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## **Interior Department, Airspace Mappers Partner To Keep UAVs Out Of High-Risk Areas.**

The [Los Angeles Times](#) (10/7) reported that the Interior Department this year provided “real-time access to data on all active wildfires to two airspace mapping companies as part of a pilot program” designed to keep UAVs from “flying near wildfires” and interfering with fire-fighting efforts. One of the companies, AirMap, worked with UAV manufacturer DJI to create “geofences” around wildfires. In the event a UAV “hit the virtual boundary, the geofencing software overrides the flight controller and forces” the UAV “to hover in place.” Mark Bathrick, Director of the Office of Aviation Services at the Interior Department, said, “We really want to have this new community of pilots be as responsible as the manned aircraft pilots that came before them.” The Times article noted that the FAA earlier this year “tested FBI drone-detection technology at John F. Kennedy International Airport in New York and Atlantic City International Airport in New Jersey for a few weeks.”

## **NASA, NOAA Deploy “Global Hawk” Hurricane-Monitoring Drone.**

[NBC News](#) (10/7) reported on its website that NASA and the National Oceanic and Atmospheric Administration (NOAA) on Thursday deployed their joint \$130 million “Global Hawk” unmanned aircraft. The researchers are preparing to send the Global Hawk, capable of flying up to 65,000 feet for up to 30 hours at a time, to Florida to gather scientific data on Hurricane Matthew. NOAA will also use the data for its Sensing Hazards with Operational Unmanned Technology (SHOUT) mission.

## **AeroVironment Unveils New Unmanned Aircraft.**

[Bloomberg Government](#) (10/7) reported that AeroVironment unveiled “a new tiny unmanned aircraft,” known as the Snipe, at the Association of the United States Army’s annual conference last week in Washington, DC. The system “weighs 130 grams, can loiter for 20 minutes and has a range of 1 kilometer.” It also “comes equipped with an electro-optic and infrared camera.” AeroVironment will provide 20 to 30 prototypes to the Army by the spring of 2017, according to AeroVironment Unmanned Aircraft Systems Vice President of UAS Business Development David Sharpin. The company also recently announced a \$22.8 million contract for the Block 10C Switchblade lethal miniature aerial missile system and support services.

## **UAV Pilots Warned To Avoid Interfering With Hurricane Clean-Up Efforts.**

[The Hill](#) (10/7) reported that the FAA and the Academy of Model Aeronautics issued a statement “urging” pilots of UAV units to avoid areas affected by Hurricane Matthew. The agencies warned that pilots of unauthorized drones who prevent relief officials from operating could face civil penalties or criminal prosecution.

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## **UAS Conference To Be Held In Cape May This Week.**

The [Press of Atlantic City \(NJ\)](#) (10/10) reports that the Delaware River and Bay Authority, Cape May County, and the Association for Unmanned Vehicle Systems International (AUVSI) will host the second annual Cape May Unmanned Aviation Systems Conference this week at Cape May Convention Hall. The event will feature “a drone race expo and a debut screening of a drone movie.”

## **White House Officials To Discuss “Possibilities And Perils” Of UAVs.**

[Ars Technica](#) (10/10) announced that it will be live-streaming a discussion over Facebook with White House Chief of Staff Denis McDonough, Transportation Secretary Anthony Foxx, CyPhy Works Founder Helen Greiner, and Zee Aero CEO Eric Allison. The discussion will focus on “the possibilities and perils of drones and personal aircraft,” and will occur Tuesday at 12:00 pm EST.

## **Geofences Aim To Keep UAVs Away From Wildfires.**

In continuing coverage, the [Los Angeles Times](#) (10/7) reported that the Department of the Interior, upset by the “growing number of rogue drones flying near wildfires,” provided real-time access to data “on all active wildfires to two

airspace mapping companies as part of a pilot program.” Santa Monica-based AirMap and UAV manufacturer DJI have developed “geofences” for use around wildfires that override a UAV’s flight controller when it passes through the virtual boundary, and force it to “hover in place.” The geofences also prevent UAVs inside the barrier from lifting off. Department of the Interior Office of Aviation Services Director Mark Bathrick said, “We really want to have this new community of pilots be as responsible as the manned aircraft pilots that came before them.”

## **Raytheon Developing “Multi-Mission Coyote” UAV.**

[Aviation Week](#) (10/10) reports that Raytheon Missile Systems said that it “has begun developing a more modular and easily manufactured ‘Multi-Mission Coyote’ UAV and has already flown several ‘primitive prototypes,’ with more iterations to come in 2017.” Raytheon Director of Unmanned Air Systems Pete Mangelsdorf and Advanced Systems Development and Quick Reaction Programs leader John Hobday “said the Multi-Mission Coyote will be ‘as close to plug-and-play as you can get,’ with different sensors and payloads being swapped out with minimal touch labor.”

