27Mar17

NASA Selects 10 SmallSat Missions For Concept Development.

Engadget (3/26) reports that NASA has selected 10 projects proposed under its Planetary Science Deep Space SmallSat Studies (PSDS3) program to receive a total of $3.6 million for concept planning. The projects include two focused on Venus; one to study the elemental composition of the moon; two asteroid missions, including one proposed by Lockheed Martin; one to study Martian moons; another to study Mars' climate variability; one to study Uranus' atmosphere; and another to study Jupiter's magnetosphere. NASA Planetary Science Division Director Jim Green said that the "small but mighty satellites have the potential to enable transformational science."

28Mar17

DJI: UAVs Should Transmit Identifier For Security.

The AP (3/27) reports that in a paper released on Monday, DJI argued that continual transmission of an identification code by unmanned aircraft could help to address governments' security concerns while safeguarding operators' privacy. DJI suggested that the system could be developed using existing technology, and an attorney for the company equated the transmitted codes to license plates. Also on Monday, FAA Administrator Michael Huerta announced that the agency will create an advisory committee to make recommendations regarding remote UAV tracking and to facilitate discussions on security between government agencies and the commercial UAV industry.

US Army Considering Collapsible UAV Helicopter For Evacuations.

Popular Mechanics (3/27) reports that the US Army Medical Research and Materiel Command is studying Dragonfly Pictures' DP-14 Hawk UAV "as a possible alternative to traditional helicopters for casualty evacuation." The twin-rotor DP-14, resembling a "miniature CH-47 Chinook," features a man-sized internal payload bay, collapses to fit inside a utility van, and can be reassembled in 40 minutes.

Vector To Launch Microsatellite Rockets From Cape Canaveral.

SPACE (3/27) reports that on Saturday, Vector Space Systems co-founder and CEO Jim Cantrell revealed that the startup plans to launch its small-satellite launch vehicles from launch complex 46 at Cape Canaveral Air Force Station beginning in 2018. The pad is owned by state economic development agency Space Florida, and Cantrell said that it offers "precisely" what Vector – which has contracts with NASA and DARPA – needs for its Vector-R rockets, which it has priced at $1.5 million per launch.

Black Swift Technologies UAS Completes Extreme Altitude Mapping Test 28 Mar 2017

[Black Swift Technologies](#) (BST) has announced that it has overcome the challenges of mapping terrain in difficult conditions at altitudes exceeding 14,000 feet using a small unmanned aircraft system (sUAS). BST demonstrated that a sUAS can successfully be deployed at extreme altitudes and deliver geo-referenced digital aerial images enabling detailed actionable information cost-effectively without concern for a surveyor's well-being or equipment malfunctions.

Utilizing BST's SwiftTrainer, a turnkey sUAS flight system designed specifically for GIS mapping applications, BST captured millions of data points in a fully autonomous flight over Colorado's Mount Evans. The geo-tagged images were easily integrated into processing software resulting in an accurate 3D orthomosaic (a highly detailed map in true scale).

"Surveyors have been using sUAS in place of more expensive manned aerial missions for quite some time now," stated Jack Elston, Ph.D., CEO of Black Swift Technologies. "Being able to demonstrate that a sUAS can be an effective and accurate mapping platform in areas inaccessible to vehicles or at extreme altitudes solidifies the added value surveyors can offer their clients." http://www.unmannedsystemstechnology.com/2017/03/black-swift-technologies-uas-completes-extreme-altitude-mapping-test/

29Mar17

Almost 800,000 U.S. drone owners have registered to fly in 15 months

That's a lot of drones in our skies. BY APRIL GLASER @APRILASER MAR 27, 2017

The U.S. Federal Aviation Administration says that more than 770,000 drone owners have registered to fly in U.S. airspace.

That's up from the 670,000 figure FAA chief Michael Huerta shared during his talk at the Consumer Electronics Show in Las Vegas at the start of 2017. It also means that 100,000 drone owners have newly registered with the agency in less than three months.

