THE RESULTS 2012

WWW.GMES-MASTERS.COM

GMESMASTERS

THE EUROPEAN EARTH MONITORING COMPETITION

UPON THE INITIATIVE OF

SUPPORTED BY

ORGANISED BY

Jean-Jacques Dordain
Director General
European Space Agency (ESA)

The great success of the inaugural GMES Masters in 2011 has served as convincing proof that its organisers had their fingers on the pulse in creating this competition aimed at soliciting ideas related to the use of Earth observation data, and in particular of GMES data.

I was pleased to learn that, in 2012, the response to the GMES Masters has once again been very strong, turning out a large variety of innovative ideas for the commercial use of data and services from the GMES programme. I have been told that for this second iteration of the competition two further Challenges sponsored by new industry partners were added to the original five, enlarging significantly the scope of potential submissions from new application domains made accessible by GMES data and services. That is certainly another good sign for the increasing attractiveness of this truly European competition.

The ideas presented in the Master's first two years have demonstrated that innovative GMES applications entail a substantial economic potential, especially for SMEs and start-up companies. Of the 160 companies that have undergone incubation at the seven ESA Business Incubation Centres across Europe, more than 20% are already using Earth observation data for their services and products - and the number is rising. The great success of the GMES Masters has affirmed that it is the right choice of vehicle to promote the practical use and the potential applications of GMES in daily life.

My sincere congratulations go to this year's winners of the GMES Masters and to its organisers who, for a second time, have orchestrated this year's edition so masterfully!

Jean-Jacques Dordain

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

The Global Monitoring for Environment and Security (GMES) programme forms a mainstay of European space policy, one the Free State of Bavaria seeks to actively support by contributing its own particular strengths. It is thus with great pride that I announce our success in bringing the European data centre for GMES Sentinel satellites to Oberpfaffenhofen. This news serves as further recognition of Bavaria's global reputation in the field of remote sensing.

In addition to supporting Europe's space programmes themselves, Bavaria also fosters commercial applications and aims to shorten the path from promising R&D to marketable products. For example, the Free State of Bavaria co-finances the GMES Masters innovation competition to advance the development of such applications for the GMES programme, and we have been pleased to see the idea competition prove its innovation potential over its first two years.

The incubation programme at Anwendungszentrum GmbH Oberpfaffenhofen, meanwhile, was established to provide creative minds with the expert advice and assistance needed to enter the market. Its work goes hand in hand with that of the European Space Agency Business Incubation Centre (ESA BIC) Bavaria, a joint project of the Free State of Bavaria, ESA, and the German Aerospace Center (DLR). ESA BIC Bavaria aims to support 20 start-up companies– which include winners and participants of the GMES Masters competition – every year at its three Bavarian locations in Oberpfaffenhofen, Nuremberg, and Berchtesgadener Land. I was happy to hear that, according to the current status, this goal is well within reach.

I would like to thank all the participants for their contributions to this year's GMES Masters. Congratulations to all our winners and all the best in realising your ideas!

Martin Zeil

INTRO

Thorsten Rudolph
Managing Director

Ulrike Daniels
Project Manager

Lara Schaflinger
Project Officer

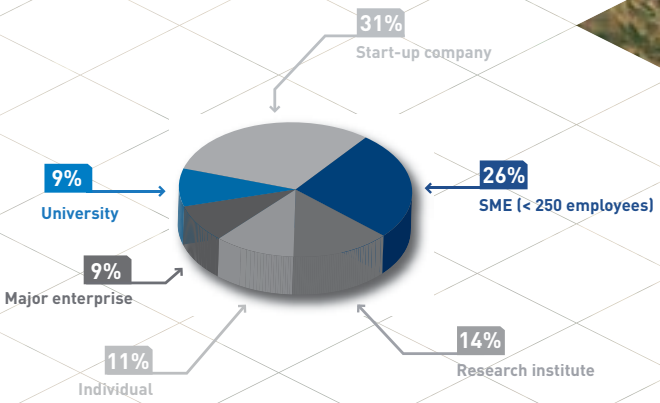
In its second year, the GMES Masters competition once again generated more than 100 innovative business ideas based on GMES services. The prize pool now worth well over EUR 300,000 – and particularly participant access to satellite data – has considerably increased, with two additional industry partners joining the fray and the European Commission providing a substantial quota of satellite data. The new partners, European Space Imaging GmbH and Astrium GEO-Information Services, are awarding very high-resolution (VHR) and radar satellite data to the winners of their challenges.

The areas that attracted most submissions this year were emergency management (27%) and environmental protection and pollution management (18%). Other fields eliciting innovative ideas for value-added services included tourism, geo-marketing, insurance and financing, and many more. We are pleased to see that the GMES Masters once again reached its exact target group, with 31% of the ideas contributed by start-up companies and 26% by small and midsize enterprises. This indicates that European entrepreneurs are ready to make use of the great economic potential of GMES-related products and services. Furthermore, a very recent survey conducted by the European Commission shows that public awareness of GMES has increased from 22% in 2009 to 38% in 2012 among European citizens. In addition, 81% are convinced that services and technologies derived from space activities are important for the development of innovative applications on Earth. With the GMES Masters, we foster both commercial applications and public awareness.

The GMES Masters was inaugurated thanks to the dedicated commitment of its initiating partners: the European Space Agency (ESA), the Bavarian Ministry of Economic Affairs, the German Aerospace Center (DLR), and T-Systems. We highly appreciate their faith in the potential of this innovation competition.

We would also like to thank all the participants for their contributions and are looking forward to an exciting GMES Masters 2013.

