# Activities of PC IDEA in the Americas: A Progress Report

## Francisco Antonio HANSEN ALBITES, Mexico

## SUMMARY

This paper gives a brief account on the recent activities of the Permanent Committee of Geospatial Data Infrastructure for the Americas, PC IDEA. Since the last report presented in Bangalore, India, the main activities are as follows: A Special Meeting for the Development of Information Policies for Land Management in the Americas, was held in Aguascalientes, Mexico during the last days of October 2004, organized and sponsored by FIG, UN, PC IDEA, besides other organizations. PC IDEA has a Class A liaison with ISO/TC211. Information regarding Geographic and Geomatic ISO Standards has been systematically sent by ISO/TC211 to PC IDEA. A Seminar on ISO Metadata Standards was organized by ISO/TC211, supported by PC IDEA and PAIGH. and given to attendees from 8 Latin American countries. PC IDEA also attended a Meeting of SIRGAS held in Mexico. PC IDEA, along with ISCGM and PAIGH is supporting the initiative from Chile to develop the Global Map of the Americas, a project linked to the Global Map Project from the ISCGM. PC IDEA also supports the initiative to develop the so called Andean SDI, which comprises 5 countries in the northern part of South America. The 5th. meeting of PC IDEA is programmed to be held along with the 8th. United Nations Regional Cartographic Conference for the Americas in New York next June. Some problems are reported in the hope to solve them in due time.

## SUMARIO

Este trabajo da una breve reseña de las recientes actividades del Comité Permanente de Infraestructura de Datos Geoespaciales para las Américas, CP IDEA. Desde el último informe presentado en Bangalore, India, las principales actividades son las siguientes: Reunión Especial sobre el desarrollo de Políticas de Información para la Administración Territorial, celebrada en Aguascalientes, México, durante los últimos días de octubre de 2004, organizada y respaldada por la FIG, la ONU y el CP IDEA, además de otros organismos. El CP IDEA tiene un vínculo tipo A con el ISO/TC211 el cual ha estado enviando al CP IDEA sistemáticamente información sobre los estándares geográficos y geomáticos de este organismo. El ISO/TC211 organizó y llevó a efecto un Seminario-Taller sobre Estándares de Metadatos de la ISO, con el apoyo del CP IDEA y el IPGH, el cual se impartió a técnicos y directivos de 8 países latinoamericanos. El CP IDEA asistió también a una Reunión del SIRGAS celebrada en México. Se está apoyando, junto con ISCGM y el IPGH la iniciativa chilena para desarrollar el Mapa Global de las Américas, proyecto vinculado al Proyecto de Mapa Global del ISCGM. El CP IDEA apoya también el desarrollo de la denominada IDE Andina, la cual comprende cinco países de la porción norte de América del Sur. La 5ª. Reunión del CP IDEA está programada para tener lugar durante la 8ª. Conferencia Cartográfica Regional de las Naciones Unidas para América el próximo mes de junio en Nueva York. Se mencionan algunos problemas, esperando resolverlos en su oportunidad.

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## 1. INTRODUCTION

This is a paper intended to deliver to this GSDI8 International Conference a brief report on the activities of the Permanent Committee of Geospatial Data Infrastructures for the Americas, PC IDEA, since the last one presented during the Seventh GSDI held in Bangalore, India, February 2004. It also includes a short account on the genesis and meetings held to date.

## 2. GENERAL BACKGROUND

As many of you already know, PC IDEA is the result of a movement initiated during the $6^{th}$. United Nations Regional Cartographic Conference for America, UNRCCA, held in New York, in June of 1997. The intention was to promote the organization of a body in the American region similar to the one already existing for the Asia-Pacific region, the Permanent Committee of GIS Infrastructure for Asia and the Pacific Region, PCGIAP, also initially promoted by the UN and which at these times is operating with a membership of 55 nations of the region.

In the above context the $6^{th}$. NU Conference issued two recommendations, number 3 and 4 as follows:

**Recommendation number 3:** To establish a Permanent Committee of Spatial Data Infrastructure for the Americas, and

**Recommendation number 4:** To consider the establishment of national Spatial Data infrastructures and that all American member states of the NU participate in the Committee as defined in Resolution Number 3.

In February 2000, 21 American countries convened in Bogota, Colombia and signed a first agreement to constitute the Permanent Committee. After this first approach, there was a second meeting during the $7^{th}$. UNRCCA in New York, January 2001, where a statement was issued recognizing the importance of SDIs to support the development of geospatial information in the Americas.

The Conference issued as well a recommendation to the American governments to support the idea of spatial data infrastructures development as a basic strategic policy. It also recommended adhering to the SDI concept and the development and implementation of strategies supporting the regional and global initiatives while at the same time giving proper attention to national SDI development.

