

# United Nations/Azerbaijan/United States of America/European Space Agency Workshop on the Applications of Global Navigation Satellite Systems

Baku, Azerbaijan, 11 – 15 May 2009

## PROGRAMME

### Monday, 11 May 2009

08:00 Registration of Participants

#### 10:00 Opening and Welcome Remarks, and Key Note Presentations

- 10:00       ▪ H.E. Mr. Ali ABBASOV, *Minister of Communication and Information Technologies of the Republic of Azerbaijan*
- 10:10       ▪ Mr. Hans HAUBOLD, *United Nations Office for Outer Space Affairs, Austria*
- 10:20       ▪ Mr. Kenneth HODGKINS, *United States of America*
- 10:30       ▪ Mr. Helmut SPITZL, *European Commission*
  
- 10:40       ▪ Prof. Roald SAGDEEV, *Maryland University, United States of America*
- 11:10       ▪ The United Nations and GNSS: Global in Space and in Time, Ms. Sharafat GADIMOVA, *United Nations Office for Outer Space Affairs*

11:30 Coffee Break

#### 12:00 Presentation Session 1: Overview of Global Navigation Satellite Systems in Operation and in Development

*Chairperson: Sharafat Gadimova, United Nations Office for Outer Space Affairs*  
*Rapporteur: Alexandru Badea, Romanian Space Agency, Romania*

- 12:00       ▪ U.S. Space-based Positioning, Navigation and Timing (PNT) Policy and International Cooperation, Mr. Kenneth HODGKINS, *United States of America*
- 12:20       ▪ GLObal NAVigation Satellite System (GLONASS), Mr. Alexander SERDYUKOV, *Federal Space Agency, Russian Federation*
- 12:40       ▪ Galileo and EGNOS Programmes' development, Mr. Helmut SPITZL, *European Commission*

13:00 Lunch Break

#### 14:30 Presentation Session 2: Overview of Global Navigation Satellite Systems in Operation and in Development (continues)

*Chairperson: Alexandru Badea, Romanian Space Agency, Romania*  
*Rapporteur: Sharafat Gadimova, United Nations Office for Outer Space Affairs*

- 14:30       ▪ COMPASS/BeiDou, Mr. Gang WANG, *Beijing Global Information Centre of Application and Exploitation, China*
- 14:50       ▪ Indian Regional Navigation Satellite System (IRNSS), Mr. Tsering TASHI, *Indian Space Research Organization, India*
- 15:10       ▪ TRIUMPH, the first interoperable GNSS technology, Mr. Javad ASHJAEI, *Javad GNSS, United States of America*

15:30 Coffee Break

- 16:00           ▪ Combination of GNSS and GIS technologies for remote sensing purposes, *Ms. Xosiyat ISMATOVA, National Academy of Aviation, Azerbaijan*
- 16:20           ▪ Perspectives of GNSS applications in Azerbaijan Air Navigation Services, *Mr. Farhan GULIYEV, Azerbaijan AirNavigation, Azerbaijan*

**16:20 – 17:30       Discussion Session 1: Using and implementation of GNSS technologies**

- Issues and concerns, requirements of implementing, possibilities of success, mechanisms and resources of implementing

**18:00       Welcoming Reception**

**Tuesday, 12 May 2009**

**09:00       Presentation Session 3: Global Navigation Satellite Systems Infrastructure**

*Chairperson: Ms. Maria OVDII, Agency for Land Relations and Cadastre, Moldova*  
*Rapporteur: Mr. Akjol DJENALIEV, Kyrgyzstan*

