



Capacity Building and Education Cooperation Under the Framework of ICG Information Centre

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1 **ICG information Centre**

2 **About the Regional Centres**

3 **Proposals**

The Proposal of ICG information Centre

*In 2008 of the Third Meeting of ICG 3, The ICG plenary agreed that the UN-affiliated Regional Centres for Space Science and Technology Education would be act as **Information Centres for ICG**.*

Concept for

[Regional Centres for Space Science and Technology Education]

**to become Information Centres
for the International Committee on Global Navigation Satellite Systems**

Actions of ICG information Centre

Action C1: Establish the ICG information portal drawing on contributions from Members, Associate Members and Observers of the Committee. This will include a calendar of GNSS-related events.

Action C2: Identify undergraduate and graduate courses on GNSS to be included on the ICG information portal.

Action C3: Consider the possibility of disseminating a list of relevant textbooks on GNSS in English and other languages through the ICG information portal. Consideration will also be given to developing a glossary of terms and definitions.

Action C4: Consider the use of the Regional Centres for Space Science and Technology Education, affiliated to the United Nations, to promote GNSS use and applications.

Action C5: Identify international conferences where Members, Associate Members and Observers will make presentations on the existence and work of the ICG. A list of such events will be maintained on the ICG information portal.

Action C6: Develop a proposal for further mechanisms to promote the applications of GNSS.“



Our Work

Our Wo



- Secretariat of COPUOS ▸
- Programme on Space Applications ▸
- UN-SPIDER ▸
- ICG ▸
- UN-Space ▸
- UNISPACE+50 ▸
- Space Law ▸
- High Level Forum ▸
- Topics ▸

- Members ▸
- Providers' Forum ▸
- Working Groups ▸
- ICG Annual Meetings ▸
- ICG Programme on GNSS Applications ▸
- Resources ▸
- ICG Documents ▸
- Space Weather & GNSS ▸
- Other Events ▸
- ICG Timeline ▸

cooperation in the peaceful uses of exploration and use of outer space...
tical changes, and the evolving use

- A/AC.105/ series
- Working Group Reports
- Publications
- ICG Reports Extracts

PROGRAMME ON SP
creation in 1971, has
Provision of country c

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world.
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Our Work

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- High Level Forum

*BeiDou International Exchange and Training Center
was established on August 24, 2012.*



Degree Programme

Master Programme

Phase I

**Course Study in China: 9 months (at Beihang University)
(Leading to Course completion Certificate of Beihang University)**

Module I

Module II

Module III

Common Platform Courses
(all Directions)

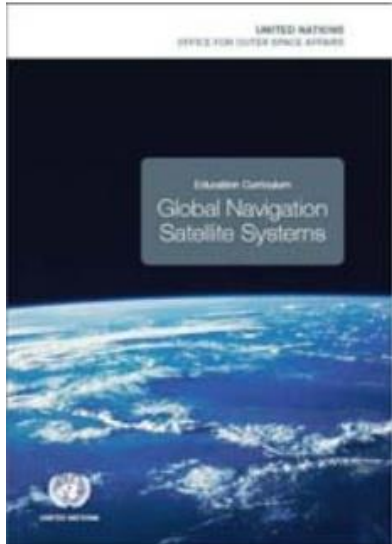
- Major courses
- Academic Lectures
- Professional visits

- Pilot Project

Phase II

**Thesis Research: 12 month (in China or home country)
(Leading to Master's Degree in Engineering)**

Degree Programme



Core Course	Class Hrs
GNSS Reference System	18
Principle of Global Navigation Satellite Systems	32
GNSS Navigation Signal	18
GNSS Receiver Principles and Design	32
GNSS/INS Integration Navigation	32
Global Satellite Navigation System Applications	18
Satellite Navigation Data Processing	32
GNSS Experiment	18
GNSS New Technologies	18

Reference the Curriculum recommended by the United Nations

Awarding Master's Degree in Engineering and Doctoral Degree in Engineering by Beihang University

