

# NEWS & EMERGING TECHNOLOGY

## SENSEFLY LAUNCHES THE EBEE X FIXED-WING DRONE

senseFly, the industry's leading provider of fixed-wing drone solutions, today sets a new standard in mapping tools with the launch of the **eBee X**. Launched with the promise that "it's not about the drone," but instead about overcoming business challenges, the eBee X, part of the Parrot Business Solutions portfolio, is designed to boost the quality, efficiency and safety of an operator's geospatial data collection. It offers a camera to suit every job, the accuracy and coverage capabilities to meet the requirements of even the most

demanding projects, and is durable enough to work virtually every site. "The eBee X is a giant leap forward for mapping technology and underscores senseFly's position as the leader in the fixed-wing drone market," said **Gilles Labossière, the Executive Vice President and COO of Parrot Group, and senseFly CEO**. "No matter what type of project a professional is undertaking, the eBee X has the coverage, data and accuracy capabilities needed to get the job done."

[www.sensefly.com](http://www.sensefly.com)



## GENOA, ITALY: MORANDI BRIDGE COLLAPSE

Satellite imagery supplied by **European Space Imaging** highlights the devastating extent of damage that was sustained to the **Morandi Bridge** as it collapsed during a violent storm on Tuesday, August 14th. **Italian PM Giuseppe Conte** declared a 12-month period of emergency. Some 10,000 rescue workers continued to sift through the piles of concrete with sections of debris reaching three stories high in the search of finding remaining survivors. At least seven victims were pulled from the rubble alive. There are grave concerns that the remaining structure may collapse and this has led to the evacuation of at least 630 people who reside near the bridge. Due to the high resolution of the 30 cm satellite imagery released by European Space Imaging, identification of a 300 meter convey of rescue vehicles at the rubble site along with a scattering of other

vehicles around the perimeter totaling almost 100 vehicles. In addition several tent sites were erected to service the crews and remaining survivors.

[www.euspaceimaging.com](http://www.euspaceimaging.com)



## URISA RELEASES WHITE PAPER DEFINING THE BOUNDARIES OF PRACTICE BETWEEN SURVEYORS AND GIS PROFESSIONALS

In recent years, **URISA's Policy Advisory Committee** has facilitated several panel discussions at GIS-Pro conferences during which surveyors and GIS professionals have discussed the distinctive, yet complementary, services that each profession provides. Surveyors and GIS professionals each create, analyze, and draw conclusions from maps and associated data. While their respective skills and responsibilities are distinct, there is sufficient overlap to have caused some conflict as to which practices are appropriate to each profession. In some states, GIS professionals are using easily operated GPS devices to capture the location of new elements for public agency maps - a practice traditionally reserved for licensed surveyors. This paper reviews the current definition of that professional boundary, and outlines some aspects that remain insufficiently precise. Good will and mutual respect have enabled these two professions to arrive at the current "boundary" definition. The goal of this White Paper is to assist with the dialog by providing background and recommendations. [www.urisa.com](http://www.urisa.com)

## OGC REQUESTS COMMENT ON CANDIDATE STANDARD: GEOGRAPHIC INFORMATION

The **Open Geospatial Consortium** (OGC) seeks public comment on the candidate standard jointly developed by the **International Organization for Standardization** (ISO) and the Open Geospatial Consortium: "Geographic Information - Well-Known Text representation of coordinate reference systems" (CRS WKT). Well-Known Text (WKT) is used as a compact machine- and human-readable representation of geometric objects and coordinate reference information, as specified two decades ago in the OGC and ISO standard. The original CRS WKT was subsequently extended in numerous incompatible ways, and had thus become non-interoperable. In 2015, OGC and ISO adopted a major revision of the CRS WKT specification that allowed a rigorous description of coordinate reference systems and coordinate operations in WKT. This latest edition of CRS WKT cancels and replaces the 2015 version, which has been technically revised. The candidate CRS WKT standard was prepared by the OGC CRS Standards Working Group and Technical Committee ISO/TC 211 Geographic information/Geomatics.

