ACCURATE SATELLITE NAVIGATION PROVIDED AS EU PROJECT GALILEO GOES LIVE

Project Galileo, a joint initiative of the EU and **European Space Agency (ESA)**, has gone live, with global connectivity supplier **HUBER+SUHNER** on-board. The Switzerland-based company is supplying radio frequency components to the project, and following an extensive testing period and 17 years of development, the Galileo system went live with the aim to supply the world's most accurate satellite navigation technology. Galileo provides better positioning navigation, unique accuracy, and faster detection of emergency beacon signals, helping rescue teams when every minute matters. Users around the world can now access a highly accurate, guaranteed global positioning service under civilian control. HUBER+SUHNER currently supplies more than 4,500 radio frequency components to **Thales Alenia Space** in Italy for a number of the Galileo satellites, which use HUBER+SUHNER adapters to connect the antennas to the active satellite components.
www.hubersuhner.com

ADVANCED DISTRIBUTION MANAGEMENT SYSTEM FOR ELECTRIC UTILITY COMPANIES

Hexagon Safety & Infrastructure now offers a fully integrated **Advanced Distribution Management System** (ADMS) solution to better enable utilities to manage their complex electrical distribution infrastructure and take advantage of real-time operational data. The **ADMS** solution will aid utilities in improving their network reliability and resilience by streamlining operations and expediting critical actions and decisions. Leveraging Hexagon's strategic alliance with **ETAP**, the single-vendor ADMS solution features Hexagon's **Intergraph InService** with embedded Distribution Management System (DMS) engine from ETAP. "The ADMS solution is scalable to provide smart grid capabilities to any sized utility, from the largest investor-owned company to small municipal utilities," said **Anna Throneberry, vice president, Hexagon Safety & Infrastructure.** The integration between Hexagon's and ETAP's products is built upon **Common Information Model** and other industry standards, which have been proven in production environments, linking together Outage Management Systems, Supervisory Control And Data Acquisition (SCADA) systems and DMS.
www.hexagonsafetyinfrastructure.com

EUROWINGS TO OFFER INMARSAT'S GX AVIATION IN-FLIGHT BROADBAND SERVICE

Inmarsat announced that **Eurowings** is the latest airline from the **Lufthansa Group** to select its advanced new **GX for Aviation** in-flight broadband solution. GX for Aviation will initially be equipped on 69 Airbus A320 family aircraft from the Eurowings fleet, with the option to add additional aircraft. All aircraft covered in this agreement are expected to be fitted out by the middle of 2017. Eurowings will be the first low-cost carrier to offer GX for Aviation, the world's only in-flight connectivity solution with reliable, seamless high-speed global coverage provided through a single operator. The service allows passengers to browse the internet, stream videos, check social media and more, with connectivity on par with broadband on the ground. In addition, Inmarsat's GX for Aviation service will be integrated with the existing in-flight entertainment system based on Lufthansa Systems' BoardConnect platform.
 www.inmarsat.com

OFFSHORE EXPERIENCE: THE FIRST OFFSHORE EXHIBITION AT THE MARITIME MUSEUM ROTTERDAM

The Maritime Museum Rotterdam presented its first **Offshore Experience** exhibition where visitors can go on a challenging search venture to experience what it is like at sea and 3km below the surface. More than fifty companies in the offshore and shipping sector and foundations took part in this project and contributed knowledge and items. **VSTEP**, in collaboration with **RH Marine Netherlands BV**, donated a **DP Simulator,** and the ocean of VSTEP's upcoming **NAUTIS version 3** simulator platform was used for the projection of the sea all around the exhibition space. On the oil platform replica, visitors can go on a challenging search for energy from oil, gas and wind. There are simulations that visitors can experience for themselves how drillers, crane drivers, wind turbine specialists and helicopter pilots manage their spectacular jobs on the open sea, in a constant battle with the elements. **www.vstepsimulation.com**

