NEWS & EMERGING TECHNOLOGY

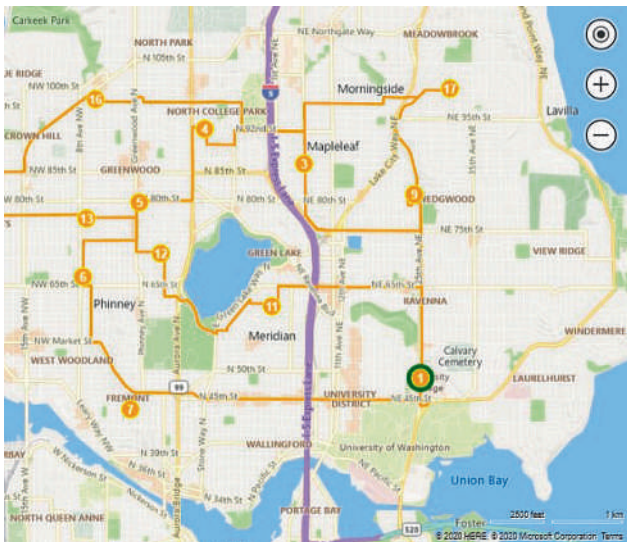## PARSEC BUSINESS ACCELERATOR BOOSTS EO ENTERPRISES

100 SMEs in the EO field have been selected for financial and technical support by the PARSEC business accelerator, 10 of them will receive the "grand prize". Part of the support is the enabling multi-Petabyte **PARSEC datacube platform** which has been introduced to the SMEs. Harnessing the power of **Big EO Data** requires efficient handling of the volume, velocity, variety, and veracity of multimodal EO data, such as the **Copernicus Sentinels.** SMEs entering the EO market require expensive experts top-skilled in IT and remote sensing alike, which distracts precious resources from the core business. These barriers make it difficult for SMEs gaining ground in the market. This is where PARSEC comes to help. This European funded project will effectively support SMEs in addressing these challenges through both business development support, financial support, and a massively scalable EO datacube service.

www.parsec-accelerator.eu

MICROSOFT UPDATES BING MAPS FEATURES TO SUPPORT FLEETS AS DELIVERY DEMAND SURGES

Microsoft is helping fleet and logistics companies respond to the sudden increase in demand for delivery services due to the COVID-19 pandemic, with its **Bing Maps Multi-Itinerary Optimization (MIO) API.** To meet the greater need for **effective multi-stop route planning,** Microsoft has expanded the Bing Maps MIO API features to now support up to 50 agents and 500 itinerary locations. The Bing Maps MIO API takes the manual work and complexity out of route planning and, powered by AI, automates the process of building itineraries for multiple agents (drivers, field services etc.) and their multiple shifts, while optimising their routes to save travel time and distance. Grey Matter provides licensing expertise as the sole Microsoft Bing Maps distributor for EMEA and APAC regions.

www.greymatter.com

ESTONIAN RAILWAYS SELECTS HEXAGON TO AUTOMATE AND DIGITIZE OPERATIONS

Estonian Railways, a state-owned company responsible for Estonia's railway administration, has selected Hexagon's Geospatial division to implement a **transportation system** that will automate and digitize the railway's infrastructure maintenance, construction and traffic management processes. The combined **asset management system** and **GIS platform** will support the company's more than **700 employees** to efficiently manage assets and workflows. Powered by Hexagon's **GeoTrAMS**, a web-based system for tram and light-rail infrastructure, and **GeoMedia**, a flexible GIS management platform, Estonia Railway will be able to visualize assets on a map while integrating with other companies and external systems. Hexagon's state-of-the-art registry will serve multiple information systems and users at the same time, centralizing the use of asset and spatial data while avoiding data duplication and ensuring that users have access to the most up-to-date information.

www.hexagongeospatial.com

U.S. RUGGED DEVICE MANUFACTURER JUNIPER SYSTEMS SEES STRONG DEMAND AS GLOBAL SUPPLY CHAINS ARE IMPACTED BY COVID-19

While rugged device manufacturing giants are experiencing manufacturing shutdowns, supply shortage of parts, and extended product lead times, U.S. rugged device manufacturers like Juniper Systems are seeing strong product demand. Sourcing parts locally within the U.S. and maintaining a robust product and part inventory have been two keys to fulfilling the increase in demand, according to Supply Chain Manager Greg Foulger. Juniper Systems is known for being **"all under one roof"** with **product design, engineering, manufacturing,** and **sales** all operating within one building in Logan, UT USA. Because of this unique setup, Juniper Systems is able to provide a rare level of support to its global partners and user base requiring ultra-rugged handhelds, tablets, and GPS receivers for mobile data collection applications.