- 09:00           ▪ EUPOS: Example of a regional full scale accuracy ground-based differential (D)GNSS infrastructure, *Mr. Gerd ROSENTHAL, International EUPOS Steering Committee Office, Germany*
- 09:20           ▪ Introduction to GNSS Network RTK, *Mr. Ezzedine DJERBI, Leica Geosystems AG, Switzerland*
- 09:40           ▪ RTK Network LatPos in Latvia, *Mr. Janis ZVIRGZDS, Latvia Geospatial Information Agency, Latvia*
- 10:00           ▪ Ukrainian GNSS-based positioning timing navigation system (UAPOS), *Mr. Kostiantyn VOLOKH, National Space Agency of Ukraine, Ukraine*
- 10:20           ▪ Creation of ground-based infrastructure of differential global navigation satellite system in the Republic of Kazakhstan, *Mr. Marat NURGUZHIN & Mr. Sabit MURAT, JSC «National Company «Kazakhstan Gharysh Sapary» T, Kazakhstan*
- 10:40           ▪ SIRGAS: An international collaborative enterprise of the geodetic community in Latin America and the Caribbean, *Mr. Claudio BRUNINI, Argentina*

*11:00       Coffee Break*

**11:30       Presentation Session 4: International/Regional Experiences of the use and implementation of GNSS technologies**

*Chairperson: Mr. Mr. Tsering TASHI, Indian Space Research Organization, India*  
*Rapporteur: Mr. Igor IBRAGIMOV, Uzbekistan Academy of Sciences, Uzbekistan*

- 11:30           ▪ International Space Weather Initiative, *Mr. Hans HAUBOLD, United Nations Office for Outer Space Affairs*
- 11:50           ▪ Regional cooperation in the field of space weather studies and applications in the southeastern and east central Europe and in the Caucasus region , *Mr. Elchin BABAYEV, Azerbaijan National Academy of Sciences, Azerbaijan*
- 12:10           ▪ Abdus Salam ICTP – Boston College partnership for training in GNSS science and Technology, *Mr. Sandro Radicella, The Abdus Salam ICTP, Italy*
- 12:30           ▪ Energy System: remote control, *Mr. Hikmet HASSANOV, TV-Radio Broadcasting and Satellite Communication Production Unit, Azerbaijan*

*13:00       Lunch Break*

**14:30       Presentation Session 5: Education and training on GNSS**

*Chairperson: Ms. Asli OLMEZ, Ministry of Public Works and Settlement of Turkey, Turkey*  
*Rapporteur: Mr. Alaa Aldin ZEIN, General Organization of Remote Sensing, Syria*

- 14:30       ▪ Experience of CRASTE-LF in capacity building in space science and technology: Introduction of new technology, *Mr. Abderrahmane TOUZANI, CRASTE-LF, Morocco*
- 14:50       ▪ GNSS education activities in ISMB, *Ms. Gabriela POVERO, Instituto Politecnico de Torino, Italy*
- 15:10       ▪ GNSS: A view of an academic “ Stakeholder”, *Mr. Moustafa BARAKA, Cairo University, Egypt*

15:30       *Coffee Break*

## **16:00       Discussion Session 2: Developing Partnerships and Networks**

### **Discussion Panel:**

- Prof. Roald SAGDEEV, *Maryland University, United States of America*
- *Mr. Gerd ROSENTHAL, International EUPOS Steering Committee Office, Germany*
- *Mr. Claudio BRUNINI, SIRGAS, Argentina*

Discuss plans, framework for a mechanism of regional cooperation; follow-up projects and initiatives.

*Discussion paper: Developments of the EUREF GNSS Services and Reference Networks, Mr. Johannes Ihde, EUREF, Germany*

18:00       Adjourn

## **Wednesday, 13 May 2009**

## **09:00       Presentation Session 6: GNSS applications and technology development**

*Chairperson: Mr. Janis ZVIRGZDS, Latvia Geospatial Information Agency, Latvia*  
*Rapporteur: Mr. Ali SADEGHI NAEINI, Iranian Space Agency, Iran*

