

**Report to the 35th General Assembly
FIG Working Week 2012 in Rome, Italy**

FIG Standards Network

Report to FIG General Assembly 2012

The Standards Network was formed in 2002. It works within Commission 1 and consists of representatives from each of FIG's Commissions.

1. Terms of reference

The terms of reference of the Network are set out in the FIG Guide on Standardisation and are as follows:

- Building and maintaining relations with the secretariats of standardisation bodies,
- Proposing priorities on FIG's standardisation activities, including advising the Council on priorities for spending,
- Setting up necessary Liaison relationships with standardisation bodies,
- Ensuring that lead contacts to Technical Committees etc are in place,
- Maintaining an information flow on standardisation to FIG members, including through the FIG website, and more directly to relevant Commission Officers,
- Maintaining this Guide, and related material on the FIG website,
- Working with other NGOs, within the framework of the MOUs signed by the Council,
- Advising FIG's officers and members on standardisation activities as necessary.

2. Work since the 2011 Working Week

The Network met at the 2011 Working Week in Marrakesh and members have corresponded by email since then. Key activities undertaken by Network members and other colleagues over the past year include:

- **Maintaining a list of commission topics relevant to standardisation** – this “Standards Template” is under revision and will be published presently. FIG commission chairs are reminded that this is one of the Standards Network's key tools. Regular updates are one of the main contributions the FIG Commissions can make to the Network.
- **Staying involved with ISO/TC 211 standardisation activities** – Iain Greenway, the lead liaison from FIG to ISO/TC 211. Key items are:
 - An important initiative is underway to submit to ISO a proposal for a standard related to ITRS. The French standardization agency AFNOR has established at national level an ad hoc committee chaired by Claude Boucher for this purpose. After several discussions, the committee has decided:

- That France propose to ISO to establish an ad hoc structure dealing with standardization on geodetic references;
- That this structure should be established within the ISO TC 211 on Geospatial Information;
- That this structure should take care of the establishment of the standard related to ITRS as one of its future work items.

The first step proposed by France is to undertake a preliminary work (stage 0) on Geodetic references within ISO TC211. The purpose of this work will be to re-assess at international level and within the frame of ISO TC211 the initial work done by France through the AFNOR committee. A strong liaison with FIG, as well as IAG and other international organizations is an important part of this stage 0 work.

- Another important standard under development under the supervision of ISO TC211 is *Geographic information – Calibration and validation of remote sensing imagery sensors – Part 1: Optical sensors*:

“Imaging sensors are one of the major data sources for geographic information. The image data capture spatial and spectral measurements and are applied for numerous applications ranging from road/town planning to geological mapping. Typical spatial outcomes of the production process are a vector maps, Digital Elevation Models, and 3-dimensional city models. There are typically 2 streams of spectral analysis data, that is, the statistical method, which includes image segmentation and the physics-based method which relies on characterisation of specific spectral absorption features.

In each of the cases the quality of the end products fully depends on the quality of the measuring instruments that has originally sensed the data. The quality of measuring instruments is determined and documented by calibration.”

- L. Hothem another key liason with ISO/TC 211 has reported that:
“Finally after many years, we believe we are finally at a critical milestone in establishing a registry for geodetic parameters. It is long overdue. ISO/TC211 Technical Specification 19127 for Geodetic Codes and Parameters was adopted in 2002. At the recent mid-March meeting of the CB in Ottawa, Canada, we received a demonstration of a registry management software package (called RegManTool) that we believe meets the requirements for the establishment, management and maintenance of an up-to-date international registry for geodetic codes and parameters. At the Delft meetings of the CB, we will review further the operations of RegManTool with sample data in coordination with a representative from Standards Norway. Standards Norway will host the registry.”

This work is also of considerable interest for FIG Commission 7.

- **Progress of ISO 19152 on the Land Administration Domain Model (LADM)** – this work grew out of the Commission 7 work on the Core Cadastral Domain Model and was accepted into the ISO/TC 211 work programme in 2008. Christiaan Lemmen reports:

“The Land Administration Domain Model (LADM) is in its final stage: 'Final Draft International Standard'. The results of the last voting round are expected in July 2012.

The Final Draft International Standard (FDIS) covers basic information related to components of land administration (including water and elements above and below the earth surface). It includes agreements on data about administrative and spatial units, land rights in a broad sense and source documents (e.g. deeds or surveys). The rights may include real and personal, informal rights as well as indigenous, customary and informal rights. All types of restrictions and responsibilities can be represented. Overlapping claims to land may be included. The draft standard can be extended and adapted to local situations; in this way all people land relationships may be represented. This can be supportive in the development of software applications built on database technology.

The FAO Solutions for Open Land Administration (SOLA) project will promote affordable IT-systems that enable improvements in transparency and equity of governance. Started in June 2010, SOLA is a three year trust fund project, funded by the Government of Finland. Through the development and re-use of open source software, it aims to make computerised cadastre and registration systems more affordable and more sustainable in developing countries. The LADM is being used as input for SOLA developments; see www.flossola.org. For the Social Tenure Domain Model software has been developed, a pilot is ongoing in Uganda.

GIS providers are interested in the LADM developments for implementation in their solutions.”

- **Staying involved with ISO/TC 172 SC6 work on survey instrument standards** – Hans Heister leads this work for FIG. Several standards under Technical Committee ISO/TC 172/SC 6 "Geodetic and surveying instruments" standards grouping are presently under discussion and/or revision:
 - Optics and optical instruments -- Field procedures for testing geodetic and surveying instruments -- Part 4: Electro-optical distance meters (EDM measurements to reflectors)
 - Optics and optical instruments -- Field procedures for testing geodetic and surveying instruments -- Part 5: Total stations
 - Optics and optical instruments -- Field procedures for testing geodetic and surveying instruments -- Part 6: Rotating lasers
 - Optics and optical instruments -- Ancillary devices for geodetic instruments -- Part 1: Invar levelling staffs.
- **Standards issues related to FIG Commission 2.** People working in different countries have different competencies. One key issue is to establish a database on

different systems and competencies. Progress towards two of the standards is being made.

- **Standards issues related to FIG Commission 4.** The International Board (IHO, FIG and ICA) has published guidelines for establishing individual recognition for hydrographic surveyors, at both professional and technical levels, taking into account education and experience.
- **Standards issues related to FIG Commission 5.** At the meeting in Marrakech it was decided that FIG publication No. 9 Recommended Procedures for Routine Checks of Electro-Optical Distance Meters should be revised with additions for recommendations for hand held distance-meters and reflector-less instruments.
- **Standards issues related to FIG Commission 6.** Commission 6 is interested in the ISO TC 172 and the ISO 17123 series of standards related to survey instruments. There is interest in helping to define standards in deformation measurement and monitoring and data analysis.
- **Standards issues related to FIG Commission 9.** One item of interest is documents and valuations of properties in jurisdictions where there are no existing property markets and systems in place.
- **Communication issues.** It was proposed in the Standards Network meeting in Marrakesh that the Standards Template be sent out to the National Professional bodies. The FIG Commissions don't necessarily report their Standards activities to them. This would provide more interaction. It was proposed that the National Professional bodies are far more competent to evaluate the importance of standards to their members. Informing them of the FIG Standards Network work items would also ensure continuity and higher visibility.

The Network plans to meet again in Rome and consider its work for the coming year.

David Martin

23 February 2012