www.junipersys.com

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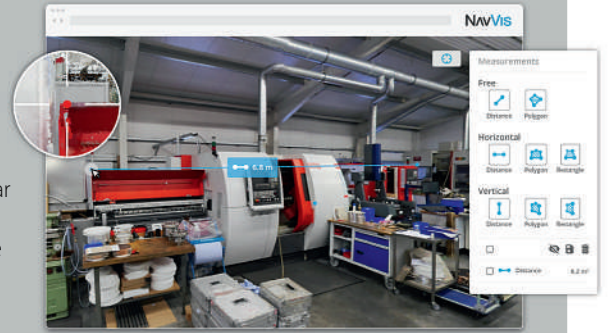**Products:**

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microsurvey.com/emcad2021

microsurvey.com/incad2021

SURVEY SOFTWARE EASY WORKFLOW

PART OF HEXAGON

NAVVIS RELEASES INDOORVIEWER 2.6

NavVis, a provider of indoor spatial intelligence technology and enterprise solutions, announces the release of NavVis IndoorViewer 2.6. This major software release includes a **new measurement tool** that lets users take highly accurate measurements based on point clouds in realistic browser-based digital buildings. This release also makes additional features available to structured e57 point cloud files, including automatically **generating highly detailed floorplans and routing.** NavVis IndoorViewer is a popular deliverable among building stakeholders without the technical expertise to work with point clouds and modeling software, thanks to the realistic digital buildings and intuitive interface. One of the features that has proven to be useful among users across multiple industries is the measurement tool. It enables users to take measurements remotely on any device, saving time otherwise spent traveling to the site. **www.navvis.com**

SEPTENTRIO ADDS SAPCORDA SAPA SERVICE TO GNSS RECEIVER PORTFOLIO

Septentrio, a provider of in high-precision GNSS positioning solutions, announces that it has entered into a commercial agreement with **Sapcorda**, a global provider of sub-decimetre GNSS corrections. For over two decades Septentrio has been designing reliable and robust GPS/GNSS receivers for demanding applications. These receivers rely on external corrections to reach high accuracy in the sub-decimetre range. Through the collaboration with Sapcorda, Septentrio will pioneer an innovative **no-hassle corrections integration** into a new line of products for the high-accuracy industrial market. These new products will consist of **Sapcorda's SAPA Premium corrections** integrated directly into **Septentrio's latest GNSS receiver technology.** The result is sub-decimetre accuracy, which is available to users right out of the box. This significantly simplifies the user's GNSS receiver set-up process and eliminates completely the hassle of corrections service subscription and maintenance. Such GNSS receivers acquire corrections via internet as well as via satellite broadcast and deliver reliable, broadly available sub-decimetre positioning to high-volume industrial applications. **www.septentrio.com**

HERE CONTINUES TO LEAD AS COUNTERPOINT RESEARCH'S TOP LOCATION & MAPPING PLATFORM
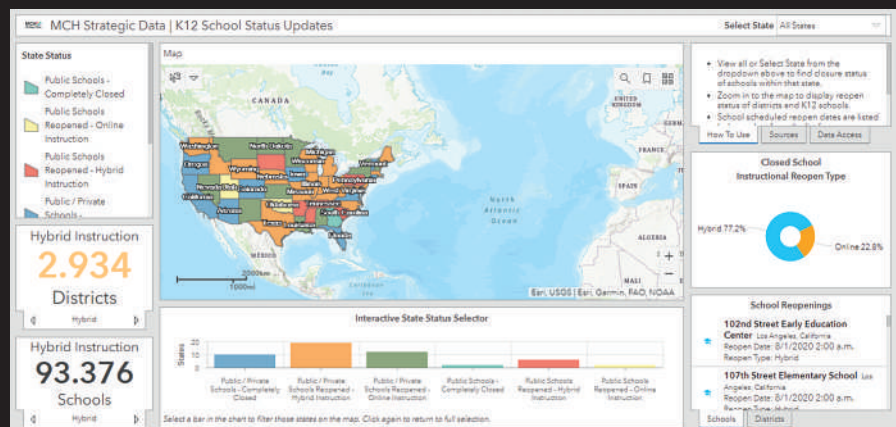
For the third time in a row, HERE Technologies was named by Counterpoint Research as **the world's number one location platform.** The 2020 Counterpoint Research Location Platforms Evaluation and Analysis compared the 25 leading location platform vendors, including **Google, TomTom** and **Mapbox**, in capabilities and execution. Counterpoint has greatly expanded its evaluation criteria since publishing its last benchmark in July 2018. The new report evaluates the leading 25 maps and location platform players, across six categories, on more than 60 capabilities and ecosystem success parameters. HERE leads the pack in all categories and across more than 40 of the criteria, including: Developer Ecosystem, Indoor Maps, ADAS/HD Maps, Geo-Coding, Traffic, Tracking & Positioning, Openness, Marketplace and more. **www.here.com**

