

Chapter 4

The Issues Negotiated

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Most of the controversial political issues related to space technology at UNISPACE '82 have existed since the beginning of the space age and have changed little since first raised in the United Nations (U.N.) Committee on Peaceful Uses of Outer Space (COPUOS). However, in the intervening years, the technology has matured and prospered, and the number of nations having access to or relying on space technology has increased dra-

matically. Accordingly, the political context of the debate over the exploitation of outer space has changed. The developing world is now more active in space and demands a greater voice in how it is used. Although UNISPACE '82 yielded few surprises or new approaches to the politics of outer space, the conference and its report to the U.N. General Assembly reflect a consensus of states' opinion on the exploitation of outer space,

MILITARIZATION OF OUTER SPACE

Although not included in the formal conference agenda, worries about the introduction of weapons into space (see ch. 2 and app. A) made the militarization of outer space the most contentious issue at UNISPACE '82. Even during the preparatory meeting of COPUOS in March and April, the paragraphs in the initial draft report dealing with militarization were the subject of intense debate. The initial draft report referred to militarization as "a barrier to greater cooperation and a potential obstacle to deriving the full benefits of space technology," and as an impending "dark shadow over the peaceful and beneficial uses of space." The United States objected to such wording on three grounds:

1. that COPUOS and UNISPACE '82 were not the proper forum for this issue, which had already been referred by Committee I of the U.N. to the Disarmament Committee;
2. that the discussion—and the term "militarization"—did not distinguish adequately between military support systems such as surveillance, communications, or navigation satellites, and space weapons; and
3. that in any case the military uses of space need not interfere with peaceful uses or with the use of space systems by developing countries.

No consensus was reached on these paragraphs at the March COPUOS meetings.

It was clear from the initial plenary session that the militarization of outer space would have to be addressed at the conference. With the exception of the United States and three other countries, all participating nations mentioned this issue in their introductory statements. Early in the conference, Austria proposed that the four paragraphs dealing with militarization might be resolved by assigning them to a special working group. The United States and the Soviet Union both opposed this suggestion. The United States believed that highlighting the issue of militarization at the beginning of the conference would make it more difficult to resolve. The U.S. delegation did express its willingness to participate in an informal working group if all the contested paragraphs were included.

The management of the militarization issue by the leaders of the U.S. delegation was the source of some confusion for many delegations. The United States attended the conference

... prepared to accommodate a limited, preferably single, appropriately stated reference to the problem of weapons systems in space or aggressive uses of outer space contrary to the U.N. Charter.²

¹"Draft Report of the Conference," Preparatory Committee for the Second U.N. Conference on the Explorations and Peaceful Uses of Outer Space, A/ CONF. 101 /PC/L. 20; Mar. 1, 1982.

²Letter from Addison E. Richmond, Jr., Bureau of Oceans and International Environmental and Scientific Affairs to Dr. Gordon Law, Office of Technology Assessment, Dec. 21, 1982.

However, the failure of the United States to raise this issue in its opening speech to the Plenary created the impression in the minds of some delegates that the United States did not oppose the "militarization" of space. This impression was intensified when the representative of the United States, upon having been asked to propose wording on the subject of militarization that was acceptable to the U.S. delegation, stated that the problem was conceptual in nature and it would therefore serve no useful purpose for the United States to put forward proposals on the issue.³

Early in the second week, when it became apparent that consensus would not be reached on the paragraphs dealing with militarization, the president of the conference Willibald Pahr (Minister for Foreign Affairs, Austria) assembled a small ad hoc group of "Friends of the President." This device has been used successfully at previous U.N. conferences to resolve complicated issues. The United States agreed to participate actively; as a result, the Friends of the President drafted alternate paragraphs to replace the contested ones (see app. G).

Although the three paragraphs written by the Friends of the President were adopted without debate in the final plenary session, the debate over militarization of outer space was not yet resolved. Before the formation of the Friends of the President, the Group of 77 (G-77) had circulated a position paper calling for a ban on the "testing, stationing, and deployment of any weapons in space." During that final plenary session, Mexico moved to include this document as well as another one concerning remote sensing and direct broadcast satellites (DBS) as annexes to the report

³U. N. Press Release OS/V/42, Aug. 17, 1982.

