UAS and SmallSat Weekly News

Contents

2 Airwayz AI-based systems to spearhead multiple drone fleets in urban airspace
2 XAG Sets Out Roadmap in Ukraine to Create Autonomous Farms with Drones
3 Airspace Link raises $10M to build a mapping tool for drone pilots
4 Skyports teams with Kongsberg Geospatial for BVLOS deliveries
4 Brand new Arkells release features drone music video
5 This amazing drone Instagram creator is worth adding to your feed
5 In warfare, the future is now
6 ANRA Technologies Wins NASA's Next Big Advanced Air Mobility Project
7 Poland announces $200 million-plus investment in U-space and related services
7 AirHub™ links federal, local government and drone operators in a digital infrastructure
8 Drone-Based Airport Surface Inspection Under Development
8 Nigerian researcher creates criminal, terrorist tracking drone
9 The awe-inspiring drone photography of Gary Cummins
10 Watch Chelsea celebrate Champions League victory with stellar drone light show
11 Drone video combines shadows, dancing
11 IAI signs $200 million UAV contract with Asian customer
12 OneWeb surpasses 200 satellites with Soyuz launch
12 Censys: Made in the U.S. Fixed Wing Drones for BVLOS Flight
13 New Unmanned Helicopter Features Four-Hour Flight Time
13 Pentagon budget 2022: US Navy requests increased unmanned investments
14 OneSky Partners with Eve As Launch Customer for eVTOLs
14 Bathymetric surveys with a UAV and an echo sounder successfully conducted in Israel
15 Propeller Aero and Wingtra partner to deliver faster smarter drone surveys
16 Stratospheric HAPS UAV Flies at 64,000 Feet
16 DJI Drones Cleared by Department of Defense Audit
17 Kittyhawk Changes Its Name but Not Its Mission: Introducing Aloft Technologies Inc.
17 Joby Moves Forward on eVTOL Infrastructure with New Partnership to Build Skyports
18 DoD space agency to launch laser communications between cubesats and drones
19 SKYDIO 3D SCAN MARKS ANOTHER MAJOR MOVE FOR AMERICAN DRONE COMPANY
19 Low-Cost Armed Drones Reshape War and Geopolitics
20 Urban Air Mobility in Japan: Next Gen Planning Offices Will Support AAV, UAM

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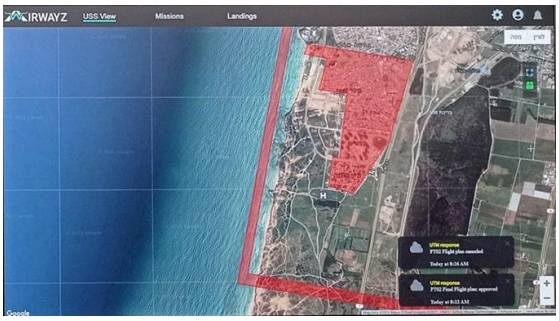
29May21

Airwayz AI-based systems to spearhead multiple drone fleets in urban airspace

May 28, 2021 News



Flight system and Unmanned Traffic Management specialist Airwayz has today announced it has been awarded a contract by Ayalon Highways, an Israeli governmental company. To quickly investigate and respond to missile damage to civilian structures and infrastructure in the towns of Ashdod and Ashkelon, the Israeli civil defense, fire, and police services will inspect drone footage to assess damage and prioritize remedial work, saving time, making best use of resources and restoring public safety more quickly. In a world first, the project will see multiple drone fleets operate in the same urban airspace.

The operation, set-up by Ayalon Highways, has initially been deployed in the towns of Ashdod and Ashkelon. Ayalon Highways issued a Request for Proposal with a tight turnaround last week, knowing that such an operation was possible following a successful pilot scheme which was rolled out in Hadera in March. The project was organized by several government departments including the Israel Innovation Authority, the Israel Ministry of Transport, The Civil Aviation Authority of Israel and The Smart Mobility Initiative at The Israel Prime Minister's Office to validate the safe and efficient integration of drone deliveries in urban environments.
https://uasweekly.com/2021/05/28/airwayz-ai-based-systems-to-spearhead-worlds-first-real-world-use-case-of-multiple-drone-fleets-in-urban-airspace/?utm_source=rss&utm_medium=rss&utm_campaign=airwayz-ai-based-systems-to-spearhead-worlds-first-real-world-use-case-of-multiple-drone-fleets-in-urban-airspace&utm_term=2021-05-28

XAG Sets Out Roadmap in Ukraine to Create Autonomous Farms with Drones

May 28, 2021 News

As Ukraine becomes the second largest grain exporter, XAG has introduced drone and ground robots which helps smooth its transition to autonomous farming. Since hitting the Ukraine market at the end of 2020, XAG Agricultural Drones have been scaling up to help farmers reap better harvests and reduce chemical use.