ESRI PARTNERS WITH MCH STRATEGIC DATA TO PROVIDE INFORMATION ON US EDUCATION AFFECTED BY COVID-19

Esri announced that it will be making data layers on US school closures during the COVID-19 pandemic available through a new partnership with MCH Strategic Data. To help educational organizations as well as families across the nation better understand the situation in their communities, Esri and MCH have made **school closure data** accessible from a **public dashboard.** Information on K through 12 public and private schools include whether they are closed, plans for re-opening school buildings, and the type of instruction they are offering during closures due to the epidemic. As the COVID-19 outbreak has escalated rapidly across the globe, and with municipalities struggling to respond, MCH and Esri have built out additional resources like the **MCH School**
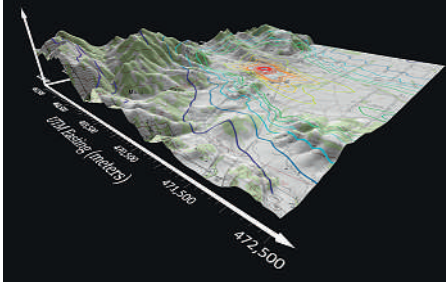
Status Updates to help organizations quickly visualize and understand the current situation, as well as identify potential community risk areas when schools begin to open back up, and estimate the capacity needed to respond. **www.esri.com**

GOLDEN SOFTWARE SIMPLIFIES SURFER WORKFLOWS FOR FASTER GRIDDING

Golden Software, a developer of affordable 2D and 3D scientific modeling packages, has streamlined many workflows in the latest version of its **Surfer gridding, contouring, and 3D surface mapping product.** These enhancements will save time for end users in oil & gas exploration, environmental consulting, mining, engineering, and geospatial projects. Used by **100,000 clients worldwide,** Surfer has been relied upon for more than 30 years by scientists 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**

HANLEY WOOD | MEYERS RESEARCH ANNOUNCE ACQUISITION OF SATELLITE IMAGERY COMPANY BIRD.I

Hanley Wood | Meyers Research, the housing industry's foremost advisors and provider of rich data, announced it acquired **Bird.i**, a Scotland-based company that combines the latest **satellite imagery** and **artificial intelligence (AI) technology** to provide valuable land and building insights. Bird.i's imagery processing technology shows how things are changing on the ground, allowing for more timely, better informed decision-making throughout the building process, providing a competitive advantage for users. The Bird.i data platform will be available for Hanley Wood | Meyers Research customers, so its current clients can take advantage of real-time imagery. Additionally, Bird.i will be integrated in Metrostudy and Zonda – the respective data products of Hanley Wood and Meyers Research – later this year. **www.hibirdi.com**

Thuraya MarineStar

THURAYA MARINESTAR BECOMES A MAJOR SUCCESS STORY

Thuraya, the mobile satellite services subsidiary of the UAE-based global satellite company, Yahsat, announced that Thuraya MarineStar, its best in class maritime voice solution with advanced **two-way tracking** and **monitoring capabilities** is a bestseller, especially in the Asian maritime markets. This versatile solution was sold out within a month after its launch and first installations have been made successfully. Due to robust demand from fisheries, Thuraya's Service Partners are now placing new bulk orders for the hardware units. As an entry-level solution, Thuraya MarineStar is built on the same successful voice platform that has sold more than **one million Thuraya satellite voice devices**. Since it enables tracking and monitoring, in addition to voice communications, vessel operators do not have to invest more in their tracking systems or a brand new tracking application. **www.thuraya.com**

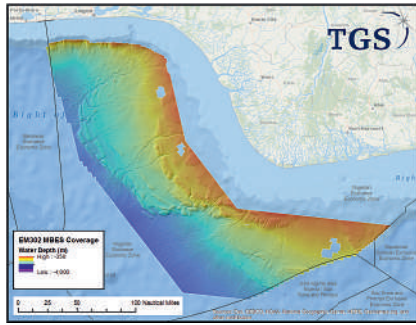## ELBIT SYSTEMS AWARDED $20 MILLION IN CONTRACTS TO UPGRADE HERMES 900 UAS OF LATIN AMERICAN CUSTOMERS

