

NEWS & EMERGING TECHNOLOGY

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION SELECTS HEXAGON FOR SAFETY MANAGEMENT SYSTEM

South Carolina Department of Transportation (SCDOT) has selected Hexagon's Geospatial division to implement a transportation safety management system that will support the state's **roadway safety programs** and federal reporting requirements. The integrated system will allow SCDOT to leverage existing crash data from the South Carolina Department of Public Safety's databases for **quicker and more accurate analysis**. It will provide a data-driven environment to help transportation analysts and safety engineers **identify high-risk locations** based on crash rates, frequency, roadway characteristics and other criteria. The system will also support data collection and project identification for South Carolina's Highway Safety Improvement Program, which is critical to funding transportation safety programs. www.hexagon.com



ATMOS UAV JOINS FORCES WITH TOPCON POSITIONING GROUP

Atmos UAV, the fast-growing Dutch drone manufacturer that develops high-end VTOL fixed-wing drones for surveying and mapping applications, has now formed a new **partnership** with Topcon towards a base station free era. A designer, manufacturer and distributor of precision measurement and workflow solutions, Topcon has developed and optimized over the last years its own GNSS RTK Reference Network, **TopNETlive**, which will now be available with every Marlyn unit. TopNETlive is an innovative and flexible **subscription-based solution** that offers **real-time GNSS corrections**. Designed to meet the unique needs of its users, the platform provides a wide range of subscription services such as Network RTK, RTK, DGNS, and Agriculture-specific GNSS. Managed and operated by Topcon geodesy teams, and with multiple stations for redundancy at hand, TopNETlive brings survey-grade results without the need of a base station. www.atmosuav.com

ECOBOT JOINS TRIMBLE'S GIS PARTNER PROGRAM TO EMPOWER ENVIRONMENTAL REGULATORY REPORTING

Trimble announced that Ecobot, a software company that provides cloud-based applications to speed environmental regulatory reporting, has joined Trimble's Mapping & GIS Partner Program. As part of the program, Ecobot has implemented Trimble integration tools to add **high-accuracy positioning capabilities** within its wetland delineation app. The app, which runs on iOS mobile devices, connects with the Trimble R1, R2, and R12 Global Navigation Satellite Systems (GNSS) receivers to record **precise field data**. The combined solution allows Ecobot customers to provide fast, accurate U.S. Army Corps of Engineers (USACE) wetland delineations, which establish the location and size of a wetland for government regulatory purposes. www.trimble.com



RIEGL USA HAS RELOCATED

Internationally recognized for their Ultimate High-Performance LiDAR 3D scanning equipment and data processing software, RIEGL USA announced that they have relocated to their new state-of-the-art, RIEGL group financed North American headquarters and training centre in **Winter Garden, Florida**. This investment was made possible by the continued success and growth of RIEGL in North America, the excellent and determined teamwork of the RIEGL USA team, and by the strong confidence that the RIEGL headquarters in Austria, Europe, is placing in the North American market. RIEGL USA's new **18,500 square foot facility** is located on its own ground of approx. 19 acres at 14707 West Colonial Drive, Winter Garden, a charming city just west of Orlando, Florida. www.riegl.com



GIS ANALYTICS SERVER OF U.S. FEDERAL STATISTICAL DATA

The Visual Data Analytics (VDA) Mapserver is a web-based, interactive mapping and geospatial analysis resource for **U.S. Federal statistical data** that is developed from the TatumGIS Developer Kernel for ASP.NET edition. VDA incorporates a unique combination of U.S. Federal demographic, economic, and business data with proprietary current estimates and projections to offer **important insights** into what is changing, where, and by how much - an essential resource in this era of increased uncertainty. VDA differs from other available tools in the scope and style of accessing data for wide-ranging geography and frequently updated demographic-economic subject matter. Integration of multi-sourced data into VDA GIS projects offers the user a wide capability and flexibility for viewing or analysing the data. www.tatukgis.com

