

In cooperation with:



# EUROPEAN SATELLITE NAVIGATION COMPETITION 2009

01 | may - 31 | july

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Submit your application innovation from 1st May to 31st July 2009  
at [www.galileo-masters.eu](http://www.galileo-masters.eu)



Europe's unique ideas competition for satellite navigation applications

**GLOBAL CHALLENGE:**

high-tech regions from all over the world are competing for the prize of being the GALILEO Master

**GLOBAL POTENTIAL:**

win the chance to realise your idea in your preferred region

**GLOBAL PLAYERS:**

strong partners award special topic prizes with the aim of joint realisation

**GLOBAL NETWORKING:**

all winners and finalists will meet for the awards ceremony in Munich

special topic  
sponsoring partners



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patronage of



organised by





Pedro Pedreira  
Executive Director  
European GNSS Supervisory Authority (GSA)



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### The year of EGNOS

2009 is truly an exciting year for the European satellite navigation programmes.

It is the year that EGNOS, the European Geostationary Navigation Overlay Service – Europe’s first step in the satellite positioning, navigation and timing domain – became officially operational. It is also the year that the first commercial service to be born from the European GNSS programmes, EDAS - which offers ground-based access to EGNOS data - was launched for use by the public.

Last year the GSA became a cooperation partner in the European Satellite Navigation Competition. By all standards, the experience was very positive. The number of applications we received for our special topic prize for EGNOS applications well exceeded our expectations and our prize winner was also awarded the overall 2008 GALILEO Masters title. Our participation not only helped to encourage competition entries from a wider European public, but also supported two key objectives of the GSA: support the development of GNSS markets and help ensure the competitiveness of European industry in the GNSS sector.

In this important year, our aim is that the 2009 GSA special topic prize helps to further raise awareness of the commercial opportunities created by EGNOS and its first service EDAS, demonstrate its business potential, and encourage GNSS-based innovation.

The GSA is very pleased to once again support the European Satellite Navigation Competition. We sincerely hope that our cooperation in 2009 will continue to stimulate new ideas that harness the benefits of EGNOS.

Paul Flament  
European Commission - Deputy Head of GALILEO Unit

“I have been impressed by the evolution made by the European Satellite Navigation Competition since a few years. I do believe that this initiative is of true value and will foster the development of innovative ideas in the field of satellite navigation. I hope that European competencies will grow thanks to this competition.”

**16th/17th MARCH**

International Kick-Off  
Madrid / Spain

**24th MARCH**

Kick-Off  
Bavaria / Germany

**3rd APRIL**

Kick-Off  
Gipuzkoa / Spain

**21st APRIL**

Kick-Off  
Taipei / Taiwan

**23rd APRIL**

Kick-Off  
Hesse / Germany

**28th APRIL**

Kick-Off  
United Kingdom  
& Ireland

**28th APRIL**

Kick-Off  
Niedersachsen /  
Germany

**29th APRIL**

Kick-Off  
Øresund / Denmark  
& Sweden

**1st MAY**

Opening of the  
ideas database

**4th MAY**

Kick-Off  
Sophia-Antipolis /  
France

**7th MAY**

Kick-Off  
North-Rhine West-  
phalia / Germany

# A global success story starts in its sixth year

The European Satellite Navigation Competition starts round 6 with new partner regions and other thematic focus points.

What was started in the Free State of Bavaria in 2004, has, within the last few years, matured into a global network for high-tech regions and international technical experts. With the first time participation of Israel, Switzerland, Gipuzkoa/Spain and Øresund/Denmark and Sweden, the ESNC community already encompasses 17 partner regions. This network is strongly geared towards the requirements of the industry and, together with the partner regions, supports rapid implementation of the numerous product and service innovations from the past few years. Also the continuing support by the European GNSS Supervisory Authority (GSA) esteems the initiative for stimulating innovation and entrepreneurship in the European GNSS markets.

Under the patronage of the Bavarian State Ministry for Economics, Infrastructure, Transport and Technology, the Anwendungszentrum GmbH Oberpfaffenhofen gave the starting shot for an international ideas competition in 2004, which aimed at the early development of applications that are based on satellite navigation systems available today, for example GPS, and which should gain a significant enhancement from Galileo. With the special topic prizes sponsored by industrial and institutional partners, the ESNC has also established itself as a think tank for industry-specific needs, as 80% of all participants in 2008 took the opportunity to submit their ideas for both regional evaluation and consideration for one of the special topic prizes.

In 2009, the concept will be continued with challenges presented by T-Systems, the DLR, the GSA, the ESA, NAVTEQ, the Madrid Region and Aerospace Cluster, the Forum SatNav MIT BW as well as Anwendungszentrum GmbH Oberpfaffenhofen.

- ▶ The title sponsor T-Systems will award the most innovative applications for use in the public and health sectors.
- ▶ The German Aerospace Center (DLR) invites to provide advanced GNSS applications for enterprises and the public sector where precise, secure and interference-free signals are essential.
- ▶ The GSA will award the most promising EGNOS application idea, exploiting EGNOS` s unique features with special emphasis on the use of EDAS.
- ▶ The ESA's Technology Transfer Programme is seeking innovative and creative business ideas, aiming at a quick market implementation and high value capture by using satellite navigation in a non-space business environment.
- ▶ NAVTEQ is looking for the most innovative developments in the field of navigation and location-based services for mobile devices.
- ▶ The Madrid Region and Aerospace Cluster, together with a selected group of Spanish firms and institutions, will award a special topic prize for civil protection, life support, and other safety-critical applications.
- ▶ The Forum SatNav MIT BW e.V. (Forum for Applied Satellite Navigation and Mobile IT Baden-Württemberg) is searching for high-value applications exploiting security relevant features of GNSS for the logistics and transport sectors.
- ▶ Anwendungszentrum GmbH Oberpfaffenhofen will award the GMES Masters for the best downstream application based on dynamic earth observation data making use of GNSS and space and ground-based communication infrastructures.

Not only the number of partner regions has increased over the last five years from three to 17, but also the number of participants has risen from 48 in the first year to 525 in 2008. In the meantime many of the distinguished prize winners are working on the realisation of their projects. Pages 11 to 14 are dedicated to some of these international success stories.

On 1st May 2009 the ideas database for application innovations in the area of satellite navigation will be opened for the sixth time under [www.galileo-masters.eu](http://www.galileo-masters.eu). By participating in the European Satellite Navigation Competition, you are using your chance to play a part in designing the dynamic, growing market for navigation applications and shape part of the future. We look forward to your application idea.

The GALILEO Masters team



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Managing Director



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Business Development



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Project Management



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15th MAY	25th MAY	3rd JUNE	8th JUNE	8th JUNE	30th JUNE	31st JULY	AUGUST	23rd/24th SEPTEMBER	21st OCTOBER	20th-22nd OCTOBER
Kick-Off South Holland / The Netherlands	Kick-Off Baden-Württemberg / Germany	Information day Paris / France	Kick-Off Lombardy / Italy	Kick-Off Israel	Kick-Off Switzerland	Closing of the ideas database	Evaluation of the ideas	International Expert Meeting in the UK	Awards Ceremony Munich / Germany	Trade fair „discuss & discover“ Munich / Germany



## How to participate

### 1. Registration at [www.galileo-masters.eu](http://www.galileo-masters.eu)

Create your own profile and choose a user name and password. Once you have done this, you will be able to log into the database to continue developing your idea as often as you like before the end of July.

### 2. Select a region

You are free to choose which of the partner regions you would like to represent. The region you choose is where you would establish your business, if chosen as regional winner or GALILEO Master.

### 3. Enter whether you would like to submit your idea for one of the special topic prizes

In addition to recognising outstanding applications in the overall field of satellite navigation, the European Satellite Navigation Competition will award special topic prizes sponsored by industrial and institutional partners who are searching for innovative solutions in certain satnav-related fields.

These are intended as a format encouraging joint realisation of the winning idea by the winner and the sponsor. Last year, 80% of all participants took advantage of the opportunity to submit their ideas for both regional evaluation and consideration for one of the special topic prizes. Participants who also submit their innovations for one of the special topic prizes are twice as likely to be nominated. It is actually possible for a participant to be nominated as a regional winner, a special topic winner, and as the overall winner, the GALILEO Master.

In 2009, the concept will be continued with challenges presented by T-Systems, the German Aerospace Center (DLR), the European GNSS Supervisory Authority (GSA), the European Space Agency (ESA), the world's leading provider of digital map data, NAVTEQ, the region of Madrid, the Forum SatNav MIT BW as well as Anwendungszentrum GmbH Oberpfaffenhofen.

