## **NEWS & EMERGING TECHNOLOGY**



# 3D PLURAVIEW MONITOR PRODUCT FAMILY EXPANDED – NEW 22" FULL-HD MODEL

The 3D PluraView family of monitors is a passive 3D stereo system with the highest user acceptance of any 3D stereo monitors currently on the market. The Plug & Play beam splitter technology has been established on the market for 13 years and achieved recognition in the 4K 10-bit (UHD) version as a 3D stereo reference. To satisfy different requirements, the 3D PluraView product family now offers **three models** with the following areas of application: GIS / mapping, photogrammetry, laser scanning, computer tomography, simulation, molecular research and design / CAD stereo software applications. As an entry level model for workplaces whose software applications have lower resolution requirements, the new **PluraView Full HD Compact 22"** with **1920 x 1080 resolution** is available. Its compact housing and narrow overall depth takes up very little desk space and is ideally suited to open-plan offices accommodating a lot of workstations in a small area. **www.schneider-digital.com** 

# AGGREGION OPENS NEW OPPORTUNITIES FOR SECURE COLLABORATION WHEN WORKING WITH DATA

Aggregion, a company that develops solutions for collaborative work with data and the creation of partner to the G-Core Labs cloud. This important for Aggregion and supports Intel Software Guard **Extensions** (Intel SGX) for secure work. Intel SGX was integrated into the G-Core Labs cloud thanks to software from Scontain. Software solutions provided by Aggregion let various companies like retailers, telecom operators, agencies commence secure and efficient collaborative projects with data related to purchases and who cooperate on the Aggregion platform, such as banks and retailers, can optimize cross-channel target audiences, manage customer programs. www.gcorelabs.com

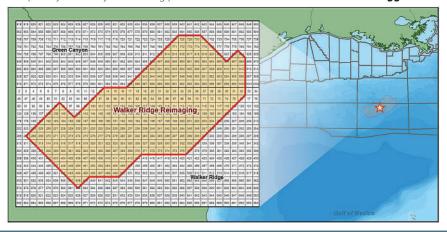
### **GPI AND RIEGL: FROM THE GROUND TO THE SKIES**

Throughout the years, GPI Geospatial and RIEGL USA have developed a well-established partnership. GPI Geospatial owns and operates multiple RIEGL LiDAR sensors and systems including multiple VQ-1560 series (VQ-1560i and VQ-1560 II) airborne LiDAR sensors, as well as RIEGL VMX-450 mobile and VZ-400 and VZ-**400i** terrestrial units. GPI Geospatial has recently moved into a new flight acquisition facility at the Orlando Executive Airport with a 13,000 square foot hangar, as well as a new 8,000 square foot data processing center on the airport property to bring together their operations and flight acquisitions teams. The location and proximity of this new facility to the RIEGL USA headquarters is further strengthening the partnership between the two organizations with collaborative efforts benefitting GPI's customer base. www.riegl.com



## CGG LAUNCHES WALKER RIDGE REIMAGING PROGRAM IN THE GULF OF MEXICO

CGG has announced the start of a new seismic data reimaging program in the prospective Walker Ridge area, as part of a major reimaging campaign being conducted in the Gulf of Mexico. The Walker Ridge program covers approximately **300 OCS blocks** including two priority areas of significant industry interest. Advanced **proprietary imaging technologies** will be applied to this program to unlock the full potential of existing seismic data and provide significant uplift in subsurface imaging. Given recent discoveries and proven production in Walker Ridge, the new program has received strong industry prefunding from clients actively **exploring and drilling for oil and gas** within this basin. CGG's Walker Ridge Wide-Azimuth and StagSeis DEUX surveys will provide input for the project and the reprocessed data will deliver valuable, high-quality imaging throughout the program with two priority discovery areas being processed on an accelerated schedule. **www.cgg.com** 