[www.opengeospatial.org](http://www.opengeospatial.org)



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## DIGITALGLOBE SATELLITE IMAGERY OF RUSSIAN MILITARY EXERCISE

Two of **DigitalGlobe's** high-resolution imaging satellites (GeoEye-1 and WorldView-3) collected new imagery in the morning of September 13, 2018, of the large Russian military exercise, known as **Vostok 2018**, being conducted at the Tsugol training area in eastern Russia. The satellite imagery captured an airborne paratroop in progress with Il-76 Candid airplanes in flight dropping airborne fighting vehicles, equipment and personnel with parachutes. Additionally, the images reveal the scale and scope of the exercise, with thousands of armoured vehicles, artillery and equipment assembled in formation and conducting a parade while Russian President Putin reportedly observed the forces. [www.digitalglobe.com](http://www.digitalglobe.com)



### ELBIT SYSTEMS OF AUSTRALIA TO HELP TRAIN ADF CYBER WARRIORS

**Elbit Systems of Australia** has been selected by the Australian Defence Force to boost Australia's Cyber Security capability. Speaking at **Land Forces 2018** in Adelaide, **Commonwealth Minister for Defence, the Honourable Christopher Pyne**, announced that Elbit Systems of Australia will deliver a Cyber Range training platform including infrastructure, network design and build, train the trainer, training and teaching materials and support. **Managing Director of Elbit Systems of Australia, Dan Webster** said, "The Company is delighted to be providing cyber expertise to the ADF. We will be supporting Defence in training their 'Cyber Warriors' who will defend against the real cyber threats we are faced with every day. Trainees will learn to identify, track, investigate, respond to and remediate a cyber-attack." Cyber Training Ranges will be installed at ADF facilities in Melbourne, Sydney, Adelaide and Canberra. The fully self-contained Cyber Security training network will be capable of training 50 students concurrently. [www.elbitsystems.com](http://www.elbitsystems.com)

### HEMISPHERE GNSS ACQUIRES OUTBACK GUIDANCE BUSINESS FROM AGJUNCTION, INC.

**Hemisphere GNSS, Inc.** announces the signing of a definitive agreement to purchase all of the assets of the **Outback Guidance** (Outback) business from **AgJunction, Inc.** along with a new technology licensing agreement. This acquisition aligns well with Hemisphere's continued push into the global agriculture market. In addition to the included IP licenses for business into the dealer channel, a second license was signed to allow agriculture steering solutions sales into OEM, VAR, and all other segments of the agriculture supply chain. As a result of these agreements, Hemisphere will assume ownership of the Outback Guidance assets, including channel, infrastructure and trademarks. Additionally, licenses to intellectual property and related technology have been executed. Also included are two product development, sales, and support facilities, including personnel, located in Hiawatha, KS, USA and Winnipeg, MB, Canada. The addition of Outback Guidance represents Hemisphere's continued effort to make significant investments to expand its presence in the global agricultural market. [www.HGNSS.com](http://www.HGNSS.com)

### SWIFT NAVIGATION INTRODUCES STARLING, A GNSS POSITIONING ENGINE

**Swift Navigation** announced an integrated solution for precise automotive positioning applications and its interoperability with automotive-grade GNSS chipsets from STMicroelectronics. Swift unveiled its **Starling™ Positioning Engine**, a modular and portable high-precision GNSS positioning software engine that leverages **Swift's Skylark™ Cloud Corrections Service** for autonomous vehicle applications. Starling revolutionizes the architecture and cost structure of precise positioning applications. Platform independent, Starling utilizes the measurements from commercially available GNSS receivers to provide true precision and integrity capabilities. While demonstrating their first-choice integration of the ST Teseo platform for automotive customers, Swift's Starling software is GNSS-receiver agnostic and works with a variety of automotive grade GNSS chipsets and inertial sensors, offering automotive companies choices in selecting the best components for their autonomous sensor suite, Vehicle to Vehicle (V2V) applications and Automated Driving Systems. Starling features multi-band, multi-constellation support to provide centimeter-level accuracy. [www.swiftnav.com](http://www.swiftnav.com)