The FAA first opened its drone registration system just over 15 months ago, in December 2015. Only weeks after the registration system started operating, the FAA announced that more than 181,000 drone owners had registered in its database.

To put that in perspective, Huerta said last year that the FAA currently counts around 320,000 manned aircraft registered with the agency, but that registration system has been operating for about 100 years. Drones have had registration requirements for not quite two years.

https://www.recode.net/2017/3/27/15077998/us-drone-owners-registered-fly-15-months

Industry Involvement Key to Integration, FAA Officials Say AUVSI News

FAA Administrator Michael P. Huerta said often there is a combative atmosphere between government and the industries it regulates, "but I don't think we have that here." He noted the progress made thus far in allowing the safe, commercial use of small unmanned systems, but said, "this was the easy stuff. As we move toward integration, the questions we need to answer are getting more and more complicated," such as flying drones over people and beyond visual line of sight."

For example, he said FAA is setting up a new rulemaking committee to create standards for remotely identifying and tracking unmanned aircraft, "one of the law enforcement community's top concerns."

Terry Bristol, chief operating officer of the FAA's air traffic organization, said the agency is seeking to automate the LLANC, or Low Altitude Authorization Notification Capability process, to allow UAS to notify air traffic control of flights within five miles of an airport, or to get authorization to fly in certain airspace classes. The FAA expects to have this capability "online before the end of this year," she said. "We're going as quickly as we can."

Testifying before Congress on March 15, Earl Lawrence, director of the FAA's Unmanned Systems Integration Office, said automating LLANC is "the first step" toward an unmanned traffic control system. Jim Eck, the assistant administrator in the FAA NextGen Office, said eventually a UTM system and automated LLANC will go a long way toward helping counter problems from rogue UAS operators. "So the sooner we can get to these automated systems, where everyone is filing, the better off we will be as a community," he said.

A Startup's Plan To Cut Air Freight Costs In Half With 777-Size Drones

In 2020, Natilus's huge unmanned planes could carry 200,000 pounds of goods across the world. But first, a 30-foot prototype must pass test runs.

BY DANIEL TERDIMAN 03.27.17

Commercial passenger jets fly at an altitude of around 30,000 feet or higher. Imagine sitting in a window seat of one of those giant aluminum tubes a few years from now as it makes its way across the Pacific Ocean. Picture looking down about 10,000 feet below. You just might see what one startup thinks could be the future of international cargo transport.

The idea is simple: Shipping by air is fast, but expensive. Boat is much cheaper, but very slow. So why not send all those boxes and packages on an un-piloted, amphibious Boeing 777-sized drone that can fly point to point and eventually drop off as much as 200,000 pounds of cargo at a seaside port? It would carry that cargo at about half the cost of normal air freight thanks to a more efficient use of fuel and the lack of an expensive crew.

That's the thinking behind Natilus, a Richmond, California-based startup that this summer plans on flying FAA-approved tests of a 30-foot prototype that's about the size and weight of a military Predator drone. The flight will mark the first significant step toward upending the global freight forwarding industry. Eventually, CEO Aleksey Matyushev says, the company hopes to fly the prototype on 30-hour test runs, carrying up to 700 pounds of cargo, between Los Angeles and

Hawaii. https://www.fastcompany.com/3069053/a-startups-plan-to-halve-cargo-shipping-costs-with-777-size-drones

SmartPlanes' Freya UAS Selected by NASA to Conduct BVLOS Testing AUVSI News

As a part of the NASA UAS Traffic Management (UTM) R&D Technical Capability Level 3 (TCL 3) project, NASA used SmartPlanes' Freya UAS to help with testing related to beyond visual line of sight (BVLOS) operations at the Nevada UAS test site.

The ultimate goal of NASA's UTM platform is to safely integrate and manage UAS into the low-altitude airspace.

SmartPlanes, which is a manufacturer of UAS that can be used for surveying, surveillance, remote sensing and aerial mapping, is confident in its UAS' abilities, especially the Freya UAS, to conduct BVLOS flights.