SEPTENTRIO OPENS R&D CENTER IN ESPOO, FINLAND

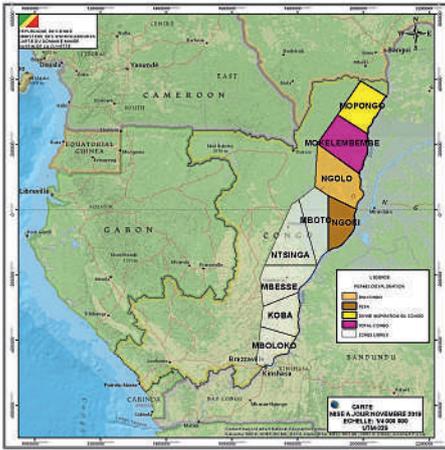
Septentrio has opened a new Research & Development center in Espoo, Finland, to support the strong growth and ambitious expansion plans for its **GNSS/INS** solutions for professional and industrial applications. The new office is strategically located in Espoo, well known as a **high-tech hub** with a long history of state-of-the-art GNSS and INS development, housing many technology companies as well as the famous **Aalto University**. Septentrio will be expanding its R&D team in the coming months with enthusiastic and highly qualified GNSS and INS engineers as well as software engineers. Stefan Söderholm will spearhead the establishment of the new R&D center and the recruitment efforts. www.septentrio.com



UGCS INDUSTRIAL SOLUTIONS INTRODUCES THE DRONE-INTEGRATED METAL DETECTION SYSTEM

SPH Engineering announces the launch of a drone integrated metal detection system with a Geonics EM61Lite metal detector, a new product of UgCS Industrial Solutions. The same performance and robustness available for users of the standard **EM61-MK2 time domain metal detector** are now available for airborne use - to find metallic objects in hard to reach or dangerous areas. The new system is capable of **detecting metallic** (magnetic and non-magnetic) **items** in the first few meters under the surface. It could be applied for many applications, including UXO search, detection of underground infrastructure and archaeological needs. www.industrial.ugcs.com





CGG SIGNS MULTI-CLIENT AIRBORNE GRAVITY GRADIENT SURVEY AGREEMENT WITH SNPC IN CONGO

CGG is mobilizing to acquire the industry's first-ever multi-client airborne gravity and magnetic survey of the onshore **Congo Cuvette Basin** in the Republic of Congo after signing an agreement with the SNPC and the Ministry of Hydrocarbons. The project has already received significant prefunding from the oil and gas industry. Scheduled for licensing in early 2021, the survey data will significantly support industry exploration initiatives by helping to **assess hydrocarbon prospectivity** and provide a backbone for future exploration of the area. The Congo Cuvette basin is a large underexplored onshore sedimentary basin, in a logistically challenging area for resource exploration. This **airborne geophysical survey** will support the initiatives of the government of the Republic of Congo and SNPC to attract investment into this frontier area. www.cgg.com

HERE RELEASES 3D CITY MODELS FOR INDUSTRIES TO BUILD REALITY-BASED APPLICATIONS AND SIMULATIONS

HERE Technologies, the location data and technology platform, unveiled high-fidelity, 3D models of **75 city centers** around the world to give software developers the geospatial data needed to build real-world visualizations of cities. With **HERE Premier 3D Cities**, last-mile delivery drivers can navigate dense cities with maps that highlight precise building dimensions and entry points along their delivery routes. The entertainment industry gets the building blocks for virtual site visits and seamless computer-generated imagery integration. Telecommunications companies can optimize their buildouts of **5G networks** in 3D and urban planners and emergency responders can build digital twins for better land use analysis and disaster readiness simulations. www.here.com

AYRES ACQUIRES TRUE VIEW 620 3D IMAGING SYSTEM

GeoCue Group has partnered with the Geospatial Division of consulting firm, Ayres, in their acquisition of a GeoCue True View 620 3D Imaging System (3DIS). GeoCue's True View 620 is equipped with **RIEGL's miniVUX-2UAV laser scanner** integrated with dual photogrammetric cameras. Extreme accuracy is provided by **Applanix APX-20 Position and Orientation System**. All True View 3D Imaging Systems are bundled with Applanix POSPac, True View EVO post-processing software and True View Reckon data management solution. www.geocue.com

UNDERWATER SUCCESS FOR REMOTE SURVEY

Bureau Veritas (BV), a provider of testing, inspection, and certification, has successfully completed the proof-of-concept project for underwater remote surveys using the **Seasam technology eco-system** from **Notilo Plus** on a Corsica linea ship, the Mediterranee. Efficient underwater inspection of shipping vessels is important for the industry as a substitute for **docking surveys** at agreed intervals or to inspect hull damage. BV has been evaluating opportunities to provide **effective remote inspection services**. Using the Seasam system, an in-water survey of a ship located in Marseille has been supervised from its head office in Paris. The Seasam drone, sensors, and control system with Notilo Plus software has successfully demonstrated innovative and enhanced capabilities as one of the possible alternatives to the traditional diver in-water survey. www.group.bureauveritas.com