## **UAVs Carrying Medicines, Blood Face Top Challenge: Africa.**

The [AP](#) (10/9) reported that the government of Rwanda and US company Zipline will “launch a drone network to deliver blood supplies and medicines to remote hospitals and clinics. Even in one of Africa’s smallest countries, such deliveries can take weeks by land.” Meanwhile, “off Africa’s eastern coast in Madagascar, another US company, Vayu, has completed drone flights to deliver blood and stool samples from rural villages with support from the US Agency for International Development.”

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## **DroneDeploy Launches UAV Mapping Directory For Professional Operators.**

[TechCrunch](#) (10/11) reports that DroneDeploy launched its free Drone Mapping Directory on Tuesday, which they hope will make it easier for businesses to find UAV service providers. TechCrunch adds that, using the directory, businesses will be able search through operators’ profiles, look at examples of maps operators have created in the past, and “then connect with the most desirable vendors in the their area.”

## **Air Force To Replace Predator UAVs With Reapers, Mini-UAV Fleets.**

[Defense Systems](#) (10/11) reports that the Air Force recently unveiled a Small UAS Road Map, which is expected to replace its fleet of Predators “by transitioning more missions to the larger Reaper” and increasing the use of smaller UAVs, including plans for “swarms of mini-drones to perform a range of key [Intelligence, Surveillance and Reconnaissance (ISR)] and combat functions without running into each other, Brig. Gen. John Rauch, Air Force Director of Intelligence, Surveillance and Reconnaissance, said in an interview.” Air Force strategy “also calls for greater manned-unmanned teaming between drones and manned aircraft such as F-35s.” For instance, Rauch “talked about a ‘loyal wingman’ concept wherein larger platforms such as an F-35 or F-22 will be able to control a fleet of nearby drones, drawing upon rapid advances in autonomy and computer technology.”

## **White House Hosts Live-Stream Discussion With UAV Experts.**

[Government Technology](#) (10/11) reports that the White House live-streamed a discussion on Tuesday hosted by Chief of Staff Denis McDonough with Transportation Secretary Foxx and a group of UAV industry experts. Participants in the discussion touched on topics involving the emergence of UAVs in commercial settings, evolution of the UAV market, existing and future industry regulations, and potential applications for UAV technology in the future. Zee Aero CEO Eric Allison said that the industry is at “a tipping point of a new revolution in aviation,” and, “The technology that fueled the information revolution...is moving over to physical objects.”

## **GE's New Technology Center has a Drone Named Raven Working Inside it** By AUVSI News posted 6 days ago

General Electric's new Oil & Gas Technology Center in Oklahoma City features a drone working inside it alongside humans in an effort to help keep the environment as clean as possible. The prototype drone, known as Raven, will have the important responsibility of precisely, and cost efficiently, detecting emissions to ensure that customers limit environmental impact, and help the oil and gas industry improve when it comes to operational efficiency. Raven has already proven reliable, as it was successfully tested in detecting emissions from oilfield equipment at well sites in Arkansas.

Raven will play an integral role in the smooth operation of a center that has big expectations and is expected to be a beacon of innovation within the Oil & Gas industry. The new center is five stories tall, has two 30-ton overhead cranes for moving large testing equipment, and can hold up to 230 people.

<http://www.auvsi.org/blogs/auvsi-news/2016/10/05/ges-new-technology-center-has-a-drone-named-raven-working-inside-it>

## **Historic Solar Impulse team planning drone** AFPOctober 10, 2016

Geneva (AFP) - Circling the globe in an aircraft that used no fuel would be enough for some to rest on their laurels, but the pilots of Solar Impulse 2 on Monday spoke of their new project. "An unmanned version of Solar Impulse," aviator and engineer Andre Borschberg told reporters when asked what groundbreaking mission the Swiss-based team was tackling next. Borschberg and his partner Bertrand Piccard took turns captaining the solar powered plane on a record-shattering 43,000-kilometre (26,700-mile) journey across four continents, two oceans and three seas -- without using a single drop of fuel.

The Swiss aviators said an unmanned version of their plane could hover at altitudes relatively low compared to other pilotless craft such as satellites -- roughly 20 kilometres (12 miles) -- for months, possibly bouncing wifi signals to poorly serviced areas or collecting rare agricultural data.

<https://www.yahoo.com/tech/historic-solar-impulse-team-planning-drone-174129042.html>

## **Drones carrying medicines, blood face top challenge: Africa**

CARA ANNA October 9, 2016

JOHANNESBURG (AP) — At first, the drone took some explaining. Anxious villagers buzzed with rumors of a new blood-sucking thing that would fly above their homes. Witchcraft, some said. Those trying out drones for humanitarian uses in Africa warn that the technology is no quick fix, but several new projects are exploring what can be achieved.

