NEWS & EMERGING TECHNOLOGY

DLR TO USE AIRBUS BARTOLOMEO SERVICE FOR FIRST-EVER IN-ORBIT VERIFICATION OF LASER-OPTICAL CLOCKS

The Galileo Competence Center of the German Aerospace Center (DLR-GK) and Airbus have signed a **€16.8 Mio contract** for the hosting of DLR's COMPASSO mission on the **International Space Station (ISS) Bartolomeo platform.** COMPASSO will be the first in-orbit verification of compact and highly stable laser-optical clocks. Via a bi-directional optical link, these clocks are compared to and synchronized with highly stable clocks on Earth. In addition, the optical link between the ISS and the ground station is used for assessing the influence of atmospheric turbulence on the frequency and time transfer. In combination with optical links, highly stable optical clocks are of particular interest for future generations of satellite navigation systems, such as **Galileo,** and the basis for new **Global Navigation Satellite Systems (GNSS) architectures,** such as the Kepler concept developed at DLR. **www.airbus.com**

SVITZER, KONGSBERG MARITIME, AND ABS JOIN FORCES TO DEVELOP THE WORLD'S FIRST COMMERCIAL TUG TO BE FULLY REMOTELY CONTROLLED

Global towage operator Svitzer A/S, Kongsberg Maritime, and ABS announced that they have signed an agreement to jointly develop **RECOTUG**, the world's first fully operational, and fully remotely controlled tugboat. While Svitzer is bringing the needed operational experience, a newly built tug with crew as well as tug-specific technical solutions, Kongsberg Maritime will provide the **remote control systems** and the **autonomous technology** and lead the integration of systems and technology. ABS will bring the guidance and expertise necessary to obtain regulatory approval. The aim of the RECOTUG project is to develop a remotely controlled tug that will be able to perform a full towage operation with all operations controlled from a remote operations centre. **www.svitzer.com**
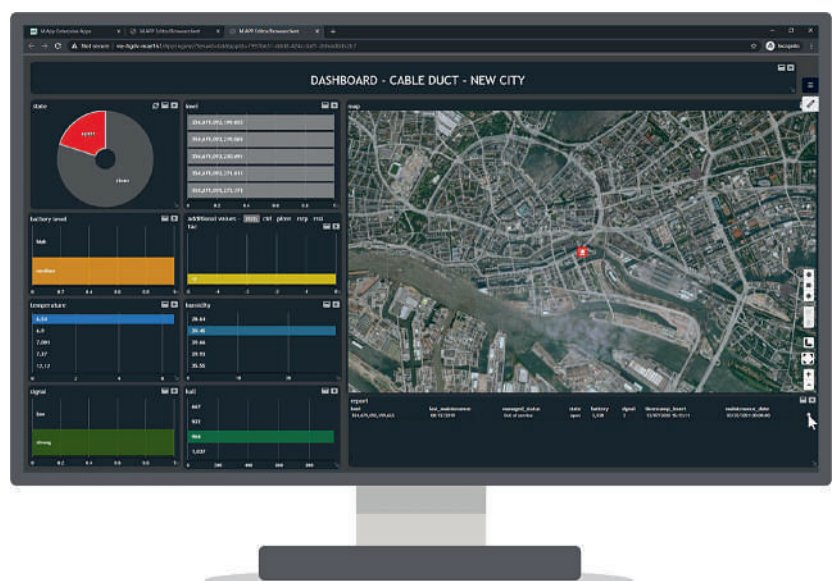