## ESRI ANNOUNCES LAUNCH OF ARCGIS FIELD MAPS

Esri announced the launch of

the ArcGIS Field Maps mobile

data-driven maps to help mobile workers collect and edit data, find solve many workflow challenges for organizations that have prioritized digital transformation from paper-based to digital field operations management. personnel will benefit from a streamlines mobile operations and workflows by reducing the number of tools and optimizing field efficiencies with real-time **location.** This new solution also crews using one set of maps while personnel at headquarters work from another. Additionally, it is a burden for an IT department to maintain and manage multiple apps across a large

field workforce. www.esri.com

#### VERIDAAS PLANS STATEWIDE CALIFORNIA LIDAR MAPPING PROJECT IN SPRING 2021 FOR PUBLIC AND PRIVATE CUSTOMERS

VeriDaaS, a geospatial solutions company, is planning a highdensity LiDAR elevation data collection at a minimum of 30 points per meter (ppm) over the entire State of California in the Spring 2021 as part of the VeriDaaS National Mapping Initiative (VeriMAP). Higher density data above 30 ppm is also an option if stakeholder commitments are secured before the planned start of the project. The geospatial data will be utilized across a wide range of private-sector vertical markets including electric utilities, transportation, telecom, insurance, and architecture/engineering/construction (AEC), as well as Federal, State and Local Government groups. The California VeriMAP program is open to new participants. Private- and public-sector organizations that wish to participate as stakeholders purchasing high-density LiDAR elevation data sets at reduced cost-sharing rates should contact VeriDaaS now. www.veridaas.com



# EUROPEAN BORDER AND COAST GUARD AGENCY (FRONTEX) SELECTS AIRBUS AND ITS PARTNER IAI

The European Border and Coast Guard Agency (Frontex) awarded a contract to Airbus Defence and Space Airborne Solutions (ADAS), a 100% subsidiary of Airbus Defence and Space and the global market leader in RPAS services, and its long-term partner Israel Aerospace Industries (IAI) to operate a Medium Altitude Long Endurance (MALE) RPAS for **Maritime Aerial Surveillance services**. The service will be delivered in Greece, and/or Italy and/or Malta within a Framework Contract. The service includes the provision of a RPAS platform, payload, communication equipment and capacity, mission storage and all necessary experts managing the system and providing operational support. Under the contract, Airbus and IAI will provide the service for pre-planned assignments as well as for ad-hoc calls. **www.airbus.com** 



#### PIX4D LAUNCHES NEW GROUND IMAGE CAPTURE APP FOR 3D MODELLING WITH THE IPAD PRO AND IPHONE 12 PRO

Pix4Dcatch empowers users to easily create ground-based 3D models using an iOS mobile device. No need to be an expert, the user simply scans the area of interest with Pix4Dcatch. The app records pictures along with GPS positions. Compatible with recent iOS devices, but optimized for the newest iPad Pro and iPhone 12 Pro and Pro Max with LiDAR sensors, scanning is done with real-time 3D meshing for scene completion feedback. This process of giving live feedback enables a workflow that secures optimal results. Images are then automatically uploaded to Pix4Dcloud for a fast generation of scaled and georeferenced 3D models and points clouds that can be measured, shared and exported. www.pix4d.com



## SPACEOPAL, INNOVATION IN THE GNSS SECTOR

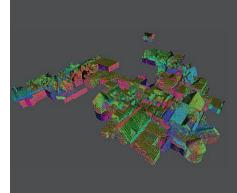
Global Navigation Satellite System (GNSS) systems and technologies are constantly and rapidly evolving. For this reason, Spaceopal, an equal-share joint venture between für Raumfahrtanwendungen (GFR) mbH and the prime contractor for the operational services of Galileo, the satellite navigation program of of proactively managing such path of "innovation". On the basis Galileo Services, Spaceopal, together to GNSS innovation, research and development. Innovative services, such as **NAVCAST** paired with **IONOLAB**, designed and developed to increase the accuracy of the Galileo and GPS GNSS systems (and also of Glonass and Beidou at a later stage), were initiated

