

NEWS & EMERGING TECHNOLOGY

BENTLEY SYSTEMS ANNOUNCES FINALISTS IN THE YEAR IN INFRASTRUCTURE 2019 AWARDS PROGRAM

Bentley Systems announced the finalists in the Year in Infrastructure 2019 Awards program. The annual awards program honors the extraordinary work of Bentley software users advancing infrastructure design, construction, and operations

throughout the world. Twelve independent jury panels of distinguished industry experts selected the 54 finalists from 571 nominations submitted by more than 440 organizations in more than 60 countries.

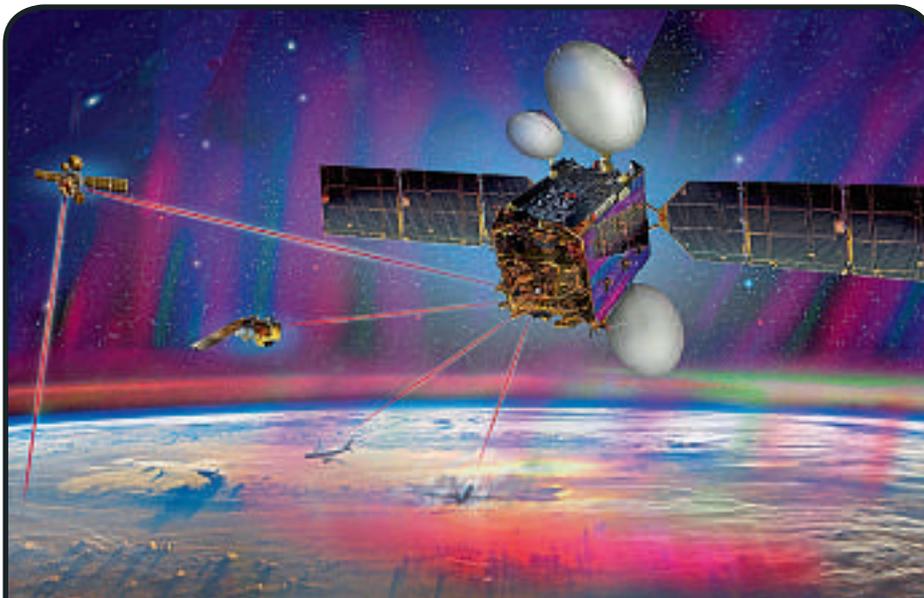
www.yii.bentley.com/awards



LIPLAN: GROUND STATION FOR LIAIR

LiPlan IOS is a ground station app for LiAir systems developed by **GreenValley International**. LiPlan integrates mission planning, system configuration, auto pilot, status tracking, and mission management into one app to simplify your LiDAR mission planning and execution process and to improve the data result quality.

www.greenvalleyintl.com



SUCCESSFUL LAUNCH OF THE SECOND SPACEDATAHIGHWAY SATELLITE ON ARIANE 5

The **EDRS-C satellite**, the second node of the SpaceDataHighway network (also known as EDRS, European Data Relay System), has been successfully launched into geostationary orbit at 31° East by an Ariane 5 rocket from Kourou, French Guiana. After a test period, it will double transmission capacity of the system in order to serve two observation satellites simultaneously and provide redundant back-up for the SpaceDataHighway. This second satellite is joining EDRS-A which transmits on a daily basis the images of Earth acquired by the Copernicus programme's four Sentinel observation satellites.. www.airbus.com

VEGA FLIGHT VV15 FAILURE: ARIANESPACE AND ESA APPOINT AN INDEPENDENT INQUIRY COMMISSION

Arianespace announced the failure of Flight VV15 carrying the FalconEye1 satellite. This was the first Vega failure after 14 successful launches in a row since being introduced at the Guiana Space Center in French Guiana in 2012. The Vega launch vehicle lifted off as scheduled on 10 July, 2019 at 22:53 hrs (local time in French Guiana). Approximately two minutes after the Vega launcher's liftoff, shortly after ignition of the second stage (Zefiro 23), a launcher anomaly occurred – leading to the premature end of the mission. The **European Space Agency (ESA)** and Arianespace immediately decided to appoint an independent inquiry commission. Preparations for the next Ariane 5 launch are continuing at the Guiana Space Center.

