
Chapter 1
Summary

OVERVIEW

In August 1982, delegates from 94 countries and several specialized agencies met in Vienna, Austria to discuss the state of space technology, its potential, and the political issues that derive from using it. Because of their interest in the lessons that might be drawn from U.S. participation in UNISPACE '82, and concern over U.S. leadership in space, the Committee on Science and Technology of the U.S. House of Representatives, and the Joint Economic Committee asked the Office of Technology Assessment (OTA) to prepare this technical memorandum on UNISPACE '82 and related issues. It was undertaken as part of a major assessment of international cooperation and competition in civilian space activities requested by these same committees.

Although UNISPACE '82 was primarily a technical conference centered around space technol-

ogy, the fact that it was organized by the United Nations (U. N.) and involved 94 countries meant that political issues related to space technology constituted an implicit part of the agenda. **UNISPACE '82 itself is unlikely to have a significant direct effect on the long-term space goals or strategies of the United States. Nevertheless, it offered a window through which to view the development of international space policy, the roles that the United States and its agencies play in this process, and the potential effect of the process on U.S. public and private interests.** In each of these related areas, the United States experienced some successes and some failures; from each it can derive certain important lessons of use to Congress.

CONTEXT

Over the last quarter century, the United States has been the leader in developing space technology and in exploring outer space. It has played a significant role in establishing the international legal regime to promote the use of outer space for peaceful purposes and for the benefit of all countries, irrespective of their economic status and their degree of scientific and technical development. Through a program of bilateral and multilateral agreements for science and applications, the United States has also led in helping other nations develop their own abilities to reap the benefits of using outer space.

During the last decade, however, the **diplomatic and technological context for space activities has changed, in part because of the very success of U.S. international programs. Today, the U.S. leadership role in international markets and organizations is challenged.**¹ Initially aided by the

United States, the Europeans and the Japanese now provide stiff commercial competition in specific space technologies. At the same time, some developing nations have focused on using space technology as a means to greater economic growth, and have demanded a greater voice in its use. Since the United States has had and wishes to continue its leadership role in space, it is important to understand the lessons of UNISPACE '82, and how the United States might make better use of international fora to achieve its diplomatic, commercial, and technical ends. This technical memorandum is limited to discussing these matters in the context of UNISPACE '82. Policy options for dealing with many of the issues developed herein will be explored in the forthcoming OTA assessment, international cooperation and competition in civilian space activities.

Civilian Space Policy and Applications, (Washington, D. C.: U.S. Congress, Office of Technology Assessment, June 1982), OTA-1-144,

THE CONFERENCE

Cooperation in space for peaceful purposes was the major theme of UNISPACE '82. **Because outer space is by nature and treaty an international realm, what one country does in outer space is necessarily of interest, and perhaps a source of worry, to another.**

Although the primary focus of UNISPACE '82 was on cooperation, competition between nations for commercial markets and/or political prestige also played a background role. **Some of our military allies, most notably Japan and those in Europe, are rapidly building space industries independent of our own. Their emergence as competitors in the exploitation of outer space may result in their also developing political and economic agendas on space that differ in important respects from those of the United States.**

For several reasons the United States had been reluctant to participate in UNISPACE '82, ever since a conference was first proposed in 1974; nevertheless, the United States began to prepare for the conference. However, a major dispute with the Soviets over the succession of a U.S. citizen to Chief of the U.N. Outer Space Affairs Division (OSAD) in the spring of 1981 caused the United States to cease most of its UNISPACE '82 activities and threaten to withdraw from the conference. Until this issue was finally resolved on December 28, 1981, the United States took little part in preparing for UNISPACE '82. It slowed

work on its national paper, declined to nominate a UNISPACE '82 Deputy Secretary-General, and allocated no funding for an exhibit or most other related conference expenditures. After reaching agreement about the personnel issue and resuming its preparations for the conference in January 1982, the United States had only 7 months to complete its arrangements and to name a delegation.

The primary tangible output of UNISPACE '82 was a 43-paragraph conference report. It was first submitted in draft by the UNISPACE '82 secretariat in January 1982 and amended in two preparatory meetings of the U.N. Committee on the Peaceful Uses of Outer Space (COPUOS) in January and March. By the time of the conference the wording of all but 15 paragraphs, containing the most controversial issues, had been agreed to through the consensus procedures of COPUOS. Although they had the option of submitting any unresolved issue to a vote, the delegates at UNISPACE '82 agreed to a consensus procedure like that followed in COPUOS. During the conference, agreement was reached on all 15 disputed paragraphs. **In some respects, however, agreement on the text of the conference report was deceptive since it merely left the most important issues* to be resolved at a later date at COPUOS or the U.N. General Assembly.**

● See section on "Major Issues" below.