Form of Organisation 2012



ABOUT GMES

© ESA

As the most ambitious Earth observation programme to date, Global Monitoring for Environment and Security (GMES) will provide accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure safety and security for the European citizens. While the GMES programme is led by the European Union (EU), the European Space Agency (ESA) is the overall coordinator of the GMES Space Component and will, inter alia, ensure the delivery of data from more than 30 satellites (the GMES Sentinel Missions and the national or European Contributing Missions). The European Environmental Agency (EEA) is responsible for the GMES In-Situ Component, i.e. for data from airborne and ground sensors, while the European Commission (EC), acting on behalf of the EU, is responsible for the GMES programme management and the GMES Services.

Thanks to GMES the users will be provided with information through Services dedicated to a systematic monitoring and forecasting of the state of the Earth's subsystems. Six thematic areas are developed: Land, Marine Environment, Atmosphere, Emergency Management, Security and Climate Change.

Today GMES is in its initial operational phase, with many of its Services already pre-operational. It is planned that GMES will enter into its operational phase at the beginning of 2014.

Further information can be found at www.esa.int/gmes or at http://ec.europa.eu/gmes

THE WINNER
IDEAS CHALLENGE

THE IDEA

MOSP-RIOS - OFF-SHORE OIL SPILL & FLARING MONITORING

Sentinel-1 and -2 data will be used to build a comprehensive map of existing oil extraction platforms in specific areas of interest, which will present an alternative, independent source of information to official lists. Alerts will be issued directly according to a set of defined criticality watermarks through a direct connection to customer-specified interfaces. By offering different service levels (SLAs), MOSP-RIOS hopes to provide an efficient portfolio of cost-effective options to each customer and thereby match the level of service acquired to the actual criticality faced. QA4EO (Quality Assurance Framework for Earth Observation) information will be kept as record of the measurement accuracy used.

The proposed service will collect and analyse satellite data at every overpass (day and night) over selected regions fully automatically and in near real-time. Customers will be notified immediately of possible oil spills, thus providing for a fast and efficient alert system. A similar approach will be adopted to detect gas flaring and immediately warn customers about specific platforms.

THE WINNERS

Serco SpA, Italy
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EXPERTS IDEAS CHALLENGE

MIKKO STRAHLENDORFF
FINISH MINISTRY OF TRANSPORT & COMMUNICATIONS
MINISTERIAL ADVISER

THE EXPERTISE

«Through continuous space-based monitoring, MOSP-RIOS can revolutionise regulatory oil platform controlling. Its innovative combination of oil spill and gas flare monitoring will expand control in a cost-effective manner while driving cleaner, more sustainable drilling.»

PETER SEIGE
BAVARIAN MINISTRY OF ECONOMIC AFFAIRS, INFRASTRUCTURE, TRANSPORT AND TECHNOLOGY
EXPERT SPACE PROGRAMME

PROF DR CAROLA TIEDE
MUNICH UNIVERSITY OF APPLIED SCIENCES
PROFESSOR

FRANK SPRENGER
SUSTAINABLE AG
CEO

BENJAMIN KREBS
BMW GROUP
INNOVATION MANAGEMENT

DR SEBASTIAN CARL
GAF AG
HEAD GEODATA AND DATA-PRODUCTS

JÜRGEN SCHWARZ
EXELIS
VISUAL INFORMATION SOLUTIONS
DIRECTOR OF EUROPEAN STRATEGIC PROGRAMS
MANAGING DIRECTOR

DR THOMAS BEER
EUROPEAN SPACE AGENCY (ESA)
GMES POLICY COORDINATOR

THE GMES MASTERS IDEAS CHALLENGE

The Ideas Challenge is at the core of the GMES Masters competition. By combining all available terrestrial and space-based information systems, GMES is giving Europe an independent environmental monitoring capability to improve the quality and the security of life of European citizens. For the Ideas Challenge all submissions have been welcome which address any of the following main thematic areas: Land, Marine Environment, Atmosphere, Emergency Management and Climate Change. The best idea for a commercially viable business using GMES data has been rewarded, upon recommendation of an independent panel of experts evaluating all proposals.

THE PRIZE

The winner has been rewarded with a cash prize of EUR 10,000 as well as the chance to get the idea further developed in one of the seven ESA Business Incubation Centres (BICs). ESA BICs are designed to bridge the gap between an idea and its development into a viable business. The incubation package has a value of up to EUR 60,000.

ANWENDUNGSZENTRUM
Oberpfaffenhofen

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SUCCESS STORY
IDEAS CHALLENGE 2011

THE IDEA

DEFOREST ACTION EARTHWATCHERS - CROWD SOURCED TROPICAL FOREST MONITORING

Geodan was the winner of the Ideas Challenge and the 2011 GMES Master thanks to its innovative project DeforestACTION EarthWatchers – Crowd-Sourced Tropical Forest Monitoring. In April 2012, the Dutch company started a pilot project that actively involves schoolchildren in protecting the rainforest in western Borneo as "EarthWatchers". "Our number of EarthWatchers has increased daily since April, and the DeforestACTION team on the ground in Borneo has been keeping them up-to-date on the local situation. Students and teachers alike are excited about the way this unique initiative enables young people to get involved in protecting our resources while learning about Earth observation and the natural dynamic of rainforests," reports Dr Eduardo Dias of Geodan. "Winning the GMES Masters in 2011 gave EarthWatchers a tremendous boost. The increased international attention we've received since the competition has made it possible to connect with satellite providers such as Astrium, e-geos, GeoEye, and DMCii, who are now satisfying the project's data needs." Over the summer of 2012, various NGOs that protect tropical forests all over the world have reached out to DeforestAction and Geodan to express their interest in using the real-time and transparent information analysed by crowdsourcing. The new monitoring and protection sites will be announced soon.

