United Nations/United Arab Emirates/United States of America Workshop on
the Applications of Global Navigation Satellite Systems

Dubai, 16 – 20 January 2011

PROGRAMME

Day 1, 16 January 2011

09:00 Registration of Participants

10:00 Opening and Welcome Remarks, and Key Note Addresses

- HE SHEIKH NAHAYAN MABARAK AL NAHAYAN, Minister of Higher Education and Scientific Research, United Arab Emirates
- HE Mr. AHMED AL MANSOORI, Director General of EIAST, United Arab Emirates
- Ms. Sharafat GADIMOVA, United Nations Office for Outer Space Affairs
- Mr. Jeffrey AUERBACH, Department of State, United States of America

Objectives of the Workshop
Ms. Sharafat GADIMOVA, United Nations Office for Outer Space Affairs

11:00 Coffee Break

11:30 Key Note Presentations

11:30 International Committee on Global Navigation Satellite Systems, Ms. Sharafat GADIMOVA, United Nations Office for Outer Space Affairs

11:50 Establishing Space Policy, Mr. Mohamed Ahmed TARABZOUNI, Saudi Arabia

12:15 Presentation Session 1: Trends in satellite-based navigation systems

Chairperson: Mr. Alexandru BADEA, Romania
Rapporteur: Mr. Janis ZVIRGZDS, Latvia

12:15 - 12:35 Global Positioning System (GPS) modernization: GPS IIIA – On the road to the future, Mr. Michael SHAW, United States of America

12:40 – 13:00 GLObal Navigation Satellite System (GLONASS) status, performance and modernization efforts, Ms. Tatyana MIRGORODSKAYA, Russian Federation

13:05 Lunch Break

14:35 Presentation Session 1: Trends in satellite-based navigation systems (continues)

14:35 – 14:55 SSTL role in the GALILEO navigation project, Mr. Ramon Alexander da SILVA
CURIEL, United Kingdom

15:00 – 15:20
- Quazi-Zenith Satellite Systems (QZSS) Update, Mr. Mikio AOKI, Japan
15:25 – 15:45
- Update of COMPASS and its applications, Mr. Jingnong WENG, China

15:50 Coffee Break

16:20 Presentation Session 2: GNSS services and reference frames

Chairperson: Mr. Sethu Nandakumar MENON, United Arab Emirates
Rapporteur: Mr. Ivo MILEV, Germany

16:20 – 16:40
- Continuous operating GNSS network for Saudi Arabia, Mr. Nasr ALSAHHAF, Saudi Arabia
16:45 – 17:05
- Indonesian permanent GNSS stations network: the current status, Mr. Cecep SUBARYA, Indonesia
17:05 – 17:25
- GNSS reference station system LatPos in Latvia: regional cooperation with Lithuania, Mr. Janis ZVIRGZDS, Latvia
17:30 – 17:50
- Geodetic Infrastructure for GNSS positioning services (GIGPS), Mr. Vasile CHIRIAC, Moldova

17:55 Adjourn

18:00 Welcoming Reception

Day 2, 17 January 2011

09:00 Presentation Session 3: GNSS augmentation and applications

Chairperson: Mr. Michael SHAW, United States of America
Rapporteur: Mr. Vasile CHIRIAC, Moldova

09:00 – 09:20
- GNSS augmentation and applications, Mr. Jeffrey AUERBACH, United States of America
09:25 – 09:45
- Implementation of EGNOS-based LPV approaches in Europe, Mr. Luis CHOCANO, Spain
09:50 – 10:10
- Examples of QZSS applications, Mr. Koichi KISHI, Japan
10:15 – 10:35
- GNSS implementation within the United Arab Emirates aviation sector, Mr. Michael HAYES, United Arab Emirates
10:40 – 11:00
- Pakistan satellite based augmentation system (PakSBAS), Mr. Ajmal MUHAMMAD, Pakistan

11:05 Coffee Break

11:30 Presentation Session 4: Activities in the field of GNSS applications

Chairperson: Mr. Olivier OBROU, Cote d'Ivoire
Rapporteur: Mr. Ajmal MUHAMMAD, Pakistan

11:30 – 11:50
- Positioning with Internet-based, wide-area, real time GPS, Mr. Tarig ALL, United Arab Emirates
11:55 – 12:15
- High-end GNSS based application used for the German railway clearance measuring train, Mr. Ivo MILEV, Germany
12:20 – 12:40  ▪ Design and realization of delay mapping receiver based on GPS for sea surface wind measurement, Mr. Dongkai YANG, China
12:45 – 13:05  ▪ Comparison between remote sensing and GPS measurements for earthquake ground deformation monitoring, Ms. Ferdaous CHAABANE, Tunisia

13:10  Lunch Break

14:30  Presentation Session 4: Activities in the field of GNSS applications (continues)

Chairperson: Mr. Cecep SUBARYA, Indonesia
Rapporteur: Mr. Renato FILJAR, Croatia

14:30 – 14:50  ▪ Study of a geomagnetic storm effect on the ionospheric scintillation and total electron content (TEC) over the SCINDA station in Abidjan, Mr. Olivier OBROU, Cote d'Ivoire
14:55 – 15:15  ▪ Developing GNSS applications industry and understanding the legal issues involved, Mr. Sethu Nandakumar MENON, United Arab Emirates
15:20 – 15:40  ▪ GNSS geodetic applications in Algeria, Mr. Salem KAHLOUCHE, Algeria
15:45 – 16:05  ▪ The ground-based infrastructure of high accuracy satellite navigation system in the Republic of Kazakhstan, Mr. Abdikul ASHUROV, Kazakhstan

