Location SIG
'What do users and applications really need for ubiquitous positioning?'
25th January 2017
Hosted by Geovation and Supported by Royal Institute of Navigation

This SIG is championed by David Bartlett, **Omnisense**; Bob Cockshott, **The KTN** and Ben Tarlow, **Qualcomm.**

Venue: Geovation Hub, Urban Innovation Centre, 1 Sekforde Street, Clerkenwell Green, London, EC1R 0BE

AGENDA

13:30	Registration and networking with refreshments (Please note lunch will not be provided)
14:00	Introduction to Location SIG from **Bob Cockshott, The KTN**
14:20	Welcome from our Host, **Alex Wrottesley, Head of Geovation, Ordnance Survey**
14:40	**Session chaired by SIG Champion, David Bartlett, Omnisense** **'Micro-Location: adding value and security to the IOT'** **Adrian Wards, FAE Manager, Decawave** Whether it is to further optimize processes in the industry, to develop deeper analytics in sports or to develop context aware applications, location information is key. In an era where all objects - even the smallest - are getting connected and are becoming autonomous, the need for object level location accuracy is becoming a must. In this presentation, we will introduce a new technology bringing centimetre location accuracy. We will present real use cases from industrial, automotive and consumer verticals where this technology is already proving to be extremely valuable including example where accurate location can bring a new layer of security for wireless data communications.
15:00	Q&A
15.10	**Refreshments and networking**
15:40	**Session chaired by SIG Champion, Bob Cockshott, The KTN** **'The Road to 5G'** **Martin Kingston, Principal Designer, EE** A short overview of 5G from the perspective of characteristics and capabilities, along with the evolutionary and revolutionary steps required for current 4G networks.
16:00	Q&A
16:10	**Session chaired by Robert Driver, CW** **Start Up's Pitching** We are delighted to welcome several creative start-up's: • **Andy Thurman, CEO, Omnisense Ltd** • **Jack Lomas, Co-Founder, Sensat** • **Ramsey Faragher, Founder & CEO, Focal Point Positioning Ltd** • **Nina Tumanishvili, Connector, HelloHub**
17:00	**Exhibition and Refreshments**
17:30	**Event closes**

With the permission of the speakers, presentations will be loaded to the CW website on the day following the event

Profile of organisers

Cambridge Wireless (CW)

CW is the leading international community for companies involved in the research, development and application of wireless and mobile, internet, semiconductor and software technologies. With 400 members from major network operators and device manufacturers to innovative start-ups and universities, CW stimulates debate and collaboration, harnesses and shares knowledge, and helps to build connections between academia and industry. CW's 19 Special Interest Groups (SIGs) provide its members with a dynamic forum where they can network with their peers, track the latest technology trends and business developments and position their organisations in key market sectors. CW also organises the annual Future of Wireless International Conference and Discovering Start-Ups competition along with other high-quality industry networking events and dinners. With headquarters at the heart of Cambridge, UK, CW partners with other international industry clusters and organisations to extend its reach and remain at the forefront of global developments and business opportunities. For more information, please visit **www.cambridgewireless.co.uk**

Profile of supporter

Royal Institute of Navigation

The Royal Institute of Navigation (RIN) is a learned society with charitable status. Formed in 1947, its aims have always been threefold:

• To unite all those with a professional or personal interest in any aspect of navigation in one unique body;

• To further the development of navigation in every sphere;

• And to increase public awareness of the art and science of navigation.

Navigation encompasses the science, the technology and the practice of getting from A-B on land, in the air, on seas and rivers, and in space. The RIN exists to study, to practice and to inform the public about one of the broadest and most diverse subjects in the world. In 2007, in recognition of the importance of its work, the RIN was granted a Royal Charter by Her Majesty Queen Elizabeth II. **www.rin.org**

Profile of host

Geovation

The Geovation Hub is Britain's pioneering location data lab. Location is at the heart of many of the most successful digital products and services and the mission for the Geovation Hub is to expand its use across the UK's innovation community. Whether you're a software developer looking for technical support, an entrepreneur looking for funding or a business looking for opportunities to collaborate, Geovation is here to help you succeed. **geovation.uk/**

Profile of SIG Champions

David Bartlett, CTO, Omnisense

David Bartlett has specialist knowledge in the fields of location technology, wireless communications and digital imaging. Omnisense supplies real-time location and tracking systems (RTLS), technology and services based on its patented sparse-wideband (SWB) technology. The technology is extremely reliable and the entire system can be deployed without need for wired infrastructure (wireless). As such the system can be deployed rapidly and is fully transportable to different sites. For further information visit **www.omnisense.co.uk**