THE WINNERS 2011

Geodan Holding B.V., The Netherlands
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THE WINNER
ESA APP CHALLENGE

THE IDEA

ASIGN / GEO-PICTURES - CROWDSOURCED, IN-SITU VISUAL GMES VALIDATION

Thailand 2011: Severe floods over six months. 15 million people directly affected, 800 dead, 77 provinces declared disaster zones, USD 50 billion in estimated damage. The world's fourth-most costly disaster. Crisis management required accurate flood monitoring, with updated maps from radar satellite images generated by the International Charter every few days. Urban areas required in-situ verification due to backscatter. Facing difficulties in organising professional field teams, AnsuR decided to turn to the public. United Nations (UN) needed visual data to be contributed every day; the public could help, but needed a tool to provide that data reliably. From a professional assessment tool developed in FP7 Space - GEO-Pictures -, AnsuR created the crowdsourced app ASIGN for Android and iPhone. ASIGN captures reliably geo-tagged and time-stamped images and text and, at the push of a button, sends it to a server they set up at CERN in Geneva for UNOSAT. The prototype app, announced in Thai on Facebook the next day, was successful. Close to a thousand photos were sent over the next period, greatly helping the UN produce more accurate flood maps and limit damage.

THE WINNERS

AnsuR Technologies AS, Norway
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EXPERTS
ESA APP CHALLENGE

DR THOMAS BEER
EUROPEAN SPACE AGENCY (ESA)
GMES POLICY COORDINATOR

THE EXPERTISE

«The usefulness of the ASIGN mobile app was already demonstrated during the Thailand flooding of 2011. It clearly exhibits the social dimension of near real-time information from space and from the ground, merged for the benefit of those struck by disaster.»

MICAELA DE LORENTIIS
EUROPEAN SPACE AGENCY (ESA)
HEAD OF THE CORPORATE APPLICATIONS SERVICES SECTION

PIERRE-PHILIPPE MATHIEU
EUROPEAN SPACE AGENCY (ESA)
EARTH OBSERVATION APPLICATIONS ENGINEER

GIANCARLO FILIPPAZZO
EUROPEAN SPACE AGENCY (ESA)
GMES PROGRAMME COORDINATOR

DR ROBERT MEISNER
EUROPEAN SPACE AGENCY (ESA)
COMMUNICATION PROGRAMME OFFICER

FRANZ HASLBECK
M-ACADEMY
DIRECTOR

CHRISTIAN STAMMEL
NAVISPACE AG
CEO

BRUNO NAULAIS
EUROPEAN SPACE AGENCY (ESA)
EUROPEAN SPACE INCUBATORS NETWORK MANAGER

THE PARTNER
ESA - THE EUROPEAN SPACE AGENCY

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. To contribute to the success of GMES ESA is exploiting its 35 years of expertise in space programme development and management.
While the GMES programme is politically led by the European Union (EU), ESA is the overall coordinator of the GMES Space Component and will, inter alia, ensure the uninterrupted delivery of data from the GMES Sentinel satellites and from an important number of GMES Contributing Missions at national, European and international level.
Today, the GMES programme is in its pre-operational stage, serving users with satellite data currently available through the GMES Contributing Missions. ESA's coordinator role will continue within the GMES operational phase, expected to start in January 2014.

THE PRIZE

ESA has awarded the ESA App Challenge prize to the best application idea for the usage of GMES on mobile phones or tablets.
The winner will be considered for support by one of the seven European Space Agency's Business Incubation Centres (ESA BICs) across Europe.

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SUCCESS STORY
ESA APP CHALLENGE 2011

THE IDEA

AQUAMAP – NEAR REAL-TIME WATER QUALITY SERVICES ON MOBILE PHONES

EOMAP won the ESA App Challenge 2011 with Aquamap, an idea for a near real-time water quality service for mobile phones. The main objective of the idea was to provide near real-time, high-resolution water quality products to both private users and professional offshore companies.

In the past months, EOMAP has paved the way to the successful implementation of Aquamap in order to provide rapid, user- and service-friendly access to its products. The installation of automated water-quality processors directly on ground segments has been successfully realised in Germany, Mexico, and Australia. In June 2012, EOMAP contributed a pilot GeoServer and further support to the ESA App Camp workshop in Frascati, Italy. The GeoServer uses a demonstration data set of digital maps integrated within a web-based portal, which enables mobile applications to access, visualise, and process satellite-based map products. The architecture and scope of the GeoServer was used as a pilot to support the current development of mobile applications using EO products and integrating basic access commands. The Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology is supporting EOMAP within the APPS4GMES project.

THE WINNERS 2011

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THE WINNER
DLR ENVIRONMENTAL CHALLENGE

THE IDEA

THERMCERT - THERMAL & CARBON EFFICIENCY REPORTING TOOL

Reducing thermal wastage in buildings – particularly over a large area or in large-scale buildings – is a key factor in the global drive to reduce carbon emissions. Often entire estates, regions, or cities need to be measured, especially to highlight the "worst offenders." Multiple incentives and systems have been introduced to help support investment in building sectoral thermal efficiency schemes. Measurement, Reporting, and Verification (MRV) are key. The proposed solution aims to use space-derived data to enhance quality and scanning frequency over the lifetime of thermal investments by initially focusing on large-scale buildings or extended thermal projects over a larger area than individual EPC ground (or air) scans can provide. It will also highlight geographical areas with poor thermal output.

A key aim is to increase the detail and quality of thermal output measurements and optimise the corresponding financial returns, increase the effectiveness of carbon credits/trading, and provide advanced tools for MRV and the promotion of thermal efficiency investments.

THE WINNER

Stevenson Astrosat Ltd., United Kingdom
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EXPERTS
DLR ENVIRONMENTAL CHALLENGE

GUNTER SCHREIER
GERMAN AEROSPACE CENTER (DLR)
HEAD OF BUSINESS DEVELOPMENT AND GMES COORDINATION, GERMAN REMOTE SENSING DATA CENTER (DFD)

THE EXPERTISE

«ThermCERT addresses the need for a European policy concerning the improved energy efficiency of houses and buildings. It uses available ground-based data and merges it with thermal infrared satellite imaging to support the energy certification of buildings.»