UAVLAS DEVELOPED UNIVERSAL SOLUTION FOR PRECISION & SAFE LANDING FOR UAVS

UAVLAS has introduced the ultra-high precision autonomous landing system for UAVs, a set of **sensors and software** that provides a direct connection between drone and landing site. As a result, the advanced landing assistance system ensures an **accurate and safe landing** even in the absence or weak GPS signal, strong and gusty wind, landing on a charging station, or mailbox, operations in dark or fog. UAVLAS's landing assistance system is aimed to solve the bottlenecks in the most costly and critical segment last mile delivery. The **ultra-high precision landing system** consists of a ground transmitter (landing platform) and a lightweight onboard receiver on a drone (Plug&Play) and software enabling the system to operate with commonly known autopilots. www.uavlas.com



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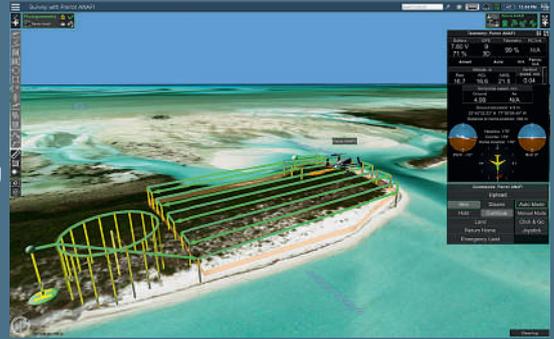


[EOS POSITIONING SYSTEMS]

WWW.EOS-GNSS.COM

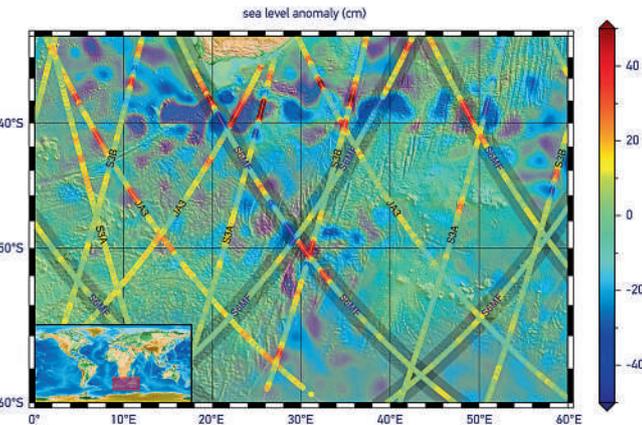
PARROT, UGCS PARTNERSHIP AUGMENTS DRONE MISSION PLANNING, MAPPING

SPH Engineering, a premier UgCS software developer, announced that the Parrot ANAFI UAV platform is now compatible with UgCS. ANAFI users now have access to the program's vast range of tools to enhance professional drone operations and streamline land surveying and mapping processes. The world's premier **UgCS (Universal ground Control Software)** is a tool for enhanced UAV mission planning and data collection suitable for land surveying and industrial inspections. It is an **industry-standard data acquisition instrument** for professional drone pilots doing their job with a mixed multi-vendor drone fleet in large scale surveying projects. It allows to plan and fly drone survey missions to safely collect high-quality data, providing convenient technics for aerial and linear surveys and enabling direct drone control. www.ugcs.com



THE COPERNICUS SENTINEL-6 MICHAEL FREILICH SATELLITE DELIVERS PROMISING FIRST ALTIMETER DATA

The first data from the European-US ocean-monitoring satellite Copernicus Sentinel-6 Michael Freilich, launched on 21 November, show the spacecraft's altimeter is on track to provide **highly accurate measurements** of sea level, sea state and ocean surface wind speed. Sea level products extracted from the first nineteen hours' worth of **altimeter data** received on 4 December, overlaid on a map showing the similar products from all of the **Copernicus altimetry missions** – Jason-3, Sentinel-3A and -3B – confirm Copernicus Sentinel-6 Michael Freilich is “seeing the same scene” in a dynamic area of the ocean south of South Africa. The products reflect highs and lows in the ocean surface topography that, like high and low pressure in the atmosphere, regulate ocean currents. www.eumetsat.int