www.spaceopal.com

## SWEDISH SPACE CORPORATION TO LAUNCH SATELLITES FROM ESRANGE SPACE CENTER

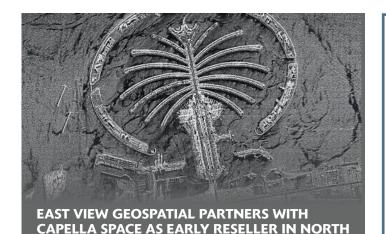
The Swedish government announced a decision to establish capability to launch small satellites from Esrange Space Center in northern Sweden. The announcement is the third step in an extensive modernization of the infrastructure at Esrange to meet the **growing demand of testing and launching capability** in the space sector and was made by the Swedish Space Minister Matilda Ernkrans during the inauguration of a new testbed facility for next generation rocket technology at Esrange. Esrange Space center is already one of the most active and versatile launch sites in the world and the latest decision allows SSC to proceed with its goal to be able to launch small satellites into orbit by 2022. This announcement follows the overall ambition defined in the Swedish space strategy decided upon in 2018. **www.sscspace.com** 





### GEOSLAM COMPLETES SPOOK-TACULAR SCANNING OF CALIFORNIAN LANDMARK

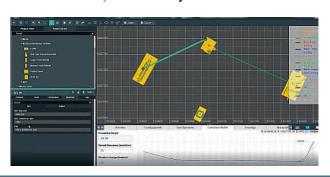
The team at geospatial 3D mapping specialist GeoSLAM has produced a digital twin of one of the world's most haunted mansions, The Winchester Mystery House, using the newly-launched ZEB Go. It may be hard to believe the feat of scanning this vast architectural landmark, built in 1886. The site, located in the City of San José, spans 4.5 acres and the four-story mansion covers **24,000 square feet,** featuring some 160 rooms, as well as 40 staircases, basements and a myriad of passages, corridors and alcoves. Considering the building's complexities, the survey called for a mobile mapping system that could easily negotiate the confined and difficult-to-access places that wouldn't mean days or weeks spent onsite. The Zeb Go's **'walk and scan' method** of data collection enabled GeoSLAM's sales director Jackie Guilbault and senior solutions architect Brian D Rosensteel, to rapidly capture the building and understand its layout, digitally. **www.geoslam.com** 



Space to offer high-resolution synthetic aperture radar (SAR) imagery products, establishing EVG as an early reseller for SAR technology, Capella offers continuous all-weather earth observation imagery that provides global coverage through Site and Strip imagery with resolution down to **0.5m per pixel**, Capella will deliver high-quality imagery catered to clients' needs. Reliable delivery of actionable information on everything from

#### SHELL DEEPWATER SELECTS BENTLEY'S ITWIN PLATFORM FOR PROJECT DELIVERY

Bentley Systems announced that Shell's Deepwater business has selected Bentley's digital twin approach to streamline its capital projects process and accelerate time to first oil. With a plan to deliver several subsea tie-back projects over the next 10 years, Shell Deepwater Projects has recognized a significant opportunity to accelerate capital project delivery and cut project delivery time by implementing an integrated digital project & engineering environment. The solution spans project conception in the early phase design through to handover. In addition, Bentley announced that it is providing investment funds to **FutureOn**, a Norwegian software company supporting deep-water subsea projects, to accelerate going digital within the oil and gas industry. The investment sets the stage for FutureOn and Bentley to deliver the next-generation digital twin technology required for oil and gas ecosystems to manage and analyse data, integrate with existing systems, provide analytics visibility, and rapidly explore ideas collaboratively. www.bentley.com



# PAS 880 | Accurate and Affordable Oblique & Nadir Aerial System



One 280MP nadir camera with 4 x 150MP oblique cameras are integrated into a single pod to simultaneously capture photogrammetric 2D & 3D digital imagery.



