

AR)  
ed  
that the  
the  
of the  
,  
l  
'  
ows:  
re  
eir  
in  
el,  
e

UNITED NATIONS  
GENERAL  
ASSEMBLY



Distr.  
GENERAL

A/AC.105/PV.171  
19 July 1977

ENGLISH

COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

VERBATIM RECORD OF THE ONE HUNDRED AND SEVENTY-FIRST MEETING

Held in Vienna, Austria,  
on Wednesday, 22 June 1977, at 10.30 a.m.

Chairman: Mr. JANKOWITSCH (Austria)

General debate (continued)

This record is subject to correction.

Corrections should be submitted in one of the working languages, preferably in the same language as the text to which they refer. They should be set forth in a memorandum and also, if possible, incorporated in a copy of the record. They should be sent within one week of the date of this document to the Chief, Official Records Editing Section, Department of Conference Services, room LX-2332.

Any corrections to the records of the meetings of this session will be consolidated in a single corrigendum, to be issued shortly after the end of the session.

77-70342

The meeting was called to order at 10.45 a.m.

GENERAL DEBATE (continued)

The CHAIRMAN: Before calling on the first speaker, I should like to inform the Committee of requests we have received for participation in our work, and of the results of consultations thereon which I have conducted with delegations.

I have received, first, a cable dated Bogota, 20 June, from the Minister of Foreign Affairs of Colombia, Carlos Borda Mendoza, the text of which, in the Spanish original, is the following:

(spoke in Spanish)

"I have the honour to request you to be good enough to allow Colombia to be represented in an observer capacity, at the United Nations Conference on the Peaceful Uses of Outer Space by Messrs Jaime Aguilera-Blanco, José Joaquín Caicedo and Gerardo Mecías.

"Please accept the assurances of my highest consideration."

(continued in English)

I have made this cable the subject of consultations with delegations, including the delegation of Colombia, and I should now like to suggest, as a result of those consultations, that we invite the delegation of Colombia to address this Committee at an appropriate moment, without precedent to further requests of this nature. It is my intention to call on the delegation of Colombia and on the delegation of Ecuador which has made a similar request, at the end of the morning meeting.

This will be without precedent to further requests of this nature, and will not involve any decision of the Committee concerning status, but will be a courtesy which the Committee extends to those two delegations.

If I hear no objection we shall proceed accordingly.

It was so decided.

Mr. ANWAR SANI (Indonesia) It indeed seems fitting to my delegation that the Committee on the Peaceful Uses of Outer Space should be meeting in this historic and beautiful city of Vienna which in 1968 played host to the first United Nations Conference on the Exploration and the Peaceful Uses of Outer Space.

(Mr. Anwar Sani, Indonesia)

We should like to take this opportunity to express our thanks to the Government of Austria for its hospitality in hosting these meetings, and our special gratitude to the President of Austria for his inspiring address when he opened this session on Monday.

I have had the privilege and the pleasure, Mr. Chairman, of working closely with you since both of us were accredited to the United Nations more than five years ago. It is therefore on the basis of direct experience that my delegation expresses its full confidence that the Committee, under your dedicated and wise leadership, will be able to make even more significant progress in promoting the peaceful uses of outer space.

Our high appreciation also goes to the Chairman of the two Sub-Committees, as well as to the Chairmen of the Working Groups, and also to the United Nations Outer Space Division, for their outstanding contribution to the work of the Committee.

Many delegations in their various statements have made reference to the rapid development of space technology, and I think it is appropriate for my delegation to pay tribute to one of the most important contributors to space technology, Dr. Werner von Braun, who died recently. His name is inseparably linked to the successful landing of the first man on the moon.

Let us now turn to the report of the Legal Sub-Committee. With regard to the question of the draft treaty relating to the moon, my delegation regrets that no agreement has yet been reached on such issues as the scope of the treaty and the status of the natural resources of the moon. We wish to reiterate the view that the principle of the common heritage of mankind and the related rights of exploitation and exploration are of great importance to the formulation of the treaty. My delegation is of the opinion that they are inseparably linked, and should be implemented only through the establishment of an international régime which would ensure not only the opportunity for the exploitation and use of the resources, but also an equitable sharing of their benefits.