### 4. Ideas database

The ideas database is divided into three sections. In the first section, you are asked to describe your idea as accurately and as clearly as possible; the second section is about the market potential of your idea; and the last section deals with formal project aspects and with the trademark and patent rights for your idea.

### 5. Evaluation

Once the database has been closed, regional panels of experts from all regions and the expert panels of the special topic sponsors will select the regional winners and the special topic winners. In September, an international panel of experts will meet in the UK to select the overall winner – the GALILEO Master – from the regional winners and the special topic winners.

### 6. Awards Ceremony

On 21st October 2009, the prizes for the GALILEO Master, the regional winners and the special topic winners will be awarded and the ideas presented to the public at an official state reception at the Munich Residence.

## MAIN PRIZE:



The overall winner – the GALILEO Master – will be chosen from the regional winners and the special topic winners. The main prize will be a grant of **EUR 20,000**, awarded by the Anwendungszentrum GmbH Oberpfaffenhofen and the European GNSS Supervisory Authority. In addition, the GALILEO Master will get the chance to enter a six-month incubation programme in his favoured region to realise his idea.

## SPECIAL TOPIC PRIZES:

### T-Systems Special Topic Prize:



The winner of the T-Systems special topic prize will receive the opportunity to realise an innovation project with T-Systems, which could lead to a long-term partnership.

- Network for Developers™ (NN4D) - activities valued to in total ca. EUR 25,000.
- A personal technical consultant will assist in seeing the winning idea through to successful implementation.
- The opportunity to present the final application to NAVTEQ partners and customers, including leading handset manufacturers, platform and technology providers.

### DLR Special Topic Prize:



Each of the three winners will receive a voucher for DLR services pertaining to the further development of their ideas, such as feasibility studies, concept studies, and prototype or business development. The prize can therefore lead to direct implementation.

- 1st prize: a DLR voucher worth EUR 70,000\*
- 2nd prize: a DLR voucher worth EUR 50,000\*
- 3rd prize: a DLR voucher worth EUR 30,000\*

\*note: EUR 10,000 is equivalent to one man-month

### GSA Special Topic Prize:



The winner of the prize will have the opportunity to realise his/her idea at a suitable incubation centre of his/her choice within the EU27 for six months, with the option of an additional six months based on evaluation after the first period.\* (\* costs should not exceed EUR 20,000 per six-month period)

### ESA Special Topic Prize:



ESA is looking for ideas that can be implemented immediately and quickly nurtured into a profitable business with the technical and financial assistance of an ESA business incubator. Along with this extensive support package, the winner will also receive a EUR 10,000 award.

### NAVTEQ Special Topic Prize:



- A 12-month incubation programme that consists of one year of free access to NAVTEQ map data, content, and services (please register and download the competition tender for details).
- The incubation programme will assist the winner of the NAVTEQ special topic prize with coaching, technical and business development support, and web promotions through NAVTEQ

### Madrid Special Topic Prize:



The winner of the prize, awarded by the Madrid region (through IMADE and the Aerospace Cluster) and a group of select Spanish firms and institutions, will receive a cash award of up to EUR 20,000 and the opportunity to realise an innovation project along with some of the sponsoring firms involved in the development of support-of-life applications and services.

### Forum SatNav MIT BW Special Topic Prize:



The winner will be offered a platform for presenting ideas, products, and solutions at a special Baden-Württemberg event, as well as at the upcoming international trade fair POSITIONALE in May, 2010 in Stuttgart, Germany.

- Second and third place will also receive a platform for presenting ideas at the Baden-Württemberg event.
- The forum's cooperative nature offers an ideal atmosphere for developing and promoting concepts and ideas with strong and experienced partners.

### GMES Special Topic Prize:

The winner of the GMES Masters will get the opportunity to enter a six-month incubation programme at the Application Center for Satellite Navigation in Oberpfaffenhofen including:

- Free office space, infrastructure, and telecommunications
- A marketing budget
- Ten days of coaching

In addition the winner will get the chance to present his idea to internationally leading companies of the GIS, earth observation and GNSS industries to open further cooperation opportunities.

## REGIONAL PRIZES:

### Australia:



The regional organiser will promote the winner and support the realisation of the awarded idea. The iLab Technology Incubator, may offer to the winner of the Australian Challenge a minimum of six months of business incubation in Brisbane, Queensland.

### Baden-Württemberg / Germany:



- Prize money of EUR 5,000
- Presentation and promotion of the winning organisation and its concept during the regional awards ceremony, with regional and national media in attendance

### Bavaria / Germany:



A six-month incubation phase at the Application Center for Satellite Navigation in Oberpfaffenhofen including:

Free office space, infrastructure, and telecommunications; a marketing budget; ten days of coaching

The aim of the programme is to accompany entrepreneurs through the pre-seed phase up until the founding of the company.

### Gipuzkoa / Spain:



A 12-month incubation phase in BicBerrilan, including:

- Expert consulting: advice, monitoring, business plan design, IP protection
- Specialised business training courses held by prestigious entities like IESE (MBA)
- Possibility of attending a one-week course on the MIT if selected as the best entrepreneur of the year
- Access to infrastructure such as meeting rooms, teleconference equipment, etc.
- Access to public-private venture capital

### Hessen / Germany:



The regional winner will be supported by experts with respect to the preparation of the application in response to ESA Business Incubation, e.g. coaching and consulting.

### Madrid / Spain:



The winning application will undergo a tailored six-month incubation phase at facilities in the Madrid region. This start-up programme, which takes advantage of the madrimasd system and the Madrid Science & Technology Parks and Clusters Network, will include free office space, in-

frastructure, and telecommunications, as well as a marketing budget and 10 days of coaching. The aim of the programme is to accompany entrepreneurs through the pre-seed phase up until the founding of the company.

### Nice – Sophia Antipolis / France:



Six months of free office space in Sophia Antipolis and 10 days of consulting in order to establish and develop the winning project

### North Rhine-Westphalia / Germany:



The regional organiser will promote the winner and support the realisation of the awarded idea. In addition a prize money of EUR 1,200 will be awarded by Navisat e.V.

### South Holland / The Netherlands:



Logica, a leading IT and business services company, and trusted innovation partner, offers a GPS enabled smartphone, combined with the use of its prototype LBS platform, including 10 days of technical support to demonstrate the winning idea. The Logica LBS platform is a proven technology to combine satellite positioning information with innovative business applications. Moreover, the top 3 ideas of the European Satellite Navigation Competition 2009 get a free booth at the annual South Holland Knowledge Festival 2009 in Leiden (The Netherlands).

### Switzerland:



The regional winner will receive a one year free membership in clusteraviatik.ch (value CHF 1,000) and will be supported in that time by experts with respect to the preparation of the application in response to national and international ITTs, e.g. through coaching and consulting activities.

### Taipei / Taiwan:



- 1st prize: EUR 10,000  
A round-trip air ticket to and accommodation in Europe for one person. (One round-trip air ticket to and accommodation in Taiwan if the first-place winner is not from Taiwan)
- 2nd prize: EUR 3,000
- 3rd prize: EUR 2,000
- Shortlists (five ideas at most): EUR 1,000 for each

For all winners in Taiwan, ITRI will provide 10 days of coaching and consulting for preparation of each respective application (valid from Dec. 2009 to Dec. 2010).



## Special Topic Prize

### Applications for use in healthcare and the public sector

#### Starting Position

Thanks to continuous progress in medicine and living conditions, many now have the chance to live longer lives. This naturally gives rise to a desire for mobility in one's golden years. For the elderly, however, going on a mountain hike or city tour often means leaving their familiar surroundings. This inadvertently leads to a certain element of insecurity that makes it difficult for many to seek out the freedom they cherish.

T-Systems, a subsidiary of Deutsche Telekom AG and an active member of the community, wishes to give seniors peace of mind – even in critical situations – by combining communication and positioning technology.

#### Objectives

As part of the European Satellite Navigation Competition 2009, we are looking for technologies that use GNSS-based positioning to give elderly and disabled people access to certain functions regardless of their current location. This could include an emergency call function or a push-button taxi service.

In our search, we are focusing primarily on usability for seniors and disable individuals. The solutions submitted should be miniaturized for inconspicuous installation into everyday objects (watches, belts, and so on). Each should also comprise a complete system that implements appropriate hardware and software components to make finding the user easier (for example, a GNSS-enabled handheld with relative map material for positioning).

