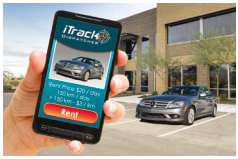







THE RESULTS 2011

www.galileo-masters.eu

GALILEO
Masters

EUROPEAN
SATELLITE NAVIGATION
COMPETITION
2011

powered by TÜV SÜD

The European Satellite Navigation Competition – Innovation on a Global Scale

Martin Zeil
Bavarian State Minister for Economic Affairs, Infrastructure, Transport and Technology

For the eighth year running, the ESNC is boosting innovation in satellite navigation on a global scale. With 401 participants from 49 countries, this innovation contest reached new all-time highs this year. In close cooperation with our European and global partners, an excellent network has been established to create added value for satellite navigation technologies and foster entrepreneurship in this emerging market. One-third of the winners of the previous ESNCs have gone on to found new companies. This confirms our expectation that the innovation contest should provide a means of promoting the international commercialisation of space technologies and providing new businesses and jobs related to satellite navigation.

The Free State of Bavaria identified the importance of satellite navigation early on, establishing the first German incubator for this emerging market in 2001. In combination with the follow-up programme at the ESA Business Incubation Centre (BIC) Oberpfaffenhofen, 60 new ventures have been supported so far. The Bavarian ESA BIC Programme – which, like the ESNC, is managed by Anwendungszentrum GmbH Oberpfaffenhofen – also recently expanded to Nuremberg and Berchtesgadener Land in an effort to support another 48 company foundations by 2013. All these activities underline the importance of the ESNC and the ESA BIC as key factors of entrepreneurship in the Bavarian aerospace and satellite navigation industry.

I would like to thank all our partners and partner regions for their efforts and their support for the implementation of the awarded ideas, as well as all the participants for their valuable contributions to the competition. Congratulations to all the winners of the ESNC 2011 and all the best in your efforts to realise your ideas!

Martin Zeil

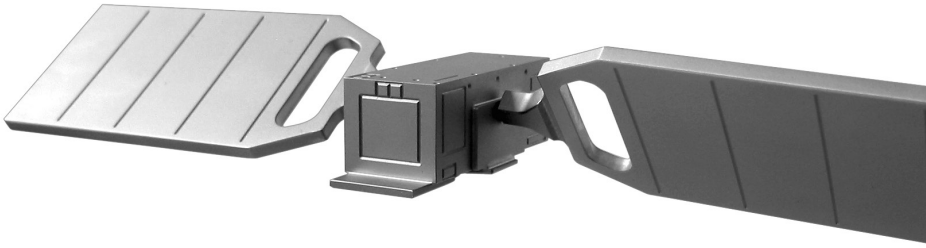
The European Satellite Navigation Competition 2011 – new record of 401 participants from 49 countries

The European Satellite Navigation Competition 2011 set another participation record. From April to June, an all-time high of 401 participants from 49 countries submitted their ideas for the innovative use of satellite navigation in more than 40 different application areas.

The competition succeeded in attracting participants from many different regions. For the first time, participants from Guadeloupe, Martinique, and Japan were among the winners. The fact that a Bavarian became the regional winner for Taiwan and a Taiwanese was awarded the EU-funded Living Lab Prize illustrates that the innovation contest has succeeded in its goal of creating stronger international linkages. The majority of this year's contributions came from Taiwan, Germany, Spain, the UK, and Lithuania. Participants included individuals, universities, SMEs, and start-up companies. This year, more than 90% of contributions were submitted for a special topic prize, which clearly demonstrates satellite navigation's enormous potential to provide solutions to specific industrial issues.

Special thanks are due to the ESNC title sponsor TÜV SÜD, which sponsored the competition for the first time. This cooperation is especially beneficial to the large number of participants who have expressed a strong interest in having their applications certified. Further thanks go to the German Aerospace Center (DLR) and the European Space Agency (ESA), for having confidence in the ESNC's potential for innovation, and supporting the competition ever since it was first launched in 2004. Both institutions also awarded special topic prizes in this year's competition. Special thanks also go to the European GNSS Agency (GSA), which, once again, awarded a prize for the most promising EGNOS application idea. We would like to thank both NavCert and IFEN for offering the GATE prize for a solution that will be certified after successful testing at the Galileo test range in Berchtesgaden (Germany). Further thanks go to NAVTEQ, the world's leading provider of digital maps, which looked for location-based mobile enterprise solutions, and supported the second ESNC University Challenge together with Awapatent AB. Furthermore, we would like to thank the Industrial Technology Research Institute (ITRI) of Taiwan for awarding the first prototyping prize in the competition's history for an application chosen from prototypes that promote the trend towards Connected Vehicles.

In 2011, five new regions – Catalonia/Spain, Estonia, Latvia, Macedonia and Medjimurje/



Croatia – awarded their first regional prizes. With 23 global partner regions worldwide – and more about to join in 2012 – the European Satellite Navigation Competition can boast a proven track record of success in fostering international networks and supporting the development of a future market. One third of the previous winners participated in incubation programmes. The fact that about 80% of their ideas are now being implemented proves how successful the ideas competition is in translating ideas into new businesses. Together with the entire international network of 179 experts, these regions will continue to help the many applications and business cases that were submitted realise their full potential as successful products made by exciting new companies.

And last but not least, we are delighted about the huge interest in the ESNC audience award, which is supported by Maiwald Patentanwaltsgesellschaft mbH. Up until 15 November, all visitors of www.galileo-masters.eu can vote for their favourite idea among 260 published abstracts.

We would like to thank all our partners for their outstanding support and already look forward to an exciting European Satellite Navigation Competition 2012, running from April to June 2012.

Thorsten Rudolph
Managing Director

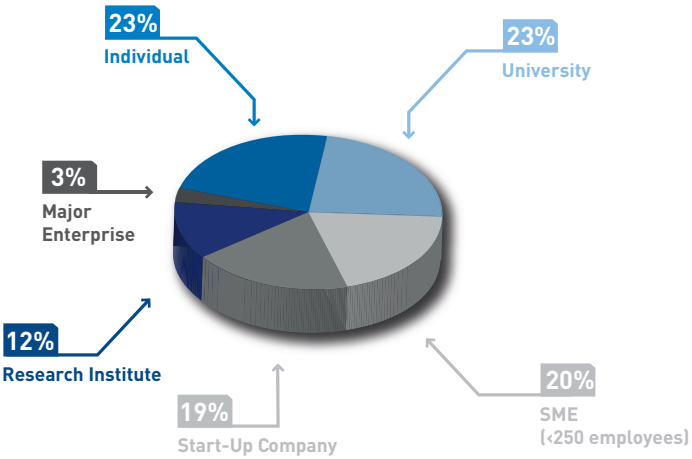
Ulrike Daniels
Business Development

Andreas Dippelhofer
Project Management

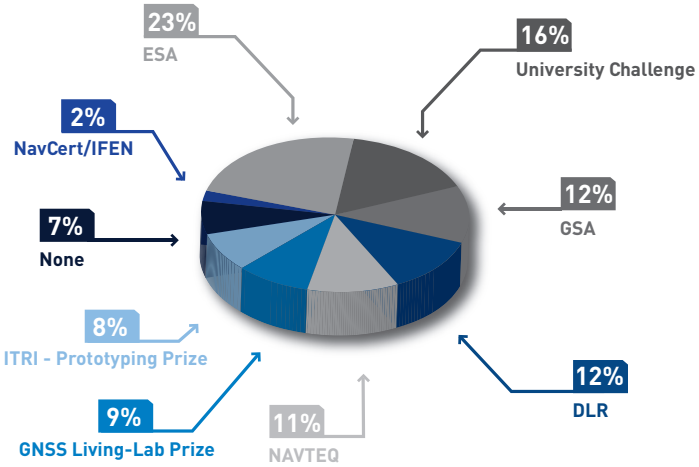
Kathrin Sturm
Project Officer


© Simone Hörmann

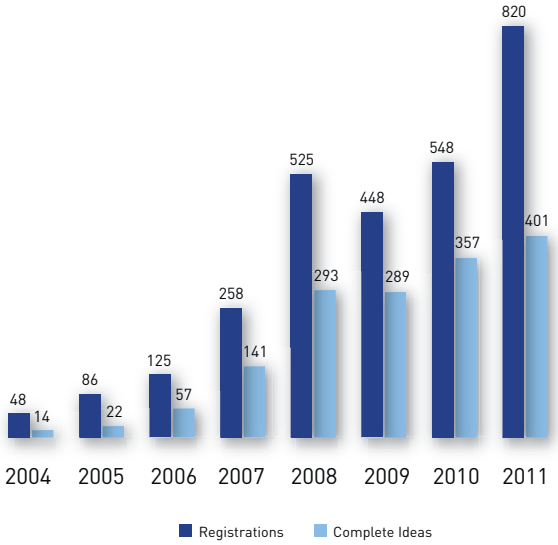
Form of Organisation



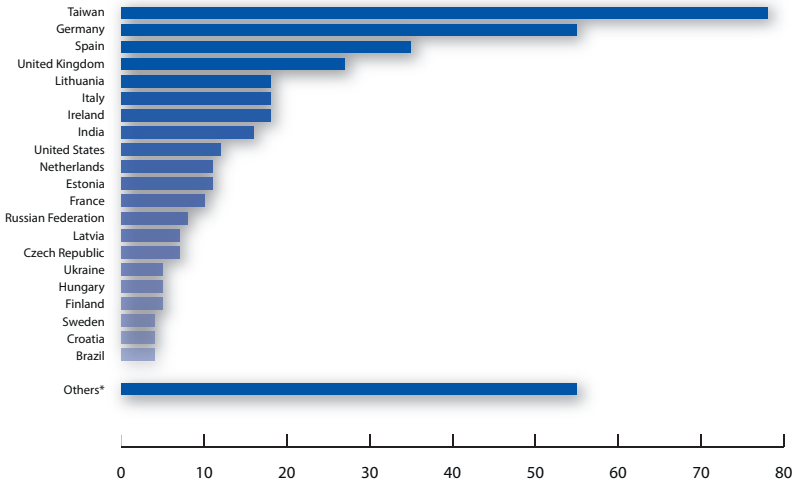
Participation in the 2011 Special Prizes



Participants 2004 - 2011



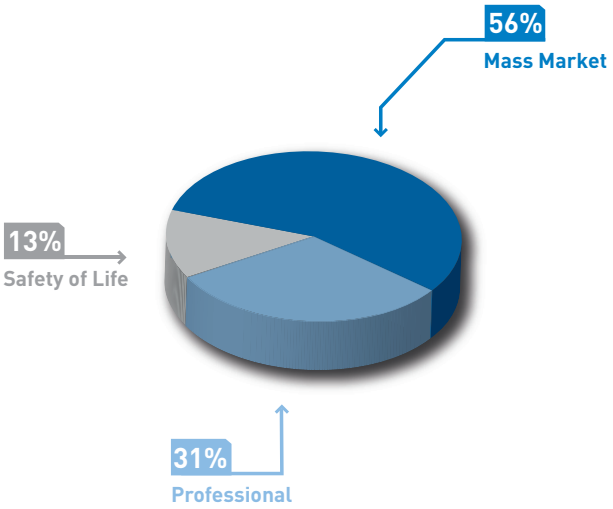
Ideas from Countries



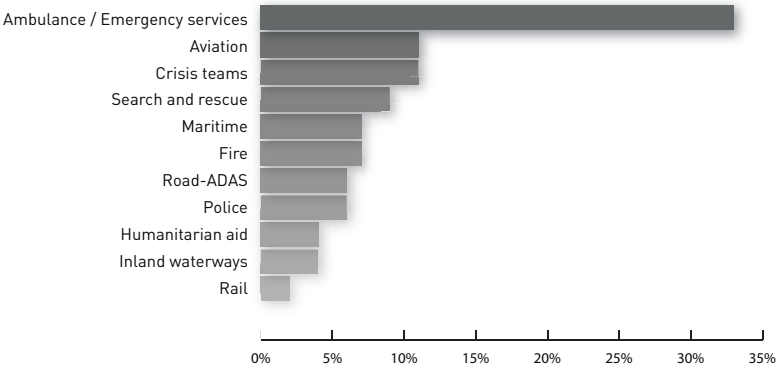
*Australia, Bahrain, Bulgaria, China, Cyprus, Egypt, Greece, Guadeloupe, Iceland, Indonesia, Israel, Japan, Kenya, Luxembourg, Macedonia, Malaysia, Malta, Martinique, Nigeria, Pakistan, Poland, Portugal, Singapore, Slovenia, South Africa, Switzerland, Turkey, United Arab Emirates