THE FINNISH TRANSPORT AGENCY CHOOSES TELEDYNE CARIS

The **Finnish Transport Agency Liikennevirasto** (FTA), who is responsible for Hydrography in Finland, has selected **Teledyne CARIS™** to provide a new bathymetric data management system. This will be a fundamental part of **FTA's** infrastructure to manage existing bathymetry, as well as managing and validating incoming bathymetric surveys provided by external contractors. The **MERTA** project, which has a seven figure contract value, will include the deployment of software, migration of existing bathymetric datasets, and will provide new optimized workflows at FTA. The **CARIS** software will be integrated with existing systems ranging from internal systems for chart production, and external data sources housed in 3rd party GIS databases. Additionally, the solution will provide FTA with easy and secure synchronization between on-line and off-line environments of the MERTA system. The foundation of this migration is the **CARIS Bathy DataBASE™(BDB)** solution.
 www.teledynecaris.com

GRITTER TRACKER COMING TO THE RESCUE FOR SNOWED-IN SCOTS

Transport Scotland has set up a **'Gritter Tracker'** app – using tech from GIS mapping specialist **Esri UK** – to help keep the roads open north of the border. The live app monitors all of the major trunk roads to show the Scottish public in near real-time where gritter vehicles have been active, and when, via a visual 'snail trail' on the map. Through the Trunk Road Gritter Tracker app,

Transport Scotland aims to enhance road user confidence by showing the live location of gritters out on the road network. Esri UK's cloud-based **ArcGIS Online** underpins the app by providing information on both the location of the vehicles and a trail of where they have been in the last 24 hours in an easy-to-understand way that automatically scales to the demands of the public. **www.esriuk.com**

EUROPE'S NEXT WEATHER SATELLITE ON ITS FIRST JOURNEY

Airbus Defence and Space has sent the **MetOp-C payload module,** the 'brain' for Europe's next polar-orbiting weather satellite, on its first journey. The module, which weighs around 2.1 tonnes, contains ten measuring instruments together with their control systems. These comprise systems for issuing commands and monitoring instruments, formatting data, encrypting and storing it as well as transmitting it to Earth. The payload module (PLM) will be tested in space conditions at the **European Space Agency Space Research and Technology Centre** (ESTEC) in Noordwijk in the Netherlands. The module will then go on a second trip, to the Toulouse Airbus Defence and Space

site, where it will join up with the service module (SVM). The service module houses the main computer, power supply, attitude and thermal control systems as well as systems for controlling communications with the ground station. MetOp-C is currently planned to be launched in October 2018.
www.AirbusDefenceandSpace.com

TOPCON ANNOUNCES DISTRIBUTION WITH INTEL FOR BOTH FIXED AND ROTARY-WING UAS SOLUTIONS

Topcon Positioning Group confirms continuation of its agreement with **MAVinci,** an Intel company, to supply customers with the **Sirius Pro** fixed-wing unmanned aerial system, following the purchase of MAVinci by Intel. **Charles Rihner, vice president of the Topcon GeoPositioning Solutions Group,** said, "Topcon will continue to provide excellent sales and support for our fixed-wing UAS offering. This partnership is a great extension of our work with Intel on the rotary-wing **Intel Falcon 8+ System** and we look forward to more success with the fixed-wing Sirius Pro relationship as well. Our focus remains on

strongly supporting current customers and further growing the global UAS markets," he said. **www.topconpositioning.com**

ESRI UNVEILS CITYENGINE MOBILE VIRTUAL REALITY SOLUTION

The newest version of **Esri's** recently unveiled **CityEngine** allows urban planners, architects, and GIS professionals to simply and quickly create VR experiences on mobile devices. These experiences can be viewed in the free **ArcGIS 360 VR** app from **Esri Labs**. Users can immerse themselves into 3D scenes by teleporting to static viewpoints and comparing different urban planning scenarios. Now, rather than relying on high-performance graphics computers and cumbersome wired VR accessories, having a simple smartphone paired with an affordable wireless headset is all that is required to be immersed in a VR experience.