THE UNITED STATES AT UNISPACE '82

The United States had much to gain by participating in UNISPACE '82. The conference offered the United States the opportunity to explain its positions on the use of outer space and influence those of other countries, as it simultaneously gained insight into the interests and concerns of others. **However, the preparation and participation at the conference reflected the U.S. approach to other U.N. conferences. The United States has been generally reluctant to concede that its interests can be promoted or seriously jeopardized at such conferences. It approached the UNISPACE**

'82 warily and attended primarily to "limit the damage" that UNISPACE '82 could cause to U.S. interests.

- **Conference Preparation.** Although for about 10 months the United States pursued little formal preparation for UNISPACE '82, the United States had developed and established its positions on many of the crucial issues over the years. In January 1982, the National Aeronautics and Space Administration (NASA) assumed an unofficial coordinating role until the Sta

Department was able to establish a special coordinator's office. The State Department named Ambassador Gerald Helman as Special Coordinator for UNISPACE '82 in mid-March 1982. NASA Administrator James Beggs was named Head of the U.S. Delegation in June. The White House announced the selection of the rest of the delegation in late July, less than 2 weeks before UNISPACE '82.

The United States participated in the January 1982 and March-April 1982 COPUOS preconference meetings where it was able to modify the UNISPACE '82 draft report to accommodate U.S. interests. Unfortunately, partly because of the hiatus in conference preparation, the U.S. delegation was unable to use the full range of outside advisers (e. g., Members of Congress, citizens advisory groups, key persons in the industry, etc.) to assist in forming U.S. positions.

In preparing for the conference, each nation contributed a "Country Paper" describing its current use of and projected needs for space technology. Although the U.S. Country Paper discussed many U.S. achievements, it does not reflect the full range and scope of the U.S. space program, including private involvement in space activities. Nor does it emphasize the full range and depth of good and useful cooperative projects that the United States has entered into with other countries.

Conference Participation. With support from both allies and friends, **the U.S. delegation was highly effective in preventing most wording inimical to U.S. interests from appearing in the conference report. It was less effective in using the conference to further U.S. interests in outer space.**

The United States has had a longstanding problem of participating effectively at the U.N. and in its related organizations. U.N. conferences are more often perceived as experiences to be tolerated rather than opportunities to influence other countries. **To use the opportunities inherent in international conferences more effectively will require a change in U.S. attitude toward them. Specifically, it will require better preparation, especially for private sector delegates and advisors, and an emphasis in long-term planning.**

- **U.S. Private Sector.** The U.S. private sector has played and will continue to play a major role in the development of space technology and management of space systems. **It is therefore important that the U.S. Government work diligently to take into full account the interests of the private sector in international meetings such as UNISPACE '82.** Private sector advisors, with their valuable technical, organizational, and negotiating skills, can assist delegations by working out innovative positions and gathering international support for these positions. Because the private sector advisors and delegates were selected less than 2 weeks before the conference, there was little time to brief them about the many complex issues to be discussed in Vienna. As a result, some private sector members of the delegation were not well employed at UNISPACE '82; they were underused and given little direction. **As the number and type of private sector space activities increase, it will be desirable to involve the private sector on a continuing basis in space related diplomacy, and arrange for private sector participation in the early and middle stages of conference preparation.**
- **The U.S. Exhibit.** Initially, the private sector was reluctant to exhibit at UNISPACE '82 because firms had not budgeted for it and because their preparation time was highly constrained. This reluctance was overcome by Administration urging and assurances that the Government would support the companies logistically, politically, and materially. In spite of the short preparation time, the firms put on an excellent exhibition.
- **Congressional Involvement.** Because of its responsibility for oversight, the Congress has a longstanding interest in the preparation and conduct of U.S. delegations at international conferences and the results they obtain. Both the House Committee on Science and Technology and the House Committee on Foreign Affairs held hearings on U.S. preparation for UNISPACE '82. In addition, several members of the House of Representatives attended parts of the conference. The hearings revealed that preconference coordination between the rele-

vant congressional committees, NASA, and the State Department could have been improved. Many of the concerns expressed by Members during the hearings regarding the U.S. positions and preparations for UNISPACE '82 might have been allayed had they been kept better informed.