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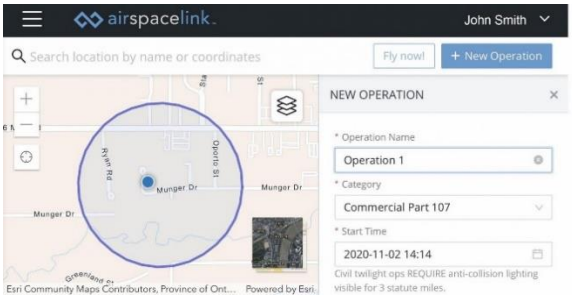
XAG has collaborated with DroneUA to distribute its agricultural drones and robots that can sow seeds, spray crops, and spread fertilizer.

In cooperation with Agro-Region, the DroneUA team hosted a demonstration this April to evaluate the effectiveness of XAG Agricultural Drones on winter barley fields near the village of Velyka Oleksandrivka, Kyiv region. The test showed that one drone when equipped with atomized sprayers and a 20L liquid tank could operate over 16 hectares per hour, setting a record performance in Ukraine.

One operator, along with two outside observers, controlled three drones to apply crop protection products. 43 hectares of barley were treated fully autonomously by this small fleet in 53 minutes. https://uasweekly.com/2021/05/28/xag-sets-out-roadmap-in-ukraine-to-create-autonomous-farms-with-drones/?utm_source=rss&utm_medium=rss&utm_campaign=xag-sets-out-roadmap-in-ukraine-to-create-autonomous-farms-with-drones&utm_term=2021-05-28

Airspace Link raises $10M to build a mapping tool for drone pilots Ishveena Singh May. 28th 2021



Aviation solutions startup Airspace Link has developed a GIS-based digital mapping tool that fuses the needs of both federal and local governments to help drone pilots make informed decisions. And now, the Detroit-based company has raised a cool $10 million in Series A funding.

Airspace Link has been approved by the FAA for its Low Altitude Authorization and Notification Capability program. Meanwhile, in North Dakota, the company is supporting the FAA's BEYOND program to support safe and scalable BVLOS drone operations.

Airspace Link has also developed a cloud-based drone platform called AirHub to help operators determine the safest, most efficient route for a drone to take on the way to pick up and deliver items. When pilots define a boundary, the platform generates an operational report focused on what's happening below the drone, such as the number of households, population, and businesses the aircraft will be flying over. It's great for understanding the impact the drone might have in the event of an unforeseen failure. The company says it has forged alliances with more than 40 government agencies and municipalities in the US for the AirHub platform.

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With the Series A capital raise, joining Airspace Link on this mission are Altos Ventures and Thales. Before this round, the startup had raised $4 million from Indicator Ventures, 2048 Ventures, Ludlow Ventures, Matchstick Ventures, Techstars, and Dan Gilbert's Detroit Venture Partner. https://dronedj.com/2021/05/28/airspace-link/#more-58990

Skyports teams with Kongsberg Geospatial for BVLOS deliveries Bruce Crumley May. 28th 2021

A major international builder and operator of Advanced Air Mobility take-off and landing infrastructure, Skyports also runs a drone delivery division in which the Kongsberg Geospatial IRIS airspace visualization applications will be used. The company praises the technology for enabling a single operator to effectively monitor multiple drones and sensor feeds at once. It also provides real-time calculation of aircraft separation, and communications line-of-sight to enable BVLOS operations.

IRIS also permits advanced real-time 2D and 3D visualization of airborne track and weather data. In addition, it emits cues, alerts, and warnings that single drone operators need to understand complicated and changing flying conditions. Skyports chief executive Duncan Walker says IRIS will save time and operational costs of drone delivery used in supply chains. https://dronedj.com/2021/05/28/skyports-teams-with-kongsberg-geospatial-for-bvlos-deliveries/

Brand new Arkells release features drone music video Scott Simmie May. 27th 2021

If you haven't heard of the rock band Arkells, you're in for a treat. The popular group is from Canada and enjoys a substantial international fan base. And now it's enjoying something else: Drones.

Arkells released a new video, and it features some really skilled FPV flying and some pretty gorgeous vistas. We know drones have been used in music videos before, but this is the first one that comes to mind where it's entirely shot by First-Person-View drones. We've gotta say, it's pretty slick.

All Roads - That's the name of the video, and it opens on a stretch of a country road. It was shot by a Toronto production company called First Class Drones. Here ya go! https://dronedj.com/2021/05/27/new-arkells-release-features-music-video-shot-entirely-by-fpv-drone/#more-58893

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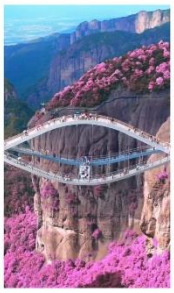
This amazing drone Instagram creator is worth adding to your feed Scott Simmie

May. 27th 2021


We popped into IG earlier today and saw an intriguing video pass by. Instagram is a great platform for discovering new talent. If you're following one of those accounts that re-post curated videos and photos, you can come across some real gems you might otherwise miss. And that was the case for us today.

China is a pretty gorgeous country if you get to the right spots. Some of the tourist highlights – which often combine beautiful vistas with mind-bending architecture – are unforgettable. Fortunately for us, a blogger named khanjipeerwala has made visiting and capturing some of these wonders a priority. Here's the video that first caught our attention, from the Ruyi bridge in Shenxianju, Taizhou, Zhejiang, China.