16:10  Coffee Break

16:40  Discussion Session 1: Use and Implementation of GNSS Technologies

Moderators: Ms. Sharafat GADIMOVA, United Nations Office for Outer Space Affairs
Mr. Mohamed Ahmed TARABZOUNI, Saudi Arabia

▪ Issues and concerns, requirements of implementation, mechanisms and resources of implementation, experience in the use of the GNSS signal in specific applications

18:00  Adjourn

Day 3, 18 January 2011

09:00  Presentation Session 5: Education and training on GNSS

Chairperson: Ms. Ferdaous CHAABANE, Tunisia
Rapporteur: Mr. Mozammel SARKER, Bangladesh

09:00 – 09:20  ▪ UN-affiliated Regional Centres for Space Science and Technology Education, Ms. Antonella BINI, United Nations Office for Outer Space Affairs
09:25 – 09:45  ▪ The Moscow State University of Geodesy and Cartography education system and the GNSS applications, Mr. Andrey KUPIRIYANOV, Russian Federation
09:50 – 10:10  ▪ An initiative for developing a training structure on GNSS and geomatics at national and regional level, Mr. Alexandru BADEA, Romania
10:15 – 10:35  ▪ GNSS education and training programme in Thailand, Ms. Pirada TECHAVIJIT, Thailand
10:40 – 11:00  ▪ Space weather effects on GNSS performance and operation: a fundamental component of GNSS curriculum, Mr. Renato FILJAR, Croatia

11:05  Coffee Break

11:30  Discussion Session 2: Education/training opportunities in the use of GNSS

Moderators: Ms. Antonella BINI, United Nations Office for Outer Space Affairs
Mr. Andrey KUPIRIYANOV, Russian Federation
Type and level of training/education required; specific GNSS fields requiring education/training; available GNSS-related materials/software and curricula.

13:00 Lunch Break

14:30 – 18:00 Technical Visit/City Tour

Day 4, 19 January 2011

09:00 Presentation Session 6: GNSS applications and technology development: Case studies

Chairperson: Mr. Nasr ALSAHHAF, Saudi Arabia
Rapporteur: Ms. Pirada TECHAVIJIT, Thailand

09:00 – 09:20 Improvement of the ellipsoid height for the maps of Uzbekistan based on GPS data, Mr. Erkin MIRMAKHMUDOV, Uzbekistan

09:25 – 09:45 Developing GNSS applications in Morocco: projects, research, training and action plan, Mr. Mustapha AMGHAR, Morocco

09:50 – 10:10 Monitoring major landslides using GPS: case study Hammana region, Lebanon, Mr. Chadi ABDALLAH, Lebanon

10:15 – 10:35 GPS measurements of current crystal movements along the Gulf of Suez, Egypt, Ms. Nadia ABO-ALI, Egypt

10:40 – 11:00 Satellite-based navigation systems and their application in Kyrgyz Republic, Mr. Azamat DYIKANBAEV, Kyrgyz Republic

11:05 Coffee Break

11:30 Presentation Session 6: GNSS applications and technology development: Case studies (continues)

Chairperson: Mr. Chadi ABDALLAH, Lebanon
Rapporteur: Mr. Azamat DYIKANBAEV, Kyrgyz Republic

11:30 – 11:50 GNSS and its application in the context of Bangladesh, Mr. Mozammel SARKER, Bangladesh

11:55 – 12:15 Planned differential GPS system at Yangon International airport, Mr. Thet LWIN, Myanmar

12:20 – 12:40 GNSS performance in times of natural disasters: a Chilean 2010 earthquake case-study, Mr. Renato FILJAR, Croatia

12:45 – 13:00 Organization of the work of the working groups

Working Groups Sessions (in parallel)

Discussion points:
- plans/ framework for a functional partnership that could be established in order to present GNSS technology and to strengthen regional information and data exchange networks on the use of GNSS technology and its applications;
- where should the efforts be focussed on in terms of GNSS use/education/training
- possible follow-up projects/initiatives

Working Group 1: Capacity Building and Institutional Strengthening
Working Group 2: Geodetic Reference Network
Working Group 3: Specific global navigation satellite systems applications

13:00    Lunch Break

14:30    Working Groups Sessions (in parallel)

  Informal discussions/drafting of session reports and recommendations in groups lead by co-chairs of sessions

16:00    Coffee Break

16:30    Working Groups Sessions (continues)

  Informal discussions/drafting of session reports and recommendations in groups lead by co-chairs of sessions

18:00    Adjourn

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Day 5, 20 January 2011

09:00    Discussion Session 3: Round table to finalize the recommendations/observations

  Assess the practical benefits of the follow-up actions resulting from the workshop and its contribution to the ICG and its working groups

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

11:00    Coffee Break

11:30    Plenary Closing Session

    • Summary reports of presentation sessions
    • Concluding Remarks, United Nations Office for Outer Space Affairs
    • Concluding Remarks, United Arab Emirates

13:00    Adjourn