ESNC Total Market

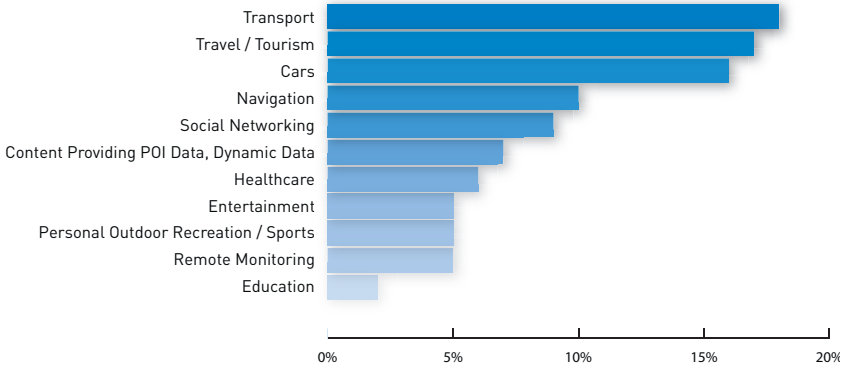
401 Ideas



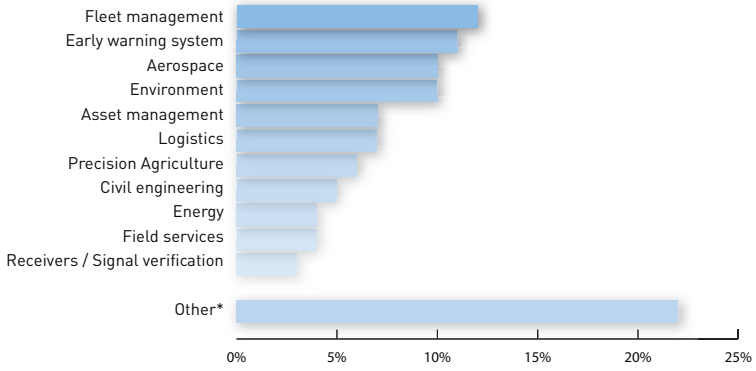
Safety of Life



Mass Market



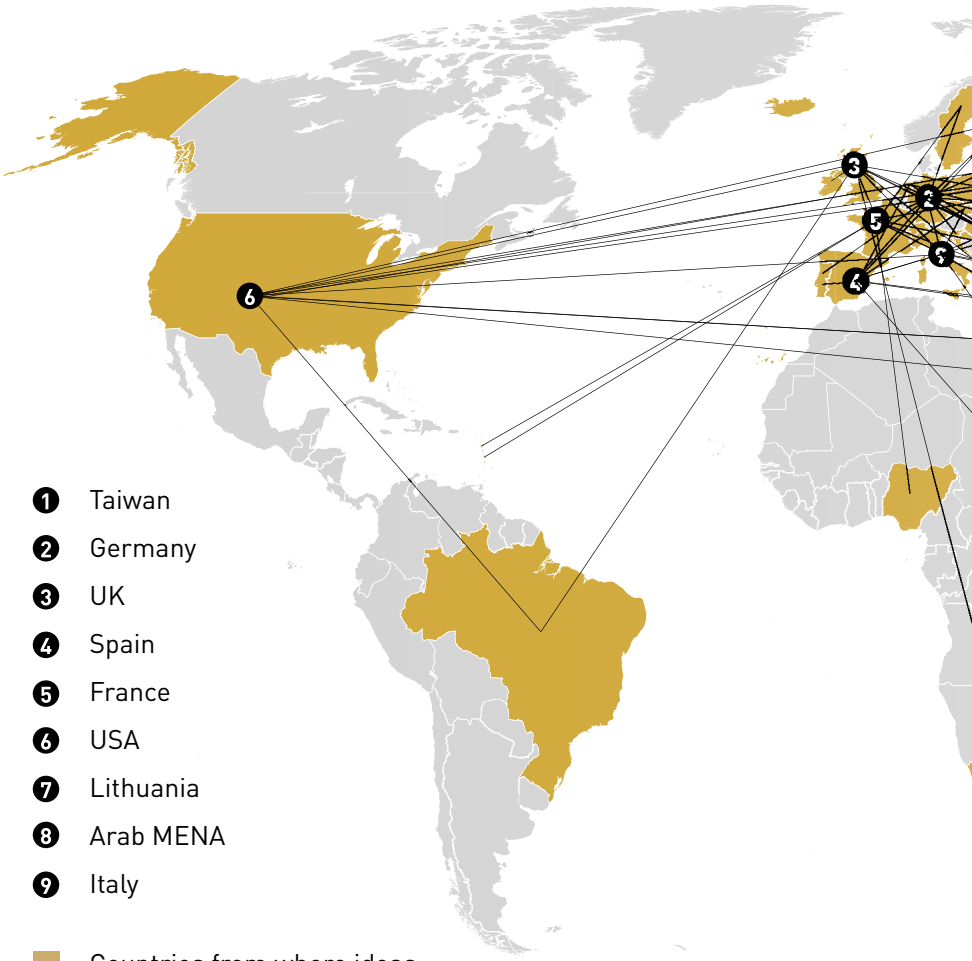
Professional Applications



*Construction, GIS, Fisheries, Land survey, Meterological forecasting, Mining, Timing, Toll collection, Oil and gas, Lone worker protection, Geodesy, Bank

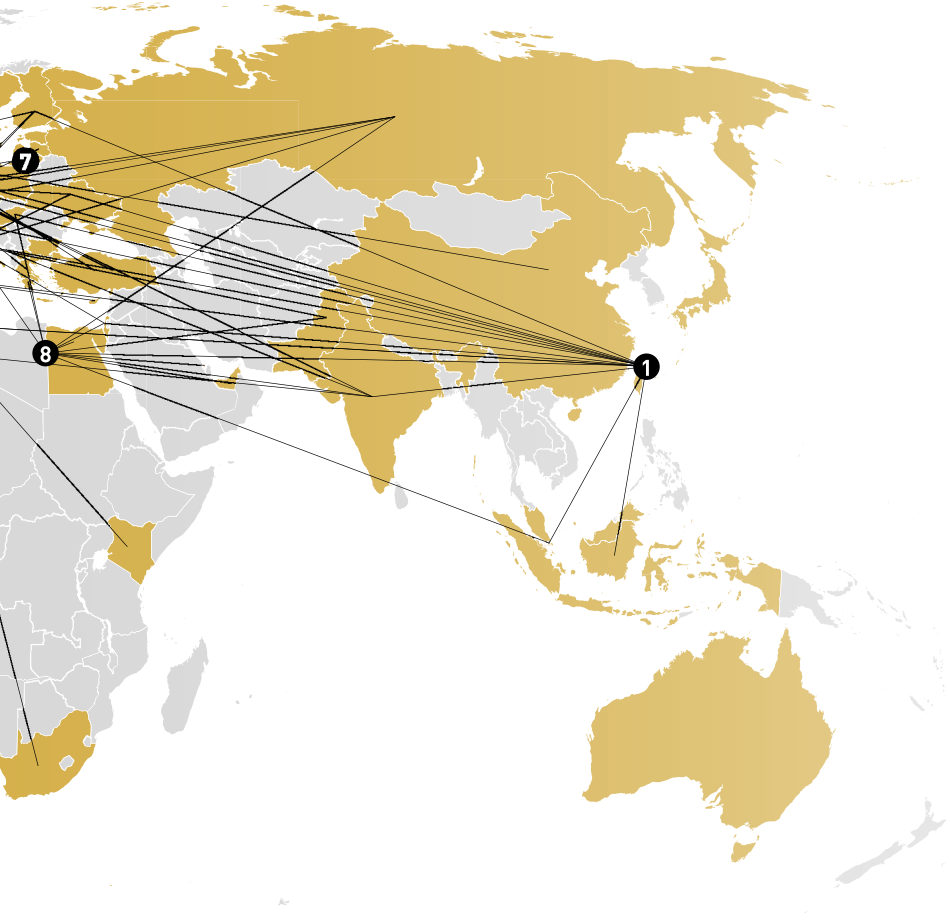

UK & Ireland
Øresun
South Holland
Hesse
Baden-Württemberg
Switzerland
Lombardy
Aquitaine
Nice-Sophia
Gipuzkoa
Catalonia
Arab Middle
USA
Brazil


Estonia
Latvia
Lithuania
Prague
Medjimurje
Macedonia
Taiwan
East & North Africa
Australia



1. Taiwan
2. Germany
3. UK
4. Spain
5. France
6. USA
7. Lithuania
8. Arab MENA
9. Italy

Countries from where ideas have been submitted to other countries than the own

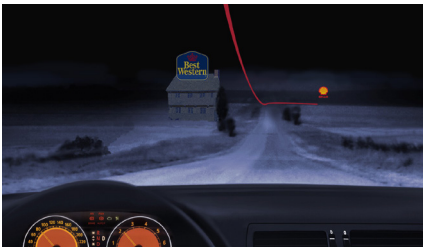

7
8
1

True3D™ Head Up Display: Disruptive technology in LBS and mapping for citizens and military

Juliana Clegg | Tom Zamojdo | Chris Grabowski
jcc@mvslabs.com | www.mvs.net

MVS - California, LLC

MVS-California is the exclusive global design and development source for the True3D™ Head Up Display (HUD), an augmented reality navigational display engine designed to provide non-distracting, translucent location guidance to untrained operators of any vehicle. Virtual Cable™ and Virtual Signs™, generated by linking GNSS, map, and POI data, have been designed to maximise situational awareness using NASA guidelines established for pilot safety.



© MVS-California, LLC.

Painstakingly cost engineered for the automotive market, the True3D™ HUD is nothing short of an LBS revolution. Images – icons, road signs, a guide wire – are placed accurately in one's forward view, appearing to be outside the windshield, from 2 metres to infinity, thus rendering conformal display. Images are volumetric (truly 3D), and capable of refreshing at 60 fps, enabling real-time data streaming. MVS-California have advanced reference designs and detailed manufacturing plans. The company seeks to collaborate with ecosystem partners who can assist them in commercialising the HUD's potential in automotive, trucking, marine, and avionics markets.

NAVTEQ: Mobile Enterprise Solutions

NAVTEQ // NAVTEQ is the leading global provider of maps, traffic and location data enabling navigation, location-based services and mobile advertising around the world. Our robust and accurate content enables intelligent location applications, which support navigation for in-vehicle systems, portable and wireless devices, and mapping solutions available via the internet or mobile devices.

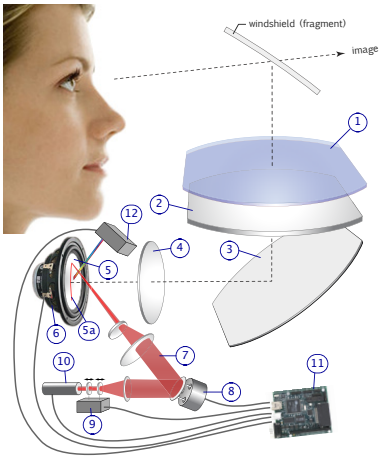
NAVTEQ Network for Developers (www.NN4D.com) provides developers with the technical and business support needed to build, showcase and launch innovative location-enabled solutions.

NAVTEQ
425 W. Randolph St
Chicago, IL 60606
USA

Mr David Ko
+1 312 894 7706
david.ko@navteq.com
www.navteq.com

NAVTEQ™

GALILEO
Masters



1. Sun filter
2. Eye lens group
3. Folding mirror(s)
4. Relay lens group
5. Projection screen

5a. Path of laser spot

6. Projection screen actuator
7. Laser beam
8. Scanner
9. Beam focuser and profiler
10. Laser
11. Circuit board
12. RGB raster projector

NOTE: Objects not drawn to scale

USA

Inside GNSS // Inside GNSS magazine covers the engineering solutions, policies, programmes, and most challenging applications of GPS, Galileo, GLONASS, Compass, and related technologies. Now in its 6th year of publication, the print edition of the magazine reaches a targeted international audience of 35,000 product designers, system integrators, technical managers, manufacturers, and service providers as well as GNSS policy makers. Inside GNSS also offers a full digital version of the magazine, the monthly GNSS SIGNALS e-newsletter, and a website that receives more than 30,000 visits per month. The bimonthly magazine is published by Gibbons Media & Research LLC in Eugene, Oregon, USA.