Elbit Systems announced that it was awarded two contracts valued at a total of approximately $20 million from Latin American customers to upgrade the capabilities of their **Hermes 900 Unmanned Aircraft Systems (UAS)**. Both contracts will be performed within a 12-month period. Under the contracts, the Company will **integrate satellite communication systems** and automatic take-off and landing systems into the Hermes 900 UAS that the customers are already operating. This upgrade will advance these **Medium Altitude Long Endurance (MALE) UAS** to the latest configuration, enabling extension of the operational range to more than 1000km and performing the take-off and landing autonomously and independent of GPS reception. Since its debut 10 years ago, the Hermes 900 UAS was selected by numerous customers across four continents, performing a wide range of missions in the fields of Intelligence Surveillance Target Acquisition and Reconnaissance (ISTAR), homeland security and maritime search and rescue. **www.elbitsystems.com**

TDI-BROOKS COMPLETES MULTIBEAM PHASE FOR TGS OFFSHORE NIGERIA

TDI-Brooks International, Inc (under contract to TGS), has completed the offshore multibeam phase offshore the Niger Delta. This survey took place in water depths of 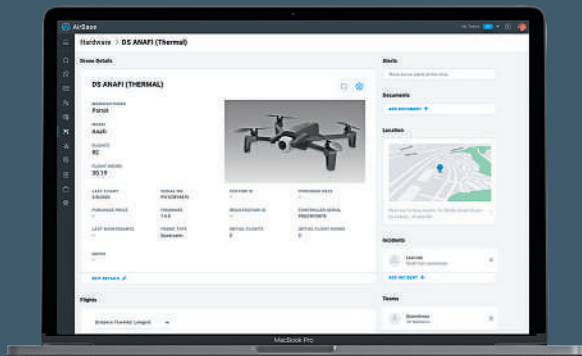**750** to **3,500 meters** and is Nigeria's first regional multi-client **Multibeam and Seafloor Sampling (MB&SS) Study.** TDI-Brooks' R/V Gyre acquired **82,000 square kilometres** of high-resolution hull-mounted multibeam echo sounder data. During the multibeam data collection a total of **1,223 active hydrocarbon seeps** were detected in the multibeam water column data. Onboard hydrocarbon seep analysis was conducted in near real-time onboard the vessel to expedite the process of core selection. The Gyre is fitted with an **EM302 MBES** (EM304 upgrade pending). The R/V Proteus is scheduled to begin acquisition of the follow-up Surface Geochemical Exploration (SGE) coring campaign in July 2020, where approximately 245 piston core samples targeting suspected seep features selected from the MBES dataset will be collected, along with an additional 45 additional piston core samples for geotechnical and biostratigraphic studies. **www.tdi-bi.com**

BEPICOLOMBO TAKES LAST SNAPS OF EARTH EN ROUTE TO MERCURY

The ESA/JAXA BepiColombo mission completed its first flyby on 10 April, as the spacecraft came less than 12 700 km from Earth's surface at 06:25 CEST, steering its trajectory towards the final destination, **Mercury**. Images gathered just before closest approach portray our planet shining through darkness, during one of humankind's most challenging times in recent history. Launched in 2018, BepiColombo is on a **seven-year journey** to the smallest and innermost planet orbiting the Sun, which holds important clues about the **formation** and **evolution of the entire Solar System.** The operation is the first of nine flybys which, together with the onboard solar propulsion system, will help the spacecraft reach its target orbit around Mercury. The next two flybys will take place at Venus and further six at Mercury itself. While the manoeuvre took advantage of Earth's gravity to adjust the path of the spacecraft and did not require any active operations, such as firing thrusters, it included 34 critical minutes shortly after BepiColombo's closest approach to our planet, when the spacecraft flew across the shadow of Earth. **www.esa.int**
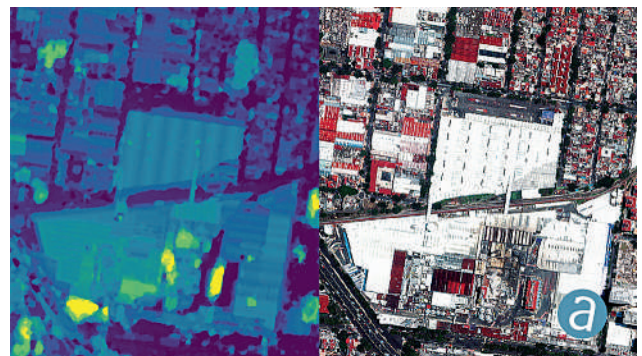

