Munich Satellite Navigation Summit 2007

The fifth Munich Satellite Navigation Summit 2007 took place from 6th to 8th March 2007 in the famous â€˜Residenz MÃ¼nchenâ€™, Munich, Germany. The summit was established as the European and international conference with global impact, featuring invited high-ranking international speakers from industry, science and government, all addressing the direction to be taken by satellite navigation now and in the future. The programme contained many excellent presentations on latest status and policy developments relating to all major providers of GNSS, including the EU, USA, Russia, India, Japan and China, and approximately 440 registrants from 28 countries attended. This event really is a â€˜Summitâ€™ rather than a technical conference. It deals with the latest developments but does so with a focus on policy aspects, and as such the meeting follows quite a unique format. It also has the advantage of attracting senior decision-makers, making it an ideal event for high-level networking.

Galileo
The dominant issue at this yearâ€™s Summit was the problem with the Public Private Partnership for Galileo, Europeâ€™s Global Navigation Satellite Systems (GNSS). There are delays in reaching agreement between the European GNSS Supervisory Authority (representing the European Union) and the consortium of companies known as the Concessionaire, which is supposed to take on the contract to operate the Galileo system for the next twenty years. Most private-sector companies in the Consortium are trying to take a â€˜European viewâ€™; however, there have been suggestions in the press that one is acting more in its own national interest. My opinion, based on private discussions at the Summit, is that that there has already been too much time and money invested for the PPP to fail. For example, there are two contracts, one to operate the system (the Concession) and one to build it. Many of the players taking part in the Concession component are also heavily involved in the consortium contracted to build the system, itself a two-billion Euro contract. Also, neither the EC (public servants) nor the private sector wants the issue to go back to the European Parliament, with all the concomitant uncertainty. I am therefore confident overall that a compromise will be found in coming months. Unfortunately, this all means that there will be delays in the full deployment of the system.

Geodetic Reference Frames
The meeting in Munich was to discuss the sub-group of the UN mandated International Committee on GNSS (ICG). This sub-group is co-chaired by FIG and IGS and charged with tasks such as developing standards for GNSS reference stations, investigating mitigation of radio interference and multi-path at such stations and fostering the rejuvenation of geodetic reference frames in developing countries, such as the AFREF project in Africa. It was agreed that a report on progress with AFREF would be developed over coming months. A report will also be drafted on the status of work on a regional reference frame, currently being undertaken by the Permanent Committee on GIS Infrastructure in the Asia Pacific. Geoscience Australia is heavily involved in this work in the Asia Pacific. Further meetings will be organised at the FIG Working Week in Hong Kong in May and with the full ICG in Bangalore, India in September.

GATE
Part of the programme was a technical tour to the German Galileo Test Bed, GATE (Galileo Test- und Entwicklungsumgebung), in the Berchtesgaden area at the foot of the Alps. The GATE involves six transmitters broadcasting Galileo specification signals from mountaintops down into the valley around the town of Berchtesgaden. The system can broadcast signals to multiple receivers in the test area, allowing receiver manufacturers and applications developers to test their products before the Galileo satellites are in place. In its simplest mode of operation the system broadcasts the signals as though the â€˜satellitesâ€™ are at the fixed locations of the transmission towers. In more sophisticated mode the system can fully simulate signals as though they are coming from satellites in motion across the sky, in orbits as will be seen for the real Galileo satellites. To accurately simulate the signals for a moving receiver the position of the receiver (derived from GPS measurements) needs to be fed back to the GATE control centre, so that in this mode only one receiver can be tested at a time. As well as the advantages for receiver and application development, the GATE system can be a very useful tool for testing possible improvements in signal design for future satellites. It will also allow data to be gathered to better research and understand signal propaâ€“gation issues such as radio interference and multi-path.