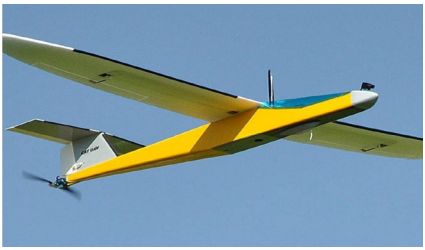
Gibbons Media and Research LLC
1574 Coburg Road, No. 233
Eugene, Oregon 97401-4802
USA

Mr Glen Gibbons
+1 408 216 75 61
info@insidegnss.com
www.insidegnss.com

Traffic collision avoidance system for mini Unmanned Aerial Vehicles

Jordi Santacana | Jordi Salvador
jordisantacana@catuav.com | www.catuav.com

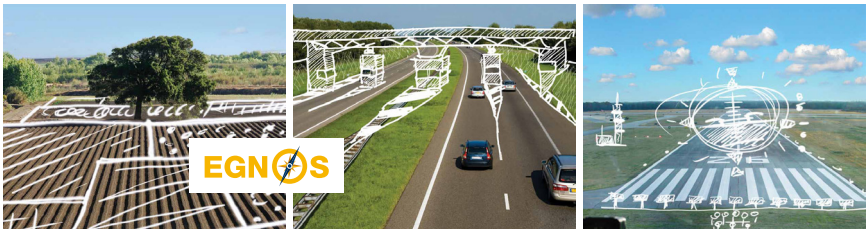
Unmanned Airial Vehicles (UAV), which are already used extensively in the military field, are now starting to open up the civilian market. With the arrival of miniature sensors and electronic components, as well as batteries with improved specific energy, new operative mini UAVs have appeared. This type of device weighs less than 2 kg and has a limited payload. Nevertheless, the fact that it can be operated everywhere and at a low cost makes it ideally suited for civilian use.



© CATUAV

One of the drawbacks of mini UAVs is that they cannot carry the avionic systems required for flights in controlled airspace. As a consequence, their range and flying altitude is limited. With this project, we propose a new system that will help mini UAVs meet the legal requirements for flights in controlled airspace by enabling them to localise other aircraft and send their own data to the air traffic authorities and other aeroplanes flying nearby. This will create new applications for UAV technology.

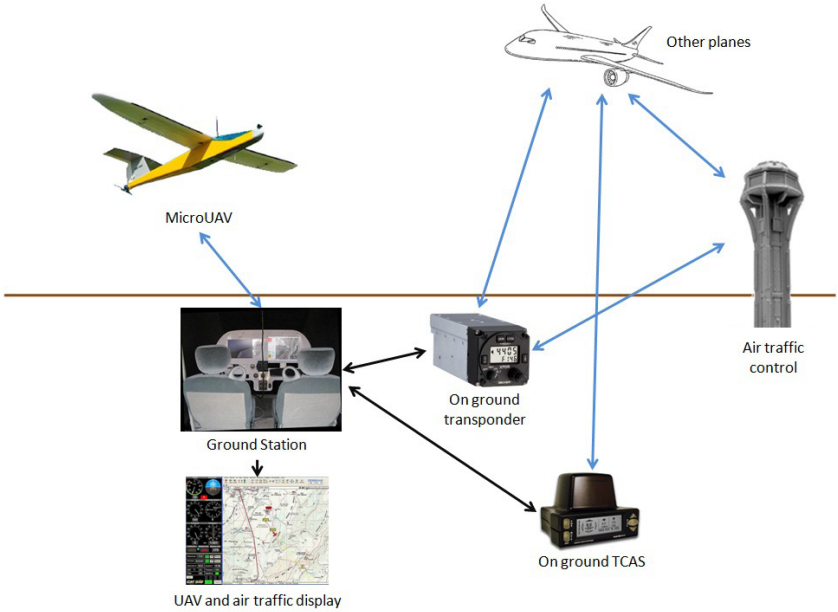
GSA: The most promising EGNOS application idea



European GNSS Agency (GSA) // The GSA, a European Community agency, works with the European Commission on a range of activities aimed at helping European entrepreneurs and businesses – especially high-tech SMEs, business incubators and related networks – commercially exploit EGNOS and Galileo. These marketing, promotional and R&D activities help ensure that European industry maintains a competitive edge in the global satellite navigation market. EGNOS is Europe's first venture into satellite navigation and is available free of charge. It augments GPS and makes it suitable for safety-critical applications. It will be followed by Galileo, a full-fledged global navigation system.

European GNSS Agency (GSA)
Rue de la Loi, 56
1049 Brussels
Belgium

Boris Kennes
+32 22 95 31 32
boris.kennes@gsa.europa.eu
www.gsa.europa.eu



Catalonia / Spain

CTAE // Catalonia, located in northeastern Spain, has a diverse orography with extensive mountain ranges mirroring the coastline, inland depressions, and soaring peaks in the Pyrenees. The Catalonia Challenge is organised by CTAE, a non-profit foundation established in 2005. It achieves industry advancement by promoting university-industry collaboration, technology transfer, and international partnerships. CTAE is engaged in active GNSS research and conducts projects with external partners to help bring innovations to market. Since 2010, CTAE has also been providing incubation services and access to test infrastructures.

CTAE - Aerospace Research & Technology Centre
Viladecans Business Park
C/ Tecnologia, 19. Edifici Dinamarca, Planta 0
E-08840 Viladecans (Barcelona), Spain

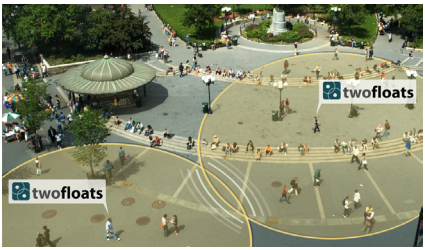
Ms Pepa Sedó
+34 93 664 26 44 ext. 104
pepa.sedo@ctae.org
www.ctae.org

twofloats – proximity detection as a service

Timo Friesland | Dr Florian Odronitz | Markus Otte | Martin Raack
tf@twofloats.com | www.twofloats.com

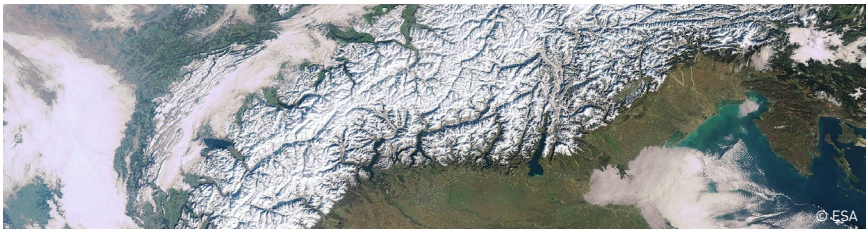
twofloats offers a software solution for a multitude of mobile applications in the field of location-based services. Our innovation is an efficient and scalable software-as-a-service for detecting proximity amongst large numbers of moving objects. New and existing applications can easily be extended to leverage proximity detection between users – so far this has been technically impractical.

As part of an application, twofloats' advanced algorithm tracks the locations of registered users. Whenever two users get spatially close, twofloats triggers an action resulting in the notification of the users or a trusted third party. Hence, members of social networks never miss an opportunity to meet their future spouses; business colleagues can reconnect on a fair, and old friends can catch up whenever they happen to be in the same town. Companies can seamlessly integrate twofloats in consumer apps and dynamically trigger interactions between customers, based on proximity. By taking into account additional factors like age, gender and arbitrary keywords, twofloats offers a self-contained location-based matching service.



© Zina Seletskaya

ESA: ESA Innovation Prize



European Space Agency (ESA) // The ESA, an international organisation comprising 18 member states, is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the citizens of Europe and the world.

The mission of ESA's Technology Transfer Programme Office is to facilitate the use of space technology and space systems for non-space applications. The office is responsible for defining the overall strategy for transferring space technologies, including the incubation and funding of start-up companies.

European Space Agency (ESA)
Keplerlaan 1
2200 AG Noordwijk
The Netherlands

Mr Bruno Naulais
+31 71 565 4711
bruno.naulais@esa.int
www.esa.int

SARA - Signal Authentication through Receiver Autonomous techniques

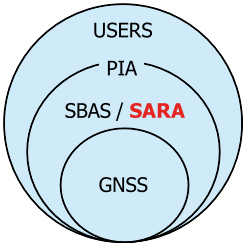
Dr Antonio Pujante Cuadrupani
project@panamnav.com | www.panamnav.com

SARA® by PanamNav

PanamNav.com

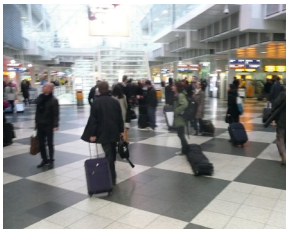
Signal Authentication through Receiver Autonomous techniques (SARA) exploits information acquired by GNSS receivers to detect fake signals intended to induce a JMS (Jamming/Meaconing/Spoofing) event.

SARA is implemented autonomously in the receiver, similar to RAIMS (Receiver Autonomous Integrity Monitoring), which can coexist in the same GNSS receiver. SARA does not require any modification of GNSS signals simply using the available signal information on a best effort basis. SARA relies on the combined analysis of a series of different kinds of observables, namely: a) physical magnitudes (power, spectrum, timing) and b) characteristics intrinsic to the navigation data signal. SARA can be integrated in the chipset engine or the application layer of devices, such as smartphones. It improves both the quality of the GNSS user experience, and the overall safety and reliability of GNSS. SARA is an implementation of the PanamNav featured PIA concept, which aims at an integrated GNSS service including PNT, Integrity and Authentication.



© PanamNav

DLR: Augmented Navigation - everywhere!



German Aerospace Center (DLR) // DLR is Germany's national research centre for aeronautics and space. Its extensive research and development work in aeronautics, space, transportation, and energy is integrated into national and international cooperative ventures. The German federal government has given DLR, as Germany's Space Agency, responsibility for the forward planning and implementation of the German space programme, as well as the international representation of Germany's interests. Furthermore, Germany's largest project management agency is also part of DLR, which also invests in promising technologies and offers its research and development capacities to customers.

German Aerospace Center (DLR)
Münchner Straße 20
82234 Weßling
Germany

Mr Robert Klarner
+49 (0) 8153 28 1782
robert.klarner@dlr.de
www.dlr.de

DLR

Geo-Coupon: A coupon demanding app based on where you have been

Che-Tsung Lin | Yun-Te Su
AlexofNTU@gmail.com | www.itri.org.tw

ITRI Industrial Technology Research Institute

According to the statistics, over 332 billion coupons were distributed in the U.S. in 2010. Although traditional coupons are considered effective, they inevitably have some drawbacks, such as paper waste, unpredictable volumes of circulation, and non-customisable discount rates. Moreover, everyone can get coupons without making any effort.

Geo-Coupon is an on-demand coupon app based on GNSS. It provides purpose-driven digital coupons according to predetermined rules, such as whether the user has visited branch stores for a limited duration. Consumers' visits can be proved by executing Geo-Coupon, which verifies where they have been. This could also be synchronised not only to check in on Facebook, but also to promote branch stores visited via their social network. Once different goals are achieved by Geo-Coupon users, the corresponding reward – coupons in the form of QR (Quick Response) codes or bar codes with unique serial numbers – would be instantly available. Therefore, Geo-Coupon provides location-based coupon-demanding strategies which benefit both chain stores and consumers.

© ITRI

GNSS Living Lab Prize

Galileo Advanced INnovation Services (GAINS) // The FP7 project GAINS supports the GNSS Living Lab Prize, aiming at facilitating the emergence of user-driven open innovation demand for services and applications enabled by satellite navigation technologies. The living labs are grouped under the European Network of Living Labs (ENoLL), launched in 2006 by the EU Finnish presidency. The network offers open innovation methodologies and techniques in the product development life cycle. 274 living lab sites are operational in different domains, spanning from eHealth to energy optimisation and efficiency, from intelligent mobility to inclusion of the elderly people and rural development.

Anwendungszentrum GmbH
Oberpfaffenhofen
Friedrichshafener Straße 1
82205 Gilching, Germany

Ms Ulrike Daniels
+49 8105 77 2 77 14
daniels@anwendungszentrum.de
www.anwendungszentrum.de

ESNC 2011
GNSS Living Lab Prize
supported by GAINS

TIMEWISE

Dr Antonio Pujante Cuadrupani
project@panamnav.com | www.panamnav.com

TIMEWISE® by PanamNav

PanamNav.com

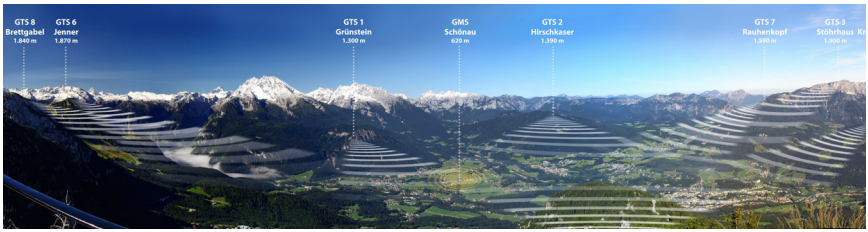
TIMEWISE is an elegant and effective method and technology to authenticate time references obtained from GNSS systems. TIMEWISE validates GNSS signals by creating a unique US4D "fingerprint" of time from the signals received. TIMEWISE provides protection to critical infrastructures and key economic sectors that nowadays rely on GNSS receivers for synchronisation:

- Banking services
- Insurance services
- Telecommunication networks
- Energy distribution networks
- Oil pipelines
- Commodity suppliers (water, gas, etc.)

