

21Feb17

Verizon Purchases UAV Operations Management Vendor Skyward.

[eWeek](#) (2/17) reported that Verizon “is bolstering its growing involvement” in the UAV industry by purchasing UAV operations management company Skyward, which provides software solutions for commercial customers. The acquisition enables Verizon to leverage its network and large customer base with Skyward’s solutions to help companies more easily scale and manage their UAV operations. Verizon has increasingly focused on UAV initiatives in recent years, becoming the first service provider to join the Small UAV Coalition and launching its Airborne LTE Operations initiative, which uses large UAVs to create an in-flight cellular network.

US Air Force Expects To Decide On Counter-UAV Program Of Record Next Year.

[Inside Defense](#) (2/17) reported that a US Air Force spokeswoman announced that the service expects to establish a counter-UAV program of record by the close of fiscal year 2018 as the use of the unmanned aircraft grows in the Middle East. The spokeswoman explained that the Air Force’s primary focus is “non-kinetic” options, but that “kinetic options to defeat small UASs are also being explored.” In comments about the program last week, Air Force Special Operations Command Chief Lt. Gen. Brad Webb “did not elaborate on what ‘materiel and non-materiel’ approaches the service will take,” such as electronic jamming, reprogramming or firing shots, although the service did recently award a contract to explore the use of 12-gauge counter-UAV shotgun rounds.

Researchers Apply “Fuzzy Logic” To Autonomous UAVs.

On its website, the [University of Cincinnati](#) (2/20) reports on university researchers’ efforts to apply “fuzzy logic” to autonomous UAV operations, which were unveiled in a study published last month in the AIAA Journal. The research, which aimed to use the same kind of logic humans employ for navigating dynamic conditions, was funded by a \$500,000 grant from the National Science Foundation.

Nokia Showcases LTE-Connected Drones for First Responders

20 Feb 2017

Nokia has showcased how drones can facilitate efficient rescue operations for first responders. Using its Ultra Compact Network – a highly portable base station – Nokia has demonstrated the creation of an instant high-speed LTE network to establish connectivity between video camera-equipped drones and a control center. The demonstration of the “Nokia Saves Lives” initiative took place at the UAE Drones for Good (D4G) Award event in Dubai.

Network connectivity is often the first priority of any rescue operation since it is often compromised in disaster situations. Nokia’s Ultra Compact Network provides a standalone LTE network to quickly re-establish connectivity to various mission-critical applications including video-equipped drones. Drones can stream video and other sensor data in real time from the disaster site to a control center, providing inputs such as exact locations where people are stranded and nature of the difficulty of reaching the locations.

The Nokia Saving Lives initiative establishes such a control center in a disaster location which analyzes data using Nokia Video Analytics technology to derive useful insights that enable quick

decision-making for prioritizing tasks for efficient and safe rescue operations. Nokia's Video and Data Analytics solution, together with rescue applications and mission advisor tools, provides the required intelligence for making appropriate decisions quickly.

<http://www.unmannedsystemstechnology.com/2017/02/nokia-showcases-lte-connected-drones-first-responders/>

Sentera Integrates NDVI Crop Health Sensor with DJI Phantom 4

16 Feb 2017

Sentera has announced its new conversion of a DJI Phantom 4 Pro drone into a precision scouting tool that collects TrueNDVI crop health data, in time for the 2017 growing season in the northern hemisphere. By integrating the ultra-lightweight Sentera NDVI Single Sensor onto the Phantom 4 Pro platform, visual-band RGB, near-infrared (NIR) and normalized difference vegetation index (NDVI) data can be captured simultaneously in a single flight, and then read immediately for instant insight and action. The efficiency of capture means users can cover more acres, in less time, and crop health can be assessed more frequently.

“The timing couldn't be better for our customers in the northern hemisphere! True NDVI technology can really boost their 2017 growth potential,” noted Kris Poulson, vice president of agriculture for Sentera. “In the next month, some growers will see their first crops popping up. Now is the optimal time to start using True NDVI data to make input decisions: while the plants are young and vigor can be influenced.”