Facilities



**BeiDou Navigation Satellite System
Exhibition Hall (located at Beihang
Aerospace Museum)**



GNSS Smart Classroom



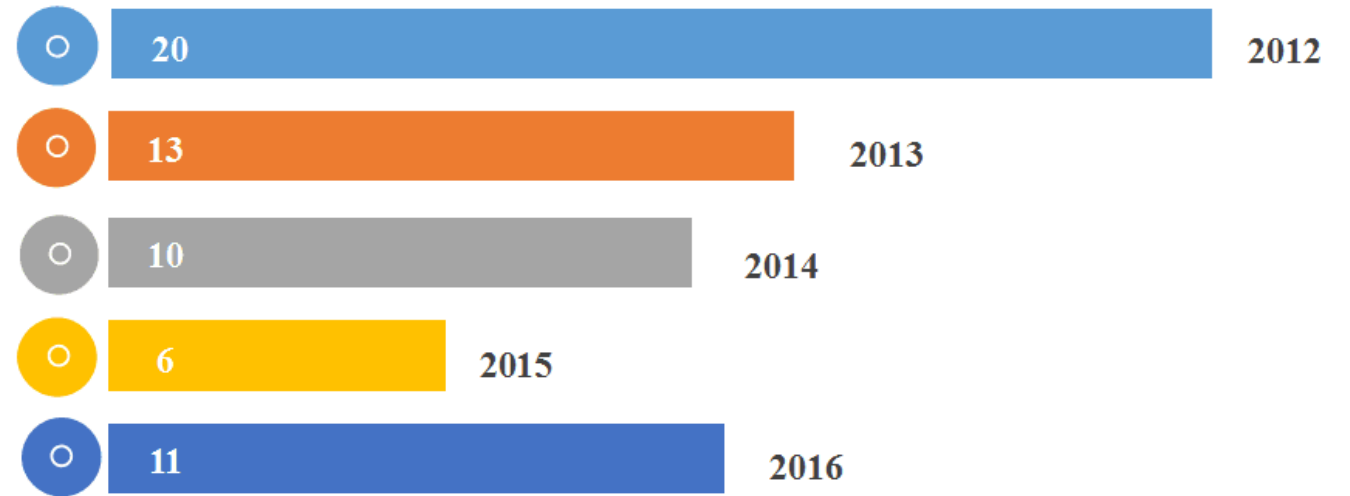
北斗/GNSS simulator
for test and evaluation

Experiment equipment

Postgraduates

60 international postgraduate students in GNSS have been cultivated from 2012 to 2016, **40** of whom have already got master's degrees.

Master's Programme of Space Technology Applications

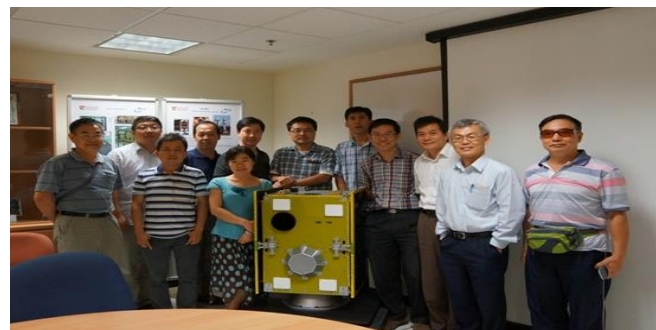


- Indonesia, Iran, Mongolia, Pakistan, Peru, Spain, Thailand
- Bangladesh, Indonesia, Iran, Mongolia, Pakistan, Peru, Thailand
- Indonesia, Mongolia, Nigeria, Pakistan, Peru, Thailand
- Algeria, Bangladesh, Indonesia, Mozambique, Pakistan
- Algeria, Bolivia, Brazil, Croatia, Iran, Nigeria, Peru, Thailand, Ukraine, Venezuela

