

SUMMARY OF COMMISSION ACTIVITY REGARDING STANDARDS

<i>Commission</i>	1 – Professional Standards and Practice
<i>1998-02 material of relevance for inputting</i>	None directly; Publication 29 (Business Matters for Professionals) may be of some passing relevance to standardisation bodies as they develop activities in management
<i>2002-06 plans for material</i>	C1 has 5 WGs: <ul style="list-style-type: none"> • 1.1 – Standards Network • 1.2 – professional practice and organisational structures – developing Publication 29 and reviewing legal and structural processes – might be of passing relevance – might also interpret relevant standards • 1.3 – IT matters – might interpret some relevant standards (but mainly focussed on C1 website etc) • 1.4 – project management – best practice guidance planned, and case studies – passing relevance • 1.5 – Network on Under-represented groups
<i>Relevant current standardisation activity and current links with it</i>	C1 is a general commission so has no direct links with technical standards. ISO 9000 is most relevant, and will link with continuing commission work on good practice in quality management. No direct links with standardisation bodies.
<i>Relevant current standards to promote and explain</i>	As above
<i>Additional comments</i>	The key area where C1 can be involved with standards (apart from the Standards Network) is likely to be ensuring that professionals are aware of general (management) standards – these should therefore be covered in the work of WG1.2
<i>Completed by</i>	Iain Greenway
<i>Date</i>	14 June 2005

<i>Commission</i>	2 – Professional Education
<i>1998-02 material of relevance for inputting</i>	Main item is Mutual Recognition, which has links to ISO TC211 work on the qualification and certification of personnel
<i>2002-06 plans for material</i>	WG 2.3 on mutual recognition is relevant, and links with ISO TC211. The current stage of ISO/TC211's work on qualification and certification of personnel is complete. At this stage, they do not have any concrete plans for further action, but are instead keeping the situation under review and seeing how the recommendations of TR19122 are taken forward. A Round Table (and possible 'declaration') on Mutual Recognition was held at the FIG Regional Conference in Jakarta in October 2004. Further discussions were held in Cairo in April 2005 and it was agreed to work closely with the ASEAN initiative in this area, seeking to show that Mutual Recognition is a workable methodology.
<i>Relevant current</i>	As above

<i>standardisation activity and current links with it</i>	
<i>Relevant current standards to promote and explain</i>	ISO TC211 standards, in particular the Technical Report 19122 on the qualification and certification of personnel
<i>Additional comments</i>	Commission 2 does not seem to have particularly strong links with standards issues.
<i>Completed by</i>	Iain Greenway/ Frances Plimmer
<i>Date</i>	14 June 2005

<i>Commission</i>	3 – Spatial Information Management
<i>1998-02 material of relevance for inputting</i>	Publications 30 (The Nairobi Statement on Spatial Information for Sustainable Development, 2002) and 31 (Land Information Management for Sustainable Development of Cities) highlight the importance of global standards.
<i>2002-06 plans for material</i>	<p>C3 has 4 WGs:</p> <ul style="list-style-type: none"> • 3.1: <i>e-Government and e-Citizen</i> – deals with SIM and LBS in an e-Government context. • 3.2: <i>SIM infrastructure</i> – Standards Network on international (ISO/TC 211, OpenGIS Consortium, etc.) and on regional level. • 3.3: <i>State of the art of SIM</i> – worldwide analysis and best practice of institutional structures as well as data. • 3.4: <i>Knowledge Transfer in SIM (education, training)</i> – Joint Commissions 2 and 3 WG on education and training. <p>In addition there is an Inter-Commission activity (Commissions 3 and 5 led by 3): “<i>Mobile society and Location based services (LBS)</i>”</p>
<i>Relevant current standardisation activity and current links with it</i>	In the working plan 2002-2006 C3 is involved with the ISO 19100 series standards (standards developed by ISO/TC 211). There are also some direct links with standardisation bodies.
<i>Relevant current standards to promote and explain</i>	With regards to the topic <i>Mobile society and Location based services</i> ISO 19132, 19133 and 19134 are a matter of special interest. So also is 19136 on GML.
<i>Additional comments</i>	<p>There is an increasing need for standardisation of geographic information and services. ISO/TC 211 and OGC meet this need and increase the availability, access, integration, and sharing of spatial information. There is a continuing need to prioritise standards and their impacts to FIG members. Some specific areas for the future work plans of Commission 3 are:</p> <ul style="list-style-type: none"> • How to transfer the results of positional accuracy improvement work from data providers to data users in an unambiguous way • How to build this functionality into Spatial Data Infrastructures
<i>Completed by</i>	Martin Scheu
<i>Date</i>	14 June 2005

