

GNSS. asia

Facilitating Industrial GNSS Cooperation Across Continents

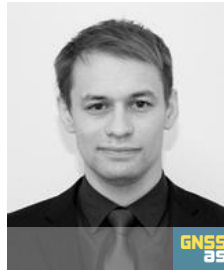


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ECCK



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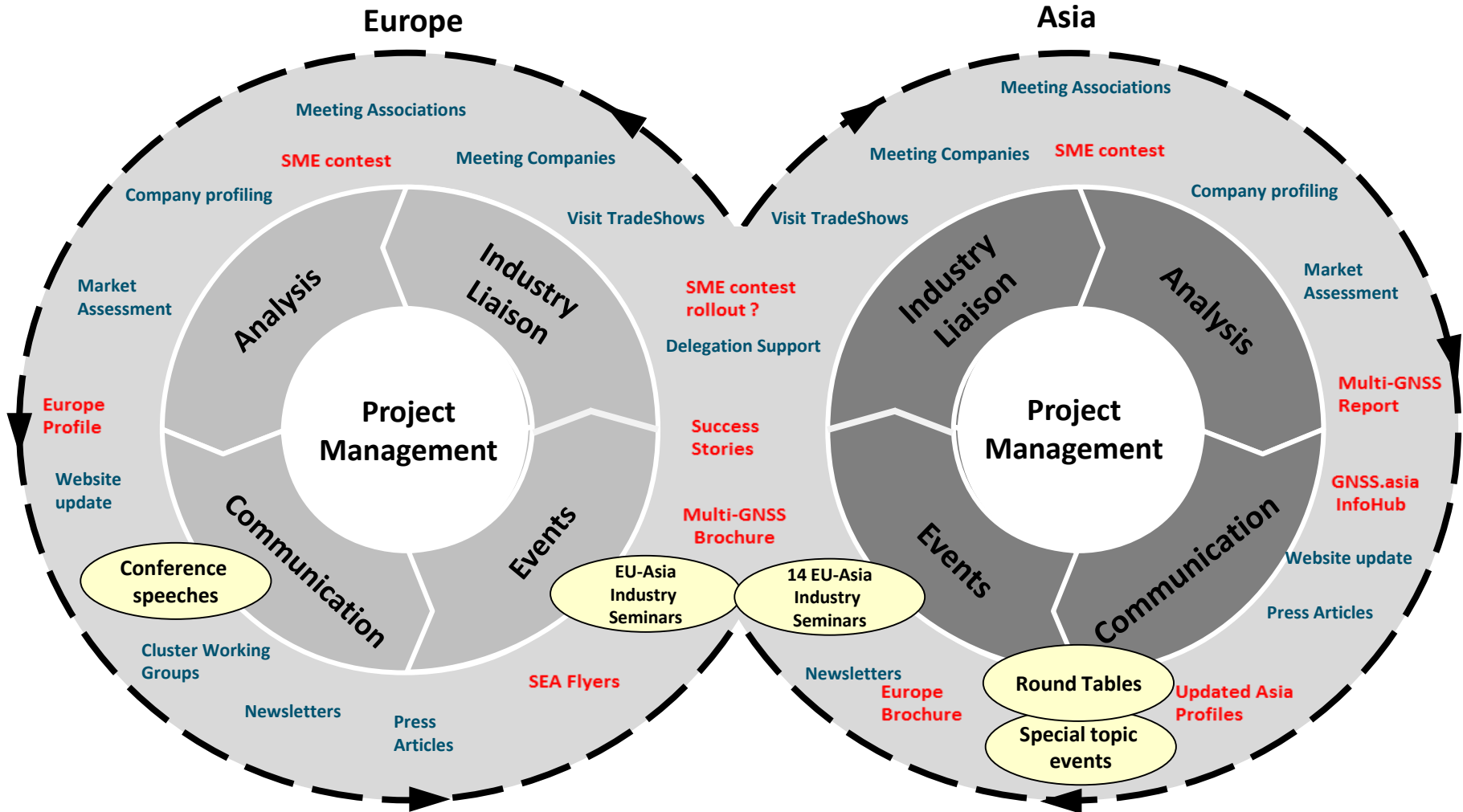