### HAWKEYE 360 ANNOUNCES EAGLE TECHNOLOGY AS PARTNER FOR NEW ZEALAND

**HawkEye 360 Inc.** is introducing a Strategic Partner Program to broaden access to its products and announces **Eagle Technology** as the Strategic Partner for New Zealand. "HawkEye 360 is building an international network of partners that will help us commercialize and distribute our unique analytics," said **Beau Jarvis, Chief Revenue Officer, HawkEye 360**. Eagle Technology will distribute and build upon HawkEye 360 analytics for a variety of applications, such as Maritime Domain Awareness (MDA) and spectral mapping. HawkEye 360 can identify and track ships based on radio signals, which will enable Eagle Technology to monitor the oceans around New Zealand and near Antarctica for environmental, economic and security concerns. HawkEye 360 can also precisely map active radio emissions, equipping Eagle Technology to efficiently deploy spectrum. "We are excited to be able to take this capability to our local customers to enable and support their critical decision making," said **Duane Eagle, Managing Director, Eagle Technology**. [www.eagle.co.nz](http://www.eagle.co.nz) [www.he360.com](http://www.he360.com)

**DELAIR RECEIVES FUNDING FROM INTEL CAPITAL**

**Delair** announced that it has recently closed its expansion round with an investment from **Intel Capital**. For the past year, Delair and Intel have been collaborating on the **Intel® Insight Platform**, a cloud-based digital asset management solution that leverages Delair’s extensive suite of industry-optimized software analytics to speed Intel’s efforts to transform how businesses in key verticals work using data captured from UAVs for actionable analytics. The funding will be used to further accelerate the development and adoption of the Intel Insight Platform—a data processing, visualization, analytics and reporting service that allows customers to store organize, share, and harness the rich data provided by commercial drone systems. The platform integrates Delair’s deep customer experience and vertical expertise with Intel’s expertise in developing customer-focused, easy to use cloud-based solutions and tools. **Michael de Lagarde, CEO of Delair**, said: “Data is the future of the commercial drone business and that’s why we are excited about this investment from Intel Capital.” [www.delair.aero](http://www.delair.aero)



**BOUNDLESS INTRODUCES GIS SOLUTION FOR STATE & LOCAL GOVERNMENTS**

**Boundless** announced that **Boundless Exchange™**, its geospatial content management system, is now available as an unlimited-user, managed service solution for state and local governments, enabling them to create and share maps across the organization without concerns about spiralling costs tied to software licenses and number of users. As the accumulation of data and imagery continues to accelerate, government agencies with limited resources are challenged to store and process geospatial data used to create, edit and share maps. In the case of unforeseen events or emergencies, agencies may need to use resources beyond their budgets in order to provide wider access to important information, often to the public. Boundless Exchange is a highly-configurable geospatial content management system designed to facilitate the cataloguing, discovery and publishing of location-oriented content. The GIS portal is available as a managed offering in the cloud, providing lower operating costs, access to the latest cloud computing environments, simplified maintenance and on-demand scalability – all managed by Boundless. [www.boundlessgeo.com](http://www.boundlessgeo.com)



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**FUGRO BEGINS MARINE SITE INVESTIGATION**

**Fugro** has commenced a marine site characterisation programme at **Iberdrola's Baltic Eagle Offshore Wind Farm**, in German waters of the Baltic Sea. Under a contract worth over €10 million, Fugro will undertake a UXO survey to clear the investigation sites, followed by a geotechnical seabed investigation and borehole drilling. The workscope also includes a programme of standard and advanced laboratory testing. The fieldwork takes place between August 2018 and February 2019 from Fugro vessels including the geophysical vessel Fugro Pioneer and geotechnical drilling vessel, Fugro Scout. To enhance quality and bring operational efficiency to the project, Fugro will deploy the proven Geobor-S piggy back drilling system, and its team of geophysical, geological and geotechnical experts will complement and optimise the final deliverables. "Our drilling set-up ensures that we deliver data of the highest quality to Iberdrola and obtain it in a safe manner," said **Erik Vogt, Fugro's Project Manager**. "Starting with the Fugro Pioneer we'll clear the sites of any UXO risks efficiently." [www.fugro.com](http://www.fugro.com)



