

25th
ANNIVERSARY



EU-Japan Centre
for Industrial Cooperation
日欧産業協力センター

GNSS. asia

Japan in the ESNC 2013 Competition: from ideas to potential commercialization

GPS/GNSS Symposium 2013, Tokyo 29 November 2013



The GNSS.asia project is funded by the European Union within the Seventh Framework Programme under grant agreement no 287244. The responsibility for the views presented in this message / document lies exclusively with the members of the GNSS.asia consortium and do not necessarily reflect the views of the European Commission and the European GNSS Agency.

Pilot Activities to foster EU-JP GNSS industrial cooperation (2013)

Industrial internships in GNSS for European and Japanese engineering students (VULCANUS)

企業インターンシッププログラム（ヴルカヌス奨学金）

→ EU: 1 Japanese student will start in CEIT (GNSS in railway industry)

GNSS Industrial Partnership Service – to develop EU-JP business and R&D partnerships

産業連携サービス - EUと日本企業、R&D機関がパートナーシップを特定し発展

→ EU: over 10 Industrial profiles interested in developing partnerships with Japan

→ Japan: call for interest to develop cooperation with the EU

Innovation Competition in Japan with the **European Satellite Navigation Competition 2013**

→ Reward innovative ideas for GNSS applications in Japan (starts 1 April 2013)

GNSS.Asia Japan – プロジェクトチーム

ファブリツィオ・ムラ



市岡利康



谷島 潔



角谷陽子



ファブリツィオ・ムラ: 日欧産業協力センター事務局次長, J-BILATプロジェクトコーディネーター, GNSS.Asia.チームリーダー

市岡利康: J-BILAT, GNSS.asiaプロジェクトマネージャー, 科学技術イノベーションにおける日欧連携のプロモーション

角谷陽子: 日本における J-BILAT, GNSS.Asia 普及活動のプロジェクトコーディネーター

谷島 潔: 日本チームエキスパート, ライトハウステクノロジー・アンド・コンサルティング株式会社勤務。GNSS活用により世界貢献することを目的とする。

GNSS.Asia Japan – Networking Workshops

First GNSS.Asia Japan Workshop: 14 May 2013

Update on GALILEO schedule, EGNOS applications
Market opportunities in the EU for Sat Nav Apps,
Side by side with the SPAC Forum



Second GNSS.Asia Japan Workshop: 16 October 2013

Organized in Cooperation with SPAC
Updated Market assessment of eGNSS
Case studies in Europe: GNSS for Transport / road
Presentation of FP 7 projects : call to participate in H2020



“Vulcanus” Engineering Internships

Vulcanus in Japan 2011-2012 Map of internships

We welcome Japanese GNSS companies interested in receiving European engineering interns for the period:

September 2013- August 2014

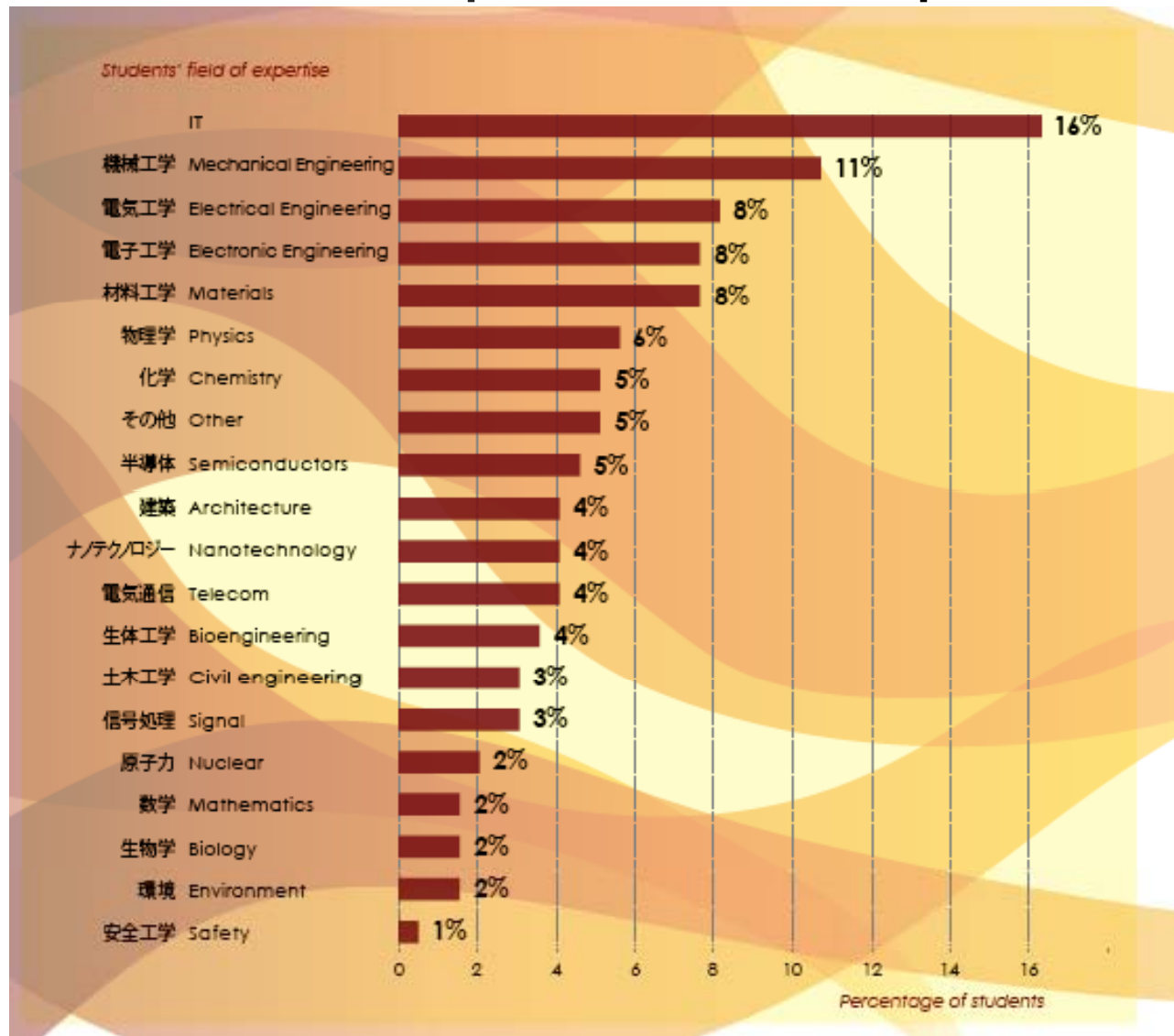
VULCANUS IN JAPAN
2011-2012

	1 - Mr Przemyslaw SYKTUS - PL AGH NTT CS Laboratory Souraku gun, Kyoto		3 - Mr Jakub KOSEK - PL AGH NTT CS Laboratory Atsugi shi, Kanagawa
	2 - Ms Ecaterina CERVENCA-LATES - RO Politehnica University of Timisoara NTT CS Laboratory Souraku gun, Kyoto		4 - Ms Tatjana ENDRJUKATE - LV Transport and Telecommunication Institute NTT CS Laboratory Atsugi shi, Kanagawa
	5 - Mr Andrea TINO - IT University of Catania NTT CS Laboratory Souraku gun, Kyoto		6 - Mr Richard BECKER - DE University of Rostock FujiSoft Incorporated Tokyo
	19 - Mr Louis UDEH - GB UNIV NOTTINGHAM Mitsubishi Chemical Corporation Yokkaichi shi, Mie		7 - Mr Gediminas DAUDERIS - LT Vilnius University NTT Basic Research Atsugi shi, Kanagawa
	26 - Ms Jana HONOVA - CZ Bmo University of Technology Mitsubishi Chemical Kurasiki shi, Okayama		8 - Ms Maria ANAGNOSTI - GR University of Gent NTT Basic Research Atsugi shi, Kanagawa
	21 - Ms Krisztina SZIRTES - HU Budapest University of Technology AIST Tsukuba shi, Ibaraki		9 - Mr Roger MOLTO PALLARES - ES Chemical Institute of Sarria (IQS) NTT Basic Research Atsugi shi, Kanagawa
	22 - Mr Valiko KARUSION - EE Tallinn University of Technology NTT Data Corporation Tokyo		10 - Ms Sanna Maria RAUHAMAKI - FI University of Jyväskylä NTT Basic Research Atsugi shi, Kanagawa
	23 - Mr Valerio VALLU - IT University of Bologna Hitachi Works Hitachi shi, Ibaraki		11 - Mr Maciej Mateusz KRUK - PL AGH FujiSoft Kawasaki shi, Kanagawa
	20 - Ms Nicola TYLER - DE Ludwig-Maximilians-Universität Mitsubishi Chemical Corporation Kitakyushu shi, Fukuoka		12 - Mr Diederik Jan VREEKEN - NL Delft University of Technology Hitachi Research Lab. Hitachinaka shi, Ibaraki
	24 - Ms Adelina DEHELEAN - RO Politehnica Timisoara IBM Japan Yamato shi, Kanagawa		13 - Mr Dominic HAYWARD - GB Durham University Hitachi Research Lab. Hitachinaka shi, Ibaraki
	25 - Mr James MATTHEWS - GB University of Birmingham Hitachi Kasado Kudamatsu shi, Yamaguchi		14 - Ms Sylwia KORCZYNSKA - PL Wroclaw University of Technology Hitachi Central Research Lab. Kokubunji shi, Tokyo
	27 - Mr Daniel Enrique ROJAS - DE Karlsruhe Institute of Technology Hitachi Kasado Kudamatsu shi, Yamaguchi		15 - Mr Erwin-Lorant KARALYOS - RO Technical University Cluj-Napoca Hitachi Central Research Lab. Kokubunji shi, Tokyo
	25 - Mr Danilo BONFINI - IT University of Trieste FUJITSU Kawasaki shi, Kanagawa		16 - Ms Raluca BORA - RO Technical University Cluj Napoca Schlumberger Sagamihara shi, Kanagawa
	29 - Mr Kristijonas BŪDELIS - LT Kaunas University of Technology YASUI ARCH Tokyo		17 - Mr José Enrique SERRANO COMES - ES Polytechnic University of Valencia TUV Rheinland Japan Yokohama shi, Kanagawa
	30 - MS Athina KONTI - GR City University London Schlumberger Sagamihara shi, Kanagawa		18 - Mr Lukasz ZABIEROWSKI - PL AGH TUV Rheinland Japan Yokohama shi, Kanagawa

“Vulcanus” Engineering Internships

Vulcanus in Japan Company internship for young engineers:

Demand in Japan: ICT is at the top of the list



“Vulcanus” Engineering Internships in GNSS

Results of the Vulcanus in Japan GNSS campaign (first half of 2013):
0 placements in Japanese companies



Where did we go wrong?

Lessons learned:

Industry: Highly Concentrated Japanese SatNav makers
Willingness to engage in internationalization?
Market very dependent on public projects (QZSS)
Hardware makers: not interested
Application developers: want talent with hyper-specific skills
Industrial internships not common in Japan

Academia: Very interested: but no strong connection to industry

The European Satellite Navigation Competition (ESNC)

About the European Satellite Navigation Competition 2013

Past Winners and success stories in ESNC

Evaluation of the 2013 Japan Competition



EUROPEAN SATELLITE NAVIGATION COMPETITION 2013

参加者への情報

About the European Satellite Navigation Competition 2013

SUBMIT YOUR IDEA
1 APRIL - 30 JUNE 2013
WWW.GALILEO-MASTERS.EU

partner regions 2012

- FINLAND
- ESTONIA
- IRELAND
- UK
- ØRESUND
- LITHUANIA
- HESS
- PRAGUE
- POLAND
- BADEN-WÜRTTEMBERG
- BAVARIA
- PORTUGAL
- SWITZERLAND
- AUSTRIA
- AQUITAINE
- LOMBARDY
- CROATIA
- NORTH AMERICA
- GIPUZKOA
- NICE-SOPHIA ANTIPOLIS
- CATALONIA
- BULGARIA
- ARAB MENA
- BRAZIL