The architecture is unique. And those flowering trees surrounding the place are also pretty amazing. Anyway, that started us down a rabbit hole into some of his other content: https://dronedj.com/2021/05/27/stellar-drone-videos-from-instagram-creator/#more-58882

30May21

In warfare, the future is now David Ignatius May 27, 2021

Two drones fly above Lake Street in downtown Reno, Nev. as part of a NASA simulation to test emerging technologies in 2019.

We're standing outside an empty brick warehouse in Alexandria, Va., but let's imagine that it's a hidden command center for hostile forces in Iraq. How are we going find out who's inside without exposing ourselves to gunfire?

An operator removes a small quadcopter drone from his backpack and the tiny drone emerges from the building several minutes later with a detailed map of the structure and imaging that shows it's empty. Mission accomplished — a job that, in a real-life combat situation, could get soldiers killed.

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Nova 1 was created by a high-tech start-up called Shield AI, which was co-founded by ex-Navy SEAL Brandon Tseng after he returned from Afghanistan in 2015. Tseng's unit had suffered casualties in an operation in Uruzgan province when he couldn't target a hostile building because he didn't know if civilians were inside. Tseng knew that AI could solve this problem. He got a degree from Harvard Business School, grew his company, and hired a former Air Force special tactics officer, and others.

Shield AI's systems are now deployed in combat locations abroad. The real breakthrough is that its AI brain is at the "edge," in the quadcopter itself. It doesn't have to communicate with a server back at headquarters — a link that would probably be jammed in a real conflict. https://www.washingtonpost.com/opinions/2021/05/27/warfare-future-is-now/?utm_campaign=wp_week_in_ideas&utm_medium=email&utm_source=newsletter&wpisrc=nl_ideas

ANRA Technologies Wins NASA's Next Big Advanced Air Mobility Project BUSINESS HEADLINE NEWS GEORGINA FORD MAY 30, 2021

ANRA Technologies has won NASA's Aeronautics Research Mission Directorate National Campaign 2 for Advanced Air Mobility (AAM) for Community Planning and Integration activities to address safety and integration barriers together with FlyOhio, a collaboration of public, private and academic institutions led by DriveOhio's advanced air mobility (AAM) group.

ANRA will be the primary Provider of Services for UAM (PSU) technology for this multi-year program and will serve as the integrator of PSU information sharing across participating aircraft operators and future, multiple PSUs. ANRA will lead the development and test of PSU integration with vertiport automation services.

This agreement provides the FlyOhio team with an opportunity to collaborate with NASA on multi-modal transportation planning, modelling, and simulations of the AAM portion of a transportation system, public acceptance, community engagement, infrastructure planning, and contingency planning for opportunities to demonstrate AAM operations in various scenarios. https://www.commercialdroneprofessional.com/anra-technologies-wins-nasas-next-big-advanced-air-mobility-project/

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31May21

Poland announces $200 million-plus investment in U-space and related services

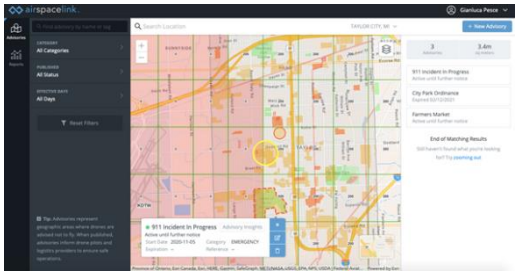
May 27, 2021 Philip Butterworth-Hayes UAS traffic management news

The Polish government will allocate over PLN 740 million ($201 million) to the development of U-space and related drone services, according to the Polish Air Navigation Services Agency as part of a national economic recovery plan.

The Senate and the European Commission have approved Poland's National Reconstruction Plan which sets out the reforms and public investment projects that Poland plans to implement with the support of the Recovery and Resilience Facility, the European Union's plan for COVID-19 pandemic recovery. The EU will provide up to EUR672.5 billion to support investments and reforms to EU States, via grants worth a total of EUR312.5 billion and EUR360 billion in loans, according to an EU website statement.

One of the main early beneficiaries of the fund in the digital/drone/UAM space – more than PLN 500 million – will go to Poland's PANSA, according to a company press release. "PANSA will be responsible for creating infrastructure supporting the development of advanced drone flights on a mass scale. https://www.unmannedairspace.info/news-first/poland-announces-usd200-major-million-plus-investment-in-u-space-and-related-services/

AirHub™ links federal, local government and drone operators in a digital infrastructure March 31, 2021 admin Sponsored editorial



While UAS traffic management systems have been available for some time, AirHub, a cloud-based digital infrastructure from Airspace Link, is different in that it allows local authorities, cities, and states to input static and dynamic risk and advisory data in a quick and easy format. "We have a strategic partnership with geo-spatial mapping company Esri," says Michael Healander, President & CEO of Airspace Link, "which embeds our technology into theirs, and theirs in ours."