Qiulan Zhu
Events Coordinator



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Expert Advisor

Building on the success of GNSS.asia



GNSS.asia continuation
New project elements

INDUSTRY



EU Industry



EVENTS

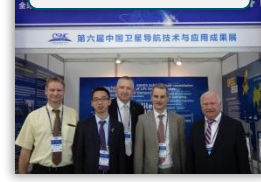
Round Table Meetings



Industry Seminars



GNSS Events



Workshops



Delegation Support



GNSS asia

Country Profiles

Country Profiles

Key opportunities:

- GNSS applications for navigation and location services
- GNSS applications for precision agriculture
- GNSS applications for smart cities and infrastructure
- GNSS applications for disaster management and emergency response
- GNSS applications for autonomous vehicles
- GNSS applications for precision farming and agriculture
- GNSS applications for smart grids and energy management
- GNSS applications for smart transportation and logistics
- GNSS applications for smart manufacturing and industry 4.0
- GNSS applications for smart healthcare and medical devices
- GNSS applications for smart energy and power grids
- GNSS applications for smart infrastructure and urban planning
- GNSS applications for smart mobility and transportation
- GNSS applications for smart security and defense
- GNSS applications for smart environment and natural resources
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- GNSS applications for smart mobility and transportation
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- GNSS applications for smart environment and natural resources

Newsletters

Newsletters

Latest highlights:

- GNSS Opportunities
- News on GNSS
- News from India
- European Chamber Seminars
- Navigation activities

GNSS Asia Latest highlights

Cross-continental cooperation in GNSS continues

Multilingual Website

Website interface showing navigation and content in multiple languages.

Market Opportunities

Market Opportunities

Applications:

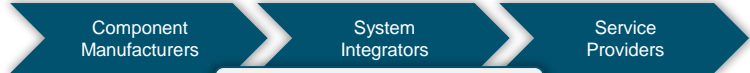
- Industry profiles, manufacturing concerns and public authorities need all the data in a single bank at their disposal for the full range of their operations.
- GNSS Asia is a leading provider of GNSS solutions for a wide range of applications.

Installed base of GNSS devices by region:

Year	North America	Europe	Asia Pacific	Latin America & Caribbean
2014	1.5	1.0	0.5	0.2
2015	2.0	1.5	0.8	0.3
2016	2.5	2.0	1.2	0.4
2017	3.0	2.5	1.6	0.5
2018	3.5	3.0	2.0	0.6
2019	4.0	3.5	2.4	0.7
2020	4.5	4.0	2.8	0.8
2021	5.0	4.5	3.2	0.9
2022	5.5	5.0	3.6	1.0
2023	6.0	5.5	4.0	1.1

Company Database

Company	公司名	GNSS Market	GNSS product/services	Website	Short Description
KYCT	睿威科技	Road	GPS Devices	http://www.kyct.com.tw	KYCT is a company for Solar Energy technologies. In recent year, it has developed its technology in Telematics, GPS navigation and fleet management in Road applications.
LIDAR Technology	捷密科技	LBS	navigation services	http://www.lidar.com.tw/	LIDAR was founded in 2010, a spin-off RS research team of ITRI. The company focus on applications in Earth observations, Geo-information and LBS.
Leadtek	康泰科技	Road/LBS	GPS Devices	www.leadtek.com.tw	Leadtek is a company for the integration of computer and communications technologies with its sights set on combining multimedia videography, and GPS in a single product. It also extends to the market for broadband network devices.
Locosys Technology	大辰科技	Road/LBS	GNSS/GPS modules and solutions	http://www.locosys.com/	A leading company in the GPS/GNSS market in Taiwan