(see app. H and I). The United States objected on the grounds that since the conference report, including the paragraphs drafted by the Friends of the President, had been agreed to by consensus it was inappropriate to attach an annex that lacked the consent of all participants. This debate was settled by adding a paragraph in the report that referred to the G-77 document but did not include it as an annex.

The United States had no easy or obvious course to follow in dealing with the "militarization" issue at UNISPACE '82. That the issue was not on the agenda as called for in the U.N. resolutions establishing the conference was, strictly speaking, correct. It was also true that lengthy discussion of the issue would not resolve it, and could distract the conference from more practical issues on the agenda. Although the United States has an interest in combating Soviet assertions that the space shuttle is a "weapon" while Soviet A-sat systems are not, it is virtually impossible to make this case without agreeing that "weapons in space," once properly defined, are bad. The United States cannot agree that weapons in space are incompatible with "peaceful uses of space" while declining to negotiate on the prohibition or limitation of those weapons. The general U.S. policy, that armaments are a deplorable necessity, but that we seek appropriate and verifiable agreements to limit or reduce them, could be put to good use in situations such as the UNISPACE '82 debate if the United States had a policy on arms control in space. Unless the United States formulates a position on further arms control measures for space, resistance to discussing the issue whenever possible may be the only "damage-limiting" strategy available to the United States (see app. A).

DIRECT BROADCASTING BY SATELLITE

DBS constitutes both a threat and a promise to developing countries. It is a threat because it provides the potential to allow foreign countries and private broadcasters to transmit programs directly to individuals, bypassing nationally controlled distribution systems. The use of DBS also has considerable promise since it would allow

countries to transmit educational, health, and other information services internally without building expensive ground-based infrastructures.

Many developing countries (strongly supported by the Soviets) want international restrictions and regulations placed on the originator of direct



Direct broadcast satellite conceptual illustration

broadcast services that spill over national boundaries. The United States opposes any restrictions on this technology on the grounds that they would be contrary to the concept of free flow of information as embodied in Article 19 of the Universal Declaration of Human Rights, adopted by the U.N. General Assembly in 1948. *

The disagreements on DBS are not simply North-South or even East-West conflicts. Within the developed West, both Canada and Mexico have expressed anxieties over the potential adverse cultural affects of U.S. television programs that will become available with new U.S. systems. The legal subcommittee of COPUOS has discussed

*This declaration states "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through media and regardless of frontiers." UN General Assembly Resolution 217 (III) Dec. 10, 1948

REMOTE SENSING

Since the first use of military remote-sensing satellites by the United States and Soviet Union in the early 1960's, some states have raised questions about the right of a country to acquire images of other countries, and the further right to disseminate such data to third parties. The United States and the Soviet Union eventually agreed not

to object to satellite reconnaissance, provided information was not publicized or shared with other than close allies. However, when the U.S. civilian Landsat system began operation in 1972, some states questioned the propriety of distributing data about their mineral and other natural resources to third parties. The U.S. policy of broad inter-

DBS and the issue of prior consent for many years and failed to reach agreement on several draft resolutions that would establish principles governing the use of this technology. Before UNISPACE '82, the DBS debate at COPUOS had reached an impasse.

The final conference report raises the issue of prior consent to broadcast by stating that DBS "could affect the sovereign rights of States"⁴ and that it is "time for countries to agree on the legal implications . . . of satellites for international direct television broadcasting".⁵ A position paper by the G-77 and submitted by Mexico went a step further in its discussion of this issue; it states:^{*}

The Group of 77 firmly hold the view that activities in the field of international direct television broadcasting through satellites should only be conducted in full respect for the sovereignty of states. In this regard the recognition by the international community of principles embodying: a) broadcasting state's responsibility, b) prior consultation and agreement between broadcasting and receiving states, and c) the radio regulations of the ITU, inter alia, are of utmost importance.

Given the strong feelings that DBS engenders, the DBS debate at UNISPACE '82 was remarkably restrained. However, this issue was the source of considerable controversy at the meeting of the U.N. Special Political Committee Meeting in November 1982. This issue is discussed in detail in chapter 5.

⁴Report on the Second U.N. Conference on the Peaceful Uses of Outer Space, A CONF. 101/10, August 1982, par. 308.

⁵Ibid., par. 309.

* As discussed above, this position paper is not part of the final draft report but is mentioned in the report as a separate conference document.