MONIKA NÖRR
CHAMBER OF INDUSTRY AND COMMERCE FOR MUNICH AND UPPER BAVARIA
HEAD OF INDUSTRY AND INNOVATION

DR THOMAS BEER
EUROPEAN SPACE AGENCY (ESA)
GMES POLICY COORDINATOR

DR KLAUS-DIETER ROCKWITZ
GERMAN AEROSPACE CENTER (DLR)
DLR PROGRAM DIRECTORATE SPACE (PD-W)

DR JUTTA GRAF
GERMAN AEROSPACE CENTER (DLR)
SITE MANAGEMENT OBERPAFFENHOFEN

DR ROLF-DIETER FISCHER
GERMAN AEROSPACE CENTER (DLR)
HEAD OF TECHNOLOGY MARKETING

ROBERT KLARNER
GERMAN AEROSPACE CENTER (DLR)
TECHNOLOGY MARKETING OBERPFAFFENHOFEN

THE PARTNER
DLR – THE GERMAN AEROSPACE CENTER

DLR is Germany's national research center for aeronautics and space. DLR also hosts the Earth Observation Center (EOC), comprised by the German Remote Sensing Data Center (DFD) and the Remote Sensing Technology Institute (IMF). EOC works in all fields related to the development of algorithms and data analysis systems, practical implementation of Earth observation applications and services – from satellite data capture and near real-time services to disaster monitoring and environmental mapping. As such, the EOC is involved in many aspects of GMES design, implementation, and operations.
In determining the focal points of its research, DLR is to a large extent guided by the demand for innovative products and services developed in close cooperation with industry. It also invests in promising technologies and offers its research and development capacities to customers for their own use.

THE PRIZE

DLR has been looking for new applications in Earth observation, with proposals addressing the mapping of the environment and climate, specifically those concerning managing energy. The winner will receive a voucher for a workshop or initial coaching according to what further realisation of the idea requires.

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SUCCESS STORY
DLR ENVIRONMENTAL CHALLENGE 2011

THE IDEA

EOPPAD – EO OF POWER PLANT AQUATIC DISCHARGES

Will Aicken of AMEC (formerly Serco) won the 2011 DLR Environmental Challenge with EOPPAD (Earth Observation of Power Plant Aquatic Discharges), a service that uses GMES and related satellite-data sources to assess environmental impacts associated with the discharge of cooling water from thermal power plants (TTPs) back into rivers, lakes, and oceans.

EOPPAD has since received support from DLR to explore the idea further. "Currently, DLR and myself are looking at a number of sources of high-resolution imagery. One such source is very high-resolution thermal infrared imagery from the DLR small satellite mission BIRD (Bi-spectral Infrared Detection). This satellite was dedicated to hotspot detection and investigation from space, and could be useful in detecting cooling water discharges from thermal power stations into coastal and land-based water bodies," Will Aicken explains. Another source of potentially useful data that will be examined is the TET-1 satellite, which is involved in a DLR verification mission launched in July 2012. This satellite will also have high-resolution thermal infrared sensors on board. In addition to infrared imagery, visible imagery from RapidEye and SPOT is being examined for use in deriving related water-quality information. Will Aicken is also looking at possible synergies between EOPPAD and other water-quality monitoring services related to GMES.

amec

THE WINNER 2011

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Will Aicken
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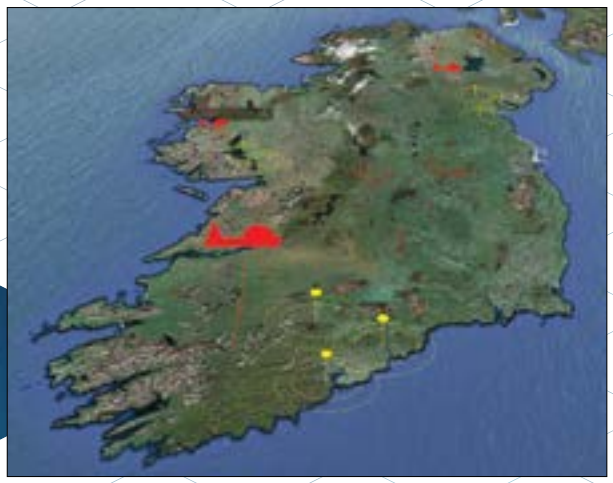
www.amec.com

THE WINNER
T-SYSTEMS CLOUD COMPUTING CHALLENGE

THE IDEA

WAMSAPS - WIDE-AREA MONITORING USING SPACEBORNE & AIRBORNE PLATFORMS



Wide-Area Monitoring using Spaceborne and Airborne Platforms (WAMSAPs) is a novel approach that facilitates continuous monitoring of man-made and natural environments in a more timely and comprehensive manner. Regular high-resolution, synoptic EO imagery and multi-sensor data streams acquired from fixed and mobile low-altitude, Unmanned Aerial Vehicles (UAV) and aerostat platforms are used to monitor and map key locations within a given area of interest. The system's operations – including deployment, acquisition, fusion, analysis, and visualisation – are fully automated. Rapid data acquisition by WAMSAP's low-altitude, eco-friendly aerostats/UAVs (which typically lasts minutes) ensures that these compact platforms are non-permanent features on the skyline.

Its output includes dynamic, multi-thematic data streams that can be transformed into a range of exciting new personalised, geospatial web services and applications serving both the B2B and the wider consumer market. A cloud-based web services subscription model can also be implemented to ensure the system's commercial viability.

