REPORT FOR FIG ON THE ISO/TC 211 MEETINGS, ROME, MAY 2007

1. Overview and key issues

The meetings in Rome continued to progress the work of the Technical Committee. Key standards such as ISO 19136 (GML) and ISO/TS 19139 (XML schema for metadata) are now either published or in their final editorial stages.

A number of issues on the way forward for the TC were discussed, viz:

- What <u>key areas</u> should the TC focus on for standardisation – the issue of <u>application domains</u> was much-debated (a standard, 19144, on land cover classification schemes is underway; and FIG is in the process of proposing the core cadastral domain model). A majority view came forward that TC211 <u>should</u> move into application areas, although there was not complete consensus on this. A key potential additional work area for the TC is climate change – UN-FAO is looking to ISO to lead standardisation work on many of the measured components of this, and ISO Central Secretariat has passed the work to TC211. This will be a challenge for the TC, both in resource terms, and the higher (political) profile that it will create;

- Whether the TC should start work in the area of <u>Ubiquitous GI</u>. No clear view on this emerged and comments from national bodies and liaisons were requested;

- How best to <u>assist users</u> in implementing TC211 standards. It was agreed that the Outreach Group has done good work on awareness raising, but that more work on implementation is needed. The Outreach Group was tasked with pulling together existing presentations, guidelines etc; and another Task Force (with me as chair) was tasked with pulling together a coherent, prioritised business plan of what needs to be done (guidelines, good practice examples, distance learning modules) – and the costs and benefits;

- Ensuring that the TC has access to the <u>resources</u> it requires to deliver on the commitments it has made;

- Clearing the logjam that has stopped any TC211 <u>registers</u> being created, despite the pressing need, not least for a register of geodetic codes and parameters. Some of this is due to ISO procedures, but resource availability is also an issue.

Key issues for FIG are, in summary:

- Progressing a New Work Item Proposal for the <u>Core Cadastral Domain Model</u> (Commission 7/ Christiaan Lemmen)

- The need for us to continue to input to a number of specific (proposed) work items including:

  - 19130 on <u>sensors</u> – the work item will be re-initiated shortly, excluding the hydrographic elements and we will need to comment appropriately (Commissions 4/ Andrew Leyzack, 5/ David Martin);

  - 19111 Part 2 – the <u>extension of spatial referencing by coordinates for parametric values</u> (Commission 5/ David Martin)

- Maintaining a watching brief on work on <u>ubiquitous geographic information</u> etc, determining how/ whether they are relevant to us (Commission 3/ Helen Murray)

FIG remains respected as an important contributor to TC211's programme of work. We should continue to support TC211's work, coordinating our input through the Standards Network.

2. My activity

I divided my time as follows:

Sunday 27th – chairs and convenors meeting

Monday 28th – at Working Group 7, then, 9 then 6 meetings

Tuesday 29th – project team meeting of ISO 19111-2; strategy meeting

Wednesday 30th – Programme Maintenance Group; chairing Focus Group on Data Producers; Outreach meeting

Thursday 31st, Friday 1st – Plenary meeting

Between these formal activities, I held a range of meetings with individuals and small groups.

3. ISO Technical item progress

A good volume of work continues to move through TC211, although there are a few items that have become 'stuck' in the process and have required remedial action. In addition, there are significant new areas where people would like TC211 to work, and balancing this with the need to maintain the current standards set, whilst recognising the limitations on available resource, is a subject of ongoing debate.

Active work is as follows:

Geospatial services (Working Group 4)

- ISO 19117 – Portrayal – amendment: New Work Item Proposal submitted by DGIWG – the standard needs update to be consistent with other standards
- ISO 19118 – Encoding – amendment – to make conformant with GML etc. Progress required a vote in the Editing Committee (very unusual)
- ISO 19136 – GML – a key standard – has been sent to the Central Secretariat for publication
- 19142/ 19143 – Web Feature Service/ Filter Encoding – editing committee meetings this week, to move them to Committee Draft. Many issues yet to be resolved, reflecting issues about the maturity of the technology. A further meeting is planned for October/ November, with Draft International Standard target date of May 2008. Progress is slow, because of resourcing problems from the Project Leader and Editor. This was highlighted as a more general problem as well
- Possible new work identified include OGC Catalogue Service, Web Coverage Service (WCS), Web Coordinate Transformation Services

Imagery and Gridded data (Working Group 6)