10th
Anniversary

in cooperation with



prize awarding partner



under the patronage of



organised by



sponsoring partners



innovative IT partner



目的



EUROPEAN
SATELLITE NAVIGATION
COMPETITION 2013

- GNSS(衛星測位システム)の多岐にわたる可能性の認識を広める
- 様々な分野への技術応用を推進
- 企業家やベンチャー企業をサポート
- 受賞アイデアの理解を高めるため、多様な地域の産業、研究、政治体制などを考慮したマッチング
- 欧州が主体である衛星測位システム・ガリレオの将来的な可能性を軸にした国際協力の増築

主催



グローバルパートナー

Anwendungszentrum GmbH Oberpfaffenhofen (AZO)

- Organiser of the European Satellite Navigation Competition
- Drives innovation & incubation in the commercial use of space technologies & infrastructures

日本のパートナー

- 一般財団法人 日欧産業協力センター
- GNSS.Asia
- 一般社団法人 測位航法学会



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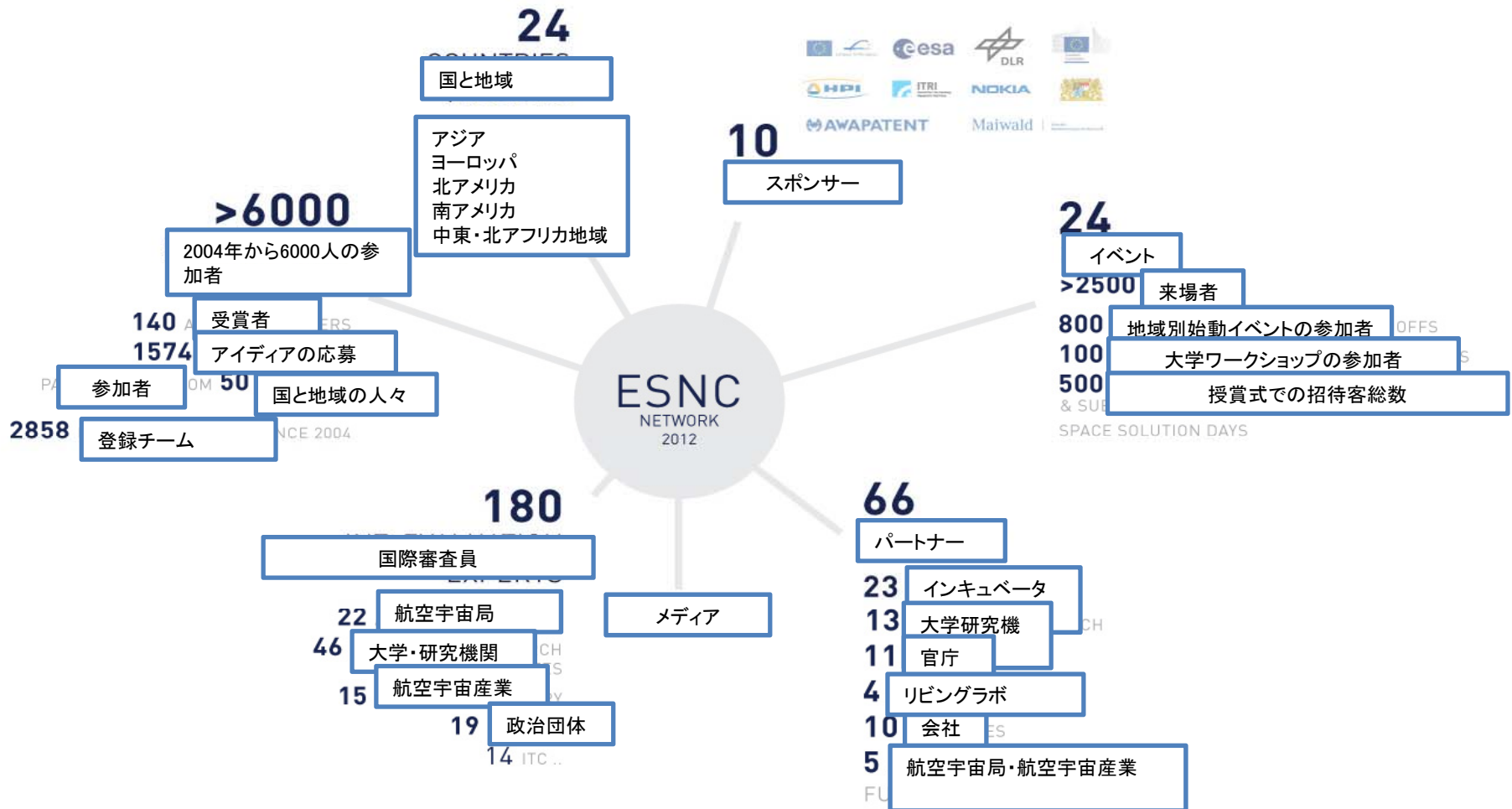
日欧産業協力センター