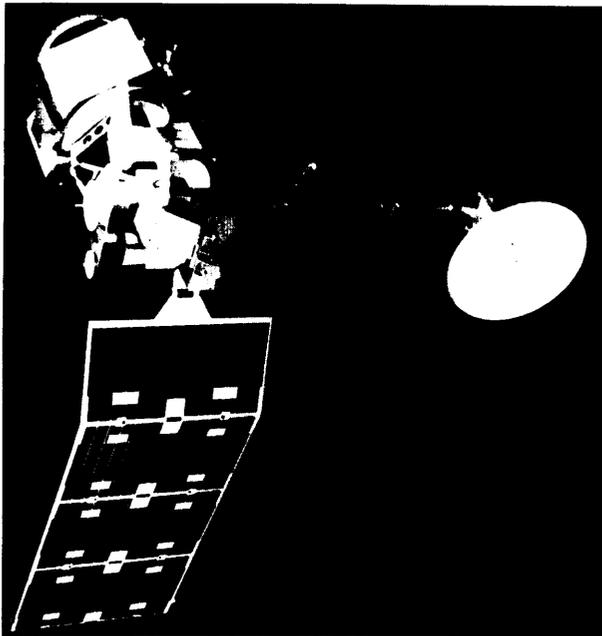


Photo credit: National Aeronautics and Space Administration

Landsat-D used for exploring the Earth from more than 400 miles distant

national dissemination gives all parties equal access to information. In addition, through the Agency for International Development, the United States has provided developing countries with assistance in the application of Landsat data for national purposes.

Today, because many of these countries now use Landsat data (80 m ground resolution) on a daily operational basis, and because a new high-resolution, commercially oriented system (the French SPOT) will be flown in 1984, questions about resolution limits, prior consent, pricing policies, and data distribution have taken on new meaning. SPOT is designed to provide ground image resolutions down to 10 m. The experimental thematic mapper on Landsat 4 provides ground resolution of 30 m or better. Such systems can not only yield information regarding natural resources but also data on some military items. Some countries favor restrictions on the ground resolution of civilian satellite sensors; others support a legal regime that would require obtaining the permission ("prior consent") of sensed countries before acquiring data or selling them publicly, especially if this is done before the data are

available to the sensed country. These countries argue that nations have sovereignty not only over their natural resources, but also over information about these resources.

The United States has repeatedly rejected prior consent rules and limiting ground resolution on the premise that any regime which controls resource information is incompatible with the U.N. doctrine of the free flow of international information. The United States favors the most open possible regime both for obtaining and disseminating remotely sensed data.

The political difficulties associated with remote sensing were not raised in the draft conference report. Instead, the draft report emphasized the economic implications of remote sensing, and called attention to: 1) the need for continued access to data from remote-sensing systems and, 2) the importance of efficiently coordinating existing and new systems for use by developing countries. ^bParagraph 172 of the draft report (par. 174 of the final report) had said:

. . . A possible situation in which data is not available to the sensed State but is available for commercial and other forms of exploitation by another country has been a cause of concern to a number of countries. It is therefore important to reach agreement on principles governing satellite remote sensing.