www.euspaceimaging.com

YELLOWSCAN SIGNS A NEW DISTRIBUTOR IN THE UNITED STATES

YellowScan, a provider of UAV LiDAR Solutions, has announced a new distribution partnership with Frontier Precision, a company that has been dedicated to their clients for more than 30 years. YellowScan customers will benefit greatly from their extensive experience delivering survey, mapping, engineering, construction, GIS, forensics, law enforcement, forestry, water resources, and many other markets throughout the western United States.

www.yellowscan-lidar.com



RIEGL INVESTS IN NEW OFFICE AND PRODUCTION FACILITIES

RIEGL, an internationally successful manufacturer of LiDAR scanners for surveying applications headquartered in Horn, Austria, is investing heavily in the expansion of production and office space. The continued, worldwide demand for the high-performance sensors allows the company to grow and expand further.

This summer, a new office and production facility has started construction at the location of the company's headquarters in Horn, Austria. The new building will house the company's printed circuit board production and the software development team. RIEGL is also continuing to grow in the United States. The company has been active and successful in this market for more than 25 years and is currently building a new North American office facility in Winter Garden, Orlando, Florida, offering 1500m² (16,000 sq. foot) floor space. In total, the investment volume for the expansion of the company's facilities in 2019 and 2020 is more than 10 million EUR. www.riegl.com



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Surveying your world accurately brings great advantages. We're constantly developing new inertial sensing technology, enabling cost-effective real-world solutions.

PRECISION MEMS ENABLING NORTH FINDING

FOG-GRADE PERFORMANCE

COST-EFFECTIVE NAVIGATION CORE

QUALITY TECHNICAL SUPPORT DURING INTEGRATION

IDEAL WHERE SPACE IS AT A PREMIUM



www.siliconsensing.com

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20 YEARS

長年のご愛顧に感謝いたします。

VEXCEL IMAGING LAUNCHES SUBSCRIPTION IMAGE SERVICE SOLUTIONS TO GOVERNMENT AGENCIES

Vexcel Imaging introduced its high quality and up-to-date **aerial image subscription for government agencies**. The cloud-based image solution, now available via subscription service, saves state and local government a significant amount of time and money by making it fast and simple to acquire up-to-date, concise, ultra-high-resolution imagery and leverage it organization-wide into critical location intelligence. "Government agencies face many challenges like supporting Smart Community initiatives; providing mission-critical information during emergencies; and ameliorating geospatial data hosting and procurement. Outdated and hard to access geospatial data acquired per department

is not a viable option," said Erik Jorgensen, CEO of Vexcel Imaging. "Vexcel's imagery solution now makes it possible for small cities to large

states to access detailed imagery that covers entire jurisdictions and is refreshed regularly and predictably." www.vexcel-imaging.com



APPLICATIONS OF GLOBAL NAVIGATION SATELLITE SYSTEMS WORKSHOP

FIG Asia Pacific Capacity Development Network (AP CDN) and Commission 5 – Position and Measurement members, along with representatives from sister organisations, such as the UN GGIM for Asia and the Pacific (UN-GGIM-AP) Working Group 1 Geodetic Reference Frames, UN Sub-Committee on Geodesy Education Training Capacity Building (SCoG ETCB), and the International GNSS Service (IGS) actively participated in the "Workshop on the Applications of Global Navigation Satellite Systems" held in Suva, Fiji, 24-28 June 2019. This event was organized by the University of the South Pacific (USP) and co-sponsored by the United Nations Office for Outer Space Affairs (UN OOSA) and the International Committee on Global Navigation Satellite Systems (ICG). Over 100 delegates from 26 countries attended the workshop that utilized various buildings and facilities within the USP campus. www.fig.net

VIRTUAL REALITY IN CAx-APPLICATIONS

With the **VR PluraView** monitor, the term "3D-CAD" is now given a completely new value for CAx, Design & Design: The innovative VR system makes working in virtual reality environments as well as stereoscopic visualization in construction and design a reality.