"We greatly simplified the creation and sharing of the mobile VR experience," said **Dominik Tarolli, head of 3D geodesign at Esri.** "In a matter of minutes, a CityEngine user can now create a VR experience out of a 3D scene and share it in ArcGIS Online, Esri's cloud solution."
www.esri.com

ORCA PILOT CHART MAPPER

ORCA Pilot Chart Mapper is a new complementary tool for **SevenCs PPU** software, **ORCA Pilot G2**. This unique product is developed to make Pilots more independent, flexible and up to date, when it comes to high precision charts in local areas. Chart Mapper is a perfect tool to create an optional chart layer with high density depth information for display in a PPU within seconds! In general it is common practice to export and exchange depth information data in xyz format. ORCA Pilot Chart Mapper reads xyz point cloud data and processes it to create S-57 high density bathymetry layers – e.g. bathymetric ENCs. SevenCs GmbH is located in Hamburg, and for decades has been "the Expert" in developing maritime software applications. Global business experience for nearly 25 years have led to a reliable product family such as the S-57 and S-100 chart display Kernel, professional navigation software (ORCA Series) and ENC production tools.
www.sevencs.com

HERE AND MOBILEYE TO PARTNER ON REM(TM) AND OPEN LOCATION PLATFORM TECHNOLOGY
HERE and Mobileye announced a strategic partnership that links their respective autonomous driving technologies into an enhanced industry-leading offering for automakers. "We are building a state-of-the-art global HD map that is becoming the standard for autonomous driving and other IoT applications that need precise location-based information and services," said **Edzard Overbeek, CEO of HERE.** "We are rapidly expanding this capability and I am very pleased that we can accelerate that work with Mobileye." High-definition mapping is a key enabler for autonomous driving. Mobileye's REM(TM) technology combined with HERE HD Live Map is critical to ensure dynamic, near real-time updates. "We are pleased to work with HERE to create a "world HD-map" standard, leveraging the combined fleet size of certain vehicle brands initially, with the objective of eventually launching an industry wide initiative." said **Professor Amnon Shashua, Chairman and CTO of Mobileye.**
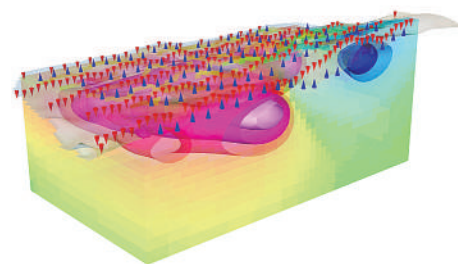www.here.com. www.mobileye.com

TATUKGIS FOR MOBILE GIS DEVELOPMENT

TatukGIS has released version 11 of its **GIS Developer Kernel** for **Delphi** edition. New support for the **Embarcadero FireMonkey** (FMX) framework enables Delphi and C++Builder development for desktop and mobile computing devices (iPad, iPhone, & Android tablets). The extensive **TatukGIS API** and features can now be used to develop professional GIS applications for the **Microsoft Windows, Apple macOS** and **iOS**, and **Android** operating systems. Version 11 additionally introduces: Redesigned and extended support for pixel operations and grid analysis, Vector-to-grid interpolation algorithms for Kriging, IDW, Splines, and heatmaps, Powerful built-in line style editor and extended line styling, 700+ item SVG symbol library, Redesigned and improved visual layer property controls, Enhanced rendering performance and quality, including 4K monitor support, Enhanced 3D support, new support for PLY and STL formats, Dedicated DK documentation web site. The TatukGIS Developer Kernel 11 for Delphi is presently available as a free upgrade for customers with active maintenance plan. **www.TatukGIS.com**

GEOSOFT INTRODUCES IP AND RESISTIVITY INVERSION IN VOXI EARTH MODELLING

As part of **Geosoft's 9.1** software update, induced polarization (IP) and resistivity data inversion is added to its **VOXI Earth Modelling 3D inversion software service.** Geoscientists are now able to create detailed 3D models of conductivity and chargeability from IP and resistivity survey data with VOXI. The resulting models can assist in interpreting and targeting regions for mineral and environmental applications. VOXI's full featured and modern approach to 3D modelling of IP and Resistivity data includes superior defaults and parameter options that support all electrode configurations and a full suite of measurements. A 3D algorithm is utilized for forward and inverse calculations of time domain and spectral IP and resistivity data. Multidisciplinary geoscientific data and models can be incorporated into the inversion using VOXI 3D constraint building tools. The models can be integrated seamlessly with geophysical or geological interpretations within Geosoft's geoscience platform, **Oasis montaj. www.geosoft.com**

