

REPORT ON THE ISO TC211 MEETINGS, LISBON, MARCH 2001

1. Overview

The meetings came at what might be portrayed as a milestone in the life of TC211. Most of the original standards work items are now at the stages (DIS and beyond) where the TC has no real input. This is allowing a clearer focus on the next tranche of work (both that in train and that needed), on organising to deliver that work to best effect, and on promoting the awareness and use of the developing standards. A key element here is that the original standards were around models; what is needed now is the next level of detail, allowing the models to be implemented in a consistent manner across datasets, organisations and countries. The meeting made good progress on a number of fronts.

2. Workshop on Standards in Action

This all-day event on Wednesday 7 March consisted of presentations from upwards of a dozen countries who are involved in different testing/ conformance/ publicising activity around the TC211 standards. These activities are also allowing some feedback on the standards. In summary, key points were:

- Canada – a web-site is live and running (address not advised) which shows what can be done in pulling different datasets together in real time, as long as they all comply with TC211 standards. They have put a lot of work into this, with an environmental focus (given the amount of land and sea wilderness that Canada is responsible for managing).
- South Africa – building on the National Spatial Information Framework, they are building a national metadata service. They are also producing a report explaining the standards set and what it means for the industry and practitioners. In addition, a South African feature catalogue is being developed as a basis for data exchange.
- Germany – the ALKIS and ATKIS projects (www.atkis.de) bring together disparate land and topographic datasets from the different Lander and facilitate interoperability and distribution via the Internet. About 50% of the TC211 standards are now being used. Some difficulties were reported with regard to some of the standards not yet having reached stability.
- Japan – are in the process of merging multiple datasets and exchanging update information; they have already converted a variety of datasets into standardised datasets. A particular driver is being able to use all available data in case of a disaster.
- Australia – they are using the standards to facilitate the sharing of data across state boundaries (the cadastre is state-based). A common data dictionary was created in 1997 but was little used. TC211 standards now seem set to take over this role. The Australian Spatial Data Infrastructure is also expanding standardisation beyond land information. A key lesson is the need to develop things holistically, rather than seeing data models, feature catalogues etc as separate things.
- Portugal – demonstrated a substantial amount of work they have done on inspection and testing, building from the TC211 standards and creating automated testing routines.
- Switzerland – things were flagging a bit by mid-afternoon, so the Swiss had thoughtfully brought in a mime artist to enliven the proceedings! Again, they have a federal set-up and a need to share data. They demonstrated INTERLIS, a system which allows data to be transferred between different GIS packages by making use of TC211 standards. In this way, users can each stick with the system that suits them best whilst ensuring that the data is still interoperable with other data.
- China – I missed this presentation!!

- USA – discussed the FGDC work on metadata standards. The FGDC document is freely available over the web, and over 100,000 copies have been downloaded in the last two years. This raises issues over the pricing policy for ISO standards. After all, widespread use is the aim of the standardisation process.
- Belgium – demonstrated different datasets from different sources and collected for different purposes being brought together in real-time over the web. This included using the NIMA gazetteer – which has millions of entries – for site-centring data extracts.
- Nordic countries – described the use of testbeds, in particular mixing Norwegian and Finnish national mapping agency data from very different GIS packages. Some particular problems with inconsistencies within the TC211 standards were mentioned.
- Russia – described the development of national standards to provide the next level of detail beneath the TC211 documents.

The key themes that kept coming through were:

- The enormous economic benefits of being able to pull data from different sources and for it to fit together;
- The need for stability in the standards; and
- The need for easy access to the standards – whether through OGC software that companies buy, or in other ways.

It was great to see so much happening, but the talks demonstrated a clear need for a greater overall framework for the different tests, so that the whole can become greater than the sum of the parts. This is planned, with the TC211 secretariat managing an open register. The presentations will all be available via the TC211 web site.