These principles imply the recognition by all States, of a common trust of the moon and its resources. Such resources should therefore not be considered the property of only those who are able to explore and exploit them. Rather such exploration and exploitation, when feasible, should benefit all mankind on an equitable basis.

(Mr. Anwar Sani, Indonesia)

In order to regulate those activities and to ensure an equitable distribution of benefits, States should commit themselves to establishing an international régime for those purposes. Such a development would parallel that of the emerging law of the sea, which recognizes the common heritage principle with regard to the resources of the sea-bed area beyond national jurisdiction and the need for a régime to ensure its rational application by the international community. It is essential to recognize that article II of the Outer Space Treaty should be understood to mean that the moon and other celestial bodies should not only be available for the common use of all States, but should be under their joint trust as well. It is the firm view of my delegation that such an approach would prevent the moon and other celestial bodies from becoming potential areas of conflict.

The use of direct broadcasting satellite technology undoubtedly holds vast potential for promoting international understanding and co-operation and advancing the development efforts of Member States. However, if its application is not carefully regulated, it might become a cause of conflict rather than a source of harmony. My delegation views with serious concern the impact which this technology may have on the social and cultural as well as the political aspects of national life if its application is not well regulated.

The dangers of unregulated freedom of information were recognized by the General Assembly as early as its second session, when it recommended the adoption of measures intended to combat the dissemination of distorted reports likely to disturb friendly relations among States. They were also recognized in the preamble to the Convention on the International Right of Correction, which as we know, was a Convention already in force. This preamble was envisaged to deal, among other things, with threats to the maintenance of friendly relations among States arising from the dissemination of inaccurate reports. Thus, the need to provide protection for States which might be adversely affected by false and distorted information has been clearly established.

We are confronted with the task of reconciling the political concept of freedom of information with the legal concept of State sovereignty. As my delegation has had occasion to observe, if freedom of information could be construed within the framework of international co-operation and understanding and if consent could be construed as an exercise of sovereign rights to be protected against possible dissemination of information that might have a different impact on the political, social, and cultural life of the receiving countries, then it is possible to find some alternative formulations to reflect these concerns.

(Mr. Anwar Sani, Indonesia)

It seems to my delegation that the principle of freedom of information should not be considered absolute but must be considered in the context of other principles governing international relations. Moreover, we should bear in mind the fact -- which is of particular importance in this regard -- that an agreed procedure by which the international community can verify the authentic nature of information flowing from one country to another is still lacking. Since the flow of biased information and ideas may have a deleterious effect not only on national political institutions and social mores but also on national security, it is clearly within the competence of sovereign Governments to protect their peoples against such harmful influences.

In this connexion, it has been asserted that the technical regulations of the International Telecommunication Union (ITU) impose practical limitations on direct international satellite broadcasts. In my delegation's view, however, these technical constraints do not by themselves suffice, in view of the fact that questions attendant upon the protection of national sovereignty in relation to satellite broadcasting are most complex. Moreover, the ITU regulations, which are intended to promote orderly utilization of satellites for direct television broadcasting, are concerned primarily with the present state of the technology and are more specifically addressed to a particular point of time without reference to future technological possibilities.

It is true that under the ITU Final Acts channels have been allocated for each country's broadcasting needs in such a way as to prevent interference with another country's channels. Nevertheless, it is at the same time recognized in article 14 of the same document that possibilities of interference, for whatever reasons, continue to exist. In view of these factors, and the recognition that satellite broadcasting should be based solely on prior agreements, it is essential to elaborate the principle of consultation and agreements, which will strengthen the technical regulations already in force. This is particularly true in view of the fact that our task in terms of the General Assembly mandate is much broader in scope, covering, as it does, a whole range of technical, political and legal issues of far-reaching implications.