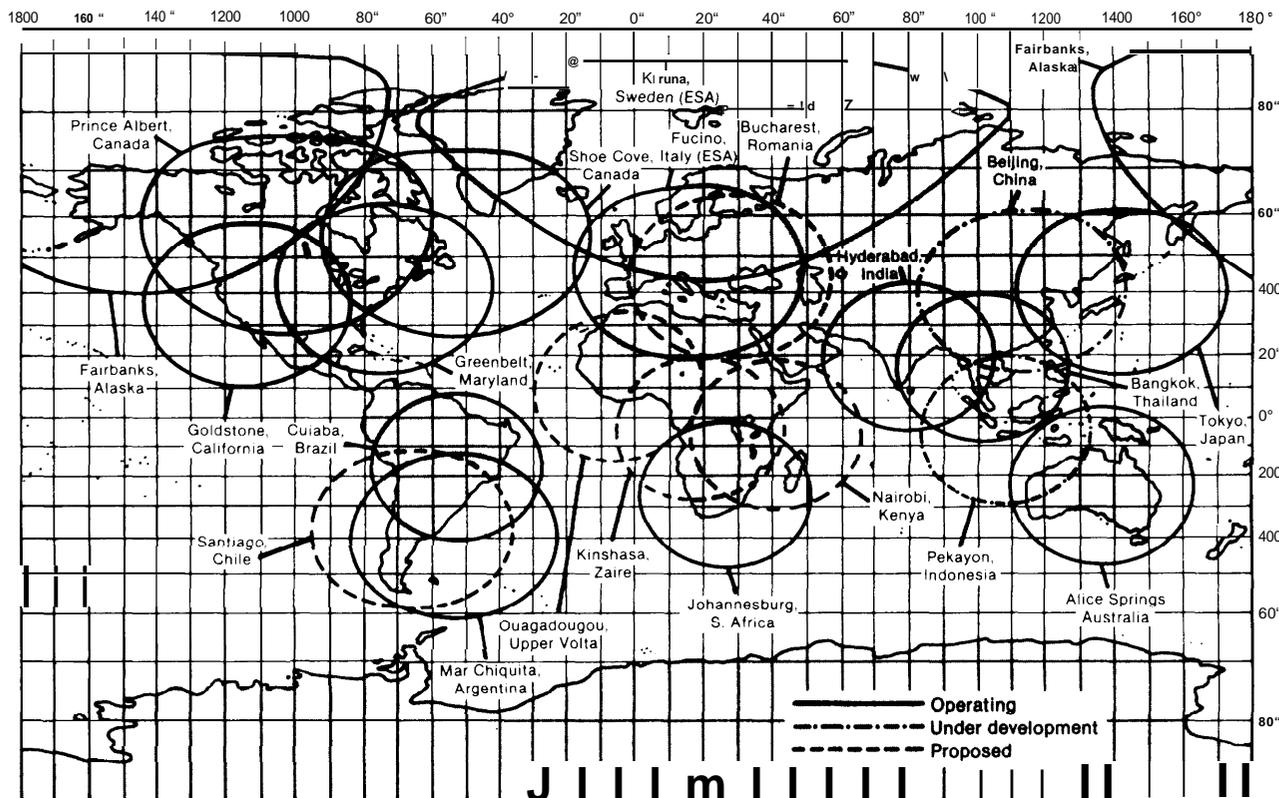
In the final report of the conference (par. 174) the wording was altered to say:

A possible situation in which data are not available to the sensed State but are available for commercial and other forms of exploitation by another country has been a cause for concern to a number of countries. The sensed State shall have timely and non-discriminatory access under reasonable conditions to the primary data obtained by remote sensing from outer space which relate to its territory. It is therefore important to reach agreement on principles governing satellite remote sensing. Accordingly, the current discussions on this in COPUOS should be completed expeditiously.

This amended paragraph, by recommending "timely and nondiscriminatory access [to data]

^a"Draft Report of the Conference, " A/CONF. 101/3, Apr. 20, 1982.

Current and Probable Landsat Ground Stations



NOTE Coverage circles based on Landsat-3 reception (altitude 917 km)
SOURCE: National Aeronautics and Space Administration

under reasonable conditions," cautiously addresses the fears of the developing countries that prior access to data by industrialized nations will result in loss of control of their own resources. Still, it fails to address the matter of prior consent to distribute data by the sensed states. A more radical approach to the issue of prior consent was taken in the position paper submitted by Mexico on behalf of the G-77.*

The Group of 77 firmly holds the view that activities in the field of remote sensing should be carried out with full respect for the sovereign rights of states. The Group of 77 believes that sensed States should have timely and unhindered access on a priority basis at nominal cost, to all

*See app. H.

data and information obtained over their territories. Dissemination of such data and information derived from it to a third party should not be done without the prior consent of the sensed country. The Group of 77 urges UNISPACE '82 to recommend, through the General Assembly, to the Committee on the Peaceful Uses of Outer Space and its Legal Sub-Committee to finalize the work on the elaboration of draft principles concerning remote sensing of the earth from space as a matter of high priority.

Although both statements accept implicitly the right of the sensing states to acquire data from satellites, the crucial issue they touch on is data dissemination to third parties. The difficulties that might result from demands for prior consent to distribute remote sensing data are discussed in chapter 5.

