

United Nations/United States of America International Workshop on the Use and Applications of Global Navigation Satellite Systems

(to be convened as a Joint Meeting of the Action Team on GNSS and GNSS Experts of UN/USA Regional Workshops and International Meeting 2001-2002)

8-12 December 2003, Vienna, Austria

I. BACKGROUND

At the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, known as UNISPACE III, the participating States stressed the social and economic benefits of global navigation satellite systems (GNSS). Benefits of GNSS applications are growing in such areas as aviation, maritime and land transportation, mapping and surveying, agriculture, power and telecommunications networks, and disaster warning and emergency response, to name a few. Particularly for developing countries, GNSS applications offer cost-effective solutions to pursue economic growth without compromising the present and future needs to preserve the environment, thus promoting sustainable development.

In 2001, the Office for Outer Space Affairs, within the framework of the United Nations Programme on Space Applications, began to organize a series of regional workshops focusing on capacity building in the use of GNSS in various areas of applications that support sustainable development. In 2001-2002, with the sponsorship and technical support by the Government of the United States of America, the Office organized the following meetings on GNSS. The European Space Agency (ESA) co-sponsored the last three of them.

- i) First UN/USA Workshop on the Use of Global Navigation Satellite Systems, for the benefit of countries in Asia and the Pacific (Kuala Lumpur, Malaysia, 20-24 August 2001);
- ii) Second UN/USA Regional Workshop on the Use and Applications of Global Navigation Satellite Systems, for the benefit of countries in Eastern Europe (Vienna, Austria, 26-30 November 2001);
- iii) Third UN/USA Regional Workshop on the Use and Applications of Global Navigation Satellite Systems, for the benefit of countries in Latin America and the Caribbean (Santiago, Chile, 1-5 April 2002);
- iv) Fourth UN/USA Workshop on the Use of Global Satellite Navigation Systems, for the benefit of countries in Africa (Lusaka, Zambia, 15-19 July 2002);
- v) International Expert Meeting on the Use and Applications of Global Navigation Satellite Systems (Vienna, Austria, 11-15 November 2002).

On the basis of results of these workshops and additional suggestions made by the participants from developing countries through a survey, the International Meeting of Experts on GNSS (Vienna, November 2002) considered further actions to expand the use and applications of GNSS and their benefits to the society. The results of the Meeting included proposals for pilot projects with GNSS applications in surveying and mapping, civil aviation, environment and pollution control, as well as management of natural resources and agriculture. The Meeting also recommended follow-up actions in cross-cutting areas such as establishing institutional framework for use and applications of GNSS, awareness increase, as well as training and education. Some of these follow-up actions are currently being implemented by the participating institutions.

The results of the series of regional workshops and the International Meeting of Experts also contributed to the work of the Action Team on GNSS, which is one of the 12 action teams established by the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) to implement priority recommendations of the Third United Nations Conference on the Exploration and Peaceful

Uses of Outer Space (UNISPACE III). Under the leadership of the United States and Italy, the Action Team currently consists of more than 30 countries and a dozen international organizations.

The work of the Action Team included a comprehensive review of the existing and planned GNSS and augmentations, their use and applications, as well as activities carried out by various entities to promote GNSS. The Action Team also examined the requirements of developing countries, gaps in meeting those requirements as well as existing training opportunities in the fields of GNSS. Based on the examination of those issues, the Action Team is currently in the process of identifying institutional models of international cooperation and coordination that could be applied to GNSS and developing recommendations, taking into account some of the recommendations of the International Meeting of Experts in November 2002. The final report of the Action Team with recommendations for further actions by Member States, intergovernmental and non-governmental entities will be submitted to the General Assembly through the COPUOS in time for the review by the Assembly in 2004 of the progress made in the implementation of the recommendations of UNISPACE III, known as UNISPACE III+5 review.

The Action Team on GNSS is one of the leading action teams that have made fast progress toward the implementation of the recommendations of UNISPACE III. The work of this Action Team could serve as a model for how the United Nations could undertake follow-up actions of global conferences to yield tangible results within a fixed time frame.

II. OBJECTIVES

The International Workshop on GNSS will aim to achieve the following objectives:

- a) Review the progress made in the implementation of the recommendations of the UN/USA International Meeting of Experts on the Use and Applications of Global Navigation Satellite Systems (Vienna, November 2002)
- b) Review any follow-up initiatives and actions resulting from the series of UN/USA Regional Workshops on GNSS
 - i) Identify any initiatives/actions that require assistance from the Office for Outer Space Affairs or other entities;
 - ii) Assess the resources (including staff resources) required from the Office;
 - iii) Prioritize those initiatives/actions for support by the Office in 2004-2005.
- c) Finalize the recommendations and the report of the Action Team on GNSS
- d) Prepare draft terms of reference of a GNSS Coordination Board (GCB).