U.S. Initiatives. In spite of the relatively limited time available for the task, the United States prepared several proposals designed to encourage international multilateral cooperation in space. Although it was the only country to offer such proposals, the lack of preparation time and the reluctance of the conference secretariat to help the U.S. delegation, prevented the proposals from gaining wide exposure at UNISPACE '82.

MAJOR ISSUES

The issues discussed at UNISPACE '82 were not unique to this conference. Nor are they unique to discussions of the potential benefits and drawbacks of employing space technology. In fact, nearly all of the most important disagreements have been debated within the specialized agencies and committees of the U.N. since the beginning of the space age. Some of them are directly related to the applications of specific technology or specific systems. Others are more broadly defined and relate to major international economic and political concerns.

Economic and Political Concerns

- **Economic needs of developing countries.** The discussion at UNISPACE '82 demonstrated that the developing countries of the world not only desire a greater share of the benefits of space systems and services but are willing and able to apply considerable pressure on the industrialized countries to institutionalize the means of transferring space technology and operating skills. However, the conference made no decisions about the most effective means of accomplishing such transfer. In particular, the idea of establishing a U.N. Centre for Outer Space, which had been proposed (and widely sup-

ported by a majority of members during the preparatory meetings) to serve the training and information needs of the developing world was, with little discussion, referred back to the General Assembly. This occurred after the Soviets applied considerable pressure on some developing countries to withdraw their support. Although the United States and most other Western nations did not oppose the Centre, neither did they wish to add to the operating expenses of the U.N. In general, the United States would prefer to handle most cases of technology transfer through bilateral or limited multilateral agreements because these agreements make it possible for the United States to match mutual needs more effectively (see appendix B).

Since the conference the United States has followed through on one of its proposals by holding a 2-day Intergovernmental Meeting of Space Technology Experts in February 1983 (see appendix C). The meeting, the first of its kind, was attended by about 100 participants from 40 countries and international organizations, about 15 developing countries were represented. Another proposal, a worldwide study of global habitability, continues to be discussed and planned in the United States; a third proposal, a satellite communications management seminar, sponsored by Hughes Aircraft under the auspices of the U.S. Telecommunication Training Institute, is scheduled for later this year.

Also at stake at UNISPACE '82 were issues not on the agenda, related to the so-called New International Economic Order (NIEO) and the New World Information Order (NWIO), positions championed by many nations that have banded together in a loose coalition called the "Group of 77 (G-77)." Many of these countries also support the adoption of principles, which did appear on the agenda, that guarantee equitable access to space resources (e.g., the geostationary orbit and any material resources su-

as the Moon or other celestial bodies) and protect the sovereign rights of nations through prior consent regimes. The conference report reflects part of their position by asserting in paragraph 11:

The international community, and in particular the developed countries with more advanced technology should intensify their efforts to promote the wider exploitation of space technology by developing countries.

Militarization of Outer Space. This was the most controversial issue raised at UNISPACE '82. In the opening days of the conference, 90 out of 94 delegations, * representing the entire spectrum of international political orientation, voiced general concern about the increased use of space for military purposes. Most countries are deeply worried about the potential damage of an arms race in space. Although the United States attempted to limit the debate on the grounds that the militarization issue should be discussed in the U.N. Committee on Disarmament, it failed to keep the issue from surfacing time and again. Events at UNISPACE '82 demonstrated that **the United States has yet to develop an effective long-term strategy for responding to international concern about the militarization of outer space.**

By contrast, the Soviet Union has positioned itself well by appearing to be more responsive to international apprehensions about militarization of space. **Unless the United States undertakes to negotiate about limiting weapons in or for space, it will be in a poor debating position on the issue. "Stonewalling" to avoid discussing militarization, the tactic the United States used at UNISPACE '82, may then be its only practical short-term damage-limiting option.**

Private Enterprise in Space. Because the role of private industry varies among nations, some confusion and suspicion exists over its future part in outer space. Although it was never a subject of debate, the rights and roles of private firms in outer space were implicit questions in many issues that surfaced at UNISPACE '82.

*The United States did not mention the issue in its opening statement.

Many developing countries, along with the Soviet Union, have attempted to inhibit private enterprise in space by proposing *severely* restrictive international regulation. Use of private direct broadcast satellites (DBS) and land remote-sensing satellites will continue to generate considerable concern among many nations and lead to continued attempts to subject such operations to internationally formulated governing principles.