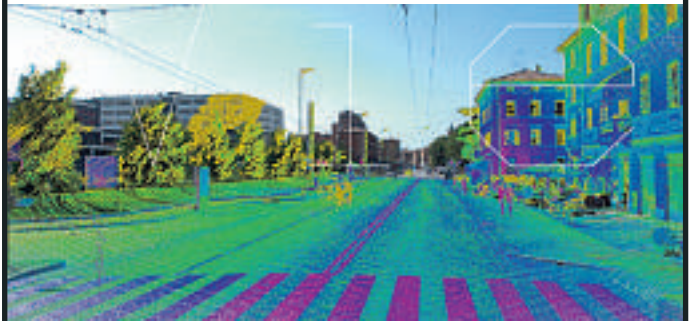
**AURECON GROUP AND DIGPRO ENTERS NEW PARTNERSHIP AGREEMENT**

**Digpro** has entered into a distribution and implementation partnership with **Aurecon South Africa (Pty) Ltd**. The agreement strengthens Digpro's partner base on the African continent. As part of the partnership, Aurecon will promote, implement and provide support on Digpro's software offering within Electricity, Water and Communication Networks. The two businesses want to structure their relationship and jointly develop high value-added solutions for current and future clients. **Stefan Multing, Head of International Sales at Digpro** says; "I am very happy and pleased to welcome Aurecon as one of our strategic partners. In many ways this new relationship is a perfect match. Aurecon provides local expertise and advanced consultancy services within electricity, water and telco, and we provide world class software, tailored for utilities and other network owners." Stefan continues; "This is an important stepping stone for Digpro's commitment to expand presence and business on the African continent." [www.digpro.com](http://www.digpro.com) [www.aurecongroup.com](http://www.aurecongroup.com)

**PITNEY BOWES NOW OFFERING DATA FOR PURCHASE ONLINE**

**Pitney Bowes Inc.** will now offer licenses to over 1,500 geography-specific data sets for purchase online through the Pitney Bowes Software and Data Marketplace. The new offering is yet another proof point in the Company's strategy to simplify commerce for customers, and invest in its growth businesses, such as Data licensing. The Software and Data Marketplace is designed as a self-service resource for users to seamlessly access over a thousand industry-leading datasets with relevance across industries, such as Retail, Insurance, AdTech, Real Estate and Financial Services. Registered users can explore and search the Pitney Bowes data catalog, instantly download sample data, and visualize and layer data on a map to ensure the data meets their needs. Now, with the addition of this new purchase capability, users cannot only transact online, but can easily download purchases through digital files. Software Development Kits (SDK) are available for each data set download to ensure users receive their products and updates automatically. [www.pitneybowes.com](http://www.pitneybowes.com)

**SITECO ANNOUNCES FULL COMPATIBILITY OF ROAD-SCANNER DATA WITH TOPODOT**



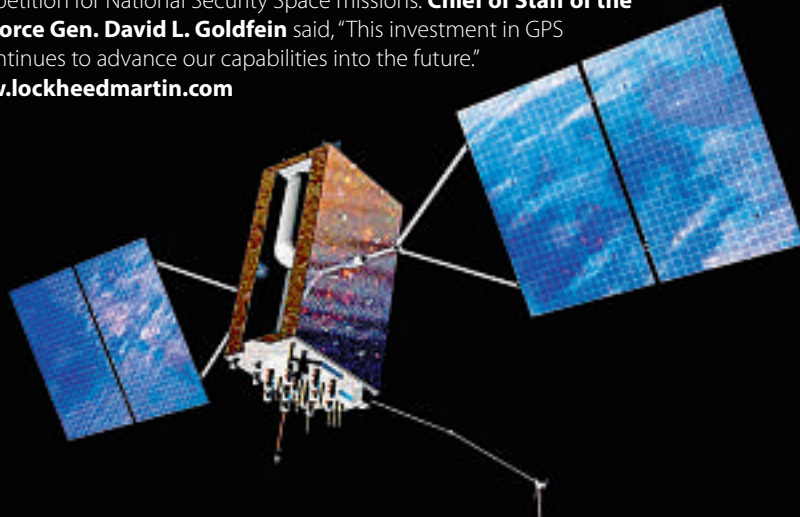
**SITECO Infomatica SRL** has released their latest version of **Road-SIT Survey** software suite, which now includes complete data format compatibility with **TopoDOT** software from Certainty3D, Orlando, FL. This new functionality extends the Road-SIT Survey existing output to LAS, ASTM e57, DXF and many more formats, making extended workflow for existing customers working seamlessly into TopoDOT. In recent years, TopoDOT software has become widely used for DOT roadway design and management. The SITECO solution of integrating static scanners and a wide variety of LiDAR profilers onto a high performance mobile mapping platform, bringing high performance multi-scanner configurations into a highly cost effective roadway asset scanning platform. One such configuration allows the use of dual FARO Focus laser scanners to be used for both static and mobile scanning, ensuring greater efficiency of survey capital equipment. The Road-Scanner product family includes a comprehensive road information software suite as standard, and the new format simply extends functionality for those already using TopoDOT. [www.sitecoinf.it](http://www.sitecoinf.it)