business
incubation
centre
Bavaria
managed by AZO



ESNC 国際ネットワーク



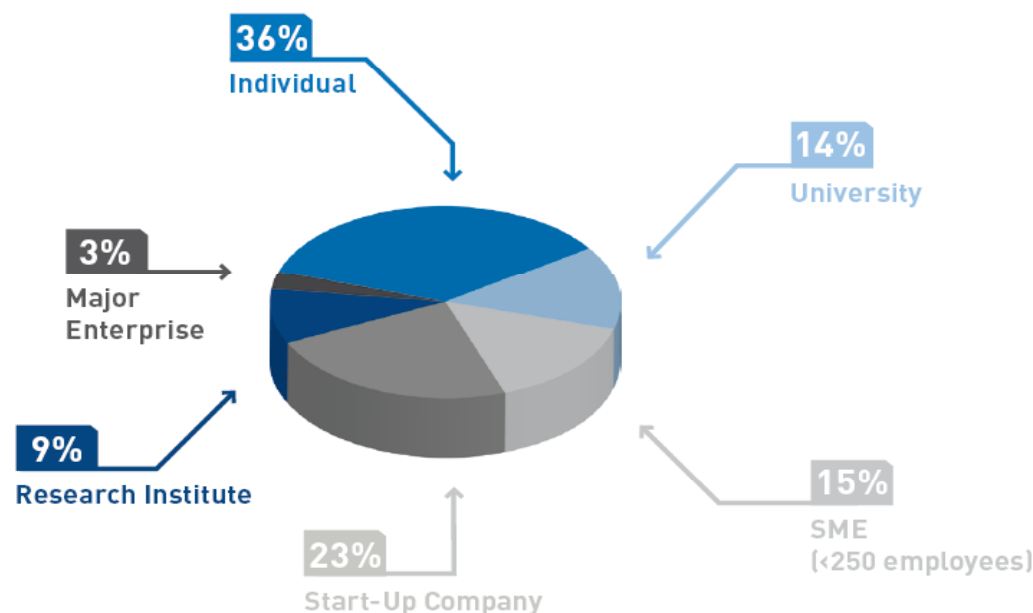


2004年から革新的な技術・イノベーションの源のESNC

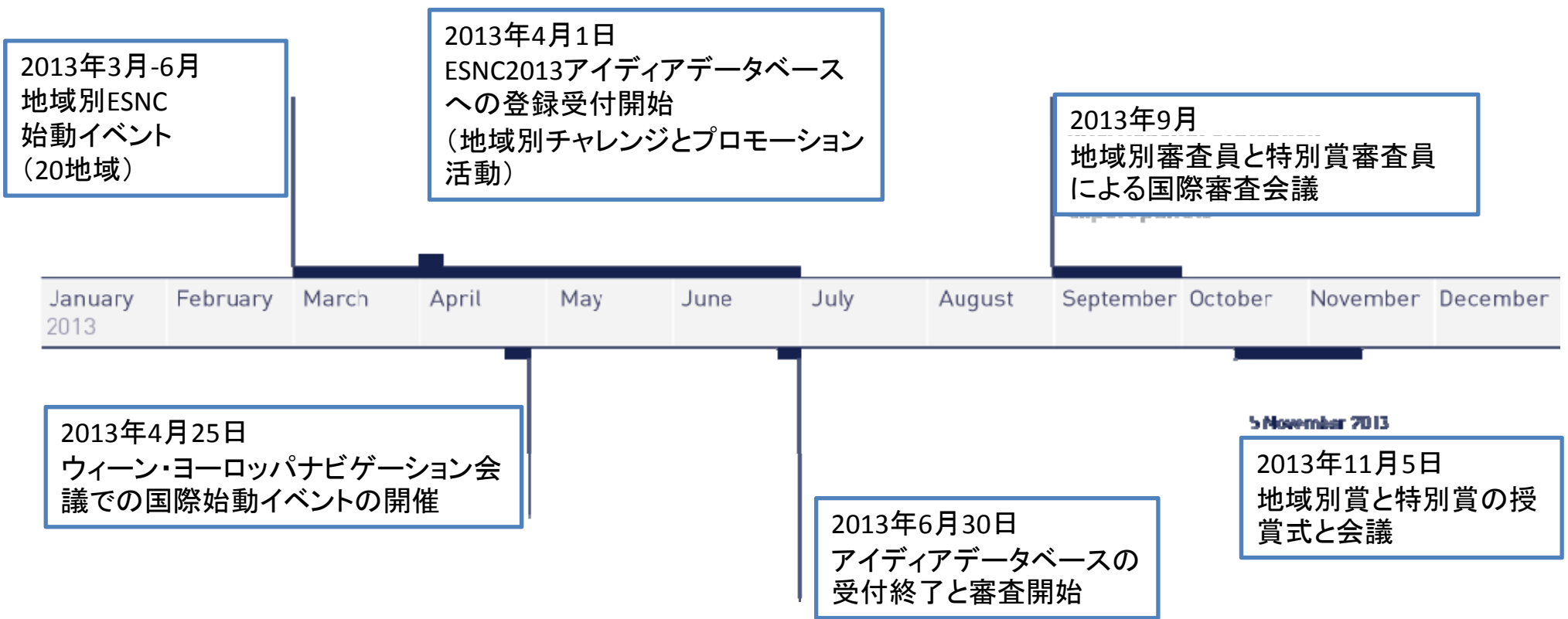
- 6,000以上の参加者
- 約2,000通の応募
- 171人の受賞者
- 60以上の国際的パートナー

過去のESNC応募者

- スタートアップ企業
- 中小企業
- 大企業の研究開発員
- 大学等の研究関係者
- 学生(20歳以上)
- 個人の研究員



スケジュール



応募方法



EUROPEAN
SATELLITE NAVIGATION
COMPETITION 2013

アイデア募集 2013年4月1日-6月30日

<http://www.galileo-masters.eu/>



上記ウェブサイトをクリック

<https://login.galileo-masters.eu/login.aspx?ReturnUrl=%2f>

EUROPEAN
SATELLITE NAVIGATION
COMPETITION 2013

Welcome to the Ideas Database

Please register or login here to submit your entry. You can edit your entry at any time until the closing of the database on 30 June 2013. We look forward to your submission!

If you are a new participant please use the registration form to log in.

Email or Username

Password

[Forgot Password](#)

Register Login

氏名・パスワードを登録

2013 年 ESNC パートナー



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special prize partners





EUROPEAN
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COMPETITION 2013

Prizes 2013 賞

日本賞



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COMPETITION 2013



EUROPEAN
SATELLITE NAVIGATION
COMPETITION 2013

In cooperation with



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Ministry of Economy, Trade and Industry

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FAQ

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Career

Calendar

Contact

Imprint

Now YOU can be the jury!