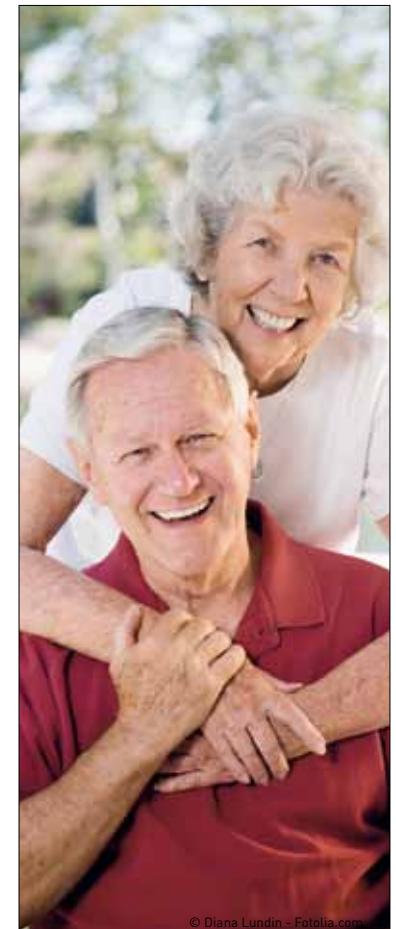
The development of innovative business models facilitating economical operation of the system in question and its ability to integrate into existing systems will also be a main priority.

#### Prize

The winner of the T-Systems special topic prize will receive the opportunity to realise an innovation project with T-Systems, which could lead to a long-term partnership.

We look forward to your interesting proposals. Let's shape the future together!

[www.t-systems.com](http://www.t-systems.com)



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## Special Topic Prize

### Advanced applications for industry and public

#### Starting Position

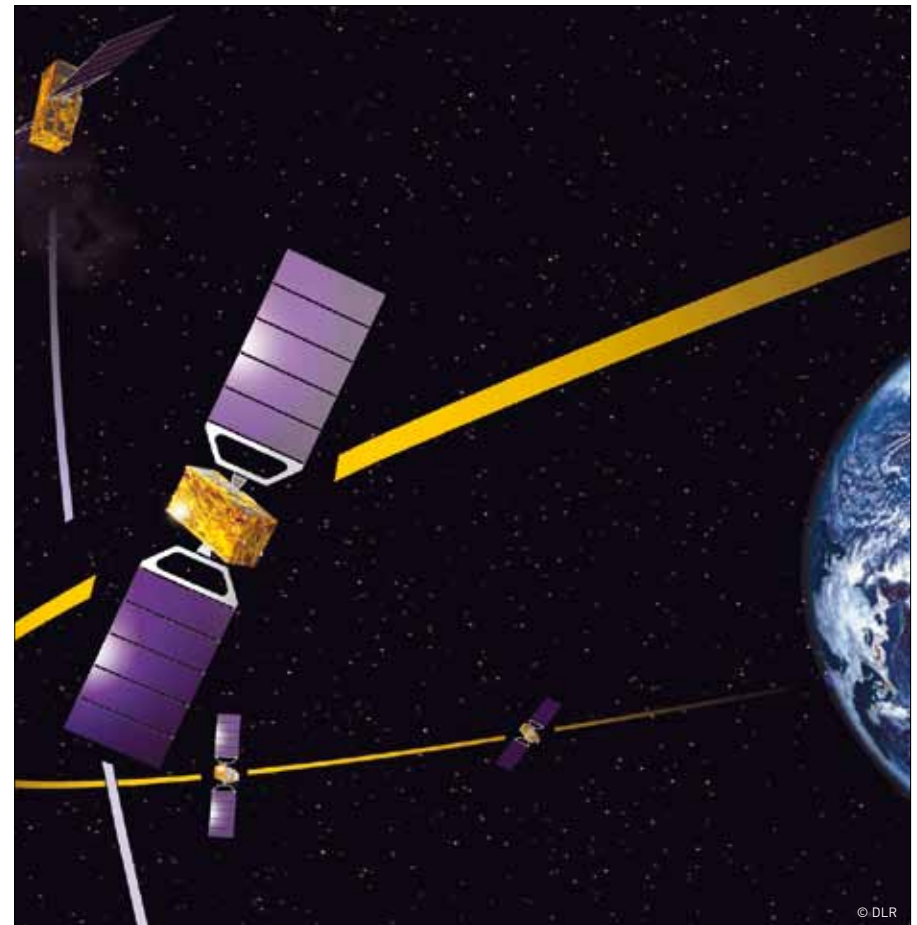
The German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt, DLR) is Germany's national research centre for aeronautics and space. Its extensive research and development work in aeronautics, space, transportation and energy is integrated into national and international cooperative ventures. As Germany's space agency, DLR has been tasked with planning and implementing the German space programme by the German federal government, as well as with representing Germany's interests internationally. Germany's largest project-management agency is also part of DLR.

DLR employs approximately 5,700 people at 13 locations in Germany: Koeln (headquarters), Berlin, Bonn, Braunschweig, Bremen, Goettingen, Hamburg, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Stuttgart, Trauen, and Weilheim. DLR also operates offices in Brussels, Paris, and Washington D.C.

In determining the focal points of its research, DLR is to a large extent guided by the industry's demand for innovative products and services. In addition, it invests in promising technologies and offers its research and development capacities to customers for their own use. Numerous products have been successfully developed in this way and brought to market in cooperation with innovative enterprises.

#### Objectives

PRECISE, INTERFERENCE-FREE and SECURE – these are the distinctive features of the GNSS applications that operate to the sustained benefit of the economy and the public sector. The DLR is looking for creative ideas regarding new products and services, as well as for new applications in which one or more of the aforementioned quality characteristics are an absolute necessity. The determining benchmark will be the innovative character of each idea and its added value for the end user. The three best entries will be fully developed and implemented jointly with DLR, leading on to next-generation applications.





Specifically, DLR is looking for product-, service- and business-related ideas in the following fields:

#### 1. Applications calling for exact time control

DLR is looking for added-value services depending on high-precision GNSS time signals, such as synchronisation processes. Time signal transmission via Galileo's high-precision time control could, for instance, provide a way of optimising the transfer of electric energy in a power grid. In the financial and communications sector, time signals play a similarly important role in the electronic data exchange, as well as in its integrity and authentication by digital timestamps.

#### 2. GNSS-based applications in public health

At present, public health is caught between the conflicting influences of growing cost pressure, the demand for a service orientation, and demographic change. Consequently, requirements are growing more stringent particularly in the medical engineering and pharmaceutical industries. In this case, end users include, for example, doctors, emergency services, hospitals, health insurers – and, last but not least, the patients themselves.

#### 3. New methods or applications that improve signal verification and reduce interference susceptibility

Verification is crucial to the integrity of navigation signals received from GNSS systems. The objective is to employ new methods of improved signal verification in order to enhance the precision and reliability of GNSS-based positioning and navigation. Local supplementary systems could, for instance, be developed to support transport by air, land, and sea. Receivers need to be protected against signal corruption from, for example, reflected signals or jamming. New and effective methods vital for suppressing interfering signals of this kind.

#### 4. New methods or applications that enhance the accuracy of GNSS positioning and the speed of data distribution on the ground

DLR is looking for new methods of enhancing the precision of GNSS positioning and the speed of data distribution on the ground, such as in identifying train collisions or supporting air traffic control on the ground.

#### 5. New applications for Public Regulated Service (PRS)

DLR is seeking applications for the public sector that crucially depend on accuracy, signal quality, and reliability in signal transmission. Relevant fields include the entire transportation sector, as well as civilian and security-related functions at all levels: aviation and shipping, road and rail traffic control, crisis teams, emergency services, humanitarian aid, toll collection, vehicle data recorder readouts, etc. End users may include, for instance, rail companies, traffic control centers, customs authorities, the police, technical, humanitarian, or medical relief agencies.

#### Prize

Each of the three winners will receive a voucher for DLR services pertaining to the further development of their ideas, such as feasibility studies, concept studies, and prototype or business development. The prize can therefore lead to direct implementation.

1st prize: a DLR voucher worth EUR 70,000\*

2nd prize: a DLR voucher worth EUR 50,000\*

3rd prize: a DLR voucher worth EUR 30,000\*

While all contestants underline their innovation competence by participating, those who prevail will enjoy the added benefit of receiving a valuable seal of quality in being distinguished as the winner of the DLR special topic prize.