UP42 TO OFFER SMART SATELLITE DATA FROM AUSTRALIA'S LATCONNECT 60 ON THE UP42 GEOSPATIAL MARKETPLACE

UP42 announced that image data and information from the planned LatConnect 60 constellation of mid-inclined orbit remote sensing satellites will be available on the UP42 developer platform for Earth observation data and analytics. In early 2022, **LatConnect 60** will launch its **first two “smart” small satellites** equipped with onboard Artificial Intelligence (AI) for data pre-processing and advanced tip-and-cue functionality. This on-board AI has the possibility to significantly reduce costs for resellers and end users, making enterprise-quality satellite data available to a wider range of small and medium enterprises. www.up42.com



LEICA BLK247 SMART 3D SURVEILLANCE SYSTEM NOW AVAILABLE IN TWO VERSIONS

Leica Geosystems, part of Hexagon, announced the expansion of its Leica BLK247 smart 3D surveillance system to accommodate the varying needs of its global customers. The Leica BLK247 is the world's first 3D sensor combining LiDAR, video camera and thermal imaging technology for **security and surveillance**. Building owners, operators, security teams, and facilities managers can benefit from **continuous monitoring of buildings and spaces** including hospitals, factories, manufacturing plants, and offices. Additionally, the Leica BLK247 provides **reliable surveillance** for private properties. The Leica BLK247 is now available in two versions, the Leica BLK247 i5 and the Leica BLK247 x5, which are suited to monitor and protect different environments. www.leica-geosystems.com





CYPRUS SUBSEA AND SUBSEA EUROPE SERVICES COLLABORATE TO CREATE COMBINED HYDROGRAPHY AND OCEANOGRAPHY PORTFOLIO

Subsea Europe Services GmbH (Hamburg, Germany) and Cyprus Subsea Consulting and Services C.S.C.S. Ltd (Nicosia, Cyprus) have entered a new strategic cooperation to share knowledge and services that will simplify the **acquisition of high-quality marine data** for clients across Europe. The agreement, which was signed on 1st January 2021, is the foundation for matching the extensive autonomous and long-term water column survey experience of **Cyprus Subsea** and **Subsea Europe Service's seafloor surveying expertise** to provide a harmonised Hydrography and Oceanography portfolio from a single, Europe-wide source. Additionally, both companies will share knowledge on the continuing development of autonomous solutions for marine surveying, developments that will help to bring high-quality marine data to more companies and organisations.

www.subsea-europe.com

THE COHESIVE COMPANIES ANNOUNCE THE ACQUISITION OF UK-BASED MAXIMO SOLUTIONS PROVIDER SRO SOLUTIONS

The Cohesive Companies, a wholly-owned but independently operated digital integrator business unit of Bentley Systems, announced its acquisition of SRO Solutions ("SRO") to extend its capabilities for marine and industrial infrastructure. Established in 2004, SRO introduced IBM's Maximo to the maritime environment, managing projects across all seven continents for an extensive list of **blue-chip owner-operators** of assets on- and off-shore. SRO, a Gold Accredited IBM Business Partner, provides unique Maximo replication and zero downtime upgrade solutions.

Headquartered in Manchester, SRO approaches each project with a disciplined agile methodology, underpinned by a rich **engineering heritage** and **strong technical competence**. SRO's engineers, consultants, and project managers wield extensive experience in delivering Maximo solutions across a wide range of sectors, led by maritime and oil and gas.

www.bentley.com



GSSI ANNOUNCES DISTRIBUTION AGREEMENT WITH INSTROTEK ON PAVESCAN RDM CONTINUOUS ASPHALT DENSITY GAUGE

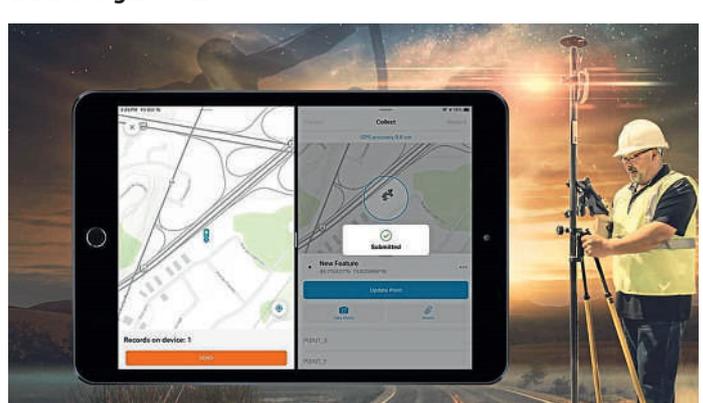
GSSI, a manufacturer of ground penetrating radar (GPR) equipment, announces that InstroTek will serve as national and international distributor of GSSI's PaveScan RDM Continuous Asphalt Density gauge. PaveScan provides **accurate real-time measurements** to ensure pavement performance and quality. Based in Research Triangle Park, NC, InstroTek is a global provider of products and technology development for the **construction and raw materials industry**, with sales and services offices across the US. The company holds more than twenty construction materials testing patents, including the first **portable nuclear gauge calibration device** and the first automatic equipment for accurate density measurements of course and absorptive asphalt samples. Setting new standards for testing and quality control for over twenty years, InstroTek equipment is used for accuracy and reliability in materials testing around the world. www.geophysical.com