The highest-profile one yet begins this week in Rwanda, as the government and U.S. company Zipline launch a drone network to deliver blood supplies and medicines to remote hospitals and clinics. Even in one of Africa's smallest countries, such deliveries can take weeks by land. With drones, it will take hours.

Off Africa's eastern coast in Madagascar, another U.S. company, Vayu, has completed drone flights to deliver blood and stool samples from rural villages with support from the U.S. Agency for International Development.

<https://www.yahoo.com/tech/drones-carrying-medicines-blood-face-top-challenge-africa-133533047.html>

## A lightweight drone is investigating Hurricane Matthew by flying into the eye of the storm

Posted on auvsiadmin in News, STEM Education and Learning on October 11, 2016

Whenever a hurricane nears land, the National Oceanic and Atmospheric Administration (NOAA) dispatches several aircraft to inspect its intensity from the top down. However, since planes carrying passengers can't get very close to a storm without risking damage, NOAA's hurricane hunters use the Coyote, a tiny 13-pound drone, to gather data about the natural disaster.

After being deployed from the belly of a NOAA aircraft, the drone will spread its 5-foot wingspan and cruise to the most violent quadrants of the hurricane to glean atmospheric information like temperature, windspeed, wind direction, humidity and ocean surface conditions. It can be steered in different directions by a "pilot" with a remote-controller onboard the plane.

The drone's information is transmitted back to the plane in real-time and then communicated to the National Hurricane Center, who relays the information to forecasters. The almost-immediate data could hone forecast models. Eventually, Cione imagines that quick detection of dangerous weather patterns could help send out evacuation warnings.

The Coyote is also the first innovation in the field that can measure sea surface temperatures around a storm, using infrared sensors. The drone can cruise at the lowest level of the hurricane—100 to 200 feet from the ocean's surface—where manned planes cannot go. "It's important to get an understanding of how the ocean feeds the storm," Cione said. "It is sort of the holy grail."

But these benefits come at a premium: The \$22,000 drone, which is now produced by defense technology firm Raytheon, is far more expensive than the researchers' current go-to equipment—\$800 dropsondes. These expendable weather measurement devices record winds, temperature and humidity, and they are specifically designed to be dropped from aircrafts at high altitudes. Equipped with parachutes, they glide straight down for around five minutes.

Cione is also quick to point out that more than one dropsonde is ejected from the aircraft during a mission so the cost difference isn't necessarily that wide. Moreover, the battery-powered drone can fly in the storm for up to an hour whereas a single dropsonde lasts barely five minutes—the cost of the data collected per minute is \$360 for the former, versus \$180 for the latter.

<http://increasinghumanpotential.org/quartz-a-lightweight-drone-is-investigating-hurricane-matthew-by-flying-into-the-eye-of-the-storm/>

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## Feds To Fund Plans To Take On Zika Virus With UAVs.

[NBC News](#) (10/12) reports that "two groups that want to deploy drones to fight Zika won support from the federal government Wednesday." The plans being developed by Delaware-based WeRobotics and Michigan's Vayu "join a

batch of inventive solutions for fighting Zika and other mosquito-borne diseases being funded by the U.S. Agency for International Development [USAID].” The agency’s Wendy Taylor said: “Usually, when you think about fighting Zika you think of trucks driving up and down and fogging streets.” But, she added, “It might be easier to use a UAV (unmanned aerial vehicle) instead of driving up and down small, winding streets with a truck.”

## **USPS Survey Reveals That Americans Are Wary Of UAV Deliveries.**

The [Washington Post](#) (10/12) reports that a survey published by the US Postal Service (USPS) on Tuesday found that 57 percent of people are either neutral or feel negatively about the prospect of UAV delivery. The survey also found that 75 percent of people think UAV delivery technology is five years away, while the rest believe it will take longer. The article adds that the survey’s findings suggest, “No matter if you’re Amazon, Google or UPS, rolling out drone delivery would result in customers thinking less of your company.” Therefore, the article concludes that if companies really hope to make UAV deliveries successful, they “need to convince consumers that it will actually improve their lives – or suffer a blow to their reputation.”

## **Intel Unveils Branded UAV.**

[eWeek](#) (10/12) reports that Intel is launching its first branded UAV, unveiling the Falcon 8+ at the InterGeo 2016 show. The craft builds on the work done by Ascending Technologies, a start-up that Intel bought earlier in the year. The UAV “is designed for industrial and commercial work, including inspection, surveying and mapping, and comes with a broad range of capabilities and a sophisticated control unit.”