**AIRBUS AND ORBITAL INSIGHT PARTNER ON THE ONEATLAS PLATFORM**

**Airbus Defence and Space** has entered into a partnership with **Orbital Insight**, a U.S.-based geospatial analytics company, to build a suite of geospatial analytics services and tools. The agreement will provide Orbital Insight with access to Pleiades and SPOT satellite imagery at scale and provide Airbus with analytics services, making Orbital Insight the first analytics partner for the Airbus Digital Platform, "**OneAtlas**." The OneAtlas Platform is a collaborative environment enabling users to easily access constantly updated satellite imagery, perform large-scale image processing, extract industry-specific insights, and benefit from Airbus assets to develop tailored solutions for a wide range of markets in both commercial and government sectors. "We're proud to be Airbus' first geospatial analytics partner on The OneAtlas Platform," said **Dr. James Crawford, Orbital Insight's CEO** and founder. "Along with our new satellite imagery agreement, this partnership drives customer value for those looking to better understand what's happening on and to Earth." [www.AirbusDefenceandSpace.com](http://www.AirbusDefenceandSpace.com)

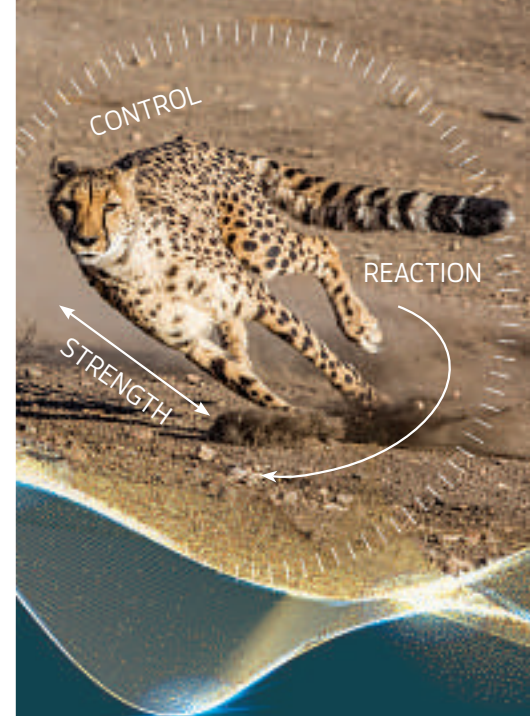
## US AIR FORCE ANNOUNCES SELECTION OF GPS III FOLLOW-ON CONTRACT

The **U.S. Air Force** selected **Lockheed Martin** for a fixed-price-type production contract for 22 GPS III Follow-On satellites with a total estimated contract value up to \$7.2 billion. "The world is dependent on GPS, from getting directions to getting cash from an ATM or trading on the stock exchange," said **Secretary of the Air Force Heather Wilson**. "These satellites will provide greater accuracy, and improved anti-jamming capabilities, making them more resilient." Today, the Air Force operates a total of 77 satellites vital to national security that provide communications, command and control, missile warning, nuclear detonation detection, weather and GPS for the world. The Air Force's acquisition strategy for this solicitation achieved a balance between mission success, meeting operational needs, opportunities for technology insertion, lowering costs and introducing competition for National Security Space missions. **Chief of Staff of the Air Force Gen. David L. Goldfein** said, "This investment in GPS III continues to advance our capabilities into the future." [www.lockheedmartin.com](http://www.lockheedmartin.com)



