

LATIN AMERICATM GEOSPATIAL FORUM

Report 2014

22 – 25 September 2014 Hilton Mexico City Reforma Hotel, Mexico

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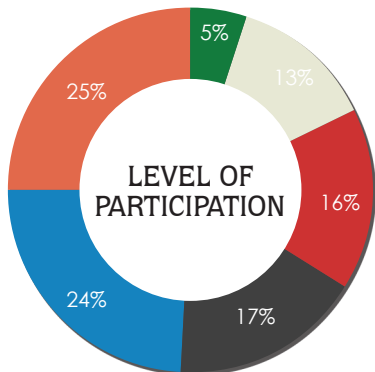
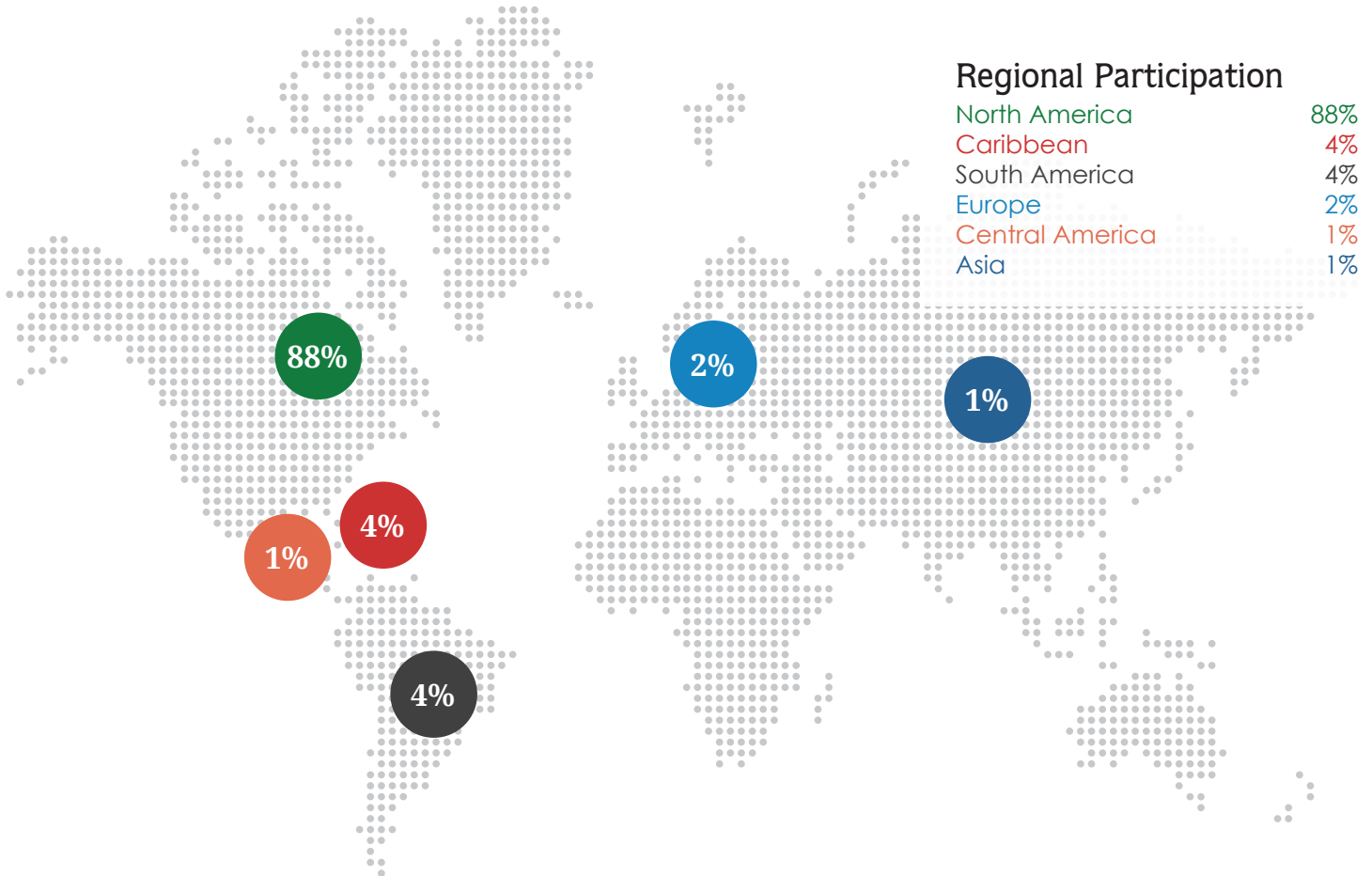


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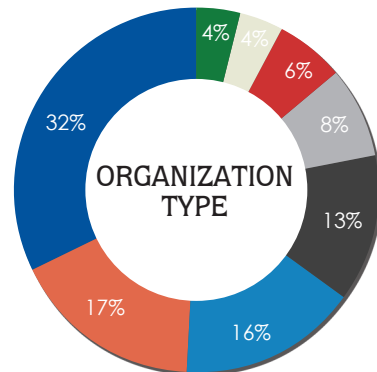


STATISTICS/AWARDS/NETWORKING

THESE NUMBERS SPEAK A THOUSAND WORDS...



