IAG-FIG Workshop “Reference Frames in Practice”

Report by Prof. Chris Rizos

The link between these two geospatial sister organisations is a fundamental one. Because geodesy has always provided the foundation for surveying and mapping, many geodesists with an “applied” focus have been interested in, and have contributed to, FIG activities. The strongest relationship is between IAG Commission 4 “Positioning & Applications” and FIG Commission 5 “Positioning & Measurement”. However, IAG Commission 1 “Reference Frames”, the IAG’s International GNSS Service (IGS), and International Earth Rotation & Reference Systems Service (IERS) conduct activities and generate products very relevant to FIG members and organisations.

This is not surprising because modern geodesy is closely associated with positioning tools such as GPS/GNSS, applied geodesy applications such as ground and structural deformation monitoring, new terrestrial mapping technologies such as mobile imaging/scanning systems, datum concepts such as the International Terrestrial Reference Frame (ITRF), geoid models, and height systems.

The IAG and FIG also work together in a number of international forums such as GEO (Group of Earth Observation), UN-ICG (International Committee on GNSS), and the UN-GGIM (Global Geospatial Information Management). The FIG typically represent the interests of high accuracy users and service providers (including national mapping organisations), while the IAG provides the link to the geodetic (theory & practice) community. The common interests of the two organisations is also obvious from their membership of the Joint Board of Geospatial Information Societies (JBGIS). In fact the JBGIS is a very important forum for the IAG, where it works with all its geospatial “sister” organisations to promote awareness of the value of geospatial data, products, services; as well as datums, technologies and standards, for the benefit of science and society.

One recent example of the close cooperation of the IAG and FIG is the “Technical Seminar on Reference Frame in Practice” that was run 21-22 June 2013, immediately following the South East Asian Survey Congress, 18-20 June, in Manila, Philippines. This is the second time such an IAG-FIG workshop has been run (the first being in 2012, at the FIG Working Week in Rome, Italy). The workshop was also sponsored by the UN-GGIM-Asia-Pacific, the UN-ICG and the Philippines Geodetic Engineering and Geomatics Society, with generous corporate support provided by Esri, Trimble and Leica Geosystems. There were speakers from Australia, New Zealand, Japan, Korea, Philippines, Singapore, Indonesia, Fiji, PNG, and Sweden, with about 50 participants.

The first day’s program dealt with the following topics:

- Case Studies – The Status and Issues of Geodetic Infrastructure from Countries in the Region

- IGS Services and Other Initiatives
- APREF Status and Determination
- Reference Frame Infrastructure

Topics of the second day were:

- Gravity and the World Height System
- Multi-GNSS Environment
- Going Geocentric
- Dynamic Datums
- The Role of Manufacturers in the Provision and Operation of Geodetic Infrastructure

A technical manual on “Reference Frames in Practice” is currently under preparation and will be published by the FIG. We will continue to see joint IAG-FIG activities in the years to come.

Presentations from the “Technical Seminar on Reference Frame in Practice” can be sourced from the FIG Commission 5 website: *http://www.fig.net/commission5/index.htm*

SEASC website: *http://www.seasc2013.org.ph*

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Participants at Workshop