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15 September 2003

United Nations/Thailand Workshop on
Contribution of the Space Communications Technology to Bridging the Digital Divide

Bangkok, Thailand, 1 -5 September, 2003

Dear Mr. GAGNE,

Following my previous letter to you dated 28 January 2003 on the above subject (a copy of this letter is hereby attached for your easy reference), kindly find attached the following documents below for your attention:
1. copy of the information letter;
2. background information on the above workshop;
3. observations and recommendations of the participants in the workshop.

WSIS Secretariat is kindly requested to review the attached observations and recommendations for possible inclusion into the documents of WSIS preparation process.

This is also to inform you that UN/OOSA will organize during the first phase of the Summit a side event (a copy of e-mail from WSIS Secretariat is also attached).

Yours sincerely,

Sergio Camacho Lara
Director
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Attachments : (i) copy of the information letter from UN/OOSA; (ii) UN/OOSA submission; (iii) a copy of the e-mail from Mr. Romazotti; (iv) my fax to Mr. Romazotti.

UNITED NATIONS/Office for Outer Space Affairs submission to the Secretariat of the World Summit on Information Society on Contribution of the Satellite Communications Technology to Bridge the Digital Divide

PREAMBULE

United Nations Office for Outer Space Affairs (UN/OOSA) believes that satellites can service rural/ remote areas today in a cost-effective manner, and with minimal infrastructure investment compared to conventional terrestrial systems. There is an opportunity to exploit recent developments in satellite communications systems, beginning with an assessment of how these might be applied in the context of sustainable development.

In line with the World Summit on Information Society (WSIS) initiative, the UN/OOSA organized a Workshop on the Contribution of Satellite Communications Technology to Bridge the Digital Divide for benefit of developing countries in the Asia-Pacific region.

All of the regional ministerial meetings so far conducted in preparation for the WSIS acknowledged the close link between the availability of a large-scale broadband infrastructure and the provision of public education and health. Such infrastructure, inter alia, can be provided by the geostationary communication satellites.

BACKGROUND

Representatives of various governmental institutions and private industry from developed and developing countries were briefed on the latest developments in satellite solutions to deliver broadband Internet during a five-day Workshop. The aim of the United Nations/Thailand Workshop on Contribution of the Satellite Communications Technology to Bridge the Digital Divide (Bangkok, Thailand, 1-5 September, 2003) was to familiarize the participants from the Asia and Pacific region with both practical and cost effective space-based solutions which are currently available and provide additional options for areas with underdeveloped telecommunications infrastructure.

The Workshop considered ways in which developing countries can use space communication techniques such as Internet delivery via satellite, to enable e-learning and e-health and thus contribute to the social betterment and economic success of the region. The main advantage of educational broadcasting via satellite and two-way interactive e-learning is the system's distributive power or the ability to reach a large number of potential students wherever they may be living or working. For many developing countries, satellite-based distance education is the only practical alternative for providing quality instruction to an increasing number of geographically dispersed students.

The Workshop on this subject was the second organized within the framework of the United Nations Space Applications Programme by the Vienna-based United Nations Office for Outer Space. The Workshop is part of an ongoing effort by the United Nations to promote wider use of space technology and greater cooperation in an effort to bridge the Digital Divide between developed and developing countries and within developing countries.

The workshop assisted participants from developing countries in understanding how to use satellite-based communications networks for enhancing access to cost-effective communications, education, healthcare and other socio-economic services and applications. The aim of the workshop was two-fold: firstly to elaborate a possible contribution to the World Summit on the Information Society (WSIS) from the satellite communications sector's viewpoint, and secondly to review the status and future of various aspects of satellite communications technology. These aspects include: (i) the satellite market in the Asia-Pacific region, (ii) new satellite service opportunities for applications such as e-health and e-learning, (iii) satellite communications for disaster relief, iv) remote and rural multimedia/Internet services (v) local user access, (vi) marketing satellite services solutions, (vii) development of regional and international co-operation, and viii) advances in broadcast and two-way Very Small Aperture Terminal (VSAT) technology.

Participants developed observations and recommendations on which next steps are needed to be taken to improve Internet access and e-learning and e-health applications in their respective countries and in the Asia-Pacific region. These observations and recommendations are contained in the annex to this Information Note.

The participants agreed that the cost of equipment and services need to decline further in order for satellite technology to play a vital role in delivering Internet access and other communications services to many rural communities. Government initiatives also need to be undertaken as private sector-led efforts alone are not likely to address rural communities and would contribute to the already widening divide.

In particular, the participants were optimistic since the iPSTAR project (the most powerful communications satellite to date and which will be commissioned into service by Thailand next year) will offer services that challenge terrestrial digital subscriber line (DSL) and cable modem price offerings. This important step will lead to greater affordability and penetration of satellite communications services in sparsely populated rural areas.