PARROT, DRONESENSE PARTNER TO BETTER EQUIP PUBLIC SAFETY UAS PROGRAMS

Parrot, the European drone group, announced it is partnering with DroneSense— a software company whose comprehensive drone management platform enables public safety organizations to build, manage, and scale their unmanned aircraft programs. Through this partnership, public safety UAS teams are able to use the full suite of **DroneSense capabilities** tailor-made for the needs of first responders with their **ANAFI aircraft.** Parrot's ANAFI and ANAFI Thermal drones offer an ultra-compact tool for professionals, helping them gain new vantage points on a situation using the drone's aerial insights. In addition to its built-in **4K HDR camera,** ANAFI Thermal also integrates a **FLIR thermal sensor**— allowing users to easily capture thermal and visual readings for faster response times, along with higher precision and efficiency. This functionality coupled with the scene management tools in the DroneSense Platform will provide public safety operators with an unparalleled level of situational awareness that will ultimately help save more lives. **www.parrot.com**

SIMACTIVE INVOLVED IN THE MAPPING OF A UNESCO ARCHEOLOGICAL SITE

SimActive, a developer of photogrammetry software, announces that his **Correlator3D** product is used to map the UNESCO World Heritage Site of Halin in Myanmar. The archaeological project involved the deployment of drones to gather data necessary to prepare **orthophoto maps** and **digital elevation models**. The goal is to find new features as well as to assess the state of the known ones. These include monumental walls, dams and digging canals many of which are still visible in the landscape. The resulting geospatial data also allow to check if modern constructions or farming are not causing any damage. **www.simactive.com**

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1 cm RTK

ARROW GOLD
1 cm RTK with SafeRTK™

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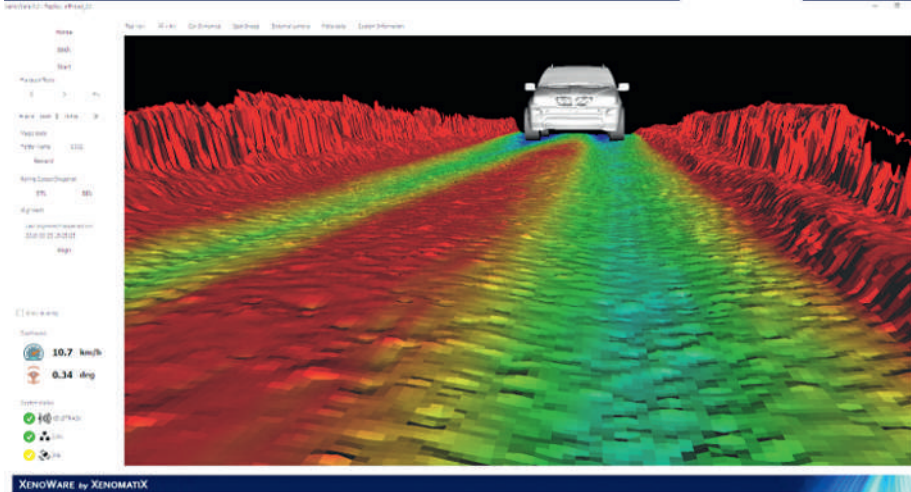Submeter & Subfoot GNSS

EOS POSITIONING SYSTEMS
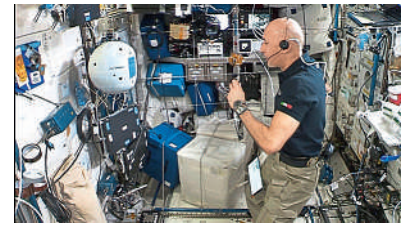info@eos-gnss.com

WWW.EOS-GNSS.COM

Made in Canada

XENOMATIX LAUNCHES 6D ROAD SCANNING

XenomatiX, Tier II provider of true solid state lidars, launches a new business unit, 6D Road Scanning services to strengthen its position as innovator and facilitator **of road safety and comfort.** Since roads wear with loads and seasons, 6D road scanning allow road managers to effectively analyse the road surface for cracks, waviness, rutting, potholes or other damages and to determine if and when maintenance or repair is needed. Using its **true solid state lidar systems**, XenomatiX acquires and analyses high-precision and reliable pavement condition data for any road network. The Road Scanning sensor is mounted on top of a regular vehicle and digitizes the road surface, collecting following types of data: 3D point clouds, surface reflectivity data, camera images and detailed GPS data. These measurements can be delivered as raw data or can be analysed by XenomatiX' road engineering experts using generic or customized algorithms. **www.xenomatix.com**

