



3rd EU-Asia Industry Collaboration Seminar 12 June 2014 Prague, Czech Republic

Summary

The 3rd EU-Asia Industry Collaboration Seminar was held on the 12th of June 2014 in Prague. The event was organised by the GNSS.asia consortium - as a side meeting of the European Space Solutions Conference which ranks high amongst the most important European events on Space applications - with the following objectives:

- Bring together key industrial and institutional players from EU and Asia to gather insights on the current opportunities for GNSS downstream cooperation.
- Explain the services offered by the project through concrete examples
- Present the key results achieved by GNSS.asia and share the key findings emanating from the project
- Present up-to-date market information per application domain for each of the Asian economies and the hottest trends from Asia (i.e. LBS and Internet of Things).
- Discuss business opportunities related to the differentiating features of Galileo in the Multi-GNSS context and by leveraging EU expertise in EGNOS.

The Seminar had 78 Pre-event and on-site registrations (business cards dropped). The event was open for ESS participants and has attracted strong interest by the relevant press (SpaceNews, Aviation Week, ASCII Cloud-Japan). Amongst the participants were 10 representatives of Asian companies and organisations joining as part of the GNSS.asia delegation. The agenda included an overview of the services, achievements and findings of the project, a dedicated presentation on LBS and IoT, short pitches by Asian delegates and a panel session focusing on business opportunities related to the differentiating services of Galileo and the European expertise in SBAS.

The participants have had the chance to gain valuable insights on the current opportunities for industrial GNSS cooperation in India, China, Taiwan, Korea and Japan. In addition they were informed about the services that each Asian team can provide to support their business development activities.

The panel session offered a unique opportunity to discuss the differentiating features of EGNSS and how they can drive forward cooperation with Asian actors in a Multi-GNSS context.

Furthermore the event offered a unique opportunity for direct matchmaking and networking between the participants from Europe and Asia.

The full agenda of the event is attached in Annex I.



Presentations

Opening address: EU-Asia cooperation on satellite navigation applications

The event was opened by Ms Arunima Sengupta of DG ENTR, Unit H3 - EU Satellite Navigation Applications and International Affairs and Mr Gian-Gherardo Calini Head of Market Development Department at GSA. Ms Sengupta presented the current status of the European GNSS programmes, the overall framework for international cooperation and the specific importance of the Asia-Pacific region for EGNSS.

Mr Calini underlined the importance of the region with regards to global GNSS device shipments and highlighted the need for close cooperation on downstream applications. Mr Calini emphasised on how Europe “Thinks Big” about Galileo and invited the representatives of the Asian economies to join. In the next few minutes representatives from India, China, Taiwan, Korea and Japan, expressed in their local language the same message, underlining the willingness for cooperation.



Figure 1: Opening addresses by Ms Sengupta of DG ENTR (left) and Mr Calini of GSA

EU-Asia industrial cooperation

Mr Rainer Horn, coordinator of GNSS.asia, presented the activities performed by the project in the past 2,5 years. Mr Horn summarised the results from of recent events in Asia, explained how the project has established close contacts with several important stakeholders in Asia and presented how the project has been concretely helping European companies in their business development activities in Asia.

Furthermore Mr Horn presented the pilot activities undertaken in each of the Asian economies:

- In-depth analysis of GNSS in Railways in India;
- Thorough mapping of the LBS value chain in China;
- GNSS.asia Information Hub in Taiwan;



- Concrete cooperation projects initiated in Korea;
- European Satellite Navigation competition launch and Vulcanus project in Japan.

Mr Horn concluded his presentation by presenting the main results achieved by GNSS.asia and some actionable inputs for EGNSS activities in the region



Figure 2: Presentation by Rainer Horn, GNSS.asia coordinator

Next on the agenda were presentations by the representatives of the GNSS.asia teams in Asia.

GNSS opportunities in India

Mr Varad Krish, GNSS.asia India team leader, articulated the importance of the establishment of the new government that will push forward for technological modernisation across the country opening up more opportunities for GNSS-based solutions. Mr Krish presented the Indian market scenario and explained how the Indian team has established very strong ties with the Airports Authority of India, railway stakeholders, ISRO and industrial associations. The current GNSS opportunities in India including railways, road transport, EGNOS/GAGAN synergy and surveying were introduced. Mr Krish concluded his presentation with a message by Mr Barroso underlining the importance Europe gives in cooperation with India.



