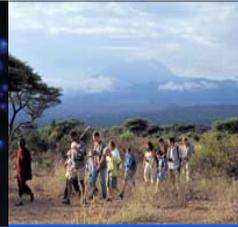




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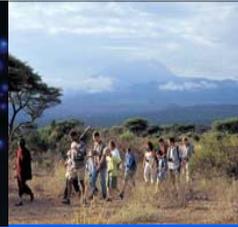
The United Nations and GNSS: Global in Space and Time

Second Meeting of the ICG

5 - 7 September 2007
Bangalore, India

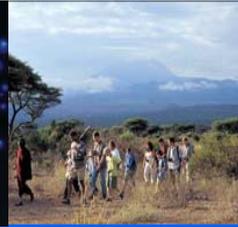


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Outline of the Presentation

- ◆ **UNCOPUOS, UNOOSA, UNISPACE III**
- ◆ **International Coordination of GNSS Activities**
- ◆ **UNISPACE III: Action Team on GNSS**
- ◆ **International Committee on GNSS**
- ◆ **Education and Training**
- ◆ **International Heliophysical Year 2007**



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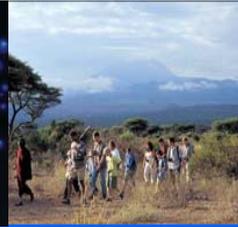
- ◆ **Mandated by the Fourth Committee of the UN General Assembly and the Committee on the Peaceful Uses of Outer Space (COPUOS) and its subsidiary bodies**
 - ◆ Intergovernmental Process
 - ◆ Programme on Space Applications
 - ◆ Inter-Agency Meeting on Outer Space Activities
 - ◆ Responsibilities of the Secretary-General under the UN Treaties and Principles on Outer Space



- ◆ **Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)**
 - ◆ 1999 UNISPACE III: The Space Millennium - Vienna Declaration on Space and Human Development
 - ◆ Action Teams established by COPUOS under voluntary leadership by Member States
 - ◆ 2004 UNISPACE III+5 Plan of Action contained in the report of COPUOS to the UNGA on the review of the implementation of the recommendations of UNISPACE III and endorsed by the UNGA

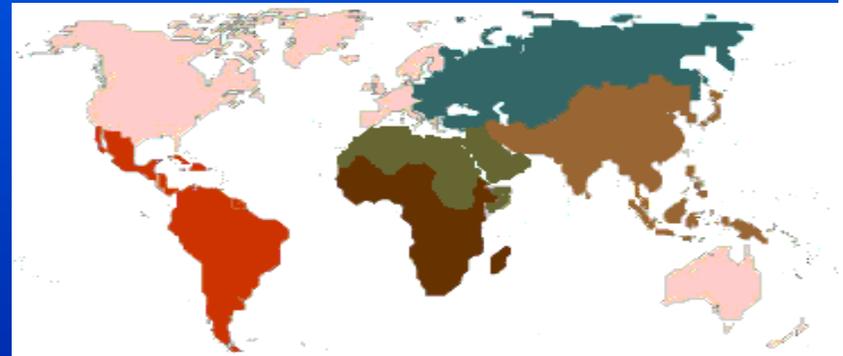


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UN Information Dissemination Network

- ◆ **United Nations International Space Information System (UNISIS)**
<http://www.unoosa.org/>
- ◆ **United Nations Development Programme (UNDP) Offices**
 - ◆ UNDP cooperates with governments and institutions, largely in developing countries
 - ◆ 178 offices worldwide
 - ◆ 185 Permanent Missions of UN Member States

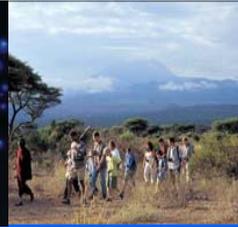


UNDP Regional groupings

- ◆ **United Nations Information Centres and Offices**
 - ◆ Located in over 60 nations in all regions.



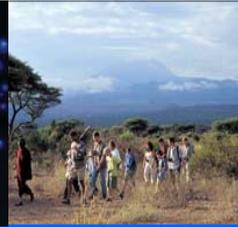
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UNISPACE III: 1999, UNOV, Vienna, Austria

- ◆ **“The Space Millennium: Vienna Declaration on Space and Human Development” (Vienna Declaration)**
 - ◆ **GNSS related recommendation:**

“To improve the efficiency and security of transport, search and rescue, geodesy and other activities by promoting the enhancement of, universal access to and compatibility of space-based navigation and positioning systems”



Action Team GNSS: Establishment in 2001

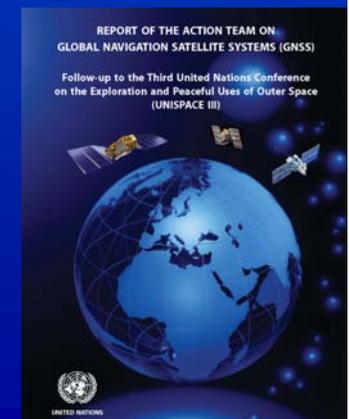
- ◆ **GNSS Action Team co-chaired by the United States and Italy**
 - ◆ **38 nations**
 - ◆ **15 organizations**
 - ◆ **3 UN system entities:** ESCAP, ICAO, ITU
 - ◆ **4 IGOs:** ESA, European Community, Eurocontrol, BIPM
 - ◆ **8 NGOs:** CGSIC, EURISY, AIAA, IAG, IAIN, ICA, FIG, IGS