## **3D-Printed Exoskeleton Converts DJI UAV To Search And Rescue Tool.**

[TechCrunch](#) (10/12) reports that the 3D-printed EXO 1 exoskeleton for the DJI UAV won a design contest sponsored by DJI and Shapeways. The add-on “quickly attaches” using zip-ties and adds a host of features. GoPro mounting points allow the attachment of “cameras, lights and any number of the various devices and accessories that have adopted the mounting design.” Additionally, carabiners and neodymium magnetics allow the UAV to “lift a small payload and deliver it to a person without landing.”

## **Companies Vying For Military Small UAV Contract Already Upgrading Products.**

[Popular Mechanics](#) (10/12) reports that, “Although the U.S. Army’s Lethal Miniature Aerial Munition System (LMAMS) will likely be a ‘program of record’ in 2017, the companies vying for the contract are already making some big upgrades.” The Army currently relies on AeroVironment Switchblades; the newest version, Block 10C, has an improved digital data link, which helps deal with the increasingly common UAV jamming and allows other UAVs to act as communication relays. “The Switchblade’s biggest competition” is Lockheed Martin’s Terminator and Textron’s Battlehawk, although Israeli company UVision teamed with Raytheon to offer a version of the Hero, which already is used by the Israel Defense Forces.

## **Northrop Grumman Cellphone App IDs UAV Units.**

[C4ISR & Networks](#) (10/12) reports that Northrop Grumman “has demonstrated a cellphone app that identifies drones,” called the Mobile Application for UAS Identification. The company says the app, also known as MAUI, features an “acoustic sensor that operates on Android cell phones and uses the phone’s microphone to detect Group 1 drones, defined as UASs weighing less than 20 pounds, flying lower than 1,200 feet and flying slower than 100 knots.” The company also has presented its Drone Restricted Access Using Known EW (DRAKE) system, which allows drones to be disabled with anti-IED technology.

## **Prisons Worldwide Are Installing New Technology To Curb UAV Smuggling Incidents.**

The [Washington Post](#) (10/12) reports that prisons worldwide are dealing with a new threat of UAVs smuggling drugs, porn, and cellphones to inmates inside prison walls. As a result, several prisons in the US and Europe have had to install UAV-detection technology that alerts law enforcement when it notices UAV activity in the area.

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## **New Foldable, Autonomous, Camera UAV Doesn't Require FAA Registration.**

[NBC News](#) (10/13) reports on Zero Zero Robotics' Hover Camera Passport, "a foldable, autonomous camera drone that weighs 242 grams," less than the 250 grams that trigger FAA registration requirements. Controlled by a smartphone app, the UAV "can automatically hover after the owner releases it from his or her grip," automatically follow the user, "and even circle you to create a 360-degree wraparound video." Meng Qiu Wang, CEO and co-founder of Zero Zero Robotics, "said the camera uses a combination of AI, sonar, and a downward viewing camera to position itself to get the best possible footage of its subject." The Hover Camera costs \$599 and has a 10-minute battery life.

## **Nashville Area UAV Use Mostly For Entertainment-Business Purposes.**

The [Nashville \(TN\) Ledger](#) (10/14) reports that Rocky Davidson, contact person for UAVs with the FAA's Nashville district office, said that locally, UAVs "have been used mainly to make films and music videos," with about 80 percent of applications to fly small UAVs being for entertainment-business purposes, and another 10 percent being from "architects who wanted to use drones to film construction projects." However, "the Association for Unmanned Vehicle Systems International (AUVSI) sees the greatest potential for drone use in agriculture and public safety." Farmers can use UAVs to provide "a kind of rough eyeballing of crops that reveals bare spots and weed growth, to more detailed and more expensive imaging that can measure heat, moisture and the health of crops," allowing more precise application of water, fertilizer, or pesticides.

## **Amazon Holds UAV Design Competition For Children.**

[Business Insider](#) (10/13) reports on Amazon's "Design a Drone Competition" for Cambridgeshire students ages six to 11. As part of the competition, the children are asked to construct delivery UAVs using "wood, plastic, metal, paper and cardboard" or to submit a drawing of a UAV design with an explanation of what materials would be used to build it. Amazon will select two winners, who each "will receive a rare tour of the Amazon Prime Air Cambridge Lab, along with five of their friends." In addition, the winners will receive up to £300 worth of STEM materials as well as Amazon Fire tablets. The company says the competition is intended to "inspire the next generation of innovative, creative, and scientific thinkers."

## **Commercial UAV Companies Face Questions After ISIS UAV Use.**

[TechCrunch](#) (10/13) reports that after reports that ISIL used commercially available UAVs to kill Kurdish fighters this week, Pentagon officials are "racing to respond to a new threat," while commercial UAV companies – particularly DJI, which makes the popular Phantom and controls 60 to 70 percent of the market – "are now facing questions about how their products end up in the hands of the world's most notorious terrorist group." While DJI denies the Phantom was used in this week's attack, "the company acknowledges that ISIS has used its drones to conduct surveillance."