"We launched in April last year, and we are now in 18 states from North Dakota – where we are deploying a $28 million beyond-visual-line-of-sight system with our partners Thales – to

Ontario, California, where the system will start supporting drone package delivery and emergency first responder operations from mid-2021."

The company is also an FAA approved Low Altitude Authorization and Notification Capability supplier providing real-time coordination authorization for recreational and commercial drone pilots at 726 airports. https://www.unmannedairspace.info/sponsored-editorial-1/airhub-a-single-gateway-that-links-federal-local-government-and-drone-operators-in-a-simple-digital-infrastructure/

Drone-Based Airport Surface Inspection Under Development 27 May 2021 Mike Ball

Silent Falcon UAS Technologies has been selected by the Federal Aviation Administration to develop repeatable standardized processes and procedures for using small unmanned aerial systems to supplement Pavement Management Program inspections. The company will investigate the use of drone-mounted sensors for the delineating, analyzing, maintaining, and reporting airport pavement data.

The first airport has already been scanned under the FAA agreement – Cape May County Airport in New Jersey, where the FAA has a Memorandum of Agreement with the Delaware River and Bay Authority to conduct research.

Independent from the agreement, Silent Falcon flight teams have already successfully scanned over 30 million square feet of airfield pavement across the country. The key for the company's clients is they get 100% of the runways and taxiways scanned and analyzed. Clients receive a proprietary interactive heatmap displaying the various distressed areas to help target repairs. https://www.unmannedsystemstechnology.com/2021/05/drone-based-airport-surface-inspection-under-development/

Nigerian researcher creates criminal, terrorist tracking drone Bruce Crumley May. 31st 2021

A Nigerian researcher has developed a carbon emission tracking drone he believes will prove effective in locating and arresting criminals, kidnappers, and even terrorists as they try to avoid detection in remote hiding places.

Dr. Olusola Ayoola has outfitted his drones with sensors that pick up carbon-based traces left by human beings in natural settings. Because people leave carbon tracks in most things they do – including walking to or sitting around a spot – Ayoola says the

Carbon Emission Detection Based Aerial Surveillance drone will become a valuable tool to police and military forces hunting down a wide range of evildoers.

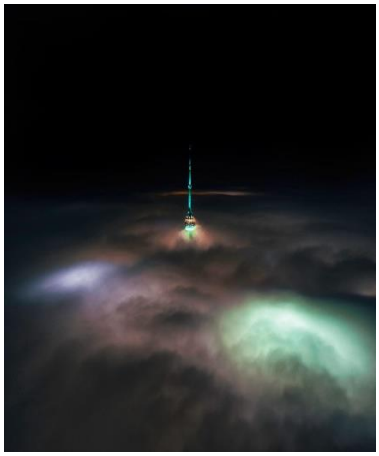
Those include terrorists hiding out in desert or mountainous areas; bandits, contraband traffickers, and kidnappers who hunker down in jungle areas; poachers in savannahs; and notorious groups like Nigeria's Boko Haram that engage in most of those criminal acts.

Founder of the Robotic and Artificial Intelligence Nigeria (RAIN) research institute, Ayoola explained: *We discovered the Carbon Emission Detection Based Aerial Surveillance which allows for a drone to sniff out hideouts through the carbon their activities emit. As long as human life exists in a forested location, there must be carbon emission, be it under a cave, under a canopy or inside a bunker… With this new technology, we can quickly scan the entirety of our forests and games reserves to generate a real map of which spots of these hitherto assumed uninhabited forests have suddenly spiked up in human activities.*
https://dronedj.com/2021/05/31/nigerian-researcher-creates-criminal-terrorist-tracking-drone/#more-59060

The awe-inspiring drone photography of Gary Cummins Aron Harris May. 29th 2021

In 2019, I discovered a photographer on Instagram who combined Milky Way photos with abandoned houses. The combination was stunning and so began my interest in the work of Toronto-based photographer, Gary Cummins. The CN Tower above the clouds got a check from Transport Canada

Buildings in Hong Kong



The CN Tower above the clouds

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Gary moved to Toronto from Waterford, Ireland, in 2011 after living in Australia and New Zealand. His new home inspired him to pick up a camera for street photography. I asked how he transitioned from street photography to astrophotography and eventually to drone photography.

"The transition came after a 10-week trip that took me to Iceland, Faroe Islands, Hong Kong & Southwest USA," he tells me. "During this trip, I was surrounded by so much nature and dark skies that I made it a mission to dive a bit deeper into it upon my return to Canada." Eventually, this love of the stars led him to drone photography. https://dronedj.com/2021/05/29/the-awestriking-drone-photography-of-gary-cummins/#more-58641

Watch Chelsea celebrate Champions League victory with stellar drone light show

Ishveena Singh May. 31st 2021

This weekend saw Chelsea getting crowned as the champions of Europe for the second time in the club's history, courtesy of a 1-0 over Manchester City. But even as the Blues lifted the Champions League trophy hundreds of miles away in Portugal, the football club brought the party home to fans in London in the form of a spectacular drone light show!