## NANOTRON RELEASES NEW PRODUCTION VERSION OF LOCATION TRACKING SOFTWARE

**Nanotron** achieves and deploys a new release of its Location Engine and Server software, **nanOLEs 3 5K** for up to 5,000 objects. The newly-updated nanoLES platform delivers instantaneous, high-precision location data for large mission-critical tracking applications in Livestock Health and Mining. Leveraging its highly scalable virtual synchronisation of location infrastructure, nanotron has now more than doubled the scope of existing commercial deployments. The nanoLES product uses nanotron's patented 'Sea of Anchor' technology for highly scalable virtual synchronisation of location infrastructure. The software processes raw location data it receives from 'anchors', based on Time of Arrival (TOA) information, and delivers position information to customers' business applications. The 'Sea of Anchor' technology simplifies location infrastructure build-out. It eliminates the complex cell-based approach of competing offerings. To expand an installation, users simply add more tags and new 'anchors' connected to the same data backbone network. [www.nanotron.com](http://www.nanotron.com)



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**PCI GEOMATICS COMPLETES HISTORICAL AIRPHOTO MAPPING PROJECT FOR VIRGINIA COUNTY**

**PCI Geomatics** announced the completion of a project to process historical airphotos for the GIS department of Fairfax County, VA. In 2017, the county GIS team contacted PCI Geomatics to help correct its remaining historical airphotos from 1960 and 1976. The 1976 imagery was particularly unique as it was the first color imagery collected of the entire county. The experts at PCI Geomatics used its Geomatica Historical Airphoto Processing software to produce accurate, complete, high-quality ortho mosaics of the data. The county had recognized the long-term value of historical imagery and invested in preserving the information contained in older images through systematic scanning and ortho mosaicking. The county GIS team also created Historical Image Viewer, an innovative and easy-to-use app, available through its web portal, to showcase historical ortho mosaics. Tom Conry, **GIS Manager at Fairfax County** said, "We have added the 1960 and 1976 imagery to the existing 12 years of historic imagery in Historical Image Viewer." [www.pcigeomatics.com](http://www.pcigeomatics.com)

**GARMIN ANNOUNCES AVAILABILITY OF COST-EFFECTIVE NAVIGATION DATABASES FOR SOUTH AMERICA**

**Garmin** announced the addition of new, cost-effective **Garmin Navigation Database** information for South America. This database is now available in the newly expanded **Americas OnePak**, which offers coverage in North, Central and South America and provides database updates across all Garmin avionics and a portable in a single aircraft. New to South America, the Garmin Navigation Database provides a trusted and convenient path to incorporate the latest database information within select Garmin avionics. Data such as instrument procedures, frequencies and airport data are included in this database. The Americas OnePak that incorporates the new South America data is available on compatible products for \$724 USD, which includes the Garmin Navigation Database, Terrain and Basemap and can also include the Airport Directory, IFR enroute charts, VFR sectional charts, Obstacles and SafeTaxi®. The purchase of a OnePak subscription also provides existing Garmin Pilot™ subscribers with an upgrade to Garmin Pilot IFR Premium that includes coverage in South America. [www.flygarmin.com](http://www.flygarmin.com)

**GARMIN JOINS HERE VENUES MARKETPLACE, THE FAST-GROWING SOURCE FOR VENUE MAPS**

**HERE Technologies** announced **Garmin International, Inc.**, as the latest partner to join **HERE Venues Marketplace**, a rapidly expanding source for maps of venues such as airports, malls, stadiums and corporate campuses. Access to the Marketplace's data APIs will allow Garmin to receive up-to-date maps of venues around the world. For users of selected Garmin devices, that would mean being able to use the freshest maps to navigate hassle-free right to where they want to go. HERE Venues Marketplace is a partner and customer ecosystem that is expanding upon the HERE acquisition of Micello in March 2018. The process by which venue maps are created and distributed is simple. Venue owners and facility operators provide their floor plans to HERE Technologies, which HERE Technologies then converts into structured map data. Each venue can opt-in to make the new map available to the marketplace of more than 50 partners, who can integrate the maps into their applications and services. [www.here.com](http://www.here.com)