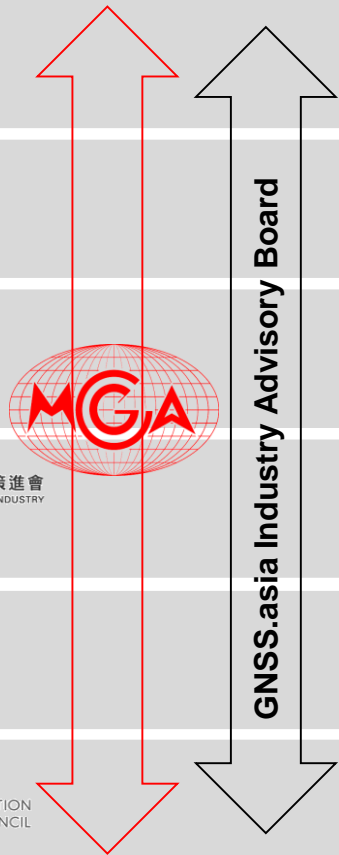


COMMUNICATION

Supply Chain Analysis

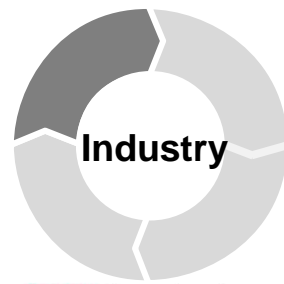
ANALYSIS

GNSS.asia collaboration network in Asia-Oceania

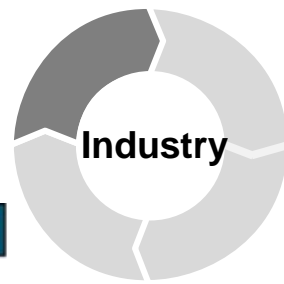


Industrial cooperation across continents in GNSS

European companies engaged in GNSS.asia activities



And Asian companies have been very active, too



India

kalycito XYS EI Labs India Pvt. Ltd. Sheorey Digital Fargo Telecom roadmatics
ASL Advanced Systems EGS LEAD BY INNOVATION AqTronics LARSEN & TOUBRO amdl ACCORD infineon

China

Hwa Create COSIC UNICORE 和芯星通 联星 OLinkStar UniStrong 合众思壮 NAVINFO 四维图新

Taiwan

MEDIA TEK SkyTra LOCOSYS PRINCO G.top GlobalTop RoyalTek TIT
MITAC ADVANTECH DIOD PEGATRON ASUS PEGATRON Quanta Computer wistron WNC Wistron NetWeb Corp.

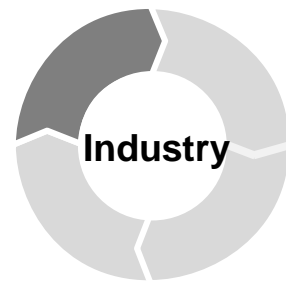
Korea

TELACE SAMSUNG ASCEN GPS Global GPS Leader AscenKorea Inc. SK kt Dusitech LG

Japan

FURUNO ジョルダン株式会社 Mapion SEIKO EPSON HITACHI Inspire the Next FUJITSU TEN NISSAN
MITSUBISHI ELECTRIC NAVITIME Clarion AISIN AW ALPINE

Many GNSS.asia actors are interested in Multi-GNSS activities



Multi-GNSS chipsets, MEMs, Sensor Fusion, and Telematics. Galileo Pilot User



Precise navigation and positioning solutions, network of over 80 GNSS reference stations, Galileo CS partner



High Precision Multi-GNSS Receivers, Aviation Receivers



Sensors: MEMS, triaxial geomagnetic, barometric pressure, acceleration etc.



GNSS Development suite, real Time GNSS generators and software receivers



Multi-GNSS chipsets, mobile communications Galileo Pilot User



Maritime GNSS Galileo Pilot User



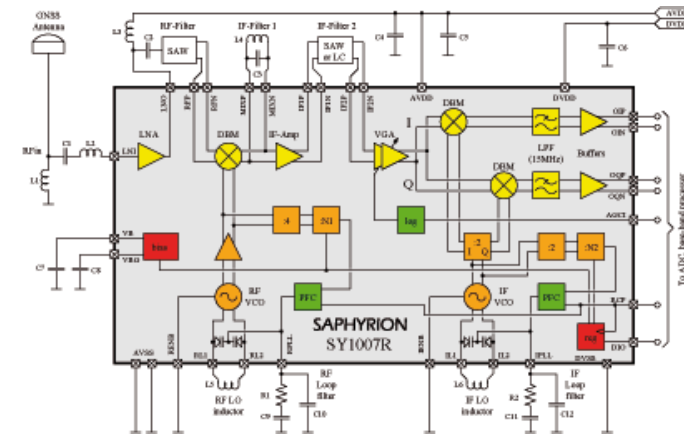
Hardware/software development for GNSS receivers