Chelsea supporters who gathered outside Stamford Bridge stadium to celebrate their club's historic win were in for a special treat lasting seven minutes and 33 seconds on Saturday evening. Since not many fans were able to travel to the coastal city of Porto, the football club wanted to do something special for those stuck in London.

So, Chelsea arranged for an awe-inspiring drone light show and lit up the skies with phrases like "The pride of London," "Champions of Europe," "For the fans," and "The Shed." The drones' flying formations also included the blue lion from the club's coat of arms, a 1905 Chelsea scarf, and visuals of the Champions League trophy. Watch it all here: https://dronedj.com/2021/05/31/watch-chelsea-drone-light-show/#more-59064

Drone video combines shadows, dancing Scott Simmie May 31, 2021


We highly doubt you've ever seen a drone video like this one. One of the accounts we follow on Instagram is a curated feed of cool drone videos. We've seen all sorts new and experimental drone vids as a result. Sometimes the feed credits its sources well, and sometimes it doesn't.

And that source is the account, ahem, @maneaterswimwear. There's not much of an explanation with the post, but it's clearly shot by drone. And while we've seen drone vids that really use shadows well, we've yet to see one that combined shadows with choreography. Not saying it doesn't exist, but we've certainly never seen one before. So let's take a look:
https://dronedj.com/2021/05/31/drone-video-combines-shadows-dancing/#more-59097

1June21

IAI signs $200 million UAV contract with Asian customer Greg Waldr1 June 2021

IAI does not specify the contents of the deal, but says it relates to the provision of "unmanned aerial systems services to a country in Asia."

IAI promoted the Heron Mk II at 2020's Singapore Airshow

IAI adds that the Heron can be controlled from ships at sea or from land bases, supporting both ground missions as well as maritime patrol work, including against submarines. The system features a remote takeoff and landing capability, precluding the necessity of deploying a control post near the runway.

IAI adds that it is the fourth significant transaction it has made this year in relation to UAVs. In January, IAI announced deals to provide two Heron Mk II unmanned air vehicles to an unnamed country in Central Asia. The two deals, which the company says are valued at "tens of millions of dollars." That package included land arrays and reconnaissance payloads.
https://www.flightglobal.com/military-uavs/iai-signs-200-million-uav-contract-with-asian-customer/143972.article

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OneWeb surpasses 200 satellites with Soyuz launch May 28, 2021 Stephen Clark

Launching through heavy rainfall, a Soyuz booster vaulted away from the Vostochny Cosmodrome in eastern Russia to place 36 more OneWeb internet satellites into orbit Friday, giving the London-based company a fleet of 218 spacecraft, one-third of its planned constellation.

The 218-satellite constellation is also enough to make OneWeb owner of the second-largest fleet of active satellites in Earth orbit. OneWeb has more satellites than Planet's fleet of Earth-imaging spacecraft but is well shy of the more than 1,600 SpaceX-built Starlink internet satellites now in orbit.

The 325-pound (147.5-kilogram) satellites separated four at a time from a dispenser on the Fregat upper stage. The dispenser, made in Sweden by RUAG Space, carried the 36 OneWeb satellites through the launch sequence.

OneWeb and Arianespace, the Soyuz launch provider, confirmed the successful deployment of all 36 satellites around four hours after liftoff. OneWeb said its ground controllers established contact with all the spacecraft, confirming their health after the successful launch.
https://spaceflightnow.com/2021/05/28/oneweb-surpasses-200-satellite-mark-with-soyuz-launch/

Censys: Made in the U.S. Fixed Wing Drones for BVLOS Flight Miriam McNabb May 28, 2021

Censys was founded in 2017 by a group of aerospace engineers at the Embry-Riddle Aerospace Research Park in Daytona Beach, FL. The company started with a clear goal: building a made in the U.S. fixed wing that "is affordable, delivers incredible data and pushes drone capabilities further," says co-founder Trevor Perrott.

The team was solving a problem they'd encountered when working in the military UAS sector: the available long-range UAS were too expensive, and the regulatory environment too dynamic to provide a sustainable commercial solution. The Censys portfolio of VLOS and BVLOS fixed wing drones fills the gap: and this year, customers have had a 100% success rate in receiving BVLOS waivers from the FAA. It's a stunning achievement – the FAA's historic approval rate of

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1% – and it speaks to the safety case Censys UAVs offer. https://dronelife.com/2021/05/28/censys-made-in-the-u-s-fixed-wing-drones-for-bvlos-flight/

New Unmanned Helicopter Features Four-Hour Flight Time 31 May 2021 Mike Ball

ANAVIA has released its first helicopter UAV that delivers up to 240 minutes of flight time and can carry a payload of 65 kg. In addition to its long endurance and heavy lift capacity, the system features a back-up motor and intelligent redundancy systems, intuitive controls, and easy mission programming. With long maintenance intervals, low costs, and compatibility with a wide range of sensors and payloads, the HT-100 is designed to be an economic alternative to conventional manned helicopters.