(Mr. Anwar Sani, Indonesia)

Indonesia shares the view that the international community should not seek to devise detailed rules far in advance of the development of objective conditions to which they are intended to apply. Radically new technical developments may well render such regulations irrelevant to the course of developments in the future. If general guiding principles can now be agreed upon, then the development of practical applications of broadcast technology to national needs may be attempted, bearing in mind that satellite broadcasting should be subject to appropriate agreements arrived at as a result of consultations among the interested States. In our view, such an approach will take into account the need to safeguard the sovereign rights of States as well as non-interference in internal affairs, which would facilitate the evolution of satellite broadcasting to its full potential.

The question of remote sensing satellites for the collection of data concerning the earth's natural resources and environment as a potentially effective tool in enhancing economic development is of great interest to Indonesia. In my delegation's view, new rules must be formulated to ensure that remote sensing does not infringe upon the legitimate interests of the sensed States. Adequate protection should be extended at all times to the sensed States, and their sovereign right to the data collected should be fully recognized. The close interrelationship between the technical, organizational and legal aspects of these questions makes it difficult to come to a final conclusion now on the best way to disseminate data. A high degree of flexibility would be required to meet additional legal and political problems of a complex nature which might arise in the application of more sophisticated technology in the future.

In our view, these concerns are adequately reflected in the unnumbered principle formulated on page 6 of annex III to the report of the Legal Sub-Committee (A/AC.105/196). We consider the proposed principle to be a fair and just solution, which will ensure that further application of remote sensing does not interfere with the principle of sovereignty of States over their natural resources.

(Mr. Anwar Sani, Indonesia)

The question of the definition and delimitation of outer space has continued to occupy our attention for a number of years. In our view, there is a need for defining outer space. Such a definition should start from the premise that there are only two possible zones, namely, the atmosphere and outer space, governed by different legal régimes. We further consider that the geographical scope of regulations governing air space and outer space should be clearly defined. Although the present activities of States in outer space do not seem to violate the sovereignty of States, some new types of outer space activities are becoming a reality and the need has arisen for a distinction between the sphere of application of air law and outer space law in order to avoid future conflicts.

One aspect of this problem concerns the technical and legal implications arising from the geostationary orbit of satellites. In this context the question has arisen whether under the terms of the Outer Space Treaty the orbiting of geostationary satellites can be regarded as a legitimate activity or as an act of appropriation of a part of space by a nation or group of nations. The fact that it will be years before other nations will have the technological capability to place their own satellites in geostationary orbit should, of course, not impede a review of the current practice, which is based on the questionable principle of "first come, first served". General acceptance of this principle raises certain fundamental questions of importance concerning the legitimacy of the first occupier to occupy indefinitely a particular orbital location in space, particularly above an equatorial State. The state of the technology, as has been generally commented upon, has now suggested that the life span of future generations of satellites can be expected to be considerably longer. These developments have created a need for a system of advance planning and co-ordination which will be flexible while at the same time ensuring the availability of orbital locations and natural space resources for late-comers.

We feel that this matter should be resolved, in view of the importance and complexity of the issue of geostationary orbital satellites and its relationship to the question of the delineation of outer space.

(Mr. Anwar Sani, Indonesia)

I should now like to refer to the report of the Scientific and Technical Sub-Committee (A/AC.105/195). My delegation is in general agreement with several aspects of the report. On remote sensing, in particular, we agree with the formulation of the terms 'primary data' and 'analysed information' as suggested in the report. As regards classification of the data, we feel that further serious consideration should be given to the working paper prepared by the Soviet Union. This working paper can be used as a basis for further discussion as it seeks to combine recognition of the sovereign rights of States with international legal regulations.