PORT OF TALLINN SELECTS HEXAGON TO DIGITIZE PORT OPERATIONS IN ESTONIA

Port of Tallinn, the largest port authority in Estonia, has selected Hexagon's Geospatial division to implement a **digital port** and **harbour asset management solution** that will improve the day-to-day management of property and utilities infrastructure. The solution will be used by **300 port authority employees** and help to streamline cargo and passenger operations at one of the largest port enterprises on the Baltic Sea. Powered by **Hexagon's M.App Enterprise**, a unified platform for creating geospatial applications, and **GeoMedia**, a flexible GIS management platform, the Port of Tallinn will be able to better manage and maintain increasing volumes of spatial data related to buildings, assets, utilities infrastructure and operations at its five constituent ports. **www.hexagon.com**
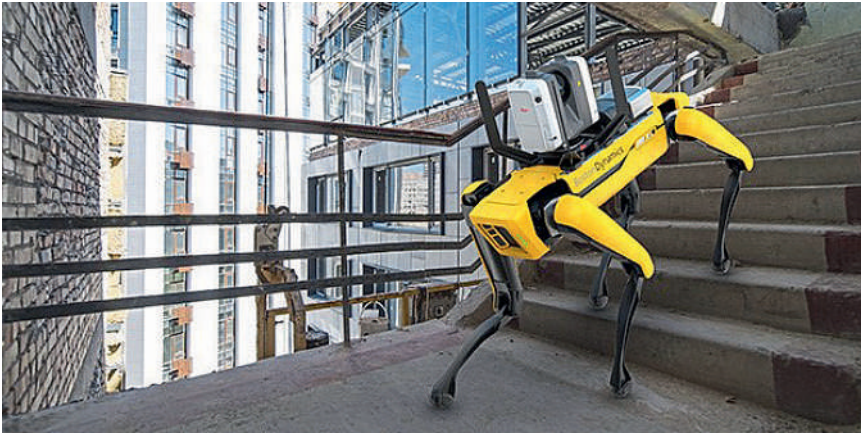
LEICA GEOSYSTEMS OFFERS MOBILE, AGILE 3D REALITY CAPTURE SOLUTION FOR BOSTON DYNAMICS SPOT

Leica Geosystems, part of Hexagon, announced a reality capture solution for a variety of industries. By combining Boston Dynamics agile mobile robot **Spot** with the industry-proven **Leica RTC360 3D laser scanner,** scanning time spent by human operators is significantly reduced by programming the devices to repeat automated scanning paths through sites. This requires minimal monitoring by the user, allowing for **increased scanning efficiency,** productivity, and flexibility when planning reality capture tasks. Professionals in many different industries such as construction, manufacturing, facility management, public safety, defence, media and entertainment or any other industry with autonomous scanning needs can benefit from **programmed scanning tasks,** especially for locations that must be repeatedly scanned for up-to-date digital twins. **www.leica-geosystems.com**

PHASE ONE ANNOUNCES P3 DRONE PAYLOAD FOR ASSET INSPECTION

Phase One, a developer of digital imaging technologies, announced the P3 Payload, a versatile solution designed for fast, efficient, and safe inspection of critical infrastructure with an Unmanned Aerial Vehicle (UAV). The P3 Payload includes a **Phase One iXM 100MP** or **50MP camera**, one of the RSM lens options, and a new gimbal with integrated rangefinder. Available in Q2 2021, the P3 Payload is extremely versatile, offered in two configurations to meet a wide range of user requirements. The P3 for the **DJI M300** is plug-and-play and ready to fly with a M300 drone, developed mainly for operators and service providers that already own, or are considering purchasing, a DJI M300. **www.geospatial.phaseone.com**

HIBER SUCCESSFULLY LAUNCHES SECOND GENERATION SATELLITE VIA SPACEX'S TRANSPORTER-1

Hiber, the European satellite Internet-of-Things (IoT) company, announced that its most recent satellite, **Hiber Four**, has been successfully launched in space, via SpaceX's first rideshare mission of 2021 - Transporter-1. Hiber Four is a second-generation satellite developed and assembled by Hiber's engineers in its Amsterdam office. Hiber Four, and its sister satellite **Hiber Three** (launching in March), are half the volume (3U) of the previous generation, which reduces the mass and decreases the launch costs by up to 50%. The newest generation of satellites also have an on-board propulsion system allowing Hiber's ground engineers to adjust the satellite's orbit. This ensures that Hiber Four, and its future descendants, avoid collisions and, importantly, de-orbit themselves at the end-of-life, making Hiber one of the most responsible CubeSat constellation operators in the world. **www.hiber.global**

SEPTENTRIO TAKES THE NEXT STEP IN GNSS RECEIVER SECURITY WITH OSNMA ANTI-SPOOFING

Septentrio, a provider of high-precision GNSS positioning solutions, announced that its receiver has successfully authenticated navigation data of the first **OSNMA encrypted GNSS satellite signal.** OSNMA (Open Service Navigation Message Authentication) offers **end-to-end authentication** on a civilian signal, protecting receivers from spoofing attacks. OSNMA is being pioneered by the **Galileo Program**, with Septentrio providing a testbed for this technology from the end-user point of view. The anti-spoofing capabilities of OSNMA will complement Septentrio's already available best-in-class anti-jamming technology, **AIM+**, and further strengthen the overall security of Septentrio GNSS receivers. **www.septentrio.com**