Indian Market Scenario

GNSS industry

- Strong GNSS Research and Development capability
 - Indian industry has the capability to produce **Multi-GNSS receivers**
 - Several embedded system **companies** are engaged in chip designing services (for domestic and Global markets mainly US, Taiwan, Korea) e.g. Qualcomm, Samsung, and Accord Qualcomm, Intel, TI, Broadcom have design and development centres in India
- The **Telematics Industry** is growing steadily
 - ESDM Cluster in Bangalore and Mysore
 - Insurance Telematics getting recognised.
- **Innovative GNSS-enabled solutions motivated by specific Indian societal challenges**
 - Electronic Personal Safety Devices (ePSD)
 - ATM Cash dispenser vehicles
 - 108 FREE Ambulance service (Emergency Medical Service)
- **Modernisation of national infrastructure**
 - Railways
 - Road Tolling
 - Smart Cities
 - Sanitary inspectors monitoring

5



Figure 3: Presentation by Mr Varad Krish on GNSS opportunities in India

GNSS opportunities in China

Mr Rainer Horn has presented on behalf of Mr Davof Xu, who was unable to attend the current GNSS opportunities in China. The presentation focused on the events organised in May in China, the extensive GNSS market mapping activities and specific offers/request by Chinese GNSS players. Mr Horn also noted the specific services that GNSS.asia offers to European companies aiming at entering the Chinese market, highlighting the very good relationship established with GLAC (GNSS&LBS Association of China).

Extensive mapping of the GNSS downstream industry

- Receivers produced by major Chinese players such as Unicore Communication, Hangzhou Zhongke Microelectronics Co., Ltd and Top-to-Tech
- Several major device vendors, e.g. smartphone manufacturers (ZTE, Huawei, Lenovo and Coolpad)
- The Chinese in-car navigation system market maintained rapid growth in 2012, reaching CNY 24,4 billion.
- China's internet giants are likely to play a key role in the "internet of everything"
- Key European companies, e.g. Thales, Airbus, Alstom, TomTom, Septentrio have been actively pursuing opportunities in the Chinese market.

Through GNSS.asia European Companies have access to the 2000 members of the Chinese industry cluster GLAC

- GNSS.asia China is cooperating on events with the national cluster "GNSS and LBS Association" GLAC
- Opportunity to for EU Companies to present themselves at the upcoming GLAC Annual Symposium (September 2014)

GNSS.asia – GLAC Meeting Beijing 26 May 2014

2nd GLAC's Annual Conference and Exhibition 2013

Figure 4: Presentation on the current GNSS opportunities in China

GNSS opportunities in Taiwan

Ms Angela Hsiao, team leader of GNSS.asia in Taiwan, has provided elaborate information on the current state of GNSS in Taiwan, based on extensive market monitoring by the GNSS.asia team. Ms Hsiao focused on the strengths of Taiwan as a global leader in semiconductors and chipset-manufacturing and as a gateway to the greater region. Further on she thoroughly outlined the most promising sectors for EU-Taiwan industrial GNSS cooperation.

Advantech's regional projects implementation "Gateway to Asia"

Map showing project locations in Turkey, Israel, India, Cheng Du, Beijing, Shan Xi, Zheng Zhou, Shanghai, Hong Kong, Taipei, Da-Lian, Seoul, Tokyo, Kuala Lumpur, and Singapore.

- ETC/MTC
- Railway/Metro
- Road Surveillance
- FIDS
- CTC
- Other

Taiwan's dynamic industrial network and linkages

Diagram showing the dynamic industrial network and linkages in Taiwan, including various companies and their interconnections.

Figure 5: Ms Hsiao presented the GNSS opportunities in Taiwan

GNSS opportunities in Korea

The overview of the current GNSS opportunities in the Republic of Korea was presented by Mr Tomasz Wierzbowski, team leader of GNSS.asia in Korea. Mr Wierzbowski underlined the main strengths and weaknesses of Korea highlighting the recent announcement of the plans for the deployment of a Korean SBAS. Specific mention was given to the key actors of the GNSS industry and their willingness to cooperate with Europe as well as to the services provided by GNSS.asia to support European companies.



Figure 6: Presentation by Mr Wierzbowski on GNSS opportunities in Korea

GNSS opportunities in Japan

Mr Fabrizio Mura, GNSS.asia Japan team leader, has presented the current GNSS opportunities in Japan. Mr Mura presented specific recommendations on building industrial cooperation between EU and Japan, and moved on to elaborate on the different activities carried out by the project in support of this goal. Mr Mura presented the value chain in LBS and road and explained the concrete interest of Japanese players for collaboration with EU. Finally Mr Mura invited attendees representing SMEs to participate in the competition that the EU-Japan Centre is kicking-off, for the sponsorship of a market entry plan in Japan.



