

# Airborne User Group Meeting

Real world to digital world



**NEW IN 2017**  
Experience Single Photon LiDAR

22 - 24  
FEBRUARY **2017**

 **DUBLIN,  
IRELAND**



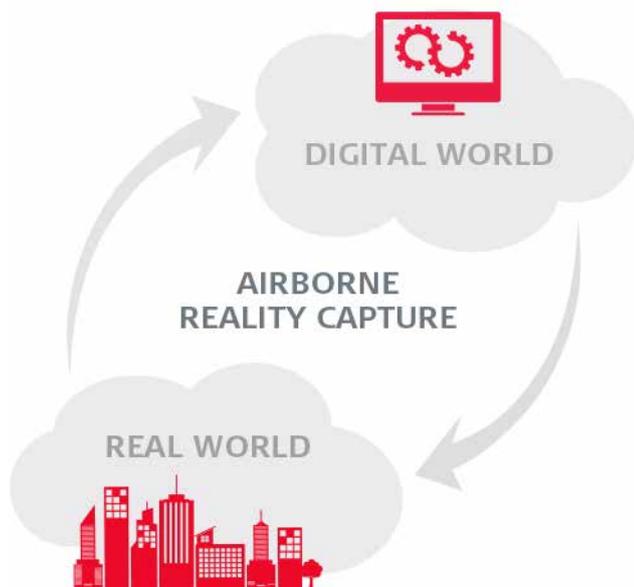
- when it has to be **right**

**Leica**  
Geosystems

# Advancing airborne innovation

The Airborne User Group Meeting 2017 will take place from 22 – 24 February in Dublin, Ireland and will be hosted by our valued customer Ordnance Survey Ireland (OSi).

Join this exclusive industry conference for airborne imaging and LiDAR solutions to get the latest market updates, customer case studies, future development plans, and up-to-the-minute insights on new sensors and software; all in Ireland's historic capital where you can enjoy a perfectly poured Guinness straight from the source.



## New in 2017

- Future Talk: Smart Cities – Are we ready for 3D?
- Experience Single Photon LiDAR (SPL)
- New data sets from Leica CityMapper hybrid sensor

## Registration rates

Companies with Customer Care Package:  
Free of charge

Companies without Customer Care Package:  
EUR 95.00\* | EUR 195.00

\*Early bird rate applies until 31 December 2016

## Venue

The event will take place in the iconic Dublin Castle, one of Ireland's major historic sites. From the founding of the Celtic settlement to every Presidential inauguration since, it has stood witness to some of the most pivotal events in the country's history. [www.dublincastle.ie](http://www.dublincastle.ie)



## Accommodation

Fifteen minutes from Dublin International Airport, Portmarnock Hotel & Golf Link enjoys an unmatched coastal location with breathtaking sea views. Special rates\* apply for UGM 2017 attendees. The bookings will not be facilitated by the organiser. [www.portmarnock.com](http://www.portmarnock.com)



\* Booking code provided upon registration



Register at [www.leica-geosystems.com/UGM2017](http://www.leica-geosystems.com/UGM2017)