The United Nations programme on space applications continues to be limited, despite repeated appeals for its expansion. The programme has already proved its worth in numerous ways and has had a profound impact. From its initial task of creating an awareness of benefits to be derived from space applications to an expanded programme of providing education and training opportunities. However, there are a number of additional areas which deserve examination by experts but which cannot be dealt with because of lack of adequate resources. The desirability of including technical assistance to developing countries in the area of practical applications should be given more serious consideration. In order to promote these activities and launch a full-scale programme of space applications it might be necessary to consider a proposal for voluntary contributions which would be utilized to finance such endeavours.

As regards the question of a United Nations conference on outer space matters my delegation continues its support for the proposed conference and is confident that it would be preceded by adequate preparations to ensure its success. Although the number of replies received so far in response to the Secretary General's communication on this issue might seem insufficient to permit the formulation of definitive conclusions, their contents clearly indicate that the idea of holding an international conference commands wide support.

As I emphasized it is important to recognize the importance of space technology applications from the perspective of the needs of the developing countries and the need for their continual assessment. It is also necessary to review the progress made in space applications in all their aspects since the Vienna Conference of 1968 and to consider the present and future requirements of practical

(Mr. Anwar Sani, Indonesia)

applications of special value to the developing nations. An increased exchange of information on space programmes and experiments carried out by several countries is certainly to be welcomed. We need a forum to foster regional and international co-operation in systems pertaining to ground and space segments and to discuss a United Nations technical assistance programme on space applications, which is often suggested in our deliberations.

(Mr. Anwar Sani, Indonesia)

Furthermore, as the study by the Secretariat on this question makes clear, there is justification for convening a United Nations conference on outer space matters if it is action-oriented and designed to strengthen the capabilities of member States in using the applications of space research for their economic and social development. In that context, it would be necessary to consider, among other things, whether or not the existing machinery for promoting international co-operation in this field is adequate. In the opinion of my delegation, these reasons justify the convening of a United Nations conference on outer space matters.

Mr. Chairman, in your opening remarks, you appropriately highlighted the need for the Committee to look more seriously into the question of the generation of solar energy through space technology. After remote sensing, we believe this to be the area of future priority in the work of the Committee. We hope that international co-operation will be forthcoming in view of the importance of this new technology and its implications. We agree that it is incumbent upon the Committee to ensure that it will be developed and applied in the interests of all nations, including the developing countries.

In conclusion, the United Nations must play a greatly expanded role in the promotion of the peaceful uses of outer space. The Committee has always emphasized the importance of disseminating knowledge and understanding of the achievements of space science and technology. Major strides have been made to that end, and my delegation hopes that that progress will continue. We also hope that there may be an even greater degree of co-operation in the years ahead so that the achievements in the field of the peaceful uses of outer space will indeed benefit all mankind.

Mr. RUTSCHEN (German Democratic Republic): On behalf of the delegation of the German Democratic Republic, I wish, first to thank the President of the Republic of Austria, Mr. Kirchschnager, for his kind words on the opening of this twentieth session of the Committee on the Peaceful Uses of Outer Space and for his good wishes for the success of its proceedings. At the same time, Mr. Chairman, we should like to express our satisfaction at the fact that this year's session of the Outer Space Committee under your experienced leadership is held in the capital of your country.

(Mr. Rutschén, German Democratic Republic)

In assuring you of our continued commitment to open-minded and fruitful co-operation, we wish you, Sir, and all others present here every success in the further work of this Committee.