Browse through more than 200 abstracts of this year's ESNC submissions. Until 15 November 2013 you can read through the summarised ideas and vote for your favorite entry: [more](#)

VOTE NOW FOR THE
ESNC AUDIENCE AWARD
UNTIL 15 NOVEMBER 2013

AUDIENCE AWARD '13
VOTE NOW
UNTIL 15 NOVEMBER

About

ESNC Network

Business Incubation

Experts Network

The Competition

Terms of Participation

Application Fields

Evaluation

Awards Ceremony

Prizes

Get Inspired

Japan

Prizes Region Regional Organiser Regional Partner



Prize

The regional winner will receive:

- EUR 5,000 in cash to be used at the winner's discretion
- As part of the "Step In Japan" programme, the winner will have access to one month of hot-desk support at the main Japanese office of the EU-Japan Centre for Industrial Cooperation in Tokyo.
- The winner will also receive an information helpdesk service in relation to Japan and assistance in searching for and identifying partners through the Enterprise Europe Network Japan service with an eye toward commercialising the winning idea.

Contact

EU-Japan Centre for Industrial
Cooperation
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[Email](#)

emura@ic21.eu



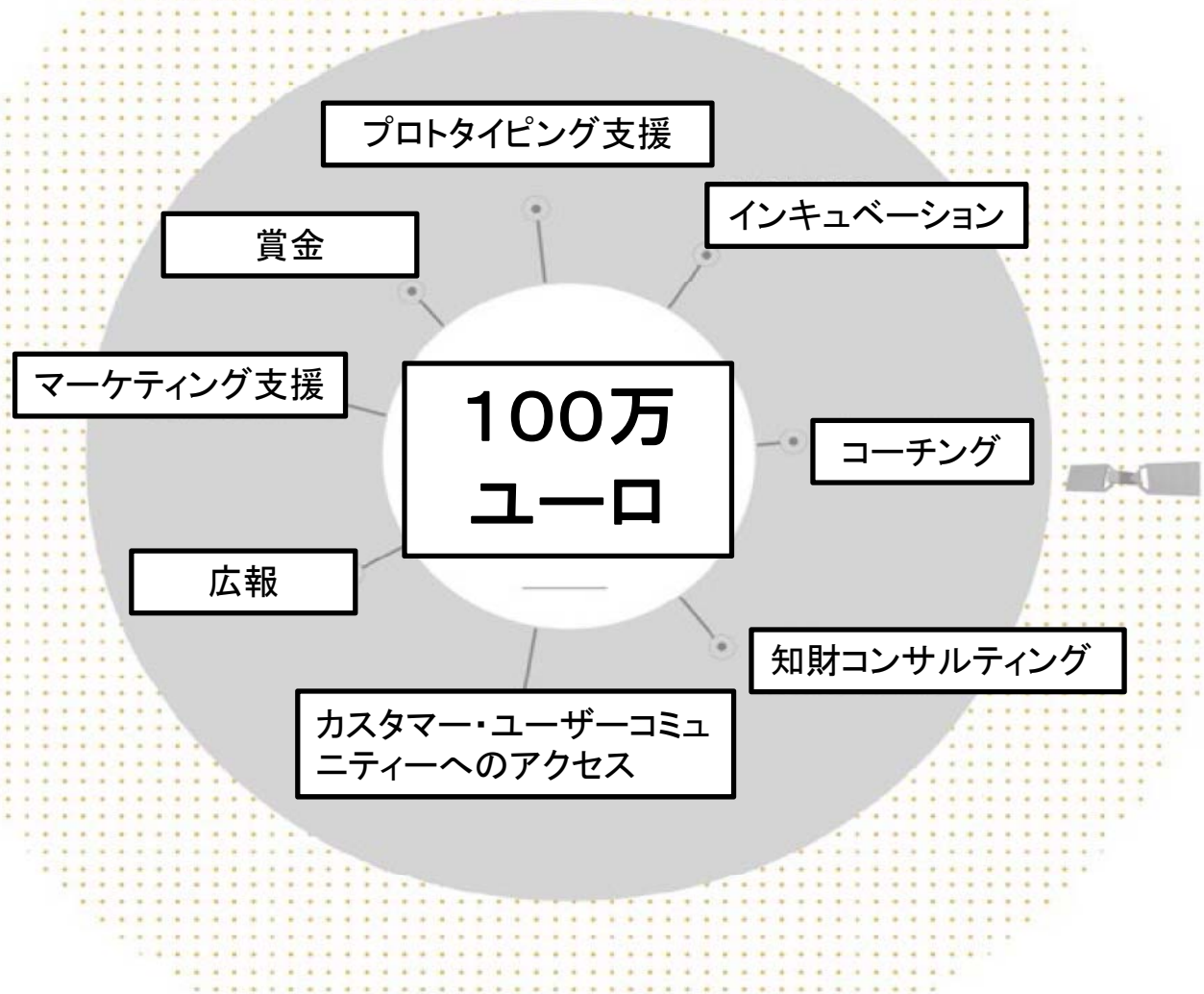
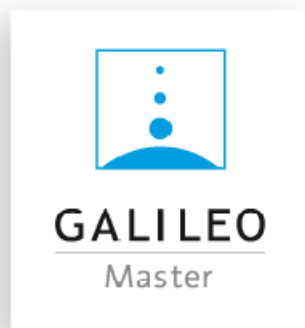
優勝者はグローバル賞獲得のチャンスがあります！

- 賞金 € 5,000
- 1ヶ月インキュベーションサポート → STEP in Japan
- 情報提供サービス → Enterprise Europe Network
- パートナリングサポート