High ROI for 2D & 3D imaging missions



Nadir coverage of +20,000 pixels accross



Capture rate of 2 frames per sec.



Shutter Speed Up to 1/2500 sec.





**AMERICA** 

www.geospatial.com









Discover **HERE** the New Dimension in Aerial Mapping!

## AI STARTUP EARTHDEFINE ANNOUNCES EXPANSION OF ITS BUILDING FOOTPRINT GEOCODING AND ON-DEMAND PROPERTY INFORMATION

EarthDefine, a provider of high-resolution geospatial spatial data that uses artificial intelligence (Al) to analyse aerial and LIDAR imagery, announced the release of an updated **building footprint database**, which contains over 156 million footprints of commercial and

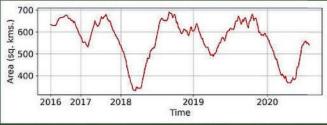
residential structures across the continental United States. EarthDefine's latest update will allow insurers to identify with **rooftop accuracy** where structures fall within a parcel of land to improve risk rating, quoting accuracy, and claims response. EarthDefine's building footprints are generated using **state-of-the-art deep neural networks**. Neural networks are a type of artificial intelligence (Al) algorithm that can provide accurate extraction of ground features like building footprints, parking lots, trees, swimming pools, solar panels, etc., from aerial imagery and LIDAR data

across large scales and highly diverse geography. www.earthdefine.com



## TERRA COVER LAUNCHES REALSAT AS NEW SURFACE WATER MONITORING SERVICE

Terra Cover announces the release of a new surface water monitoring service, ReaLSAT (Reservoir and Lake Surface Area Timeseries), for freshwater analysis and research. The ReaLSAT service provides **global surface area monitoring** for water bodies with sizes greater than **0.01 square kilometres**. The insights derived from robust tracking of these water bodies enables customers in insurance, water resource management, and infrastructure development industries to incorporate the impact of changes in freshwater availability in business operations. In a recent case study, Terra Cover analysed **1329 reservoirs** (built for hydropower or irrigation) in Uruguay. In 2018, which witnessed one of the worst regional droughts in history, total surface area decreased by almost 40 % across the country. According to Terra Cover analysis, current 2020 figures also show alarming reductions in surface areas. **www.terracover.ai** 



Surface area variations from January 2016 till July 2020 of 1329 reservoirs (smaller than 10 sq. kms.) in Uruguay.



Sentinel-2 imagery (false color composite) of a reservoir in the summer season for years 2018, 2019 and 2020. The reservoir is at very low levels in 2020 similar to 2018 which was one of the worst droughts in Uruguay.



### PARROT ANNOUNCES PARTNERSHIP WITH FOXFURY LIGHTING SOLUTIONS

Parrot ANAFI USA is a very versatile and powerful UAV solution built to meet the demands of first responders, firefighters, search-and-rescue teams, security agencies, surveying and inspection professionals. In some specific cases, those operations require specialized equipment to ensure the highest level of safety and operability. Parrot is announcing a partnership with FoxFury Lighting Solutions, a provider of professional drone lightning. Parrot and FoxFury designed a tailored system for the ANAFI platform, allowing professionals to attach up to three D10 lights modules on the drone. The intuitive saddle mounting system and the lights are made in the USA and provide up to 40 minutes of continuous use in "High" mode and 80 minutes in "Strobe" mode, with self-contained LiPo batteries. www.parrot.com