Professional / Junior Management
Academia/Research / Senior Management
Top Management / Mid Management



Professional Associations
Government Data Providers / Private Users
Land Agencies / National Mapping
Private Technology Providers / Academic
Research Institute / Government Users

Awards

Continuing the tradition of awarding outstanding work in the field of Geospatial Technologies, Applications and Policies, Geospatial World Magazine conferred the Latin America **Geospatial World Awards** for the year 2013 – 2014.

Award winners:

Application of Geospatial Technology in environment protection, monitoring and management

CONABIO,
Mexico

Public Registry Real Property and Commercial, Nicaragua

Application of Geospatial Technology in Land Management

Application of Geospatial Technology in Cartography

National Water Commission & Universidad Nacional Autónoma de Mexico

Centro de Operações Rio, Brazil

For Application of Geospatial Technology in environment protection, monitoring and management

Exemplary Implementation of Geospatial Policies and Programs

Centro de Operações Rio, Brazil

Unidad Administrativa Especial de Catastro Distrital, Colombia

Exemplary Implementation of Geospatial Policies and Programs

Application of Geospatial Technology in Heritage Conservation

Sistemas Avanzados y Proyectos, S.A. de C.V., Mexico

Geoware, Mexico

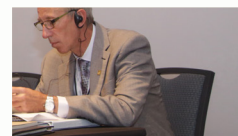
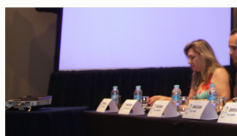
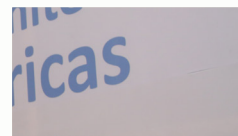
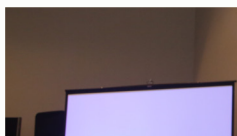
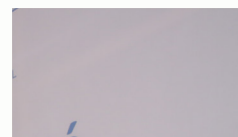
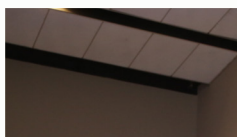
Application of Geospatial Technology in Enterprise GIS

SPECIAL THANKS TO EXHIBITORS OF LATIN AMERICA GEOSPATIAL FORUM 2014



UNGGIM MEETING

At the sides of Latin America Geospatial Forum, INEGI – the co-organisers of the event hosted the first edition of UNGGIM Americas meeting. The meeting saw an overwhelming participation by the North American, South American and Caribbean countries. It was attended by **44 delegates** from **29 countries**.



OPENING & VISION SESSIONS

THE CONFERENCE WAS FORMALLY INAUGURATED ON 23RD SEPTEMBER, 2014 DURING THE OPENING SESSION THAT WAS ADDRESSED BY:



Eduardo Sojo Garza-Aldape
President
INEGI, Mexico



Sanjay Kumar
CEO, Geospatial Media
and Communications,
India



Rodrigo Alejandro Nieto Enriquez
Undersecretary of
Urban Development
and Housing, Ministry of
Agrarian, Territorial and
Urban Development,
Mexico



Chris Gibson
Vice President,
Executive Committee
Member
Trimble Navigation
USA

AT THE VISION SESSION, DIGNITARIES SHARED THE ROAD MAP FOR THE GEOSPATIAL INDUSTRY FOR THE REGION. PRESENTATIONS WERE MADE BY:



Eduardo Sojo Garza-Aldape
President
INEGI, Mexico



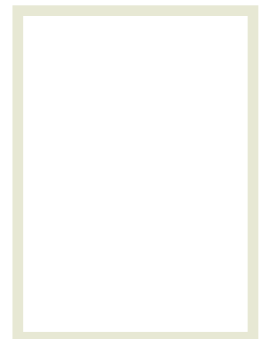
Dr. José Sarukhán Kermes
National Coordinator,
CONABIO
Mexico



Rodrigo Alejandro Nieto Enriquez
Undersecretary of
Urban Development
and Housing, Ministry of
Agrarian, Territorial and
Urban Development,
Mexico