The new VR PluraView is a passive virtual reality stereo monitor. As a full-fledged VR / AR desktop system, it is based on the successful 3D PluraView monitor from **Schneider Digital**. The proven, flicker-free beam splitter technology allows the user - even over a longer period - a fatigue-free VR working. Equipped with a high-tech tracking system, the VR PluraView now allows interaction with 3D stereo models and content across all axes. Zoom, rotate and incline without a mouse, either via head tracking and / or using tracking-balls or a 3D pen. www.schneider-digital.com



WHEELER FINANCIAL FROM PITNEY BOWES HELPS GHILOTTI BROS SECURE FUNDING TO DRIVE GROWTH AND BOOST COMPETITIVENESS

Pitney Bowes, a global technology company that provides commerce solutions in the areas of ecommerce, shipping, mailing, finance and data, announced that Wheeler Financial from Pitney Bowes has closed a financing transaction with Ghilotti Bros. Inc (GBI) to help them grow their business. GBI is a highly prominent, 105-year-old construction firm in Northern California that is on its fourth generation of ownership. They employ over 275 people and generate annual revenues in excess of \$100 million. The firm secured funding from Wheeler Financial to invest in GPS tracking technology to gain an advantage in its highly-competitive market. www.pitneybowes.com

TERSUS RELEASES OSCAR GNSS RECEIVER WITH CALIBRATION-FREE TILT COMPENSATION

The **Oscar GNSS Receiver** is a new generation GNSS RTK system. With an internal high-performance multi-constellation and multi-frequency GNSS board, the Oscar GNSS Receiver can provide high accuracy and stable signal detection. The rugged housing protects the equipment from harsh environments. The Oscar GNSS Receiver has three versions: Ultimate, Advanced, and Basic. It provides selectivity for the requirement from different users. The built-in large capacity battery is detachable, two batteries support up to 16 hours of field work in RTK mode. www.tersus-gnss.com

PITNEY BOWES NAMED TO FORBES MAGAZINE LIST OF AMERICA'S BEST EMPLOYERS FOR WOMEN FOR SECOND CONSECUTIVE YEAR

Pitney Bowes, a global technology company that provides commerce solutions in the areas of ecommerce, shipping, mailing, finance and data, announced its inclusion in Forbes Magazine's list of America's Best Employers for Women, for the second consecutive year.

Pitney Bowes' inclusion within the 2019 list of high-performing American businesses reflects its deep-rooted commitment to doing the right thing, the right way – a value which has been at the heart of the business for almost a century and continues to drive its culture.

www.pitneybowes.com

BENTLEY SYSTEMS SELECTS PING IDENTITY TO ENHANCE USER EXPERIENCES

Ping Identity, an Identity Defined Security company, announced that **Bentley Systems**, a software development company, has selected the Ping Intelligent Identity platform to advance the priority it has placed on driving exceptional user experiences. Bentley Systems selected Ping Identity to help strengthen Bentley's ability to bring applications to market faster and build a flexible data model to support various current and future compliance requirements. Ping stood out as the market leader of choice because of its strict adherence to standards, which is critical in supporting Bentley Systems' aim towards providing an increasingly open and extensible technology offering. www.bentley.com

OPENING OF THE WORLD'S FIRST HIGH-VOLUME SATELLITE PRODUCTION FACILITY IN FLORIDA

OneWeb Satellites, a joint venture of **OneWeb and Airbus**, officially opened the world's first high-volume, high-speed advanced satellite production facility to bring transformative internet connectivity to everyone, everywhere. The OneWeb Satellites facility is the first to employ industrial-scale mass production techniques for satellites, enabling dramatically reduced costs and production times that can deliver one satellite per production shift or two a day, while significantly expanding internet connectivity and making space technology far more accessible. The facility's production capabilities will first support the rapid scaling of the OneWeb network, starting with a constellation of 650 satellites and scaling to 1,980 satellites delivering global connectivity.

www.airbus.com



RIEGL Airborne Laser Scanners & Systems



RIEGL Waveform LIDAR Technology to Use with Aircrafts, Helicopters or Large UAVs

Choose the scanner exactly right for your application and benefit from proven *RIEGL* LIDAR technology: Multiple-time-around processing, multi-target capability, highly accurate and informative scan data, a sophisticated design, a wide field of view, customized configurations, and user-friendly integration.



VQ-1560i

- **Dual Channel** Airborne Mapping System for ultra-wide area / high altitude mapping of complex environments
- operation at varying flight altitudes typically up to 12,000 ft AGL
- high point density, most efficient flight planning



VQ-780i

- your choice for mid-sized wide area / high altitude mapping applications
- operation at varying flight altitudes typically up to 12,000 ft AGL



VQ-480 II / VQ-580 II

- for corridor mapping applications, city modeling, agriculture & forestry, or glacier & snowfield surveying
- operation at varying flight altitudes typically up to 4,400 ft AGL

Also explore *RIEGL's* proven UAV LIDAR sensors for unmanned aircraft!