## HERE INTEGRATES WHAT3WORDS INTO IN-CAR NAVIGATION FEATURE

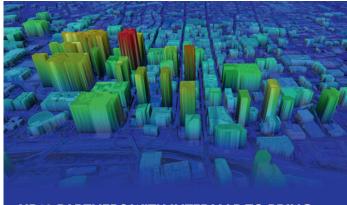
HERE and what3words have partnered up to offer the next generation of precision in-car navigation. OEMs using HERE Technologies can now include what3words as an in-car navigation feature, with drivers of enabled vehicles able to navigate to any **precise 3-meter square** using a what3words address. HERE is a navigation platform with its map data services found in **150 million vehicles worldwide.** The platform offers industry-leading products designed to use the latest location content, such as road networks, buildings and traffic systems. The addition of what3words address entry means that drivers can experience the smartest mapping systems, alongside the breakthrough address system. **www.here.com** 





## GNSS-ENABLED ALTIMETER HELPS IMPROVE SITUATIONAL AWARENESS, SAFETY DECISIONS IN FREEFALL

u-blox, a global provider of positioning and wireless communication technologies and services, has announced that its GNSS (Global Navigation Satellite System) technology is being used in a smart altimeter for skydivers, paragliders, wingsuit pilots and other aerial athletes. Dekunu Technologies' **Dekunu One**SmartAlti is a body-worn altimeter that provides a similar quality of information about a user's altitude and position in the sky as pilots receive in their cockpits. A large, clear display ensures that skydivers can always access that information easily. This helps with their situational awareness and enables them to make smarter decisions about their own and fellow skydivers' safety during freefall. www.u-blox.com



# UP42 PARTNERS WITH INTERMAP TO BRING HIGH-RESOLUTION ELEVATION DATA TO UP42'S GEOSPATIAL MARKETPLACE

UP42 announced that the NEXTMap Elevation Data Suite from Intermap Technologies is now offered on the UP42 developer platform for Earth observation data and analytics. The NEXTMap 3D elevation products are available as **Digital Surface Models** (**DSM**) and **Digital Terrain Models (DTM)** at one-, five-, and 10-meter resolution. The addition of NEXTMap datasets to the UP42 marketplace enables users to build even more powerful geospatial solutions in the areas of infrastructure management, construction planning, geologic mapping, land cover classification, forestry, resource conservation, and contour generation. UP42 gives users direct access to extensive **Earth observation datasets** and **advanced processing algorithms** – along with cloud computing power – to create their own geospatial solutions easily and inexpensively. Users purchase just

the data needed to cover their area of interest and then leverage scalable processing capabilities to analyse the datasets without

investment in their own computing infrastructure.

www.up42.com

#### **EGNOS ENABLED PPUS IN THE PORT OF SEVILLE**

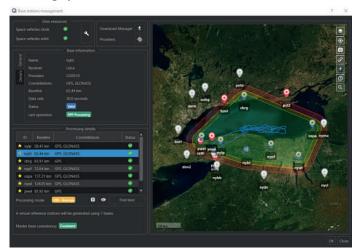
In the Port of Seville, pilots use a unit from AD Navigation which can be configured in different functional modes and is able to use different sources of corrections over GPS. Carlos de Bricio, who is the pilot responsible for new technologies in this port, is in favour of the use of **EGNOS corrections** which are considered of great benefit in specific situations, such as the entrance and navigation through the lock or in docking and turning manoeuvres. When configured to apply EGNOS corrections, this PPU achieves an accuracy of 50 centimetres, perfectly fitting the increasingly demanding **accurate position information** of larger ships with the associated manoeuvring difficulties. The use of EGNOS is in line with the recommendations of the IMPA Guidelines on the design and use of Portable Pilot Units. These guidelines recommend differential corrected positioning devices, either by GBAS or SBAS, as the minimum to provide enhanced accuracy in the positioning. www.adnav.com

