



MUNICH SATELLITE NAVIGATION SUMMIT 2008

Session 7:

Chairman: Eero Ailio

Chairman Eero Ailio of the European Commission opened the panel with a view on two possible scenarios in the years after 2013 when an increased number of GNSS providers will be existing. The first scenario he called a "big bang" for the global business, the second scenario could be an inflation of expensive, non-profitable systems that could convince some governments to put financial efforts into other fields than GNSS that may become more important in the future. In order to get an idea which of the scenarios will be likely, Ailio asked the panel about the intended activities in their countries.



Higgins, Subari, Ailio, Rizos, Jun, Nam (left to right)

The presentation of Dr. Gi Wook Nam, Director of GNSS Research Division of Korean Aerospace Research Institute, held by Dr. Moon Beom Heo, reflected the Korean view on current GNSS research issues. The Korean government established a national plan for GNSS. The responsibility is co-ordinated by three ministries. The development in the field of GNSS is clearly planned in three phases. Phase 1 (2009-2013) is dedicated to the development of core technologies, Phase 2 is dedicated to construction of the navigation payload leading to a multi-functional geostationary satellite intended to be launched in 2016. The long-term goal is to provide an own RNSS. In general, the development of augmentation systems is planned on two scales – as wide area and as

local area systems. The local systems can be realized in the short term, having a DGPS for maritime services already under construction. Dr. Heo concluded his speech expressing the Korean Galileo participation within the framework of R&D activities of the 7th Framework Programme.

Yin Jun, Department of International Cooperation, Chinese Ministry of Science and Technology reviewed the process of Chinese-EU cooperation on Galileo including the signed contracts on the political and technical level. Jun pointed out that China supports the construction of Galileo. China is interested in the further collaboration during operation phases and wants to promote the relations between Compass and Galileo.

Mustafa Din Subari of the National Space Agency of Malaysia (ANGKASA) gave a report on the current status and the way forward of GNSS applications in Malaysia. He claimed that three areas need to be paid attention to: the GNSS infrastructure, the GNSS technology development and the GNSS applications. With respect to infrastructure he prefers a strategy to participate with GNSS core service providers and with regional GNSS augmentation system providers (MSAS), but not to forget to develop an own Satellite-Based Augmentation System (SBAS) in the longer term. With respect to technology development he wishes seamless applications of GNSS technology that is affordable for local users. Both can be achieved putting efforts into education and the local industry. This will also be beneficial with respect to the improvement of the third of the mentioned areas – the GNSS applications.

Chris Rizos, University of New South Wales, started his presentation showing the special Australian context – a highly urbanized society, but a large, sparsely populated country. He focused on a GNSS system of systems R&D agenda starting with the idea of a multi-constellation receiver. He proves that Australia is particularly benefiting from the multiple systems since some of them (e.g. QZSS) will be focusing exclusively on the East Asian region. Moreover,



the agenda comprises the ongoing improvement of differential networks and future performance improvements in precise user applications. Rizos explicitly expressed that international engagement is welcomed in Australia. There are many common challenges in terms of regional and global collaboration delivering multi-lateral benefits. Finally, he announced that the Australian GRAS - a mixture of an SBAS and a GBAS - will face certification in 2009.

Matt Higgins, Principal Survey Advisor of Queensland Government, Australia, explained the auditors the geographical situation of his country consisting of large areas with sparse population. He subsumed possible GNSS contributions on a scale that ranges from local applications to regional or national ones and further on to global ones and presented some examples starting with the SunPOZ service in the urban Brisbane region offering centimetre accuracy in real-time. The backbone of SunPOZ are survey quality GNSS receivers and mobile phone communications. Established in 2001, it was the first pilot network in the southern hemisphere and has become an operational network nowadays. Higgins pointed out that it is ideally suited to also become a Galileo local element. Regarding the national efforts he mentioned AuScope, a geospatial reference frame that attempts to improve the monitoring of the continent to sub-mm accuracy. Focusing on global contributions a proposal for a Galileo sensor station was filed to ESA. Furthermore, there is a cooperation with the Russian Space Agency on testing equipment for future GLONASS monitoring stations.



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