EOS POSITIONING SYSTEMS ANNOUNCES ABILITY TO CONSUME ARROW GNSS LOCATION DATA IN MULTIPLE ESRI APPS CONCURRENTLY

Eos Positioning Systems (Eos), the Canadian manufacturer of the high-accuracy Arrow Series GNSS receivers, has announced that it has released capability in its Eos Tools Pro app (on iOS, Android) that allows **ArcGIS Collector** and **ArcGIS Survey123**, or any other two mobile applications, to run concurrently on a single device. This allows a user to **dynamically switch between two apps** in the field while retaining high accuracy in both. This new capability allows fieldworkers to run two apps at the same time while accessing the same ArcGIS Online database. Specifically, a user can now record a high-accuracy GNSS location in Collector and then immediately switch to an open Survey 123 form to complete their workflow. The data, including precise positioning will be populated to the same ArcGIS Online database.

www.eos-gnss.com



AIRBUS SIGNS MULTI-SATELLITE CONTRACT WITH INTELSAT FOR ONESAT FLEXIBLE SATELLITES

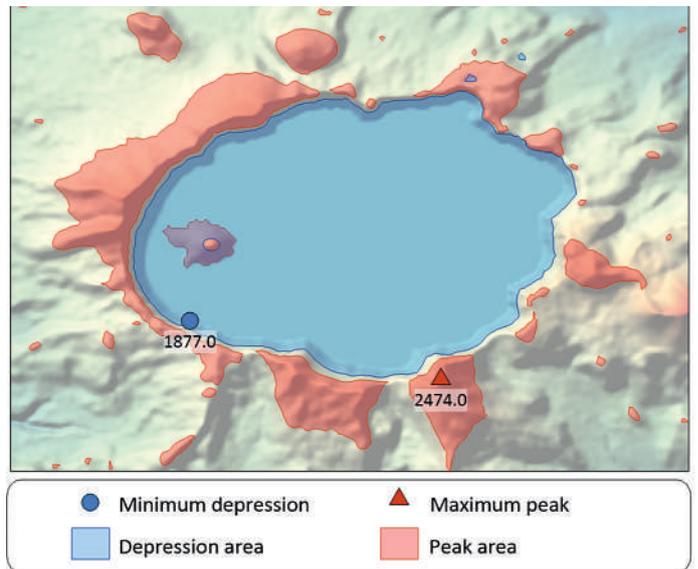
Airbus has signed a contract with Intelsat to build two OneSat satellites operating in multiple frequency bands for Intelsat's next-generation software-defined network. The contract was signed on 31 December 2020. The satellites will be based on **Airbus' OneSat product line**, the latest generation of fully flexible, in orbit reconfigurable, Software Defined Satellites (SDS). OneSat is designed to deliver the optimal balance between performance, flexibility and competitive cost per bit, while maintaining Airbus' unrivalled product reliability. Airbus will deliver an **end-to-end fully integrated solution**, including design and manufacture of the satellites. The highly capable ground segment software components, when fully integrated into Intelsat's next-generation software defined network ecosystem and advanced digital suite will allow dynamic operation of end-to-end satellite resources. The two next generation SD satellites will be delivered in 2023. www.airbus.com



U-BLOX SIGNS DEAL WITH UK START-UP FOR CUTTING-EDGE GNSS TECHNOLOGY

u-blox, a global provider of positioning and wireless communication technologies, has signed a deal with the award-winning UK based technology company, Focal Point Positioning, to **integrate technology** that will improve the **accuracy and reliability** of **GNSS devices** - enhancing positioning performance and security for growing applications such as smart cities, location-secure IoT and health and fitness wearables.