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After this UN Conference, the Third PC IDEA meeting was held in Cartagena, Colombia, in May 2001, along with the 5th. GSDI International Conference, where final Statutes were approved, membership was increased to 24 countries and working groups were organized on Legal and Economic Aspects, Communications, and Technical issues. Within this technical main group, seven subgroups on Fundamental Data, Clearinghouse, Geospatial Standards, Policies and Institutional Agreements, Cadaster, Geographic Names and Institutional Strengthening were defined and organized.

The 4th. PC IDEA meeting took place in San Jose, Costa Rica in June 2003, along with a meeting of the Commission of Cartography of the Panamerican Institute of Geography and History, PAIGH, where main authorities were renewed and working groups reports were delivered, besides progress reports in the development of some national SDIs.

## 3. MAIN ACTIVITIES

After GSDI7 in Bangalore, the principal activities on which PC IDEA has been involved are as follows:

Special FIG, UN, PC IDEA Forum.
During the 7th. UNRCCA a resolution was issued recommending the organization of a Forum of American Countries regarding the development of information policies for land administration, as a special meeting for decision takers. Resolution number 5 regarding Land Administration and Spatial Data Infrastructures was stated as follows:

*"**Requests** the United Nations Secretariat, within available resources and with the support of the Permanent Committee on SDI for the Americas (PC-IDEA) and the International Federation of Surveyors, to provide support on the program of the inter-regional workshop to be hosted by Mexico to determine policies and programs for educational, training and professional capacity building that will ensure the development of appropriate land administration systems and associated spatial data infrastructures,*

***And Recommends** that member States develop appropriate institutional, legal and technical processes to integrate land administration and topographic mapping programs within the context of a wider national strategy for spatial data infrastructure."*

According to this resolution the Forum was organized by the FIG and supported by PC IDEA. It was held in Aguascalientes, Mexico in the last days of October, 2004 and was hosted by the National Institute of Statistics, Geography and Informatics (INEGI). This Agency had also a leading role in the local organization providing administrative support both to FIG and PC IDEA. This Forum was attended by some 70 participants from 18 countries, besides a greater number of local interested people. This Forum was possible due to the enthusiastic collaboration from several organizations; the governments of Canada and the United States of America through Natural Resources Canada, the USGS/FGDC and USAID, plus the World Bank and PAIGH.

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The objective of the Forum was to stress the importance of developing land policies regarding de value of land administration, cadastre and land registration and their integration to spatial data infrastructures.

The Special Forum outcome was on the necessity to develop and link modern land policies with spatial data infrastructures, define policies and programs for capacity building in all levels, aimed to foster the development of sound land administration systems and associated spatial data infrastructures, and develop appropriate processes to integrate land administration, cadastre and land registration in the context of those spatial data infrastructures.

In this GSDI8 Conference a full report will be delivered by FIG covering more details. It will be also the subject of a complete and detailed report to be presented during the 8th. UNRCCA in New York, next June.

## 3.1 Geospatial Standards Minimeeting

During the second week of May last year, previous to an International Congress on Geomatics 2004 organized by the Cuban government, a short 3 days meeting of the International Cartographic Association (ICA) Commission on Geospatial Standards was held in Havana, Cuba, with the local support from GEOCUBA, the local organization dealing with Geospatial Information along with the Office of Geodesy and Hidrography. In this meeting was present a small group of representatives from ICA and other international organizations, plus PC IDEA which participated through delivering a presentation on the nature and objectives of this regional body and stressed the necessity to work on common geospatial standards, welcoming the concern and contribution from ICA and looking forward to reinforce links with this body.

## 3.2 ISO/TC211 Liaison

CP IDEA considers geospatial standards development, compilation and availability a very important issue from the point of view of inclusion in the main technical components, along with fundamental data, metadata development and clearinghouses implementation and operation. In the context of standards a close link is maintained with the ISO Technical Committee 211 (ISO/TC211), through a class A liaison granted in May, 2002. This status allows PC IDEA to have access to all documents and technical specifications available on the ISO/TC 211 website, though PC IDEA has no right to vote. Many international organizations favor this no voting status because it allows the organization to remain transparent and neutral and still be engaged.

From the beginning of this liaison, the ISO/TC211 Secretariat has been systematically sending to PCIDEA information about the Standards the Organization is developing. Specifically, the PC IDEA Executive Secretariat began to receive information as of September 2003, which is being cataloged, organized and analyzed for the future benefit of member countries. To achieve this benefit it will be necessary to reorganize the technical working group of PC IDEA devoted to Geospatial Standards, redefine its objectives and state

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the necessary goals under a practical and feasible conceptual and operating schema. So far, the general objective of this group is to develop and promote the compilation, use and efficient management of geospatial standards for the regional geospatial information.