THE WINNERS

iGeotec Technologies Ltd., Ireland
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www.igeotec.com

EXPERTS
T-SYSTEMS CLOUD COMPUTING CHALLENGE

DR JURRY DE LA MAR
T-SYSTEMS INTERNATIONAL GMBH
HEAD OF INTERNATIONAL SALES - PUBLIC SECTOR

THE EXPERTISE

«WAMSAPs made its case using multiple sensors that require the dynamic scalability of a cloud computing platform depending on the respective type of measurement (space or airborne). The concept also won the jury over with its variety of potential business models and clear technical implementation plan.»

RALF WILLENBROCK
T-SYSTEMS INTERNATIONAL GMBH
BUSINESS DEVELOPMENT MANAGER

DR THOMAS BEER
EUROPEAN SPACE AGENCY (ESA)
GMES POLICY COORDINATOR

BENJAMIN KREBS
BMW GROUP
INNOVATION MANAGEMENT

THOMAS SCHRAGE
ASTRIUM GEOINFORMATION SERVICES
PROGRAM MANAGER | FUTURE PROGRAMS

BERNHARD RUFF
T-SYSTEMS INTERNATIONAL GMBH
HEAD OF SUPPORT & GEO-SERVICES

SASCHA STEINER
T-SYSTEMS INTERNATIONAL GMBH
INNOVATION CENTER

MARKUS LENNARTZ
T-SYSTEMS INTERNATIONAL GMBH
VICE PRESIDENT SEGMENT EU / INTERNATIONAL

DR BERND SCHIRPKE
T-SYSTEMS INTERNATIONAL GMBH
ICT TRANSFORMATION CONSULTING

GERALD EICHLER
DEUTSCHE TELEKOM AG, TELEKOM INNOVATION LABORATORIES
SENIOR EXPERT R&D

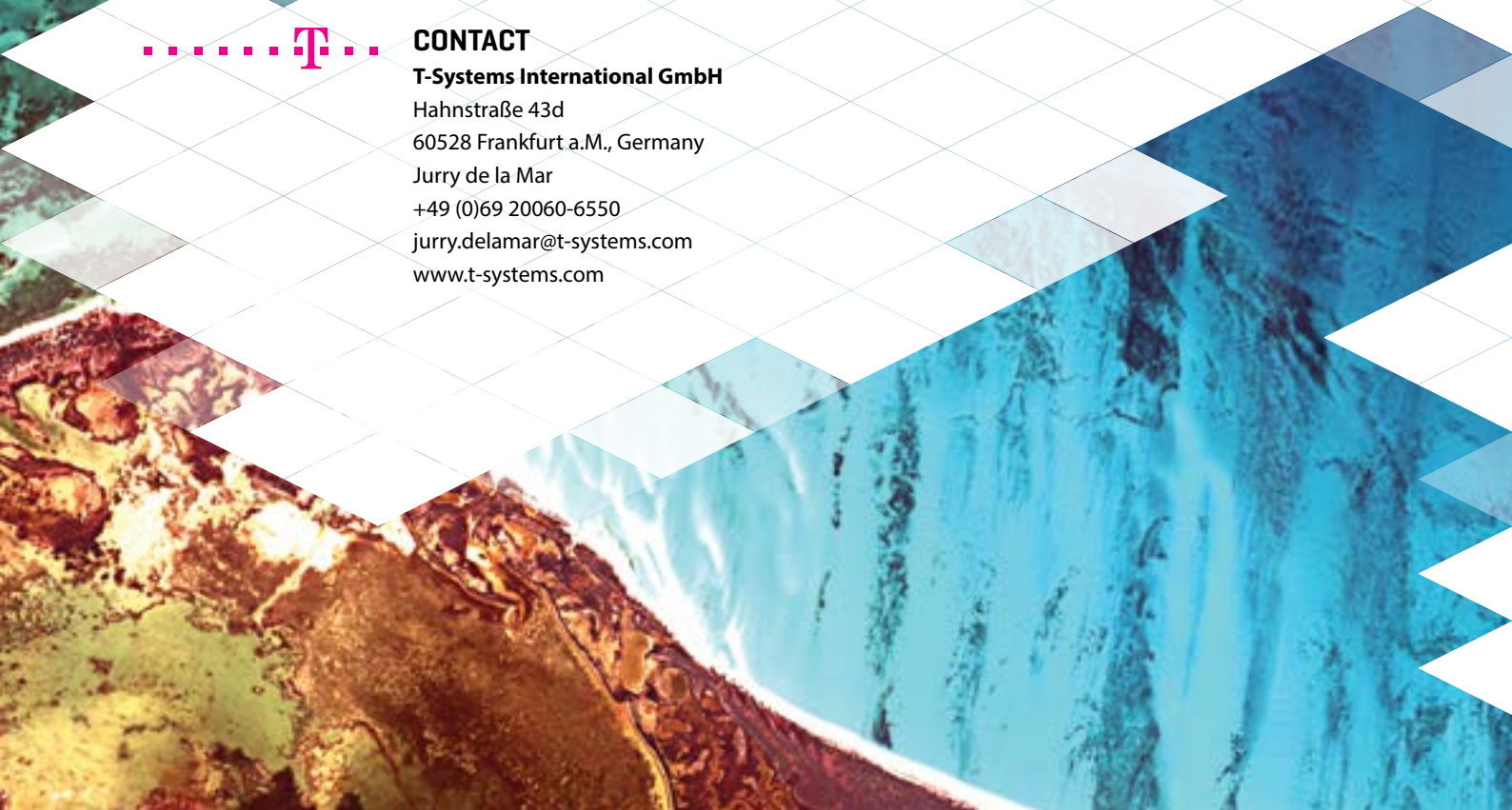
ROLAND VOELSKOW
T-SYSTEMS INTERNATIONAL GMBH
PORTFOLIO EXECUTIVE IT-HOSTING

THE PARTNER T-SYSTEMS

T-Systems operates information and communication technology for multinational corporations and public institutions. Furthermore, the Deutsche Telekom subsidiary is a leading supplier of cloud computing, and enables customers to use ICT resources via the Internet as and when they need them, only paying for what they use.
In the future, GMES services will be available in completely new dimensions by making use of extensive monitoring data from space and sensor networks that can be processed in near real-time. Providing such future GMES services to a wide variety of users and industries will entail building on cloud computing technologies to create commercially attractive and sustainable services.