It is targeted at a wide range of fields including mapping and surveying, surveillance, logistics, search and rescue, defense, and precision agriculture. ANAVIA experts can provide customers with all the training they need to carry out their missions autonomously and with maximum precision and safety, as well as maintain the UAV's modules themselves. ANAVIA also handles servicing, inspections, repairs, and procurement of spare parts.
https://www.unmannedsystemstechnology.com/2021/05/new-unmanned-helicopter-features-four-hour-flight-time/?utm_source=UST+eBrief&utm_campaign=631a35010a-ust-ebrief_2021-jun-1_engaged-Subject-Test&utm_medium=email&utm_term=0_6fc3c01e8d-631a35010a-119747501

Pentagon budget 2022: US Navy requests increased unmanned investments

Michael Fabey 29 MAY 2021

The navy has requested $268.9 million for the Unmanned Carrier Launched Airborne Surveillance and Strike program which was recently restructured with near-term focus on the new Unmanned Carrier Aviation Stingray program.

The MQ-25 Stingray program is working to develop an unmanned capability to embark on aircraft carriers to conduct aerial refueling as a primary mission and provide some intelligence, surveillance, and reconnaissance capability as a secondary mission.

Boeing and Naval Air Systems Command have been testing the MQ-25A T1 prototype. The program is slated to conduct Initial Operational Test and Evaluation in FY 2024 with Initial Operational Capability scheduled for FY 2025. https://www.janes.com/defence-news/news-detail/pentagon-budget-2022-us-navy-requests-increased-unmanned-investments

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2Jun21

OneSky Partners with Eve As Launch Customer for eVTOLs Mark Phelps June 1, 2021

OneSky Flight's Halo business unit has placed an order for 200 Eve eVTOL aircraft. With deliveries expected to start in 2026, the developmental urban air mobility vehicles are seen as the next step in OneSky's strategy of providing a door-to-door solution for private air travel. Initial Halo services are planned for New York and London.

OneSky is a part of entrepreneur Ken Ricci's Ohio-based Directional Aviation Group. Eve Urban Air Mobility Solutions is an established Embraer-backed developer of eVTOL aircraft. The companies refer to the purchase agreement as a partnership.

Ricci cites a 15-year business plan that involves three tranches of five years each. The first is to explore further linking of current helicopter services and infrastructure with Directional's business jet offerings, which include everything from managing individual private jets to selling jet cards. He said package deals with rotorcraft services could be offered as early as later this year.

The next phase would involve transitioning from conventional helicopter technology to eVTOL aircraft such as the Eve. That infrastructure would continue to rely on existing heliports, however. The final phase would expand takeoff and landing sites including rooftops and other convenient locations. https://www.avweb.com/aviation-news/onesky-partners-with-eve-as-launch-customer-for-evtols/?MailingID=627&utm_source=ActiveCampaign&utm_medium=email&utm_content=Lufthansa+Aviation+Training+s+Low-cost+VR+Sim%2C+Garmin+G5000+Goes+to+D328&utm_campaign=Lufthansa+Aviation+Training+s+Low-cost+VR+Sim%2C+Garmin+G5000+Goes+to+D328%2C+Wednesday%2C+June+2%2C+2021

Bathymetric surveys with a UAV and an echo sounder successfully conducted in Israel May 31, 2021 News

Israeli drone service provider ERELIS recently conducted a number of pilot projects using a drone equipped with a single-beam echo sounder in the Mediterranean and Dead Seas. The data was validated by authorized local surveyors and reports from previous

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surveys of the same areas. The reference bathymetric data was collected using a manned boat and multi-beam and single-beam echo sounders and demonstrated a good match between the results of new drone-based and traditional methods.

The bathymetric system consisted of a standard commercial DJI drone onboard computer and terrain following system with radar altimeter and a single-beam echo sounder provided by SPH Engineering, Latvia. For data processing, the Eye4Software Hydromagic software package was employed.

SPH Engineering announced the launch of a UAV drone, integrated with an echo sounder, as a new product for bathymetric surveys of inland and coastal waters in May 2020. This data collection method has been used in several countries, including Denmark and the UAE. The method has proven to be both time and cost efficient and suitable for mapping, measuring and inspections, as well as environmental monitoring. This bathymetry solution is also synchronized with the Hydromagic Survey software package. https://uasweekly.com/2021/05/31/bathymetric-surveys-with-a-uav-and-an-echo-sounder-successfully-conducted-in-israel/?utm_source=rss&utm_medium=rss&utm_campaign=bathymetric-surveys-with-a-uav-and-an-echo-sounder-successfully-conducted-in-israel&utm_term=2021-06-01

Propeller Aero and Wingtra partner to deliver faster smarter drone surveys June 1, 2021 News

Propeller Aero, the drone data visualization and analytics platform and Wingtra, the Vertical Take Off and Landing drone manufacturer for mapping and surveying, have joined forces to deliver site data and 3D mapping to construction and earthworks companies across the globe. Designed for the construction and earthworks industry, the Propeller Platform and WingtraOne partnership makes it easy for construction professionals to collect survey-grade data across their worksite consistently and accurately. What used to take days or weeks, can now be completed in hours, with more accuracy and reliability.