DE BOER MARINE TO DELIVER MANAGED DATA SERVICES THROUGH SES NETWORKS' SKALA GLOBAL PLATFORM

De Boer Marine, a Dutch company specialised in maritime navigation and communication equipment, is now offering seamless, reliable **managed data services** to its international maritime clients by leveraging SES Networks' exceptional **connectivity** and its **Skala Global Platform**, the two companies announced. De Boer Marine's customers will benefit from a superior customer experience with a cost-effective communications solution that reduces operational risk and cost. Crew and operators will stay connected to their friends and family anytime, anywhere, while De Boer Marine and fleet operators will benefit from **flexible bandwidth management**, advanced automatic beam switching, and a sophisticated network management system to maximise their profitability and efficiency. The Skala Global Platform offers a combination of next-generation **ground system technology, advanced satellite capabilities and service lifecycle expertise** that enables scalable, flexible and high-quality managed data services for commercial shipping companies across the world. **www.ses.com**

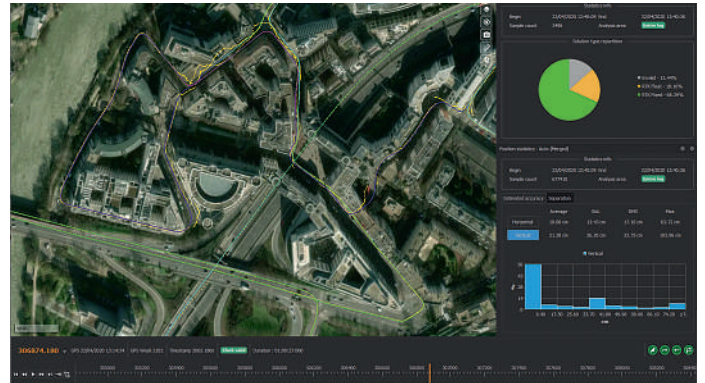## CIMON-2 MAKES ITS SUCCESSFUL DEBUT ON THE ISS

CIMON-2, the updated version of the CIMON astronaut assistant, developed and built by Airbus for the German Aerospace Center Space Administration (DLR), has now demonstrated its capabilities during initial tests on the **International Space Station (ISS).** The free-flying, spherical technology demonstrator with **artificial intelligence (AI)** showed off a number of its features during interactions with **ESA astronaut Luca Parmitano.** CIMON-2 started its journey to the ISS on 05 December 2019, launching with the CRS-19 supply mission from the **Kennedy Space Center** in Cape Canaveral, Florida. It is scheduled to stay on the ISS for up to three years. Just shy of two months after the successful first use of CIMON-2, the project team has now received the analysis. With the new improved hardware and complex software working so well, the CIMON team from **DLR, Airbus, IBM, Ludwig Maximilian University in Munich (LMU)** and the **ESA User Support Centre Biotesc** in Lucerne (Switzerland) are extremely satisfied with CIMON-2's performance. This continued success of the CIMON project is yet another pioneering achievement in the use of AI in human space flight. **www.airbus.com**

DETECTION SERVICES PROVIDES REZATEC'S GEOSPATIAL INTELLIGENCE SOLUTIONS FOR HUNTER WATER

Detection Services in association with partner Rezatec, global provider of **satellite data analytics**, is proud to be using its state-of-the-art satellite technology to monitor any potential structural and environmental changes at **Hunter Water's Grahamstown Dam,** near **Newcastle, Australia.** Grahamstown Dam is the Hunter's largest drinking water storage, holding up to 182,000 million litres of water. It provides around half of the drinking water used by Hunter Water's customers on an ongoing basis. Hunter Water has engaged Detection Services to provide an asset monitoring program featuring a highly targeted approach to identify hotspots of terrain movement, soils saturations, vegetation growth, moisture levels and structural movement. **www.rezatec.com**

FUGRO WINS CONTRACT FOR A9 MOTORWAY WIDENING IN THE NETHERLANDS

Fugro has been awarded a 3-year contract for an extensive geotechnical campaign and subsequent design work as part of the **A9 motorway upgrade and expansion project** in the Netherlands. In addition to the geotechnical ground investigation, Fugro will provide **geotechnical design** of all civil structures, including ground-retaining walls and earthworks for widening the motorway. The scope of work also covers preparation of a **3D ground model,** which will facilitate more efficient scenario analysis and integration with the project's **building information model** (BIM). The A9 project involves the widening of 10 km of existing motorway between the Holendrecht and Badhoevedorp junctions, including a deep cut (open tunnel) nearly 2 km long. This section of the A9 passes through a densely populated area between Schiphol and Amsterdam, which presents additional challenges for the acquisition of Geo-data along this busy stretch of road.
www.fugro.com

