



**Office for Outer Space Affairs:
Programme on GNSS
Applications**

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ICG-9, 10 – 14 November 2014
Prague, Czech Republic



UNITED NATIONS
Office for Outer Space Affairs



UNITED NATIONS Office for Outer Space Affairs

- ❑ **Implements** the decisions of the **General Assembly** and of the **Committee on the Peaceful Uses of Outer Space (COPUOS)**;
- ❑ **Performs** functions of the **Secretariat** of **COPUOS** and its subsidiary bodies: Scientific & Technical Subcommittee and Legal Subcommittee;
- ❑ **Coordinates** the inter-agency cooperation within the United Nations on the use of space technology (**UN-SPACE**);
- ❑ **Implements** the United Nations **Programme on Space Applications**.

- ❑ **Performs** functions of the **Executive Secretariat of the International Committee on Global Navigation Satellite Systems (ICG)** , its **Providers' Forum** and its **Working Groups**;
- ❑ **Leads** the work of the **ICG Working Group C** on Capacity Building and Information Dissemination;
- ❑ **Implements** the **ICG Programme on GNSS Applications**;
- ❑ **Maintains** a comprehensive **Information Portal** for ICG and users of GNSS services.

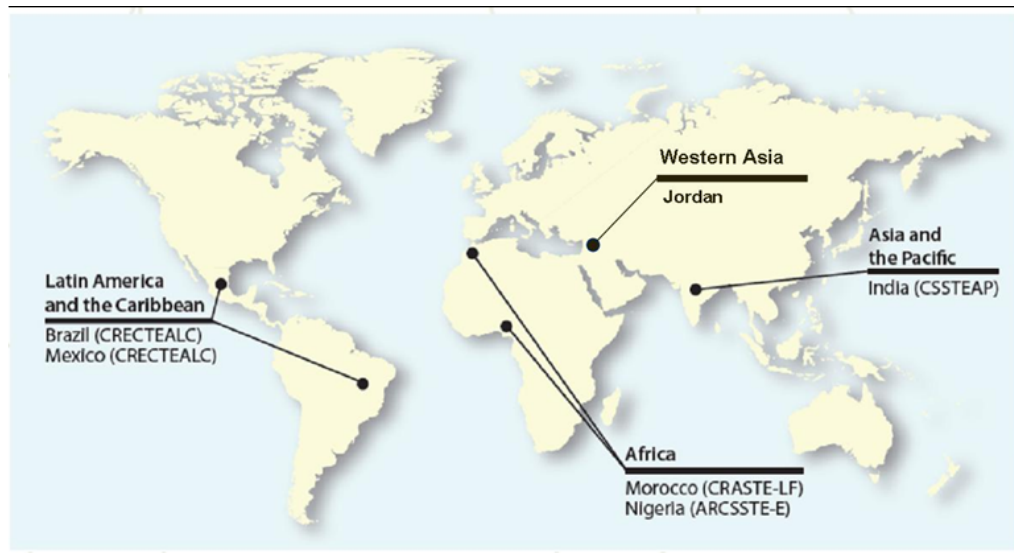


I. Executive Secretariat of the International Committee on Global Navigation Satellite Systems and its Providers' Forum

- ❑ **Prepares** activities for the **annual meetings of ICG and its Providers' Forum** in cooperation with the host country of the meeting;
- ❑ **Prepares** the ICG-related documents in the **A/AC.105/ series** available in all official languages of the United Nations;
- ❑ **Coordinates** the **planning meetings** of ICG and its Providers' Forum in conjunction with sessions of COPUOS and its Scientific & Technical Subcommittee;
- ❑ **Maintains** coordination and cooperation with the ICG Working Groups, intergovernmental and non-governmental organizations involved in the ICG-related activities, including the UN-affiliated regional centres, **also acting as the information centres of ICG**;
- ❑ In cooperation with the international GNSS community, **contributes** to **international and regional conferences** in order to introduce the work of the ICG with all its elements;