Technology= Specific Issues

The use of satellites for communications and land remote sensing raise crucial issues about the flow and control of information within and across national borders. Although some developing countries at UNISPACE '82 argued for international regimes to manage the operation of DBS and land remote sensing by satellites, they were unsuccessful. Even so, the United States can expect continued attempts within the U.N. and its associated agencies to limit the free flow of information. **The United States will need long-term as well as short-term strategies for meeting these challenges.**

Satellite Communications

- **Geostationary Orbit (GSO).** Three potential problems exist: future overcrowding of parts of the orbit, frequency congestion (also related to orbit overcrowding), and claims of sovereignty by the equatorial nations.

Developing countries raised the issues of possible overcrowding of the orbit and frequency spectrum, and lobbied hard for a priori allotments based on the principle of the equitable use of the orbit.

With the exception of that portion of the GSO over the Western Hemisphere, there appears to be little pressure on 6/4 GHz positions at the present time. The United States opposes efforts to allot slots in the orbit or frequencies prior to an expressed intention for actual use on the grounds that future technological advances will solve overcrowding problems. The history of technological advances in satellite communications supports the U.S. position.

In the 1976 Bogota Declaration, several equatorial countries claimed sovereignty over the

GSO, but their claims have been rejected by most other countries. The support that some developing countries give the equatorial claims are inconsistent with their espousal of the principle of global shared use of the GSO. The conference report (par. 281) mentions the equatorial' claims without supporting them. These equatorial countries can be expected to continue to try to use the issue for political leverage in other international meetings.

- **Direct Broadcasting Satellites.** The use of DBS to deliver television programs directly to individual home or village receivers constitutes a powerful medium for providing news, entertainment, education, health care information, and other services to isolated areas. On the other hand, many countries, developing and industrialized alike, recognize the potential DBS has to impose foreign values on a society. Some of these countries have expressed strong interest in regulating its use. Although no decision on this issue was reached at UNISPACE '82, in November 1982 members of the U.N. Special Political Committee voted to refer the matter to the General Assembly. **In December 1982, the General Assembly adopted the set of principles proposed by the Special Political Committee. Though not legally binding, these principles reflect the majority international opinion on DBS.** The resolution notes that "ac-

cess to the technology should be available to all States without discrimination . . ." and call for "consultation and agreement between state before establishing an international DBS service. "

Land Remote Sensing

Since the first use of military remote-sensing satellites by the United States and the Soviet Union in the early 1960's, some nations have questioned the right of a country to acquire image of another country and the further right to disseminate such data to a third party. During UNISPACE '82, countries belonging to the G-7 reiterated their concern over these issues. They were successful in retaining wording in the conference report which stated:

The sensed State shall have timely and non-discriminatory access under reasonable conditions to the primary data obtained by remote sensing . . .

At the same time, these countries wish the United States to maintain a continuous data flow from the Landsat system, and attempted to use UNISPACE '82 to pressure the United States to make such a commitment. It is clear that remote sensing issues will be of growing concern, as high ground resolution (30 m or less) satellites approach operational status.

THE AFTERMATH OF UNISPACE '82

Although UNISPACE '82 had no power to enact laws or regulations, it was a forum for discussion and expression of competing interests. It was also a meeting in which individuals interacted, friendships were formed, and critical first impressions and prejudices were established. Past U.S. achievements in space and international cooperative ventures have created good will that could be used to lessen the conflict over issues where the United States differs from other nations, particularly with some members of the G-77. **Unfortunately, the absence of long-term domestic policy goals for space, the difficulties of coordinating strategies among U.S. agencies, and in the specific case of UNISPACE '82, the abbreviated prepara-**

tion time, have prevented the United States from taking the maximum diplomatic advantage of space program and using space technology as tool of foreign policy. Moreover, the United States has allowed itself to become isolated on the military and DBS issues, and its tactics regarding { militarization issue at UNISPACE '82 may ~ have been overly strident. This is particularly concerning, because space technology is one area which the United States has an exemplary record in "north-south" relations. It is potentially an area where U.S. /developing country agreements, arrived at through equitable negotiation, could of substantial scientific and economic advantage to all parties.

Continued opposition to U.S. policies by the developing nations could also have a direct effect on U.S. domestic interests. Concern is high over the issue of prior consent for remote sensing and DBS. Actions in the U.N. General Assembly or one of the related organizations could have a direct effect on the development of a U.S. industry in either of these fields. Developing country activities at the International Telecommunication Union also potentially threaten the large and growing U.S. communications industry. Political restrictions on the free flow of information affect

not only the communications industry but could also affect the computer industry.

UNISPACE '82 was not the cause of any of these problems; it merely illuminates their existence and the necessity for solutions. By its continued and sometimes unnecessary opposition to developing country demands the United States has helped to polarize the international environment. This polarization works to the net disadvantage of the United States.