<i>Commission</i>	4 – Hydrography
<i>1998-02 material of relevance for inputting</i>	Nothing specific; the ongoing links between Commission 4 and the International Hydrographic Organisation (IHO) are relevant for international hydrographic standards
<i>2002-06 plans for material</i>	The key link of C4 relevant to standards is that with the IHO. C4 has recently led the strengthening of the FIG/ IHO relationship into a formal Memorandum of Understanding. IHO is a Liaison member of ISO TC211, providing linkages into the standardisation arena.
<i>Relevant current standardisation activity and current links with it</i>	C4 is also a member of the International Advisory Board on Standards of Competence for Hydrographic Surveyors.
<i>Relevant current standards to promote and explain</i>	A number of international hydrographic standards exist, including some ISO standards. It is important that FIG is aware of the relevant documentation, something which requires ongoing input from C4. International Standards which are of relevance to hydrography are: <ul style="list-style-type: none"> – ISO 19115 Metadata profiles – IHO reports that the next edition of the IHO Standard for Digital Hydrographic Data (S-57) will be based on 19115. – ISO 19130- Sensor and data models for imagery and gridded data. This document is moving slowly. In a May 2005 submission, FIG provided a number of significant comments on shortcomings in the document (whilst recognising that the latest draft does at least cover hydrographic sensors) – ISO 19111/ 19127, in particular with reference to vertical reference frames
<i>Additional comments</i>	There is a lack of standards for describing the vessel/ sensor reference frame, with different manufacturers using different conventions. The International Marine Contractors Association (IMCA) has published standards on multibeam surveys. C4 has collated the conventions used by different system manufacturers. ISO 19130 proposes a standard convention. The issue of certification for hydrographic surveyors is also being advanced in various parts of the world; Commission 4 will maintain a watching brief on progress.
<i>Completed by</i>	Andrew Leyzack
<i>Date</i>	14 June 2005

<i>Commission</i>	5 – Positioning and Measurement
<i>1998-02 material of relevance for inputting</i>	C5 is directly related to standards. ISO TC 172 SC6 – Geodetic and surveying instruments – defined in 2001 the new ISO 17123 – Field procedures for testing geodetic and surveying instruments. Several workshops, seminars and publications, eg. “quality management for geodetic measurements” Seminar from DVW, November 2001, Fulda. Seminar in Malta, September 2000, Seminar in Gävle, Sweden, March 1999
<i>2002-06 plans for material</i>	C5 has 3 WGs: <ul style="list-style-type: none"> • WG 5.1 – Standards, Quality Assurance and Calibration

	<ul style="list-style-type: none"> • WG 5.2 – Reference Frame in Practice • WG 5.3 – Integrated Positioning, Navigation and Mapping Systems
<i>Relevant current standardisation activity and current links with it</i>	<p>WG 5.1 has a direct relation to standards, especially all standards in relation to the measurement(s) and the quality of the measurements. Several members of the WG 5.1 are members of their national standardisation group and some also members of the International ISO-group. ISO TC172 SC6 is particularly relevant to C5, with Hans Heister being the FIG lead expert to this work.</p> <p>Some elements of TC211 are also relevant, including 19130 on sensor orientation, and 19111/ 19127/ 6709 on coordinate reference systems and positions.</p> <p>WG 5.2 and 5.3 are not in direct relationship to standards</p>
<i>Relevant current standards to promote and explain</i>	<p>The new set of standards ISO 17123 – field procedures for testing geodetic and surveying equipment – will be explained and promoted (publications, workshops, seminars). The document of most current relevance is that on GPS, which is at an early development stage in ISO. Commission 5 is becoming actively involved in this work in an attempt to ensure that it meets the needs of practitioners.</p> <p>Comm 5 has also provided an expert to the TC211 work to update ISO 6709 on how to quote positions, and to ISO 19130 on sensors.</p>
<i>Additional comments</i>	<p>Comm 5 has advanced the idea of developing Fact Sheets for relevant standards, something which might extend to other Commissions also, and which the Commission will attempt to progress in TC172 SC6.</p>
<i>Completed by</i>	Rudolf Staiger
<i>Date</i>	14 June 2005