International Training Programmes



Indonesia



Singapore



Egypt



Mongolia



Nigeria



Australia



Morocco

Teaching /Training Materials



*Textbooks for GNSS Degree Programme
(in English)*



*Textbooks for GNSS Short Training Programmes
(in English)*

Invited Experts /Professors



Sergio Camacho
Former Director of
UNOOSA



Mazlan Otgman
Former Director of
UNOOSA



Simonetta Di Pippo
Director of UNOOSA



Niklas Hedeman
Doctor
UNOOSA



Andrew Dempster
Professor
Australia



Macabiau Christophe
Doctor
France



Laurent Azoulai
Doctor
France



Olivier Julien Doctor
France



Maarten Uijt de Haag
Professor
U.S.A



Michael Braasch
Professor
U.S.A

UN Regional Centre for Space Science Technology Education in Asia-Pacific established in Nov,2014 at Beihang



联合国附属空间科技教育亚太区域中心
Regional Centre for Space Science and Technology Education in Asia and the Pacific(China)
(Affiliated to the United Nations)



As one of the UN Regional Centres, we have received the following books:



Special thanks to the ICG secretariat, Ms. Shafa

ICG information centre is an important platform for GNSS information dissemination and capacity building.

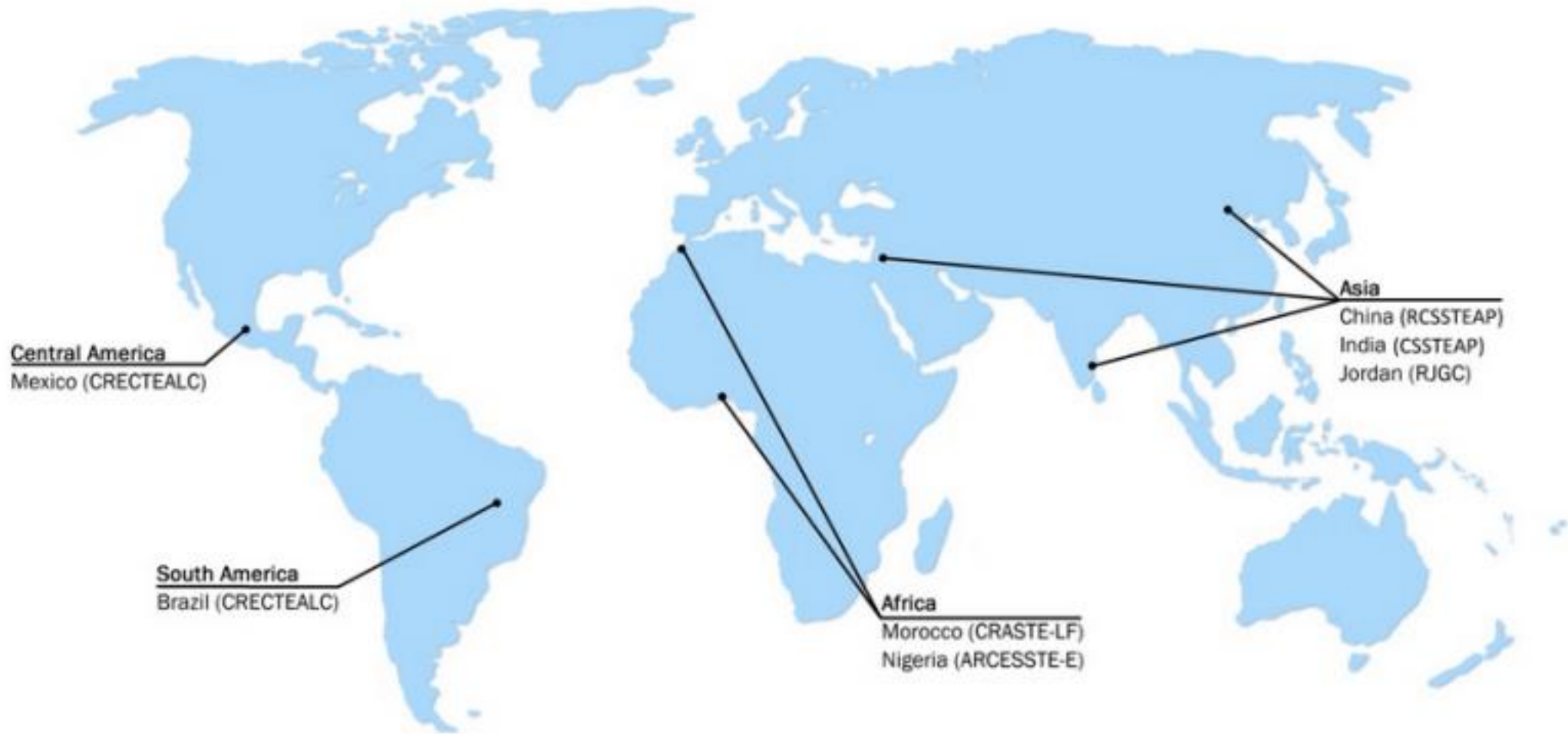
With the development of GNSS Technology and Applications, how to facilitate further development of the ICG information centre ?