SEFTON COUNCIL AND ARVATO INTRODUCE NEW DIGITAL MAPPING TOOL FOR CITIZENS

Sefton Council, with the support of **Arvato**, has launched a new interactive mapping tool to help residents independently access a range of council information online. The intuitive technology, by software developer **Cadcorp,** overlays a range of data including property and electoral figures from across the region on to a map hosted on the authority's website. This enables local residents to find information at the click of a button, enabling self-service to check the progress of planning and building applications and finding listed buildings, heritage sites and polling boundaries. A version of the software will also be launched for Sefton Council employees to provide them with a comprehensive archive of data in one place. This will reduce the time spent manually searching and collating information from different departments and enabling staff to gain a clearer view of residents through overlaying the data to identify trends. **www.arvato.co.uk www.cadcorp.com**

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COPERNICUS SENTINEL-3 MARINE DATA FLOW TO USERS IN AFRICA

The new information on Sea Surface Height, Ocean Colour and Sea Surface Temperature, disseminated via **EUMETCast, EUMETSAT's** flexible data dissemination system, will ensure improved management of fishing zones and security for fishermen at sea as well as the forecast of harmful algae bloom and coastal protection. This new service responds to the request of key marine regional centres in Africa and was coordinated by the **African Union** with the **European Commission**. It ensures the availability of

vital satellite information in support of marine resources and coastal management on the whole African continent. Disseminating the data via **EUMETCast** secures the simultaneous availability of data all across the continent and ensures easy access even in remote locations with limited internet access. The introduction of the new service was complemented with training activities for African users on how to use EUMETSAT's Copernicus Marine data stream for operational marine surface analysis. **www.eumetsat.int**

GRASS ANNOUNCES THE STABLE RELEASE OF GRASS GIS 7.2.0

After almost two years of development the new stable major release **GRASS GIS 7.2.0** is available, providing **more than 1950 stability fixes and manual improvements.** The new version includes a series of new modules to analyse raster and vector data along with new temporal algebra functionality. More than **50 new addons** are also available. Its graphical user interface supports the user to make complex GIS operations as simple as possible. The updated **Python interface to the C library** permits users to create new GRASS GIS-Python modules in a simple way while yet obtaining powerful and fast modules. Furthermore, the libraries were again **significantly improved for speed and efficiency,** along with support for huge files. Finally, GRASS GIS 7 comes with a series of **new modules** to analyse raster and vector data, along with a full **temporal framework. www.grass.osgeo.org**

FUGRO'S G4 SATELLITE CORRECTION SERVICE OPTIMISES LATEST GALILEO LAUNCH

As a result of a significant **Fugro** technology achievement, users of its **G4 satellite** correction service will be among the first in the world to benefit from **Galileo's** much anticipated 'initial services' launch. Fugro has further extended its leading technology position by taking full advantage of Galileo's operational milestone. The launch of Europe's satellite navigation system's new 'initial services' capability means that all Fugro's G4 satellite correction service users will instantly benefit from much greater accuracy and reliability. Fugro's G4 service, launched in February 2015, was the first to utilise all available global navigation satellite systems (GNSS) – GPS,

GLONASS and BeiDou. From its launch date the service was prepared for Galileo, and Fugro's G4 users now have access to almost 80 satellites from the four GNSS systems – a significant advantage when line-of-sight to certain satellites is obstructed by offshore structures. **www.fugro.com**

DMT CONTRACTED FOR 3D SEISMIC SURVEY IN LANDAU

The technology service provider **DMT** has been awarded a contract for a high-resolution 3D vibro-seismic survey to determine the geological structure of the subsoil in the **Upper Rhine Plain.** The seismic project will deploy approximately 7,000 wireless geophones and cover a total of around 58 km² in the Landau region. DMT will use vibro trucks of different sizes, depending on the nature of the terrain and how built-up particular areas are. The project is for **Wintershall**, the largest German producer of crude oil and natural gas. "What's special about this survey is that due to the range of vehicles used, we are able to adapt extremely well to the environment," explains **DMT Project Manager, Dr Rüdiger Misiek.** "Furthermore, we use wireless geophones as measuring sensors. By eliminating the need for cables, we have no trouble crossing railway tracks and roads," **www.dmt-group.com**