FOURSQUARE, KOREM CEMENT PARTNERSHIP TO ENHANCE FOCUS ON GEOSPATIAL DATA

Foursquare, the independent location technology company and Korem, the geospatial expert shop, announced a new partnership to help customers create better **location-based user experiences** and seamlessly adopt leading geospatial data and technology into their decision-making processes. Since the onset of the COVID-19 pandemic, changing demographic patterns have happened quickly and data collected even one year ago is now almost irrelevant. More current, more dynamic, and fresher data is required to better **understand the changing behaviors** and **preferences of people** as they have adapted to the new normal. Here, mobile location data can provide better insights into the phenomenon that we are seeing today. **www.korem.com**

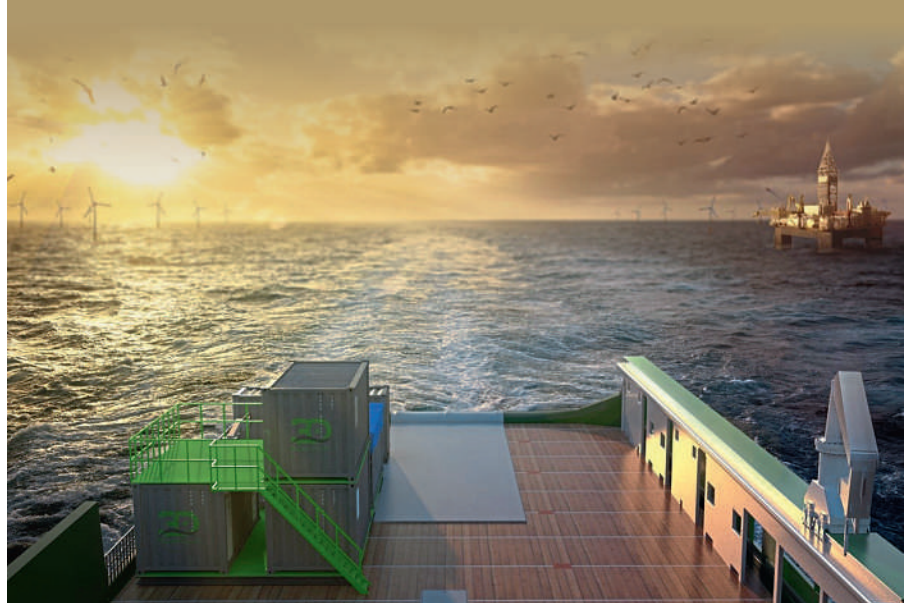## SIMACTIVE INCREASES DRONE PRODUCTIVITY WITH NEW TOOLS

SimActive, a developer of photogrammetry software, announced the release of Correlator3D version 8.7 with new tools to increase productivity of **drone image processing**. These allow editing flight lines to, for example, remove images captured during take-off / landing or while the drone was performing a turn between two flight lines. The new version also supports the quick identification of which individual **orthophotos** have contributed to a particular location in the final **mosaic**. During quality control, users can then easily disable a particular ortho that would have led to an undesirable artifact in the final mosaic (e.g., shadow) and regenerate an improved final product. **www.simactive.com**

GAF HAS BEEN AWARDED A MULTI-YEAR CONTRACT BY THE GERMAN FEDERAL STATE OF SAXONY-ANHALT

GAF AG has won the first European call for tenders for the operational implementation of the agricultural area monitoring system in Germany in 2021 stipulated by the **European Common Agricultural Policy** (CAP). The Paying Agency makes use of GAF's sophisticated cloud-based solutions for the automatic monitoring of **agricultural parcels**. The contract runs for the next three (+1) years and covers the rapid, accurate and fully automated continuous monitoring and precise verification of numerous crop types covering the entire area of **Sachsen-Anhalt**, and the evaluation of compliance with agri-environmental and climate measures, using both optical and radar data from the European Copernicus Sentinel Missions. **www.gaf.de**

3D AT DEPTH LAUNCHES WORLDWIDE OFFSHORE GEOPHYSICAL SURVEY SERVICES BUSINESS

3D at Depth, an expert in commercial Subsea LiDAR (SL) laser technology, and provider of underwater survey services and 3D data solutions, announced the launch of its offshore **Geophysical Survey Services division.** The new division will provide optimized surveys to support both nearshore, inshore, and offshore deep-water development activities focused in the areas of offshore wind farms, pipeline routes, environmental site surveys, offshore hydrocarbon projects, and civil engineering surveys. 3D at Depth first commercialized **Subsea LiDAR (SL) technology** for the offshore industry in 2014. The Company focus has always been on 3D data excellence through innovative technology solutions that enable cost savings across any survey initiative without sacrificing data quality. **www.3datdepth.com**