Jay Freeland
CEO, FARO, USA

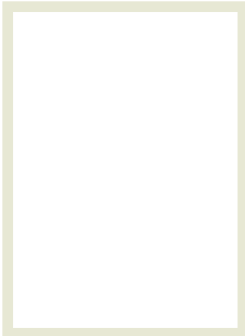


Eng. Humberto Ibarrola Díaz
General Director
FIC, Mexico

PLENARY SESSION: GEOSPATIAL TECHNOLOGY DIRECTIONS



Chairperson:
Dr. José Ignacio Chapela,
Director General,
CentroGeo, Mexico



Jairo R. Linares
Regional Sales Manager -
Mexico, Central America,
and the Caribbean Basin,
Hexagon Geospatial,
Mexico



Eduardo Falcon
Executive VP and GM,
GeoPositioning
Solutions Group, Topcon
Positioning Systems, Inc.,
USA



Richard Humphrey
Senior Director –
Technology
Autodesk, USA



Xavier Lopez
Sr. Director Spatial,
Location and
Network Technologies
Group, Oracle
USA

The title of **Richard Humphrey's** presentation was The Future of Infrastructure Planning and Preliminary Design. He outlined how the current gap for reaching the infrastructure requirement is amounting to USD 36 trillion and more than 60% of infrastructure projects fail to meet costs and scheduled targets. What is needed to bridge this gap is transformative solutions including Unified access to federated data, Rich in-context modeling, analytics, and simulation and anywhere, anytime access to data. He elaborated on Autodesk's Building Information Modeling for Infrastructure, which is an intelligent

model-based process for the lifecycle fed by federated data silos and powered by big data.

Xavier Lopez of Oracle enumerated on the role of geospatial information platforms for improved analysis and decision making. He also elaborated on development of "Location Intelligence" applications that incorporate spatial analysis into business intelligence for increasing decision support for managers. He concluded his presentation by presenting two customer use cases on Business Intelligence and Mobile Tracking using Oracle platform solutions.

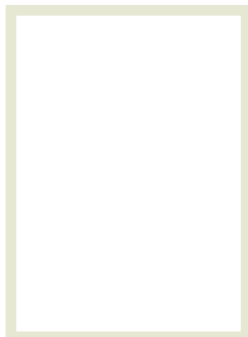
Jairo Linares outlined for the audience how Geospatial Technologies model the world and with increasing number of sensors being deployed for various uses, accessibility to a variety of data is easy and fast. This data needs to be analysed well in order for it to deliver some actionable information for the user, which can be achieved by a number of capable tools today. He went on to explain how technological solutions provided by Hexagon helps users from a number of verticals generate this information, store this information and ultimately create solutions aimed at increasing efficiency.



PLENARY SESSION: GEOSPATIAL INFRASTRUCTURE FOR THE KNOWLEDGE ECONOMY



**Chairperson:
Rodrigo
Barriga-Vargas**
Secretary General
of the Pan American
Institute of Geography
and History, Mexico



**Dr. Francisco
Mendieta
Jiménez**
General Director,
Mexican Space
Agency (AEM),
Mexico



Mark Reichardt
President & CEO,
OGC, USA



**Jorge Carlos
Díaz Cuervo**
General Director of
Regional Development,
Mexican Ministry of
Agrarian, Territorial and
Urban Development
(SEDATU), Mexico

This Plenary highlighted the importance of the coordinated use of geospatial data to develop plans and public policies, as well as the importance of geospatial standards in facilitating the use of territorial information. Clearly, each presentation had its own objective but they were linked to subjects such as the importance of geospatial data topology.

Dr. Mendieta's presentation pointed to the fact that space provides unique opportunities for creating useful and profitable goods and services, both public and commercial, in a variety of activities such as communications, satellite positioning and Earth observation, among others. Mexico has been an important satellite systems operator and in terms of observation of the territory and seas, it has been an important user of information from international satellites. The Mexican Space Agency is currently working on several fronts to contribute to the development of the sector, with the main objective being to meet social needs. The AEM has also been seeking to strike strategic partnerships with the international space community.

Mark Reichardt mentioned that the world is steadily facing events that highlight the complexity of the relationship between availability of geospatial data and information, good governance, market demand and economic limitations, all of which affect the public welfare. Climate change, water availability, crop monitoring, urban resiliency, law enforcement challenges and the rapid rise of low cost location enabled technologies and services remind us how organizations with different missions need to quickly access geospatial information, from a growing number of sources. Ultimately, making sense of it in an efficient manner leads to spatial knowledge which can be used to take informed action. Geospatial standards are critical so agencies, such as health and public safety authori-