1 Introduction

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Regional Centres for Space Science and Technology Education
(affiliated to the United Nations)



CSSTEAP India
(inaugurated in
1995)

CRASTE-LF
Morocco
(inaugurated in
1998)

ARCESSTE-E
Nigeria
(inaugurated in
1998)

CRECTEALC
Mexico and Brazil
(inaugurated in
2003)

RCSSTEWA /
RJGC Jordan
(inaugurated on 29
May 2012)

RCCSTEAP China
(inaugurated in
2014)

Objectives of the Centres (Re: A/AC.105/749 & A/AC.105/782)

In order to translate the recommendations of the Committee and the General Assembly into an operational programme, the Programme on Space Applications initiated a project aimed at the establishment of regional centres for space science and technology education at existing research and higher education institutions in each region covered by the United Nations Economic Commissions: Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and Western Asia.

***T**he principal goal of each centre is the development of the skills and knowledge of university educators and research and applications scientists, through rigorous theory, research, applications, field exercises, and pilot projects in those aspects of space science and technology that can contribute to sustainable development in each country.*



*With the rapid development of space technology applications, the world has changed greatly. **Global Navigation Satellite Systems** is one of the most important and active field in space technology applications and now used all most everywhere and can be benefit everyone.*



Crop-dusting



Sharing Bicycle

UN/Russia Workshop on Human Capacity Building in Space Science and Technology for Sustainable and Economic Development, 30 Oct-2 Nov, 2017, Samara, Russia



Co-Organized with UNOOSA the Meeting of the Directors of the UN Regional Centres held on 13-14 June, 2017, Room C0431, Vienna International Centre.
ARC- Alliance of Regional Centres was proposed by Beihang Centre.



investigation to other regional centres



66 countries among the 6 regional centres

Objective of the Alliance

The objective is to promote the development of space technology applications by enhancing exchanges and further maximizing advantages of the UN Regional Centres/ICG Information Centre.

It is suggested to establish the Alliance, which will be a sustainable resource sharing platform and further improve overall capability of all the UN Regional Centres/ICG Information Centre.

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The Future of Global Space Cooperation:

UNISPACE
+50

It is suggested the proposed Alliance of Regional Centre would be regarded as ICG Information Centre Alliance.

It would be benefit to prompt cooperation in

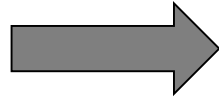
- *information dissemination*
- *resorces sharing*
- *faculty and student exchange*
- *application demonstration*
- *joint action, seeking support,raise funding and etc.*

Proposed Cooperation

- *Publishing a series of textbooks on GNSS*
- *Establish Joint GNSS Teaching and Research Lab*
- *Prpmo Information Dessemenation and Sharing*
- *Students/Faculty Exchange*
- *Organize short training programs for developing and emerging countries*
- *.....*

Recommendation

Core



Talent

Talents are the key preparation for everything.

To prompt university cooperation and resource sharing among ICG members to facilitate the development of space technology applications in developing countries.



Down to the Earth while Aiming High



Algeria



Argentina



Bangladesh



Bolivia



Brazil



China



Indonesia



Pakistan



Peru



Venezuela



WeChat: UN_Centre



WECHAT

Website: <http://www.rcssteap.org>



WEBSITE



Flying with the wings of art

58th COPUOS, China Delegation
第58届联合国军备委员会中方代表团

Thank you for your attention