SPH ENGINEERING, VELOS ROTORS PARTNERSHIP AUGMENTS THE FIRST SINGLE ROTOR HELICOPTER TAKING OFF, SURVEYING

SPH Engineering announced that the Velos UAV helicopter has passed field tests to become the first single rotor helicopter supported by **UgCS software.** UgCS now enables **Velos helicopter professionals** to use Velos for photogrammetry and LiDAR drone surveying missions. UgCS is now able to support the twin engine telemetry providing input for a UAV. The newly created **Telemetry Viewer** can handle extensive telemetry from such complex drones. This allows for optimal flying of the Velos helicopter, the safest UAV in its class, with a fully redundant twin-motor design and double key components. UgCS makes piloting easier and safer, allowing for the control and monitoring of one or multiple Velos helicopters on a single mission in both single and multi-operator modes. **www.integrated.ugcs.com**
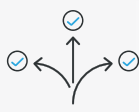
PHASE**ONE**
IMAGING BEYOND IMAGINATION

P3 Payload for Drones

Unmatched inspection productivity and versatility

For DJI M300 and Mavlink drones

Productivity **Versatility** **Quality** **Smart Focus**

- **Best in class sensor performance:** Making the most out of every flight
- **Largest image sensor:** Capturing more in every shot
- **Widest range of lenses:** Getting more details from a distance
- **Smart focusing:** Making every shot count

P3 Payload for DJI M300:
Ready for flight

Get started from day one

P3 Payload for Mavlink:
Ready for integration

Reduce your time to market

Discover more at geospatial.phaseone.com

OGC MEMBERSHIP APPROVES NEW COMMUNITY STANDARD

The Open Geospatial Consortium (OGC) membership has added **Indoor Mapping Data Format** (IMDF) 1.0.0 to the OGC Standards Baseline as a Community Standard. Indoor Mapping Data Format (IMDF) makes it possible for anyone to create **indoor map apps** and **services** using the same highly accurate and detailed data on any app, website, or operating system. Examples include government agencies using an electronic standard of indoor maps data for efficient response to events; hospitals providing mapping guidance to patients, doctors, and visitors; and airports creating a single map that can be easily styled by partners without altering the accuracy of the underlying data. **www.ogc.org**

TELESPAZIO ANNOUNCES SUPPORT FOR AWS GROUND STATION WITH ITS CLOUD-BASED SERVICE PLATFORM ENABLE

Telespazio Germany GmbH, a subsidiary of Telespazio – a joint venture between Leonardo (67%) and Thales (33%) –, a provider of aerospace engineering, software solutions and services and a member of the **Amazon Web Services** (AWS) **Partner Network** (APN), announced support for **AWS Ground Station** within Telespazio's cloud-based service platform for space operations **ENABLE**. The collaboration provides customers with access to an expanded network of satellite ground stations, simplified satellite management, and AWS services for data processing, storage, and analysis. The combined technologies and services from AWS and Telespazio will therefore provide a **cost effective** and **scalable solution** that allows customers to rapidly transform large amounts of raw data into actionable intelligence, collaborate and experiment with new applications, and deliver products to market faster without buying, leasing, or maintaining complex and expensive infrastructure. **www.telespazio.com**

FARO ANNOUNCES TWO NEW GLOBAL SUSTAINABILITY GOALS TO ADVANCE ESG EFFORTS

FARO Technologies, a global provider 3D measurement, imaging and realization solutions for 3D Metrology, AEC (Architecture, Engineering & Construction), and Public Safety Analytics, announced two new strategic goals in support of its Environment, Social & Governance (ESG) efforts. The first new goal is to **reduce the Company carbon emissions 25% by 2025** through aggressive activities that improve environmental performance. The second new goal is to **establish middle** and **high school partnerships** to improve curriculum in Science, Technology, Engineering & Mathematics (STEM) -- especially for minorities and females from low-income and disadvantaged areas. Year-one STEM funding will be $50,000 across the US, Canada, Germany, Portugal, the U.K, Singapore, and India. **www.faro.com**