Jorge Carlos Díaz Cuervo's presentation outlined the plans promoted by SEDATU and their connection to territorial development programs as per the guidelines of the Mexican National Development Plan to encourage the efficient use of the country's territorial planning systems in cities and rural areas. SEDATU confirmed its commitment to ensure coordination, monitoring and evaluation of policies, programs and projects. SEDATU endeavours to provide a suitable environment for the development of adequate housing in the north, a model of sustainable urban development, as well as to enhance inter-agency coordination to ensure involvement of the three levels of government in sustainable land management, in addition to promoting regional, urban and metropolitan housing,



LIS FOR REGIONAL DEVELOPMENT

CHAIRPERSON

Prof. Fraser Taylor
Director, Geomatics and
Cartographic Research
Centre, Carleton
University, Canada

SPEAKERS

Jorge Carlos Díaz Cuervo
General Director, SEDATU,
Mexico

Robert Buergenthal
Senior Director, Strategy,
Thomson Reuters, USA

**Manuel Ignacio Acosta
Gutiérrez**
Director Jefe, Registro
Agrario Nacional, Mexico

Florencia M. Gomez
National Director of
Registry of Rural Lands,
Argentina

**Miguel Ángel Cancino,
Head Attorney**
La Procuraduría
Ambiental y del
Ordenamiento Territorial
del Distrito Federal (PAOT),
Mexico

Anna Miller
Business Development
Analyst Latin America and
the Caribbean, Trimble,
USA

Álvaro Monett
Executive Secretariat
of the National Land
Information System of
Chile

**Magdalena García
Rendón**
Directora General de
Soluciones Geoespaciales,
Merrick & Company,
Mexico

Felix Audirac
CTO, CartoData S.A. de
C.V. Mexico

Eduardo Ortega Roa
Director Nacional Adjunto/
DNR, Coordinador
Componte Registro/
PRODEP, Nicaragua

Trevor Shaw
Director of Surveys and
Mapping of The National
Land Agency, Jamaica

Francisco Garrido
CEO, Geoware, Mexico

Juliano Lazaro
Sales Manager, BRADAR,
Brazil

Professor Taylor gave an overview of the key topics to be discussed in the Workshop including the non-technical issues arguing for a demand driven approach which takes into consideration the political and historical situation of each region. Any system that does not carefully consider these non-technical issues, he argued is doomed to failure regardless of its technical efficiency. In professional terms focus should be on where the mapping, cadastre and geospatial worlds meet.

Robert Buergenthal presented the Thomson Reuters Framework based on Sustainability, Scalability and Security. He argued that potential solutions should include the private sector and that the aim should be to do more with less. Sustainability must allow for development over time and scalability includes linkage between regional and national systems. Security is a critical, but often overlooked factor. An attack on a LIS might be disastrous as it could change land ownership and create a host of unanticipated problems.

Manuel Ignacio described in detail the Registro Agrario Nacional system for Mexico. In Mexico there are three forms of property; Private property, Public property and Social property and more of half of Mexico's agricultural land is Social property. The RAN system is primarily a system for social property and contains information on over 30,000 ejidos with 17 layers of information. A live display of this impressive system was given. The system faces many challenges of implementation and update given the nature

and scale of the data and the high costs.

Jorge Carlos Diaz presented the paper on Policies and National Programs for Regional Development which is part of Mexico's National Development Plan 2013-2018. Mexico is a diverse nation and a regional approach is required in development terms to take this into consideration. The country has been divided into three regions and the plans for each region vary. These are North and South East, Central and South. The impressive program for this new vision for regional development in Mexico was outlined in detail including concepts such as "human cities" and new models of public spaces.

Florencia Gomez discussed the National Register for Rural lands in Argentina which was developed in response to Law 26.737 of 2011. The major concern here was the perception that large amounts of rural land in Argentina were owned by foreigners. The rights of rural lands owned by foreigners prior to the law being passed were protected but an information system to manage this process was required. Overall the registration process revealed that 5.93% of Argentina's rural land was owned by foreigners but there were strong regional variations with foreign ownership as high as 50-80% in some areas.

Miguel Cancino presented the Geographic Information System of Environmental Heritage and Urban Districts of Mexico D.F. This system is unique in that it integrates both urban and environmental information such as a tree census and public

works. It is interactive, easy to use and free.

Anna Miller presented a paper on Trimble's development of a field to folio strategy for accelerating secure land tenure. The system uses various Trimble technologies to input field data directly into the system using accurate cadastral information. This speeds up data capture and the integrative approach is of great value.

Alvaro Monett introduced the experience in Chile with SNIT. Chile is unique in establishing a separate Ministry to establish the National Spatial data Infrastructure. Alvaro discussed the strengths and weaknesses of this system which is in the process of full implementation. He also discussed at length the new integrated system to deal with natural hazards and disaster mitigation which is quite impressive. SNIT is characterized by a high degree of cooperation among the agencies involved and Chile has taken an imaginative and effective approach to the integration and presentation of spatial data.