Figure 7: Presentation by Mr Mura on GNSS opportunities in Japan



Figure 7: Mr Mura presented the current GNSS landscape in Japan

GNSS.asia hot topic: Internet of Things and Smart Cities

After the networking coffee break, Mr Rainer Horn has presented the hot topic of Internet of Things and Smart Cities that was prominently featured in the latest round of events in Asia. This presentation provided participants that could not attend the Asian Seminars with the opportunity to follow the latest news on this hot trend. In particular Mr Horn presented the vision on this subject by leading Asian and European firms as showcased in Beijing and Taipei.

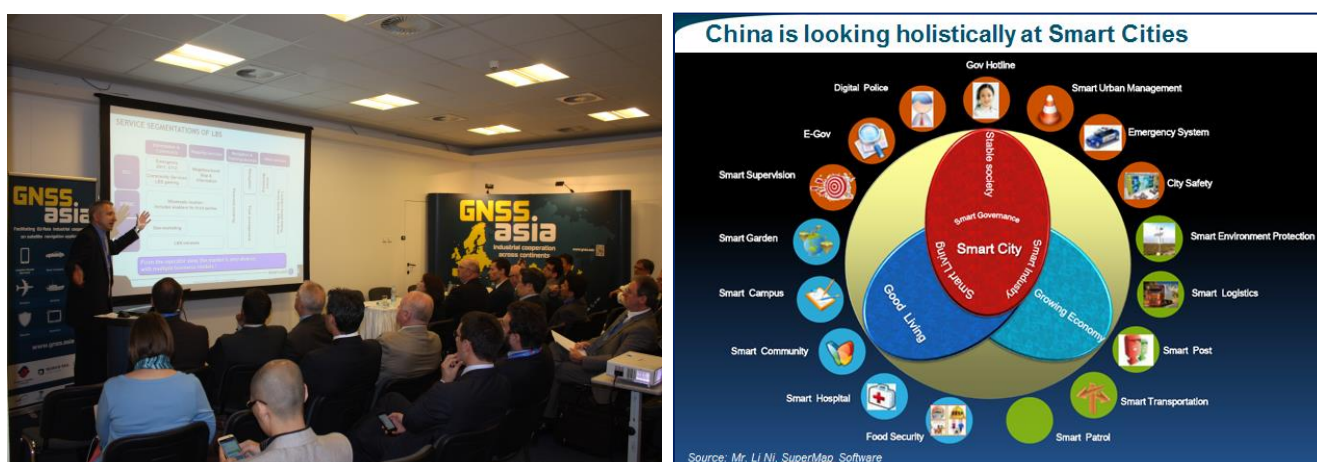


Figure 8: Mr Horn presenting on the Internet of Things and Smart Cities in Asia

Ignite Session: Pitches by Asian participants

This session included short pitches by Asian participants presenting their GNSS-related activities, their current products/services and their concrete request/offer for industrial cooperation with Europe. The presentations confirmed the diversity and maturity of the initiatives developed in each country and signified the catalytic role that GNSS.asia can play.

Specific note shall be given to the fact that Mr Tantiphanwadi presented on behalf of the G-NAVIS project that is undertaking activities in South East Asia including awareness, education, training, research and technology transfer, support to public bodies, etc.

In summary presentations were made by

- Mr Bobbie Kalra - CEO of Magnasoft (India)
- Mr Shanmuga Velan - CEO Elena Geo Systems (India)
- Slayer Chuang - CEO GeoThings (Taiwan)
- Dr Sawat Tantiphanwadi - NSTDA on behalf of G-Navis project (Thailand)
- Dr Sanguk Lee - GNSS.asia expert Korea, representing Ascen & Net Customise (Korea)
- Mr Yasushi Sakurai - General Manager SPAC (Japan)



- Mr Hiroaki Tateshita - Secretariat MGA, JAXA (Japan)



Figure 9: Ignite session. From left to right on each row: Ms Kalra - Magnasoft, Mr Velan - Elena Geo Systems, Mr Chuang - GeoThings, Mr Tantiphanwadi - NSTDA, Dr Lee - Ascen & NetCustomise, Mr Sakurai - SPAC