グローバル賞

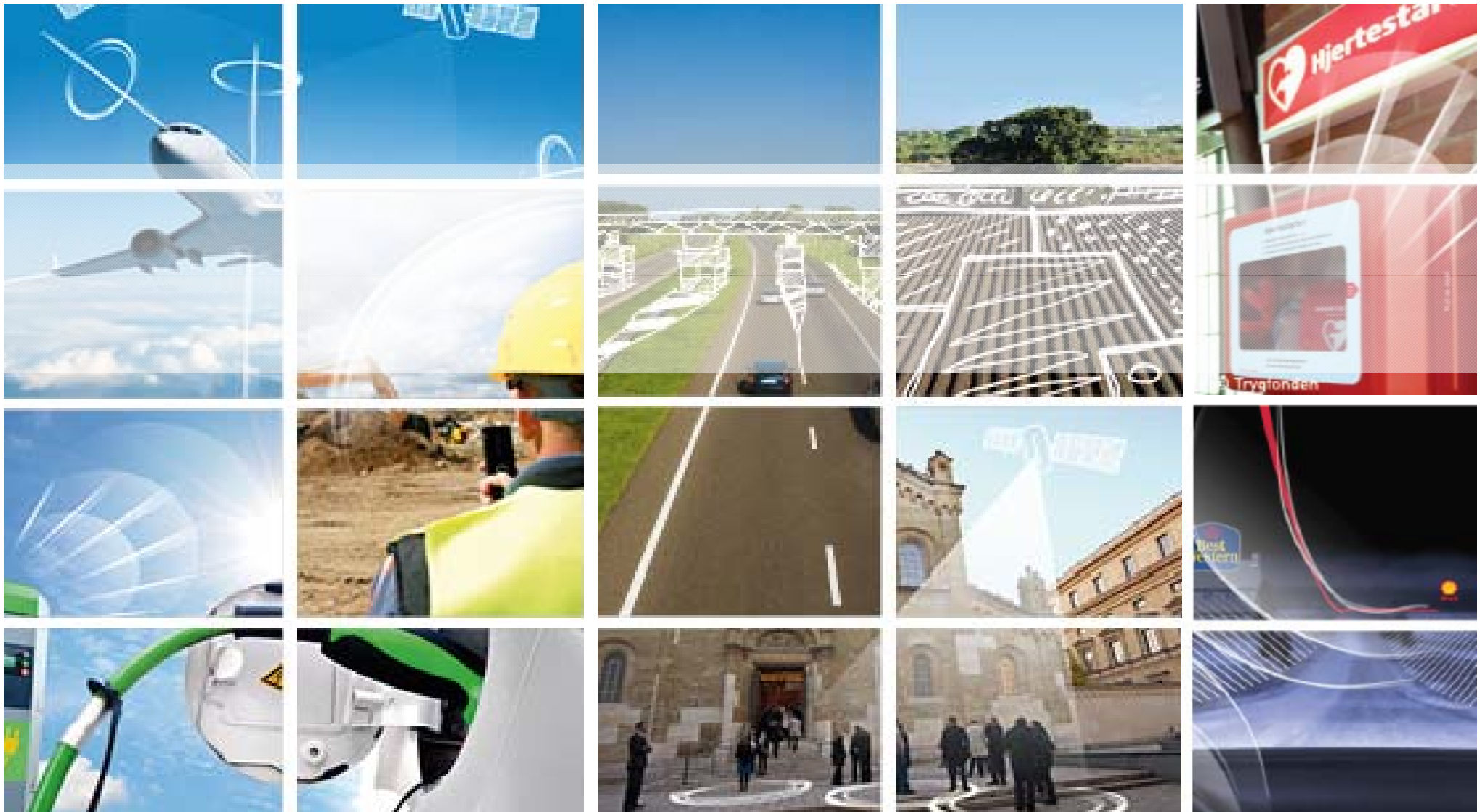
ガリレオマスターになって
€20,000獲得！



アプリケーションの事例



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COMPETITION 2013

Past Winners & Success Stories

© Simone Hörmann

Overall Winner :: GALILEO Master 2011

Winner :: NAVTEQ / USA



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

Juliana Clegg | Tom Zamojdo | Chris Grabowski



- Augmented Reality
- Translucent location guidance
- Virtual Cable™, Virtual Signs™
- GNSS, map, and POI data
- From 2 metres to infinity
- Truly 3D
- Real-time data streaming
- Automotive, marine, avionics



© MVS-California, LLC.

総合優勝者 ナビゲーションのアプリケーション



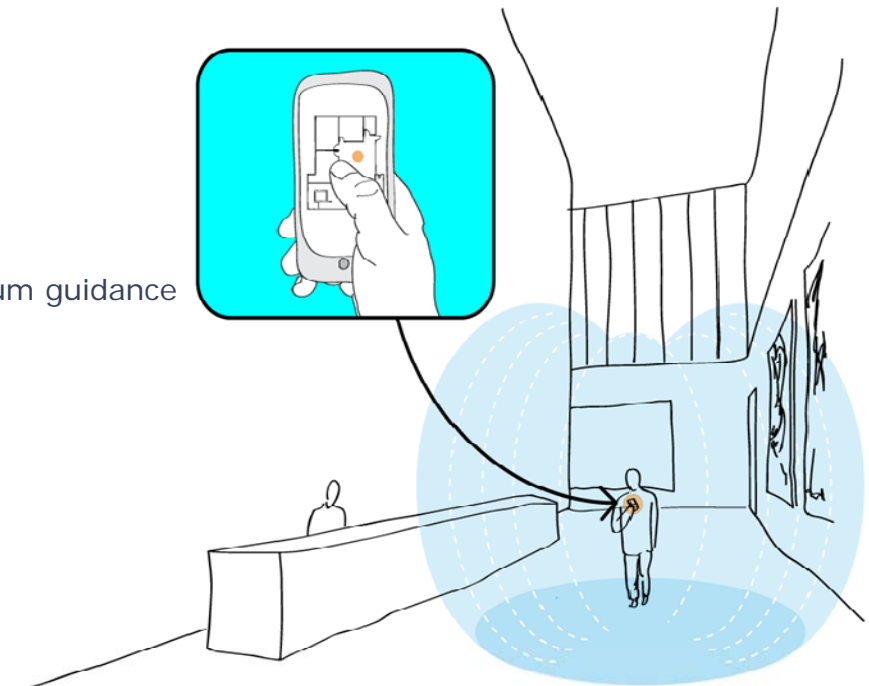
Seamless Indoor Navigation シームレス屋内ナビゲーション