GARMIN® INTRODUCES G1000® NXI, THE NEXT GENERATION INTEGRATED FLIGHT DECK

Garmin International Inc. has announced its successor to the ever-popular G1000 integrated flight deck, the **G1000 NXi**. Boasting a modernized flight display design with significant performance enhancements, the G1000 NXi incorporates innovative capabilities into a state-of-the-art avionics platform. Features such as wireless cockpit connectivity, including wireless aviation database updates using Garmin Flight Stream, enhanced situational awareness with **SurfaceWatch™,** visual approaches, map overlay on the HSI and more, are all available with the G1000 NXi. Deliveries are expected to begin in February as

the **Federal Aviation Administration** (FAA) has granted Supplemental Type Certificate (STC) approval for the G1000 NXi integrated flight deck in the King Air 200.
"As innovators in the avionics industry, we're excited to introduce the G1000 NXi – the next generation G1000 integrated flight deck," said **Carl Wolf, Vice President of Aviation Marketing and Sales. www.garmin.com**

EARTHSENSE SYSTEMS GAINS FROM UK SPACE AGENCY SUPPORT

EarthSense Systems is one of the first companies to benefit from **UK Space Agency** incubation funding. Located in Leicester's new hub for high tech, low carbon and innovative business, Dock, EarthSense has access to first class office, lab and workshop facilities, as well as business support services. **Leicester's Dock** was one of only five regional incubators to receive funding from the UK Space Agency, designed to enable the provision of a supportive business environment to organisations like EarthSense. The Space

Agency funding is designed to grow space in the regions and to assist entrepreneurs to develop small companies – an important path in realising the space sector's ambitions to achieve a 10 percent share of the global space market by 2030. "Being located in such a prestigious and well supported business environment will be important for the success and growth of EarthSense," commented **James Eddy, Managing Director of EarthSense Systems.** www.earthsense.co.uk

ECOMETRICA SECURES BREAKTHROUGH £14.2M UK SPACE AGENCY CONTRACT

Sustainability software and data company **Ecometrica** has won a contract worth more than £14 million from the **UK Space Agency's** recently launched **International Partnership Programme (IPP).** The 'Forests 2020' project is set to help countries to improve the management and protection across 300 million hectares of tropical forests - 12 times the size of the United Kingdom - and sees Ecometrica lead an international consortium that brings together many of the world's leading experts on forest monitoring. Launched earlier in 2016, the IPP brings together British space knowledge, expertise and capability to "provide a sustainable, economic or societal benefit to undeveloped nations and developing economies". Ecometrica will bring together various partners in Brazil, Colombia, Ghana, Indonesia, Kenya and Mexico, where Earth Observation laboratories will be set up to assess threats to rainforests and help direct conservation resources. The project is due to complete in March 2020. **www.ecometrica.com**

LINKADIA CHOOSES DIGITAL ELEMENT TO IMPROVE MOBILE ADVERTISING EFFICIENCY

Digital Element announced that specialist mobile advertising agency and affiliate network, **Linkadia,** has chosen its **NetAcuity IP** geolocation solution. The technology will allow Linkadia to boost its performance for mobile advertising targeting and maximise results for its clients. By incorporating Digital Element's IP geolocation, mobile carrier and ISP data, the company will be able to increase the accuracy of its geo-targeting capabilities for their clients across more countries than ever before – enhancing, advertising performance and ROI. In addition, the use of Digital Element's proxy database, which includes proxy type and proxy description information, will empower Linkadia to identify suspicious connections that are attempting to falsify their location. This will allow the company to ensure performance data shared with its clients shows conversions from legitimate traffic. By partnering with Digital Element, Linkadia joins a portfolio of high-profile ad networks. **www.digitalelement.com**