To operate, Surveyors place Propeller AeroPoints™ (smart ground control points) on their worksite, then fly the WingtraOne drone to collect survey data. Images are uploaded to Propeller's cloud-based platform where the automated geotagging and photogrammetry processing is completed, within 24 hours of submission. https://uasweekly.com/2021/06/01/propeller-aero-and-wingtra-partner-to-deliver-faster-smarter-

drone-surveys/?utm_source=rss&utm_medium=rss&utm_campaign=propeller-aero-and-wingtra-partner-to-deliver-faster-smarter-drone-surveys&utm_term=2021-06-02

Stratospheric HAPS UAV Flies at 64,000 Feet 30 May 2021 Mike Ball

Sceye has successfully launched, flown and landed its stratospheric HAPS (high-altitude platform station) UAV, reaching an altitude of 64,600 ft. The company has received financial support from the State of New Mexico to pilot the delivery of universal broadband access to the Navajo Nation, working with a consortium of regional telecommunications companies and tribal entities.

Sceye, Sacred Wind Communications, CellularOne, PVT Networks, Santa Fe Indian School, and Navajo Technical University are banding together with the goal of achieving 100% connectivity across the Navajo Nation. According to the Navajo Tribal Utility Authority, 60% of the Navajo Nation's over 300,000 residents do not have fixed Internet access.

The company has recently conducted tests to determine the data connection range of its systems. Standard LTE technology allows for a range of 100km, and Sceye's systems have added an additional 40km, setting a long-range record. Sceye's combination of technologies can cover areas as wide as 27,000 square miles with high-speed broadband.

Sceye will pilot one of its HAPS UAVs over an area of approximately 6,000 square miles to demonstrate 100 Mbps download speeds to homes, schools, and clinics, which is the FCC's gold standard for rural area broadband.
https://www.unmannedsystemstechnology.com/2021/05/stratospheric-haps-uav-flies-at-64000-feet/

3June21

DJI Drones Cleared by Department of Defense Audit Miriam McNabb June 02, 2021

DJI Government Edition drones were cleared for use by a US Department of Defense audit which stated that "The DJI Government Edition versions that were tested show no malicious code or intent and are recommended for use by government entities and forces working with US services."

The report from the Pentagon examined the DJI Government Edition Mavic Pro and the DJI Government Edition Matrice 600 Pro. The author of the report examined numerous points of concern noted in a previous audit, finding fixes for those deemed critical.

DOI was forced to down their entire fleet of drones – used primarily for wildfire and environmental protection applications – in 2020, in response to pressure to move away from China-made technology. DJI has consistently asked the U.S. government to define specific security specifications, rather than ban the use of technology based on country of origin, which they say raises prices for consumers and limits innovation.

As the U.S. enters another dangerous wildfire season, the Pentagon report clearing DJI drones for government use could help the Department of Interior to recharge their drone program, utilizing their existing fleet for mapping, monitoring, and protecting public lands. https://dronelife.com/2021/06/02/after-all-that-dji-drones-cleared-by-department-of-defense-audit/

Kittyhawk Changes Its Name but Not Its Mission: Introducing Aloft Technologies Inc. Miriam McNabb June 03, 2021

"The market leader in drone airspace systems & UTM technologies has been renamed to Aloft Technologies, Inc," says a company press release. "Aloft represents the core company mission of powering and enabling safe and compliant drone flights through a combination of enterprise UTM applications, security and compliance solutions and AI."

Kittyhawk formed a partnership with the FAA in 2019, reworking the B4UFly app in a public private partnership that benefited the drone community. But as Kittyhawk changes its name, the company emphasizes that the core of their business is their UTM platform, including remote ID technology: and their commercial drone management platform, which launched last year. https://dronelife.com/2021/06/03/kittyhawk-changes-its-name-but-not-its-mission-introducing-aloft-technologies-inc/

Joby Moves Forward on eVTOL Infrastructure with New Partnership to Build Skyports Kelsey Reichmann June 2, 2021

Joby Aviation announced a new partnership that will give the electric vertical take-off and landing aircraft maker exclusive access to rooftop infrastructure in key metropolitan areas in the U.S. to build skyports for its aircraft, the company announced in a June 2 press release.

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Joby is partnering with parking garage operator, REEF Technology, and real estate company, Neighborhood Property Group to build skyport infrastructure for its aircraft.

The agreement will give Joby the opportunity to secure long-term leases on rooftops within NPG and REEF's network of parking garages through a period of exclusivity, according to the release. According to Joby, its eVTOL aircraft will launch in 2024.

According to Joby, parking garages will be ideal for skyport locations because of their proximity to popular locations, size, obstruction-free approach and departure paths, and ability to host mobility hubs. https://www.aviationtoday.com/2021/06/02/joby-moves-forward-evtol-infrastructure-new-partnership-build-skyports/

DoD space agency to launch laser communications between cubesats and drones

Sandra Erwin — June 2, 2021

WASHINGTON — A pair of cubesats built by General Atomics for the Space Development Agency will seek to demonstrate optical communications between satellites, and from satellites to a military drone aircraft.