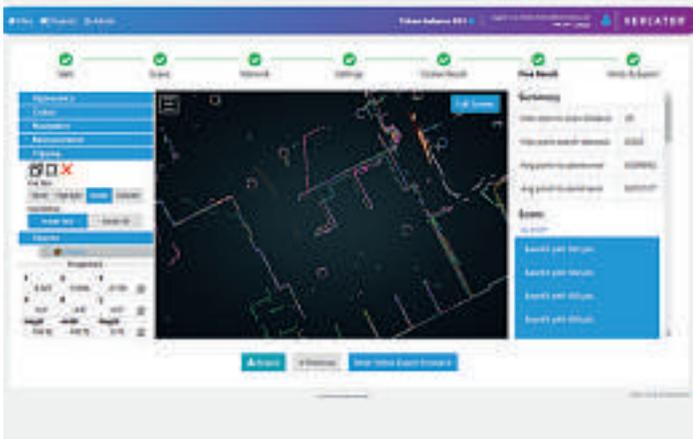
INTERGEO VISIT US AT
 September 17-19, 2019 | Stuttgart
 RIEGL booth I1.024, hall 1

Scan this QR code to watch the RIEGL videos on our YouTube channel. www.riegl.com [f](https://www.facebook.com/riegl) [t](https://twitter.com/riegl) [in](https://www.linkedin.com/company/riegl) [yt](https://www.youtube.com/channel/UC...)

RIEGL LMS GmbH, Austria | RIEGL USA Inc. | RIEGL Japan Ltd. | RIEGL China Ltd. | RIEGL Australia Pty Ltd.

VERCATOR CLOUD DELIVERS GAME-CHANGING 3D POINT CLOUD REGISTRATION

Correvate announced the release of a new cloud-based registration service allows users to harness the power of the cloud to rapidly align laser scan data sets more accurately and cost-effectively. The company announced to add additional processing services in the future. The new **Vercator cloud service** automatically aligns point cloud data created by static terrestrial laser scanners, saving time in the field by enabling targetless scanning and in the office by registering data sets in the cloud. This powerful new service is aimed at land surveyors, engineers and those involved in reality capture, and brings automation at a time where cost efficiency is high on the stakeholder agenda. www.vercator.com



EUROPEAN SPACE IMAGING AND MAXAR TECHNOLOGIES CONTRACT

European Space Imaging signed a contract with Maxar Technologies, a trusted partner and global innovator in Earth intelligence and space infrastructure, to offer SecureWatch and EarthWatch to customers based in Europe, North Africa and the Commonwealth of Independent States (CIS countries). The innovative products are subscription-based services that provide customers online and offline access to global content layers through one interface. The products provide instant access to Maxar's WorldView satellite imagery and geospatial data while empowering customers with the flexibility to only pay for content that they consume via a per gigabyte price model. www.euspaceimaging.com

GEODYN RELEASES HIGH-SPEED AERIAL FILM SCANNER

GeoDyn announced the release and demonstration of **PromptSCAN_2**, a very high-speed aerial film scanner at the ISPRS Geospatial 2019 in Enschede. PromptSCAN_2 accurately scans aerial film with 10, 15 or 20 µm resolutions at 2 seconds per frame for panchromatic and 3 second per frame for colour. With its highly automated loading and exposure determination, a complete film of 250 frames can be scanned within 15 minutes. This is 50x faster than any other aerial film scanner and enables the very efficient conversion of the many valuable aerial film archives. www.geodyn.com

SEPTENTRIO STRENGTHENS ITS GNSS/INS PORTFOLIO WITH A SINGLE ANTENNA RECEIVER

Septentrio, a provider of high-precision positioning technology, announced that their GPS/INS receiver is now available with a single antenna option. This single antenna receiver brings the possibility of robust centimetre positioning and 3D attitude (heading, roll, pitch), while keeping weight and power consumption to a minimum. For Septentrio customers this means simplified integration as well as increased operation time and productivity. www.septentrio.com

FUGRO PERFORMS FIRST NORTH SEA REMOTE HEADING CONTROL OPERATION

Fugro has successfully provided remote positioning services onboard a floating production storage and offloading (FPSO) vessel for Bluewater during a scheduled subsea inspection, repair and maintenance campaign in the North Sea. A recent week-long operation included accurate remote configuration of the positioning systems onboard the FPSO, the assisting anchor handling vessel and the dive support vessel, with no Fugro survey crew offshore. Fugro managed the remote operation from its centre in Aberdeen via a robust low bandwidth connection, enabling command and control of the integrated survey system onboard the vessel and communication with the FPSO marine crew. www.fugro.com