In these sectors, an outage can provoke losses of millions of Euros. TIMEWISE is capable of detecting any JSM event (Jamming/Spoofing/Meaconing) in real time, and immediately reporting it to a control centre. The system can trigger mitigation actions and is capable of operating autonomously during an emergency. TIMEWISE has global market potential, as it uses GNSS signals, which cover the entire surface of the planet. TIMEWISE is based on the PanamNav featured PIA concept: PNT, Integrity, and Authentication.

© PanamNav

NavCert / IFEN: GATE Prize



NavCert/IFEN // TÜV SÜD is one of the leading technical service providers worldwide. More than 16,000 process consultants provide their customers with certainty and added value in more than 600 locations worldwide. Within TÜV SÜD, NavCert provides certification and consulting concerning positioning and timing.

IFEN GmbH is a leading provider of GNSS test solutions and services. IFEN's portfolio includes GNSS RF signal generators, software receivers, test ranges, as well as simulation and data processing tools.

NavCert GmbH
Ridlerstraße 65
80339 München
Germany

Mr Martin Grzebellus
+49 89 5008 45 45
martin.grzebellus@tuev-sued.de
www.navcert.de

NavCert IFEN GmbH

NAVIP – Navigation device for blind and Vision Impaired Persons

Jan Schindler | Matthias Wuest
jan.schindler@student.kit.edu

Karlsruhe Institute of Technology

Imagine a world in which all your senses play a vital role, except vision. You might have a friend who helps you find the way, or you might even have a dog to guide you. But what you do not have is complete freedom and independence. Our device will change that. Meeting someone in a restaurant, going to the doctor's, going to a musical, hiking in the Alps, or strolling along the beach will become a reality for you – without the help of others. Our revolutionary personal navigation device for vision impaired persons (NAVIP) will change the lives of millions of vision impaired people around the world, providing them with all the information they need to travel independently. Using Galileo, our device is able to harness the satellite navigation system's accuracy and reliability,

© Ottó Kálmán

bringing personal navigation systems to the next level. An integrated image processing unit will upgrade this device by combining outdoor and indoor navigation. This device is being developed by Jan Schindler (business engineering student at KIT) and Matthias Wuest (graduate from KIT).

University Challenge: Location-Based Services

© NAVTEQ

Anwendungszentrum GmbH Oberpfaffenhofen (AZO) // Location-based services are services or applications that make use of the user's geographical location. They have exploded in recent years in large part due to the advent of app stores, the ubiquitous availability of the internet and the growing sophistication of devices.

The ESNC University Challenge is carried out by Anwendungszentrum GmbH Oberpfaffenhofen (AZO) and supported by NAVTEQ, Awapatent AB, and the University FAF Munich. It connects innovative thinkers with the business community to pave the way from university to entrepreneurship.

Anwendungszentrum GmbH
Oberpfaffenhofen
Friedrichshafener Straße 1
82205 Gilching, Germany

Mr Andreas Dippelhofer
+49 8105 77 2 77 16
dippelhofer@anwendungszentrum.de
www.anwendungszentrum.de

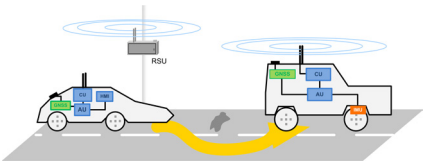
ESNC 2011
University Challenge
supported by NAVTEQ & AWAPATENT

Cooperative road damage evasion application

Fabian de Ponte Müller | Jonathan Brembeck | Bernhard Kloiber
fabian.pontemueller@dlr.de | www.dlr.de

The Cooperative Road Damage Evasion Application is a novel safety application that enables a vehicle to locally circumnavigate road damage (e.g. potholes) detected by other vehicles. Through special on-board sensors, a vehicle can detect this type of hazard. The exact geographic location of the pothole is pinpointed using accurate positioning technology, such as EGNOS/Galileo, or differential correction data from a Road Side Unit (RSU).

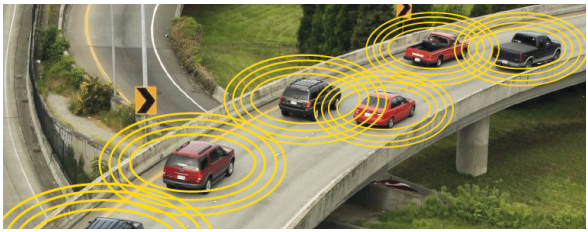
To communicate the hazard to other road participants, the application uses vehicle-to-vehicle communication based on existing WAVE/DSRC standards. Suitable protocols are used to distribute the notification among vehicles in a predefined region.



© DLR

Vehicles featuring WAVE/DSRC communication equipment will receive the notification and act appropriately, i.e. calculate an evasive manoeuvre, warn the driver through the vehicle's human machine interface (HMI), or autonomously circumnavigate the pothole.

ITRI: Connected Vehicle



Industrial Technology Research Institute (ITRI) // Taiwan's leading research institute for technology advancement is a not-for-profit R&D organisation financed equally by Taiwan's Ministry of Economic Affairs and national industry. Founded in 1973, ITRI functions as an incubator for Taiwan's industries. ITRI initiated a prototyping prize to integrate GNSS technology into WAVE/DSRC (Wireless Access in Vehicular Environments and Dedicated Short-Range Communications). The concept of this prize focuses on "connected vehicle", expecting to enable ESNC to inspire more innovative applications.

Industrial Technology Research Institute (ITRI)
Sec. 4, Chung Hsing Rd.
Chutung, Hsinchu
Taiwan, R.O.C.

Ms Ann Chung
+886 35 91 65 28
annchung@itri.org.tw
www.itri.org.tw

ITRI Industrial Technology Research Institute

A.L.I.V.E Global system – Agricultural Localisations In Vast Estate

Yann Desportes | Idrissa Magne | Hervé Merlini
contact@yades.eu

Vast multi activity agricultural estates cultivate various crops and/or rear livestock in outdoor husbandry systems (e.g. cattle, sheep, goats). Each of these farming activities requires the collection of specific data.

The A.L.I.V.E (Agricultural Localisations in Vast Estates) global system is a group of applications which will help managers and owners of vast agricultural and/or multi activity estates manage their green spaces and livestock efficiently. Equipped with a tablet device that is ergonomic, mobile, waterproof, shock-resistant, reliable, and easy to use, farmers will be able to locate their livestock and monitor the condition of the grazing land. The tablet device's display will show a faithful representation of the estate in question and include colour codes that will identify and locate animals and broken fences, as well as the areas which need to be sown, fertilised or irrigated. The device will even make it possible for the farmer to tell if an isolated animal is alive or not.

© Peter Galli / iStockphoto

Guided by a simple navigation system, farmers will have no trouble reaching specific locations on their estates.

Aquitaine / France

© Gilbert

TOPOS // Aquitaine, bordered by the Atlantic and the Pyrenees, offers a mix of economic dynamism, fascinating landscapes, and a cultural heritage that contributes to the success of entrepreneurial ideas. Aquitaine is a leading region in R&D investment; Aquitaine promotes start-ups in the avionics, aerospace, composites, and photonics sectors.

As a non-profit organisation, TOPOS facilitates partnerships, networking and collaborative activities in the GNSS market. Our members are groups, SMEs, research agencies, and regional institutions which focus on economic growth and the success of EGNOS/GALILEO projects.

HELILEO SA
553, Rue Bernard Palissy
Pôle Economique d'Agglomération
40990 Saint-Paul-lès-Dax, France

Mr Bernard Panefieu
+33 5 97 67 00
bernard.panefieu@helileo.com
www.helileo.com

iTrack21 dispatcher

Dr Hasan Fakhroo | Jawad Sabt | Ali Alaswad | Mustafa Ali
Mohammed Hubail | Ahmed Albosta | Munther Sabt | itrack21@icol.com

A car rental company will assign designated car parking spaces where customers can pick up or drop off rental cars. In theory, this could be any place where a car can be parked legally. First, the customer will need to register with the company and will be assigned a username and password, which can be used on a mobile application that will guide the customer to the nearest parked car available. The customer will then be able to use the mobile application as a "remote control", to unlock & mobilise the car through a secure data and command communication protocol between the smartphone, the control (dispatcher) workstation, and the tracking device. Payment for using the car can be made in any known form, such as pre-paid credit or by credit card. The tracking device will handle the security issues related to car usage;

© iCOL Plus

the company will be able to define restricted areas, where the car must not be used. If the car enters one of these areas, the system will warn the driver and, if necessary, stop the car. With an interface allowing navigation, the tracking device can also be used as a standard GNSS system.

Arab Middle East & North Africa (MENA)

Arab Science and Technology Foundation (ASTF) // ASTF is an independent, non-governmental, non-profit international organisation formed in April 2000 by a group of Arab scientists and engineers from all over the world. Its primary directive is to promote science and technology by supporting and facilitating scientific and technological innovation in the Arab Middle East and North Africa (MENA) region. ASTF serves as a mediator between those who conduct and develop scientific research and those who fund it, as well as those who benefit from it. At present, ASTF has branch offices in many Arab states.

c/o Astrium Satellites
Earth Observation, Navigation and Science
Gunnels Wood Road
Stevenage, SG1 2AS, United Kingdom

Dr Omar Al-Emam
+44 7887 82 63 33
omar.emam@astf.net
www.astf.net

NavRange – GNSS-based golfing system

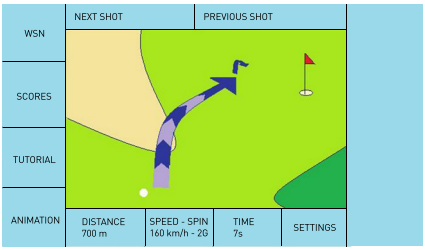
Venkatraman Ramkumar | venkat_ramkumar@msn.com

This idea is under patent application

NavRange is a GNSS-based golfing system which tracks and plots the speed, position, spin, bounce and flight of a ball in play. It then downloads all this information via NavRange software, using visual animations of the golf course and ball trajectory to allow the user to see in near real-time how the ball was hit. Scoring is also done automatically; with the possibility of uploading the results to the internet.

NavRange can also help players improve their game, by suggesting the right amount of power, spin and speed before they strike the ball for each shot.

Golf courses can also opt for a system capable of automatically retrieving the location and telemetrics of a ball, and sending it to golf administrators (important in tournaments). Via wireless internet or mobile internet standards the information can also be sent to players.



© Venkatraman Ramkumar

Australia

IGNSS Society // Australia is an advanced user of GNSS and was amongst the earliest adopters of GPS for mining, agriculture and civil engineering. Its large land mass and widely separated cities also make Australia a centre of innovation in the application of GNSS to long-haul sea, road, rail and air transport, and the country is well-placed to take advantage of the emergence of a system of systems based on multiple GNSS.

The IGNSS Society is a market-driven non-profit association providing services such as workshops, conferences, trade fairs and excellence awards programmes.

IGNSS Society Inc
PO Box 6026
Mitchelton Qld 4053
Australia

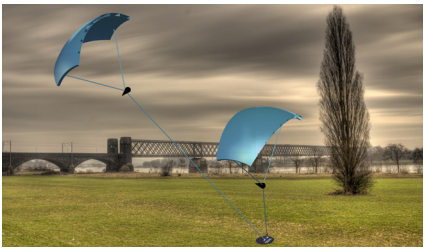
Ms Shannon Lockyer
+ 61 7 3355 6630
shannon@ignss.org
www.ignss.org

SkyAmps - energy solutions

Jens Rieder | Thomas Fischer | Andreas Poehlmann | Philip Kozlowski
Sören Burckardt | Simon Neipp | Julian Clamroth | Samir Krnjic
rieder.skyamps@googlemail.com | www.skyamps.de

SkyAmps is a wind power plant based on two kites pulling away from each other. The ropes of each kite are wrapped around a bar in opposite directions. The kites fly away from each other, pulling in different directions. One kite flies straight into the maximum power wind zone, whereas the second one pulls just as hard to support its own weight. As a consequence, the bar starts to rotate. A generator takes the enormous force a kite can create and turns it into electric energy.

Compared to standard wind power plants, the major advantage of this technology is that it can be used at high operating heights: after all, the higher you get, the stronger and the more constant the wind is. As a consequence, one kWh generated with SkyAmps can cost as little as € 0,02 – well below the standard price for green energy.



© SkyAmps

The obvious advantage SkyAmps offers over one-kite power plants is of course a better efficiency rate. SkyAmps loses only a tiny fraction of the power wasted by one-kite systems, which have to buffer electric energy to run an electric engine needed to pull down the kite. In a nutshell, SkyAmps is the ideal solution for a green energy mix!