Magdalena Garcia Rendon showed various examples of her companies interesting MAPA system that has a strong cartographic base.

Felix Audirac of CartoData Mexico discussed his companies approach to the selective use of cartographic data on the cadastre. He argued that such an approach can result in up to 50% cost savings and much speedier data capture.

Eduardo Ortega Roa introduced the SIICAR system being constructed with World Bank funding in Nicaragua.

This impressive system is well advanced in terms of implementation and promises to make a major contribution to economic development in Nicaragua.

Trevor Shaw gave an excellent description of land as a national asset in Jamaica. Land can be looked at from both an economic perspective and an environmental perspective but also very much from an emotional perspective illustrating one of the points made by Dr. Taylor in his introductory overview. To be anyone of significance in Jamaican society an individual has to own land so land ownership is much sought after. Informal development of land is an impediment to sustainable development in Jamaica and land scarcity is driving the occupation of steep hillsides often in the form of squatter occupation. There are three separate State Agencies involved in land management in Jamaica making coordinated land management more difficult. The valuation roll is a key document and is based on the unimproved value of the 815,649 land parcels.

Francisco Garrido CEO of GEOWARE introduced Geoescrito Virtual a technological platform to integrate data on land in a single data platform. He described the advantages of the system which is an interesting technological approach to data integration.

Julian Lazaro from BRADAR Brasil introduced his companies approach to

GEOAGRI

The GeoAgri session focused on new developments and trends in geospatial technology for agriculture, with special attention for the Latin American and Caribbean region, and Mexico in particular. About 70 participants attended the event.

Mark Noort, presented an overview of trends, challenges and the different applications of geospatial technology for agriculture, in addition to an insight of how providers and clients perceive the market.

Víctor Rodríguez, gave a demonstration of INIFAP's work on crop identification, yield estimation, crop indices, growth curves (wheat, maize, cotton sorghum) and cooperation with farmers in different regions of Mexico. INIFAP also provides climate information for agriculture (mobile app 'climainifap') and weather forecasts for farmers, including warning for and analysis of

extreme events (drought, hail, heavy rain, frost).

Elies Lemkes-Straver, showed how Dutch farmers achieve the highest productivity in agriculture in the world with the help of geospatial technology. Cooperative innovative farming, social inclusion and decrease of harmful emissions (N, P, NH3) were key themes of her presentation. Aided guidance, geo-tracking and tracing are important elements in saving fuel and fertilizer.

Patricia Ornelas, explained how SIAP structures and provides information through the web facility for agriculture and livestock 'red agropecuaria web' (RAW), field staff, experts and administrative databases at national, regional and municipal levels. The information system covers more than 800 food and other (processed) agricultural products, makes integration with other sources of information possible and enables SIAP to disseminate statistical and spatial information on agri-

culture to stakeholders. Earth observation is used for establishing a national reference mosaic, crop monitoring, identifying total cultivated area and individual parcels and change detection. Geo-referencing is also done to locate strategic processing and other facilities and to support market information. This enables better decision making for agriculture and improved early warning and response in the case of extreme events.

Víctor Hernández described the research work done by CIMMYT worldwide and its dissemination activities in selected areas to increase production and productivity. The system MasAgro was presented as example for the promotion of food security and development in Mexico. The initiative aims to identify natural varieties of maize and wheat, to increase production by supplying small farmers with improved seeds and to improve management of the whole agricultural production, processing and market chain.

Félix Audirac, focused on the use of drones for the identification and counting of agave plants, work that is until now done manually. He described an automatic system for identification of agave plants in different stages of development and the possibilities of early warning for diseases and pests, as well as advice on the use of fertilizer. This promising system is currently under development.

Maurício Meira, emphasized the advantages of the use of the RapidEye constellation for agriculture. Thanks to the high frequency of imaging, a good spectral and spatial resolution range and a substantial archive over the period 2009 – 2013, cloud-free images can be delivered during the growing season that are attractive to both the value-adding industry and direct end-users. The Blackbridge monitoring programme for agriculture contains the chain of image collection, ortho-products, catalogue and delivery, and allows for

CHAIRPERSON

Mark Noort
Editor-Agriculture,
Geospatial Media
and Communications
and Director HCP
International, The
Netherlands

SPEAKERS

Victor M. Rodríguez M.,
Doctor of Science in Earth
Sciences / Geosciences
Environmental INIFAP,
Mexico

E.P.J. (Elies) Lemkes-Straver
Managing Director, ZLTO,
The Netherlands

Patricia Ornelas Ruiz
Chief Director, SIAP,
Mexico

Víctor Hernández
International Maize and
Wheat Improvement
Centre, CIMMYT, Texcoco,
Mexico