THE PRIZE

T-Systems has been looking for the best GMES application or service idea that will make use of the Infrastructure-as-a-Service cloud computing service model and will assist the winner in getting the awarded GMES application or service off the ground, which could lead to a long-term partnership.



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SUCCESS STORY
T-SYSTEMS CLOUD COMPUTING CHALLENGE 2011

THE IDEA
URTHECAST
EARTH VIDEO CAMERA

URTHECAST
THE EARTH VIDEO CAMERA

Scott Larson and his team from UrtheCast were the winners of the 2011 T-Systems Cloud Computing Challenge with the world's first continuous, high-definition, streaming video platform of planet Earth from space.

Since winning, UrtheCast has joined forces with Geodan's DeforestACTION, a project that won both the 2011 GMES Masters Ideas Challenge and the overall competition in the same year, to monitor the illegal logging of old-growth forests in Borneo, Indonesia. UrtheCast will provide DeforestACTION with near real-time imagery from cameras secured to the bottom of the International Space Station (ISS). DeforestACTION EarthWatchers is the global project that involves millions of young people around the world saving the world's forests. The EarthWatchers application will include HD video from the UrtheCast cameras for monitoring Borneo's rainforests and the victimisation of its endangered orang-utan population.

Indeed, 2012 has already seen enormous growth from this space tech start-up. The cameras are being built in the UK by Rutherford Appleton Labs and are scheduled to be shipped to Russia towards the end of this year for launch in the first half of 2013. Furthermore, a partnership with the UN has been announced where UrtheCast will be supplying data towards their humanitarian and environmental initiatives.

THE WINNERS 2011

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THE OVERALL WINNER & WINNER OF THE EUROPEAN SPACE IMAGING HIGH-RES CHALLENGE

THE IDEA

CERBERUS - CROWDSOURCING AND E-LEARNING PLATFORM

Cerberus is a crowdsourcing and e-learning platform involving participants in the creation of maps.
On satellite photographs, participants can mark where they see, for example, cracks in ice, damaged power cables, areas of drought, or even lost pyramids.
Cerberus will be able to handle multiple sources of space-based GMES data and thus help mapping in a variety of areas. The principle has already succeeded in climate change research. While learning about this topic and experiencing climate change from space, participants can also make an important contribution to science. To motivate them, Cerberus is presented as a so called "serious game". Participant output is translated into map layers to be used, after verification, by governments or other interested parties. Originally developed to help NASA map the surface of Mars, Cerberus is now being advanced to serve a variety of remote-sensing tasks involving Earth (e.g. situation assessment following natural disasters). The Cerberus project is currently undergoing incubation at the ESA Business Incubation Centre in the Netherlands (Noordwijk).

THE WINNERS

Blackshore - creative, The Netherlands
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www.blackshore.eu

EXPERTS
EUROPEAN SPACE IMAGING HIGH-RES CHALLENGE

DR RUPERT HAYDN
EUROMAP
MANAGING DIRECTOR

THE EXPERTISE

«Cerberus provides a novel approach to using VHR satellite data that not only reaches a broader community, but also exploits dedicated disaster and environmental applications in a playful way. In addition, its use of the Internet makes it a powerful crowdsourcing tool.»

DR THOMAS KEMPER
EUROPEAN COMMISSION, JOINT RESEARCH CENTRE (JRC)
SCIENTIFIC OFFICER

PROF DR GERD BUZIEK
ESRI DEUTSCHLAND GROUP GMBH
DIRECTOR COMMUNICATIONS & PUBLIC AFFAIRS

DR MICHAEL BOCK
GERMAN AEROSPACE CENTER (DLR), SPACE ADMINISTRATION
PROJECT OFFICER EO APPLICATIONS

DR WOLFGANG BAETZ
FEDERAL INTELLIGENCE SERVICE
SECTION HEAD IMAGERY EXPLOITATION AND ANALYSIS

MICHAELA WEBER
EUROPEAN SPACE IMAGING GMBH
DIRECTOR SALES & MARKETING

ADRIAN ZEVENBERGEN
EUROPEAN SPACE IMAGING GMBH
GENERAL MANAGER

THE PARTNER
EUROPEAN SPACE IMAGING GMBH

For the past 10 years, European Space Imaging GmbH (EUSI) based in Munich, Germany, has been the leading supplier of very high-resolution (sub-metre) satellite imagery to users in Europe.
EUSI is the only European VHR satellite data provider operating its own dedicated ground station with direct satellite uplink and imagery downlink in close cooperation with the German Aerospace Center (DLR). Every day users benefit from priority tasking and same-day delivery.
Since its foundation, EUSI has worked closely with all leaders in the geospatial industry such as ESA, EC, UN, EMSA, most oil and gas companies, telecom providers, mapping organisations and location based services providers. The company is also an active participant in several GMES projects.

THE PRIZE

EUSI has chosen the best application idea that uses the most advanced VHR satellite data. The winner will be awarded a data package of EUSI satellite data worth up to EUR 20,000 for use in developing the winning application further.

EUROPEAN SPACE IMAGING®

CONTACT

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80634 Munich, Germany
+49 (0)89 1301 42-0
info@euspaceimaging.com
www.euspaceimaging.com

EUROPEAN SPACE SOLUTIONS

DISCOVER WHAT SPACE BRINGS TO YOUR LIFE!