# Agenda at a glance

	WEDNESDAY 22 FEBRUARY	THURSDAY 23 FEBRUARY	FRIDAY 24 FEBRUARY	SATURDAY 25 FEBRUARY	
	Portmarnock Hotel	Dublin Castle	Dublin Castle		
08:30 - 09:00		Shuttle bus Welcome coffee	Shuttle bus Welcome coffee		
09:00 - 10:30	Hands On Workshop * at Portmarnock Hotel	1702 Efficiency in LF Camera Operation Leica ADS100 / DMC III Update	1706 Sneak preview - News about airborne LiDAR	Social Programme	
10:30 - 11:00		Coffee break	1707 Hexagon Content Program		10:00 - 14:15 Golf Fun & Game Challenge, Golf Lesson ** Golf lesson for everyone and advanced players
11:00 - 12:30		Imaging HxMap, RealWorld, RealCity	1703 New Performance in Image Production HxMap RealWorld Workflow		
12:30 - 13:30		Lunch	Lunch	11:00 - 14:00 The Teeling Whiskey Distillery Dublin Guided Tour	
13:30 - 15:00	Hands On Workshop at Portmarnock Hotel	Dublin city Shopping Free time	1709 News about Mobile Mapping & UAV: New Projects, Features, Applications	09:30 Tee Time Golf Championship Course	
15:00 - 16:30	Imaging HxMap, RealWorld, RealCity	1704 Smart 3D City Mapping Leica CityMapper & RealCity	Shuttle bus		
16:30 - 17:00		Coffee break			
17:00 - 18:30		1705 Bathymetric LiDAR Chiroptera II & HawkEye III Case Study: SHOM Litto3D Project, French Coastline	Individual programme Free time		
18:30 - 19:00	1701 Welcome	Shuttle bus			
19:00 - 20:00	Welcome reception	Guinness Storehouse Guided Tour			
20:00 - 22:00	Dinner	Dinner at Guinness Storehouse			
		Shuttle bus			

\* ) Subject to number of registrations \*\* ) Depending on weather conditions  
This programme is subject to change. Last updated - 02.17



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# Programme

## Software Workshop

Wednesday, 22 February – *takes place at Portmarnock Hotel*

Leica Geosystems comprehensive airborne software plays an integral role in driving productivity across all the airborne sensor platforms. Leica HxMap high-performance multisensory workflow is the fastest, most intuitive post-processing software suite for airborne operations.

This workshop is a hands-on session, working with real raw data, showing workflow including radiometry setup, aero triangulation, as well as product generation like aerial and ortho images, colorized LiDAR or building modeling.

**09:00 – 12:30    Workshop 1**

**13:30 – 17:00    Workshop 2**

Kristin Klimek, Software Product Manager, Leica Geosystems Geospatial Solutions Division

Tauno Saks, Team Leader Software Support, Leica Geosystems Geospatial Solutions Division

*Split into 3 blocks of 60 minutes and 2 coffee breaks of 15 minutes in between.*

### PROGRAMME

#### Section 1

- Introduction, basic information about RealWorld and RealCity, supported sensors
- HxMap structure, perspectives, product definitions
- General workflow

#### Section 2

- Demo / hands-on data QC
  - For image data (radiometry setup)
  - For LiDAR data
- Demo / hands-on aerotriangulation
  - General workflow, incl. APM and image measurements
  - Bundle-block adjustment and analysis

#### Section 3

- Demo / hands-on product generation
  - Concept of templates
- Review sample products
  - Aerial & ortho images
  - InfoCloud
  - Colorised LiDAR
  - Building models & textures
  - Mesh

Q & A



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# Programme

## Welcome Reception

Session 1701, Wednesday, 22 February, 18:30 – 18:50

- 18:30 – 18:35 John Welter, President Hexagon Geosystems, Geospatial Solutions Division  
Welcome to the Leica Geosystems Airborne User Group Meeting 2017
- 18:35 – 18:40 Colin Bray, Chief Executive and Chief Survey Officer, Ordnance Survey Ireland (OSi),  
Welcome to OSi, welcome to Dublin
- 18:40 – 18:50 Dr. Hartmut Rosengarten, Director Airborne Solutions EMEA, Leica Geosystems  
Welcome and programme overview

## Efficiency in Large Format Camera Operation

Session 1702, Thursday, 23 February, 9:00 – 10:30

Leica Geosystems large format imaging sensors: Higher acquisition efficiency, more applications and reduced costs with 21<sup>st</sup> century airborne imaging technology. Future outlook on requirements and market trends.