### 3.3 ISO Metadata Standards Workshop

Taking advantage of the above liaison an ISO Metadata Standards Workshop was organized through an initiative of ISO/TC211 and the support of PC IDEA and PAIGH. The purpose was that the Workshop will greatly benefit representatives from PC IDEA and the federated states of Mexico under a one day intensive event designed to provide the foundation for the development of the Latin American profile of the ISO Metadata Standard by members of PC IDEA, considering such profile as the implemented subset of an ISO standard that relates specifically to the requirements of users from a region.

The Workshop was held immediately following the Special Forum on Information Policies above described, that is, on October 28 2004, under the guidance of the ISO/TC211 liaison officer and with the participation of instructors from ESRI and Intergraph. The shop was partially financed by PAIGH under the program of technical assistance this regional agency has to support regional projects as proposed by the members. This support materialized facilitating air transport and perdiem expenses to some Central American Countries, and also to cover for expenses incurred by TC211. PC IDEA acted as part of the organization, collaborated withy PAIGH and secured the necessary logistic support through INEGI in Aguascalientes, Mexico.

The workshop focused on the ISO Metadata Standard 19115, was a real success since it raised a great interest from the geospatial organizations in Mexico dealing with metadata development and also from the international attendees coming from 7 different American countries, besides Mexico. A total of some 50 people participated in the shop, including representatives mainly from the federal and state governments, as well as some from the academia.

### 3.4 Links with Global Map

The development of Global Map, specifically for coverage of the Americas is of a great concern and interest for PC IDEA. PC IDEA as told before was present in Bangalore and besides attending the GSDI7 International Conference, was also present in the 10th. Meeting of PCGIAP and the 11th. Meeting of the ISCGM, where several issues regarding the participation of American countries were raised, specially the necessity to approach those few countries that had not yet adhered to the initiative of Global Map. PC IDEA agreed to communicate with them to aid in promoting a decision on the subject. So far, some countries like Colombia, Mexico and Panama have completed their share of Global Map and the ISCGM have put the in the web, available to all interested users. Other countries have different levels of progress, many of them approaching completeness. The 12th. ISCGM will, be more precise in the next days.

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By the end of October 2004 PC IDEA in its quarters at Aguascalientes, Mexico received the visit of the ISCGM Secretariat to discuss some issues as related to the progress of the Global Map in the Americas, among them the one mentioned above. On the 29th. PC IDEA in connection with INEGI organized a presentation from the Secretary of ISCGM delivered to about 150 technician and managers of INEGI, which raised a high interest and was very well received.

## 3.5 Global Map of the Americas

In connection with Global Map an initiative from the National Geographic Institute of Chile was received at PC IDEA asking for support. This initiative deals with a project to develop a Global Map of the Americas, that is, a seamless product for the whole American Continent, as complementary to the actual ISCGM project which considers the Global Map on a country by country basis. Conceptually, the idea of a continental component of the Global Map, similar to the one which is being developed in Europe (EuroGlobal Map) is an integration of existing and on development national contributions with the purpose to enhance the offer and so answering to demands for digital geospatial information for the benefit of American Countries. PC IDEA considers this initiative as viable and is encouraging it, having in mind that some technical issues have to be dealt with and given proper solutions. The initiative has both the support from the ISCGM and also from the PAIGH through the General Secretariat and the Cartography Commission of this regional agency, which is considering the initiative in the context of the Technical Assistance program of PAIGH.

## 3.6 SIRGAS meeting in Aguascalientes

SIRGAS is the acronym standing for the Geocentric Reference System for the Americas. In November 2004 there was a meeting of this regional body held in Aguascalientes, Mexico, with the purpose to present the progress to date of the three working groups composing SIRGAS, and also to promote the participation from some countries, especially those from Central America and the Caribbean. PC IDEA was present in this meeting as there is a marked interest to have a uniform geodetic reference system for the whole of America in the context of the development of the regional geospatial data infrastructure.

SIRGAS is a result of a resolution from the 7th. UNRCCA which recognized the importance of high quality 3D position data referred to a unique global geodetic reference system for spatial data infrastructures and recommended that American member countries integrate their national geodetic reference systems into a system compatible with the already existing SIRGAS project, including the provision of gravity data to support the development of a geoid as a reference surface for the heights system.

The SIRGAS project was created during an International Conference held in Asunción, Paraguay in October 1993 with the purpose to work towards the definition of a Geocentric Reference System for South America, through an initiative promoted by the International Association of Geodesy, the PAIGH and the former NIMA of the United States of America.

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In later times the coverage was increased to cover the rest of America, with the participation to date of the majority of American countries.