Multi-GNSS Chipsets for Internet of Things

GNSS.asia Success Story 1: Saphyrion found Chinese Partners

- In September 2013, GNSS.asia China team showed the Managing Director of Saphyrion around the GNSS & LBS Association's Conference in Beijing
- In January 2014, the cooperation interests of Saphyrion was published in the GNSS.asia **China e-Newsletter**
- In 2014 May, Saphyrion asked GNSS.asia to support a sales lead from a Chinese research institution
- GNSS.asia China explored interest interest and brought the parties together
- In October 2014, Saphyrion sold RF Chipsets to the Chinese Academy of Science



GNSS.asia Success Story 2: Teleorbit partners with AJT

- Prof. Qi Zheng attended the GNSS.asia Seminar at European Space 2013
- Teleorbit attended GNSS.asia Seminar 2014
- Now AJT is China Agent for Teleorbit



European Chamber
中国欧盟商会



GNSS.asia has mapped the downstream sectors and the relevant GNSS stakeholder environment



- **GNSS supply chain analysis**
 - Extensive analysis of the various downstream sectors (e.g. LBS, road, rail, etc.)
 - Analysis of local capabilities along the GNSS supply chain
- **Analysis of GNSS market prospects, trends and challenges**
 - Presentation on latest GNSS technology drivers and hottest trends
 - Identification of (multi-)GNSS opportunities across Asia-Pacific
- **Database with EU and Asia-Pacific GNSS players and stakeholders**
 - Information on GNSS markets, GNSS product/service, supply chain role, short description, etc.
 - Information about EU companies' product portfolios and cooperation interests

Communicating opportunities for industrial cooperation



GNSS profile Taiwan

GNSS profile China

GNSS profile Korea

GNSS profile India

GNSS profile Japan

In a nutshell

Japan's economy has matured since the burst of the bubble of the 1990's. The growing mobile phone industry and IT sectors will likely spur a slow expansion, driven by reconstruction demand related to the Great East Japan Earthquake of 2011. Japanese industry can rely on its strong domestic market, but is also highly export-oriented and thus subject to currency fluctuations. Japan faces competition from increasingly competitive neighbours, especially in high-tech areas. Japan is currently building its own regional satellite-based augmentation system – QZSS – slated for completion beyond 2018, setting the target for centimetre-class accuracy to drive future demand in applications in road transport, agriculture, Location-based Services, Indoor navigation and disaster management.



Key opportunities



Whereas leading Japanese automakers and suppliers have demonstrated both readiness and willingness to export eCall-compliant vehicles to the EU, growth is expected in road safety and accident prevention applications, map data provider services (combining location + navigation devices) and potentially high revenue growth in designing personalised, navigation-dependent advertisement services.



The navigation applications in the maritime transport sector are already covered by mature Japanese industry leaders. Other areas of expected potential include fishing fleet monitoring and catch control.



Early validation experiments involving QZSS have catered to automated precision farming (expected to significantly improve the efficiency of Japan's agriculture), remote sensing and monitoring of the environment.



GNSS applications for earthquake and tsunami warning, landslide monitoring and emergency message management are in testing phase, driven by regional cooperation projects in Asia-Oceania under the Multi-GNSS Asia demonstration campaign.



Japan sees a growing need to develop applications for better maintenance of municipal infrastructure (water and sewage), including precise guidance of construction machinery, as well as developing better GIS to preserve important touristic sites.

Strengths

- ▶ Technology-driven GNSS industry, with emphasis on building excellent development infrastructure for both outdoor and indoor navigation.
- ▶ A highly educated, homogenous and wealthy end-consumer base, desirous of new, value-added applications
- ▶ Growing future expectations to use Galileo in Japan at the private sector level may become an opportunity for rich receiver makers.