Bob Cockshott, PNT Lead; Quantum Lead, The KTN

After graduating in Astronomy Bob worked for 25 years in the space industry as a systems engineer and project manager developing electro-optical and RF payloads. Bob joined the Location and Timing KTN in 2006, becoming KTN Director in 2008. Bob continues to cover all position, navigation and timing technologies and applications, and now looks also looks after quantum technology commercialisation following the launch of the £270m UK National Quantum Technology Programme. For further information visit **www.ktn-uk.co.uk**

Ben Tarlow, Senior Staff Engineer, Qualcomm

Ben has worked in positioning for 15 years, developing algorithms for satellite, cellular and other terrestrial RF technologies. At Qualcomm, Ben works in the Advanced Algorithms group, where current research areas in location are data fusion, use of sensor data for positioning and fitness applications; one day, he hopes to be given the remit to explore the area of olfactory positioning. Ben has a background in Pure Mathematics and a PhD in Combinatorics. He has over 20 different patents filed or granted, mostly on subjects relating to positioning. **www.qualcomm.com**

Profile of speakers

Martin Kingston, Principal Designer, EE

Martin Kingston is a Principal Designer at EE, the largest UK mobile operator and part of BT. He has 30 years' experience in communications, from terrestrial and satellite communication systems for outside broadcasts at the BBC through to fixed and mobile broadband services. Martin is a specialist in transmission and synchronisation for mobile networks. **ee.co.uk**

Adrian Wards, FAE Manager, Decawave

Adrian has over thirty years' experience developing wireless communications and networking products. He spent twelve years with Cambridge based product design company Symbionics, working with DECT, Bluetooth, PHS and WiFi technologies. In 2003 Adrian moved to Tokyo for a working holiday and somehow never quite made it home again. Whilst in Tokyo Adrian worked for Jennic Ltd as their Asia area field applications manager, supporting Jennic's range of IEEE 802.15.4 based wireless microcontrollers. After NXP Semiconductors acquired Jennic, Adrian joined the NXP Tokyo office as part of their low-power RF group, supporting ZigBee and JenNet products. Looking for a new challenge, Adrian joined DecaWave in early 2015 and now enjoys working in the fascinating field of impulse radios and ultra-wideband based real-time location systems. **www.decawave.com**

Alex Wrottesley, Head of Geovation, Ordnance Survey

Alex began his career working in international media, sports and entertainment, starting out as a freelance PR for videogames and ending up organising international events – including a Summit of the G15 Heads of State and Real Madrid's first tour of Asia.In 2007 Alex founded Near Global an interactive media studio focused on create accurate, immersive experiences of real-world places from survey data, plans and BIM models. Projects included VR experiences of flagship London properties including St James's Market, NEO Bankside and Battersea Power Station. Alex joined Ordnance Survey in 2015 to set up its new London-based innovation centre – the Geovation Hub – a ground-breaking new location services lab tasked with stimulating the launch of new businesses using geospatial data. **geovation.uk**

Profile of start-ups

Jack Lomas, Co-Founder, Sensat

We are an award winning geo-spatial tech start up whose mission is to digitise the world, recreating places and objects in incredible detail to render them into a virtual environment. Our mission is to build technologies that make important information about the world accessible to everybody. We recently were commended as the most innovative technology to be introduced to construction in the past year and our backers include: Innovate UK, the European Regional Development Fund, the Digital Catapult and the Business and IP Centre. **www.sensat.co.uk**

Ramsey Faragher, Founder & CEO, Focal Point Positioning Ltd

Focal Point Positioning is bringing accurate position and time to smartphones and autonomous platforms, indoors and out. We are developing a smartphone-based sensor fusion, machine learning, and signal processing suite to provide satellite positioning capabilities in areas that have been unreachable until now. Our new technology dramatically improves the sensitivity and performance of existing radio-based positioning systems, providing new capabilities and services in urban environments and deep indoors. **www.focalpointpositioning.com**

Andy Thurman, CEO, Omnisense Ltd

Profile to follow.

Nina Tumanishvili, Connector, HelloHub

HelloHub addresses the human need to communicate by localising the web, enabling real time interactions between nearby smartphone users. All content is geo-tagged and location specific. It is then accessible to other app users only when they are in the vicinity of the location from which the material was originally posted. Our USP is that we have invented a simple way to localise the # and make popular keywords relevant again. The app facilitates instant positive community engagement, solving the problem of "disconnect" amongst young adults in busy urban areas. HelloHub will initially launch as a Tube – Chat app. **hellohub.com**