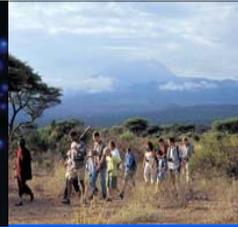
Action Team GNSS: 2001-2004

- ◆ **Regional workshops and international meetings with system providers, augmentation system providers, and users**

2001: Malaysia (ESCAP) and Austria (ECE)

2002: Chile (ECLAC) and Zambia (ECA)





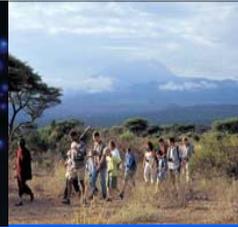
UN/USA International Meetings on the Use and Applications of GNSS

- ◆ **2002**
- ◆ **2003**
- ◆ **2004**
 - ◆ **Action Team concluded (Report)**
 - ◆ **ICG Terms of Reference (Draft)**
 - ◆ **ICG Work Plan (Draft)**
 - ◆ **GNSS/ICG Web Information Portal (Draft)**
 - ◆ **Follow-up projects/initiatives on GNSS applications (21)**
 - ◆ **UN/Italy Long-term fellowship programme GNSS**
 - ◆ **AFREF, SIRGAS, EUPOS, ...**

- ◆ **UNISPACE III + 5 : Review of the implementation of the recommendations of UNISPACE III (UN GA Res. 59/2, para 11)**



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**Moving from a
short-term
“Action Team”
to a
Long-term
“International Committee on GNSS”
(ICG)**



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UNGA and GNSS/ICG

**The United Nations General Assembly,
in its resolution 61/111 of 14 December 2006,**

" ...noted with appreciation that the International Committee on Global Navigation Satellite Systems had been established on a voluntary basis as an informal body to promote cooperation, as appropriate, on matters of mutual interest related to civil satellite-based positioning, navigation, timing and value-added services, as well as the compatibility and interoperability of global navigation satellite systems, while increasing their use to support sustainable development, particularly in developing countries"

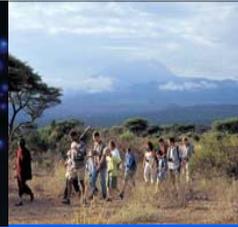


FIRST MEETING OF THE ICG: 2006

ICG: Work Plan

Information Dissemination

- **ICG Information portal, including a calendar of GNSS related events**
- **Identify undergraduate and graduate courses on GNSS**
- **Disseminate a list of relevant textbooks on GNSS in English and other languages**
- **Use of the Regional Centres for Space Science and Technology Education, affiliated to the United Nations to promote GNSS use and applications**
- **Develop a proposal for further mechanisms to promote the applications of GNSS**



Support for GNSS activities

2006:

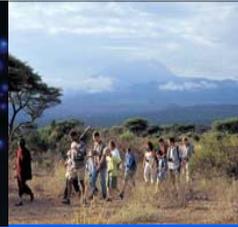
- ◆ **UN/Zambia/ESA Regional workshop on the applications of global navigation satellite system technologies in sub-Saharan Africa, Lusaka, 26-30 June 2006**
- ◆ **UN/China/ESA Training Course on the applications of GNSS, Beijing, 4 – 8 December 2006**

2007:

- ◆ **Special session on GNSS and Global Climate Change, Algiers, 22 - 24 October 2007**

2008:

- ◆ **UN/Colombia Workshop on the Applications of Global Navigation Satellite Systems, Bogota, 23 - 27 June 2008**



IHY: GPS Applications in Low-cost, Ground-based, World-wide Instrument Arrays

- 1. Global Positioning System in Africa (France)**
Increase number of real-time dual-frequency GPS stations for ionospheric studies
- 2. RENOIR: Remote Equatorial Nighttime Observatory for Ionospheric Regions (U Illinois, USA)**
Study equatorial/low-latitude ionosphere/thermosphere system
- 3. SCINDA: Scintillation Network Decision Aid (Hanscom AFRL, USA)**
Prediction of communications degradation due to ionospheric scintillation
- 4. SEVAN: Space Environment Viewing and Analysis Network (Alikhanian PI, Armenia)**
Neutron-muon detecting system for cosmic ray secondary fluxes
- 5. CIDR: Coherent Ionospheric Doppler Radar (U Texas, USA)**
Measure line-of-sight relative electron content using radio beacons
- 6. Rutherford Appleton Laboratory Low-Cost Ionosonde (RAL, UK)**



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Global Navigation Satellite Systems**

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