CLEARVISION™ TO COMPLY WITH THE NEW 'ZERO VISIBILITY LANDING' FAA REGULATIONS

The **Elbit Systems ClearVision Enhanced Flight Vision System** (EFVS) is aligned with the most updated ruling released by the U.S. **Federal Aviation Administration** (FAA), enabling the pilot to perform a full landing procedure with no natural vision. The EFVS was designed with a forward thinking approach, consistent with the recently updated FAA ruling. The system offers unmatched capabilities, providing dispatch and landing approach priority as well as Low Visibility Landing regardless of the destination airport's infrastructure. The new ruling allows operators to use an EFVS, and not necessarily natural vision, to continue descending from 100 feet above the Touchdown Zone Elevation to the runway and to land on certain straight-in IAPs under instrument flight rules. The ruling also updated the regulations to initiate and continue an approach when the destination airport's weather is below authorized visibility minimums for the runway of intended landing. **www.elbitsystems.com**

QUESTUAV ADDRESSING SAFETY STANDARDS IN URBAN ENVIRONMENTS

Drone mapping is growing at a rapid rate in almost every country in the world. Unfortunately, incidents with drones are also growing at the same time. Just like any other aircraft, drones not only need to be flown in a safe manner but flight operations need to fully integrated within a countries civil and/ or military regulatory aviation environment. **QuestUAV** have employed measures and counter measures to enhance safety when operating in urban environments. Different kinds of UAVs have specific applications. While rotary drones are designed to inspect small areas in highest detail, fixed-wing drones can be operated over long distances and cover

large areas in a short amount of time. Urban areas have various faces and UAVs can be used for a wide range of applications. QuestUAV has long been a thought leader for safe drone operations and we support the highest standards of safety for fixed wing UAVs. **www.questuav.com**

HANDLING MASSIVE GEODATA MADE EASY

A municipal GIS can manage and provide large volumes of different types of geospatial data. However, when it comes to massive datasets such as 3D city models, oblique images, panoramic services and point clouds, the limits of such GIS systems are often reached. This is where the **virtualcitySUITE** from the Berlin-based software company **virtualcitySYSTEMS GmbH** (VCS) comes in. The virtualcitySUITE is a modular solution which allows 3D city models, oblique aerial images, point clouds and traditional 2D geodata to be processed and simply presented online. The company does not aim to replace

existing applications and services, but to add additional functionality to them. So the focus is very much on functions to manage and visualise 3D geodata and to visualise oblique aerial images and point clouds. virtualcitySYSTEMS offers all the modules of the virtualcitySUITE as software for operation within existing infrastructure or as hosted solutions. **www.virtualcitysystems.de**
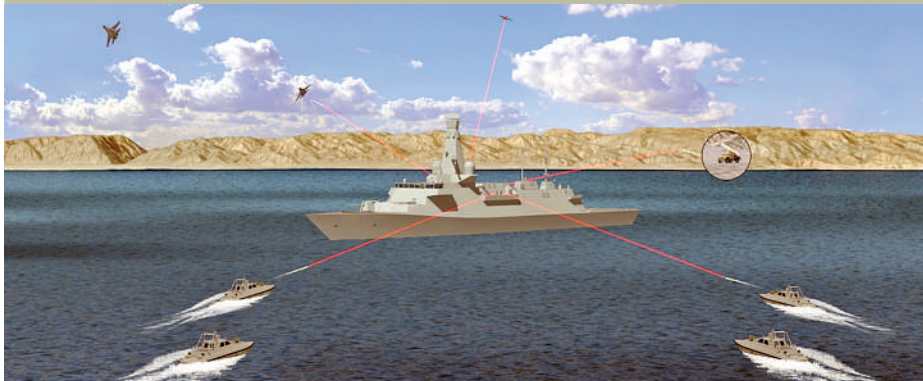
ROSS-SHIRE ENGINEERING SELECTS CTRACK TO IMPROVE FLEET PERFORMANCE AND SAFETY

