Seventh Meeting of the
International Committee on Global Navigation Satellite Systems (ICG)

4 – 9 November 2012
Beijing, China

Joint Statement

The Seventh Meeting of the International Committee on Global Navigation Satellite Systems (ICG) was held in Beijing, China from 4 to 9 November 2012, to continue reviewing and discussing developments in Global Navigation Satellite Systems (GNSS) and to allow ICG members, associate members, and observers to address recent developments in their organizations and associations with regard to GNSS services and applications. The opening ceremony moderated by Chairman of China Satellite Navigation Committee, Li Andong. State Counselor, Liu Yandong delivered an opening speech on behalf of host government. Director of the United Nations Office for Outer Space Affairs, Dr. Mazlan Othman addressed the meeting. The Ministers from Ministry of Foreign Affairs, Ministry of Science and Technology, China National Space Administration and other departments also attended the opening ceremony.

ICG addressed GNSS professional, mass-market and scientific applications. Representatives from industry, academia and governments shared views on GNSS services.

The Meeting was hosted by the Government of the People's Republic of China. Attendees included China, Italy, Japan, Malaysia, the Russian Federation, the United Arab Emirates, the United States of America, and the European Union, as well as the following intergovernmental and nongovernmental organizations: Civil Global Positioning System Service Interface Committee (CGSIC), European Space Agency (ESA), Federation Aeronautique Internationale (FAI), International Federation of Surveyors (FIG), International Association of Institutes of Navigation (IAIN), International Association of Geodesy (IAG) and IAG Reference Frame Sub-Commission for Europe (EUREF), International Bureau of Weights and Measures (BIPM), International Earth Rotation and Reference Systems Service (IERS), International GNSS Service (IGS) and Interagency Operations Advisory Group (IOAG). Representatives of the Office for Outer Space Affairs and International Telecommunication Union (ITU) also participated. Australia and Canada were invited to attend as observers. The representatives of Pakistan, Saudi Arabia, Republic of Korea and Thailand, as well as the Asia-Pacific Space Cooperation Organization (APSCO), the African Regional Centre for Space Science and Technology Education - in French Language (CRASTE-LF), the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) and Space Generation Advisory Council (SGAC) also participated.

ICG recalled that the General Assembly, in its resolution 66/71 of 9 December 2011 welcomed the continuous progress made by ICG towards achieving compatibility and interoperability among global and regional space-based positioning, navigation and

timing systems and in the promotion of the use of global navigation satellite systems and their integration into national infrastructure, particularly in developing countries, and noted with satisfaction that the International Committee held its sixth meeting in Tokyo from 5 to 9 September 2011.

ICG noted that the working groups focused on the following issues: compatibility and interoperability; enhancement of the performance of GNSS services; information dissemination and capacity-building; and reference frames, timing and applications.

The Working Group on Compatibility and Interoperability (WG-A) addressed all four areas of its current work plan through an intersessional meeting held in July, 2012 in conjunction with the 2012 IGS Workshop, Olsztyn, Poland, and additional presentations and discussions conducted during ICG-7. The Compatibility and International GNSS Monitoring and Assessment (IGMA) subgroups of WG-A also provided reports at the intersessional meeting that formed the basis for recommendations on spectrum protection and open service performance monitoring. WG-A organized and completed the first ICG Interference Detection and Mitigation Workshop, held in Vienna, June 2012, and reported the conclusions to the ICG-7, including a recommendation to conduct additional workshops. The next workshop will take place in April 2013 immediately preceding the ION Pacific PNT Meeting, where an interoperability workshop involving users and manufacturers will also be held.

The Working Group B on the enhancement of GNSS service performance followed up its workplan and its recommendations of ICG-6. The group discussed the benefits of an interoperable GNSS Space Service Volume. All WG-B participants believe that a fully interoperable GNSS Space Service Volume will result in significant benefits for future space users as it will allow for performance no single system can provide on its own. WG-B will continue to work towards an interoperable GNSS SSV. Concepts allowing for maritime integrity by exploiting the arising multiplicity of new satellite navigation signals were discussed and the significance of multipath resistant navigation signals for good ranging performance was confirmed. The value of multi-GNSS application demonstrations was identified.

The Working Group C on information dissemination and capacity-building addressed education and training programmes related to GNSS for purposes of building capacity in developing countries through the Regional Centres for Space Science and Technology Education affiliated to the United Nations and centers of excellence, such as an International Centre for GNSS Science Technology and Education at the Beihang University of China. It was noted that these centers, acting as the information centers for ICG, might grow into a network of centers and provide a major springboard for the transfer and enhancement of skills and knowledge in GNSS research and applications. A new item on information dissemination, including web-presence materials, was introduced in the Working Group's workplan.

The Working Group D on Reference Frames, Timing and Applications noted significant continued progress on the geodetic and timing references for the GNSS currently

represented in the ICG. Specific progress was noted in the alignment of CGS2012 for BeiDou, JGS2010 for QZSS, PZ90 for GLONASS and WGS84 for GPS to the latest realisation of the International Terrestrial Reference System in the form of ITRF2008. The Working Group also made recommendations in relation to developments in the recognition of the International Terrestrial Reference System (ITRS) and Universal Time Coordinated (UTC). A notable development was the progress with a pilot service by the BIPM and associated timing laboratories to produce "Rapid UTC".

The 9th meeting of the Providers' Forum was held in conjunction with the 7th meeting of ICG. The providers agreed upon a statement highlighting key achievements of the ICG and the Providers' Forum contained in Annex.

ICG accepted the invitation of the United Arab Emirates to host its Eighth Meeting in Dubai, from 10 to 14 November 2013. The Office for Outer Space Affairs, in its capacity as the Executive Secretariat of ICG and its Providers' Forum, will assist in the preparations for the meeting and for interim planning meetings and Working Groups activities. ICG noted the expression of interest by the European Union to host the Ninth Meeting of ICG in 2014.

Annex

Statement of the Providers' Forum concerning the International Committee on Global Navigation Satellite Systems 9th meeting of the Providers' Forum, 6 November 2012

The International Committee on Global Navigation Satellite Systems (ICG) was established in 2005 and has steadily developed into an important platform for the system providers, the user communities, observers and interested United Nations member states to exchange views and information concerning the field of satellite navigation. The ICG has taken a leading role internationally to promote collaboration in the utilization of Global Navigation Satellite Systems (GNSS) services for a range of commercial, scientific and technological applications. Specific areas of interest to the ICG and its Working Groups include compatibility and interoperability, service performance and service performance enhancement, timing and geodetic reference frames, education and training, and global applications.

The Providers' Forum was established in 2007 at the second meeting of the ICG. Since then, each of the 6 current and future system providers has hosted the ICG, achieving an important milestone in demonstrating the commitment of the Providers to the goals and objectives of the ICG. This commitment serves as a foundation to enhance collaboration and to increase global awareness of GNSS.

During its series of meetings, and in particular, in its 9th meeting held in conjunction with ICG-7, Beijing, November, 2012, the Providers' Forum considers user recommendations, works cooperatively to enable better service, supports the protection of radio-navigation satellite services (RNSS) spectrum, considers activities that promote GNSS awareness and education, and considers proposals to enhance service performance, and performance monitoring and assessment.

The Providers' Forum promotes compatibility and interoperability among current and future global and regional space-based systems by exchanging detailed information about planned or operating systems and the policies and procedures that govern their service provision. More importantly, the Providers' Forum is a mechanism to continue discussions on important issues addressed by the ICG that require focused inputs from system providers.

In its 9th meeting, the Providers' Forum considered the future role of the ICG and agreed to keep it on its agenda.