Weaknesses

- ▶ Large, attractive market with mature, highly competitive industries in concentrated sectors makes it difficult for new entrants.
- ▶ A sceptical view of foreign firms entering the Japanese market prevails, which means that developing partnerships with Japanese companies is demanding.



GNSS.asia

Facilitating EU-Asia industrial cooperation on satellite navigation applications

- EU
- IN
- CN
- TW
- KR
- JP

- HOME
- GALILEO
- APPLICATIONS
- OPPORTUNITY & PARTNERING
- NEWS & EVENTS
- PUBLICATIONS
- CONTACT
- LINKS
- NEWSLETTERS
- EU WEBSITE

The project

Facilitating EU-Asia cooperation on satellite navigation applications

The GNSS.asia project, financed under the EU 7th Framework Programme for Research & Technological Development, has the objective to develop and implement GNSS industrial cooperation activities between the European Union and China, India, Japan, Republic of Korea & Taiwan focusing on the downstream sector (applications and receivers).

[Read more](#)

INDIA	CHINA	TAIWAN	REPUBLIC OF KOREA
भारत गणराज्य	中国	台灣	대한민국

[View this email in your browser](#)

GNSS.asia newsletter

ISSUE #April 2015



In a nutshell

Latest highlights

- EGNSS Opportunities
- News on EGNSS
- News from Asia
- European Global Satellite Navigation activities

GNSSasia Latest highlights

Cross-continental cooperation in GNSS continues

GNSS.



Are you ready for Asia-Pacific?

GNSS.asia - Industrial GNSS cooperation across continents

As several Global Navigation Satellite Systems (GNSS) are emerging and multi-GNSS applications are rapidly gaining importance, international collaboration in the GNSS scene has become vital. GNSS.asia, financed under the EU Horizon 2020 Framework Programme for Research and Innovation, provides a comprehensive range of hands-on support services to GNSS industry enterprises in Europe, assisting them to develop commercial activities in Asia-Pacific and establish concrete industry collaboration with local companies.

Project objectives

- Perform a detailed mapping of GNSS collaboration opportunities across continents
- Support concrete industrial collaboration between EU and Asia-Pacific companies
- Promote European GNSS differentiators in upcoming multi-GNSS solutions
- Raise awareness on European GNSS applications and their benefits in the Asia-Pacific region

The GNSS.asia consortium

The GNSS.asia consortium brings together key European and Asian organisations, which have long-standing experiences in fostering EU-Asian industrial cooperation and a proven track record in GNSS activities. In order to maximize the project's impact, the consortium works in close collaboration with key industry associations, research organisations and industry players.



GNSS Opportunities in Asia

- In the last years, GNSS.asia has successfully been helping numerous industrial players through:
- Assisting European GNSS companies in entering Asian markets
 - Bringing together European and Asian key GNSS players
 - Facilitating the breakthrough of Galileo inside and outside Europe
 - Providing transparency on Asian markets and local GNSS industry

Expanding the GNSS.asia Horizon

In addition to building upon its achievements in India, China, Taiwan, Korea and Japan, GNSS.asia now expands its project efforts towards South-East Asia and Australia. Feedback from our partners and detailed market analyses show that several countries in this region offer a significant untapped potential for GNSS applications and industrial cooperation. To investigate market opportunities in this region, GNSS.asia will be collaborating closely with carefully selected local partners and stakeholders.



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Development the global GNSS ert.

operation and plications. The high-end forum

2015. It attracts works together GNSS and eCall

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ether the space the main theme