Ross-Shire Engineering has upgraded its vehicle tracking system to **Ctrack Online** to gain greater visibility and control over its fleet. The specialist engineering company selected the web-based telematics solution from Ctrack to monitor 80 vans, cars and 4x4s, targeting improved workload scheduling, reduced customer response times and enhanced driver safety. Ctrack Online will replace an existing tracking system to provide Ross-Shire Engineering with added levels of telematic functionality and reliability. The web-based nature of the solution will enable it to be accessed from four sites, so the company can respond quickly to customer requirements and effectively verify working hours. In

particular, Ross-Shire Engineering will track its network of mobile workshops, operated by two-person teams, so appropriate resources can be allocated based on the shortest and most efficient journey times. Ctrack Online will also be used to monitor speeding and driver behaviour to encourage responsible and efficient driving. **www.ctrack.com**

UK INNOVATION: LASER WEAPON CONTRACT AWARDED

The **Ministry of Defence** has awarded the £30 million contract to produce a Laser Directed Energy Weapon (LDEW) Capability Demonstrator to the **UK Dragonfire** consortium, led by MBDA. The project will assess innovative LDEW technologies and approaches, culminating in a demonstration of the system in 2019. The contract will assess how the system can pick up and track targets at various ranges and in varied weather conditions over land and water, to allow precision use. The

project will inform decisions on the future of the programme and help the MOD's **Defence Science and Technology Laboratory** (Dstl) establish a road map to an in-service capability. If it is successful, the first laser weapons would come into service in the mid-2020s. The UK Dragonfire consortium includes partners from across the UK with international reputations in this area including MDBA, QinetiQ, Leonardo-Finmeccanica GKN, Arke, BAE Systems and Marshall ADG. **www.dstl.gov.uk**

UNIVERSITY OF GLASGOW SELECTS INTELLIGENT TELEMATICS FOR 3G VEHICLE CAMERA SOLUTION

University of Glasgow has chosen **Intelligent Telematics** to provide a 3G vehicle camera solution for its fleet operation to target insurance savings and encourage responsible driving. Intelligent Telematics' industry-leading **IT1000** device will initially be installed on 25 vans before being rolled out across a further 87 fleet vehicles made up predominantly of cars and minibuses. The IT1000 will be used to capture video evidence to prove liability in the event of a collision involving one of the fleet vehicles. This will help speed up the insurance claims process to reduce the administrative burden on the University's internal resources. Previously, disputes have become incredibly

time consuming, even when only a minor bump or scrape, so the 3G cameras will now allow the office-based transport team to determine fault within minutes of an incident occurring. **www.intelligent-telematics.co.uk**

MELBOURNE CONNECTED LIVING TRANSPORT LAB

The University of Melbourne is collaborating with industry leaders from Australia and around the globe, including **PTV Group**, to integrate data from **VicRoads**, **Public Transport Victoria**, the **City of Melbourne** and the **City of Yarra**, with traffic updates to deliver insights into traffic planning, pedestrian flows, public transport efficiency and freight movements. PTV Group technologies **PTV Visum, PTV Vissim** and **PTV Optima** real-time traffic state prediction will be deployed within this living Transport Lab. A 1.2 square km 'test bed', taking in busy freight and commuter routes and shopping strips — including Australia's most congested road, Hoddle Street — will be fitted with thousands of sensors, enabling communication between thousands of devices and data sets that have until now been islands — such as tram and train movements. **The Dean of the Melbourne School of Engineering, Professor Iven Mareels**, said, "This would pave the way for connected and autonomous vehicles." **www.ptvgroup.com**

ABPMER REVIEWS WESTERN ISLES' HARBOUR AUTHORITY OPERATIONS

Recognising that it is good practice to regularly review operations, **Comhairle nan Eilean Siar** recently commissioned **ABPmer** to appraise its current arrangements for discharging its duties as a **Statutory Harbour Authority. Monty Smedley, maritime specialist at ABPmer** said, "We were delighted to undertake this independent review for the Comhairle. ABPmer's dedicated maritime team has in-depth knowledge and practical application of the various standards and expectations laid down in port and harbour authority codes such as the Department for Transport's 'Port Marine Safety Code' and the Health and Safety Executive (HSE) 'Safety in Docks' Approved Code of Practice. Our specialists conducted a series of interviews and meetings with members of the Comhairle's marine team, port management and elected Council Members, in September. ABPmer presented the findings from the review to the Comhairle's Harbour Board in a meeting held in Stornoway in early December". **www.abpmer.co.uk**