EXACTEARTH TO PROVIDE ADVANCED AIS SERVICES FOR MDA'S DARK VESSEL DETECTION PROGRAM

exactEarth announced that it has signed an agreement with MDA to provide advanced Satellite-AIS data services as part of MDA's recently announced Dark Vessel Detection ("DVD") program for the Government of Canada. The DVD program is intended to **detect** and **identify vessels** that have switched off their AIS transponders and are engaged in **illegal, unreported** and **unregulated ("IUU") fishing.** IUU fishing is a global problem that results in significant economic loss - estimated at $23 billion per year by the Department of Fisheries and Oceans Canada – and leads to considerable damage to the world's fishing population and habitat. **www.exactearth.com**

BENTLEY SYSTEMS ENTERS INTO ~ $1.05 BILLION AGREEMENT TO ACQUIRE SEEQUENT

Bentley Systems, the infrastructure engineering software company, announced that it has entered into a definitive agreement with investors led by Accel-KKR to acquire Seequent—a provider of software for geological and geophysical modeling, geotechnical stability, and cloud services for geodata management, visibility, and collaboration—for **$900 million in cash**, subject to adjustment, plus 3,141,361 BSY Class B shares. The acquisition of Seequent is expected to initially add approximately 10% to each of Bentley Systems' key financial metrics (ARR, annual revenue, and EBITDA) and is expected to be measurably accretive to Bentley's organic growth rate. Most significantly, the combination will deepen the potential of infrastructure digital twins to help understand and mitigate environmental risks, advancing resilience and sustainability. **www.bentley.com**

PIAGGIO FAST FORWARD AND TRIMBLE ANNOUNCE PROOF–OF-CONCEPT COLLABORATION

Piaggio Fast Forward (PFF), a provider of smart following technology and subsidiary of the Piaggio Group (PIA.MI), and Trimble announced a proof-of-concept collaboration to enable robots and machines to follow humans and other machines in industrial applications. Together, the companies have integrated a patent-pending **PFFtag smart following module prototype** developed by Piaggio Fast Forward onto a **Boston Dynamics' Spot robot platform** controlled by Trimble's advanced positioning technology. This eliminates the need to solely control the robot via joystick. This proof-of-concept is one of the many robots and autonomous vehicles Trimble provides solutions for and could apply to many industries Trimble serves, including construction, mining, agriculture, and logistics.
www.trimble.com

E-GEOS AND VENG HAVE SIGNED A STRATEGIC AGREEMENT

e-GEOS, a company formed by Telespazio (80%) and the Italian Space Agency - ASI (20%), has signed a five-year Cooperation, Marketing and Distribution Agreement with VENG, an Argentinean company formed (97%) by the National Commission for Space Activities – CONAE, for the **world-wide distribution** of data acquired outside Europe by the constellation of **SAOCOM satellites** (Argentinean Satellite of Observation with Microwaves). The SAOCOM constellation, composed of two identical satellites **(SAOCOM 1A and 1B)** and the **COSMO-SkyMed constellation** are part of the SIASGE, a joint project between CONAE and ASI. **www.e-geos.com**

ATMOS UAV FURTHER EXPANDS ITS DISTRIBUTOR NETWORK IN EUROPE WITH GEOSENSE

Atmos UAV, the fast-growing Dutch drone manufacturer that develops high-end VTOL fixed-wing drones for surveying and mapping applications, further expands its distributor network in Europe and signs a reseller agreement with GeoSense. GeoSense will be responsible for the distribution of **Marlyn drones** in **Greece** and **Cyprus**, and will provide assistance and first-line maintenance services to operators. Founded in 2002, GeoSense is considered as the most experienced company in trade, design and development of professional drones in Greece. It operates as an officially licensed **Training Center for UAS** (multirotor & fixed wing) by **C.A.A.** (Civil Aviation Authority), and had been an official photogrammetry trainer licensed by the Swiss Pix4D. **www.atmosuav.com**

COBHAM SATCOM APPOINTS TOTOTHEO MARITIME AS ITS NEW AUTHORIZED AGENT AND SERVICE PARTNER IN GREECE
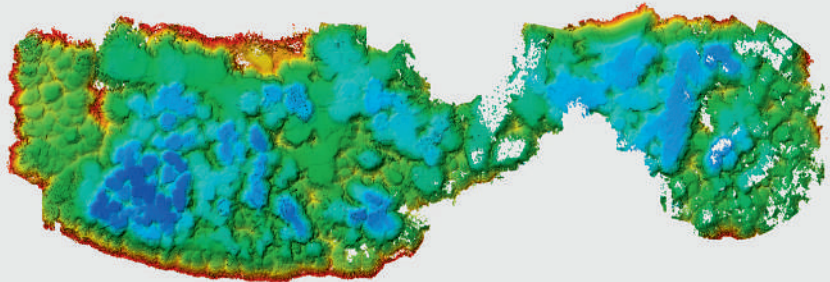
Cobham SATCOM, a provider of radio and satellite communications solutions, has appointed long term partner Tototheo Maritime, a maritime technology and services provider, to be its representative in **Greece**. Tototheo has been the exclusive authorized agent and service partner for Cobham SATCOM in **Cyprus** for well over a decade, providing quality onboard services and equipment to its customer base. Based on the excellent partnership, Cobham SATCOM has expanded the cooperation to focus on **high-quality service** and **customer support** in the Greek market. Tototheo Maritime established its presence in Greece in 2017 and has since gained the respect and trust of the local shipping industry. This was achieved through high-quality services and transparent transactions. **www.cobhamsatcom.com**