- 9:00 – 9:30 Andy McGill, General Manager for Surveying & Remote Sensing, Ordnance Survey Ireland (OSi), Ireland  
**Maintaining a National Object Data Model effectively with the next generation of remote sensing technologies**  
Having successfully moved from managing over 5000 large-scale topographic map sheets to a single database consisting of 50 million uniquely referenced real world objects, the challenge now is to find the most efficient and effective methodologies to ensure its ongoing consistency with the changing real world.
- 9:30 – 10:00 Withold Kuznicki, Key Account Director, MGGP Aero, Poland  
**Shaping smart change – DMC I + II + III camera operation by MGGP Aero**  
Revolutionising airborne photogrammetry in Poland
- 10:00 – 10:30 Klaus Neumann, VP Airborne Imaging, Leica Geosystems Geospatial Solutions Division (GSD)  
**Leica Geosystems' large format imaging sensors, benefits, advantages and differentiators**  
Product overview, updates, news



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# Programme

## New Performance in Image Production – HxMap & RealWorld Workflow

Session 1703, Thursday, 23 February, 11:00 – 12:30

Leica Geosystems' comprehensive airborne software plays an integral role in driving productivity across all the airborne sensor platforms. The Leica HxMap high-performance multisensor workflow is the fastest, most intuitive post-processing software suite for airborne operations.

The increased need for up-to-date geospatial information in many of the traditional applications as well as in emerging areas such as navigation or location based-apps requires a new approach to data processing: rapid updates over large areas in the shortest possible time. By introducing Leica HxMap, Leica Geosystems offers exactly what the industry has been waiting for: a fast intuitive and efficient post-processing platform, that allows you to produce all known data products within one single interface.

11:00 – 11:30 Belai Beshah, VP Software, Leica Geosystems, GSD and C&E  
**New performance in image production**

11:30 – 12:00 Christian Ihlenfeldt, Technical Coordinator Mapping, COWI, Poland  
TBA

12:00 – 12:30 Alain Kabamba, EMEA Business Development, Hexagon Geospatial, Belgium  
**The coming of age for cloud based geospatial apps**

It is estimated that the global app economy will be worth in excess of 100 billion euros between now and 2020. How can our geospatial community exploit this opportunity to create new revenues, change the way business is done and deliver innovative new solutions?

## Smart 3D City Mapping – Leica CityMapper & RealCity

Session 1704, Thursday, 23 February, 13:30 – 15:00

Leica CityMapper – the world's first hybrid oblique imaging and LiDAR airborne sensor specifically designed for urban mapping and smart 3D city applications. The CityMapper brings together the best of both worlds, it is specifically designed for urban mapping. Combined with the high-performance post-processing workflow, HxMap, it offers a complete urban mapping solution, Leica RealCity.

15:00 – 15:30 Anders Ekelund, VP Airborne LiDAR, Leica Geosystems GSD  
**Smart 3D City Mapping – Leica CityMapper & RealCity**

15:30 – 16:00 Ron Roth, Product Manager CityMapper & Airborne Topo LiDAR, Leica Geosystems GSD  
**Leica CityMapper**  
First surveys, new exciting results

16:00 – 16:30 Tauno Saks, Team Leader Software Support, Leica Geosystems GSD  
**New benefits from Leica RealCity workflow**



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# Programme

## Bathy LiDAR with Chiroptera II & HawkEye III – Case Study at the French Coast Line

Session 1705, Thursday, 23 February, 15:30 – 17:00

Leica Chiroptera II – the most cost-effective coastal LiDAR sensor producing seamless data from land to water and Leica HawkEye III the most efficient and powerful sensor for deep bathymetric surveying. Leica Survey Studio (LSS) is a state of the art software tool for point-cloud generation and cleaning of raw LiDAR data acquired by HawkEye III and Chiroptera II.

Since 2005, the French Hydrographic Office, SHOM, has used airborne bathymetry LiDAR extensively through its Litto3D national programme, in France and oversea territories. Since 2016 SHOM provides data captured with Leica HawkEye III installed in a Cessna Grand Caravan. The preliminary results of the first two month surveying in the Normandy will be presented.