Overall Winner :: GALILEO Master 2012
総合優勝者 :: ガリレオマスター2012



スマートフォンの正確な屋内ナビゲーション

- Ultra Low Frequency Magnetic Field Communication
超低周波数による磁場コミュニケーション
- Works with the phone's three-axis hall sensor
携帯内蔵の三軸ホールセンサを利用
- Indoor navigation, access control, personalized advertisements, museum guidance
屋内ナビゲーション、アクセスコントロール、個人向け広告、博物館案内
- GNSS support for tunnels and densely constructed areas
建物密集地域やトンネルなどにおけるGNSSのサポート
- Ranges from millimetres to several meters,
very low-cost infrastructure
低コストのインフラで尚且つミリメートル、メートル単位の範囲を持つ



©Fraunhofer Portugal

Regional Winner :: United Kingdom



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The Travel Time Platform – Time is More Valuable than Distance

Peter Lilley| Charlie Davies



iGEOLISE
MINUTES MEAN MORE THAN MILES

- Delivers locations based on travel time
- First to market, initial customers secured
- Launched in the UK
- Successful trials in nine other countries
- Uses real-time and historic GNSS data
- Adds the value of GNSS data to location-based information



© iGeolise 2012



3SOUND NAVIGATION: Track Navigation Solution

Rafael Olmedo



- Personal navigation solution
- Integrates acoustic binaural technologies (3D sounds) and GNSS technologies to guide people along a predefined track
- GNSS and augmentation systems allow accurate user positioning
- Mobile phone sensor provides orientation and reinforces navigation
- 3D sounds make it possible to perceive sounds from specific spatial points
- Open earphones allow undisturbed environmental hearing
- Track navigation based on acoustic track perception



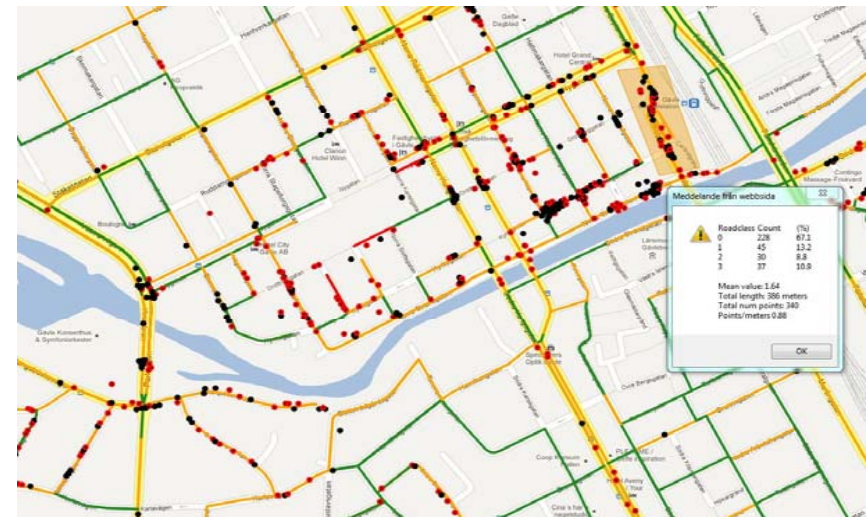


Roadroid - The Global Road Monitoring System

Regional Winner 2012 :: Öresund



- sustainable road quality using smartphone sensors, cameras, & GPS with online maps
- Roads are a key factor around the globe; important for growth and democracy
- Globally scalable solution for cost-efficient road surveys
- Road quality is an excellent input for route guidance



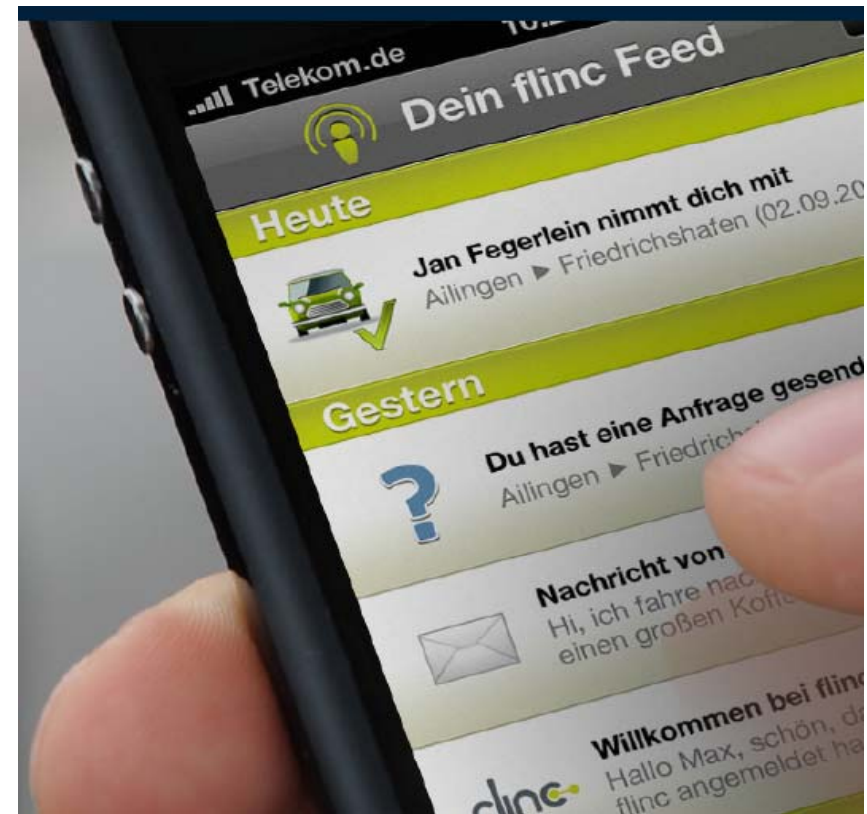
Road / Ride sharing

flinc

Regional Winner 2010 :: Hesse



- social mobility network
- real-time ride sharing
- combines GPS and location-based capabilities with social networking to offer a dynamic, safe, and automated service that gets people from A to B
- available in the app store



Success Stories (examples)



Wikitude Drive // The overall winner of ESNC 2010 is the world's first fully functional mobile Augmented Reality navigation system with global maps. It is a light-weight turn-by-turn navigation system that uses Augmented Reality (AR) to draw driving instructions directly onto the live video stream of your smartphone. Wikitude Drive is already available in the Android Market.

eVotz // The winner of the USA Challenge 2010 is currently in beta. In May the company established its European office in the ESNC partner region Nice-Sophia Antipolis. The interactive, authenticated, private, and location-aware application impacts society by leveraging the incredible growth of mobile devices – and the corresponding geo-location and mobile positioning services – to enable simple, trustworthy, and secure voting and polling.