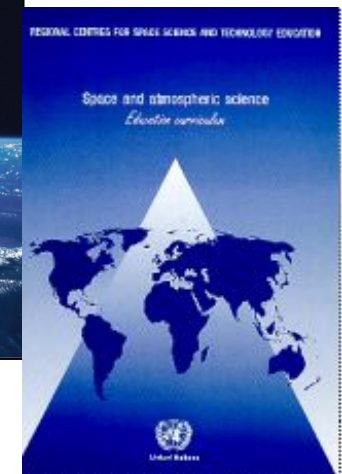
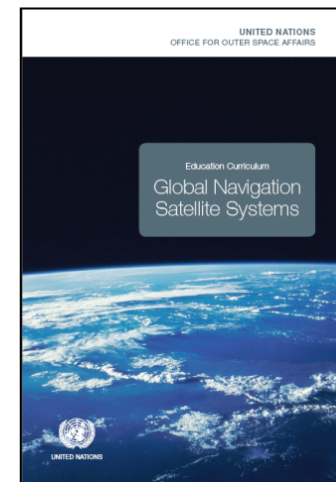


Regional Centres for Space Science and Technology Education, affiliated to the United Nations, as Information Centres for ICG



- ❑ ***Africa: Morocco and Nigeria***
- ❑ ***Latin America and the Caribbean: Brazil and Mexico***
- ❑ ***Asia and the Pacific: India***
- ❑ ***Western Asia: Jordan***

- ❑ ***Remote Sensing & GIS***
- ❑ ***Satellite Meteorology & Global Climate***
- ❑ ***Satellite Communications***
- ❑ ***Space & Atmospheric Science, and***
- ❑ ***Global Navigation Satellite Systems***





Regional Centres for Space Science and Technology Education, affiliated to the United Nations, as Information Centres for ICG

- To foster a more structural approach to information exchange in order to fulfill the reciprocal expectations of a network between ICG and regional centres.

The areas to assist the process of the further development and progress:

- **Technical level:** Various GNSS technologies;
- **Cooperative level:**
 - Possible collaboration with industry leaders; and
 - The system providers to be facilitated through seminars/trainings, supportive material; and
- **Communication and outreach to other GNSS interested actors in the region**



2007
The way forward to provide positioning, navigation and timing globally



2010
Report on planned or existing GNSS and on relevant policies and procedures



2011
Achievements of providers and users of positioning, navigation, and timing services, under the umbrella of the United Nations, in promoting GNSS over the past 10 years



II. Programme on GNSS Applications: Capacity Building and Information Dissemination

- ❑ **Promoting the use of GNSS technologies as tools for scientific applications**
 - ❑ **Space weather and its effects on GNSS**
 - **An African Outreach programme** - to bring the use of GNSS for practical applications and scientific exploration to African universities - is initiated in cooperation with the International Centre for Theoretical Physics (ICTP), Italy and the Boston College, USA
 - **African School on Space Science: Related Applications and Awareness for sustainable development, Kigali, Rwanda, 30 – 11 July 2014**
 - **Regional Workshops: United Nations/ICTP Workshop on the use of GNSS for the scientific applications, Trieste, Italy, 1 – 5 December 2014**
 - ❑ *Worldwide ionospheric studies using GNSS are presented;*
 - ❑ *Potential improvements to ionospheric estimation and mitigation when modernized signals and multiple satellite constellations available are examined.*