- 17:00 – 17:45 Yves-Marie Tanguy, Chef de la cellule de production Litto3D, SHOM, France  
**SHOM's Litto3D project – Surveying the French coastline in "La Manche" with HawkEye III**  
Extensive airborne LiDAR bathymetric survey by the French Hydrographic Office SHOM in France and oversea territories.
- 17:45 – 18:30 Anders Ekelund, VP Airborne LiDAR, Leica Geosystems GSD, Sweden  
**Megatrends driving the need of shallow water mapping**  
Increasing sea-water levels, growing population and many more reasons will grow the need of shallow water data – examples and applications from customers around the world.

## Single Photon LiDAR (SPL) vs Linear Mode LiDAR (ALS) – Complementary or Replacement

Session 1706, Friday, 24 February, 9:00 – 10:00

For years, LiDAR systems have employed a range-finding subsystem, scanning optics to direct the laser pulses, and a position and orientation subsystem to record the origination point of the laser pulse. Couple any type of range measurement system with any type of scanning system, and a complete scanning LiDAR system is the result. What separates the latest Single Photon LiDAR technology from the conventional Linear LiDAR Mode (ALS80), and how to match technology and application is the topic of this session.

- 9:00 – 9:30 Ron Roth, Product Manager Airborne Topo LiDAR, Leica Geosystems GSD  
**Sneak peak – News about airborne LiDAR**  
Single Photon LiDAR and Linear LiDAR Mode – complementary or replacement
- 9:30 – 10:00 Lubos Halvon, General Director, National Forest Centre, Slovakia  
**ALS80 Project**  
Airborne LiDAR Forestry Project, Slovakia



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# Programme

## HxCP – The Hexagon Content Program

Session 1707, Friday, 24 February, 10:00 – 10:30

### HxCP = HxIP + HxEP

The Hexagon Content Program (HxCP) is comprised of two programs: The Hexagon IMAGERY program (HxIP) and the Hexagon ELEVATION program (HxEP). The HxIP acquires and creates high resolution orthophoto and associated products for use in GIS and other imagery exploitation systems. The HxEP acquires and creates high resolution terrain models and associated products for use in many analysis applications. HxIP has commenced 2014 in the US, and 2015 in Europe. HxEP has just recently been launched in the US.

10:00 – 10:30 Bruce Wald, COO Content & Engineering Services, Hexagon Geosystems

#### **New business model with licensed data**

HxCP – The Hexagon Content Program

## Future Talk “Airborne Mapping” – Panel Discussion

Session 1708, Friday, 24 February, 11:00 – 12:30

### Smart Cities – Are we ready for 3D?

Everybody talks about 3D. Google Earth offers 3D visualization for everybody. The mapping company HERE, co-owned by German automotive companies Audi, BMW, and Daimler, uses a fleet of more than 200 cars to collect dense point cloud data about roads around the world, building a global 3D routing map. In the US a 3D Elevation Program (3DEP) has started. Leica Geosystem introduced recently the “RealCity” with the first fused imaging and LiDAR sensor “CityMapper” for capturing and processing most efficiently 3D data. Hexagon works on Single Photon LiDAR (SPL) technology for large area 3D data capturing. For autonomous driving cars with limited battery power elevation maps might become more important than maps with distances only.

Many of these projects are designed to be prepared for the future. But what about today? Is this the technology we need now – for the next couple of years? Are these the projects where city administrations and National Mapping Agencies should work on? Are these the challenges we are facing in NAFTA, EMEA, APAC with China and all other parts around the world? Are we really ready for 3D?