Baden-Württemberg / Germany

© Manuela Weschke

IHK Reutlingen // Baden-Württemberg, the federal state in the South West of Germany and home to 11 mio inhabitants, is famous for its tourist highlights, such as the Black Forest and Lake Constance, its universities in Heidelberg, Freiburg, Karlsruhe, Constance, Stuttgart, Ulm, and Tübingen; as well as the companies Daimler, Porsche, SAP and Bosch. The state is known for its great writers like Friedrich Schiller and its people are known as „Tüftler", a term indicating a great enthusiasm for technical problems and their solution. Thanks to its open-minded spirit, Baden-Württemberg is ideally positioned to participate in the ESNC.

IHK Reutlingen
Hindenburgstr. 54
72762 Reutlingen
Germany

Dr Stefan Engelhard
+49 71 21 201 119
engelhard@reutlingen.ihk.de
www.reutlingen.ihk.de, www.galileo-masters-bw.de

Baden-Württemberg
WIRTSCHAFTSMINISTERIUM

YETI – Your Entertainment & Tracking Interface

Maciej Piotrowski | Michal Wojtysiak
mkwojtysiak@gmail.com

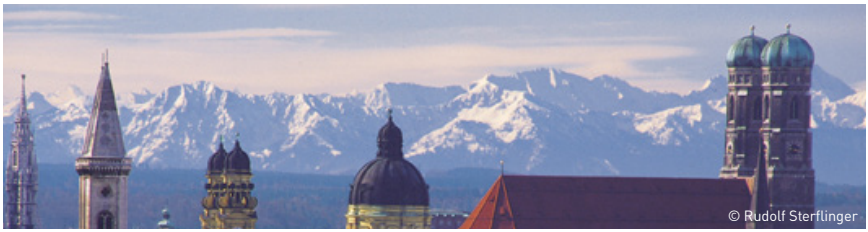
Imagine you go skiing in the mountains. Suddenly, you feel queasy or pass out and get injured. You need help, but help is not at hand... What if your smartphone could call for help – all by itself?

YETI snow solution is a system which can alert rescue teams or other skiers in multiple ways. Thanks to widespread access to GNSS services and many communication channels, there will be someone to provide instant assistance for you. Even if you are out of GSM range!

© Petr Kratochvil

Furthermore, to enhance YETI snow attractiveness (especially for younger generation), it offers a variety of entertainment services, such as workout tracking, single and multiplayer gaming. High interaction levels between users strengthen the sense of community. In a unique way, YETI combines virtual gaming and search & rescue services. All the user needs, is a smartphone with the YETI application installed.

Bavaria / Germany



© Rudolf Sterflinger

Anwendungszentrum GmbH Oberpfaffenhofen (AZO) // With over 35,000 jobs and a turnover of € 6.9 bn, the Bavarian aviation and space industry is the strongest in Germany. Since 2001, AZO has supported 60 start-ups, generating over 720 jobs. Since 2009, the ESA BIC Oberpfaffenhofen, run by AZO, has promoted aerospace technologies in Bavaria, incubating businesses in the field of satellite navigation. Due to its success, the ESA BIC Oberpfaffenhofen became the ESA BIC Bavaria in 2011, with branches in Nuremberg and Berchtesgadener Land. New partners are Fraunhofer IIS, Sparkasse Nürnberg, Economic Development Corporation Berchtesgadener Land, and Sparkasse Berchtesgadener Land.

Anwendungszentrum GmbH
Oberpfaffenhofen
Friedrichshafener Straße 1
82205 Gilching, Germany

Mr Andreas Dippelhofer
+49 8105 77 2 77 16
dippelhofer@anwendungszentrum.de
www.anwendungszentrum.de

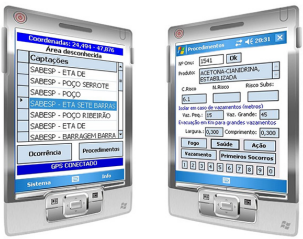
GeoCap – the management system for automotive accidents with hazardous cargo

Fábio Rodrigo de Oliveira | Arlei Benedito Macedo | Gilberto Cugler
Alex Joci dos Santos | Reginaldo de Souza Oliveira | fabio@sigrb.com.br

www.sigrb.com.br

The Management System for Automotive Accidents with Hazardous Cargo – GeoCap was developed on behalf of the Basin Committee of the Ribeira de Iguape River and the Southern Coast of São Paulo State, Brazil, with funding from the FEHIDRO – State Fund for Water Resources. It consists of a Geographic Information System with a central computer module and mobile modules, operated in handheld computers. A database associates the sub-basins of the rivers with stretches of paved roads, archives of hazardous materials, as well as water extraction points in the sub-basins and their operators.

GeoCap makes it possible for the Situation Room of the Administration of Basin Water Resources (in the Department of Water and Electric Energy), to interact with people present on the site of a traffic accident.



© SIGRB

The site of the accident is located via GPS; a GIS analysis of the database will identify any water extraction facilities at risk of contamination from the accident. Thus, the facilities' operators can be informed immediately.

Brazil

MundoGEO // Brazil, the world's 5th largest country in area and population and the 8th largest economy in nominal GDP, has won new international recognition through economic reforms. MundoGEO Publishing, created in 1998, has the mission of bringing together the geomatics and location-based services communities, those with experience in trade, professional updating, and business generation. It participates in creating and maintaining the Galileo Information Centre for Latin America (GICLA), and started work on the project Enhanced Code Galileo Receiver for Land Management in Brazil (ENCORE) in 2010.

Editora Mundo GEO Ltda
Rua Doutor Nelson Lins d'Albuquerque
110, Bom Retiro
80520-430, Curitiba, Paraná, Brazil

Mr Eduardo de Freitas Oliveira
+55 (41) 33 38 77 89
eduardo@mundogeo.com
www.mundogeo.com

RENEV - smart navigation aid for electric vehicle owner

Andreas Sisask | Luis Barragan | Andres Birnbaum | Lauri Kimmel | Rauno Ots
andres.birnbaum@logica.com | www.logica.com

RENEV is a smart phone application allowing electric vehicle (EV) users to reach destinations outside the battery range as cost and time-effectively as possible. Integrated with the EV battery management system and the charging stations, RENEV makes it easier for the EV user to select the stations and charging procedures most convenient for him.

The route is calculated and updated according to the current battery level. Charging stations are booked automatically, with all the relevant information (availability, time and cost of charge etc.) available online from the charging station infrastructure management system.

Apart from a smartphone, no additional devices are required. Navigation statistics can be used to find optimal sites for new charging stations or relocating the existing ones.

© 2011 Kaarel Kann

RENEV will contribute to the national and international efforts made to encourage EU citizens to buy electric cars. At the same time, it will help optimise the size of the charging infrastructure.

Estonia

© Steven Heap /iStockphoto

Enterprise Estonia (EAS) // Estonia is a small country located in the heart of the Baltic Sea Region. It is a country characterised by political and economic stability, as well as its low cost and ease of doing business. It belongs to the group of countries most integrated in EU structures. ESNC's partner Enterprise Estonia (EAS) promotes business, technology and regional development. EAS is the largest institution within the national support system for entrepreneurship, providing financial assistance, advisory services, cooperation opportunities, and training for entrepreneurs, research establishments, and the public and third sectors. EAS also acts as the National Space Office.

Enterprise Estonia (EAS)
Lasnamäe 2
11412 Tallinn
Estonia

Mr Urmas Uska
+372 6 27 97 01
urmas.uska@eas.ee
www.eas.ee

SWAREA - Safe Working AREA. Occupational risk management and in-situ geopositioning system

Paul Minguez Olaondo | paul.minguez@gmail.com

The SWAREA project uses a geo-referenced information system to help eliminate occupational risks. It combines online databases and Smartphone technologies with the Galileo system, providing employers and employees with a tool capable of warning them against potential dangers at work.

The system currently focuses on four processes: risk management, the coordination of activities, planning, and procedures management. Swarea is at the hub of these four processes and uses mobile technologies to make each of them more efficient.

Thus, if a worker enters a danger zone, their mobile phone will issue a warning and inform them of the risks and how to avoid them by taking appropriate action. On a construction site, e.g., the system will tell the worker about the dangers in a particular zone, which PPE (Personal Protection Equipment) they need, and where to find it. After accomplishing their task, the worker will take a validation photo to allow the system to record the changes.

© SWAREA

Gipuzkoa / Spain


© Iñigo Barandiaran

VICOMTECH TECHNOLOGY CENTER // Gipuzkoa has Spain's highest density of universities, research and technology centres. With a turnover of more than € 13 billion in 2009 and more than 10,000 highly qualified professionals working in industrial research and the aerospace, ICT, and automotive industries, this small region has become a hub of technology and innovation. The key to this success is an industrial framework that actively promotes research and enjoys the full support of the local public administration. Gipuzkoa is not only home to large integrators, but also to many other specialised SMEs covering the entire supply chain.

VICOMTECH TECHNOLOGY CENTER
c/ Mikeletegi Pasealekua 57
Parque Tecnologico Miramon
20009 San Sebastian, Spain

Dr Oihana Otaegui
+34 94 33 09 230
ootaegui@vicomtech.org
www.vicomtech.org

GIPUZKOA zurekin, aurrera

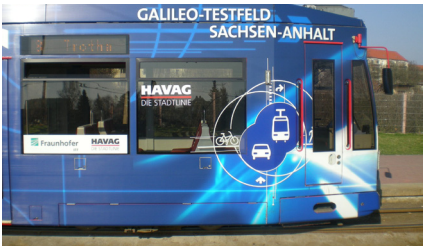
PTbox – an advanced positioning unit for the full spectrum of Public Transport operations

Dr Jörg Pfister | info@pwp-systems.de | www.pwp-systems.de

Electromobility and renewable energies play a pivotal role in preparing our society for the future. The best way to cut CO_2 emissions is to offer attractive Public Transport (PT) services. With the issue of sufficient energy supply already solved, tram systems are the most mature electric vehicles currently on the market.

pwp-systems GmbH has developed a robust positioning unit called "PTbox", which covers the full range of PT operations and aims to provide a complete positioning technology solution for PT. PTbox will be based on GPS, with EGNOS/EDAS as the main sensor and additional sensors on the vehicles.

GPS can already handle PT operations such as calculating the estimated time of arrival. However, more complex applications like transit signal priority or track sharp localisation have higher requirements. The PTbox has been designed to meet every requirement of PT. Feasibility tests on transit signal priority have shown that PTbox could offer improvements of up to 50% compared to conventional systems, thereby accelerating PT and also allowing for longer green periods for private car traffic.



© Hallesche Verkehrs AG

Hesse / Germany

Centre for Satellite Navigation Hesse (cesah) // The ESA Business Incubation Centre (BIC) Darmstadt is managed by cesah. Located in the vicinity of the European Space Operations Centre (ESOC), cesah supports the development and marketing of business ideas and start-up companies in the satellite navigation domain.

cesah is supported by Hessen-IT, a programme of the Hessian Ministry of Economic Affairs that supports the Hessian information and communication technology (ICT) sector in its market development, as well as SMEs in their efficient and creative use of ICT.

cesah GmbH
Robert-Bosch-Str. 7
64293 Darmstadt
Germany

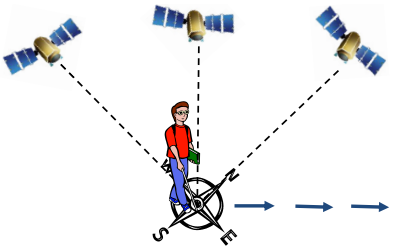
Dr Frank Zimmermann
+49 61 51 39 21 56 12
zimmermann@cesah.com
www.cesah.com

VIP-Is : Maps and LBSs for Visually Impaired People based on precise satellite navigation and tactile visualization

Igors Homjakovs | Vladimirs Homjakovs | Imad Maouli
igors.homjakovs@gmail.com

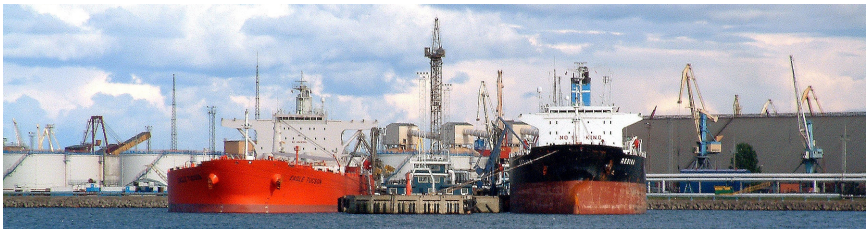
The proposed application, a navigation system, targets visually impaired people. It is based on precise satellite navigation and detailed tactile visualisation technologies. This system will give visually impaired people the information they need most – their exact location and that of their destination – as well as provide them with other LBS and emergency tracking services, in case someone gets lost.

The tactile navigation system is able to provide information on haptically complex patterns, such as roads, crossroads, buildings, shops, various major obstacles, etc. in places where directional pathways or tactile means of control are not available. Additionally, the system uses written language or synthesised speech for better and unconstrained navigation. The application is focusing on two key senses – hearing and touch – which are best trained in case of visually impaired people. In combination with precise GNSS data, this allows safe navigation even in previously unknown areas.