\*note: EUR 10,000 is equivalent to one man-month

[www.dlr.de](http://www.dlr.de)



## Special Topic Prize

### The most promising EGNOS application idea

#### Starting Position

By developing a new generation of global navigation satellite systems (GNSS), Europe is opening new doors in high-tech industry development, job creation, and economic growth. Given the strategic nature of European satellite positioning and navigation programmes (which include both EGNOS and Galileo) and the need to ensure that essential public interests in this field are adequately defended and represented, the European GNSS Supervisory Authority (GSA) was established as the regulatory authority for the European GNSS programmes. Along with assisting the European Commission in all matters related to the execution of the programmes, the GSA will focus on technical certification, security accreditation, and the market preparation and commercialisation of the system. EGNOS (European Geostationary Navigation Overlay Service) is Europe's first venture into satellite navigation. It augments the US GPS and Russian GLONASS systems, and makes them suitable for safety-critical applications. EGNOS provides several services. The EGNOS message that is broadcasted by satellite provides corrections and integrity information on GPS. The EDAS service provides the measurements of all 41 Ranging and Integrity Monitoring Stations (RIMS) via a terrestrial link (Internet or dedicated line).

#### Objectives

GSA is actively promoting the development of downstream applications that create demand for EGNOS and Galileo and provide economic and social benefits. With EGNOS scheduled to reach the Operations Qualification Review (OQR) in 2009, the focus of the GSA prize will be on EGNOS, looking for innovative satellite navigation applications that make use of EGNOS signals or services with a special emphasis on EADS and meet the following criteria:

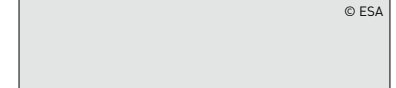
- The application should deliver end-to-end functionality to customers using new or existing EGNOS equipment and systems.
- Positioning should be a key enabler of the application.
- GPS + EGNOS should be the primary means of positioning.
- EGNOS functionality should be used (EGNOS signal or EDAS).

#### Prize

The winner of the prize will have the opportunity to realise his/her idea at a suitable incubation centre of his/her choice within the EU27 for six months, with the option of an additional six months based on evaluation after the first period.\* Award criteria will be the uniqueness and originality of the idea, its business potential (including technical feasibility, commercial feasibility, size of addressable market, and time to market), and the credibility of the corresponding team, as well as the application's use of unique EGNOS features, with special emphasis on the use of EDAS.

\* costs should not exceed EUR 20,000 per six-month period

[www.gsa.europa.eu](http://www.gsa.europa.eu)



# SUCCESS STORIES



## ► SUPERWISE Technologies AG

Cell phone recognises broad range of objects

Recognisable objects range from consumer products in supermarkets to touristic objects and even spare parts for the automobile and aircraft industries. The procedure is always the same: Take a picture of the object with your cell phone to receive the desired information about the object instantly, often within a fraction of a second. This requires the kind of cutting-edge software technology SUPERWISE Technologies AG, presented in 2007 and which was selected – as an application for GPS-enabled cell phones – as Bavarian winner of the European Satellite Navigation Competition 2007. Now industrial ap-

plications are being developed. One project which has been financed with support of the AZO seeks to implement recognition of virtually every consumer product available on the market, even including furniture and cars, reaching a total of more than 100,000 product categories. The objective is to offer a comprehensive platform for information on all consumer products, one that can be accessed simply by taking an image, sending it to the provider, and instantly obtaining information on the product's manufacturer, price, quality features, and more. The technology has already proven its performance in

tests and is presently in the final stage of application development. Similar applications will be offered in supermarkets and do-it-yourself stores. One of the very first developments will be an app. for Apple's iPhone that enables image preprocessing. The app. transmits a feature set of just a few kilobytes, which speeds up the process. Even in cases involving huge data archives of several hundred thousand images, nearly instantaneous object recognition is possible.

[www.superwise-technologies.com](http://www.superwise-technologies.com)



## ► Road Guard

Drive intelligently – Save fuel, save the environment

In the European Satellite Navigation Competition 2008, Road-Guard's GreenDrive was the winner of Germany's Bavaria region and first runner-up among the ESNC's 293 international contestants for the GALILEO Master Award.

Road-Guard develops location-based technologies and solutions for business and consumer markets. A pioneer of horizon predictive eco-driving, Road-Guard's mobile and in-vehicle applications focus on fuel economy and driver safety. It is a leader in eco-intelligent driver attention solutions, enabling phone makers, mobile

operators, PND makers, and auto manufacturers to offer attractive and profitable location-based solutions and value-added services in line with customer demands for safer, fuel-efficient, and overall greener driving technologies.

GreenDrive is an application that "senses" the nature and significance of current and impending road attributes that influence fuel consumption in relation to specific car models. It also advises the driver on the most economical driving style, leading to average fuel savings of 15%-25%.

Being purely software-based, Road-Guard is independent of hardware platforms

and is intended for marketing as either a B2B or B2C product in applications downloadable from mobile application stores (e.g. Nokia or Apple). In 2009, Road-Guard plans to establish its European center at the Anwendungszentrum GmbH Oberpfaffenhofen, Germany; implement GreenDrive as a pilot in several settings; and conclude a round of venture-capital funding.

Road-Guard makes fuel efficiency and environmental protection a part of your lifestyle.

[www.road-guard.com](http://www.road-guard.com)

# SUCCESS STORIES



► **ubigrate GmbH**  
Remote detection of empty runs

At the European Satellite Navigation Competition 2008, DHL and T-Systems awarded their first joint special topic prize. In doing so, they posed a purely practical question: How can transport capacity be better utilised? DHL needed the ability to automatically scrutinise its vehicles' shipping space and identify and localise unused capacity. The company would then fill this space with short-notice shipping orders.

The ubigrate company developed a potential solution that implements ultrasonic container sensors, mobile communica-

tions, and satellite navigation to measure load capacity status. Using the solution, DHL will potentially gain a constant overview of its vehicles' respective locations and capacities. The concept presented a compelling case for ubigrate in the competition, not least due to the practical measurements it was able to generate.

In the Navigation World area of the Munich ICT trade fair ubigrate was able to present an early prototype of its solution. Things proceeded just as quickly thereafter, with DHL, T-Systems, and ubigrate meeting to discuss an initial outline of their col-

laboration in December of the same year. Much has already been accomplished: The three partners have advanced and refined the concepts involved while adjusting them to real-world circumstances. By the end of 2009, they plan to finish development of a functional prototype that will begin to eliminate empty runs.

[www.ubigrate.com](http://www.ubigrate.com)



► **Sci-Tech Systems Ltd.**  
Real-time rescue - A personal GNSS tracker for maritime applications

Since becoming the regional winner of the 2008 United Kingdom and Ireland challenge, winning the European GNSS Supervisory Authority (GSA)'s special topic prize, and being named the 2008 GALILEO Master, Sci-Tech has had a great deal of publicity: The company has been featured, for example, on the websites of BBC Science & Technology and the European Space Agency, as well as in presentations at venture capital forums and a GSA workshop. Sci-Tech has moved into premises at the Business and Technology Centre in Stevenage, Hertfordshire, where they have an office and a laboratory.

They have reviewed the latest GNSS and telemetry devices of their person-over-board (POB) system and created a design using a highly sensitive, EGNOS-enabled GNSS chip, a state-of-the-art radio transceiver with a power output stage, and a processor capable of handling the respective software requirements. Sci-Tech is now starting to develop a prototype that will include 90% of the electronics of the final product, but will also give the company the ability to vary a number of factors and resolve some outstanding technical questions regarding the target marine environment. This re-design is expected to

take three to four months. The publicity has made it clear which market sectors Sci-Tech should concentrate on while raising an additional one - sport diving. They are currently in discussions with local companies and clubs to define the way forward. Sci-Tech are actively seeking investment from Business Angels / Venture Capitalists to fund the next stages of the project.

[www.scitechsystems.co.uk](http://www.scitechsystems.co.uk)

# SUCCESS STORIES



► **Allerayde (UK) Ltd.**  
Advanced anaphylaxis management using GNSS in the drug delivery system

Allerayde came second in the running for the UK regional prize in the ESNC 2008 for a new generation of recyclable auto-injector for advanced anaphylaxis management using GNSS in the drug delivery system. Thanks to the competition, the company's lines of communication have improved and possible future partnerships with business and research centres have been established. This will result in a more effective and efficient development programme for the Version III device. The corresponding patent submission is being prepared and will be submitted during the first quarter of 2009. In the first-generation product, an adrenaline pre-filled syringe already licensed in the EU and USA will be used, enabling early market entry. To further enhance the performance of the product, the company is planning to develop a proprietary version of the adrenaline syringe.