3. TC211 Plenary

Key general issues in the meeting were as follows:

- Most of the original batch of standards have now reached Draft International Standard (DIS) stage or beyond, meaning that it is largely processing for them to be published as International Standards. Indeed, ISO 19105 on Conformance and Testing has just been published as an international standard. More than 10 others are due for final publication this year. The reaching of DIS marks the stage where the standard has stabilised and can be used as a basis for conformance.
- The appropriate structure for TC211 needs to be reviewed in light the completion of much of this initial work. A meeting of the advisory group on strategy in early June 2001 will consider the most appropriate structure – there are various possibilities within the ISO directives.
- I pushed hard on the need for more coherence in the promotion of the standards, and what they mean: I said that FIG was keen to help but was struggling to see where to do this most usefully. This will also be picked at the strategy group meeting in June.
- As the work of TC211 comes to the next level down from the general models, the need for ‘registries’ comes into the picture – a way of registering software, datasets or whatever that have been tested and found to conform to the standards. OGC is of course a key player in this and their report showed that a good number of commercial GIS products from a variety of manufacturers have been confirmed as conforming, with many more being tested at the moment. They have also ditched the OGC standards in favour of the TC211 documents. But software won’t pick everything up. One of the current work items, for instance – 19127 – is looking at geodetic codes and parameters and seeking to create a registry of these, with all

systems described in a common manner. Quite which group within TC211 will take a lead on the registries work looks like being a bit of a turf battle. An important decision was that the framework for registries will not be in 19106 on Profiles but will be a new standard.

- TC211 is starting to look at new areas as it clears older items from its work programme. Much of this is driven by commercial needs, through OGC and others – web interfaces for geographic information, and standards for location based services, are key areas being considered. This will include taking further OGC documents and refining them – OGC see themselves as forging material for further polishing by ISO. TC211 will also be taking over the standard – ISO 6709 – on the ways of defining latitude, longitude and time. There is some tension with other ISO TCs about the scope of TC211, in particular where it touches on (or possibly overlaps) other work.
- The lack of clarity about structures and work in the future led to some lack of clarity in debate. A concern that some individuals are holding a substantial number of different roles in and around the TC also came through here.
- Showing the reach of the TC211 activity, the Global Spatial Data Infrastructure (GSDI) and the International Civil Aviation Organisation (ICAO) were accepted as liaisons.
- The next meeting of the TC will be in Adelaide in late October, and will include another workshop on standards in action. The following meeting will be in Bangkok in April/ May 2002.

4. Certification and Qualification of Personnel

The project team met just before the Lisbon plenary. Only 3 people attended – Bob Maher from Canada (the project leader), Hans Knoop from Germany (de facto deputy project leader) and Tony Pharaoh from IHB. Canada has made clear that it will not fund the work for much longer. However, it wants to see a decent report produced, and so made a plea for further case studies to complement the Canadian one in the current draft report. Several countries – Thailand, Switzerland, Russia and South Africa in particular – agreed to try to produce case studies. Many countries have in the past promised information, only to fail to deliver (and the responses to the questionnaire were very sparse, meaning that they could not be used for analysis). There was agreement that the end date of December 2001 for the final report should be met.

I pointed out the narrowness of the work, compared to FIG meetings on the subject which attract in excess of 100 people. I was asked why I thought this was – I stressed that the professional bodies were turned off by the original proposal for a standard (later changed to a proposal for a technical report), and that this tension was continuing to get in the way. In addition, it was getting in the way of professional bodies understanding and promoting the other work of TC211 – the committee is mainly seen by many as a body trying to standardise qualifications and certification.

I made a plea for a proper discussion after the report was published, to ensure that there was agreement between all parties of the work that needed to be done and who should do it. There is no denying, after all, that the TC211 initiative may have forced the issue higher up professional bodies' agendas. I suggested that the FIG Congress in April 2002 could be at about the right time for a round-table discussion, with the TC211 report published and the FIG Task Force's report submitted to that Congress.

Several delegations supported my comments in private, and Korea supported them from the floor of the plenary.