The working group is extending the TC211 standards to cover all elements of imagery and gridded data. This working group has also struggled with resource availability

- ISO 19101-2 – extending the reference model – Editing Committee this week resolved most issues. The plan is to finalise editing by September, and then move to completion
- ISO 19115-2 – the imagery metadata elements – Editing Committee this week, then to move to final vote – should be ready for publication in the middle of 2008
- ISO 19129 – Framework – has had to be reintroduced after timing out – problems with resourcing. Scope agreed to be too broad, and to be revised and submitted for another vote
- ISO 19130 – Sensor and data model – this is very relevant for many user communities, for instance standardising the axes used in LIDAR, photogrammetry, hydrography etc. The item was timed out by ISO but is in the process of bringing forward a new work item proposal

from the US, aiming at moving to a Technical Specification (rather than an International Standard) for the time being – on the basis that much technology is still developing. The scope is being reduced to only a few sensor types – frame camera, push broom, whisk broom and SAR (the last not being available in the NWIP). There will be chance to add additional sensor models as comments on the NWIP (IHO are planning to add hydrographic sensors, for instance) – on the current timetable, these will be required by early October 2007. But the standard is 168 pages with only three sensor models. The situation is therefore still far from straight forward, and a great deal of effort will be required to bring the document to successful completion within ISO time limits

- Possible new work includes Calibration and Validation of Sensors (I pointed out the need to work with ISO/TC 172 SC6 which is developing testing and calibration standards for survey instruments, GPS etc); Draping of Imagery over Elevation Models (being pushed by Korea)

Information Communities (Working Group 7)

- 19110 (Methodology for Feature Cataloguing) amendment – DIS vote now open. The hydrographic community is very concerned because the amendment would make S57 non-compliant to the standard. In essence, there is a divergence of opinion between the purists who think that the new model is better; and the pragmatists who consider that broad usage, and bringing user communities along with the standardisation process, is more important

- 19126 (Feature Concept Dictionaries and Registers) – to replace a timed out work item – the comments submitted on the NWIP are currently being dealt with

- 19137 – core profile of the spatial schema – published

- 19139 – Metadata implementation specifications – a crucial document – recently published

- 19144 – Land Cover Classification Schemes – this work was submitted by UN-FAO and is now progressing through editing. It marks an expansion of the TC211 work into application areas. The document has now been split into two – a classification system structure (Part 1); and the Land Cover Classification System (Part 2). Part 1 will proceed ahead of Part 2 (progressing them together has caused some confusion). An Ad Hoc Group will be set up to look at other classification models – which may become further parts of 19144. The focus in both parts is to ensure that there is a rigorous, coherent model to allow comparison between/ combination of material in different models, not to enforce particular coding in regional or national land cover classification schemes

- Possible new work items depend on a TC decision on any move into more application domains. FIG's Core Cadastral Domain Model would be housed here. UN-FAO is interested in creating standards for more of its climate change variables (13 in all, of which land cover is one). There have been discussions with ISO Central Secretariat about which TC should lead on this work, which UN-FAO is keen to see done in ISO. TC207 on Environmental Management is happy for TC211 to take the lead, and this could see a major expansion of TC211's work and profile

Information Management (Working Group 9)

- Revision of ISO 6709 – going through final drafting stages

- Revision of ISO 19111 (Spatial referencing by coordinates) – this is nearing publication and will bring better coherence between this standard and others

- Registry of representation of geographic point locations (19145) – a review stage item to determine what (if anything) needs to be done. It is likely to report that a register is needed

- 19146 – Cross-domain vocabularies – looking at how to bring together TC211 terminology with other related activities (eg. TC204 on Transport Information and Control Systems). This work item is in its early stages

Projects working directly to TC/ in draft proposal stage

- ISO 19104 – Terminology – the last of the original set of standards to be completed – but it was necessary to sort out a number of matters. The terminology is now to be removed to a database, with 19104 now defining the processes for maintaining the database.