III. APPROACH

The following approach will be taken to achieve the objectives listed above.

Objectives a) and b)

Review of the implementation of the recommendations of the International Meeting of Experts and of any follow-up initiatives/actions of the UN/USA Regional Workshops

Approach:

- a) Conduct a survey among the experts who participated in the Regional Workshops (Several experts have been identified to lead survey as "Responsible Experts" in five thematic areas. In addition, one or more experts are assisting the "Responsible Expert" as "Collaborators" in each thematic area.)

- b) “Responsible Experts” to prepare reports compiling the results of the survey by mid-November and present the reports to the International Workshop
 Reports to be prepared in the following thematic areas:
- Surveying, mapping and Earth sciences
 - Agriculture and management of natural resources
 - Transportation
 - Environmental monitoring and management
 - Training and education, awareness increase
- c) Examine the reports and suggestions and recommendations contained therein.

Objective c)

Finalize the recommendations and the report of the Action Team on GNSS

Approach

1. Members of the Action Team to review and refine the draft consolidated report version 3 and provide inputs and comments to the co-chairs by the beginning of November 2003.
2. The co-chairs to prepare a revised consolidated report for circulation to the participants of the International Workshop by the end of November 2003
3. Taking into account the results of the discussions at the International Workshop concerning objectives a) and b) above, the Action Team to finalize the draft consolidated report at the International Workshop. (Consolidated report to be issued as a special publication of the United Nations.)
4. The co-chairs to prepare the following documents immediately following the International Workshop for submission to the Scientific and Technical Subcommittee of COPUOS at its 2004 session.
 - a) Final report of the Action Team (executive summary of the final, consolidated report; 16 pages maximum)
 - b) Inputs for the report of COPUOS to the General Assembly for its UNISPACE III+5 review (updates of A/AC.105/L.247, annex VI)

Objective d)

Prepare draft terms of reference of a GNSS Coordination Board (GCB)

Approach

1. Interested members of the Action Team members to prepare a first draft of the terms of reference of GCB under the coordination of the co-chairs;
2. Circulate the first draft terms of reference of GCB to the members of the Action Team by mid-October;
3. Members of the Action Team to provide comments by the beginning of November
4. The co-chairs of the Action Team to present the draft terms of reference to the International Workshop

IV. REFERENCE DOCUMENTS

1. Reports of the UN/USA Regional Workshops and the International Meeting of Experts held in 2001-2002 (A/AC.105/771, 776, 785 and Corr.1, 795, and 801 to be issued)
2. Guidelines for survey and the questionnaire
3. Results of the survey (to be distributed by the end of November 2003)
4. Draft consolidated report of the Action Team on GNSS (Version 4 to be circulated by end November; version 3 available on the web board of the Action Team “<http://forum.itu.int/~gnss/>”)
5. Draft terms of reference of a GNSS Coordination Board (to be circulated by mid-November)

V. PARTICIPANTS OF THE MEETING

The participation in the International Workshop will be **by invitation only**. The meeting will be attended by:

- a) All members of the Action Team on GNSS;
- b) “Responsible Experts” and “Collaborators” for the survey on the follow-up initiatives and actions resulting from the UN/USA Regional Workshops and the International Meeting of Experts
- c) Selected experts who participated in the UN/USA Regional Workshops
- d) Selected experts nominated by the members of the Action Team, “Responsible Experts” or “Collaborators” for the survey.

VI. AGENDA AND ORGANIZATION OF WORK

The agenda of the International Workshop will consist of:

1. Opening statements
2. Presentation on the objectives and goals
 - a) Co-chairs of the Action Team on GNSS
 - b) United Nations Office for Outer Space Affairs
3. Briefing on the objectives, status of work and plan of the Action Team on GNSS (Co-chairs of the Action Team)
4. Key presentations on the recent development with the use and applications of GNSS (preliminary, indicative list)
 - a) GNSS systems and interoperability
 - b) GNSS augmentations
 - c) Recent developments in the UN system: i) outcome of the WRC 2003; ii) ICAO legal framework to govern the operation of GNSS; iii) IMO revised maritime policy and requirements for a future GNSS]
 - d) GNSS user community: CGSIC, IGB, GLONASS Service Interface
 - e) GNSS value-added services
5. Presentation of the results of the survey on follow-up actions and initiatives to the UN/USA Regional Workshops and the International Expert Meeting in 2001-2002
 - a) GNSS applications to surveying, mapping and Earth sciences
 - b) GNSS applications to the agriculture and management of natural resources
 - c) GNSS applications to the environmental monitoring and management
 - d) GNSS applications to transportation
 - e) Training and education in the use and applications of GNSS and awareness increase of the benefits of GNSS
6. Working Group sessions:
(Discussion of the results of the survey, identification of the initiatives/actions requiring assistance from the Office for Outer Space Affairs and other entities, assessment of required resources and prioritization of the initiatives/actions for support by the Office in 2004-2005)
 - a) Surveying, mapping and Earth sciences
 - b) Agriculture and management of natural resources
 - c) Environmental monitoring and management
 - d) Transportation
 - e) Training, education and awareness increase
 - f) Institutional framework