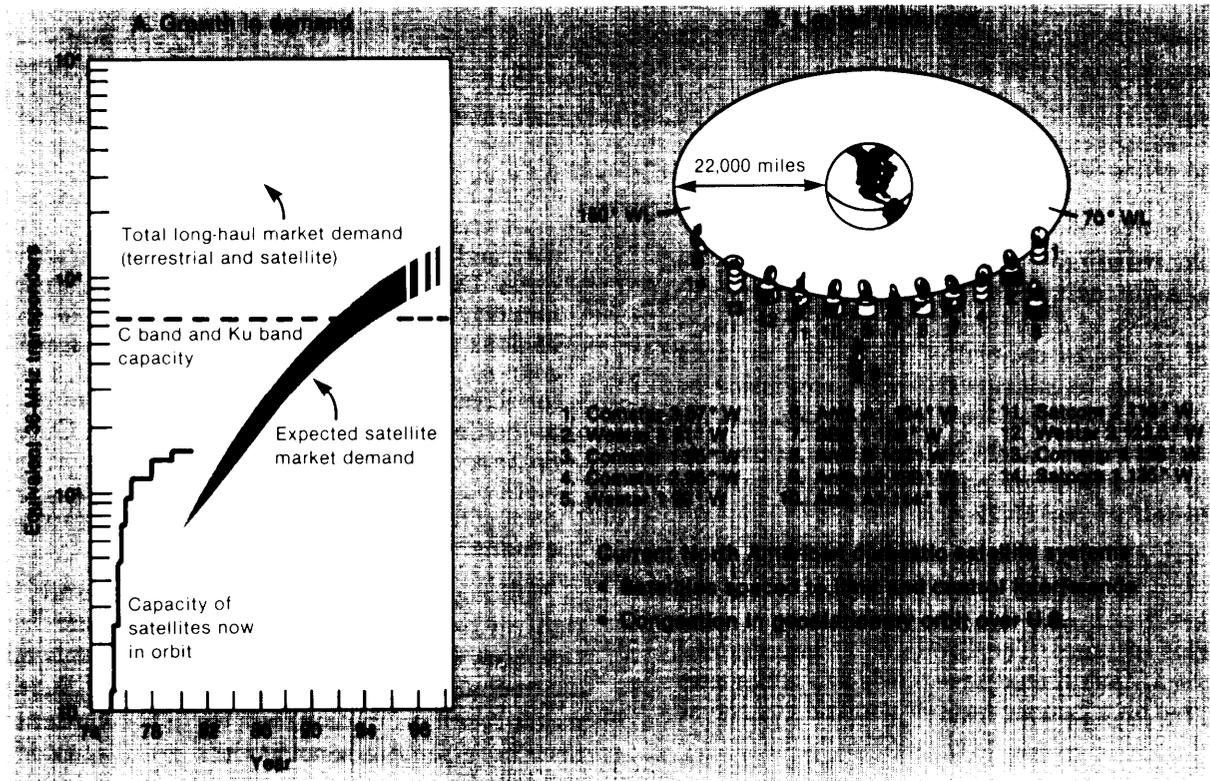
GEOSTATIONARY ORBIT

Of all the possible orbits satellites can take around the Earth, the geostationary orbit (GSO) is both most useful and most restricted. This orbit is a narrow band in the equatorial plane of the Earth 35,800 km above its surface. Because objects in the GSO remain fixed with respect to points on the Earth's surface, almost all present and projected civilian communications satellites and some meteorological satellites are located there. In recent years, certain portions of the geostationary arc have become congested electromagnetically. Physical congestion of the GSO also looms as a possibility; the probability of collisions between working GSO satellites, whose positions are highly controlled, and uncontrolled obsolete satellites grows each year. Use of the GSO has given rise to two separate disputes.

Allocation of Orbital Slots and Frequencies

The administrative responsibility for preventing electromagnetic interference in space now rests with the International and Telecommunications Union (ITU). The ITU registers and assigns satellite frequencies and orbital position requests on a first-come first-served basis; any country or organization that desires to place a satellite in orbit can do so, provided it does not interfere with other satellites. This manner of allocation and assignment is supported by the United States and other industrialized states, who argue that it permits the most efficient use of orbital and frequency resources. However, many developing states object that a "first-come first-served" policy may

The Communications Problem



SOURCE National Aeronautics and Space Administration

result in the GSO and certain frequencies being "used up" by industrialized countries before developing countries and regions can determine their own needs. These states argue for "equitable and/or guaranteed access" to ensure that these limited resources will be available to them when needed.