<http://www.unmannedsystemstechnology.com/2017/02/sentera-integrates-ndvi-crop-health-sensor-dji-phantom-4/>

New ALPHA 800 Unmanned Helicopter Offers Greater Endurance

21 Feb 2017

Unmanned Systems has released the ALPHA 800 unmanned helicopter – an evolution of the SNIPER UAS. Following 18 months of extensive research, development and innovation, the new unit boasts improvements to all its systems, from the mechanics to the on-board electronics and the available payloads. The new ALPHA 800 has a higher payload capacity of 3kg and can fly for up to 2.5 hours at a longer range of 15-30km.

Alpha Unmanned Systems has also worked on integrating a multitude of payloads and currently offers up to 15 different options covering all types of applications for multiple sectors: from surveillance, inspection, agriculture, mining, to mapping LIDAR or GIS. Payloads include: dual sensor cameras with day and night vision, up to 40x optical zoom, and high resolution and frame rate infrared sensors.

<http://www.unmannedsystemstechnology.com/2017/02/new-alpha-800-unmanned-helicopter-offers-greater-endurance/>

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UPS Tests UAV Package Delivery.

[ABC World News Tonight](#) (2/21, story 11, 0:25) reported that on Monday, UPS tested a new system for UAV delivery. In the test, a UPS driver delivered a package, while a UAV simultaneously launched from the top of the truck and delivered another package. [Reuters](#) (2/21) reports that the UAV “flew autonomously toward its destination, dropped a package and then returned to the vehicle as the driver continued on a delivery route.” In the article’s paraphrasing of the company’s comments, there is no timeline for putting the UAVs into service “partly because federal authorities are still developing regulations on how to use the technology.” [Bloomberg News](#) (2/21) reports that a company official said that such octocopter UAVs “won’t replace our uniformed service providers” and are instead designed to “assist.”

Xcel, FAA Collaborate On Research Focused On Using UAVs To Inspect Electrical Lines.

The [Grand Forks \(ND\) Herald](#) (2/21) reports that Minneapolis-based electricity provider Xcel Energy is partnering with the FAA to research the feasibility of using UAVs beyond the line of sight for inspecting electric grids. The research will help the FAA craft its guidelines for such applications. Xcel Executive Vice President Kent Larson said that the company is “proud to partner with the FAA,” and explained that UAV technology “is already giving us better inspection data to efficiently and effectively monitor our systems, ensuring employee safety and improving reliability to better serve customers.”

NASA Selects Latest Class For CubeSat Launch Initiative.

[ExecutiveGov](#) (2/21) reports that NASA has selected 34 miniature satellites for the eighth class of its CubeSat Launch Initiative, which helps small satellite developers by including their CubeSats as auxiliary payloads aboard the agency’s existing missions. The selections announced Saturday include satellites for experiments and technology demonstrations, and will launch aboard missions scheduled between 2018 and 2020.

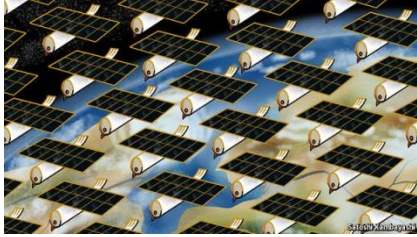
Planet’s satellites offer customers a new world view every day

Analysing images from space could be big business Feb 16th 2017

BUILT by the Indian Space Research Organisation, the Polar Satellite Launch Vehicle threw itself into the sky at 3.58am GMT on February 15th. It took with it a record-breaking 104 satellites—88 of which belonged to a single company, Planet, a remote sensing business based in San Francisco. Planet now has 149 satellites in orbit—enough for it to provide its customers with new moderately detailed images of all the Earth’s land surface every single day.

The satellites Planet makes—it calls them “doves”—measure 10cm by 10cm by 30cm. The first doves, launched five years ago, could send back pictures of just 3,000 square kilometres a day. But the satellites have followed a trajectory of improvement much closer to that seen in cell-phones—from which they get some of their components—than the established satellite industry. The latest doves can cover 2.5m square kilometres a day.