<i>Commission</i>	6 – Engineering Surveys
<i>1998-02 material of relevance for inputting</i>	<p>FIG Publication 25 on Models and Terminology for the Analysis of Geodetic Monitoring Observations is of some relevance to standards issues.</p>
<i>2002-06 plans for material</i>	<p>The C6 working groups are:</p> <ul style="list-style-type: none"> • 6.1 – Deformation Measurement and Analysis • 6.2 – Engineering Surveys for Industry and Research • 6.3 – Engineering Survey Data Bases and Facility Management • 6.4 – Engineering Surveys for Construction Works and Structural Engineering
<i>Relevant current standardisation activity and current links with it</i>	<p>ISO is not specifically working in these areas at present, although some ISO/ TC211 work is relevant to WG 6.3. We need to investigate what possible proposals FIG could make in this regard. There are however a number of national and regional standards covering these areas. There are also some older ISO standards covering setting out and construction.</p> <p>ISO 19130 and the proposed GPS standard (see Commission 5 above) may also have relevance to Commission 6. ISO 19130 does not at this stage cover terrestrial laser sensors but it would appropriate to enlarge</p>

	its scope to do so in the future, as the technology matures.
<i>Relevant current standards to promote and explain</i>	There are no particular ISO standards that FIG is aware of, but we believe that some industrial standards may have impacts.
<i>Additional comments</i>	Commission 6 planned to set up a group to collect relevant information about standards. They had planned to distribute a questionnaire in the autumn of 2003 and prepare a report on their work for the Athens Working Week in May 2004. This timetable has not progressed because of difficulties in getting people involved in the work.
<i>Completed by</i>	Aloiz Kopacik
<i>Date</i>	13 June 2005

<i>Commission</i>	7 – Cadastre and Land Management
<i>1998-02 material of relevance for inputting</i>	The 1998-2002 work of WG7.1 on Cadastre 2014 and benchmarking cadastral systems are relevant best practice publications. The Bathurst declaration and Statement on the Cadastre have already been shared with ISO, which has decided that the Statement is not of itself appropriate material for standardisation.
<i>2002-06 plans for material</i>	<p>One very interesting area is the basic contents of a Digital Cadastral Database (DCDB). For instance, “What are the common elements in all cadastral systems?” and “Which should be the basic elements in a DCDB to operate as a key element of a national or global spatial data infrastructure?” This definition of basic elements that should be found in each DCDB can be helpful for easier land transactions on an international level (e.g. European Union, Americas) as well for planning processes on a national or international level.</p> <p>The description of these basic elements is being carried out by using the ISO standard modelling language, UML. The use of UML enables data base specialists all over the world to understand what we want. It is not necessary to define the basic contents of a DCDB as a standard itself but it may be helpful in that it will help different jurisdictions to design or re-design their cadastral systems by using this work as a good practice guide. Working Group 7.3 plans to publish the results as good practice guidelines via Internet or/and a booklet.</p>
<i>Relevant current standardisation activity and current links with it</i>	ISO TC 211 is interested in a co-operation with FIG in this field by testing the ISO 19100 series of standards in practice and some activities inside OGC show as well the need for a special cadastre interest group working on a cadastral domain model. This work is being progressed by Christiaan Lemmen, working closely with WG7.3 and OGC. A second workshop on the subject was held in December 2004 in Bamberg. The next stage is to engage with ISO/ TC211 as to how to bring the work into the ISO arena
<i>Relevant current standards to promote and explain</i>	As above
<i>Additional comments</i>	OGC has launched a Property and Land Initiative which links closely to the planned FIG work; links will be built as appropriate but the group does not currently seem to be active.