"At SmartPlanes we are convinced that fixed wing UAVs and especially our latest Freya prototype is very well suited to BVLOS tasks with its 12+ miles line-of-sight telemetry range and 2+ hours flight time," SmartPlanes says in a company press release.

"The fixed wing type UAVs has far more energy efficient flight characteristics and are quickly stretching the boundaries for long distance flights. With experiences from the World Wildlife Fund nature conservation activities in Tanzania, Africa, we are comfortable that Freya's flight endurance will sufficiently enable and succeed in long range tests."

SmartPlanes is currently working with the US Army Corps of Engineers in Maryland, as they conduct long range tests, and they are also working with Alta Devices' Technology to achieve a partly solar powered, 24-hour flight. http://www.auvsi.org/blogs/auvsi-news/2017/03/23/smartplanes-freya-uas-selected-by-nasa-to-conduct-bvlos-testing

FAA Announces Intent To Set Rules For Identifying UAVs Mid-Flight.

A [Bloomberg News](#) (3/28) podcast features Bloomberg BNA Tech and Telecom reporter Michaela Ross discussing FAA efforts to expand UAV usage in the US. According to Ross, the commercial UAV industry has grown rapidly since the FAA instituted regulations, but operators are calling for more guidance on "how they can operate their drones in certain riskier types of flights." Ross reports that the FAA announced Monday that it "will be forming a rule making committee" to investigate "how to set standards so that a drone in mid-flight can be remotely identified" for law enforcement purposes.

Nevada Senate Committee Passes UAV Search Bill.

The [Las Vegas Review-Journal](#) (3/28) reports that the Nevada state Senate Transportation Committee approved a bill to "allow Nevada law enforcement officers to search crashed or abandoned unmanned aerial vehicles to identify their owners." Senate Bill 234, sponsored by Sen. Scott Hammond (R-Las Vegas), would require law enforcement to obtain "a warrant to search a drone's data if it was suspected to have been involved in a crime" but would "allow a warrantless search to identify an owner without suspicion of a crime." It would also create a licensing and regulatory framework for UAV storage facilities, in much the same way "abandoned or seized motor vehicles are stored." The full state Senate will now consider the measure.

30Mar17

FAA Pushes Ahead UAV Ops As Rulemaking Stalls.

[Aviation Week](#) (3/28) reported that although the process of expanding rules allowing operation of UAVs "is in limbo," the FAA continues its "efforts to prepare for regulations that will enable wider and safer commercial" UAV usage.

31Mar17

North Carolina Department of Transportation Establishes Best Practices and Policies for UAS Use During First Response
[AUVSI News](#)

After the North Carolina Department of Transportation's (NCDOT) division of aviation held a workshop with emergency management personnel from around the state of North Carolina in January, NCDOT has released a [final report](#) on the best practices and recommended policies for agencies in the state using UAS for first response operations.

[Via Unmanned Aerial](#), Bobby Walston, the director of NCDOT's aviation division, highlights the importance of the January exercise by saying, "the exercise produced several key findings and recommendations that support the immediate, safe integration of drones into the National Airspace System." Walston adds, "the need for this type of exercise has never been stronger. Ensuring the use of this technology is properly coordinated is top priority in guaranteeing operations are conducted safely and effectively."

NCDOT has noted several advantages of using UAS for disaster response, including providing a quicker response time, and the ability to conduct search and rescue missions at a cheaper price. UAS also eliminate the need for larger aircraft, which reduces the human risk that comes with using larger aircraft, and smaller aircraft also allow access to areas that might not be accessible by larger aircraft.

A statement from NCDOT says, "the division of aviation's goal is to ensure that drones flying within North Carolina are flown safely and responsibly. The purpose of this resource page is to provide state and local governments the appropriate tools to create and manage UAS programs to support their specific operational needs." http://www.auvsi.org/blogs/auvsi-news/2017/03/27/north-carolina-department-of-transportation-establishes-best-practices-and-policies-for-uas-use-during-first-response