© VIP-Is

Latvia



Ventspils High Technology Park // Latvia has one of the most dynamic and fastest-growing economies in all of Europe. With its prime location as a transit hub for east-west trade, Latvia has become one of the most attractive countries for foreign investment. Meanwhile, Ventspils has become the Latvian centre for space technologies. The city is also one of the busiest ports in the Baltic Sea region and one of Europe's leading ports in terms of cargo turnover. Ventspils High Technology Park supports the development of high-tech companies and coordinates the Latvian Space Technologies Cluster.

Ventspils High Technology Park
9 Kaiju street
LV-3602 Ventspils
Latvia

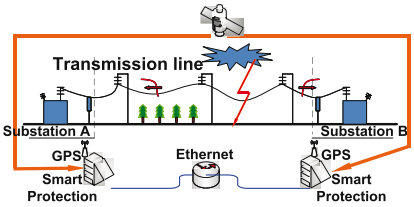
Ms Ieva Stumpe
+371 6363 04 35
ieva.stumpe@vhtp.lv
www.vhtp.lv

Traveling wave based differential transmission line protection

Dr Vytautas Siozinys | Dr Linas Markevicius
vytautas.siozinys@ktu.lt | www.ktu.lt

Electric power generation and consumption is a field that has seen a flurry of developments. The expansion of these technologies has created a need for protection and automation equipment to prevent grid faults, and thereby ensure a reliable energy supply.

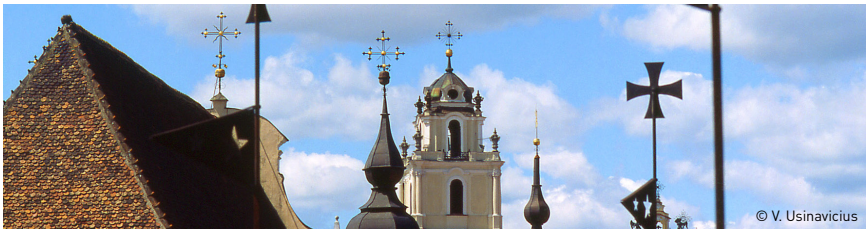
In the last decade, the world's electric power systems experienced several blackouts. Though the main reasons for these blackouts are known, technical progress is still lagging behind. Smart protection systems could ensure that electric power systems are not only developed, but also become more reliable. Smart protection systems use travelling-wave based technology. The proposed solution could offer considerably better protection against grid faults than conventional systems.



© Kaunas University of Technology (KTU)

Smart protections target transmission and distribution network operators all over the world. They could significantly improve electric power systems in terms of reliability, flexibility, stability margins, equipment availability, and lifetime.

Lithuania


© V. Usinavicius

Agency for Science, Innovation and Technology (MITA) // Lithuania, situated on the East coast of the Baltic Sea, boasts a rich history, unique traditions, Eastern Europe's oldest university, a highly educated workforce, and the highest mobile-phone penetration and densest broadband internet coverage in Europe. Lithuania promotes R&D in biotech, lasers, ICT, nanotech, mechatronics & electronics. The Ministry of Economy of the Republic of Lithuania is responsible for developing a legal and economic framework boosting economic development; it ensures public welfare and employment. Its tasks include the promotion of innovation, SME development, the administration of EU structural funds, the country's space policy, etc.

Agency for Science, Innovation and Technology
A. Gostauto 12-219
LT-01108 Vilnius
Lithuania

Dr Viktoras Mongirdas
+370 5 264 47 04
viktoras.mongirdas@mita.lt
www.mita.lt

Interference-free GNSS receiver (IFRX) and signal analysis tool

Michele Bavaro | mbavaro@onetalent-gnss.com | www.onetalent-gnss.com

It is easy to anticipate that it will be necessary to move to a higher number of bits in the quantisation process; both for the professional and the consumer domains. Since a GNSS receiver uses more bits in the sampling process, it resembles a general-purpose DSP with fixed arithmetic. At eight bits, it is questionable whether using silicon to perform GPS correlation offers an actual advantage over using a flexible software implementation on a general-purpose DSP.

The solution proposed uses a low-cost architecture in which a small FPGA is in charge of performing raw signal monitoring and conditioning (e.g. frequency analysis/filtering), to combat in-band power jamming. An embedded CPU runs a software receiver with at least eight bits and addresses more clever techniques of interference (e.g. spoofing/meaconing). Such an instrument should be equipped with a wireless modem to support online updates. It would be an ideal candidate receiver for security-critical applications, but could also function as an interference characterisation tool.

© One Talent GNSS / Elisa Bertini

Lombardy / Italy

© huzur / iStockphoto

Navigate Consortium // The ENSC is organised by the Navigate Consortium and sponsored by the Italian Space Agency (ASI), which was set up in 1988 to coordinate and manage all of Italy's national space activities. With 22.2% of the country's total GDP, the Lombardy region is Italy's leading region in terms of innovation, boasting a strong research and innovation infrastructure (with 12 universities and private R&D centres), abundant human capital and knowledge, and a strong presence of industry. The region, with its capital Milan, is also home to several leading national aerospace companies.

Navigate Consortium
Via Soperga 39
20127 Milano
Italy

Mr Maurizio Fargnoli
+39 22 68 26 465
maurizio.fargnoli@navigateconsortium.it
www.navigateconsortium.it

RegioneLombardia

Toddler care in rural areas

Tibor Török | András Kuba | tibor.torok@h-lab.eu | www.h-lab.eu

Families living in rural areas, especially on isolated farms, often face difficulties when welcoming newborns into the world. With the nearest clinic or paediatric surgery often far away, babies are only taken to the doctor's, when they require urgent treatment.

The new Toddler Monitoring System allows parents to share critical information on their babies with their paediatricians online. The hub of the system is a tablet PC capable of using integrated GPS and a 3G modem to pass on relevant information, including:

- Height, weight
- Temperature (baby / environment)
- Photos of rashes and other symptoms
- Videos of abnormal baby behaviour
- Audio recordings (coughing, crying)

The system also allows parents to make appointments with the paediatrician (vaccinations, etc.). By accessing a central website, doctors will be able to view all the information sent by the parents. Whenever it is necessary for doctors and social care workers to visit families, they can use the GPS signals of their tablet PCs to find the shortest route, even to several families in a row.

© h-lab / Ádám Végh

Macedonia

© tunart / iStockphoto

Agency for Electronic Communication of Macedonia (AEC) // Macedonia is a country located on the central Balkan Peninsula in southeastern Europe and has a strong electronic communication services industry. AEC was established in July 2005 as an autonomous, independent national regulatory authority and aims to create favourable conditions for adequate and sustainable competition on the electronic communications market, thereby serving the interests of users, the business community and the communications industry through an effective, transparent, proportionate, and proactive application of the regulatory tools.

Agency for Electronic Communications
13, Dimitrie Cupovski Street
1000 Skopje
Republic of Macedonia

+389 2 32 89 200
contact@aec.mk
www.aek.mk

Europe-wide cloud based machine-to-machine (m2m) service gateway for small and medium enterprises

Leon Sagovac | Boran Loncaric | leon.sagovac@gisdata.com | www.gdisys.com

Businesses are increasingly looking for ready-made and easy-to-use services managed by trustworthy companies offering reliable, high-quality services at a reasonable price. Cloud computing is an emerging technology and business model which lays the foundation for innovative services. The use of cloud services in conjunction with other technologies, such as satellite positioning, mobile communications and sensors, creates a new value chain ready to be explored and commercialised. A Europe-wide, cloud-based, machine-to-machine (m2m) service gateway for small and medium enterprises could leverage cloud computing and provide Infrastructure as a Service (IaaS), line-of-business applications, Software as a Service (SaaS), and an application development Platform as a Service (PaaS) that could be used by developers to deliver custom applications, or integrate data directly into corporate and private clouds. The portfolio of applications includes: fleet management, transportation planning, workforce tracking, salesforce tracking, office time tracking and remote video surveillance.

© Edelweiss / iStockphoto

Medjimurje / Croatia

REDEA / TIC // Medjimurje is the northernmost county in Croatia, famous for its entrepreneurial tradition, favourable business environment, as well as committed and innovative people. Hence the vision of Medjimurje's future as the county of strong entrepreneurship based on knowledge and innovation, preserved natural and cultural heritage and high quality of life. REDEA/TIC is best described by five maxims: (1) people are the key to success; (2) teamwork is the main principle of our work; (3) community welfare is our purpose; (4) partnership with all our stakeholders assures the achievement of our goals; (5) the protection of natural resources is crucial in all our activities.

Regional Development Agency
Medjimurje – REDEA Ltd.
Bana J. Jelacica 22
40000 Cakovec, Croatia

Mr Bojan Pecnik
+385 99 255 4179
bojan.pecnik@redea.hr
www.redea.hr

QuakeUP: Innovative technology on mobile networks to reduce the magnitude of earthquake disasters

Pierre-Marie Sarant | Gérard Ayache | Eric Seuillet | Olivier Schick
pmsarant@quakeup.net | www.quakeup.net

QuakeUp™ is a centric user application issued by humanitarian experts to recognise patterns in seismic waves. QuakeUp™ is a smartphone application that can save lives by empowering people in earthquake areas; turning them into in situ "human sensors", and providing them with instantaneous early warnings, so they can take appropriate action.

In the aftermath of an earthquake, QuakeUp™ helps locate victims in the rubble, and allows the people in the affected area to share precise, geolocalised data with rescue teams, via mobile radio systems (PMR), and ad hoc networks. Relying on current NavSat systems, QuakeUp™ offers global reach throughout all earthquake areas worldwide; as well as high speed, top precision, and maximum indoor/rubble penetration – key assets which could be further enhanced by the use of EGNOS and Galileo.

© 2011 QuakeUp

QuakeUp™ is being developed in a Living Labs environment to ensure it is fully functional for use in acute and evolving emergencies, and benefits from the latest technologies available.

Nice-Sophia Antipolis / France

Team Côte d'Azur // The Côte d'Azur is the „French Wireless Region" and home to the Sophia Antipolis technology park (1,300 multinational companies, SMEs, labs, and international institutes representing 30,000 employees from 68 different countries). In Cannes, an important space sector has emerged thanks to the presence of Thales Alenia Space.

Team Côte d'Azur and the regional public incubator IPE co-organise the regional competition. A member of ESINET (the European Space Incubator Network), Incubator Paca-Est has contributed to the foundation of 73 successful companies since 2001.

TEAM CÔTE D'AZUR
400, Promenade des Anglais
06204 Nice Cedex 3
France

Mr Jean-Francois Chapperon
+33 49 21 75 158
jfchapperon@teamcotedazur.fr
www.investincotedazur.com

Turf Hunt games and smart guides everywhere

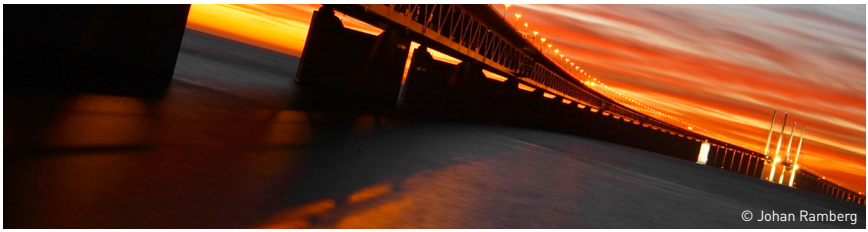
Leifur Björnsson | Steinunn Anna Gunnlaugsdóttir | steinunn@locatify.com

Locatify Ltd. is a service provider for technology and platforms, allowing our partners in the field of tourism, education, and entertainment to publish their location-aware content on smart devices. Locatify has already released its SmartGuide technology, using GPS location data and augmented reality to offer guided audio tours with pictures and maps. Locatify is now extending this platform to create a treasure hunt game.

The platform makes it possible to design and publish guides and treasure hunt games to be enjoyed on location, via smartphones. The games, which use GPS, 3G, and maps, are designed as real-time, competitive treasure hunts to be played by teams. They involve problem solving and exploration activities, finding treasures, and playing mini-games; with the game mechanics also including virtual game items. The system's design tools are suitable for amateur and professional designers alike. They can create and publish their material on smartphones and pads. The system will be available to all game and tour designers, wherever they want to create, edit, and publish guided tours and treasure hunt games.

© Locatify

Øresund / Denmark & Sweden



© Johan Ramberg

Cluster 55° // Linking the south of Sweden and the Copenhagen area of Denmark, the Øresund region delivers unique value by combining the best of the Swedish and Danish systems. The region has one of the densest ICT concentrations in Europe, with over 100,000 workers, 12,000 companies, 8,000 students at 12 universities, and about 6,000 researchers. The region has a long tradition of advanced ICT solutions, including satellite navigation applications and research. Through its network, Cluster 55° cooperates closely with, for instance, satellite navigation clusters, a large number of companies, as well as various universities and research institutes in these fields.