Félix Audirac MBET
BCSE, Commercial
Director, CartoData,
Mexico

Maurício Braga Meira
Gerente Regional
para América Latina,
BlackBridge, Mexico

ENVIRONMENT & DISASTER MANAGEMENT

CHAIRPERSON

Francisco García Mier, Director General, Centro Privado de Investigación y Desarrollo de Tecnología CONURBA, Mexico

SPEAKERS

Carlos Castro Correa, Director de Análisis de Datos Abiertos en la Coordinación de Estrategia Digital Nacional Presidencia de la República, Mexico

Agustín Fernández Eguarte, Geomatic Engineer, Centro de Ciencias de la Atmósfera, UNAM, Mexico

Silvio Vioel Rodríguez-Hernández Ph.D., GEOCUBA Researching and Consultancy, Cuba

Guadalupe Zetina Gutierrez, Investigadora a cargo del SIG y la Percepción Remota en la

Zona Arqueológica de El Tajín, Instituto Nacional de Antropología e Historia, Mexico

Lucia Lovison, Golob Ph. D. GEOS-AIP7 Capacity Building Leader Geospatial Director Afriterrra Foundation Chile

Hector Betencourt, General Director, BITS, Mexico

González Zepeda G., Maestro en Ciencias, UABC, Mexico

Ing. Oscar Zepeda Ramos, Director de Análisis y Gestión de Riesgos, CENAPRED, Mexico

Daniel Hernández Martínez, Ing. Ambiental, ITESO, Mexico

Diana Gabriela Castro Frontana, MSc., IPN – ENCB, Mexico

Ana Paulina Ocampo Caballero, Intern, ITESO/Anillo Primavera, Mexico

Andrade Sánchez Jorge Alberto, Estudiante, Universidad Autónoma de Baja California, Mexico

Se presentaron 10 de las 13 ponencias programadas en el transcurso de las 3 partes en que se dividió la sesión de trabajo. De estas, 10 se enfocaron en

el tema de desastres naturales, con mayor énfasis a los fenómenos hidrometeorológicos. 1 ponencia fue sobre sensores y tecnologías geoespaciales, mientras que se tuvieron 2 exposiciones de medio ambiente y una de aplicaciones geoespaciales a la arqueología.

Entre las principales coincidencias y conclusiones generales destacan las siguientes:

- Todas son pequeñas aportaciones para resolver grandes problemas, mediante la aplicaciones del uso de tecnología e información geoespacial
- Las instituciones del sector público aportan cada vez mayor cantidad de información y propuestas de políticas públicas; en ese sentido, destacan los esfuerzos por poner a disposición del público en general sus productos a través de las tecnologías que ofrecen los portales digitales
- La tecnología geoespacial aporta cada vez mayores innovaciones para su utilización en los temas de medio ambiente y desastres naturales

GEOBUILD

CHAIR & OPENING SPEAKER

José Pablo García, General Director, Foundation of Industry of Construction, Mexico

SPEAKERS:

Fernando Gamboa Rosas, Director-General of Public Works and Port Management, Ministry of Communications and Transportation, Mexico

Eduardo Sosa Gonzalez, Architect, GRUPO PARAMETRICO, Mexico

Ing. José Luis Degollado Zaldívar, Coordinador de Topografía e Ingeniería 3D, CSIPA, Mexico

Luz A. Gradilla Hernández, Mexican Institute of Transport, Mexico

Mtro. Héctor Reséndiz López, Coordinador Técnico de GITS, Instituto de Geografía, UNAM, Mexico

Eduardo Sosa Gonzalez, Architect, GRUPO PARAMETRICO, Mexico

Eduardo Calvillo Manager Geoware Mexico

LIC. Romo Pablo Alvarez, Director General, Ecozone, Mexico

The focused programme on GeoBuild brought together professionals from the fields of construction and building to share ideas on topics like Advanced Data Acquisition, Design, Engineering and Construction beyond 3D and Technology Convergence for sustainable infrastructure.

BIODIVERSITY

CHAIRPERSON AND LEAD PRESENTATION

Rainer Ressler, General Director of Geoinformatics, National Commission for Knowledge and Use of Biodiversity (CONABIO), Mexico

SPEAKERS:

María Isabel Cruz López, Head of the Remote Sensing Division, CONABIO, Mexico

Thomas Heege, CEO, EOMAP, Germany

Sergio Cerdeira Estrada, Head of the Ocean Monitoring, CONABIO, Mexico

Michael Schmidt, Inter Institutional Project Coordinator, CONABIO, Mexico

Dr. Luis Valderrama, Analyst, CONABIO, Mexico

Florian Hruby, Geovisualisation Specialist, CONABIO, Mexico

The programme on Biodiversity was specially organised by CONABIO – the Mexican national commission for knowledge and use of biodiversity. This interactive programme focussed on the use of Geospatial technologies for monitoring biodiversity. Deliberations during the programme revolved around physical and technological infrastructure needed for optimum use, processing and dissemination of spatial information that aids better management of biodiversity in Mexico.