- 09:00       ▪ GLONASS technologies applications in mining industry, *Mr. Mark Schmulevich, Federal Space Agency, Russian Federation*
- 09:20       ▪ Use of GPS in the transportation in the city of Baku, *Mr. Sadraddin Mammadov, Ministry of Transportation, Azerbaijan*
- 09:40       ▪ Architecture and applications of software GPS receiver, *Mr. SYED ZAHID JAMAL, SUPARCO, Pakistan*
- 10:00       ▪ Use of GNSS technologies in Uzbekistan for studying of geodynamical and ionospheric processes, *Mr. Igor IBRAGIMOV, Uzbekistan Academy of Sciences, Uzbekistan*
- 10:20       ▪ Use of GIS/RS for environmental monitoring and mapping, *Mr. Alchin SHIRINZADE, Ms. Shafag MUTTALIBOVA and Mr. Rauf RAGIMOV, National Aerospace Agency, Azerbaijan*
- 10:40       ▪ GPS Accuracy enhancement in GIS/RS civilian projects in Syria, *Mr. Alaa Aldin ZEIN, General Organization of Remote Sensing, Syria*

**11:00       Coffee Break**

## **11:30       Presentation Session 7: GNSS applications: National Programmes**

*Chairperson: Mr. Abderrahmane TOUZANI, CRASTE-LF, Morocco*  
*Rapporteur: Mr. Jamshed KAMALOV, Tajikistan*

- 11:30           ▪ Information Centre: status and development, *Mr. Alchin SHIRINZADE and G. ABBASLI, National Aerospace Agency, Azerbaijan*
- 11:50           ▪ ROEnvGeoPortal: an advanced support for environmental monitoring and dissemination of spatial data at national level in Romania, *Mr. Alexandru BADEA, Romanian Space Agency, Romania*
- 12:10           ▪ Development of GNSS applications in Poland, *Mr. Stanislav OSZCZAK, University of Warmia and Mazury in Olsztyn, Poland*
- 12:30           ▪ Use of GNSS in National spatial data infrastructure project, *Ms. Asli OLMEZ, Ministry of Public Works and Settlement of Turkey, Turkey*
- 12:50           ▪ GNSS applications in Iran, *Mr. Ali SADEGHI NAEINI, Iranian Space Agency, Iran*
  
- 13:10           *Lunch Break*
  
- 14:30 –        Technical Visit/City Tour**  
**17:00**

**Thursday, 14 May 2009**

**09:00           Presentation Session 8: GNSS applications: Case studies**

*Chairperson: Mr. Moustafa BARAKA, Cairo University, Egypt*

*Rapporteur: Mr. SYED ZAHID JAMAL, SUPARCO, Pakistan*

- 09:00           ▪ Positioning infrastructure for sustainable land administration: the case study, *Ms. Maria OVDII, Agency for Land Relations and Cadastre, Moldova*
- 09:20           ▪ Development of GPS technology in Kyrgyzstan, *Mr. Akjol DJENALIEV, Kyrgyz State University of Construction, Transportation and Architecture, Kyrgyzstan*
- 09:40           ▪ GNSS Technology and high resolution satellite data for detection and assessment warning vulnerability risk, *Ms. Sevda IBRAHIMOVA, Azerbaijan National Aerospace Agency, Azerbaijan*
- 10:00           ▪ Use of GNSS in Tajikistan, *Mr. Jamshed KAMALOV, Nuclear and Radiation Safety Agency, Tajikistan*

**10:20           Working Groups Sessions**

**Working Group 1: Capacity Building and Institutional Strengthening**

**Working Group 2: Geodetic Reference Network**

**Working Group 3: Specific global navigation satellite systems applications**

11:00           *Coffee Break*

**11:30           Working Groups Sessions (continues)**

13:00           *Lunch Break*

**14:30           Working Groups Sessions (continues)**

15:30           *Coffee Break*

**16:00           Discussion Session 3: Round table to finalize the recommendations/observations**

18:00 Adjourn

**Friday, 15 May 2009**

09:00 **Plenary Closing Session**

- Summary reports of presentation sessions
- Summary report of discussion sessions: presentation of proposals and recommendations consolidated at the discussion sessions

11:00 **Coffee Break**

11:30 **Closing remarks**

- Concluding Remarks, *Mr. Hans Haubold, United Nations Office for Outer Space Affairs*
- Concluding Remarks, *Mr. Arif Mekhtiev, Azerbaijan*

12:00 *Adjourn*