For two decades now, outer space and the celestial bodies have been intensively explored and used in the interests and for the benefit of all States. Within this historically short period of time, co-operation among States in this particular sphere has yielded tremendous scientific and technological achievements, which will retain a lasting place in the history of mankind. Let us recall here, in particular, the memory of Soviet cosmonaut Yuri Gagarin, who was the first man to orbit the earth in a space ship on 12 April 1961, and also the feat of United States astronauts Neil Armstrong and Edwin Aldrin, who were the first men to set foot on the moon on 20 July 1969 and the first bilateral docking mission on 15 July 1975 of two manned spacecraft, the Soviet SOYUZ and the American APOLLO. Particularly great advances have also been made, during the past 20 years, in the field of the transmission of information by satellite. As members well know, nearly 130 States now operate ground stations in their territories for the reception of radio and television broadcasts via satellites. On 13 May 1977, the Soviet Union and the United States signed an agreement concerning co-operation in the exploration and use of outer space for peaceful purposes. We are convinced that this accord will be both instrumental in lending a fresh impetus to the peaceful use of outer space and conducive to the further work of this Committee. In article 4 of the agreement, the two contracting parties have stated their determination to intensify their co-ordinated efforts at strengthening, and further developing the international legal régime governing outer space. The delegation of the German Democratic Republic wishes both States every success in the implementation of that agreement.

During the past 20 years, the German Democratic Republic has made a modest, but steadily growing, contribution to the peaceful exploration and use of outer space. As already reported in greater detail on a previous occasion, our international co-operation was highlighted by the use on board the Soviet SOYUZ-22 spacecraft of an IKT 5 multispectral camera made in the German Democratic

(Mr. Anwar Sani, Indonesia)

Furthermore, as the study by the Secretariat on this question makes clear, there is justification for convening a United Nations conference on outer space matters if it is action-oriented and designed to strengthen the capabilities of member States in using the applications of space research for their economic and social development. In that context, it would be necessary to consider, among other things, whether or not the existing machinery for promoting international co-operation in this field is adequate. In the opinion of my delegation, these reasons justify the convening of a United Nations conference on outer space matters.

Mr. Chairman, in your opening remarks, you appropriately highlighted the need for the Committee to look more seriously into the question of the generation of solar energy through space technology. After remote sensing, we believe this to be the area of future priority in the work of the Committee. We hope that international co-operation will be forthcoming in view of the importance of this new technology and its implications. We agree that it is incumbent upon the Committee to ensure that it will be developed and applied in the interests of all nations, including the developing countries.

In conclusion, the United Nations must play a greatly expanded role in the promotion of the peaceful uses of outer space. The Committee has always emphasized the importance of disseminating knowledge and understanding of the achievements of space science and technology. Major strides have been made to that end, and my delegation hopes that that progress will continue. We also hope that there may be an even greater degree of co-operation in the years ahead so that the achievements in the field of the peaceful uses of outer space will indeed benefit all mankind.

Mr. KUTSCHER (German Democratic Republic): On behalf of the delegation of the German Democratic Republic, I wish, first, to thank the President of the Republic of Austria, Mr. Kirchschiager, for his kind words on the opening of this twentieth session of the Committee on the Peaceful Uses of Outer Space and for his good wishes for the success of its proceedings. At the same time, Mr. Chairman, we should like to express our satisfaction at the fact that this year's session of the Outer Space Committee under your experienced leadership is held in the capital of your country.

(Mr. Kutschera, German Democratic Republic)

In assuring you of our continued commitment to open-minded and fruitful co-operation, we wish you, Sir, and all others present here every success in the further work of this Committee.

For two decades now, outer space and the celestial bodies have been intensively explored and used in the interests and for the benefit of all States. Within this historically short period of time, co-operation among States in this particular sphere has yielded tremendous scientific and technological achievements, which will retain a lasting place in the history of mankind. Let us recall here, in particular, the memory of Soviet cosmonaut Yuri Gagarin, who was the first man to orbit the earth in a space ship on 12 April 1961, and also the feat of United States astronauts Neil Armstrong and Edwin Aldrin, who were the first men to set foot on the Moon on 20 July 1969 and the first bilateral docking mission on 15 July 1975 of two manned spacecraft, the Soviet SOYUZ and the American APOLLO. Particularly great advances have also been made, during the past 20 years, in the field of the transmission of information by satellite. As members well know, nearly 130 States now operate ground stations in their territories for the reception of radio and television broadcasts via satellites. On 18 May 1977, the Soviet Union and the United States signed an agreement concerning co-operation in the exploration and use of outer space for peaceful purposes. We are convinced that this accord will be both instrumental in lending a fresh impetus to the peaceful use of outer space and conducive to the further work of this Committee. In article 4 of the agreement, the two contracting parties have stated their determination to intensify their co-ordinated efforts at strengthening, and further developing the international legal régime governing outer space. The delegation of the German Democratic Republic wishes both States every success in the implementation of that agreement.

