OVERVIEW ON THE RESULTS AND GOALS OF ISO TC211

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ABSTRACT

Standardization in geographic information or geomatics, and surveying instruments and equipment has been an important matter of concern by the FIG for the past decade. In 1994, with concurrence of the General Assembly at FIG Congress in Melbourne, Australia, Commission 5 on Positioning and Measurement established a working group on standards. This working group was tasked to monitor activities of the International Standards Organization (ISO) with particular attention given to those standards affecting the surveyor user community represented by the FIG. Besides the need for improved standards for surveying instruments, also recognized was the growing importance for standards to facilitate the exchange and dissemination of geographic and land information data.

Awareness is evolving at a fast pace among the international community of cadastre surveyors, geomatics engineers, geographical information specialists, marine surveyors, urban planners, academia, industry, and governments of the need for standards in the area of geographic and geospatial data. This need for standards is driven by increased availability of geospatial data from global sources, ease of data access via the Internet, and requirements for enhanced and reliable interoperability for the computerized databases.

Initiated by Canada, the ISO formed Technical Committee 211 (ISO/TC211) on Geographic Information/Geomatics with the first meeting held in Norway in November 1994. ISO/TC211 was charged to develop a set of standards in the field of digital geographic information concerning objects or phenomena that are directly or indirectly associated with a location on the Earth referenced to an adopted reference system.

In April 1995, in response to a request to ISO, the FIG was officially accepted as a non-government organization (NGO) with Class A liaison status with ISO/TC211. The FIG Bureau designated Commission 5 as the initial point-of-contact between the Secretariat for ISO/TC211 and FIG. Consequently, the FIG became increasingly involved in ISO/TC211 activities. This included representatives from FIG attending the semi-annual ISO/TC211 plenary and working meetings, and participation as experts and reviewers in development of proposed ISO standards for geographic information.

With increased awareness of the importance of participation in standards development activities, and the recognition that ISO activities affected interests in all the technical commissions of FIG, in 1998, an FIG Task Force on Standards was established. The Task Force is an active promoter of standardization in geomatics. The evolving close

collaboration of the Task Force and ISO/TC211 affirmed FIG as an active NGO seriously concerned about standards affecting surveyors. Of the more than 15 NGOs with Class A liaison status with ISO/TC211, FIG is a among those most active in interfacing with ISO/TC211.

Standardization within ISO/TC211 is leading to a comprehensive family of standards called the ISO 19100 series. The goals of TC211 are designed to: facilitate the exchange and increase the use of geographic information data, expand availability and access to geographic information, enhance efficiency and economies in use of digital geographic data, and contribute to a unified approach to addressing global problems such as the environment and sustainable development.

Development of the standards in ISO/TC211 is achieved through the efforts of working, advisory or special groups. Presently, there are five working groups where the primary standards works are in development. Each working group is assigned a number of work items or projects. A work item leads either to a standard or a report. Many work items are close to achieving status of International Standards (IS). Special groups are formed to address a specific need such as quality control and harmonization of standards. Advisory groups are formed to exam proposed new work items. For example, an Advisory Group on Location Based Services was established in September 2000.

Involvement of a substantial number of national standards organizations in ISO/TC211 is crucial to the success in drafting and adoption of viable standards. Currently, the number of countries involved is 52 and is continuing to grow. The number of countries participating as permanent members and in drafting standards is 33, while 15 other countries serve as observers and four countries are represented as correspondents.

This paper presents an overview and current status of ISO/TC211 standards works in development. The extent of the work underway and brief content of each work item is summarized. The ISO 19100 series of international standards in geographic information/geomatics provide the basic infrastructure essential for interoperability of computer systems and exchange of geospatial data. Considering the potentially broad user community represented by FIG, case examples are included that should help to provide some better understanding of the ISO 19100 set of standards. Discussion includes factors for determining which standards may be appropriate or required for a particular application. A key concern of the FIG is effective implementation of the ISO/TC211 standards.

INTERNET ADDRESS INFORMATION

ISO/TC 211:	http://www.statkart.no/isotc211
FIG Task Force on Standards:	http://www.fig.net/figtree/tf/standards/index.htm

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