[www.allerayde.co.uk](http://www.allerayde.co.uk)



► **Orbster GmbH**  
GPS Mission – The scavenger hunt GPS game already playable in 65 countries

Orbster GmbH and its game "GPS Mission" were selected as first runner-up for the ITRI special topic prize and second runner-up in the Baden-Württemberg Challenge, part of the ESNC 2008. Orbster GmbH has developed a location-based mobile game which is already available as a free download for the iPhone 3G, Java- and Windows Mobile GPS-enabled cell phones. One of its new features is the ability to share your gaming experience with others in real-time – not just within the GPS community, but also with all of your friends on Facebook. The Waymark function enables players to leave text and photo messages at any location at any time. So far, the global GPS Mission community has come up with location-based games in more than 65 countries around the world. You can download the client at [www.gpsmission.com](http://www.gpsmission.com) and start designing your own mission.

[www.orbster.com](http://www.orbster.com)



► **iOpener Media GmbH**  
Real-time racing game

iOpener Media was chosen as the 2006 Dutch regional winner of the ESNC for a technology that maps real-world competitions such as Formula 1 to an artificial world, enabling gamers to participate in the race virtually and in real-time. Pre-registration for the Real-time Racing Portal has now officially started at [www.realtimeracing.com](http://www.realtimeracing.com). This portal is to present the first game integrated with the iOpener-feature. With the completion of a series of successful testing days at the Zolder racetrack in Belgium, the beta-testing phase is drawing closer. The pre-registration is aimed at satisfying widespread interest and curiosity amongst the people, as well as further optimising the iOpener-enabled feature. The company expects 10,000 pre-registrations by May 2009.

[www.iopenermedia.com](http://www.iopenermedia.com)



► **SysDesign Aerospace GmbH**  
TrackLock - Monitoring of hazardous goods

The company SysDesign Aerospace was founded in May 2007, and its engineers submitted a proposal to the ESNC 2007. Based on the electronic key system „Key Pilot“ the idea was to combine the functionality of electronic keys with exact position data obtained from Galileo to protect hazardous or valuable goods whilst on the move. This technology was given the name „TrackLock“. With the support of Anwendungszentrum GmbH Oberpfaffenhofen, a proof-of-concept prototype was developed. SysDesign Aerospace is now working on the serial production of TrackLock and has developed a second generation of hardware and enhanced software based on the original concept. The technology will be taken to market over the course of 2009 and will be available in several variations: as a service, a solution to be integrated into existing systems, or a software license.

[www.tracklock.de](http://www.tracklock.de)

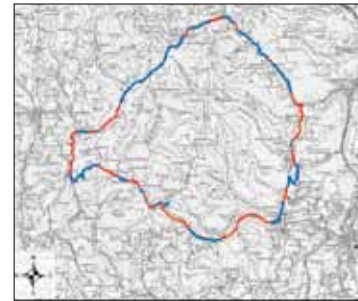
# SUCCESS STORIES



► **Kybertec s.r.o.**  
Free volume monitoring for vehicles

Kybertec s.r.o., which was founded in 2003, was the third runner-up in the ESNC Czech Republic Challenge in 2008 with its idea for a volume-monitoring system for trucks. Kybertec is a supplier for turn-key solutions and also an R&D organisation. It develops special software such as intelligent transport systems and information systems using GPS and, in the future, Galileo. In the company's proposed volume-monitoring system, each vehicle will be equipped with two cameras, which will scan the vehicle for unused capacity and send the information to an on-board unit (OBU) and central monitoring system to facilitate optimal usage of the free volume. Currently, Kybertec is negotiating with transporters and telecom OBU providers about the pilot testing of this project.

[www.kybertec.com](http://www.kybertec.com)



► **TeleConsult Austria GmbH**  
OEGNOS - Austrian EGNOS  
Data Server

The OEGNOS project of TeleConsult and partners was the first runner-up for the GSA special topic prize in the ESNC 2008. TeleConsult and its project partners are currently developing an Austrian service which improves conventional EGNOS (European Geostationary Navigation Overlay Service) corrections by considering regional atmospheric conditions. Thus, the OEGNOS concept can be described as a highly innovative regional augmentation system (RAS). A prototype service of OEGNOS will be available in summer 2010 in central Austria, and a patent application for the OEGNOS concept is in progress.

[www.teleconsult-austria.at](http://www.teleconsult-austria.at)



► **VULog SAS**  
CitéVU - GNSS-based electronic  
car-sharing system

VULog is operating the world's first car-sharing service comprised of 100% electric cars. After winning the ESNC in 2005, the company received incredible Internet press coverage all over the world. After one year of development, the product was ready to be put into a unique package - the VU City Pack, which includes software and procedures. Several technologies have been integrated: highly accurate GPS, voice recognition, web services, PDAs, and real-time wireless communications. Currently, VULog's CitéVU is operating with 10 cars in Antibes on the Cote d'Azur and has 70 registered members. The service is available 24 hours a day, seven days a week. At present, the company is conducting investment negotiations with the French national railway, SNCF in order to accelerate the deployment in France and at an international level.

[www.citevu.com](http://www.citevu.com)



► **ubinam on demand GmbH**  
Parcel Live - In the right place at the  
right time

Founded in 2006, ubinam on demand GmbH offers B2B asset-tracking services on the Web with a focus on the consumer market and the logistics and security industries as an application service provider (ASP). The company won the DHL special topic prize for the best traffic control system in the ESNC 2007. Its idea, Parcel Live, involved postal address visualisation, which enables the client to use various delivery addresses for certain times and weekdays without having to notify the sender. In the very same year, it was contracted to develop a demonstrator and an implementation concept for the planned pilot project of DHL. Ubinam also received an additional order from DHL. Now it is supplying a GSM based positioning of the delivery chain.

[www.tracking-live.com](http://www.tracking-live.com)



## Special Topic Prize

### ESA innovation prize

#### Starting Position

An international organisation comprising 18 member-states, the European Space Agency (ESA) 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. ESA designs and implements the European space programme, including efforts to find out more about our Earth, our solar system and the universe we live in; develop satellite-based technologies and services; and to promote European industries.

The mission of ESA's Technology Transfer Programme Office (TTPO) is to facilitate the use of space technology and space systems for non-space applications and to demonstrate the benefit of the European space programme to European citizens. The office is responsible for defining the overall approach and strategy for transferring space technologies, which involves, for example, the incubation and funding of start-up companies.

#### Objectives

The European Satellite Navigation Competition is a great source of innovative business ideas in virtually all industry fields. The TTPO also aims to find new ideas for the commercial use of space technology and launch new businesses in this area in Europe. Among the innovative ideas for satellite navigation applications originating from the competition's previous years are systems that report flooding in real-time, track carbon footprints, and provide location-based information no matter what the user's whereabouts are.

#### Prize

ESA will award its innovation prize to whoever comes up with the best business plan for using global navigation satellite systems. It is looking for ideas that can be implemented immediately and quickly nurtured into a profitable business with the technical and financial assistance of an ESA Business Incubation Centre. The winner will also receive a cash award of EUR 10,000.

[www.esa.int/ttp](http://www.esa.int/ttp)





## Special Topic Prize

In the field of navigation and location-based services for mobile devices

### Starting Position

NAVTEQ digital map data is fuelling a new era of innovative thinking and inventions and sparking the development of precise, reliable navigation products and services. NAVTEQ is the means of developing a virtually limitless range of location-based services (LBS) – services that will connect people for lunch, for meetings, for life. Indeed, with its high level of detail and accuracy, NAVTEQ digital map data is the sure route home in the storm, the smart way around a problem, the guide through one's busy business day. NAVTEQ's Points of Interest (POI) data, mapping software, and exciting new technologies such as voice-enabled data are the building blocks of a whole new generation of location-based services and applications. NAVTEQ also offers real value for consumers and developers through its LocationPoint Advertising solution. Developers receive a share of revenues, while consumers value their timely, interactive, and relevant offers based on proximity and profile information. This ad-supported model can be applied across all location-aware devices with connectivity.

### Objectives

NAVTEQ is looking for developers to submit innovative location-based ideas that work with mobile phones and/or wireless handheld devices using satellite positioning technology and NAVTEQ map data. Here are some suggested use cases for your LBS idea submission.