3-5 DECEMBER 2012, LONDON

European Space Solutions, a major 3-day conference, exhibition and business support event will bring together business and the public-sector with users and developers of space-based solutions to explore how space can make a real difference to the lives, and livelihoods, of people across Europe.

DISCOVER

> **Opening Plenary Session** "Space Applications: Growing the Downstream Market" with confirmed Speakers including **Antonio Tajani, Rt Hon David Willetts MP, and Sir Richard Branson**

> **11 user-led, half-day seminars** focusing on various business sectors

> **A unique "Business Support and Application Development Fair"** incl. business match-making and elevator pitch sessions

> A special 1-day **workshop on the future Galileo PRS** (Public Regulated Service)

> Plus, a range of **networking, business exchange, special topic, media and social events**

The European Space Expo - a state of the art, interactive public exhibition showcasing the many benefits that the EU space programmes bring to Europe - will complement the conference.

Registration now open at www.space-solutions.eu

HOSTED BY: UK SPACE AGENCY

AN INITIATIVE OF: European Commission

IN PARTNERSHIP WITH: esa business incubation centre; TELESPAZIO VEGA UNITED KINGDOM; Technology Strategy Board Driving Innovation

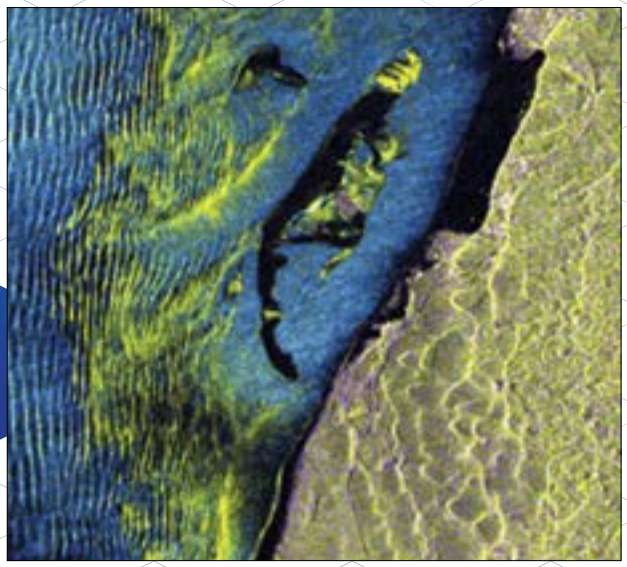
ORGANISED BY: European GNSS Agency; GMES MASTERS WWW.GMES-MASTERS.COM; EUROPEAN SATELLITE NAVIGATION COMPETITION 2012 HPI

NETWORKING PARTNER: SURREY SATELLITE TECHNOLOGY LTD

THE WINNER
ASTRIUM RADAR CHALLENGE

THE IDEA

BALIST – THE NEARSHORE BATHYMETRY SERVICE FROM SPACE USING SENTINELS-1 AND -2



BALIST is a service under development funded by the Aquitaine Regional Council as part of the APSAT project (INTERREG SUDOE IVb). Technically, BALIST aims to map coastal bathymetry for depths ranging from 0 to 20m using high resolutions of both optical and radar space data. The method is based on a combination of an optical-based inversion algorithm and optical or radar-based wave-crest tracking. BALIST has been demonstrated at a panel of French, Spanish, and Portuguese territories along the Atlantic and Mediterranean coasts. This service's global potential is considerable, as knowledge of nearshore areas is essential to both environmental and human security issues (e.g. shoreline management, sediment budgets, marine submersion risk, population and goods security, navigation safety, coastal sustainable development). The GMES initiative encompasses these major questions because under various circumstances (site inaccessibility, fast changes, disasters, etc.), frequent and synoptic satellite observations are the only means of obtaining relevant information.

GEO-Transfert

THE WINNERS

GEO-Transfert (University of Bordeaux/ADERA), France
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EXPERTS
ASTRIUM RADAR CHALLENGE

PROF DR STEFFEN KUNTZ
ASTRIUM GEO-INFORMATION SERVICES
SENIOR CONSULTANT

THE EXPERTISE

«With its innovative and commercially interesting technical approach, BALIST is fully in line with the notion of the GMES objectives of improving environmental coastal zone management and security for European citizens.»

ACHIM ROTH
GERMAN AEROSPACE CENTER (DLR)
TERRASAR-X SCIENCE COORDINATOR

DERROLD HOLCOMB
INTERGRAPH
SOFTWARE SCIENTIST

KARSTEN SCHULZ
FRAUNHOFER INSTITUTE OF OPTRONICS, SYSTEM TECHNOLOGIES AND IMAGE EXPLOITATION
HEAD OF DEPARTMENT SCENE ANALYSIS

PAOLO MANUNTA
PLANETEK
HEAD OF EUROPEAN INSTITUTIONS BUSINESS UNIT

DR URS WEGMÜLLER
GAMMA REMOTE SENSING
CEO

JÜRGEN JANOTH
ASTRIUM GEO-INFORMATION SERVICES
HEAD OF SAR RESEARCH AND DEVELOPMENT

OLIVER LANG
ASTRIUM GEO-INFORMATION SERVICES
HEAD OF SAR MONITORING SERVICES

WOLFGANG KOPPE
ASTRIUM GEO-INFORMATION SERVICES
APPLICATIONS DEVELOPMENT MANAGER

THE PARTNER
ASTRIUM GEO-INFORMATION SERVICES

The GEO-Information division of Astrium Services offers a unique portfolio of Earth observation imagery, geographic information products, and value-added services. Astrium Services operates a multi-resolution / multi-sensor satellite constellation with the Pléiades and SPOT optical satellites and TerraSAR-X & TanDEM-X radar sensors to deliver geo-information solutions to customers in sectors such as agriculture, security and defence, land administration, and resource management.
Customers enjoy a simple access to this unique offer: from more than 20 offices worldwide, the company delivers top quality products, solutions and customer service.
One unique portfolio, one company, and one point of contact for all geo-information needs!