TERRAIN, THE NEW SOFTWARE MODULE BY YELLOWSCAN

YellowScan, a global provider and designer of next generation of UAV LIDAR solutions, announced the immediate availability of its new software add-on module: Terrain. This new module enhances the processing power of **CloudStation**, YellowScan's powerful **data processing tool** that provides users the ability to create and manipulate point cloud data from their LiDAR mission's. It enables users to extract, process and display data immediately after acquisition, giving them the ability to program the auto-generation of flight lines and export .LAS files in just a few clicks. The pilot can also visualize the result of the classification and select which classification class to visualize (unclassified, ground, other). **www.yellowscan.com**

M&E DEPLOYS ADVANCED SURVEY SYSTEM FOR AGGREGATE MINING

Morgan & Eklund (M&E), a hydrographic survey company specializing in nearshore and specialized surveys for ports, harbours, and infrastructure, announced the successful deployment of its new **Autonomous Survey Vessel** (ASV) service to obtain high resolution multibeam bathymetric data to map and monitor sand and aggregate mining pits. M&E completed construction surveys to verify the submerged pit floor conditions and direct excavation efforts for future production. The survey is the first of its kind to use the **SR-Surveyor M1.8** to map dredging pits in **Florida**. In addition to mapping the dredge pits, the SR-Surveyor M1.8 used its light detection and ranging (LiDAR) sensor to gather point cloud data to image the pit embankments and dredged stockpile to compare the volume of sand removed from the pit to volume available to haul to a beach. **www.morganeklund.com**

SENSEFLY AND TOUGH STUMP COLLABORATION SIGNALS NEW ERA IN UAS TACTICAL MAPPING, AERIAL INTELLIGENCE

senseFly, a provider of fixed-wing mapping drones, has announced a new distribution partnership with North Carolina-based Tough Stump Technologies. The partnership is designed to help professionals and organizations in the defence and governmental sectors with the collection and analysis of **aerial intelligence** and **tactical mapping data** using advanced UAS (drones). Tough Stump Technologies, an American, Service-Disabled Veteran, owned and operated business specializing in remote sensing, situational awareness, and mobile communications, has added the **senseFly eBee X fixed-wing mapping drone** and its extensive portfolio of senseFly drone sensors (cameras) to its ARTEMIS (Aerial Reconnaissance Tactical Edge Mapping and Imagery System) solution. **www.sensefly.com**

PROCESSING OF QUANTUM-SYSTEMS DRONE DATA INTEGRATED IN SIMACTIVE SOFTWARE

SimActive and Quantum-Systems GmbH, providers of photogrammetry software and drone platforms respectively, announced the successful integration of their products. Data captured with the **Quantum-SystemsTrinity F90+ mapping drone** can be processed in SimActive's **Correlator3D software** to generate DSMs, DTMs, point clouds and orthomosaics. Data from high-precision sensors such as PPK receivers, survey-grade color and multispectral cameras and LiDAR are all fully supported. **www.simactive.com**

ACTIVE VOLCANO MONITORED WITH SPECTRA GEOSPATIAL SP85 GNSS RECEIVERS
Piton de la Fournaise (Peak of the Furnace), one of the world's most active volcanoes, rises from La Réunion, a French department island off the coast of Madagascar. To improve safety for the island's almost nine hundred thousand residents as well as Indian Ocean rim communities and to conduct scientific volcanology research, the **Piton de La Fournaise Volcanological Observatory** (OVPF) is charged with monitoring the volcano's activity. OVPF's post-eruption monitoring includes quickly characterizing, within two days, the resulting large-scale spatial deformation that has just occurred. Following each eruption, which average two per year, two teams from OVPF, each equipped with a **Spectra Geospatial SP85 GNSS receiver** and a **MobileMapper 50 data collector**, are deployed to 79 established locations. **www.spectrageospatial.com**

