution aerial imagery at local event sites from vantage points which could not be accessed by manned aircraft. All video and telemetry captured by the Aeryon SkyRanger was also securely distributed to stakeholders in the Central Command Centre, from where all event security activities were coordinated. The real-time situational awareness provided by the Aeryon solution enabled effective mission planning and the appropriate allocation of on-the-ground resources.

Aeryon provided the Brazilian Federal Police and other public safety agencies with a turnkey sUAS solution that included:

- SkyRanger unmanned aircraft and payloads for all-weather, day- and night-time operations
- Software-based flight control platform for autonomous flight operations
- AeryonLive, which delivers video and telemetry securely to all mission participants with less than 10 seconds latency, even in congested network environments
- On-site training and application expertise, including assessment of the operating environment, regulatory support, and network configuration and testing

http://www.unmannedsystemstechnology.com/2016/10/aeryon-skyranger-suas-utilized-for-aerial-intelligence-during-summer-olympics/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=e4a8931795-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-e4a8931795-111778317

26Oct16

FAA: Most UAV Waivers Rejected Due To "Incorrect Or Incomplete" Applications.

The Hill (10/25) reports that the FAA said Tuesday that 71 out of 107 waiver requests from UAV operators have been rejected because "many applications have incorrect or incomplete information." The FAA also said that "many applicants request too many waivers or request waivers for flights in types of airspace for which the FAA is not yet granting approvals."

Amazon Looks to add Alexa Intelligence Technology to UAS By AUVSI
News **posted 7 days ago**

Amazon has patented its Alexa intelligence, personal assistance technology, which could lead to widespread uses for tiny, voice-controlled drones that could be used for everything from finding missing people to locating parked cars.

"People lose things all the time. It is common for a people to lose their car in a large, crowded parking lot. Children can become separated from their parents in shopping malls or at crowded amusement parks. Numerous technologies exist just to enable people to find their keys," Amazon said in the patent announcement. As a result, it would be useful to be able to quickly scan a parking lot for a car or a store for a lost child, for example, using a combination of speed and altitude to improve and expedite the process."

As the patent explained, some of the primary ways that Alexa could be used are for locating lost items, vehicles and children. UAS installed with Alexa could be responsible for scanning a parking lot or store to more quickly locate a missing object or person.

In regards to cars specifically, the patent stated, "If a user has lost their car in a parking lot, therefore, the user can command the UAV to 'find car.' The command can be in the form of a voice command, for example, a button on a key fob (similar to the emergency button), or an app on the user's phone."

Another unique use could be installing Alexa on a device in an effort to provide security or turn a device into a recording device. "In some examples, the UAV can also be used as a security or recording device. In situations in which a user feels uncomfortable or in danger, such as walking down a city street at night, the UAV may act as a deterrent to potential attackers, provide piece of mind, and, worst case scenario, document the crime for police," the patent document says.

Speaking of police, Alexa could also convert UAS into mobile dash cams for police, or in the case of firefighters, a UAS could be used to help spot fires using thermal imaging cameras. They could also perch on police officer shoulders and give an eye in the sky for traffic stops or even help pursue suspects on the lam.

http://www.auvsi.org/blogs/auvsi-news/2016/10/19/amazon-looks-to-add-alexa-intelligence-technology-to-uas

DJI UAS Collect Information to Help Deal With Flooding in Houston

By AUVSI News posted 2 days ago

Texas A&M's Center for Robot-Assisted Search and Rescue (CRASAR) flew a series of unmanned aircraft flights over flooded regions in Texas in April and May, assessing property damage, monitoring floodwaters and helping local officials deal with the impact. The center operated 21 flights in April and May on behalf of Roboticists Without Borders, which drew a positive response from the public, becoming a "popular and useful asset," according to CRASAR Director Robin Murphy.

The flights were made by low-cost DJI Phantom and Inspire UAS, and experts from DataWing Global, CartoFusion Technologies, USAA, and Texas A&M embedded with the Fort Bend County Office of Emergency Management and the Fort Bend County Drainage District to conduct the operations. The results of the successful use of the UAS were published in a paper called the Two Case Studies and Gaps Analysis of Flood Assessment for Emergency Management with Small Unmanned Aerial Systems, and will be presented at the IEEE International Symposium on Safety Security and Rescue Robotics in Lausanne, Switzerland, next week.