- Content: use of content from NAVTEQ or third parties that enhances functionality or is the main feature of the solution
- Enterprise: applications related to helping inventory and people to function efficiently, plus local search advertising, buying, and billing
- Entertainment/leisure: gaming, location-based imaging, sport, travel, and tourism applications
- Navigation: routing and turn-by-turn directions, POI look-up, and traffic and pedestrian applications
- Social networking: peer and "find-me" applications, or applications related to child/senior monitoring, safety alerts
- Location-based advertising: use of mobile advertising that combines precision proximity, contextual and demographic targeting

### Prize

- A 12-month incubation programme that consists of one year of free access to NAVTEQ map data, content, and services (please register and download the competition tender for details).
- The incubation programme will assist the winner of the NAVTEQ special topic prize with coaching, technical and business development support, and web promotions through NAVTEQ Network for Developers™ (NN4D) - activities valued to in total ca. EUR 25,000.
- A personal technical consultant will assist in seeing the winning idea through to successful implementation.
- The opportunity to present the final application to NAVTEQ partners and customers, including leading handset manufacturers, platform and technology providers.

[www.navteq.com](http://www.navteq.com) [www.nn4d.com](http://www.nn4d.com)







## Special Topic Prize

### Support of life

#### Starting Position

The possibilities of using GNSS in applications where human lives are at stake have been demonstrated in a number of fields as civil aviation, guidance for travelers in hazardous environments, and location information for search and rescue operations or applications. Support of life operations are further enhanced through the Safety of Life services provided by EGNOS or Galileo.

#### Objectives

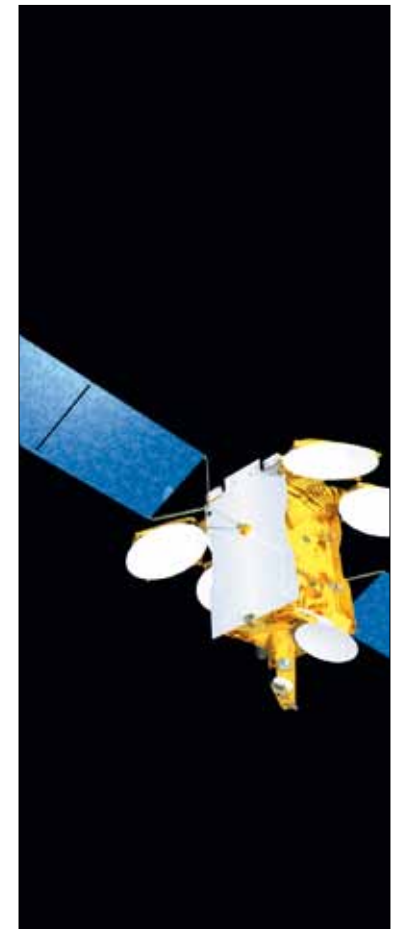
The applicant must take into account that, in contrast to other users, Safety of Life users need other functionalities apart from the services provided by satellite-only services. These functionalities are the consequence of the very stringent requirements established by the regulatory bodies in these user communities, such as ICAO (International Civil Aviation Organisation) for the aviation community or IMO (International Maritime Organisation) for the maritime community.

This special topic prize intends to encourage innovation and entrepreneurship in the development and execution of new concepts and applications supporting human life, using all the potential of GNSS, including (but not restricted to) the capabilities of the Safety of Life services. The Madrid region will host the Galileo Safety of Life Center, seeking to reinforce the importance of GNSS in supporting this critical area with its special topic prize.

#### Prize

The winner of the prize, awarded by the Madrid region (through IMADE and the Aerospace Cluster) and a group of select Spanish firms and institutions, will receive a cash award of up to EUR 20,000 and the opportunity to realise an innovation project along with some of the sponsoring firms involved in the development of support-of-life applications and services. The aim is to enhance the scope of both the Galileo Control Center and the Safety of Life Center – both of which will be based in Madrid, facilitating a long-term partnership.

[www.imade.es](http://www.imade.es)





## Special Topic Prize

### Safety and security in the logistics and transport sectors

#### Starting Position

Forum SatNav MIT BW believes in the enormous economic potential satellite navigation presents, especially for Baden-Württemberg. The forum focuses on the development of applications and services based on navigation, information, and communication technologies. In particular, it seeks to support small and medium-sized companies in launching innovative products and services, as well as in the creation of strategic alliances, cooperations, and partnerships. Furthermore, the association considers itself a platform for opening up new fields of business. It is open to all organisations connected to the field of satellite navigation. The association also represents the interests of its members at the political level. Among its further goals are the advancement of scientific and entrepreneurial competence in satellite navigation and mobile IT, and, by extension, the development of new business models. Additionally, the association wants to bring research and the economy closer together in order to create a network of companies and research institutions.

#### Objectives

Forum SatNav MIT BW is participating for the first time with a special topic prize for safety and security in the European Satellite Navigation Competition 2009. All interested companies, research institutions, and stakeholders are asked to hand in their submissions. Several criteria have been defined for the prize; submissions to be shortlisted should:

- involve an innovative solution, application, and/or process from the areas of satellite navigation and mobile IT
- be market-ready and oriented along the value chain
- feature either an enhancement of an existing solution or a radical innovation

#### Prize

The winner will be offered a platform to present their ideas and competition entry in Baden-Württemberg, as well as at the upcoming international technology trade fair POSITIONALE in May 2010 in Stuttgart, Germany.

Those who place second and third will also have an opportunity to present ideas at a Baden-Württemberg event. Additionally, the association offers cooperative approaches to developing and promoting business ideas with experienced and internationally linked partners.

[www.galileo-bw.de](http://www.galileo-bw.de)



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## GMES Masters

### Special Topic Prize

## Dynamic earth observation data in combination with GNSS

### Starting Position

Global Monitoring for Environment and Security (GMES) is a corner stone of the European Union's space strategy and, after Galileo, the next flag ship European initiative for space. GMES is driven by the need to improve the monitoring of the European and global environment especially in view of sustainable management of resources and the security of the citizens. The GMES programme gathers data mainly from space-based Earth observation (EO) satellites and ground-based monitoring systems to make environmental and security-related information available to commercial, public and private users. The turnover of the global GMES market is estimated to comprise EUR 50 bn in 2015 (source: mission study – ISU-MSS). In combination with the GNSS market, which is estimated to comprise a world-wide turnover of EUR 470 bn in 2025 (source: ProDDAGE study, GJU), the GMES market could especially profit from mass market applications in the mobile and transport sectors.

### Objectives

The GMES Masters will be awarded for the best downstream applications based on dynamic earth observation data making use of GNSS and space and ground-based communication infrastructures. The award will honour integrated and customised solutions for completely new business areas and emerging business cases as well as enhancements of existing applications for the GMES core services – land, marine and emergency. Market segments to be addressed are:

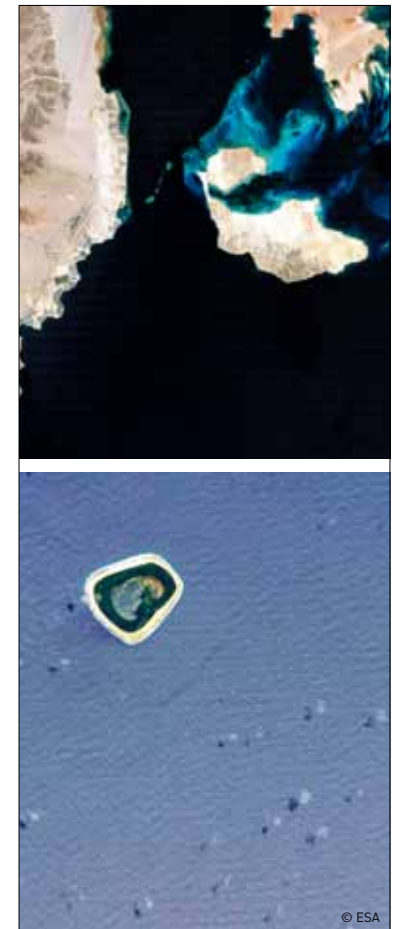
- the public policy domain, e.g.: global monitoring, sustainable growth, environment protection, disaster management, risk and civil protection, humanitarian aid
- mass market, e.g.: LBS, insurance, tourism, entertainment, ground motion monitoring
- professional, e.g.: cartography / mapping, civil engineering, energy, renewable resources, agriculture, forestry, mining, fisheries, warning systems, carbon accounting

### Prize

The winner of the GMES Masters will get the opportunity to enter a six-month incubation programme at the Application Center for Satellite Navigation in Oberpfaffenhofen including:

- Free office space, infrastructure, and telecommunications
- A marketing budget
- Ten days of coaching

In addition the winner will get the chance to present his idea to internationally leading companies of the GIS, earth observation and GNSS industries to open further cooperation opportunities.