<i>Completed by</i>	Winfried Hawerk
<i>Date</i>	31 May 2005

<i>Commission</i>	8 – Spatial Planning and Development
<i>1998-02 material of relevance for inputting</i>	None that we are aware of
<i>2002-06 plans for material</i>	<p>WGs for 2002-06 are as follows:</p> <ul style="list-style-type: none"> • 8.1 – Urban regeneration • 8.2 – Public private partnerships • 8.3 – Global urbanisation process in large cities • 8.4 – Disaster Management
<i>Relevant current standardisation activity and current links with it</i>	These are areas not covered by current ISO work. However, they appear to be areas where the documenting of best practice is appropriate, and should be explored by FIG to see how/ whether standards are appropriate.
<i>Relevant current standards to promote and explain</i>	See above
<i>Additional comments</i>	The Commission chair is attempting to find a suitable Commission representative for the Network.
<i>Completed by</i>	Iain Greenway (with input from Diane Dumashie)
<i>Date</i>	13 June 2005

<i>Commission</i>	9 – Valuation and the Management of Real Estate
<i>1998-02 material of relevance for inputting</i>	None that have been identified
<i>2002-06 plans for material</i>	<p>Relevant WGs are as follows:</p> <ul style="list-style-type: none"> • 9.1 – Education of valuation professionals in FIG • 9.3 – Valuation for taxation and statutory compensation
<i>Relevant current standardisation activity and current links with it</i>	The key standardisation body in this area is IVSC. Links between FIG and IVSC were strengthened at the 2002 Washington Congress. Commission 9 is investigating the possibility of arranging further joint sessions with IVSC at FIG events. WG 9.3 is in addition examining how valuation for compensation should be included in the IVS. The identification of an appropriate representative to attend the biannual meetings of the IVSC Standards Board, where an FIG presence would be welcomed, is seen as an important step in developing links with IVSC. The IVSC work is a vital part of developing international accountancy standards.
<i>Relevant current standards to promote and explain</i>	See above
<i>Additional comments</i>	
<i>Completed by</i>	Brian Waldy

<i>Date</i>	18 April 2005
<i>Commission</i>	10 – Construction Economics and Management
<i>1998-02 material of relevance for inputting</i>	None
<i>2002-06 plans for material</i>	WG 10.4 on Standards, research and development in cost management, quantity surveying, cost engineering and project management is relevant. This links with WG 1.4. Work is also in hand on measurement standards, supported by RICS.
<i>Relevant current standardisation activity and current links with it</i>	There is no formal standardisation work in this area, but it appears to be one in which the documenting and spread of best practice would be most useful.
<i>Relevant current standards to promote and explain</i>	
<i>Additional comments</i>	ICEC are also active in this area and we need to maintain links with them.
<i>Completed by</i>	Iain Greenway (with input from Phil Shearer)
<i>Date</i>	14 February 2003

FIG and ISO (updated 13 June 2005)

FIG is a Class A Liaison member of:

- ISO TC172 SC6 and TC59 SC 4 (which work jointly) – Geodetic and Survey Instruments
- ISO TC211 Geographic Information

Liaison with TC172/ TC59 is coordinated by Hans Heister, and C5 is currently putting relevant links to experts in place, particularly in the area of GPS.

Liaison with TC211 is coordinated by Iain Greenway and FIG is very active in its work with this TC, including on the Outreach Group and the Focus Group on Data Providers.

ISPRS input (Ian Dowman – June 2002; updated Iain Greenway – June 2005):

ISPRS is a liaison member of several ISO committees and has a commitment to supporting efforts to establish standards for data format and transfer. ISPRS also supports efforts for interoperability and data transfer through the Open GIS Consortium (OGC). In order to implement this support, explicit reference to ISO and OGC is made within the terms of reference of several of its Working Groups.

ISPRS officers are leading the ISO project 19130 "Sensor and data models for imagery and gridded data". The WG has established links with many other groups working in this area. The progress of the work on the standardisation of the frame camera and of the pushbroom/swath-type of sensors is also good. More work is necessary for the SAR- and LIDAR-systems.

ISPRS currently has liaison status on the following ISO committees.

- ISO/ TC 20 'Aircraft and Space Vehicles'
- ISO/ TC20 SC13 'Space Systems and Information Transfer Systems'
- ISO/ TC 42 'Photography'
- ISO/ TC172 SC9 'Electro optical systems'
- ISO/ TC211 'Geographic Information/Geomatics'