<http://www.economist.com/news/business/21717110-analysing-images-space-could-be-big-business-planets-satellites-offer-customers-new-world>



The future of home delivery

Pedestrians and robots will soon share the pavements

Streetwalkers From the print edition | Science and technology Feb 18th 2017 | SEATTLE

WHO would be a delivery driver? As if a brutal schedule, grumpy motorists, lurking traffic wardens and the risk of an aching back were not bad enough, they now face the fear of robots taking their jobs. Though the buzzing, parcel-carrying aerial drones planned by the likes of Amazon and Google get most of the press, a more serious threat may come from a new breed of 'droids that are about to take to the world's pavements.

The latest, called Gita, was unveiled earlier this month by Piaggio Fast Forward, a subsidiary of Piaggio, an Italian firm that is best known for making Vespa motor scooters. Gita's luggage compartment is a squat, drumlike cylinder that has been turned on its side. This, as the picture shows, is fitted with two wheels of slightly larger diameter than the drum. These let the whole thing roll smoothly along, keeping the luggage compartment upright, at up to 35kph (22mph). Normally, though, Gita does not travel anything like that fast. Instead, it follows at walking pace a metre or two behind its human owner—or, more accurately, an electronic belt that the owner wears. A wireless connection to a stereoscopic camera on this belt lets it map its surroundings, better enabling it to trail its owner around street corners or through doors.

<http://www.economist.com/news/science-and-technology/21717025-streetwalkers-pedestrians-and-robots-will-soon-share-pavements>



23Feb17

UPS Conducts Test Of UAV Delivery.

[USA Today](#) (2/21) reported that on Tuesday, UPS tested a new “truck-launched” UAV delivery system. In the demonstration, while a driver made a regular delivery by hand, a Workhorse Group octocopter UAV deployed from a truck, also designed by Workhorse Group, to simultaneously make another delivery before returning to the vehicle as the driver made the next stop. USA Today noted that UPS “realizes that drones are years away from daily use,” and UPS Senior Vice President for Global Engineering and Sustainability Mark Wallace explained that the FAA still needs “to write the rules that will allow for the safe integration of commercial drones into the National Airspace.” UPS sits on the FAA’s UAV advisory committee.

Dubai Planning To Introduce Passenger UAV Taxis By July.

The [New York Times](#) (2/14, Subscription Publication) reports that Dubai Roads and Transport Authority Director General Mattar Al Tayer said that the city will “spare no effort to launch” autonomous passenger UAVs by July. The Chinese-built Ehang 184 UAVs have already performed test runs past the Burj Al Arab hotel and will be directed and monitored from a command center. The UAVs are able to transport one passenger and a small piece of luggage up to 31 miles on a single charge, and reach speeds of 100 mph. Al Tayer said the Ehang 184 “is not just a model but it has really flown in Dubai skies.”

ISIS Introduces UAVs Into Military Campaign, Sparking Terror Fears.

Under the headline “Use of ‘Weaponized’ Drones by ISIS Spurs Terrorism Fears,” the [Washington Post](#) (2/21, A1) reported that ISIS militants are “the latest in a long line of militant organizations that have acquired drones and attempted to modify them for their own purposes.” Last month, ISIS formally announced its new “Unmanned Aircraft of the Mujahideen” unit, and it claimed that in one week the unit’s UAVs killed or injured 39 Iraqi government forces. “There have also been plots involving drones by lone-wolf actors in the United States,” including a Massachusetts model hobbyist who “was accused of planning to launch small drones with bombs against the Pentagon and the Capitol” in 2011, according to an FBI affidavit.

24Feb17

FAA: Reports Of UAV Incidents Rose By 46 Percent Last Year.

[Bloomberg News](#) (2/23) reports that in an emailed statement, the FAA said that there were 46 percent more reported UAV incidents in the US between February and September 2016 compared to the same period in 2015. According to the FAA, there were “1,274 sightings of drones flying too close to other aircraft,” 400 more incidents than during that same period the previous year.