## Choose one of these 17 high-tech regions for your future business

The European Satellite Navigation Competition is designed to provide entrepreneurs and international researchers a way to create Galileo applications as well as providing a route to market via the most appropriate participating high-tech region. The participating high-tech regions all boast sustained success in satellite navigation and communications segments and are about to further develop their efforts in these sectors. Within the Euro-

pean Satellite Navigation Competition the partner regions compete to create the best of the best – the GALILEO Master – as well as turning the new ideas into successful business cases and / or new companies in their regions. Each region has its own advantages and characteristics which may better suit an individual applicant. In 2009, the competition will be carried out in 17 regions which are represented below:



### Australia

**IGNSS Society** // The IGNSS Society is a market driven not for profit association providing services such as workshops, conferences, trade exhibitions and awards for excellence programmes. Areas of specific interest include space, air, land and marine applications. The IGNSS Society is incorporated in Queensland, Australia – a region boasting enormous growth in the quality and quantity of GNSS products and applications in the last decade. Queensland currently has: 40 GNSS related businesses, with global significance in GNSS technology for the accurate guidance of machinery used in key industries such as mining, agriculture and infrastructure development, and national significance in vehicle-based GNSS, for example intelligent transport systems. The Australian Challenge brings a new perspective to the competition through its emphasis on GNSS solutions to deal with specific Australian concerns, such as sparsely populated areas, large scale surface mining operations, and precision agriculture requirements.

#### Contact:

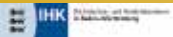
IGNSS SOCIETY

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Baden-Württemberg



### Baden- Württemberg / Germany

**IHK Reutlingen** // The internationally renowned corporations such as Daimler, Porsche, Bosch, SAP, Zeiss and Würth and many multi-national corporations have chosen to make Baden-Württemberg the centre of their business operations. Baden-Württemberg also benefits from a powerful backbone of small and medium-sized enterprises. It's famous for its tourist highlights such as the Black Forest and Lake Constance and its universities in Constance, Freiburg, Heidelberg, Hohenheim, Karlsruhe, Stuttgart, Tübingen and Ulm. The state is also known for its great authors like Friedrich Schiller ("Wilhelm Tell") and the people in Baden-Württemberg are known as „Tüftler“, which means a great enthusiasm for technical problems and their solutions. This open minded spirit is the ideal constellation for participating in the competition.

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### Bavaria / Germany

**Anwendungszentrum GmbH Oberpfaffenhofen (AZO)** // The economic region of Munich is one of the top business locations in Europe for aviation, astronautics and satellite navigation, boasting 234 companies and 7 renowned research institutes. With a turnover of EUR 4.7 billion in 2006 and over 15,000 employees in industry and research, aerospace and satellite navigation make a major contribution to the economic power of Munich as a business location. AZO was founded as an incubator to expand Oberpfaffenhofen, an important aerospace location, into a cluster focusing on European satellite navigation. AZO focuses on providing companies with optimal conditions for establishing innovative products and services based on GNSS more quickly on the market. The incubator gives start-ups six months to develop their business ideas into tangible business plans and provides extensive office space at the Oberpfaffenhofen airfield, in direct proximity to the German Aerospace Center (DLR) and the future Galileo control centre. Since the creation of AZO, 38 company founders have completed the start-up phase, leading to the creation of over 600 jobs.

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### Gipuzkoa / Spain

new!

**VicomTech** // Gipuzkoa is one of the three provinces of the Basque Country. Its city of San Sebastian has one of the highest densities of technology centers and universities in all of Spain. With the public university UPV/EHU and two private universities, Navarra and Deusto; and technology centers such as Inasmet, Cidetec, Fatronik, VICOMTech, CEIT, the Donostia International Physics Center, and the Basque Institute for Competitiveness and Cooperative Research – including the CIC biomaGune and CIC Nanogune – Gipuzkoa is a technology leader in Spain and Europe. The region is home to several internationally recognised companies and R&D institutions in the fields of aerospace, electronics, and telecommunications. In addition, Gipuzkoa boasts clusters in aerospace, transport and logistics, and telecommunications, which promote development and collaboration among several industries in these areas.

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www.gipuzkoa.net/index-i.html



### HESSEN



#### Hessen / Germany

**Centre for satellite navigation Hessen (cesah)** // cesah is a competence, information and incubation centre for Satellite Navigation supported by its shareholders, the Region of Hessen, the City of Darmstadt, as well as renowned scientific and industrial partners. Cesah is partner of the ESA Business Incubation Initiative and is located in close vicinity to the European Satellite Operations Centre ESOC. The centre supports the development of business ideas and start-up companies in satellite navigation.

**Hessen-IT** // cesah is supported by Hessen-IT, a programme of the Hessian Ministry of Economical Affairs supporting the Hessian information and communication technology (ICT) sector in their market development, as well as SMEs in their efficient and creative use of ICT. Hessen-IT provides information via online databases, news releases, brochures and workshops etc. Hessen-IT furthered and accompanied the satellite navigation activities in Hessen from the beginning.

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מיתמ"פ | MATIMOP

#### Israel

new!

**MATIMOP** // MATIMOP- the Israeli Industry Center for R&D, is a non profit organization acting on behalf of the Office of the Chief Scientist in the Ministry of Industry, Trade and Labor, which promotes technological and R&D cooperation and technology transfer activities between Israeli and foreign industries. Member of the Galileo Joint Undertaking (GJU), MATIMOP manages the Israeli participation to the GJU and to Galileo projects. Currently 8 projects are running in Israel and a call is open to participation of Israeli and European entities. MATIMOP serves as the Israeli national coordinator in international cooperative frameworks. As such, MATIMOP is the EUREKA National Project Coordinator, represents Israel within Galileo and SERAR activities, and is National Contact Point for the Enterprise Europe Network. MATIMOP recently joined the European ESNet network to enhance Israel's Aerospace industry involvement in these activities. In addition to the international activities, MATIMOP administers national programs including the MAGNET program for Generic Research and the National Technology Incubators Program.

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#### Lombardy / Italy

**Navigate Consortium** // The Lombardy region is one of the 21 regions of Italy with its own constitution on which the Lombardy "Consiglio regionale" and the Executive Government are based. The Lombardy area covers 23,861 square km. (7.9% of Italy). The Lombardy region has 12 provinces, 1546 municipalities and a population of 9,450,000 inhabitants; the capital city is Milan. The region has a GDP (PIL: Prodotto Interno Lordo) of 245.8 corresponding to 22.2% of the total for Italy. Lombardy appears to be Italy's leading region in terms of innovation; it is in a good position with respect to the international market. Lombardy has got a strong research and innovation system and human capital (12 Universities & private R&D centres), resulting in regional systems of knowledge: strong promotion to the transfer of research to the business system.

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Comunidad de Madrid



#### Madrid / Spain

**IMADE** // IMADE, the Madrid Development Institute, is an organisation under the aegis of the Region of Madrid Board of Economic Affairs. Its main objective is to promote development in the region through initiatives that encourage economic growth and job creation. The institute also promotes the development of a network of Scientific and Technological Parks in the region of Madrid. The principal objective of these parks is to promote the generation of technological knowledge in different areas, based on the integration of scientific, technological and industrial interests. They also seek to improve company competitiveness through innovation and technological development; in particular through the creation and growth of new technology-based firms.

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www.madrid.org



#### Nice – Sophia Antipolis / France

**Team Côte d'Azur** // The Côte d'Azur is often designated as the „French Wireless Region“ thanks to one of the mobile industry's largest professional community in Europe located in and around the Sophia Antipolis technology park. Sophia Antipolis is home to 1,300 multinational companies, SMEs, labs and international institutes representing 30,000 employees from 68 different nationalities. In Cannes, an important space sector has emerged thanks to one of the most important satellite manufacturing sites of Satcom world leader Thales Alenia Space. Furthermore, with its maritime, mountain and urban settings, our region provides an ideal location to set standards and norms, develop pilot applications, carry out test phases and pursue a range of activities linked to positioning navigation and timing.

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**Niedersachsen**



**Niedersachsen / Germany**

**GZVB (Gesamtzentrum für Verkehr Braunschweig e.V.)** // The Galileo Centre for Safety-critical Applications, Certification and Services - GAUSS is located at the Braunschweig Research Airport and combines and concentrates its members' competencies concerning safety critical applications nationally and internationally. GAUSS was founded as part of the "satellite navigation initiative" of the federal state Niedersachsen in February 2006 and was set up as an additional GNSS division of the GZVB (Gesamtzentrum für Verkehr Braunschweig e.V.). It is open for partners, who have special know-how in the field of standardisation und certification of GNSS applications. The significance of certification for safety critical applications as well as the excellent reputation of GAUSS and its partners is reflected in the fact that the European GNSS Supervisory Authority (GSA) assigned the task of drafting a Green Paper on the "Certification of Galileo Applications" to the GAUSS-Team already in the course of their very first tender.