The patented **Supercorrelation technology** solves a critical weakness in GNSS caused by **multipath interference**. Multipath interference occurs when satellite signals bounce off buildings and landmarks, causing GNSS receivers to provide degraded positioning outputs. The result for users is that the blue dot on their phone or device may be in the wrong place, moving in the wrong direction, or may have a large error ellipse. For autonomous vehicles it could lead to positioning errors that place the vehicle in the wrong lane or worse. www.u-blox.com



GOLDEN SOFTWARE ENHANCES SURFER VISUALIZATION FUNCTIONALITY FOR DEEPER DATA INSIGHTS

Golden Software, a developer of affordable 2D and 3D scientific modeling packages, has enhanced visualization and other functionality in the new version of its Surfer gridding, contouring and 3D surface mapping package. Surfer users now have a greater number of options for **displaying their scientific data** in the new version. The Surfer package is used by more than **100,000 people worldwide**, many involved in oil & gas exploration, environmental consulting, mining, engineering, and geospatial projects. The software has been relied upon for more than 30 years by users in numerous disciplines to easily **visualize and interpret complex data sets**. Known for its fast and powerful contouring algorithms that regularly outperform more expensive packages, Surfer enables users to model data sets, apply an array of advanced analytics tools, and graphically communicate the results in ways anyone can understand. www.goldensoftware.com



BENTLEY SYSTEMS BECOMES FOUNDING MEMBER OF DIGITAL TWIN CONSORTIUM

Bentley Systems, the infrastructure engineering software company, has elevated its participation in the **Digital Twin Consortium** by becoming a founding member. Having been a groundbreaker member since day one of the consortium's launch in May of 2020, Bentley will deepen its collaboration as a founding member and become a member of its steering committee. As a founding member, Bentley is contributing its **advice and technology expertise** to the Digital Twin Consortium's steering committee. Adam Klatzkin, vice president, iTwin Platform, at Bentley Systems, and Mullen are helping advance the Digital Twin Consortium's strategic roadmap, working groups, and governance as members of the consortium's steering committee. www.bentley.com



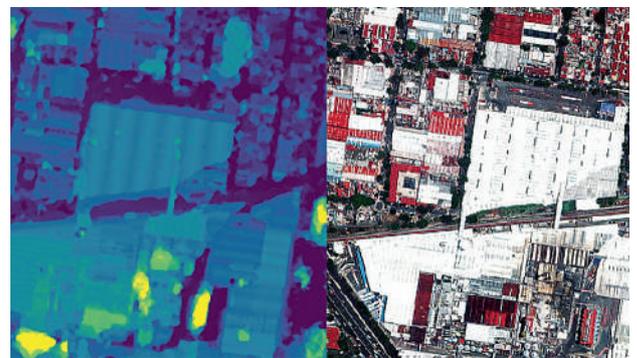


SKYEBASE, SPH ENGINEERING AND PERGAM REPORT A USE CASE OF METHANE MEASUREMENTS WITH A UAV IN BELGIUM

In Q4 2020, SkyeBase, a total inspection service provider and inspection platform developer, addressed the request from Fluxys Belgium, a gas infrastructure group headquartered in Belgium, to monitor several zones of their high-pressure gas pipeline and decompression installations for methane leaks. The method proved to be safe, accurate, as well as more labor and cost effective, compared to traditional use of helicopters or ground sniffers and/or fixed sensors. To perform the natural gas pipeline and facilities leak inspections, **SkyeBase's DJI M600** drone was equipped with **Pergam-Suisse's Falcon** methane/natural gas detection laser-based sensor payload. The drone mission was planned using SPH Engineering's UgCS software, with data being accumulated with UgCS SkyHub hardware. www.skyebase.be

SIMACTIVE USED TO DETERMINE SOLAR POTENTIAL FROM SATELLITE IMAGERY

SimActive, a developer of photogrammetry software, announces that his **Correlator3D** product is used by Dutch company **NEO B.V.** to assess solar potential in multiple cities. Digital surface models (DSMs) are generated from **WorldView** and **GeoEye** satellite stereo images and serve to calculate solar panel capacity. DSMs covering hundreds of square kilometres are quickly generated by the software. Key metrics to estimate solar potential are then derived, including roof orientation, pitch and shaded areas. "We have been impressed by the quality of SimActive's **DSMs**, especially considering the limited spatial resolution of the imagery", said Rob Beck, Managing Director at NEO B.V. "Another definite advantage of Correlator3D is the simplicity of the workflow, making it easy to use by our team." www.simactive.com



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- L1/L2/L5/GNSS
- L-Band
- Scalable

Mapping



- 60 cm Real-Time
- L1/GNSS
- Coast and SureTrack Technologies

GIS



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