The upshot is that the report will be completed, case studies or no, later this year, and there seems to be strong majority of active TC211 countries wanting to pause and take stock at that stage. This will be supported by the new TC211 procedure of distributing work item proposals for comment before moving to vote.

In light of the above, I agreed with Hans Knoop that FIG has no objection to a TC211 meeting on certification being held in Seoul, but that it must be badged as a TC211 event, with invitations from TC211 and not from FIG. Hans will liaise with Markku on this.

5. FIG Statement on the Cadastre

This was on the agenda because of the ISO Technical Management Board's decision not to fast-track the Statement towards a standard, and to refer the matter to the Joint Steering Group for spatial standardisation and related interoperability. This group is an internal ISO liaison body chaired by Olaf Ostensen (the Chair of TC211).

I was able to give some background as to what had happened to date – many countries first knew of the Statement when a ballot was called by ISO in Geneva, and the lack of prior information caused some friction. I explained that this was not our intention – rather, we felt we had something that would assist the standardisation process, in a very important area for future economic development, and were seeking how to make best use of it.

I was asked to consider how TC211 might be able to assist with this (and other FIG documents) and to come back to TC211. I will therefore hold some discussion in and around the FIG Working Week in Seoul.

6. Other FIG-related matters

The following issues have particular relevance to FIG:

- In my liaison report, I pushed the promotion/ marketing side of things. I repeated that FIG is willing to help, and cited the planned papers and seminar in Seoul, with further possibilities in Washington (although I stressed that the programme would be put together in outline in the next 3-6 months, so I needed to know soon). The TC211 strategy group meeting in Nashua, New Hampshire on 7-8 June 2001 will consider communication more (the business plan is currently very light in this area, and TC211 recognises this weakness), and we should certainly submit ideas beforehand, and attend if possible (we are almost certain to be invited).
- Julie Binder-Maitra, the Work Item leader of 19127 – Geodetic Codes and Parameters – asked if FIG might be able to help in her work. I said I was sure that we could – through Commission 5 in particular – and asked her to be more specific about her needs by 30 April, so that I could raise the issue with Commission 5 in Seoul.
- GSDI has a 'cook book' on its website (www.gsdi.org) which might also be published in paper form. Their representative wondered whether some FIG material might fit into this cookbook, including perhaps the Statement of the Cadastre and Cadastre 2014. I said that I would have a look and get back to them.
- The TC211 secretariat will shortly be reviewing working group membership. This will include the FIG experts; I will review what the needs are and sort out the right experts by the end of the Working Week in Seoul.
- I spoke with John Kim about the seminar on TC211 that he is planning in Seoul. He will talk with the local organising committee and come back to potential contributors.
- Now that TC211 is moving into the level below the models, and is preparing for completion of many standards, it is vital that FIG reviews urgently what existing FIG material could be consolidated into standards, and where FIG could assist in creating explanatory material. This will be an important element of my efforts in Seoul, but I will need Council assistance.

7. Other matters

Other issues mentioned in the plenary or corridors included:

- OGC has just produced the first edition of a newsletter to keep people informed of its activities. It can be found at www.opengis.org. Further editions will be produced, and you can register at the site for receipt of these.
- The United Nations Working Group on Geographic Information had met in Italy earlier in the week. Sessions included national mapping agencies, who felt that they couldn't commit to many issues without prior consultation with their national governments.
- Two CEN TC287 pre-standards are currently out for vote. A off-line meeting of European representatives took place, at which I wore my Irish hat. The outcome was that countries present felt it best to vote for a two-year continuation of the documents, and during that time to move the ISO documents into CEN standards through the Vienna convention. I promised to pass this information back into the Irish standardisation body. There are, however, some individuals in powerful positions who still see the TC287 standards as of greater prominence than the TC211 standards. One of these appears to be the standards adviser to the project to push SABE into Central Europe., I promised to follow this issue up through EuroGeographics.

Iain Greenway

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