TDI-BROOKS INTERNATIONAL COMPLETES TWO EBS PROGRAM OFFSHORE ANGOLA

TDI-Brooks International has recently completed Environmental Baseline Studies (EBS) for both Cabinda Gulf Oil Company Limited (CAGBOC) for the Republic of Angola and **ExxonMobil**. TDI-Brooks safely and efficiently deployed the R/V Proteus to blocks 0 and 14 for CAGBOC and Block 15 for ExxonMobil offshore Angola to complete these programs. The TDI-Brooks vessel earmarked for this project was the **R/V Proteus,** a multi-use vessel suited for a wide variety of **oceanographic research duties.** The Proteus is outfitted with **TDI-Brooks' complete geotechnical tool kit** including 20-m JPCs and 40-m CPT-Stinger/Samplers along with other TDI-Brooks standard SGE, HF, survey, EBS, cable route, etc. services. The Proteus has a Kongsberg EM-710 (1×1) hull-mounted MBES for surveys to ~2,500m water depth. The crew adhered to strict COVID-19 protocols and mitigation measures ensuring a safe and healthy work environment. **www.tdi-bi.com**

UNITY AND HERE COLLABORATE ON REAL-TIME 3D IN-VEHICLE EXPERIENCES

Unity, a platform for creating and operating real-time 3D (RT3D) content, announced a collaborative agreement with HERE Technologies, the location data and technology platform, to partner on developing next generation embedded automotive HMIs with state-of-the-art, RT3D **rendering capabilities**. The collaboration will also extend to work on next-generation location technology for autonomous driving, simulations, city planning and digital twins. To showcase the combined capabilities of **Unity's real-time 3D platform** and **HERE's location technology**, the partners developed a proof-of-concept application of an **embedded in-vehicle-infotainment (IVI) system.** Created on Unity's platform and featuring HERE 3D city data, it showcases a futuristic, wide-screen navigation experience of a 3D map of San Francisco and demonstrates what can be achieved with the addition of game-changing HMI workflow design improvements. **www.here.com**

OCEANWISE SIGN NEW SOUTH AMERICAN PARTNER

OceanWise has announced an exciting new partnership with South American based Marine Pollution Prevention and Preparation SA (M3P). M3P is an independent company, established in 2008, located in **Panama**, **Guatemala** and **Honduras**, offering high quality technical services in the disciplines of **environmental consulting** specializing in the following maritime sectors: shipping and ports, oil and chemical pollution, spill contingency plans, ship and port waste reception and treatment, pollution prevention and control programs. UK based OceanWise, that has a portfolio of specialty products and services that cater for the unique requirements of the marine industry, is looking forward to developing its relationship and exploring new opportunities with M3P in South and Central America. **www.oceanwise.eu**

CONTRACTOR INVESTS IN THE VERITY ENTERPRISE SOFTWARE SOLUTION FOR CONSTRUCTION VERIFICATION

Mercury Engineering, one of the largest contractors in Ireland, has purchased an enterprise licence for construction verification software, **Verity**, through Topcon Positioning Ireland. The purchase represents a significant enterprise deal for Verity software in Europe, according to Adam Box, business development manager for building construction at **Topcon Positioning Group.** The software from **ClearEdge3D** allows operators to process and analyse 3D point clouds for verification analysis and as-built surveys. **www.topconpositioning.com**

GMV PARTICIPATES IN THE KICK-OFF OF THE EUROPEAN GEODE PROJECT FOR PRS NAVIGATION AND TIMING
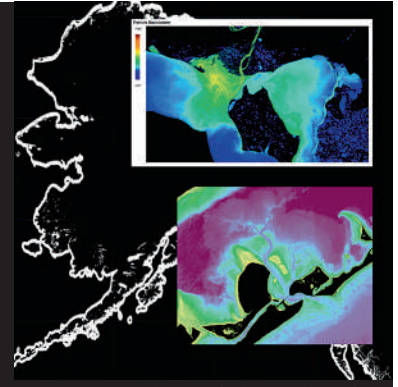
Launched under the umbrella of the EDIDP program, GEODE is the biggest **Galileo** application development project ever launched and a crucial and decisive step towards the development of the **Galileo Public Regulated Service (PRS) military User Segment.** Co-financed by Belgium, Germany, Italy, France and Spain, GEODE is supported by the EU with a grant of about **44 million Euros.** Within the Spanish industrial team, GMV is responsible for integration of the GNSS/PRS Receiver system, and in particular for the development of all the Receiver's signal-processing, navigation, and timing functions. **www.gmv.com**