**Contact:**

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**North Rhine-Westphalia / Germany**

**NAVISAT e. V.** // North Rhine-Westphalia is home to over 500 companies involved in satellite navigation. The most populous federal state is also home to the German Aerospace Center, which has some of the most important basic research establishments. The North Rhine-Westphalian association of users for integrated satellite navigation solutions (NAVISAT) wants to pool these skills in the federal state and promote the industry in expanding its activities in the field of satellite navigation. The focus is on the provision of support to commercial applications and services on the basis of existing and future satellite navigation systems (GPS, GLONASS, GALILEO) by incorporating satellite positioning technologies into concrete applications. In addition to pooling the skills that exist in North Rhine-Westphalia in the field of satellite navigation, it seeks to promote a cross-sectoral exchange of ideas, knowledge and information among its members.

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**Øresund / Denmark & Sweden**

**Øresund IT** // 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's cluster is one of the largest ICT concentrations in Europe, with over 100,000 workers, 10,000 companies, 8,000 students at 11 universities, and about 6,000 researchers. This means that ICT is one of the more important sectors in the region. All this is managed by the non-profit cluster organisation Øresund IT, which is a part of the Øresund Science Region (ØSR)'s potent cluster platform. The region has a long tradition of advanced ICT solutions, including satellite navigation applications and research. Its network also includes close cooperation with, for instance, Denmark's space research centres, satellite navigation clusters, and various universities and research institutes in these fields. ØSR also facilitates collaboration with competent clusters in areas such as logistics and entrepreneurship.

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**Prague / Czech Republic**

**Czech Space Office** // The Czech Space Office is a non-profit association, created in November 2003. The Czech Space Office mainly acts as an information and advisory centre on space activities, including international cooperation, as a contact point for the communication with ESA and as the national contact point for Galileo. Furthermore the CSO represents the Czech Republic in the International Astronautical Federation (IAF) and provides input information for the Czech professional institutions and experts, as well as for foreign organisations interested in space activities in the Czech Republic. CSO also supports the development of space science, facilitates the space industry development and implements space applications. Education and student activities are also part of the CSO's activities. The office closely cooperates with the Czech Ministry of Education, Youth and Sport, which is a governmental body responsible for space activities in the Czech Republic.

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### South Holland / The Netherlands

**Kennisalliantie** // Zuid-Holland (South-Holland) is a bustling, multifaceted province and has around 130,200 registered businesses. The province also boasts various centres of knowledge and expertise, including three universities in Leiden, Delft and Rotterdam, the TNO research laboratories, numerous Innovation Centres and of course the European Space Research and Technology Centre (ESTEC). Next to ESTEC the municipality of Noordwijk is creating a Space Business Park. Organisations like Logica contribute to innovative and sustainable developments, introducing results of research and development in the market place, e.g. downstream space market. The Kennisalliantie (Knowledge Alliance) organises the regional competition for Zuid-Holland and surrounding provinces. The purpose of the Kennisalliantie is the creation of new alliances and product-market combinations that can give rise to new innovative industries in the province of Zuid-Holland.

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### Switzerland

**clusteraviatik.ch** // The non-profit organisation clusteraviatik.ch is part of the “entwicklungschweiz” association which has the aim to develop and to maintain sector-specific networks. Part of clusteraviatik.ch are academic and research organisations as well as companies in the field of aerospace technologies and applications like satellite navigation. clusteraviatik.ch supports actively the access to attractive markets of the future and strengthens the competitiveness of the Swiss research and industry. At the moment the initiative is supported by the Cantons Zurich, Nidwalden and Luzern, the Swiss Space Association and, on a case by case basis, by sponsors. clusteraviatik.ch is not primarily for the “big players” but supports especially SMEs and applied research. Special focus is set to the support of pupils to support them in their decision to become engineer or natural scientist.

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### Taipei / Taiwan

**Industrial Technology Research Institute (ITRI)** // ITRI is Taiwan’s leading institute for technological advance. ITRI is a non-profit R&D organisation equally financed by Taiwan’s Ministry of Economic Affairs and the industry. Since its inception in 1973, ITRI has functioned as a cradle for Taiwan’s microelectronic and ICT industries. ITRI has hosted over 300 start-ups since it started its incubating programme and open labs in 1996. In recent years, ITRI has evolved from a pure technology developer towards a value creator. With over 30 companies delivering GNSS products worldwide, Taiwan belongs to one of the most important contributors to the industry. ITRI’s rich incubating experiences coupled with Taiwan’s unique strength in commercialising R&D results has made the region Taiwan a highly attractive place for those who endeavor to turn their entrepreneurial dreams into business realities.

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### United Kingdom & Ireland

**HBIC - European Space Incubation Centre (UK)** // HBIC is an independent company providing business support, project management and knowledge exchange to knowledge based businesses around ICT, space, aerospace and biotechnology across the UK and internationally. It is the European Space Incubation Centre (UK) (ESINET), through the European Business Network and European Space Agency; this has seen it establishing collaborations with a diverse range of partners in areas of technology transfer, knowledge transfer and access to finance / funding to assist in the exploitation of space technology.

- Business development can range from assisting with funding, IP and corporate development to start-up and early stage companies.
- Managing EU-wide projects on behalf of the UK to enhance businesses with technological ideas around ICT, environmental, space, aerospace and medical.
- Knowledge exchange programmes that utilise a mature network of national and international partners
- Managing the purpose built Business & Technology Centre which houses technology businesses

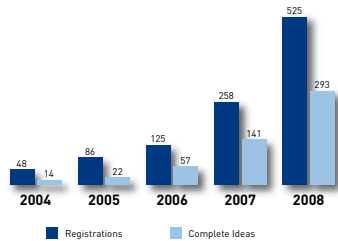
#### Contact:

Hertfordshire Business Incubation Centre

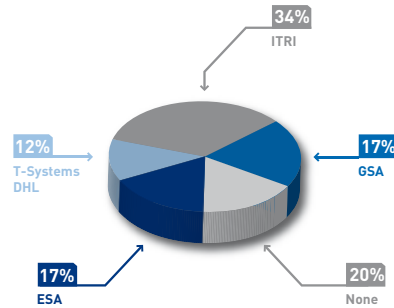
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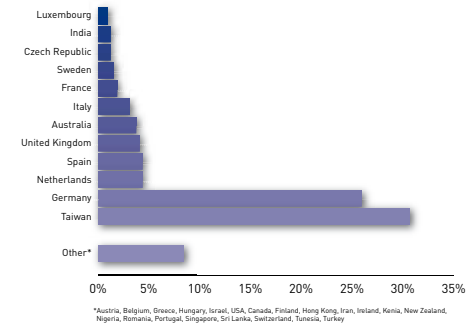
Participants 2004-2008



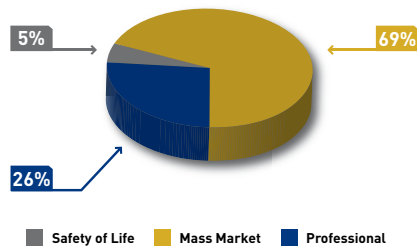
Participation in the 2008 Special Topic Prizes



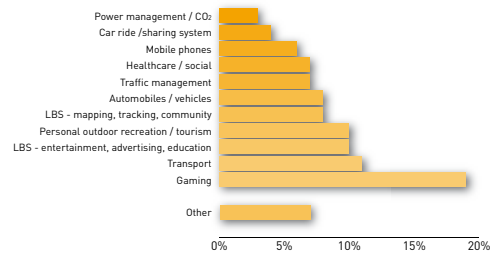
Ideas from Countries



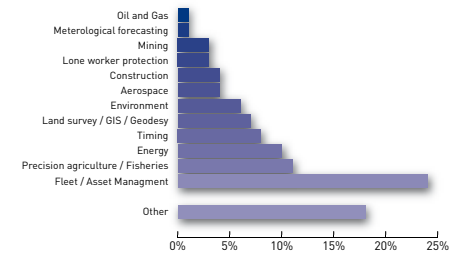
ESNC - Total Market  
293 Ideas



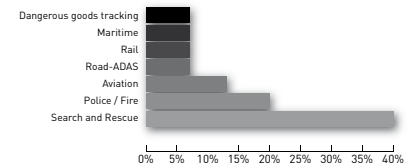
Mass Market



Professional



Safety of Life



Statistics 2008