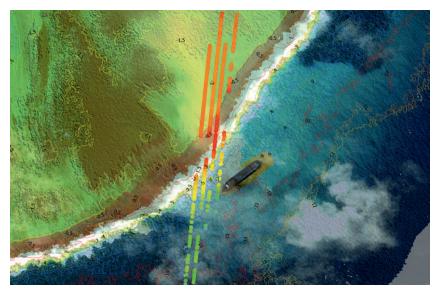


# SBG SYSTEMS TO RELEASE THE VIRTUAL BASE STATION FEATURE IN QINERTIA, ITS IN-HOUSE POST-PROCESSING SOFTWARE

Qinertia is SBG Systems' in-house GNSS and INS post-processing software. It gives access to offline RTK corrections from more than 7,000 base stations located in 164 countries. Trajectory and orientation are then greatly improved by processing inertial data and raw **GNSS observables** in forward and backward directions. Qinertia PPK software now includes a brand new **Virtual Base Stations (VBS)** functionality. The VBS consists in computing a virtual network around your project in which position accuracy is maximized, homogeneous, and robust like a PPK short baseline is. Surveyors can collect data far from base stations or over large areas, making it ideal for corridor mapping. After the mission, Qinertia chooses the most relevant reference stations, builds a virtual network, and brings your project to the centimetric accuracy with no jump on accuracy nor convergence effects, even in urban areas.

#### www.sbg-systems.com





#### TCARTA DEVELOPS AI-BASED **COMMERCIAL BATHYMETRIC MAPPING TECHNOLOGIES WITH NATIONAL SCIENCE FOUNDATION GRANT**

TCarta Marine, a global provider of hydrospatial products, has announced development of new Machine Learning-based bathymetric mapping technologies – including creation of two software packages and commercial application of NASA's ICESat-2 satellite – with funding from the National Science Foundation (NSF). The commercial bathymetric mapping projects relate to oil spill management, oil & gas exploration and production, coastal infrastructure engineering, environmental monitoring, and geospatial intelligence (GEOINT) activities. Customers include private-sector organizations as well as numerous international government agencies. www.tcarta.com

#### **ROXY TURNS MOON DUST INTO OXYGEN**

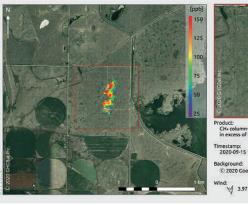
An international team led by Airbus Defence and Space (Friedrichshafen, Germany) with scientists from Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM (Dresden, Germany), Boston University (Massachusetts, USA) and Abengoa Innovación (Seville, Spain) has successfully demonstrated the production of oxygen and metals from simulated lunar dust (regolith) with the Airbus-invented process named ROXY (Regolith to OXYgen and Metals Conversion). Airbus believes ROXY could revolutionise human space exploration. After two years' development the breakthrough came last month, during a series of laboratory tests at Fraunhofer IFAM. Oxygen was extracted from a sample of simulated lunar dust. This is a small first step, but the way towards an operational system is now clear. Oxygen is indispensable for all human space activities, and this new ROXY production method, which directly uses Moon dust could revolutionise human activities on the lunar surface. www.airbus.com

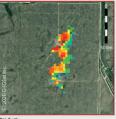


#### **GHGSAT REPORTS SMALLEST METHANE EMISSION EVER DETECTED FROM SPACE** WITH MICROSATELLITE DEVELOPED BY SPACE **FLIGHT LABORATORY (SFL)**

Space Flight Laboratory (SFL), a developer of 53 distinct microspace missions, announced the successful measurement of atmospheric methane by the GHGSat-C1 greenhouse gas monitoring microsatellite that utilizes a NEMO platform developed by SFL. The methane emission from a source on the Earth's surface is the smallest ever detected by satellite, confirmed GHGSat Inc. of Montreal. Less than a week after the September launch of GHGSat-C1 ('Iris'), GHGSat recorded the microsatellite's first successful measurement of a **methane emission** from a known oil and gas facility in Turkmenistan. A week later, the satellite operator tasked Iris to measure a much smaller, controlled methane release from a test site in **Alberta**, **Canada**. The satellite-based measurement was successful and confirmed with an airborne sensor, www.utias-sfl.net