More than 100 participants, including decision-makers and programme managers from governmental institutions and private industry from the following countries and organizations, attended the Workshop: Austria, Cambodia, France, Germany, India, Indonesia, Japan, Kazakhstan, Malaysia, Myanmar, Republic of Korea, Samoa, Tajikistan, Thailand, the United States of America, Viet Nam, International Telecommunication Union, United Nations Economic and Social Commission for Asia and the Pacific, Asia-Pacific Telecommunity, the European Space Agency, International Telecommunications Satellite Organization, Global VSAT Forum, INMARSAT and the United Nations Office for Outer Space Affairs.

OBSERVATIONS AND RECOMMENDATIONS

of the
United Nations/Thailand Workshop on
Contribution of the Satellite Communications Technology to Bridge the Digital Divide organized in cooperation with and hosted by the Government of Thailand

OBSERVATIONS

The Workshop took note that:

1. Satellite communications services offer many advantages as compared to the terrestrial telecommunications solutions;

2. In recent years there have been major advances allowing satellite technology to deliver a broad range of communications services to individual users and groups. Improvements to satellite-based solutions have occurred in both the satellite and the terrestrial segments of the system. These improvements, together with reducing costs, make satellites worthwhile for reconsideration again for cases where previous attempts were unsuccessful;

3. Satellite communications technology, in its current state-of-the-art, has the potential to accelerate the availability of high-speed internet services in developing countries, including the least developed countries, the land-locked and island countries, and countries with economies in transition;

4. WSIS represents a historic opportunity for governments to recognize the provision, on a global basis, of satellite high-speed internet services through low-cost user terminals;

5. Governmental support during the early stages of the satellite communications services development plays a critical role;

6. The international nature of satellite communications services would benefit from greater international harmonization in the use of frequencies, market access policies, and open and interoperable standards for user terminal equipment;

7. There is a trend in changing national satellite communications regulations in the ESCAP region;

8. Factors that contribute to the successful provision of satellite communications services include low-cost VSAT equipment and earlier definition of potential user needs. Necessary success factors also include availability of local human resources and a favorable legal framework;

9. There is no single standard for user terminals in satellite communications industry. Regional and national standardization groups are currently evaluating a number of standards for broadband satellite services;

10. One of the major barriers to satellite services development is the ITU backlog of so-called "paper satellites". (ITU upholds the right of all nations — rich or poor — to equal affordable access to satellite orbit space. However, there is an urgent need to reduce an avalanche of applications for satellite "slots", many for systems that will never leave the Earth. These "speculative" systems are known as "paper satellites");

11. "Hybrid" satellite communications systems (i.e. satellite technology combined with the wireless technology for the "last mile" access to the end user) provide even more cost-effective solutions;

12. Business models, such as developed, for example, for the PSTAR project will provide services at more affordable cost;

13. INMARSAT will continue to provide service in the events of disasters or emergency free of charge;

14. Introduction of e-learning and e-health services are on the development agenda of many governments;

15. The social and economic benefits of e-learning and e-health via satellite have been demonstrated in many pilot projects and are now considered as space-based applications with very important benefits for the people;

16. Developing countries would benefit from a set of guidelines addressing the satellite infrastructure development to facilitate the deployment of e-learning and e-health applications.

RECOMMENDATIONS

The Workshop recommended that :

1. The countries from Asia-Pacific region should give high priority to bridging the Digital Divide;

2. Broadband services should be recognized as an important engine for economic and social development;

3. Governmental institutions should encourage the growth of satellite services;

4. To fulfill the promises of satellite communications technology, three issues are to be addressed: (i) to maintain satellite infrastructure at affordable price; (ii) to develop the content of satellite-based applications in a manner that is appropriate for local conditions; (iii) and to create local human resources to understand and operate these applications;

5. A harmonized standard for broadband communications system is highly desirable as it could be a contributing factor in bridging the Digital Divide;

6. To make satellite broadband services affordable for the least developed countries in the ESCAP region, preparations at technical, institutional and policy levels should be conducted;

7. Necessary actions should be taken to allow development, in time for the second phase of the Summit (Tunis, 16-18 November 2005) of the conditions that would enable the emergence of a global broadband satellite system for high speed internet applications, in particular for developing countries and remote and rural areas;

8. Viable and innovative business models for satellite services should be developed;

9. Free bandwidth for regional pilot and humanitarian should be provided by the satellite communications operators. Special arrangement for e-learning projects should be encouraged;

10. The minimum data rate for e-learning applications should be 128 Kbps. This is taking into account: (i) the minimum data rate available on VSAT applications; (ii) cost of bandwidth and the current performance of a web page delivery.