MORE THAN 100 UAS EXHIBITORS ONBOARD FOR COMMERCIAL UAV EXPO AMERICAS 2019

More than 100 of the world's top UAS vendors have signed on to showcase their solutions at the **2019 Commercial UAV Expo Americas**, far more than any other commercial drone event in North America. These exhibitors will be displaying cutting-edge airframes, components, software and services as well as end-to-end solutions focused on commercial applications. They are the best in terms of innovation, and their products and services will offer the event's 2,500 attendees access to the newest technology on the market. The fifth annual Commercial UAV Expo Americas will take place October 28-30, 2019 at the Westgate Resort & Casino in Las Vegas. www.expouav.com



SEPTENTRIO ANNOUNCED AVAILABILITY OF FIRST DEV-KITS FOR NEW GNSS MODULE

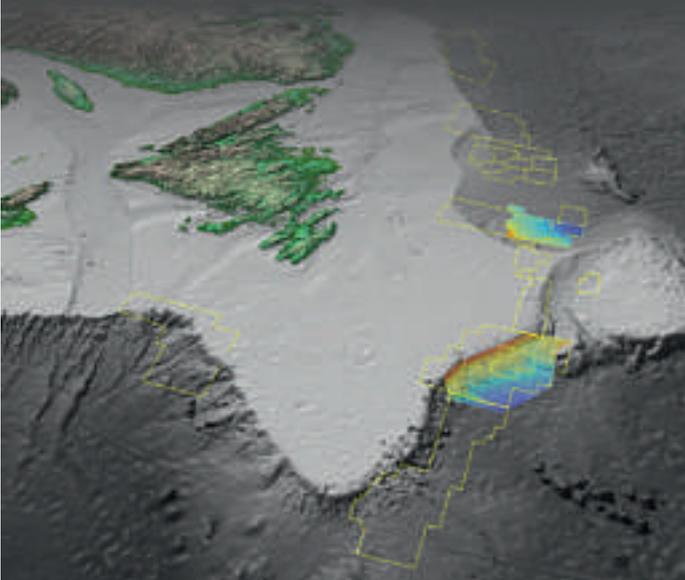
Septentrio announces that the mosaic development kit is available for testing and integration. mosaic is Septentrio's most compact next-generation, high-precision multi-frequency GPS/GNSS module. This receiver brings precision and reliability of high-end multi-frequency GNSS to mass market applications. It is designed to fit into the assembly line process. Its light weight and low power consumption helps extend battery life of robotic devices increasing operation time and efficiency. This makes mosaic ideal for applications such as robotics, automation, telematics and wearables. www.septentrio.com

CESIUM LAUNCHES WITH \$5 MILLION INVESTMENT TO MAKE REAL WORLD 3D DATA MORE USABLE

Cesium and Analytical Graphics (AGI) have announced the launch of Cesium, a newly independent company and the first spinout company from AGI. The new venture kicks off with a \$5 million Series A investment from Falcon Global Capital to fuel the growth of Cesium's platform enabling software developers and data providers to build dynamic, interactive 3D geospatial applications. Cesium began as an internal project at AGI in 2011 when a team of computer graphics developers set out to fill the vital need of temporal geospatial visualizations on the web. They built what became CesiumJS, an open-source 3D visualization engine that quickly garnered over half a million downloads. www.cesium.com

FUGRO SUCCEEDS WITH NEW SEEP SURVEY LICENSE SALES OFFSHORE NEWFOUNDLAND

Fugro and partner Amplified Geochemical Imaging (AGI), are reporting recent success selling multiple licences for data from frontier regions offshore east coast Canada. The data were acquired during two separate hydrocarbon seep surveys in the Orphan Basin (2017) and Carson Basin (2018), both situated on the continental margin of Newfoundland. The comprehensive data packages are being licensed by Fugro and include multibeam echo sounder data (bathymetry, backscatter intensity and water column), sub-bottom profiler data, heat flow measurements and shipboard geochemical screening analyses; advanced geochemical analyses, including biomarkers on select samples, are also included. www.fugro.com



RIEGL Laser Scanners for Medium-Sized Unmanned Aircraft

INTERGEO VISIT US AT
September 17-19, 2019 | Stuttgart
RIEGL booth I1.024, hall 1

RIEGL LiDAR Waveform Processing Technology for UAV/UAS/RPAS

RIEGL offers a broad line of LiDAR scanners for integration into unmanned aircraft. Choose the scanner exactly right for your application and benefit from the proven RIEGL LiDAR technology: a sophisticated design, Multiple-Time-Around signal processing, multi-target capability, highly accurate and informative scan data, a wide field of view, customized configurations, and user-friendly integration options.