THE PRIZE

The winner will receive a data package (radar and/or optical satellite data) worth EUR 25,000 and operational support to help advance the winning idea.

ASTRIUM
AN EADS COMPANY

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COMING IN 2013 ...
... THE GEO ILLUSTRATION CHALLENGE "TRACES OF HUMANKIND"

Nothing makes it so immediately clear as photos from space: The planet on which we live has a highly complex surface, broad sections of which are already being shaped and changed by the Earth's inhabitants.

Seeking to bring this idea home to a wide audience, GEO will partner the new GMES Masters Challenge "Traces of Humankind" for the first time in 2013. Participants will be asked to reveal and illustrate humankind's footprint on our planet – including all manners of effects produced by both current and long past developments – in vivid, artistic ways based on satellite images.

THE PARTNER

GEO

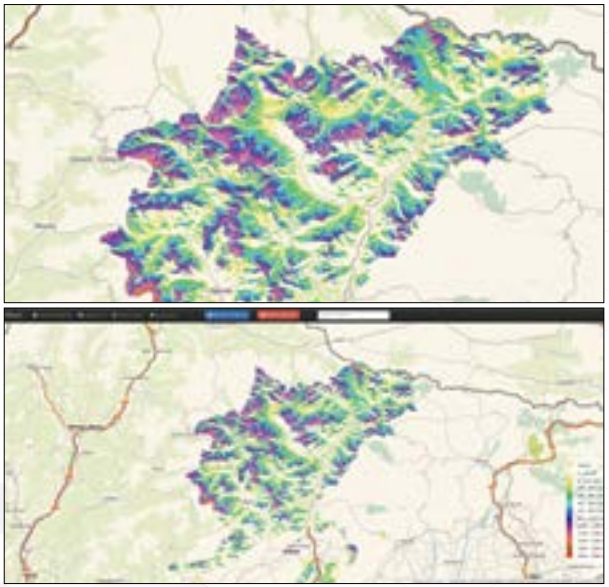
GEO – IN TOUCH WITH THE WORLD

GEO magazine has been published monthly by the Hamburg, Germany publishing house Gruner + Jahr for 36 years. Its opulent photo coverage and exciting, impeccably researched reports on science, nature, and humankind have made it the most respected German-language reportage magazine and one-of-a-kind in Europe. In the German-speaking countries alone, GEO can claim more than three million readers every month. GEO currently appears in a total of 20 countries and sells print and digital versions of its magazine in English all around the world.

THE WINNER
BEST SERVICE CHALLENGE

THE IDEA

SNOWMONIT - MONITORING SNOW AND WATER EQUIVALENT



Geobeyond

SnowMonit is designed to improve services that treat snow avalanche information through EO data. Snow accumulation, depth, and water equivalent are managed in order to exploit maps as a service while supporting the predictability of mountain hazards and the management of resources (water, energy).
This near real-time service will lead to a fine-scale resolution of situational awareness for nowcasting and warn-on-forecast applications.
Warning services for snow and avalanches very often cover remote areas that are not easily accessed and prone to natural or man-made disasters. The quality of Earth observation data can significantly impact spatial and temporal resolution in the effort to solve major safety problems in a timely manner.
This basic information is strengthening the operational performance of forecast models currently used to assess snowpack stability. Meanwhile, all stakeholders along the risk management value chain are able to consume advanced services and evolved data ready to use over the Internet through effective OGC-compliant endpoints such as WMS, WFS, and WPS.

THE WINNERS

Geobeyond Srl, Italy
Francesco Bartoli & Team
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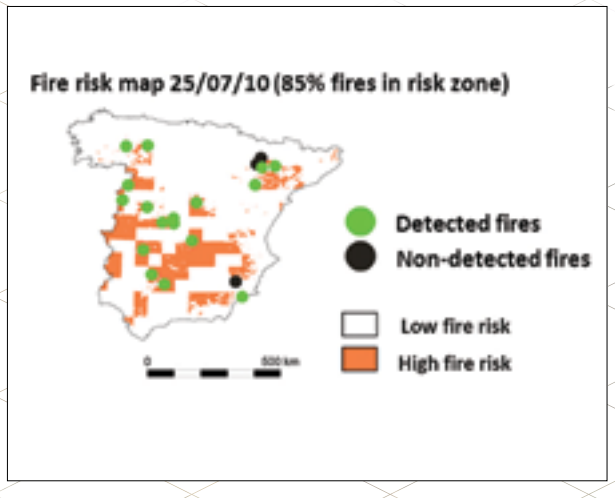
www.geobeyond.it

2ND PLACE - BEST SERVICE CHALLENGE

FIRE PREVENTION AND FAST REACTION



Uncontrolled fire outbreaks cause serious damage to the fragile and complex European ecosystem every year. In the worst cases, many victims are involved.
Merging remotely sensed visible, infra-red, and microwave data to build and constantly update fire-risk maps can help in managing these events in terms of prevention and rapid response.

Serco SpA, Italy
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3RD PLACE - BEST SERVICE CHALLENGE

EARTH SNAPSHOT

Every day, Chelys generates hundreds of real-time, photorealistic images from satellite data, which allow to monitor environmental issues such as desertification, glacial melt, and deforestation. While such images often remain unseen in data storage, Chelys analyses, describes, and publishes them daily on the Earth Snapshot portal. Earth Snapshot thus raises awareness of climate change by providing images and information useful for specialists and non-specialists alike.

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