NEW GATEWAY WILL CONNECT USERS TO OPEN MAPS FOR EUROPE FROM OFFICIAL NATIONAL SOURCES

Free to use maps from more than 40 European countries are to be made available through a new online gateway. **Open Maps for Europe** will signpost and provide easy access to **pan-European open data** created using official map, geospatial and land information. The project, which is co-financed by the **Connecting Europe Facility** of the **European Union**, is coordinated by **EuroGeographics**, the voice of European National Mapping, Cadastral and Land Registration Authorities, in partnership with the National Geographic Institute (NGI) Belgium. Users will be able to access the data, created by the not-for-profit membership association, through an online interface developed by thinkWhere.
www.eurogeographics.org

TCARTA AWARDED NOAA GRANT TO ENHANCE SATELLITE DERIVED BATHYMETRY TECHNOLOGY IN ALASKAN WATERS

TCarta Marine, a global provider of space-based hydrospatial solutions, has been awarded a Small Business Innovation Research (SBIR) Phase II grant from the National Oceanic and Atmospheric Administration (NOAA). The research focuses on enhancing **Satellite Derived Bathymetry technology** for application in the coastal waters of **Alaska**. Satellite Derived Bathymetry (SDB) extracts water depth measurements from multispectral satellite imagery using advanced physics-based algorithms. Traditionally, this technology has yielded the most accurate results in clear, calm waters; however, **TCarta** has recently taken the lead in expanding SDB applications to more challenging marine environments worldwide. **www.tcarta.com**
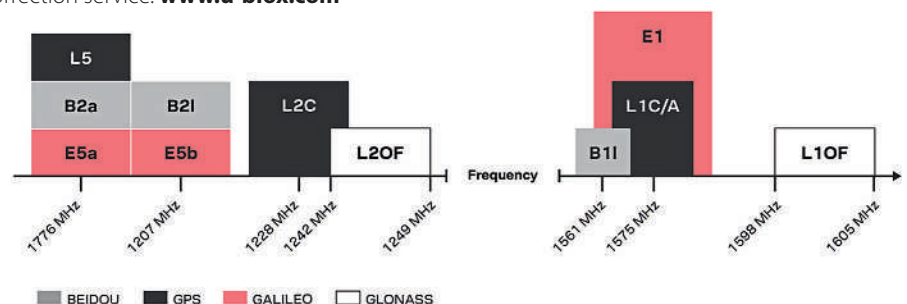
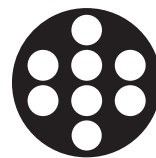## BENTLEY SYSTEMS BRINGS INFRASTRUCTURE DIGITAL TWINS TO NVIDIA OMNIVERSE

Bentley Systems, the infrastructure engineering software company, announced that it is developing applications using the **NVIDIA Omniverse platform** for photorealistic, real-time visualization and simulation of **digital twins** of massive-scale industrial and civil infrastructure projects. Bentley Systems has extended the **Bentley iTwin platform** to integrate with NVIDIA Omniverse to provide a graphics pipeline for AI-enhanced, real-time visualization, and simulation of infrastructure digital twins. This integration allows engineering-grade, millimeter-accurate digital content to be visualized with photorealistic lighting and environmental effects on multiple devices including web browsers, workstations, tablets, and virtual reality and augmented reality headsets from anywhere in the world. **www.bentley.com**

U-BLOX ANNOUNCES FIRST TIMING SOLUTIONS BASED ON L1 AND L5 GNSS SIGNALS

u-blox, a global provider of positioning and wireless communication technologies, has announced its first multi-band high accuracy timing solutions to concurrently support the L1 and L5 GNSS (global navigation satellite system) signals. The **ZED-F9T-10B** and **LEA-F9T-10B timing modules**, and the RCB-F9T-1 timing card deliver nanosecond-level timing accuracies required to synchronize cellular network base stations and smart power grids. The **ANN MB1 L1/L5 multi-band antenna** completes the offering, making it easy to evaluate the performance of the timing modules and develop high precision solutions for heavy machinery, ground robotics, and unmanned aerial vehicles. The timing modules' multi-band capability allows them to compensate the ionosphere error from all GNSS satellite constellations and reduce the timing error under clear skies to less than five nanoseconds without the need for an external GNSS correction service. **www.u-blox.com**