QINERTIA, SBG SYSTEMS' PPK SOFTWARE NOW SUPPORTS THIRD-PARTY IMUS

SBG Systems' popular INS/GNSS PPK software called Qinertia now covers all surveyors' projects by offering a license dedicated to GNSS post-processing. Open to the world, Qinertia supports **all major GNSS receivers** and is now open to **third-party IMUs.** Qinertia, the new standard for Post-processing, is now open to all IMUs and GNSS Qinertia has been designed to offer a comprehensive suite of **post-processing software** to the geospatial world. It accepts all major GNSS manufacturers, and supports proprietary protocols from **Novatel**, **Septentrio**, **Trimble**, and **Ublox** for a straight-forward workflow. It is the first full-featured post-processing software to offer a native support for Ublox F9 RTK receivers reducing the workflow as a simple "drag and drop" to guarantee data integrity and accuracy. Qinertia has been designed to help surveyors get the most of their survey very easily with a simple workflow, powerful quality control tools and leading edge tightly coupled algorithms.
www.sbg-systems.com

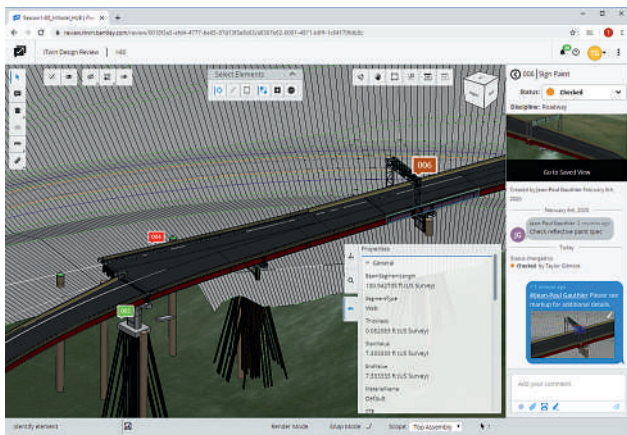## BENTLEY SYSTEMS OPENS UP FULL ACCESS TO PROJECTWISE 365

Bentley Systems, Incorporated, a global provider of comprehensive software and digital twins services for advancing the design, construction, and operations of infrastructure, announced it has opened up its **ProjectWise 365 cloud service,** including waiving subscription fees through September 30, 2020, to virtually connect infrastructure project participants forced to work from home. ProjectWise 365, leveraging **Microsoft 365 technology and office productivity tools,** extends the reach and accessibility of **BIM** and **infrastructure engineering data** to facilitate collaboration and design review across the ecosystem of project stakeholders. As an "instant-on" cloud service accessed through a web browser to simplify design review, transmittals, RFIs, information sharing, and issues resolution, ProjectWise 365 is perfectly suited for quick adoption while working from home, eliminating the need for error-prone combinations of generic technologies such as "drop boxes" and PDF. **www.bentley.com**

UAVOS COMPLETES TESTS FOR UAV DELIVERY SERVICE HUMANITARIAN RELIEF

UAVOS has successfully tested its cargo delivery UVH-170 unmanned helicopter. The trial aimed to validate a **highly automated delivery flight** from a vendor to a destination and back, across precisely pre-selected pathways. The flight took **1.7 hours** and covered a standoff distance of **62 miles** (100 km). Critical humanitarian aid, whose weight was **17,6 lbs** (8 kg), was delivered with neither the need to land nor the need for a ground control station on the receiving side. UAVOS's UAS is equipped with **line of sight data link** (LOS) and satellite communication data link, which supports Beyond Visual Line of Sight (BVLOS) flights. UVH-170 unmanned helicopter is designed for commercial operations and immediate air response, emergency relief under demanding conditions and tight timescales. The aircraft's high standoff distance makes it well-suited to humanitarian and disaster relief applications. **www.uavos.com**

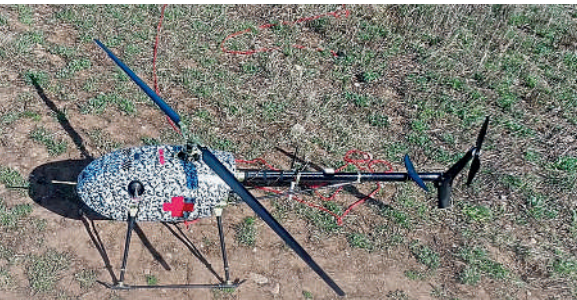## OGC AND BUILDINGSMART INTERNATIONAL PUBLISH DISCUSSION PAPER ON INTEGRATING BIM AND GIS