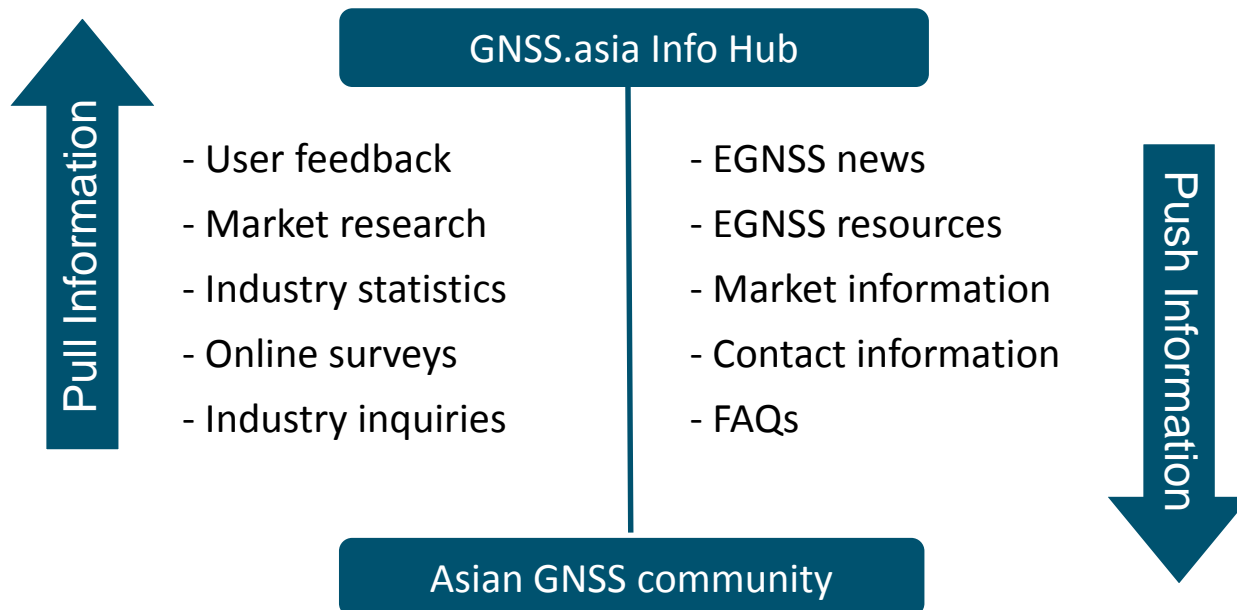
Exhibition

well as plenary, are from around ngage with the

Info Hub Concept

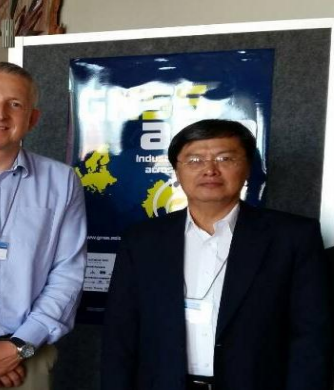


- The GNSS.asia Information Hub intends to support the EGNSS awareness-raising activities in Asia by establishing a **two-way communication channel**:
 - **Push information** aims to bring EGNSS news, success stories and other online resources to a larger audience in Asia. This will be facilitated through the use of local scripts.
 - **Pull information** will collect queries and feedback (e.g. through online surveys and questionnaires) from Asian industry and users. This also entails consolidating market information and statistics (gathered within GNSS.asia and elsewhere) relevant for EGNSS.