Cluster 55°
MINC, Anckargripsgatan 3
SE-211 19 Malmö
Sweden

Mr Micael Gustafsson
+46 736 993 601
micael@cluster55.org
www.cluster55.org

CLUSTER 55°
ICT ØRESUND

MEFID - the miniature electronic unit for remote detecting epileptic seizures of children

Vladimír Vejvoda | vejvoda@princip.cz | www.princip.cz

The Mobile Epileptic Fit Detector (MEFID) is a mini-sized, mobile, remote unit that can rapidly detect signs of an imminent epileptic attack in children patients, and thus help save their lives.

Measuring and collecting data, which is then processed by artificial intelligent algorithms, is essential both for a reliable diagnostic of epileptic seizures, and the therapy of affected children. MEFID is equipped with GNSS and GSM sensors, along with other kinetic body sensors (3 axes gyro, accelerometers etc.), which allow a precise monitoring of the patient. Thanks to our kinetic development, MEFID is able to recognise very early symptoms of an epileptic attack, and will immediately inform the respective medical centre about the type of cramp and the intensity of the seizure. The design has been adapted to match the ordinary life-styles of very young patients, even newborns. The result is a shock resistant, waterproof device with an all-day battery life. Currently, prototypes of the device are being tested at the best Czech medical institutions: Charles University - Department of Child neurology and Teaching hospital in Motol, Prague.

© PRINCIP a.s.

Prague / Czech Republic

The Ministry of Transport of the Czech Republic // The Czech Ministry of Transport has a mandate given by the Czech Government to coordinate all space activities in the Czech Republic. It is responsible for Czech membership in the European Space Agency, EU space policy, satellite navigation development, space applications and partnership with the European GNSS Agency (GSA). It also acts as a point of contact for the Galileo programme.

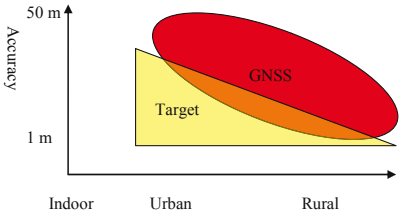
Ministry of Transport of the Czech Republic
nabr. Ludvika Svobody 12
11015 Praha 1
Czech Republic

Dr Václav Kobera
+42 (0) 22 51 31 324
vaclav.kobera@mdcr.cz
www.mdcr.cz/en

Integrated sensor solutions for reliable precise positioning in challenging environments

Peter Buist | p.j.buist@tudelft.nl

Currently, there is a large demand from mobile applications for precise and reliable positioning. Whereas technologies for GNSS-based precise positioning are already available for other applications, this is not the case for more challenging applications, e.g. mobile devices used by pedestrians and vehicles moving in an urban environment. The figure illustrates by how much the accuracy of the positioning decreases when a user moves from a rural to an urban environment, or even indoors, where GNSS becomes unavailable. As shown in the figure, the positioning results achieved by solely relying on GNSS signals in an urban environment are often as inaccurate as several dozen metres, or worse. The solution to this is to integrate GNSS with other sensors, such as accelerometers, gyroscopes and magnetic sensors,



in order to take advantage of each sensor's strong points. The latest smartphones on the market have not yet been able to provide the high levels of accuracy, reliability, and availability required by the more advanced applications. With our innovative solutions on sensor integration, the error envelope for users can be significantly reduced – even in challenging environments.

South Holland / The Netherlands

Kennisalliantie // Zuid-Holland, the most densely populated Dutch province, is home to various centres of knowledge and expertise, the universities in Leiden, Delft and Rotterdam, the TNO research laboratories, innovation centres, and the European Space Research and Technology Centre. Kennisalliantie, organiser of the Dutch Challenge, aims to establish innovative projects and programmes, and to create networks by matching experts from research, education, government and entrepreneurship. The Dutch Challenge is supported by Logica, the Netherlands Space Office, the ESA Business Incubation Centre, Lencon Engineering and the TU Delft Center for Entrepreneurship.

Kennisalliantie
Crommelinplein 1
2627 BM Delft
The Netherlands

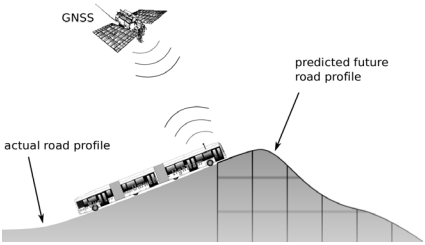
Mr Peter Tettelaar
+31 (0) 15 28 40 487
info@esnc.nl
www.esnc.nl

AHEAD - a predictive energy management for hybrid electric buses in public transportation

Philipp Elbert | Hans-Jörg Gisler | Prof Lino Guzzella
elbertp@ethz.ch | www.ahead.ethz.ch

This project aims to minimise CO_2 emissions of hybrid-electric buses used in public transport. In hybrid buses, the level of CO_2 emissions greatly depends on the energy management system regulating the power split between the battery and the engine. Simulations show that a hybrid-electric bus with a good standard strategy emits 15-20% less CO_2 than an equally sized diesel bus. However, the bus could potentially achieve savings of as much as 25-30%. So what is the problem with the standard strategy? The answer is that it cannot factor in future events, which leads to efficiency being compromised.

We have developed a new predictive strategy that uses a GNSS sensor to determine the exact position of the vehicle, which in turn allows us to factor in information on the elevation profile further ahead. This is possible, because buses used in public transport typically follow predefined routes. Simulations have shown that with our new predictive strategy hybrid busses would emit 25-30% less CO_2 than a comparable diesel bus. Thus, our new predictive strategy helps cut CO_2 emissions of hybrid-electric buses by 5-15%.



sponsored by KTI

Switzerland

swiss aerospace cluster // The swiss aerospace cluster is an agile network and non-profit organisation for pooling information across companies and organisations, thereby increasing development potential and promoting innovative products. Switzerland ranks first among 125 economies in terms of innovation levels (Global Innovation Index 2011). The cluster's members include academic and research organisations, as well as companies in the field of aerospace technologies, such as satellite navigation. The cluster supports access to attractive future markets and boosts the competitiveness of the industry and research in Switzerland.

swiss aerospace cluster
Sagirain 25
CH-6404 Greppen / Lucerne
Switzerland

Mr Michel Jaquet
+41 41 390 37 24
info@swiss-aerospace-cluster.ch
www.swiss-aerospace-cluster.ch

Device-based distributed taxi-dispatching using GPS/GNSS and short-range communications

Frank Chee-Da Tsai | ftsai@iii.org.tw

財團法人資訊工業策進會
INSTITUTE FOR INFORMATION INDUSTRY

75% of the time, taxis in Taipei city do not carry passengers. The current taxi dispatch system is set up using a centralized call centre, matching passengers and taxis. It is often understaffed, which results in long waiting times and low service levels. However, hiring more staff would drive up the costs. Calling a taxi takes an average of 356 seconds and is quite expensive for the passengers, due to high mobile phone charges. To conserve energy, reduce pollution, lower costs, and save time for taxis and passengers, we propose an innovative „Passenger as Call-Centre" dispatch system.

Based on devices with GNSS and Wifi/DSRC, the proposed system operates in a distributed and "local" way; meaning only nearby taxies will respond to a passenger's service request. The system thereby eliminates the need for the traffic-heavy and costly cellular networks, labour intensive call centres, and expensive CIS data centres used in the current dispatch system. Based on commercially available technologies and fully equipped with patent protection, a tested prototype, and a financially feasible business model, the new system comes ready to be deployed – without any regulation restrictions.

© Rouzes / iStockphoto

Taipei / Taiwan

Industrial Technology Research Institute (ITRI) // Taiwan - also known as Formosa, Portuguese for „beautiful island" - is located near the southeastern coast of China. Although small in size, Taiwan's pivotal geographic location and excellent infrastructure offer an optimal strategic transit point for multinational companies seeking to enter the Asian market. With innovative management and an extraordinarily strong backbone of SMEs, Taiwan became a knowledge-based economy in the 1990s. Today, Taiwan is becoming a key player in semiconductors, electronics, and terminal devices, and one of the largest manufacturers of GNSS products.

Industrial Technology Research Institute (ITRI)
Sec. 4, Chung Hsing Rd.
Chutung, Hsinchu
Taiwan, R.O.C

Ms Wendy Tsai
+886 35 91 27 41
wendy_tsai@itri.org.tw
www.itri.org.tw

Accident Assessor - Car Accident Reporting Application

Mark Habgood | Mark Dimond | Rob Mitchelmore | Colin Williamson
mark.habgood@instantvue.com | www.instantvue.com

The car accident reporting application aims to assist in the aftermath of a traffic accident, by fusing digital photography and geo-positioning with access to secondary datasets to gather the required insurance documentation. Its primary purpose is to reduce stress on the unfortunate victims involved in traffic accidents. The mobile application guides the user through the process of obtaining a positioning fix, taking photographs of the licence plates of all vehicles involved, and other useful images, prompts the user for textual information on the other parties involved, and uploads the information for safekeeping. The application helps users forward the information to their insurance company for initial assessment and can be used to help complete the accident report later in a more comfortable environment. Knowledge of the geolocation data will allow the weather and traffic conditions at the time and place of the accident to be gathered from historical data. Automatic number plate recognition can be used to confirm the make, model and colour of the vehicles involved.

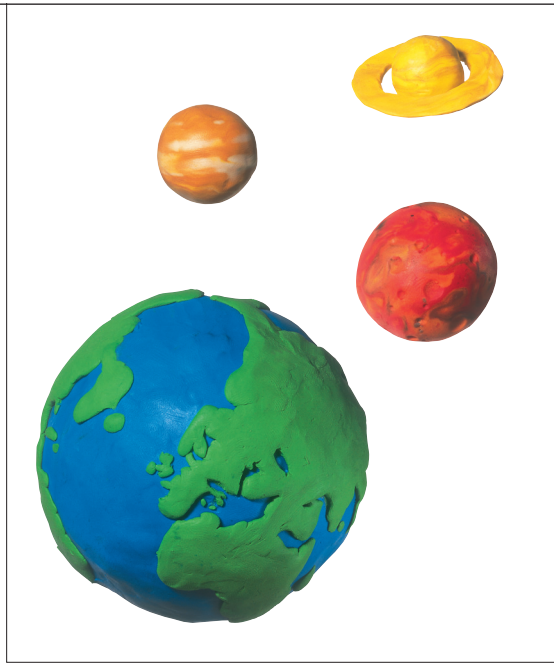
© Daniel Bujack / fotolia

United Kingdom & Ireland

GRACE // GRACE is an internationally recognised centre of excellence focusing on downstream satellite navigation technologies and applications. It enables the GNSS community to develop world-class products and services and provides access to state of the art testing facilities, including a mobile laboratory, a roof-based test-track, GNSS simulators, and an RTK test-bed. GRACE combines the globally renowned research and high-calibre teaching of the University of Nottingham's Nottingham Geospatial Institute which provides research, training and other support for industry, including SMEs and start-ups.

GNSS Research & Applications
Centre of Excellence (GRACE)
University of Nottingham Innovation Park
Triumph Road Nottingham NG7 2TU, UK

Mr Douglas Watson
+44 (0) 115 714 3888
douglas.watson@grace.ac.uk
www.grace.ac.uk



Choose certainty.
Add value.

www.tuev-sued.com

The future belongs to internationality

and even today, internationality can give you a major competitive edge. By working with TÜV SÜD, you stand to gain a partner with a presence in 600 locations worldwide and in all the most important centres of commerce. For us, sustainability is not just a buzzword, but a daily challenge which we meet responsibly, supporting our customers as process partners with our well-founded expertise and extensive experience. Investing in a cooperation with us means added-value for you.

Let's work towards a brighter future!