Claims of the developing nations to "equitable access" resulted in Resolution No. Spa 2-1, adopted by the 1971 WARC (and included in the Final Acts of WARC-79):

That the registration with the ITU of frequency assignments for space radio communication services and their use should not provide permanent priority for any individual country or groups of countries and should not create an obstacle to the establishment of space systems by other countries.

This 1971 position was reinforced at the ITU'S Malaga-Torremolinos Plenipotentiary Conference in 1973 that amended the ITU Convention to include article 33, which reads:

In using frequency bands for space radio services members shall bear in mind that radio frequencies and the geostationary satellite orbit are limited natural resources, that they must be used efficiently and economically, so that countries or groups of countries may have equitable access to both in conformity with the provisions of the radio regulations according to their needs and the technical facilities at their disposal.

The U.S. position is that technical advances can continue to expand the usable frequency spectrum and number of GSO slots sufficiently to satisfy the world's communication needs. New technology to reduce current orbital spacing and arc configuration will provide for a greater number of satellites, and recent technological advances in the use of higher frequencies (14/12 GHz and eventually 30/20 GHz) will meet the frequency requirements of all potential users.

The United States and other Western states oppose a priori allocation of slots or frequencies, and they view any comprehensive plan for geostationary allocation as restrictive and inflexible. They fear that prior restrictions may also impede technical development of communications systems.

In discussions of the UNISPACE '82 draft report, the United States argued for language emphasizing the potential of new technologies. Some

nations objected on the grounds that while new technologies could expand the GSO'S potential, they would also be more expensive, both for the space and ground segments, than current technology. The United States then supported wording giving the ITU the responsibility for evolving "criteria for the most equitable and efficient usage of the GSO and the RF spectrum" to ensure that this issue would be reconciled in a forum more capable of discussing its technical merits. * *

In a controversial paragraph (par. 150), the draft report stated:

. . . it seems desirable that developed countries shift their satellite communication system to a different frequency band (e. g., 11 /14 GHz), leaving the 6/4 GHz band basically for use by developing countries. Developed countries should also be encouraged to shift their high-density and transoceanic traffic to submarine cable or fibre-optic systems, thereby decreasing the pressure on the radio frequency spectrum and on the GSO.

Because of the disruptive effect that such a change would have on domestic and international communications, the United States and other developed countries were prepared to oppose this paragraph vigorously. The paragraph was deleted from the final conference report with little debate, suggesting that though the developing world is concerned with political access to the GSO there is little agreement as to what, if any, technological solutions may be in their best interest.

Ownership of the GSO

The importance of the GSO, the unsettled status of the longstanding dispute in COPUOS as to where outer space begins, and the desire of certain developing countries to exert greater leverage in the international system have led to a contro-

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 * In article 281 of the draft report the United States requested the inclusion of the sentence: "Further, the newer technologies that lead to better utilization (e. g., better station-keeping, higher frequencies, shaped antenna beams, etc.) should be adopted in so far as possible by all countries and international organizations." This sentence appears in the final report in this fashion: "It is desirable for all users of the geostationary orbit to take in view the advantages of adopting wherever practicable, newer technologies which could in practice facilitate more effective use of the geostationary orbit."

* * Paragraph 284 of the draft report of January 1982 had stated that such criteria should be developed with the help of ITU; this was changed to "within the ITU."

versy over the ownership of the GSO. In 1976, seven equatorial states, including Colombia, Ecuador, and Indonesia, issued the Bogota Declaration, which claimed sovereignty over the portion of the geostationary arc above their respective territories in spite of the fact that the 1967 Outer Space Treaty explicitly rejects sovereign claims to outer space. The Bogota signatories argued that the GSO was not in fact part of outer space but a distinct region determined by the Earth's gravitational pull. Support for this position by other developing countries has been mixed, partly because ownership by any one nation contradicts the desire of many developing countries for "equitable and/or guaranteed access" to the GSO. However, the equatorial countries obtained the backing of G-77 for a position paper which declares that "the present regulatory mechanism for assigning orbit

positions and radio spectrum does not ensure equitable access to this resource . . ."and that a new regulatory mechanism is necessary which will take into account "the particular needs of the developing countries including those of the equatorial countries . . ."* The final conference report mentions the claims of the equatorial countries without supporting them. * *

*See app. 1.