Panel Session: *EGNSS differentiators in the Multi-GNSS context*

The last pitch in the ignite session served as the entry point to the panel discussion focusing on *EGNSS differentiators in the Multi-GNSS context*. Thus after the presentation by Mr Tateshita on the activities of the Multi-GNSS Asia Demonstration Campaign, Mr Horn moderated the panel discussion. The distinguished members of the panel included:

- Mr Manuel Toledo - Head of GNSS Applications Technologies Division, GMV
- Mr Yves Capelle - GNSS applications and services Business Manager, Telespazio
- Mr Petr Bares - Managing Director, Iguassu Software
- Dr Daniel Ludwig - GNSS.asia co-coordinator

This session aimed at shedding light on cooperation opportunities between European and Asian companies, arising with the arrival of Galileo and touching upon some of the unique features of the system, i.e. Commercial Service, OS-Authentication, Urban Canyon, etc. and how they could be used in applications relevant for the Asian markets. Furthermore opportunities to leverage the European expertise in SBAS systems arise with the recent certification of GAGAN in India and the decision by Korea to build its own SBAS.

The participants were engaged in a lively discussion that outlined, among others, the key differentiating features of Galileo, the necessary elements to facilitate their marketing in Asia and the business cooperation expectations around SBAS based on European expertise in EGNOS. The audience was also actively engaged with several questions being addressed by the panellists.



Figure 10: Panel discussion on EGNSS differentiators in the Multi-GNSS context

Closing Remarks

The closing remarks and wrap-up of the Seminar was made by Mr Rainer Horn, project coordinator of GNSS.asia. Mr Horn has summarised the main points presented by the team leaders of GNSS.asia in the Asian economies and the contributions by the Asian companies that travelled to Europe for this event.



Annexes

Agenda

Time	Topic	Time	Presenter
08:30-09:00	Registration		
09:00	Opening address: EU-Asia cooperation on satellite navigation applications	20'	DG ENTR, Unit H3 – EU Satellite Navigation Applications and International Affairs European GNSS Agency, Market Development
09:20	Industrial Cooperation across continents: <i>Highlights to date</i> – Most recent findings – Key achievements	20'	GNSS.asia coordinators
09:40	Current GNSS trends and opportunities in Asia – GNSS market overview in five economies – Q&A (10 min)	60'	GNSS.asia team leaders
10:40	<i>Coffee Break</i>	30'	
11:10	GNSS.asia hot topic: LBS and the Internet of Things	10'	Rainer Horn, GNSS.asia coordinator
11:20	Ignite session: Short pitches by Asian participants	40'	Bobbie Kalra, Magnasoft (India) Shanmuga Velan, Elena Geo Systems (India) Slayer Chuang, GeoThings (Taiwan) Sawat Tantiphawade, NSTDA (Thailand) Dr Sanguk Lee on behalf of Korean companies Yasushi Sakurai, SPAC (Japan)
12:00	Panel Session: EGNSS differentiators in the Multi-GNSS context – Discussion on cooperation opportunities between European and Asian companies, arising with the arrival of Galileo and focusing on how the unique features of the system could be used in applications relevant for the Asian markets.	50'	<i>Moderated by</i> Rainer Horn <i>Speakers:</i> Hiroaki Tateshita, JAXA (Japan) Manuel Toledo, GMV Yves Capelle, Telespazio Petr Bares, Iguassu Daniel Ludwig, GNSS.asia coordinator
12:50-13:00	Wrap up and next steps	10'	Rainer Horn, GNSS.asia coordinator

END of meeting

B2B Matchmaking opportunities:

Via the business matching tool **Meethub**, you can conveniently arrange meetings on:

- Thursday 12 June, 14.00 - 18.00
- Friday 13 June, 9.00 - 13.00

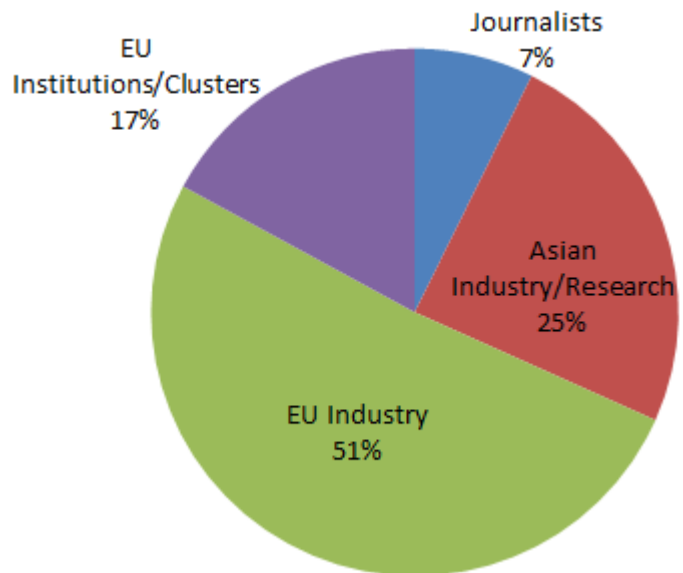
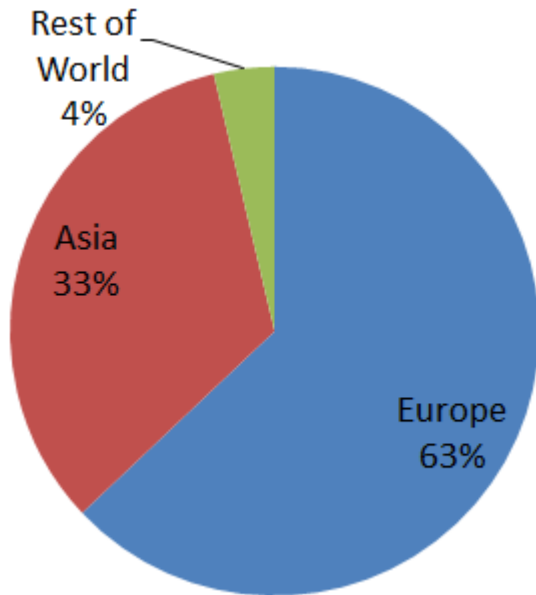


Participants List

Surname	Name	Organisation
Antonini	Mirko	Spaceexe
Bares	Petr	Iguassu
Calini	Gian-Gherardo	European GNSS Agency
Capelle	Yves	Telespazio
Cebere	Maija	Latvian Space Technologies Cluster
Chuang	Slayer	GeoThings
Cutolo	Valerio	ENAV
de Selding	Peter	SpaceNews
Doubek	Jiri	Iguassu
Dudek	Robert	Geotronics Polska Sp. z o.o.
Dusa	Tomas	GNSS Centre of Excellence
Emam	Omar	Arab Science and Technology Foundation/Astrium Satellites
Halauko	Kiryl	NewSpace Global
Horn	Rainer	SpaceTec Partners
Hsiao	Angela	ECCT
Jelic	Zoran	CREAM Europe PPP Alliance
Kadoya	Yoko	EUJC
Kalra	Bobbie	Magnasoft
Kessler	Florian	Austriatech
Koyama	Hiroshi	Mitsubishi Electric
Krajčír	Dušan	Eltodo
Krish	Varad	EBGI
Kumar	Senthil	EBGI
Larhantec	Philippe	Thales Alenia Space
Lee	Sanguk	ETRI
Liebchen	Arkadiusz	Geotronics Polska Sp. z o.o.
Ludwig	Daniel	DLC
Mamais	Eleftherios	SpaceTec Partners
Mura	Fabrizio	EUJC
Muscinelli	Roberto	Thales Alenia Space Italy
Neyret Gigot	Charlotte	Thales Alenia Space
Pasquali	Raniero	Telespazio
Polivka	Adam	Iguassu
Povero	Gabriella	ISMB
Redelkiewicz	Justyna	GSA
Riva	Fabio	Blizz



Surname	Name	Organisation
Sakurai	Yasushi	Satellite Positioning Research and Application Center
Sengupta	Arunima	European Commission
Seybold	Jürgen	TeleConsult Austria GmbH
Shibuno	Giichi	ASCII Cloud (Press/Media)
Svitak	Amy	Aviation Week
Tantiphanwade	Sawat	NSTDA
Tateshita	Hiroaki	JAXA
Testa	Eleonora	Interoute
Toledo	Manuel	GMV
Torrenti	Roger	Sigma Orionis
Tung	Ta Hai	Hanoi University of Science and Technology
Vanni	Patrizio	ENAV
Vecchione	Giovanni	Deimos
Velan	V Shanmuga	Elena Geo Systems
Viaud	Pascal	ECCT
Viedma	Emilio Jose	Indra
Wierzbowski	Tomasz	Ziin
Wu	Jian-Bong	Taipei Economic and Cultural Office, Prague





END OF REPORT