> Controlled Release, Alberta - Canada GHGSat-C1 - CH4 Measurement





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#### SWIFT NAVIGATION'S PRODUCTION-GRADE SSR SERVICE IS NOW AVAILABLE ACROSS TWO **CONTINENTS**

Swift Navigation, a San Francisco-based tech firm redefining GNSS (Global Navigation Satellite System) and precise positioning technology for mass-market applications in autonomous vehicles, mobile and Internet of Things (IoT), announced its production-grade SSR (State Space Representation) service is available across Swift's extensive coverage areas. SSR is a bandwidth-efficient format to deliver GNSS corrections To date, Skylark delivered corrections in OSR (Observation State Representation) format for compatibility with legacy equipment but with the introduction of SSR, the power of Swift's cloud error modelling is now available in its native format. www.swiftnav.com



SEOSAT-Ingenio arrived safely at the Guiana Space Centre, where it was then transferred to the Payload Preparation Complex along with its co-passenger, the CNES French space agency's **Taranis satellite**. Since then, the dedicated team has successfully completed a series of inspections and health checks that confirmed the satellite is in good shape. This included several 'leak tests' where the propulsion module's tank, valves and thrusters were tested at the 'maximum expected over pressure' to verify their performances. Since then, SEOSAT-Ingenio was transported to the Filling Hall where it was loaded with around **80 kg of hydrazine fuel** and was pressurised with helium gas to avoid the sloshing of the liquid during launch and flight. The satellite was then switched on – confirming the successful completion of its fuelling. **www.esa.int** 





# USGIF WHITE PAPER: GEOSPATIAL INTELLIGENCE & AI/ML PROGRESS DURING A PANDEMIC

The United States Geospatial Intelligence Foundation (USGIF) published a white paper on a topic impacting the intelligence community (IC) and more specifically, the GEOINT community; Geospatial Intelligence & AI/ML Progress During a Pandemic. The recent global working climate, altered by COVID-19, has driven considerable change in how the geospatial community delivers support and new capabilities for artificial intelligence and machine **learning (AI/ML).** The pandemic created a condition where many analysts to worked from home without much of the advanced infrastructure required for ML, while the high demands of mission requirements remained. The geospatial community had to adapt. USGIF focuses on this and more in the Foundation's latest document. The white paper was written in conjunction with the members of USGIF's MLAI Working Group. www.usgif.org





# GAF AG AND BKG INTENSIFY THEIR COOPERATION REGARDING THE PROVISION OF MULTI-SOURCE REMOTE SENSING DATA

GAF AG, one of the largest European providers of geographic information services with a focus on earth observation, has won an international tendering process issued by the **German Federal Agency for Cartography and Geodesy** (BKG) for the provision of remote sensing data. The framework agreement concluded on that basis includes consulting services and the granting of exclusive access to the BKG and its users to high-resolution and very high-resolution optical satellite images and radar images. With its **satellite-based crisis and situation service**, the BKG makes an indispensable contribution to providing straightforward and rapidly-prepared information products derived from geodata and remote sensing to all the federal institutions. This enables a rapid response in the case of security-relevant and critical challenges. **www.gaf.de** 

## VIRTUAL SURVEYOR INTRODUCES CURB & GUTTER MAPPING IN NEW VERSION OF DRONE SURVEYING SOFTWARE

Virtual Surveyor has introduced Curb & Gutter mapping functionality in Version 7.6 of its popular drone surveying software. The new capability enables surveyors to create a **lightweight CAD model** of curbs and gutters along the edges of streets and parking lots from standard orthophotos and elevation models captured by unmanned aerial vehicles (UAVs), or drones. Virtual Surveyor is a powerful **surveying software** that bridges the gap between drone photogrammetric processing applications and engineering design packages. The software generates an interactive onscreen environment with drone **orthophotos/DSMs** and/or **LiDAR point clouds** where the user can compare multiple drone surveys in a matter of seconds. **www.virtual-surveyor.com** 