EMERGING GEOSPATIAL APPLICATIONS

CHAIR & OPENING SPEAKER

Trevor Taylor, Director, Member Services, Open Geospatial Consortium, USA

SPEAKERS

Sartor, Sílvia Maria, PHD, Escola Politécnica da Universidade de São Paulo, Brazil

Ing. Germán Torrijos C., Msc-UNESP-Brasil

Ricardo Ontiveros Enríquez, Coordinador de Ingeniería Ambiental, ITESO, Mexico

Luiz Coelho, Federal University of Rio de Janeiro, Brazil

Lee Meeks, Director of Sales, GNSS Reference Networks, NAFTA Region

Sergio Hernandez, Regional Technical Sales Manager Latin America, Trimble, Mexico

Luiz Czank Junior, Transmissoras Brasileiras de Energia., Brazil

Reinis Osis, Geógrafo, iX Estudos e Projetos Ltda., Brazil

Erika Gabriela Garcia Contreras, Académico, UNAM, Mexico

This session covered a wide range of emerging applications including:

- Democratizing Science
- Urban and regional classification and analysis methods for road quality analysis and urban/regional settlement patterns
- Power Transmission line route planning, including environmental and economic risks
- GNSS instrumentation, very near real time accuracy calibration and software as a service for survey crews
- Advances in anywhere, anytime, any device remote printing applications



TRANSPORT & PUBLIC SAFETY

CHAIR & OPENING SPEAKER

Armando Martínez Santiago, Geography Head of Road Safety, National Autonomous University of Mexico, Mexico

Claudia Durand Alves, Transport infrastructure analyst, International department of transport infrastructure-DNIT, Brazil

Reseña Félix Jacob Santiago Sánchez, Coordinador de la Dirección General de Metrobús, Mexico

Geog. Armando Martínez Santiago, jefe de Seguridad Vial de la Unidad GIT, Instituto de Geografía, UNAM

Rodrigo Tapia-McClung, Research Center for Geography and Geomatics, Mexico

En esta mesa de trabajo la primera intervención estuvo a cargo del geógrafo Armando Martínez Santiago, quien es Responsable de Geografía de Seguridad Vial de la Unidad GITS del Instituto de Geografía. Habló sobre la necesidad de un Sistema de Información Territorial para la Gestión de la Seguridad Vial que contribuya a reducir los altos costos ocasionados por accidentes viales. Señaló que para el diseño del sistema, el análisis multiescalar es un componente estratégico que posibilitará el diagnóstico, implementación y evaluación de intervenciones en las diferentes unidades de organización territorial orientados a diferentes problemas y usuarios. La segunda ponencia fue presentada por el Ing. Félix Jacob Santiago Sánchez, Coordinador de la Dirección General de Metrobús. Hizo una reseña sobre el funcionamiento del Metrobús, para lo cual aplican tecnologías de la información con el propósito de ofrecer un servicio de calidad y seguridad en este sistema de transporte. Entre las tecnologías utilizadas destacan



GEOSS IN THE AMERICAS

CHAIRPERSON

Barbara Ryan
Director, Group on Earth Observations
Secretariat, Switzerland

SPEAKERS

Francisco Javier Mendieta Jiménez, Director, AEM
- Agencia Espacial Mexicana, Mexico

Ricardo Quiroga, Coordinador - GEO, Instituto de
Hidrología, Meteorología y Estudios Ambientales
de Colombia

Martin Medina, NOAA NESDIS-IIA, USA

Luciano Parodi, Minister Counselor, Consul General
of Chile in Ushuaia, GEO Principal of Chile,
Francisco Delgado, Lead, SERVIR Geospatial
Information Technology, USA

Roger Sayre, USGS, USA

Maurício Braga Meira, Regional Manager Latin
America, Blackbridge, Brazil

Flavio Wasniewski, Account Manager for Latin
America, MDA, Canada

Noemí Guzmán Lagunes, Director - Secretaría de
Protección Civil, Gobierno de Veracruz, Mexico

Ana Prados, NASA Applied Remote Sensing
Training (ARSET), USA

Rolando Ocampo Alcantar, Vice president, INEGI,
Mexico

Eric Van Praag, Coordinator of GeoSUR, CAF - The
Latin American Development Bank, Venezuela

Orlando Cabrera-Rivera, Commission for
Environmental Cooperation or North American,
USA

Diego Souza, Researcher, INPE, Brasil

More than 100 people attended the one-day Session titled, "GEOSS in the Americas". The Group on Earth Observations (GEO), the Americas Caucus of GEO, and Geospatial News Media and Communications organized nearly 20 speakers to address the following topics: Earth Observations in Latin America – Uses and Needs, GEO Initiatives in Latin America, Working with Geospatial Data – Experiences and Lessons Learned, and culminating with The Way Forward – Building a GEOSS Node in Latin America.