During the past 20 years, the German Democratic Republic has made a modest, but steadily growing, contribution to the peaceful exploration and use of outer space. As already reported in greater detail on a previous occasion, our international co-operation was highlighted by the use on board the Soviet SOYUZ-22 spacecraft of an MKF 6 multispectral camera made in the German Democratic

(Mr. Kutschan, German Democratic Republic)

Republic. The interpretation from an economic point of view of selected-area photographs of the territory of the German Democratic Republic by means of MSP-4, a multispectral projector manufactured by Carl Zeiss, Jena, is currently being expanded and improved, the focus being placed on various branches of geology, hydrology, geography, agriculture and environmental protection.

Subsequent space research activities by the German Democratic Republic have been pursued with undiminished continuity.

So we are proud to report here also that a group of nationals of the German Democratic Republic has started training for manned space flights at the Yuri Gagarin training centre for cosmonauts in the Soviet Union.

The United Nations has always played an active co-ordinating role in organizing world-wide co-operation in the exploration and use of outer space. As early as 13 December 1958 when, at its thirteenth session, it adopted resolution 1348 (XIII) on the item entitled, "Peaceful uses of outer space", the General Assembly unanimously recognized

"the common interest of mankind in outer space and... that it is the common aim that outer space should be used for peaceful purposes only".

This intention to use outer space and celestial bodies in the interests of mankind and exclusively for peaceful purposes has been stated in all relevant resolutions of the United Nations General Assembly. Of great significance for the peaceful exploration and use of outer space and celestial bodies is the 1963 Moscow Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water. It follows from that Treaty, as well as from the Outer Space Treaty of 1967, that the essence of the concept of freedom in respect of outer space is characterized by the obligation of all States to conduct their space activities for peaceful purposes only. The term "peaceful use" is understood by our delegation to refer to any unarmed activity performed in outer space or on celestial bodies.

It must be noted, however, that the goal of the demilitarization of outer space and of celestial bodies has not as yet been achieved. In order to achieve it all States will be required to make further considerable efforts. A legal régime of this kind can be effectively achieved only if there is respect

(Mr. Kutschan, German Democratic Republic)

for, and observance of, equality and equal security, particularly on the part of the nuclear-weapon States. The delegation of the German Democratic Republic therefore believes that the conclusion of a world treaty on the non-use of force in international relations, such as was proposed at the thirty-first session of the United Nations General Assembly, would undoubtedly go a long way towards reaching that objective. The draft treaty submitted by the USSR is based firmly on the principle of the general prohibition of the threat or use of force in inter-State relations, embodied in Article 2 (4) of the Charter of the United Nations and reaffirmed in the Declaration on Principles of International Law of 24 October 1970.



(Dr. Kutschan, German Democratic  
Republic)

With a view to further specifying and formalizing that principle, its scope of application is defined by the Soviet draft in a comprehensive way so that the use of force would be banned in all environments covered by international law, including outer space, the moon and other celestial bodies. The conclusion of such a world treaty would provide fresh opportunities to put a halt to the arms race and would help to enhance the responsibility of States to comply strictly with that principle.

Over recent years decisive stimuli - scientific, technical and legal - have emanated from the United Nations, its Outer Space Committee and several of its specialized agencies to deepen international co-operation in the peaceful exploration and use of outer space. First and foremost among them were the adoption and implementation of the United Nations programme on space applications, which is to provide assistance to developing countries, and the activities of specialized agencies in the field of the peaceful exploration and use of outer space.