TÜV SÜD AG • Westendstr. 199 • 80686 Munich • Germany
Phone: +49 89 5791-0 • e-mail: info@tuev-sued.com

TÜV®

Aquitaine / France	**Bernard Panefieu** // TOPOS AQUITAINE, HELILEO **André Perpey** // TOPOS AQUITAINE, GEOLOC SYSTEMS	
Arab MENA	**Dr Omar Al-Emam** // Arab Science and Technology Foundation **Abdul Aal Awad** // Gulf Group Company **Prof Ali Al-Mashat** // International Space University (ISU) **Prof Hussain Al-Rizzo** // University of Arkansas at Little Rock **Afif Barhoumi** // UNIDO **Mohamed Elkady** // Arab Aeronautical Association (AAA)	
Australia	**Matt Higgins** // IGNSS Society **Rob Lorimer** // CSIRO **Prof Chris Rizos** // University of New South Wales	
Baden-Württemberg / Germany	**Prof Rolf-Jürgen Ahlers** // Forum Luft- und Raumfahrt BW e.V. **Dr Stefan Engelhard** // Industrie- und Handelskammer Reutlingen **Dieter Geiger** // Siemens AG **Prof Dieter Fritsch** // Universität Stuttgart **Ralph Zimmermann** // Wirtschaftsministerium Baden-Württemberg **Prof Marius Zöllner** // FZI Forschungszentrum Informatik	
Bavaria / Germany	**Katja Popp** // Pittoresque **Prof Werner Enderle** // European Space Agency (ESA) **Joseph Kolbinger** // Kolbinger Consulting **Korbinian Kopf** // Maiwald Patentanwalts GmbH **Dr Cécile Mongrédien** // Fraunhofer IIS **Dr Stephan Oertelt** // BMW Group **Dr Günter Rohmer** // Fraunhofer IIS **Bernhard Sterzbach** // GPP AG	
Brazil	**Emerson Granemann** // MundoGeo **João Galera Monico** // FCT-UNESP **Claudia Krueger** // DGEOM, UFPR	
Catalonia / Spain	**Pepa Sedó** // CTAE **Jordi Àrias** // ACC1Ó **Jordi Corbera** // Institut Cartogràfic de Catalunya **Prof Juan A. Fernandez Rubio** // UPC **Marti Jofre** // CTAE **Pedro Linares** // Abertis Telecom	

	Laura Sarrión // Ajuntament de Terrassa	
	Prof Gonzalo Seco // UAB	
Estonia	**Madis Vooras** // Enterprise Estonia	
	Tea Danilov // Ministry of Economic Affairs and Communications	
	Alar Kolk // NycoSat	
	Kristo Reinsalu // Invent Baltics	
	Urmas Uska // Enterprise Estonia	
Gipuzkoa / Spain	**Oihana Otaegui** // Vicomtech-IK4	
	Dr Estibaliz Loyo // Vicomtech-IK4	
	Jesus Marcos // Tecnalia	
	Pedro Sanchez // IKUSI	
Hesse / Germany	**Dr Frank Zimmermann** // cesah GmbH	
	Prof Dr-Ing Matthias Becker // TU Darmstadt	
	Prof Dr Werner Enderle // European Space Agency (ESA)	
	Arne Jungstand // Steinbeis Transfer Centre for Navigation	
	Prof Dr-Ing Uwe Klingauf // TU Darmstadt	
	Wolfgang Kniejski // INI-Novation GmbH	
	John Lewis // VEGA Space GmbH	
Latvia	**Ieva Stumpe** // Ventspils High Technology Park (VHTP)	
	Pauls Irbins // Vidzeme Science Center	
	Kaspars Kalniņš // Riga Technical University	
	Dana Reizniece-Ozola // Ministry of Transport	
	Salvis Roga // Ventspils High Technology Park, Business Incubator	
Lithuania	**Vidmantas Tomkus** // Lithuanian Space Association	
	Arunas Berzinskas // Agency for Science, Innovation and Technology	
	Algimantas Kajackas // Vilnius Gediminas Technical University	
	Romualdas Kalytis // Ministry of Economy	
	Pranas Bernardas Milius // KTU Regional Science Park	
	Tadas Tumenas // Ministry of Economy	
	Egidijus Rytas Vaidogas // Vilnius Gediminas Technical University	
Lombardy / Italy	**Maurizio Fargnoli** // Navigate Consortium, Techsema	
	Antonio Bianco // Navigate Consortium	
	Mario Caporale // Italian Space Agency (ASI)	
	Alberto Tuozzi // Italian Space Agency (ASI)	

Macedonia	**Jean-Claude Dardelet** // THALES ALENIA SPACE **Prof Dr Alain Geiger** // Swiss Federal Institute of Technology (ETH) **Robert Klarner** // German Aerospace Center (DLR) **Dr Frank Zimmermann** // cesah GmbH	
Medjimurje / Croatia	**Bojan Pecnik** // REDEA Ltd. **Damir Kolmanic** // GISDATA **Matija Derk** // REDEA Ltd. **Robert Slavecki** // Croatian Angel Investor Network (CRANE.hr)	
Nice-Sophia Antipolis / France	**Jean-Claude Dardelet** // THALES ALENIA SPACE **Marc Barret** // INRIA **Patricia Braun** // Telecom ParisTech Entrepreneur **Loïc Chanvillard** // Pôle Pegase **Jean-François Chapperon** // Team Côte d'Azur **Olivier Chavrier** // Pole SCS **Eric Descheres** / KAPSYS **André Labat** // INCUBATEUR PACA-EST **Lionel Laurore** // GEOIMAGE **Ezio Malis** // ROBOCORTEX **Juliette Marais** // IFSTTAR-INRETS LEOST **Farouk Rais** // Fondation Sophia Antipolis	
Øresund / Denmark & Sweden	**Micael Gustafsson** // Cluster55 **Magnus Persson** // Sony Ericsson **Gustaf Särner** // Awapatent **Frode Thorsén** // Mobile Heights **Helena Wiedling Fernandes** // Cluster55	
Prague / Czech Republic	**Martin Pichl** // Ministry of Transport of the Czech Republic **Prof Dr Václav Cempírek** // University of Pardubice **Dr Václav Kobera** // Ministry of Transport of the Czech Republic **Dr Petr Pánek** // Academy of Sciences of the Czech Republic **Dr Petr Rapant** // VSB - Technical University of Ostrava **Prof Dr František Vejražka** // Czech Technical University in Prague	
South Holland / The Netherlands	**Peter Reffeltrath** // Kennisalliantie **Ferdi de Bruijn** // REMOOD	

	Toon Budding // ESA Business Incubation Centre
	Jeroen Glazener // NSO
	Marcel Jansen // Lencon
	Bernard Katzy // Cetim
	Arjen Mozes // Logica
	Peter Tettelaar // Kennisalliantie
Switzerland	**Prof Dr Alain Geiger** // Swiss Federal Institute of Technology (ETH)
	Dr Urs Althaus // ams management services GmbH
	Prof Dr Heinz Mathis // HSR Hochschule für Technik
Taipei / Taiwan	**Dr Chih-Kung Lee** // Institute for Information Industry (III)
	Dr Ching-Yao Chan // California PATH, UC Berkeley
	Dr Wen-Hsin Chan // DoIT, Ministry of Economic Affairs (MOEA)
	Masao Fukushima // Nissan Motor Co., Ltd.
	Dr Yong-Chie Heng // ITRI International Center (IIC)
	Dr Sheng-Tsung Hou // Feng Chia University
	Jimmy Huang // EverMore Technology Inc.
	Dr Herb Lin // Industrial Technology Investment Corporation
	Dr Frank C.C. Lin // SanYang Industry Co.
	Dr Chao-Cheng Lee // Realtek Semiconductor Corp.
	Dr Shih-Jong Su // Taiwan Private Equity & Venture Capital Association
	Dr Shiaw-Shian Yu // ICL, ITRI
United Kingdom & Ireland	**Stuart Martin** // Logica
	Martin Ditter // European Space Agency (ESA)
	Andrew German // EADS Astrium
	Tim Just // Technology Strategy Board
	Dr Peter Allan // STFC
	Prof Terry Moore // University of Nottingham
	Ann Sta // United Kingdom Space Agency
USA	**Neil Gerein** // NovAtel
	Glen Gibbons // Inside GNSS magazine
	Hans Kunze // KLA Global
	Dr John Raquet // Air Force Institute of Technology
	Doug Taggart // Overlook Systems Technology
	Dr Todd Walter // Stanford University

GSA	**Carmen Aguilera** // European GNSS Agency (GSA)	
	Hans de With // European GNSS Agency (GSA)	
	Marco Detratti // European GNSS Agency (GSA)	
	Philippe Hamet // European Commission	
	Boris Kennes // European GNSS Agency (GSA)	
ESA	**Bruno Naulais** // European Space Agency (ESA)	
	Koen Debeule // European Space Agency (ESA)	
	Niels Eldering // European Space Agency (ESA)	
	Bernd Geiger // Triangle Venture Capital Group	
	Herve Joumier // European Space Agency (ESA)	
	Rob Postema // European Space Agency (ESA)	
	Javier Ventura Traveset // European Space Agency (ESA)	
DLR	**Robert Klarner** // German Aerospace Center (DLR)	
	Dr Rolf-Dieter Fischer // German Aerospace Center (DLR)	
	Dr Michael Meurer // German Aerospace Center (DLR)	
	Walter Päffgen // GfR Gesellschaft für Raumfahrtanwendungen (GfR)	
	Dr Klaus-Dieter Rockwitz // German Aerospace Center (DLR)	
	Dr Michael Suppa // German Aerospace Center (DLR)	
	Dr Ulrich Theis // German Aerospace Center (DLR)	
NAVTEQ	**Pia Vuohelainen** // NAVTEQ	
	Anwar Ahmed // NAVTEQ	
	Martin Desrosiers // NAVTEQ	
	Franck Gaget // NAVTEQ	
	Matt Ivey // NAVTEQ	
	David Ko // NAVTEQ	
	Dieter Lange // NAVTEQ	
	Hugues Mandoul // NAVTEQ	
	Torben Meyer // NAVTEQ	
	Marc Naddell // NAVTEQ	
	Tom Tierney // NAVTEQ	

GNSS Living Lab Prize	**Roberto Santoro** // ENoLL	
	Marco Conte // ENoLL	
	Dr Klaus Ensslin // DKE	
	Markus Hasinger // CeTIM	
	Boris Kennes // European GNSS Agency (GSA)	
	Ratri Sryantoro // DKE	
	Ebru Turgut // CeTIM	
	Claudio Vandi // Lutin User Lab	
NavCert/IFEN GATE Prize	**Martin Grzebellus** // NavCert	
	Günther Heinrichs // IFEN	
University Challenge	**Gustaf Särner** // Awapatent	
	Reinhard Blasi // European GNSS Agency (GSA)	
	Fabio Dovis // Politecnico di Torino	
	Boris Kennes // European GNSS Agency (GSA)	
	David Ko // NAVTEQ	
	Daniel Ludwig // Daniel Ludwig Consultant	
	Prof Roger Förstner // Universität der Bundeswehr München	
ITRI	**Dr Cheng-Wen Wu** // ICL, ITRI	
	Dr Chia-Hsiang Chang // Institute for Information Industry (III)	
	Dr Jason S. K. Chang // National Taiwan University	
	Dr Cheng-Foo Chen // HAITEC	
	Jeff Chen // Adventech Co.	
	Dr Sheng-Lin Chou // ICL, ITRI	
	Ching-Hai Lin // DoIT, Ministry of Economic Affairs (MOEA)	
	James Hsu // Taiwan Telematics Industry Association	
	Dr Jason Yi-Bing Lin // National Chiao Tung University	
	James Alan Misener // Booz Allen Hamilton Inc.	
	Lion Jian // Maction Technologies, Inc.	
	Dr Chao, Simon Shiao-Lien // New Taipei City Government	
	Mu-Piao Shih // Chunghwa Telecom Co., Ltd.	
	Dr Thomas Strang // German Aerospace Center (DLR)	

Publisher
Anwendungszentrum GmbH Oberpfaffenhofen
Friedrichshafener Straße 1
D-82205 Gilching
Phone: +49 (0) 8105 - 77 2 77 10
Fax: +49 (0) 8105 - 77 2 77 55
www.anwendungszentrum.de

Editorial staff
Kathrin Sturm
sturm@anwendungszentrum.de

Art Direction
Andreas Dippelhofer
dippelhofer@anwendungszentrum.de

Print
Digital- & Offsetdruck Wolfertstetter KG
www.wolfertstetter.de

Place of fulfilment and jurisdiction
Gilching, Germany

esa

business incubation centre Bavaria

managed by
ANWENDUNGSZENTRUM
Oberpfaffenhofen

Located in Oberpfaffenhofen, Nuremberg & Berchtesgadener Land (Germany)

70 new Start-Ups by 2013

Start-Up Programme includes up to two years of financial, technical and networking support

partners

esa

Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology

DLR

Kreissparkasse
Kreissparkasse München Starnberg Ebersberg

Fraunhofer IIS

Sparkasse Nürnberg

WFG BGL

SATELLITE NAVIGATION
BERCHTESGADENER LAND
THE NETWORK FOR INNOVATIVE GNSS-SOLUTIONS

Sparkasse Berchtesgadener Land

follow us on

digital version

in cooperation with

powered by

sponsoring partners

media partner

innovation IT partner

audience award

organised by

under the patronage of

Aquitaine / France

Arab MENA

Australia

Baden-Württemberg / Germany

Bavaria / Germany

Brazil

Catalonia / Spain

Estonia

Gipuzkoa / Spain

Hesse / Germany

Latvia

Lithuania

Lombardy / Italy

Macedonia

Medjimurje / Croatia

Nice-Sophia Antipolis / France

Øresund / Denmark & Sweden

Prague / Czech Republic

South Holland / The Netherlands

Switzerland

Taipei / Taiwan

United Kingdom & Ireland

USA