CRASAR also recently worked with the Italian coast guard in Genoa, Italy, to test out the EMILY (Emergency Integrated Lifesaving Lanyard) lifeguard assistance USV and its ability to assist with recovery efforts of migrants trapped at sea. During the exercise, which was put together by professors from Italian universities and representatives from the Italian coast guard in Genova, EMILY was tested in coordination with LTE cellular communications, to see if the USV could serve as a response to mass casualty events that occur at sea.

The hope of CRASAR and the Italian Coast Guard is that EMILY, built by Arizona-based Hydronalix, can be used to send out on rescue missions, and give people something to latch on to while lifeguards attend to people who are facing even more dire circumstances. Earlier this year, CRASAR sent out EMILY USVs to Greece when people were migrating from Turkey. Currently, two EMILYs are being used by the Hellenic coast guard and Hellenic Red Cross, and according to the coast guard, the USV has helped save more than two dozen refugees trapped in high seas. Video footage of the exercise can be seen here.

http://www.auvsi.org/blogs/auvsi-news/2016/10/24/dji-uas-collect-information-to-help-deal-with-flooding-in-houston

27Oct16

Researcher Demonstrates UAV Hijacking Radio Transmitter.

Ars Technica (10/27) reports on a demonstration of a new "radio transmitter that seizes complete control of nearby drones as they're in mid-flight." The UAVs are then "under the full control of the person with the hijacking device," as the "remote control in the possession of the original operator experiences a loss of all functions." The transmitter works "against any drone that communicates over DSMx." The transmitter also can be "used to identify trusted drones from unfriendly ones and potentially to provide forensic evidence for use in criminal or civil court cases." Ars Technica notes that such "hijacks could allow law-enforcement officers to safely seize control of vulnerable drones that are endangering or interfering with first responders."

FAA Issues Flight Restrictions Over Dakota Access Pipeline Protest Camp.

The Bismarck (ND) Tribune (10/26) reports that the FAA "has issued a temporary flight restriction over the area of the Dakota Access Pipeline protest camps," with the exception of "response aircraft in support of law enforcement activity." The Forum of Fargo-Moorhead (ND) (10/26) notes that the FAA "no-fly" order "prohibits pilots of manned and unmanned aircraft from operating in a 7-mile radius, including the camps set up by protesters, until Nov. 4." The article explains that the FAA order was issued in response to a drone that was flown "within 30 to 50 feet of a helicopter on Sunday, which state officials said endangered the lives of the pilot and a law enforcement officer on board."

Swedish Industry Group Opposes Court Decision On UAVs.

In continuing coverage, the AP (10/26) reports that Unmanned Aerial System Sweden (UASS) has responded to the country's ruling that camera-equipped UAVs be classified as surveillance devices, saying that the decision could put thousands of jobs in danger. UASS head Gustav Gerdes "said Wednesday that Sweden was among the first countries to ban camera drones with no surveillance license, adding permits can be expensive and difficult to get."

28Oct16

Security Researcher Develops Way To Hijack UAVs.

PC World (10/27) reports that Jonathan Andersson, manager of the Advanced Security Research Group at Trend Micro DVLabs, has developed a device called Icarus that can hijack radio-controlled toys, including UAVs, that use a popular wireless transmission technology called DSMx. With the device, Andersson can take control of UAVs and lock out their owners. PC World adds that "hijacking drones and landing them safely instead of shooting them down and damaging them is a more elegant solution and could make possible trespassing investigations easier."

CubeSats Could Soon Become Self-Propelled.

Physics World (UK) (10/27) reports, "CubeSats – small, low-cost satellites – could soon become self-propelled, thanks to a rocket-motor concept developed by researchers at Los Alamos National Laboratory [LANL] in the US." While CubeSats are a "cheap and easy way for relatively small research groups to launch satellites and access space, they traditionally do not have any on-board propulsion system – the nanosatellites are usually launched via a larger satellite and simply released into a specific orbit." Recently, the LANL researchers "successfully tested a six-motor CubeSat-compatible propulsion array." According to Bryce Tappan, lead researcher of the CubeSat Propulsion Concept team, they are "very close to being able to take the next step and show that the propulsion system works on a satellite in space."

Missouri State Bans Recreational UAV Use On Campus.

The AP (10/27) reports that Missouri State University "has banned the recreational and unauthorized use" of UAVs on its campuses, citing FAA guidance and concerns for safety and privacy. University President Clif Smart said, "Clearly, there are risks associated with this type of device. ... We've seen situations where drones have fallen out of the sky, injuring individuals, and disrupting events." Faculty and students can seek permission to fly UAVs "for research, instructional or multimedia purposes on a campus or during an MSU event."

Fresh pepper? *New Yorker October 24, 2016*

"Fresh pepper?"