The development of the project comprises the necessary activities to adopt in the Continent a reference system compatible with actual positioning techniques, especially those associated to the Global Positioning System (GPS) as well as the adoption of the International Terrestrial Reference System (ITRS), through an International Reference Frame (ITRF2000, epoch 2004.0 in the GRS80). This will eventually allow for and guarantee a consistent integration with the geodetic nets of other continents, contributing so to the development of a global geodesy.

At this time SIRGAS has a membership of some 20 American countries and is organized in 3 working groups, as follows: 1) a Group for the Reference System in charge of defining the geocentric reference system for the Americas and coordinate its establishment and maintenance; 2) a Group for the Geocentric Datum to coordinate the densification of the reference frame in each one of the member countries, and 3) The group for the Vertical Datum to define a unified heights system for the Americas and coordinate its establishment and maintenance.

### 3.7 Andean SDI

In the middle 0f 2004 the Andean Community (CAN by its singles in Spanish) integrated by 5 countries in the northern part of South America, launched the initiative to build the Andean Spatial Data Infrastructure (ASDI). The CAN is an international organization oriented to the economic and social integration of those Andean countries, that is, Colombia, Venezuela, Ecuador, Peru and Bolivia. This initiative is coordinated by the executive body of the CAN through its General Secretariat (SGCA by its singles), which is interested in developing a subregional SDI in direct coordination with existing national or would be national SDIs.

The ASDI aims to optimize the use of data available in each of the five countries through a strong coordination effort which will propitiate both data accessibility and interoperability, aiming also to strengthen the national SDIs and work towards due capacity building in the subregion. The foreseen benefits of this initiative will be the enablement of decision making from national and regional political and economic leaders regarding sectors requiring spatial data to plan and devise mechanisms for the economic and social growth of the involved countries. It is also envisaged the contribution of the ASDI to the integration of the Regional SDI which is one of the main goals of PC IDEA and of the GSDI as well.

PC IDEA is ready to support this subregional initiative since due consideration and concern is given to any effort to construct SDIs, both in the national and subregional levels. In this same context are other initiatives like the former Central American Program for Geographic Information (PROCIG), and, the Mesoamerican and Caribbean Geographic Alliance (MACGA) which is still working. On the other hand these are initiatives that though not initially considered as means contributing to the construction of the regional SDI, will necessarily be a strong component aiding in the achievement of such purpose, besides

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conformation and contribution of national SDIs. A PC IDEA representative was present in Bogota, Colombia by September last year where the CAN convened to discuss issues related to the proposed ASDI

### 3.8 Relationships

PC IDEA is very much interested in the creation and maintenance of close relationships with national, regional and global organizations. In this context, communication has been favored with organizations such as GSDI and PAIGH, including in this count the ISCGM, PCGIAP, ISO/TC211 and the UN, to mention the most important so far. We hope to promote and foster this purpose working also towards the creation of new links with other regional and global organizations

### 3.9 Next PC IDEA meeting

The next PC IDEA meeting is scheduled for a one day session during the week from June 27 to July 1st. this year, along with the 8th. UNRCCA in New York. The first call to member countries as well as the preliminary agenda has been already sent according to Statutes which establish a 4 months previous notice. In his meeting some key issues have to be dealt with as a possible reform of the Statutes, a probable renewal of authorities, and the redefinition of working groups. This includes the presentation of a full report of PC IDEA activities for the 4 year period from the last UNRCCA, which is already tabled in the agenda of the Conference.

## 4. SOME PROBLEMS

As any organization, especially when it is a young one, there are some problems which have to be solved in due time. One of this is proper communication among member countries and working groups with the authorities, which does not always work in the best fashion. We have to devise some ways to enhance communications. Another problem is that PC IDEA is an organization which works with no funding whatsoever, a condition which for example prevents the organization and attendance to meetings. Some ways for having some funding have to be look for. Another problem is perhaps of a more concern; sometimes we wonder whether there is a real interest from some member countries in developing the Spatial Data Infrastructure for the Americas while they are probably more concerned in developing their national SDIs. All of these problems have to be looked at.

## 5. CONCLUDING REMARKS

To conclude, this progress report perhaps does not reflect what the work of PC IDEA should be. PC IDEA is an organization aiming to put together common interests in the realm of geospatial information for the development of national spatial data infrastructures to be integrated in a regional context as well as in the global one. The increasing demands imposed by globalization, economic sustainable development and the ever present growing technology can not be ignored. PCIDEA progress is on the line but will take some time to reach all of its goals within a formal reality. However, and notwithstanding the above described problems we

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are quite confident that through mutual understanding, cooperation and the will to make things happen in our American nations, those goals will be attained in due time.

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