- ISO 19111-2 – extension of 19111 for Parametric Reference Systems. This covers situations where, for instance, pressure is used instead of height in aircraft navigation. It is a short document and will come out for vote to the next stage (CD) in the coming months

- ISO 19147 – Transfer Nodes – this links to several work items in the transportation field, including a UK database of access points. The work is in its early stages, and will be based on ISO 19134

- ISO 19148 – Linear Referencing – an NWIP will be brought forward, along with a review (Stage 0) report in the coming months

- Project 19150 – Ontologies – a review project to look at what work TC211 should be doing in this area. It is in its early stages, with the first meeting held this week. There is at this stage some confusion as to how the work fits with several other pieces of TC211 work

- Cadastral domain model – FIG submitted a draft NWIP for comment in late 2006. A number of comments were received, with the main ones questioning whether TC211 should be involved in application domains. A discussion at the Programme Maintenance Group (PMG) made people more comfortable with doing so, given that the model will not affect the specifics of national cadastral systems (it is therefore akin to the land cover work in 19144). It was also pointed out that the cadastre had previously been referred by ISO to TC211 as within its scope. There is strong support from eg. OGC to get on with the work in TC211. The next step is back with FIG, to produce a draft in standards format, and to make clear in the scope that it is a framework model only.

- Revision of ISO 19113 (Data Quality) – a draft NWIP has received comments which were reviewed by the PMG and an NWIP will now be brought forward for vote. 19113 is inconsistent with a number of the other standards, and its use has highlighted some difficulties with it

Other issues

- ***Terminology*** – this is an area where inconsistencies crept in as a large number of standards were developed in parallel; a Terminology Maintenance Group is tasked with removing the inconsistencies, and maintains a spreadsheet to support this. A glossary of terms from published standards is on the TC211 website (www.isotc211.org). A key project at the moment is creating a multi-lingual glossary of terms – work on this will start soon.

- ***Registers*** – a major discussion on registers took place in the WG9 meeting. TC211 has not yet successfully set up a register, with one on geodetic codes and parameters a number of years under consideration and the delay causing increasing frustration. The WG considered a report from an Ad Hoc Group on the subject, which recommended that TC211 maintain a limited set of high level, stable registers, with other bodies maintaining the more detailed registers. It is still unclear exactly what constraints ISO copyright might impose. There was much pressure to get some registers set up, and to make sure that register issues are progressed early in the life of projects that will require them

- *Catalogue services* – an Ad Hoc Group reported back on this issue. OGC has moved ahead with ebXML RIM modelling, which isn't completely compatible with the UDDI modelling used in TC211. This caused problems in the implementation of the EU Portal, and so is an issue that needs to be resolved.

- There was a report from an Ad Hoc Group to review what TC211 should do in the area of *Ubiquitous GI*. This has become something of a catch phrase – recognising that GI will get everywhere and needs to be integrated more and more into IT activity. But it is not (to me) entirely clear what it is and what it is not. The TC arrived at the same conclusion after discussion of document N2242. It therefore agreed to allow national bodies and liaison members, three months in which to submit comments. In the same time frame, comments on a draft NWIP on u-Position will have been received. The next TC211 Plenary meeting will then determine whether a working group on UBGI is necessary, and what work items would be assigned to a new working group.

4. Outreach etc

The Outreach Group has continued to make progress on raising awareness about TC211 standards, mainly through running workshops – including some standards sessions at GSDI in Chile and the FIG Congress in Munich. The Focus Group on Data Producers (FGDP) has also made some progress in communicating with an important user community.

The FGDP made a presentation (building on a paper I had written for the TC chair) highlighting that the key issue is now to make implementation support material easily available to users (for instance through the TC211 website – there are place holders for such things but no content for a number of years) – this to include guidelines and good practice examples. It was understood that funding and resourcing were key issues, and that a convincing business case of costs and benefits for a range of possible activities was required. This might include distance learning material, and more support for the educational community. Funding predominantly for travel would be hard to obtain – and we need to think carefully about how to support implementation most effectively.

As a result of discussions during the week, the FGDP was closed down, its work considered complete, and two new task were agreed by resolution:

- The Outreach Group to gather together existing presentations, good practice presentations etc;
- A new Task Force (with me as chair) to put together a focussed, prioritised business case for activity, costs and benefits.

It was agreed that this was a necessary focus at this stage of implementation support activity, in parallel with further workshops (for instance during the next GSDI conference, and the ISPRS Congress in 2008). A stronger focus on implementation support (as opposed to awareness raising) remains vital.

5. Next meetings and activity

TC211 continues to maintain momentum and publish standards, with some key ones (including GML) now emerging. A renewed focus on implementation was agreed but now needs to be put into action.

The next meetings for TC211 are as follows:

- 29 October – 2 November 2007 – Xi'an, China
- 26-30 May 2008 – Copenhagen, Denmark

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1 June 2007