**TELEDYNE CARIS' BURNS FOSTER DEBUTED ADVANCED ALGORITHMS**

**Teledyne CARIS** unveiled the hydrographic industry's first use of machine learning for sonar noise removal at Shallow Survey 2018. **Burns Foster, Manager of New Product Initiatives, Teledyne CARIS** spoke on the topic of 'Advancing Hydrographic Data Processing through Machine Learning'. Attendees learnt how this newly assembled machine-learning algorithm is being used to automatically identify and remove common types of noise in sonar systems. **Bill Lamey, VP of Product Development, Teledyne CARIS** stated, "The potential benefits of machine-learning in this industry are time savings and consistency. This is based on the larger community's collective expertise in bathymetric processing gained over many years." [www.teledynecaris.com](http://www.teledynecaris.com)



### HOW DRONES CAN OPTIMIZE SURVEYING AND MAPPING PROJECTS

When commercial drones were first introduced, the geospatial industry immediately adopted them. Equipped with different types of sensors and cameras, drones were turned into flying data collection devices. It soon became obvious that drones could optimize workflows, improve safety, project results and realize considerable cost savings. The following examples show how geospatial companies are using drones in different verticals that use geospatial data. **Mapping and Surveying** - UAV's can ease the work of terrestrial surveying projects greatly, for example in dangerous areas where landslides and earthquakes are common. **Mining** - Drones proved to be a great alternative for small-scale mapping areas such as open pit mines. **Agriculture** - Specialized mapping software companies build solutions using drones that help farmers manage and monitor their crops. **Energy** - Inspection of powerlines is an important use case for drones. **Construction** - Construction sites can be managed and improved by using drones. **Drone** data can be re-used, while a worldwideGIS database gets created. [www.soar.earth](http://www.soar.earth)



### TOPCON ANNOUNCES MAGNET INSPECT

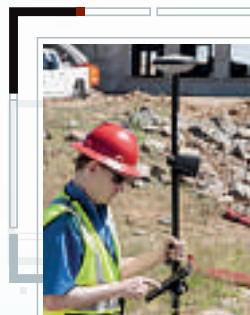
Infrastructure inspection applications include bridges, dams, tunnels, buildings, utilities such as power lines, wind turbines, cell towers, and more. The inspection industry is on path to become a \$15B+ industry by 2025. More and more new tech adopters are utilizing UAV for inspection as an alternative to conventional methods for increased efficiency and higher safety. **MAGNET Inspect** will work with models from virtually any UAV. When combined with Intel® Falcon™ 8+ Drone – **Topcon®** Edition and Topcon ContextCapture, powered by Bentley Systems, the software becomes part of an end-to-end UAV and data processing workflow for inspection of infrastructure assets. Create inspection reports faster and locate the necessary photos from your UAV database with greater ease. Select inspection photos georeferenced directly in a 3D model, then annotate and create an excel report with your key findings. Bring annotation categories from project to project for efficient reporting on your projects. [www.topcon.com](http://www.topcon.com)

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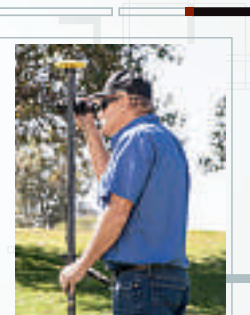
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## ESRI INCORPORATES BUILDINGFOOTPRINTUSA DATA FOR DEEP LEARNING

**Esri**, the global leader in location intelligence, has announced that it is partnering with **BuildingFootprintUSA** to provide unprecedented, accurate geocoding and address matching to users of Esri's ArcGIS platform in the United States and Canada, as well as a comprehensive training dataset used to improve Esri's machine learning and artificial intelligence. Users in any industry—including government, telecom, insurance, utilities, real estate, and retail—can benefit from the increased geocoding accuracy that comes from using building footprints. Building footprints for the United States and Canada will be available for use by ArcGIS users by the end of the year, closely followed by data for the United Kingdom and Brazil. Esri will also provide the data for advanced geocoding needs through ArcGIS World Geocoding Service, StreetMap Premium for ArcGIS North America, and ArcGIS World Geocoder. The data will be available to all ArcGIS users for no additional cost and can be discovered in the Living Atlas of the World. [www.esri.com](http://www.esri.com)