7. Discussion of the results of the working group sessions
8. Finalization of the recommendations and report of the Action Team on GNSS
9. Discussion of the draft Terms of Reference of a GNSS Coordination Board
 - a) Finalization of the text of the terms of reference
 - b) Detailed action plan for the establishment of GCB (timeline/milestone, budget, organization of work, etc.)
10. Conclusion of the International Workshop
 - a) Adoption of the draft report (summary of recommendations for further actions and major issues discussed)
 - b) Next steps (work plan for 2004)
11. Closing remarks

The International Expert Meeting will consist of the plenary and working groups. The working groups will meet in parallel to each other. The indicative schedule of work is as follows.

<i>Date</i>	<i>Morning: 9:00-12:00</i>	<i>Afternoon: 14:00-17:00</i>
Monday, 8 December 2003	<i>Item 1: Opening statements</i> <i>Item 2: Objectives and goals</i> <i>Item 3: Work of Action Team on GNSS</i> <i>Item 4: Key presentation on the recent developments</i>	<i>Item 4: Key presentation on the recent developments</i> <i>Item 5: Presentations on the results of the survey</i>
Tuesday, 9 December 2003	<i>Item 6: Working Group Sessions</i> a) Surveying, mapping and Earth sciences b) Agriculture and management of natural resources c) Environmental monitoring and management d) Transportation e) Institutional framework* f) Training, education and awareness increase	<i>Item 6: Working Group Sessions</i> a) Surveying, mapping and Earth sciences b) Agriculture and management of natural resources c) Environmental monitoring and management d) Transportation e) Institutional framework* f) Training, education and awareness increase
Wednesday, 10 December 2003	<i>Item 6: Working Group Sessions</i> • Preparation of the reports of the working group sessions <i>Item 9: GCB Terms of Reference*</i>	<i>Item 7: Results of the working group sessions</i>
Thursday, 11 December 2003	<i>Item 8: Finalization of the report of the Action Team on GNSS</i> <i>Item 9: GCB Terms of Reference</i>	<i>Item 9: GCB Terms of Reference</i>
Friday, 12 December 2003	<i>Item 10: Conclusion</i> <i>Item 11: Closing remarks</i>	

* Discussions in the Working Group on Institutional Framework may include draft terms of reference of a GNSS Coordination Board.

** A small working group of the Action Team on GNSS to hold informal consultations.

VII EXPECTED OUTCOME

The short-term and mid-term results of the International Workshop would include:

- i) A set of follow-up actions to be supported by the Office for Outer Space Affairs in 2004-2005 on a priority basis;
- ii) A set of follow-up actions that can be presented to other entities for their support in 2004-2005;
- iii) Final report of the Action Team, including its recommendations to the United Nations General Assembly through COPUOS;
- iv) Draft terms of reference of a GNSS Coordination Board and action plan for its establishment

VIII FINANCIAL ARRANGEMENTS

Within the limited financial resources available to the co-sponsors, a number of invited participants from developing countries will be offered financial support to attend the International Workshop. Funded participants will be provided with a round trip air ticket (most economic fare) between the airport of international departure in their home country and Vienna. The co-sponsors will also defray the room and board expenses of these participants for the duration of the Meeting.

IX LANGUAGE OF THE MEETING

Applicants must have a good knowledge of ENGLISH, which will be the only working language of the International Workshop.

X CONTACT POINTS

For information regarding the venue, hotels and funding and other practical matters, please contact Ms. Ayoni Oyenyin, Research and Administrative Assistant, Space Applications Section, United Nations Office for Outer Space Affairs, Vienna, Austria (Fax: +43 1 26060 5830; Tel: +43 1 26060 4953, E-mail: Ayoni.Oyenyin@unvienna.org)

For information regarding the agenda and programme of the International Workshop, please contact Ms. Takemi Chiku, Chief, Committee Services and Research Section, United Nations Office for Outer Space Affairs, Vienna, Austria (Fax: +43 1 26060 5830; Tel: +43 1 26060 4943, E-mail: Takemi.Chiku@unvienna.org)