The Open Geospatial Consortium (OGC) and buildingSMART International (bSI) have released an industry-defining paper as part of their Integrated **Digital Built Environment (IDBE) joint working group.** This paper aims to coordinate the development of the relevant data standards that are produced at each organisation. The Discussion Paper, entitled Built environment data standards and their integration: an analysis of **IFC**, **CityGML** and **LandInfra**, is free to download from OGC's Discussion Papers webpage. This report looks at a variety of challenges and addresses the need to develop better integration at a high level between **BIM and GIS standards.** The paper focuses on four key topics: predominant disparities that hinder integration; fundamental operations that underpin use cases; methods of integration in usage and proposed action points. The IDBE working group will continue to work on the points highlighted and aims to overcome integration challenges, to articulate the main use cases, devise a system of common unique identifiers and agree on a collaborative harmonisation approach. **www.ogc.org**

ROAD-SIT WEB: THE ROADS GLOBAL SERVICE IN ITALY

SITECO Infomatica SRL provides the Road-SIT Web application for the **Roads Global Service** of the Campania Region. Following the tender of the Municipality of Giugliano in Campania, G.L.M. Appalti SRL entrusted SITECO with the **survey of the municipal roads (150km)** for the supply of a "front end - back office" software system for updating pavement deterioration and post-road monitoring. The software application provided by SITECO, **Road-SIT WEB**, fully meets the requirements by providing all the necessary functions in a single online working environment. The "mobile" version, expressly developed to operate on mobile devices (smartphones with a 5 "to 7" display or iPad), has a very friendly and flexible interface. The road inspection operators identify the distresses and register them, in real-time, in a form available on a mobile device, also attaching a few photos. The data are recorded directly on the platform set up for this purpose. **www.sitecoinf.it**

G-CORE LABS OPENS POINT OF PRESENCE IN CHILE

G-Core Labs, the international provider of cloud and edge solutions, is expanding its presence in **South America** by opening a new point of presence of its **content delivery network** in Santiago, Chile's capital. The location shows an average **response time of 24 ms** (according to Citrix, the independent analytical system), successfully competing with local and American CDN service providers. The point of presence is located in a certified Tier III class data center. G-Core Labs CDN supports all necessary protocols, including HTTP/2 (by default), SSL and IPv6, and also provides flexible system configuration options: access through the API, opportunities to pre-load heavy files, to clear cache completely or selectively, to set and manage cache storing time, cache return, inheriting caching parameters, to ignore request parameters and cookies etc. The global architecture of G-Core Labs content delivery network, located on 5 continents, was created by experts on high-load systems. **www.gcorelabs.com**

NGA AND MAXAR WORK TOGETHER TO EXPAND GOVERNMENT ADOPTION OF NOME

The NGA Open Mapping Enclave (NOME) has gained popularity as a telework-friendly option to advance the production of Foundation GEOINT to support missions across the U.S. government. Maxar contributes imagery used by the NOME community of screened users within the **National System for Geospatial Intelligence** and **Allied System for Geospatial Intelligence** access to foundational GEOINT data in a dynamic, collaborative, **mapping environment**. Using NOME, trusted users with a browser and internet service are able to leverage a combination of automation tools and human expertise to improve the volume and quality of foundational maps throughout the world.

NOME leverages current, accurate and unclassified data delivered through the NGA's **Global Enhanced GEOINT Delivery** (Global EGD) program. As a contributor to Global EGD, Maxar enables NGA to serve more than a quarter-million U.S. government users with online and offline, on-demand access to the world's highest-resolution commercial imagery. **www.maxar.com**

NASA/ESA HUBBLE CELEBRATES ITS 30TH ANNIVERSARY WITH A TAPESTRY OF BLAZING STARBIRTH

On 24 April 1990, the Hubble Space Telescope was launched on the Space Shuttle Discovery, along with a five-astronaut crew. Deployed into low Earth orbit a day later, the telescope has since opened our eyes to the cosmos and transformed our collective knowledge of the Universe. Hubble has revolutionised **modern astronomy** not only for astronomers, but also for the public, taking them on a journey of exploration and discovery. This year, Hubble is celebrating this new milestone with a portrait of **two colourful nebulae** that reveals how energetic, massive stars sculpt their homes of gas and dust. Although NGC 2014 and NGC 2020 appear to be separate in this visible-light image, they are actually part of one giant star formation complex. The star-forming regions seen here are dominated by the glow of stars **at least 10 times more massive** than our Sun. These stars have short lives of only a few million years, compared to the 10-billion-year lifetime of our Sun. **www.esa.int**