*Paragraph 281 of the final report states: "Despite lack of agreement on defining the precise boundary between air space and outer space, it is accepted by most nations that GSO is a part of outer space and, as such, it is available for use by all States, in accordance with the Outer Space Treaty of 1967. However, the equatorial countries consider that GSO constitutes a physical phenomenon related to the reality of our planet in that its existence depends exclusively on its relation to gravitational phenomena generated by the earth, and for this reason it should not be included in the concept of outer space and its utilization should be regulated under a sui generis regime."

TRANSFER OF TECHNOLOGY AND THE ROLE OF THE U.N. IN SPACE AFFAIRS

If there was a single underlying theme to UNISPACE '82 it was the transfer of space technology from developed to developing nations. Developing countries see the U.N. as the preferred agent of deliberation and execution for most activities related to the New International Economic Order and the New World Information Order. By contrast, many developed countries, including the United States, see the U.N. as cumbersome and politicized, and therefore inappropriate for carrying out many technology transfer programs.

The basic justification for increased access to space technology and services is that it promotes development. The final report cites many specific examples to support this view. It raises the issue first in paragraph 8 by invoking the example of the 1979 U.N. Conference on Science and Technology for Development (UNCSTD), whose conclusions are characterized as "in general, applicable to the field of space science and technology."⁷ It then cites specifics from the UNCSTD report. UNCSTD was a multinational conference similar to UNISPACE '82 that dealt with the en-

tire range of technical issues. That conference was noteworthy for its numerous attacks on developed countries for monopolizing science and technology. The developing countries demanded large-scale transfers of technical hardware and know-how to the developing world.

Among the UNCSTD conclusions quoted approvingly in the final UNISPACE '82 report are assertions that eliminating underdevelopment "presupposes an equitable distribution and creation of scientific and technological capabilities of the world. The report extends these arguments in paragraph 11, where it says that:

Space technology can be a powerful tool to accelerate national development: it provides a way of leap-frogging over obsolete technologies and getting away from percolation and trickle-down models of development for which developing countries do not have the time . . . It is therefore necessary that all countries be able to have access to space technology.

At the March COPUOS meeting, some developed countries objected both to the assignmen-

⁷Report on the Second U.N. Conference on the Peaceful Uses of Outer Space, op. cit., subpar. 8, ref. 2.

⁸Ibid.

of guilt (and the implied duty to make redress) for the uneven distribution of space technology and to the exaggerated claims made for the ability of space technology to foster development. They suggested wording to the effect that:

Space technology is by no means the complete solution to a country's problems neither can there be any generalized prescriptions for the use of space technology.

This wording appears in paragraph 12 of the final report.

During the preparations for UNISPACE '82, numerous new and expanded responsibilities for the U.N. itself were debated. In the original version of the draft report (before the March meetings of COPUOS), these coalesced into a proposal to establish a U.N. Centre for Outer Space Affairs, which would conduct research, provide technical assistance to developing countries, and disseminate space-related information. The Centre was to be independent of (and in large part would supplant) activities of the U.N. Outer Space Affairs Division and to have its own staff and budget, both substantially larger than under present arrangements.

This proposal ran into considerable opposition from several quarters. Within the U.N. bureaucracy, some officials saw the center as encroaching

on activities already performed by a number of independent U.N. agencies, e.g., the World Meteorological Organization, U.N. Development Programme, and the U.N. Centre for Science and Technology. Many countries, including the United States, while not opposing the concept of the Centre, objected to the added expense. The Soviet Union, given its dominant position in the Secretariat of the Committee on Political and Security Council Affairs which oversees the Outer Space Affairs Division, opposed any diminution of the powers of OSAD.

As a consequence, the second draft emphasized firmly coordinating activities with other appropriate U.N. agencies but did not recommend establishing the new Centre. The final report represents a compromise: it requests the General Assembly to consider whether it would be best to establish a center or to expand the present OSAD. In adopting the conference report in December, 1982, the General Assembly attempted to do both. It established an International Space Information Service to provide direction to existing data banks and information sources. ⁹This is a much diluted version of the original concept of the center. The General Assembly also requested the Secretary General to strengthen OSAD.

⁹U.N. Doc. A/SPC/37/L.7; par. 8.