RIEGL VUX-240 for high point density corridor mapping

- max. operating flight altitude 4,600 ft AGL
- range up to 1900 m
- accuracy 20 mm, precision 15 mm
- for using on UAS/UAV/RPAS and helicopters or small manned aeroplanes
- 3.8 kg / 8.4 lbs



RIEGL VQ-840-G topo-bathymetric scanner for coastline surveying

- operating altitude 245 ft to 490 ft
- up to 1.5 Secchi depth water penetration
- measurement rate up to 200 kHz
- optional high-resolution digital camera or infrared laser rangefinder
- 12 kg / 26.5 lbs

Also explore RIEGL's proven UAV LiDAR sensors for small unmanned aircraft:

- ▶ **RIEGL miniVUX-1UAV** for integration in various small UAVs
- ▶ **RIEGL miniVUX-1DL „Downward-Looking“** tailored design for corridor mapping
- ▶ **RIEGL VUX-1UAV** versatile & powerful sensor for general UAV-based surveying



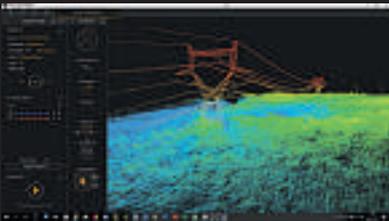
newsroom.rieglInternational



DOWNER INVESTS IN CARLSON HIGH PRECISION MACHINE GUIDANCE TO UPGRADE TECHNOLOGY FLEET

Downer, an integrated services company listed on the Australian and New Zealand stock exchanges, recently invested in Carlson high precision machine guidance solutions to be deployed across four mine sites in Australia. In total, 27 machine systems will be installed across a fleet of dozers, excavators, drills, and supervisor vehicles to increase productivity and optimize mine site operations. Downer invests in technology and innovation to maximize safety, productivity, and operational efficiency across all stages of the mining lifecycle. Supported throughout Australia, New Zealand, and Southeast Asia by Carlson's Oceania distributor Position Partners, Downer has implemented a tried and tested high precision machine guidance solution that is reliable, effective, and user-friendly.

www.carlsonsw.com



CLOUDSTATION, THE NEW SOFTWARE BY YELLOWSCAN

YellowScan announced the release of its new software. **CloudStation** provides a complete solution to create and manipulate point-cloud data. It allows to extract, process and display data immediately after flight acquisition. The auto-generation of flight lines and the production of LAS files are now done in a few clicks.

www.yellowscan-lidar.com

TRANSPORT CANADA APPROVES SENSEFLY EBEE PLUS, SQ FOR OPERATIONS OVER PEOPLE

senseFly, the global provider of fixed-wing drones, announced that the **eBee Plus** and **eBee SQ** are approved for operations over people by Transport Canada, as defined by the regulatory body's standard 922.06 Remotely Piloted Aircraft Systems (RPAS) safety assurance designation. The designation is part of Transport Canada's self-declaration process, which provides a path for drone manufacturers to self-declare the operational safety of their drones, provided their aircraft meet a series of strict requirements. The eBee Plus—the most popular fixed-wing drone in US and France—and the eBee SQ satisfy the requirements outlined by Transport Canada, making it legal for drone operators to fly and operate the drones safely over people. www.sensefly.com