The satellites are scheduled to fly to a sun-synchronous orbit later this month aboard a SpaceX Falcon 9 rideshare mission called Transporter-2. General Atomics Electromagnetic Systems announced June 2 that it has completed ground tests of the 12U cubesats equipped with laser communications terminals.

The Space Development Agency will use these satellites to test optical crosslinks as well as communication between satellites and a pilotless MQ-9 Reaper drone. Seamless connections between satellites and other military platforms via optical links is a key hurdle the Space Development Agency hopes to clear as it prepares two deploy a large mesh network of small satellites in low-Earth orbit. The constellation known as the Transport Layer is being designed to pass huge amounts of data from satellite to satellite, from satellites to the ground and to aircraft in flight. https://spacenews.com/dod-space-agency-to-launch-laser-communications-experiments-on-spacex-rideshare/

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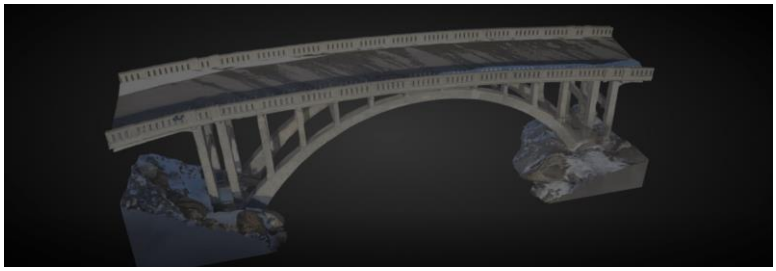
SKYDIO 3D SCAN MARKS ANOTHER MAJOR MOVE FOR AMERICAN DRONE COMPANY May 28, 2021 Sally French News



The company that rose to fame with its nearly crash-proof, truly "follow-me" drone, Skydio 2, is now making mapping software that's just as smart. Silicon Valley-based drone maker Skydio today announced the general availability of Skydio 3D Scan, which is an 'adaptive mapping software' that's intended to better automate data capture with drones.

The purpose: to allow drone operators to easily capture inspection data — and use that data to automatically generate 3D models. With it, pilots could automate photographic data collection and mapping tasks like infrastructure inspections or accident scene reconstructions.

"Manual drones lack the ability to see and understand the 3D nature of the world and, as a result, can't provide a scalable solution to replace traditional methods of inspection," said Hayk Martiros, VP of Autonomy at Skydio. "With 3D Scan, we are turning Skydio drones into intelligent scanning robots that can build real-time flight plans optimized to each scene and generate the best possible photographic datasets."
https://www.thedronegirl.com/2021/06/02/skydio-3d-scan-enterprise/

4Jun21

Low-Cost Armed Drones Reshape War and Geopolitics James Marson in Istanbul and Brett Forrest in Washington

A Bayraktar TB2 drone during a military parade in Baku, Azerbaijan, that celebrated the regaining of territory held by Russian-backed Armenian forces.

A soldier idles by a Russian-made T-72 tank. A moment later, a missile fired from a drone slams into the vehicle, exploding in an orange flash, blowing the man off his feet and leaving the tank a smoldering wreck.

The scene is one of dozens of aerial videos that were posted online in Azerbaijan last year showing off a new weapon. Over six weeks, it helped the nation regain territory in the Nagorno-Karabakh region that had been held by Russian-backed Armenian forces for more than two decades. The videos show attacks on tanks, trucks, command posts, mortar positions and radar installations.

Smaller militaries around the world are deploying inexpensive missile-equipped drones against armored enemies, a new battlefield tactic that proved successful last year in regional conflicts, shifting the strategic balance around Turkey and Russia. Drones built in Turkey with affordable digital technology wrecked tanks and other armored vehicles, as well as air-defense systems, of Russian protégés in battles waged in Syria, Libya and Azerbaijan.

These drones point to future warfare being shaped as much by cheap but effective fighting vehicles as expensive ones with the most advanced technology.
http://ereader.wsj.net/?editionStart=The+Wall+Street+Journal

Urban Air Mobility in Japan: Next Gen Planning Offices Will Support AAV, UAM

Miriam McNabb June 03, 2021

Urban Air Mobility in Japan is ready to take off. The Ministry of Land, Infrastructure, Transport and Tourism in Japan has announced the formation of the "Next Generation Aviation Mobility Planning Office" to handle regulation and issues surrounding aviation mobility. The Ministry also announced that it would regularize flight beyond visual line of sight before 2023, the target date for introducing passenger drones and urban air mobility in Japan.

The Office will be staffed by 22 full-time employees of the Minister's Secretariat. It will research issues of urban air mobility and passenger drone use to establish safety standards and appropriate regulations and systems, such as registration systems for unmanned aerial vehicles, appropriate maintenance requirements, and operations standards. The Office will collaborate with the Civil Aviation Bureau's Safety Department's Aircraft Technology Examination Center (in charge of examinations for next-generation aviation mobility, located in Aichi Prefecture) and the Fukushima Robot Test Field to design systems for next-generation aviation mobility.
https://dronelife.com/2021/06/03/urban-air-mobility-in-japan-next-gen-aviation-mobility-planning-offices-will-support-aav-uam/

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