Cardiac Power Monitoring [CPM] // CPM measures cardiac power during training at any time and location and won the GNSS Living Lab Prize in 2010. In combination with the cardiac power index (CPI), it provides the user with a target and proof that her/his training efforts are paying off. Currently the system is being tested and validated by a user community in a Living Lab.

Success Stories (examples)



VUlog // The celebrated car-sharing service from the 2005 GALILEO Master has been in place in Antibes, Côte d'Azur since July 2007.

iOpener // Following a year of support in the ESA BIC Noordwijk, the Dutch regional winner from 2006 has received EUR 4.1 million in venture capital and can already boast 20,000 beta testers for a virtual reality real-time racing game.



Insiteo // After winning the 2008 ESA special topic prize, Insiteo a specialist of innovative solutions for indoor geo-location, has concluded the initial phase of a funding round valued at several million euros to produce the first 10 prototypes of pseudolites.

授賞式2012: ミュンヘン



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歓迎会2012: ミュンヘン



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COMPETITION 2013



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Evaluation of the 2013 Japan Competition



Evaluation of the 2013 Japan Competition

- 23 Ideas received for Japan, 19 valid ideas ranked
- Ideas: B2C GNSS applications, QZSS services, Disaster prevention
- Many ideas from Japan, South Korea, Taiwan and ... Europe
- The Winning idea will be announced on 5 November at ESS in Munich
- 4 Finalists ideas shortlisted for final selection

The European Space Solutions conference is coming to Munich from 5 - 7 November 2013.

The major 3-day conference will bring together business and the public sector with users and developers of space-based solutions. For more information: www.space_solutions.eu



Save the date! 2nd EU-Asia Industry Collaboration Seminar

5 November 2013

- **Participants** from EU and five Asian Economies
- B2B **matchmaking** sessions
- Great opportunity to interact with **European GNSS Industry and Institutions!**
- GNSS Application **thematic desks** (standardisation, receivers, road and transport, etc.)
- Co-located with European Space Solutions conference and Galileo Masters Award Ceremony



European Space Solutions

Discover what space brings to your life

5 – 7 November 2013, Munich

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EU-Japan Centre
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日欧産業協力センター

THANK YOU

.. any questions?

GNSS
asia

Contact us at
gnssasia@eu-japan.gr.jp

“Vulcanus” Engineering Internships

Vulcanus in Japan Company internship for young engineers:

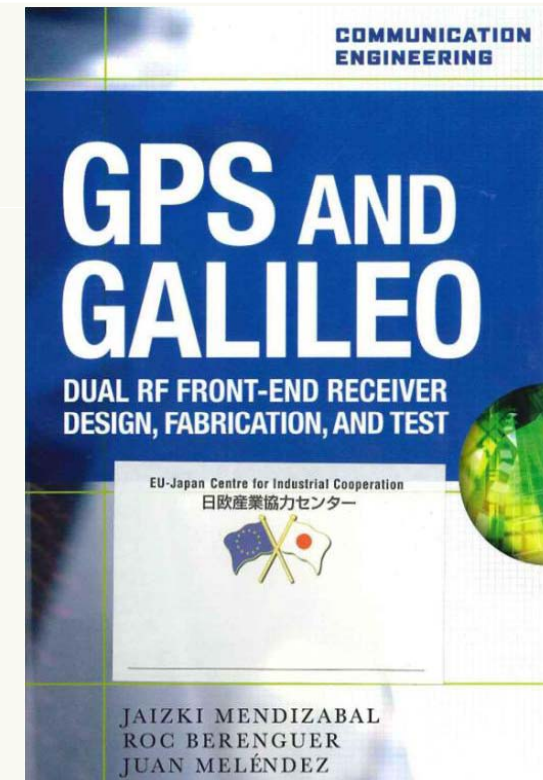
Japanese language and culture course (4-month) and company internship (8-month) in Japan for European students in science & engineering fields (the same programme exists for Japanese students in the EU).

Vulcanus in Japan

2011-2012



30 participants started
Vulcanus in September 2011



GNSS Industrial Partnership Service – to develop EU-JP business and R&D partnerships

Example of industrial partnership request:

Title: New vehicle tracking solution

Summary: A small German company offers a vehicle tracking solution based on a smart box (GNSS/GPRS) that can be configured individually and can be integrated into existing technical surroundings. It is robust and compact and provides locations of vehicles, cargo and passengers in real time. Benefits include increased transparency and more efficient work processes. Partners from logistics, facility management and other services are sought for commercial agreements with technical assistance. (TECHNOLOGY OFFER, ref.:13 DE 0855 3RMD)

Detailed information: http://www.enterprise-europe-network.ec.europa.eu/matching/complerec.cfm?BBS_ID=175765&COMPANY=801370

All current offers available at:

[http://japan.gnss.asia/Industrial Partnership Opportunities](http://japan.gnss.asia/Industrial_Partnership_Opportunities)

About the EU-Japan Centre for Industrial Cooperation

日欧産業協力センターについて

1. Policy analysis

Seminars & workshops: support to dialogue
EU-Japan Business Round Table

2. Services to Business

Training programmes for EU and JP firms
Enterprise Europe Network
Information service (business inquiries)

3. EU-Japan cooperation in Innovation & R&D

R&D (FP7) J-BILAT
Cluster helpdesk and missions

- help EU firms become familiar with the Japanese market and industry trends;

- facilitate contacts and help initiate business through network + meetings (*) (multi-sectoral);

- assess expectations from Japanese customers about EU products / services (*) ;

- help EU firms (resp. Jp firms) search for partners in Japan (resp. partners in Japan) (*) ;

(*) Relevance to GNSS