### Moderation

Dr. Isabella Toschi, Researcher, 3DOM, Fondazione Bruno Kessler, Trento, Italy

### Panel

John Welter, President Hexagon Geosystems, Geospatial Solutions Division, Switzerland

Andy Mc Gill, General Manager for Surveying and Remote Sensing, OSi, Ireland

Philip Minnaar, Manager Airborne Solutions, Geospace International, South Africa

Bruno Callabat, CEO, Technical Manager, APEI, France

Poul Nørgård, Vice President IBL Mapping Operation, COWI, Denmark



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# Programme

## News about Mobile Mapping & UAV – New Features, Applications, Partnerships

Session 1709, Friday, 24 February, 13:30 – 15:00

Leica Geosystems has the largest product portfolio for mobile mapping applications. Technologies which are more and more combined also with airborne solutions – for example in urban and 3D smart city projects. This session presents a customer case study and gives an overview of newest developments and partnerships. In addition there will be a live demo with fresh Pegasus:Backpack data.

Aibotix is one of the leading UAV pioneers, integrating state-of-the-art solutions from Leica Geosystems. DJI is the world's biggest UAV producer, now partnering with Leica Geosystems. This session gives an overview of new features and applications as well as an outlook of future developments.

### Mobile Mapping

13:30 – 13:55 Rollo Rigby, Associate Director, Severn Partnership, UK

**Pegasus:Two project**  
Mobile Mapping Project

13:55 – 14:15 Antonio Mendes, Mobile Mapping Business Development Manager, Leica GSD

**Unlimited Mobile Mapping**  
Product Portfolio, New Developments, Applications  
Live demo Pegasus:Backpack data processing

### UAV

14:15 – 14:20 John Welter, President Hexagon Geosystems, Geospatial Solutions Division, Switzerland

**Positioning, strategic outlook**

14:20 – 14:40 Lothar Assenmacher, Managing Director, Aibotix, Germany

**New sensor integration, new features, new applications**

14:40 – 15:00 Simone Geschwentner, European Business Development Manager B2B, DJI, Germany

**New partnership, new platforms, new technology**



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# Programme

## Golf Fun & Game Challenge, Social Programme

Saturday, 25 February, 10:15 - 14:15

### Golf Fun & Game Challenge for Everyone at "Kinsealy Grange Golf Academy"

Did you ever want to feel like golf legends Tiger Woods, Jack Nicklaus or Gary Player? Did you ever want to sink a one-million-dollar put? **Here is your chance! For everybody, even if you've never played before. You don't need any golf knowledge or experience.**

This is fun for everyone. Well, we won't really play for a one-million-challenge but we have prepared some funny and entertaining games and a training session with professional golf teachers. So, everyone can join and enjoy the fascination of golf. Learn to chip and put and win some nice prizes.

Programme:

- Teaching lesson with professional golf pro
- Chip'n put competition
- Nearest to pin competition

Clubs (irons, woods), golf balls, etc. will be provided – just come with sport shoes.

**The Golf Fun & Game Challenge will take place at the "Kinsealy Grange Golf Academy".**

**Players with a HCP of 36 or better: First tee time on the multiple awarded 18 hole PGA championship course, designed by Bernhard Langer: 9:30h. For further tee times please contact: [wolfgang.hesse@leica-geosystems.com](mailto:wolfgang.hesse@leica-geosystems.com) [www.portmarnock.com/golf.html](http://www.portmarnock.com/golf.html)**

**In case of severe weather conditions the Golf Fun & Game Challenge will be cancelled.**

## Whiskey Distillery Tour, Social Programme

Saturday, 25 February, 10:00 - 14:00

### The Teeling Whiskey Distillery Dublin – Guided Tour

The Teeling Whiskey Distillery is Dublin's newest destination for whiskey fans and for anyone with an interest in Dublin's long lasting association with Irish Whiskey. Located in the heart of Dublin City Centre, in the historic Liberties, the Teeling Whiskey Distillery is the only operational distillery in the city and home to the Spirit of Dublin.

We will take a fully guided tour and offer the chance to experience the complete whiskey making process with a Teeling Whiskey Ambassador. The tour concludes with a tasting of the award winning Teeling Whiskeys, with a selection of tasting options available to suit the novice and aficionado alike.

Transport from and to Portmarnock Hotel by shuttle bus.

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