## UNIFLY AND TERRA DRONE CO-DEVELOP UTM SYSTEM WITH HITACHI

**Hitachi** has launched a drone platform solution expanding their existing infrastructure inspection services portfolio with an AI assisted, drone-based service. Over the last years, the societal impact of drone technology is steadily increasing and it is expected that the use of drone technology will improve business efficiency in many fields. Professional drone applications mainly target logistics, infrastructure inspection, surveying, agriculture, disaster response and spatial information data management. Moving from pilot controlled flights to automated drone flights Beyond Visual Line of Sight (BVLOS) is key to realizing the full potential of these drone applications. To that end, Hitachi provides a drone flight management system and drone maintenance services to support safe and secure autonomous drone flights. **Unify** and **Terra Drone** provide the technical UTM backbone to ensure safe BVLOS drone flights at the test center. After registration the drones are monitored and tracked in real-time informing the authorities continuously on drone flight activities and flight compliance. [www.unify.com](http://www.unify.com) [www.hitachi.com](http://www.hitachi.com) [www.terra-drone.net](http://www.terra-drone.net)

## USGIF LAUNCHES THIRD ANNUAL EDGELOCATION GIVING CAMPAIGN

**United States Geospatial Intelligence Foundation** (USGIF) announces the launch of its third annual **EdGEOcation Giving Campaign**, with the goal to raise funding and awareness for the Foundation's K-12 educational outreach program. **USGIF** aims to generate \$15,000 in donations by Jan. 11. USGIF's K-12 programming brings geospatial intelligence (GEOINT) awareness and interactive STEM education into classrooms as well as provides resources for teachers to integrate GEOINT with existing curricula. Contributors to the giving campaign further the education of the country's future engineers, analysts, cartographers, data scientists, and beyond. "As an educational non-profit, USGIF's mission is to provide GEOINT education for people of all ages, to include helping the younger generation prepare for future career choices," said **Lindsay Mitchell, the Foundation's lead educational manager**. "All proceeds from the giving campaign directly benefit K-12 students, and with the community's contributions, USGIF will continue to develop lessons and classroom resources to ensure more students are introduced to the exciting field of geospatial intelligence." [www.usgif.org/donate](http://www.usgif.org/donate)



## ERM ADVANCED TELEMATICS LAUNCHES A UNIQUE PRODUCT TO IMPROVE DRIVING USING HUMAN VOICE WARNINGS

International automotive technology provider **ERM Advanced Telematics** is launching two new products aimed at improving driving quality with the use of human voice warnings and visual signals to the driver. The development of the two products, **eVoice** and **eFlash SF**, was completed, and both are now being implemented by a number of clients. The main target markets for the products are car fleets, automakers and auto importers. The eVoice and eFlash SF join the company's mature eSafe product for identifying and analyzing driver behaviour. The latest products represent expansion of the existing solutions for safety and communications solutions launched by ERM in recent years for connected vehicles. The eVoice product is based on a speaker installed in a vehicle that utilizes a processor and a memory chip for supplying the driver with human voice warnings designed to help him or her identify dangerous situations they made, while driving. [www.ermtelematics.com](http://www.ermtelematics.com)



## UAVOS FIXED-WING UAV SITARIA COMPLETED FLIGHT TESTS

**UAVOS Inc.** has completed a series of test flights of a new **Sitaria** fixed-wing UAV. The new UAV is designed for patrol and observation missions, for aerial photography of terrain area with a radius of up to 120 km. Among other tasks, the unmanned aircraft is purposely designed to work with the LIDAR airborne laser scanning equipment as payload. UAV Sitaria has a wide range of speeds, which allows the aircraft to carry out missions at minimum flight speeds close to 70 km/h. To fulfill a mission using LIDAR it is important to maintain a certain speed of the aircraft relative to the ground. When the UAV performs monitoring while moving against the wind, it shall keep high air speed, and moving upwind – lower speed. **Vadim Tarasov, UAVOS investor and board member** comments: "During monitoring missions, a wide range of speeds allows Sitaria fixed-wing drone to quickly reach the object and return back at the optimal speed." [www.uavos.com](http://www.uavos.com)