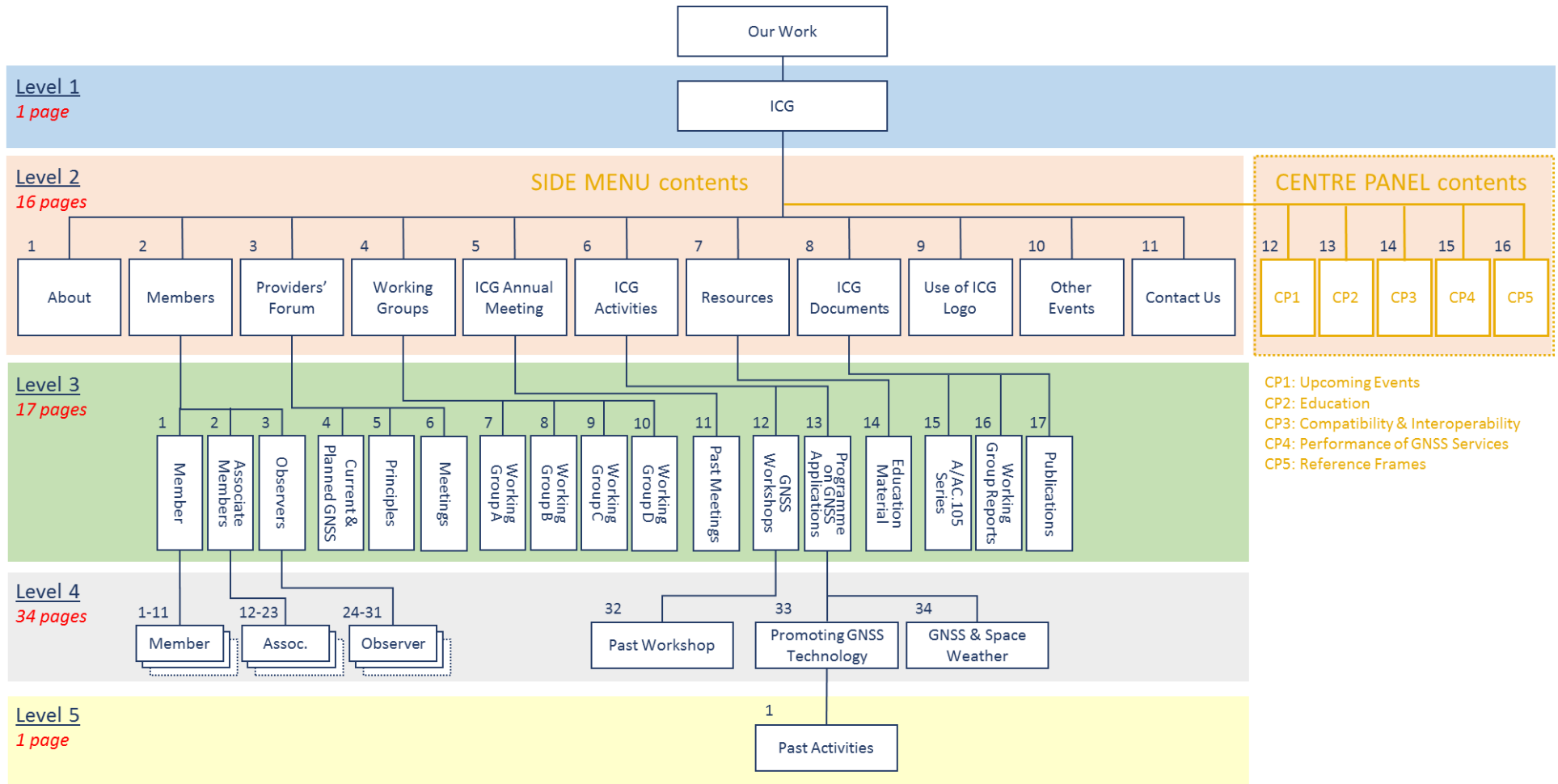


Programme on GNSS Applications: Capacity Building and Information Dissemination

- ❑ To **strengthen** the cooperation among the **regional reference frames**
 - The series of the training courses on **AFREF** are held at the University of the Witwatersrand, Johannesburg, South Africa
 - The operation of AfricaArray stations, assessment of seismic hazard, the global earthquake model regional programme for sub-Saharan Africa are presented
 - **AFREF training course, 19 – 20 January 2015**
 - A **technical manual** on “ **Reference frames in practice**” was published by FIG as a follow-up to the discussions on reference frames and recommendations made during the joint activities organized in 2012 and 2013
 - **Technical Seminar to be held in conjunction the South Asian Survey Congress, July 2015, Singapore**
- ❑ To build capacity in GNSS and related applications in developing countries, the support is provided to the Master in Navigation and Related Applications (MNA) programme organized by the Politecnico di Torino and the Istituto Superiore Matio Boella (Italy)
 - Provides an extensive background knowledge in navigation/localization systems, detailed analysis of NAV/COM integration and environmental monitoring applications



III. Information Portal for ICG and users GNSS Services





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