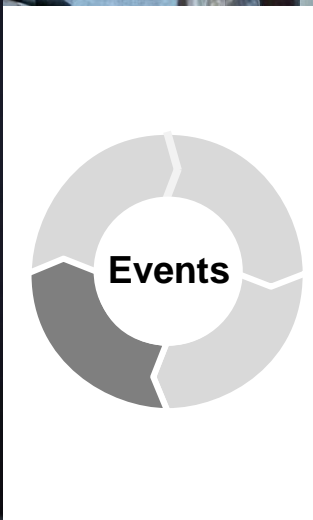
Tokyo



Phuket



Bangalore



Beijing



Seoul



Taipei

Munich 2013



Prague 2014



Round Table Meetings
Kolkata & Bhubaneswar, India



PNT Workshop
Seoul, Korea



COMPUTEX
Taipei, Taiwan

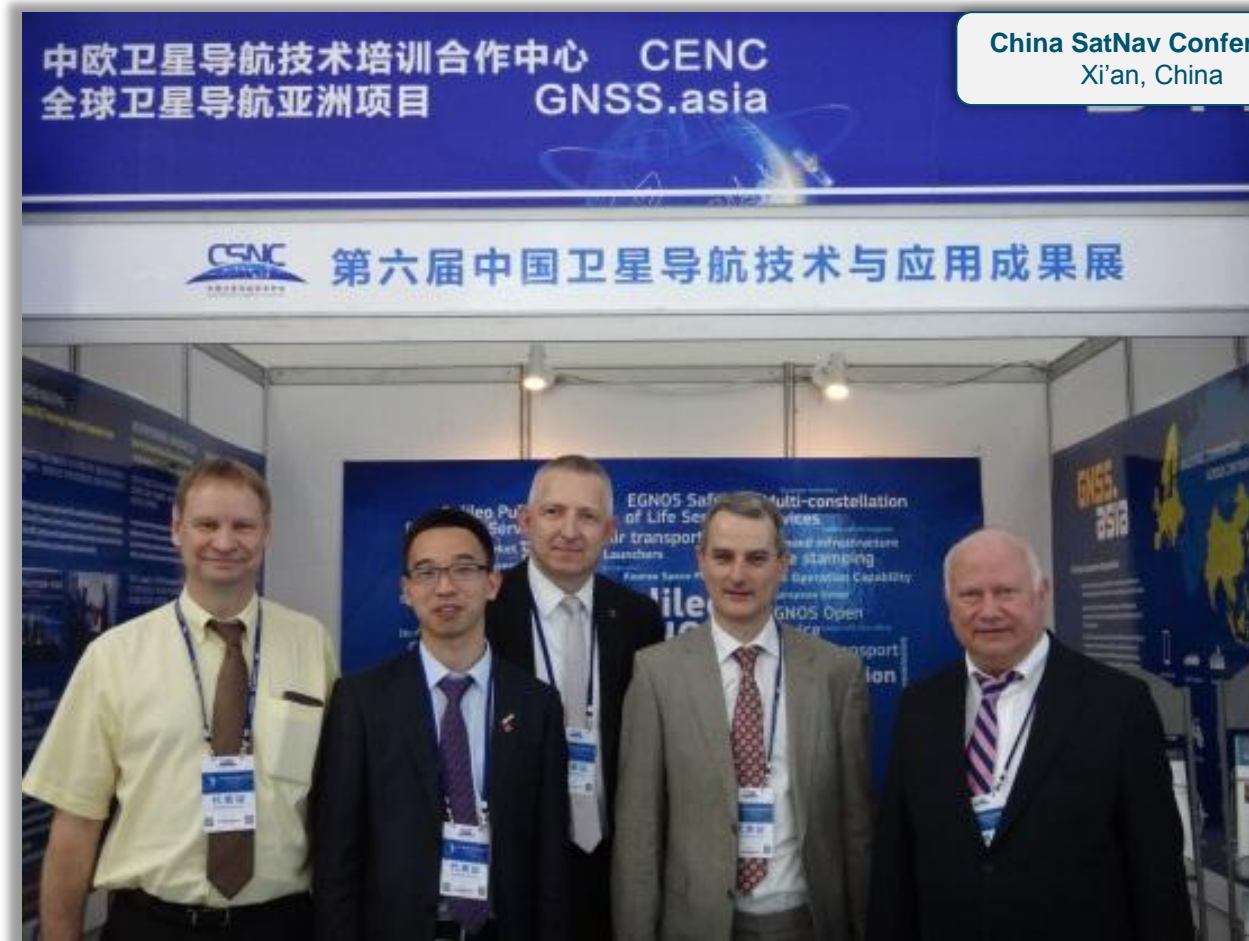


EU Mission for Growth
Taipei, Taiwan



Beyond GPS
Bangkok, Thailand

China Satellite Navigation Conference 2015, Xi'an





GNSS.asia Australia Workshop
Surfer's Paradise, Australia



UK Space Conference
Liverpool, UK



GNSS.asia Japan Seminar
Tokyo, Japan



GNSS.asia India Seminar
Kolkata, India



GNSS.ASIA CHALLENGE



- **New Regional Prize** within the ESNC framework
- Open to innovative GNSS ideas for the **Asia-Pacific Region**
- Organised by **GNSS.asia**, in cooperation with **Multi-GNSS Asia (MGA)**
- Secure your part of the **GNSS.asia Challenge prize pool**:



Personalised business coaching
from globally renowned GNSS experts



A **travel grant** to attend the
Award Ceremony at the Multi-GNSS
Asia GNSS meeting in Brunei



A **presentation opportunity** during
the GNSS.asia Industry Seminar



The opportunity to **meet GNSS
industry partners and potential
investors** from Europe and Asia

WWW.GNSS.ASIA/CHALLENGE

GNSS.asia Challenge - a successful first edition



GNSS.asia China Seminar (25 September)



China GNSS.asia Seminar In conjunction with the GLAC Annual Conference

International Seminar on GNSS Applications - GNSS Serve the World

Organisers: GNSS.asia, GLAC, parallel with GLAC Annual Conference and Exhibition

Time: 09:00 to 17:40, Date: September 25th, 2015

Venue: China National Convention Center

The GNSS & LBS Association of China (GLAC) is the leading Chinese association specializing in the GNSS and LBS industry. During its Annual Conference, many of its approximately 2000 members, including research institutes, universities and enterprises, discuss topics such as GNSS R&D, manufacturing and the evolution of global satellite navigation and location-based technology. The annual Conference and Exhibition is one of the largest events in GNSS and LBS industry in China, offering opportunities to European companies to join the exhibition and attend the dedicated GNSS.asia Seminar, which will focus on the Multi-constellation industry applications.

B2B Matchmaking on Smart Port Solutions

- Date: At the end of October or at the beginning of November
- Presentations:
 - Deutsche Telekom - Smart Port Solutions
 - CETC International – Smart Port, smart transportation
- Participants: EU & CN industry companies
- Venue: Beijing

GNSS.asia Challenge Ceremony: 8 December 2015, Brunei



Multi-GNSS Asia (MGA) Conference 2015



Geospatial Challenges in the Asia-Pacific Region

7-10 December, 2015 - Bandar Seri Begawan, Brunei Darussalam

The Multi-GNSS Asia (MGA) Conference annually attracts hundreds of GNSS and Geospatial players from the Asia-Pacific region and beyond, including research institutes, government agencies, international organisations and industry. This year's main theme will be "Geospatial Challenges in the Asia-Pacific Region", thereby broadening the conference's scope to include enabling technologies such as remote sensing, monitoring solutions and big data analysis, essential in addressing challenges specific to the Asia-Pacific region. For the first time, the dedicated GNSS.asia South East Asia Industrial Seminar will be held as part of the conference, featuring presentations by prominent speakers from Europe and Asia. Presentations will address topics such as innovative geospatial applications, the latest market trends and opportunities for international cooperation.

Main topics

GNSS applications	Geospatial solutions	Location-based services
Multi-GNSS experiments	Precise positioning	Precision agriculture
Remote sensing	GNSS system updates	Intelligent transportation
On-site demonstrations	International cooperation	Disaster management

www.gnss.asia/MGA2015

GNSS. asia

Industrial cooperation
across continents

EU Events 2015



2015 Seminars in
IN, CN, TW, KO, JP



GNSS.asia Workshops
in South East Asia




Industry Seminar
MGA Conference 2015

www.gnss.asia



Next Events in Europe with GNSS.asia present

Oct. 2015
Berlin
德国柏林



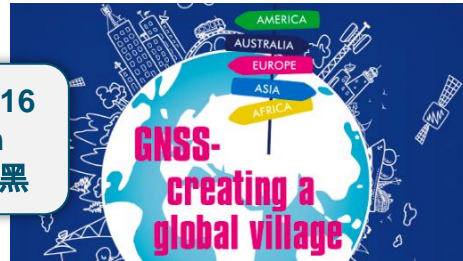
SATELLITE
MASTERS
CONFERENCE

SATELLITE MASTERS CONFERENCE

Explore cutting-edge space applications

20 – 22 OCT 2015, BERLIN

March 2016
Munich
德国慕尼黑



MUNICH SATELLITE NAVIGATION SUMMIT 2016

May 2016
The Hague
荷兰海牙



European Space Solutions

Discover what space
brings to your life



July 2016
Toulouse
法国图卢兹



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European
Global Navigation
Satellite Systems
Agency

HORIZON 2020