



GNSS Activities of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean

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Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTEALC)

National Space-Based Positioning, Navigation, and Timing
15th PNT Advisory Board
Annapolis, MD June 11-12, 2015



Background - Regional Centres, affiliated to the United Nations

- UN, 1984 – Space science and technology are tools for economic and social development;
- Developing countries need to have access to high-level in-depth education and training;
- International education and training programmes are not sufficient
 - Limited number of programmes for in-depth education;
 - Limited number of short-term courses (UN, FAO, WMO, UNESCO, national, international).



Background - Regional Centres, affiliated to the United Nations

- Resolution 45/72 of the General Assembly of the UN, 1990: “UN should lead ... establishment of Regional Centres ...”
- Regional Centres established in:
 - Asia and the Pacific (India, 1994);
 - Latin America and the Caribbean (Brazil & Mexico 1997), affiliated to the United Nations (2003);
 - French-speaking Africa (Morocco, 1998);
 - English-speaking Africa (Nigeria, 1998);
 - Western Asia – Jordan (2012);
 - Asia and the Pacific (China, 2014).



CRECTEALC - Activities

- Education Programmes : Space S&T related to: the environment, protection of biological diversity, climate change studies, health and education, weather forecasting, disaster management and the development of space science
- Target beneficiaries: professors, researchers, practitioners from public and private institutions, graduate students
- The campus in Brazil is hosted by the National Institute for Space Research (INPE)
- Campus in Mexico is hosted by the National Institute of Astrophysics, Optics and Electronics (INAOE)
- The languages of education of the Centre are Portuguese, Spanish and English.



Regional Centre for Latin America and the Caribbean (CRECTEALC)

Mexico Campus

Offers fellowships to participants/students

- 11-month education programs
 - Remote sensing and GIS
 - Satellite communications
- Workshops, short courses, seminars on specific subjects in the above áreas, space policy, GNSS



GNSS Activities

- CRECTEALC as Galileo Information Centre (2005 - 2006)
 - Coordinator of the LATINO Consortium: EC Project to function as Galileo Information Centre for Latin America and the Caribbean
 - Support the future Galileo user communities
 - Develop a Galileo portal (information related to Galileo)
 - Galileo Portal, operational in 2006
 - Prepare educational material
 - Organize courses and seminars



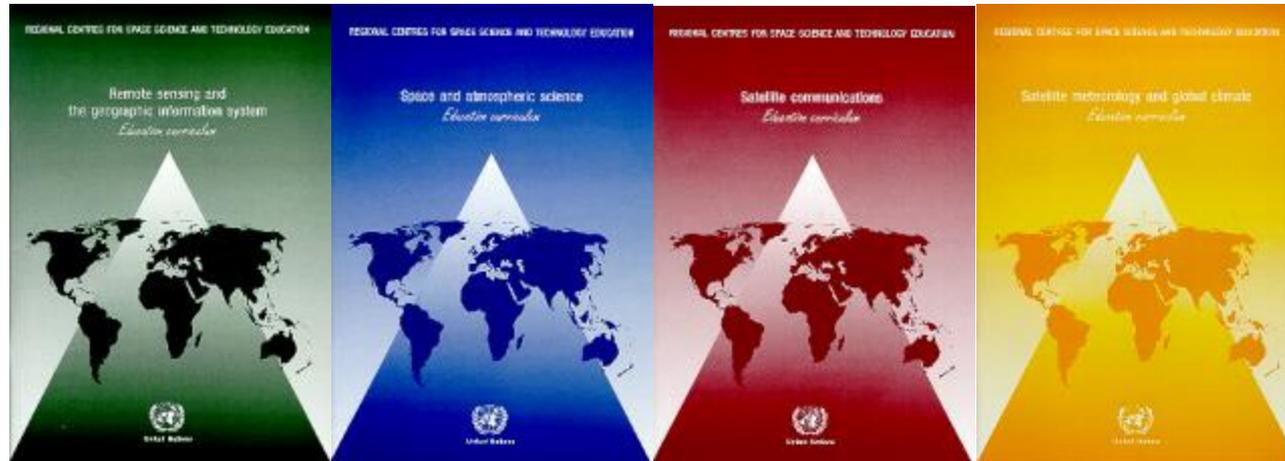
GNSS Activities of CRECTEALC

- Participated in
 - “International Training Course on Satellite Navigation and Location Based Services”, CSSTEAP, Ahmedabad, India, 2008
 - “International Training Course on GNSS Applications”, CRASTE, Rabat, Morocco 2009
- United Nations/Colombia/United States of America Workshop on Applications of Global Navigation Satellite Systems, Medellin, Colombia, June, 2008
- Preparation of GNSS curricula (ICG, in cooperation with other Regional Centres; effort led by OOSA)



Preparation of GNSS curricula (ICG; effort led by OOSA)

Long-term post-graduate education programmes



- RS&GIS, SATCOMM, SATMET, SPACE&ATMOS
- Recently added: GNSS and Space Law



GNSS Activities of CRECTEALC

Courses and seminars

- Outreach seminars on Galileo, September 2006 and 2007, held during GIS Brazil, Sao Paulo
- Galileo Information Days, “Global Navigation Satellite Systems – Current and future prospects”, March 2007, Brazil
- Summer School on Galileo, December 2007, Brazil
- Fall School on Galileo, October 2008, Mexico

Educational material

- Manual on Galileo, 2007; to become a general manual on GNSS (English and Portuguese)



GNSS Activities of CRECTEALC

Proposal made to ICG (Dec. 2008):

- CRECTEALC as Information Centre for the ICG in Latin America and the Caribbean
- CRECTEALC Offers:
 - Regional reach
 - Education programmes in all space disciplines
 - Support the development of educational material in Portuguese and Spanish
 - Support for the development of a policy to create critical mass in the region



GNSS Activities of CRECTEALC

- ICG's Working Group C (2008):
 - Recommended and the ICG plenary endorsed, that the Regional Centres should act as ICG Information Centres.
 - This resulted in:
 - Meeting on Galileo Networking for Industry, Brazil, 2009
 - UN/ESA/USA Training Course on Satellite Navigation and Location-based Services, CRECTEALC, Mexico, 2009.
- 2015 - From ICG's work plan on "Information dissemination and Capacity Building", education materials on Global Positioning System (GPS) and from Trimble Navigation, Ltd are on the way to CRECTEALC for use in the training programmes on GNSS.



Thank you

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