GIS FOR CRIME ANALYSTS

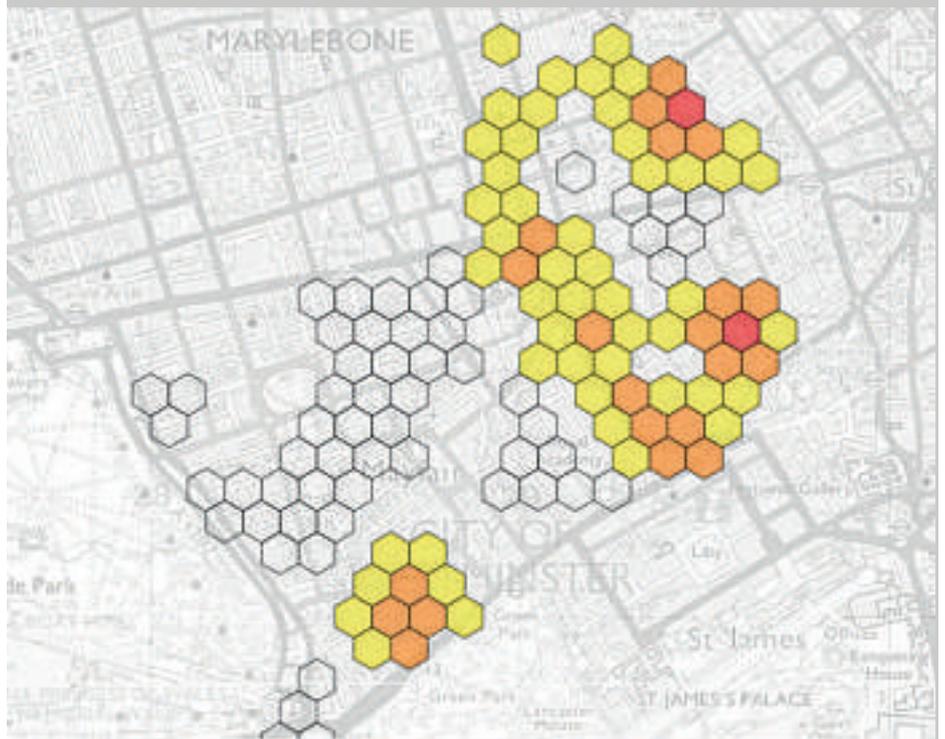
British GIS company, **Cadcorp**, has made significant updates in its latest software release, **Cadcorp SIS 9**. In particular, new functionality has been added to Cadcorp SIS Desktop to support the requirements of **Crime Analysts**. This functionality is included within SIS Desktop and without the requirement for Police Forces to license additional modules or add-ons. Police Forces have the option to purchase single concurrent licences or make use of an enterprise desktop licencing option. To support law enforcement activities, crime analysts utilise a number of methods for identifying and analysing patterns and trends in crime data. SIS Desktop offers, as standard, the processes necessary for these tasks and includes: hotspot analysis, thematic mapping, routing analysis, cell site analysis and temporal analysis. www.cadcorp.com



SIMACTIVE USED TO VALIDATE ACCURACY OF DJI PHANTOM 4 RTK

SimActive, a developer of photogrammetry software, announces that Correlator3D is being used in Japan for mapping projects acquired by the DJI Phantom 4 RTK. A full-scale validation was done in the mountains near Hiroshima with a unit flown by SimActive Japanese partner Mirukuru and customer

Ace-1. www.simactive.com



SIMACTIVE LAUNCHES NEW DRONE PROCESSING SERVICE

SimActive, a developer of photogrammetry software, announces a new drone data processing service based on Correlator3D. Clients can now upload full projects and have SimActive experts generate optimal results from their imagery, including DSMs, DTMs, 3D models and orthomosaics. As opposed to common cloud-based solutions where outputs are generated automatically and delivered as-is, the new offering includes quality control by photogrammetry specialists. Manual tagging of ground control points is also performed as part of the service. www.simactive.com



LEICA GEOSYSTEMS ANNOUNCED FURTHER COOPERATION WITH AUTODESK

With the increasing complexity of construction projects and massive amounts of information generated, interoperability with various information systems and industry standards is a requirement for project success. The two organisations are once again joining forces to bring new efficiencies in building construction. Professionals can now implement streamlined workflows based on reliable, high-accuracy data and workable 3D models. Streamlining construction workflow helps to optimise efficiency and increase transparency both on the jobsite and in the office. By connecting **Autodesk BIM 360** with **Captivate** and **iCON field software**, customers will be able to create seamless workflows between office and field. www.leica-geosystems.com



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- 3D MAPPING IN REAL TIME
- AUTOMATIC LOCALIZATION
- REAL TIME CHANGE DETECTION
- CLOUDS CONSTRAINTS
- POWERFUL ALGORITHM
- MEASURABLE MAP SHARING

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