Key finds of the day were summarized as follows:

- The importance of Earth observations, including geospatial data, information and knowledge cannot be underestimated in addressing society's key environmental challenges. Each of the GEO Societal Benefit Areas of agriculture, biodiversity, climate, disasters, ecosystems, energy, health, water and weather rely on coordinated, sustained and integrated observations.
- Many of the Earth's processes transcend political boundaries requiring more sharing of information if these issues are to be addressed holistically. No one organization, no one country, no one Region has sufficient resources to address these issues alone. We must continue to support national, regional and international coordination mechanisms to address these issues.
- Coordination mechanisms at each of these three scales (national, regional and international) can and should be focusing on three pillars – policies, programmes and people. These three pillars are intercon-

nected and can mutually reinforce each other if treated as a system.

- Technology can enable each of the conditions expressed above, and should be exploited to the greatest extent possible. One of the values in hearing people from different countries speak throughout the day was to be able to observe different ways of attacking the same problem – hence leveraging others' experiences.
- Lastly, it was evident that the current work of GEO is both broad and diverse. Each Member country or Participating Organization can select those parts of the programme that are most aligned with their goals and objectives. No one should feel as if they have to undertake all the components to increase their participation.



BIG DATA

SPEAKERS

Jim Dolan, Vice President, Textron Systems, USA

César A. Cisneros, Qualitative Computer Consultants, Mexico

Patricia Castillo Peña, Directora de El Tajín, Instituto Nacional de Antropología e Historia, México /Sap, Mexico

Tatiana Delgado-Fernández, Professor, Polytechnic University ISPJAE, Cuba

José Santos Enterprise Sales Manager Google Mexico - GISNET Mexico

Dr. José Alberto Incera Diéguez, Director de la Maestría en Tecnologías de Información y Administración en el ITAM, Mexico

The session on big data focused discussions around topics like:

- How to start making profitable use of big data
- Turning big data into a competitive business asset
- Harnessing big data to predict demand and optimise supply
- Optimising the power of social media convergence to connect with your customers
- Realising the full commercial value of big data analytics in an organisation
- Data warehousing best practices to ensure crucial information presented remain relevant and contextual



SENSORS

CHAIRPERSON

Dr. José Luis Silván, Coordinator of postgraduate CentroGeo, Mexico

SPEAKERS

Jorge Alberto Ortega Sánchez, Director General de la Empresa Quetzal Aeroespacial S de RL de CV México

Alejandra A. González Bottero, Business Development Manager - Geo-Intelligence, Airbus Defence and Space, Germany

Cheng Xiaoyang, President & CEO, Beijing Space Eye Innovation Technology Co., Ltd, China

Jaime Machuca, CTO, Droidika, Mexico

Art Ramirez, Manager Business Development, MDA, Canada

Juan B. Plaza

Continent Manager - Geospatial Sales, Latin America Trimble Navigation

Alexis Huerta Garcia

Geospatial Technician, SAGARPA, Mexico

Amilcar Morales, Researcher, CentroGeo, Mexico

Laura Olivia Rosique de la Cruz

Especialista en Monitoreo Marino, Mexico

Alejandro Monsiváis-Huerta

Instituto Politécnico Nacional, México

Andres Vargas

System Applications and Integration Specialist - Airborne division, RIEGL USA

Ericka Gabriela Garcia Contreras, Académico, UNAM, Mexico

Hernández de la Cruz Tobías, Student, UACH, Mexico

The speakers shared the latest technological advances on various procedures for data acquisition and processing as well as experiences learned from recent applications and novel conceptual frameworks for data integration. Topics ranged from comparisons of AUV performance for the acquisition of photogrammetric point clouds, going through a review of Chinese constellation of satellites and the synchronized acquisition of active and optical sensors on board of Airbus-operated satellites to exemplars of applications of sensors for monitoring natural and urban environments and to the conceptual framework for translating the geospatial analysis into geointelligence. The session was no doubt enriched by the complementary perspectives of participants from academic, industry and government sectors. But it was the active participation of attendants what allowed all participants to witness the growing interest from geospatial community on the various aspects around the sensor technology.



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