This fruitful international co-operation among States with different social systems is based on the purposes and principles set forth in the United Nations Charter. It is increasingly obvious that also from the angle of the exploration and use of outer space, the United Nations Charter has stood its test as a document that is farsighted and flexible enough to take due account of the changes taking place in the world of today. We are confirmed in this belief by the successful work of the outer space Committee, which, since 1959, has a record of having drafted four major multilateral international instruments to which a great number of States have acceded. I am pleased to recall here that, following the deposit of its instrument of ratification of the Convention on Registration of Objects Launched into Outer Space, the German Democratic Republic is now a party to all four of those instruments.

My delegation considers it desirable for all States to become parties to those international instruments. We therefore support the draft resolution proposed by the Soviet Union on the tenth anniversary of the entry into force of the Outer Space Treaty, which, inter alia, invites all States which have not yet acceded to that Treaty to do so as soon as possible. My delegation feels that recognition by all States of the principles and norms set out in the Outer Space Treaty

(Dr. Kutschan, German Democratic  
Republic)

would also be an effective contribution toward disarmament and the strengthening of international security in this area of inter-State relations. At the same time, universal adherence to the Outer Space Treaty would reaffirm the principle laid down in its article I, according to which:

"The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind".

One of the fundamental principles governing the work of the Outer Space Committee is that of consensus. Our delegation would like to take this opportunity to reaffirm its view that over the years the consensus principle has fully proved its worth in the work of this Committee. The point is not for this Committee to enforce decisions for or against a State or group of States; rather, all its members ought to seek solutions based on mutual agreement and help constructively to fulfil the tasks entrusted to it. We cannot approve of the view held by some States that the Outer Space Committee was acting only in the interests of and for the benefit of a few States. The carefully balanced composition of the Committee's membership plus the application of the consensus principle will safely guarantee due consideration for the interests of all groups of States represented in the United Nations.

As to the reports submitted by the Scientific and Technical Sub-Committee (A/AC.105/195) and by the Legal Sub-Committee (A/AC.105/196), our delegation has studied both of them carefully and agrees to them. We shall comment on them in detail later, as the Committee proceeds to the relevant items on the agenda. Already at this juncture, though, we should like to state our readiness to co-operate in the final solution of the outstanding questions related to the elaboration of principles governing the use of satellites for direct television broadcasting. The delegation of the German Democratic Republic therefore supports the recommendation contained in the report of the Legal Sub-Committee that work on the aforementioned draft principles be continued during the current session.

Mr. ABDEL-GHANI (Egypt): Mr. Chairman, it is fitting to hold this twentieth anniversary session of the Committee on the Peaceful Uses of Outer Space in Vienna. Here in this historical palace the first United Nations conference on outer space was held nearly a decade ago. It was an outstanding success in two important aspects. It was the first and largest international meeting where the scientists and experts got together and sent a message to the policy-making people of a large number of countries, in particular, the developing countries, in order to familiarize them with the benefits that could be derived from the application of space science and technology in the fields of economic, social and educational development. Secondly, the conference was a turning point in the work of the United Nations in the field of outer space. Hence, its attention was directed towards bringing home to the developing countries an awareness of the fact that space science and technology are no longer a luxury to be monopolized and enjoyed only by the very advanced countries but that it was a necessity for any country or region trying to develop itself.

In the past those countries discovered at a late stage that steam or electricity was a necessity; but they found that out the hard way. Now they find space science and technology are a new necessity, but they find this out through international co-operation. This Committee is a focal point for that area of international co-operation. We are therefore grateful that the Committee has been offered an opportunity for the first time to move from the basement of the glass building on the East River in New York to this magnificent Hofburg Palace.

(Mr. Abdel-Ghani, Egypt)

We are grateful to the Government of Austria for hosting the session in this beautiful, historic and hospitable city, which is developing as an international centre because it has all the qualifications to make it a proper place for international agencies and meetings. The fact that His Excellency the Federal President of the Republic came to address the opening meeting of this anniversary session testifies to the importance the Government of Austria attaches to all efforts aimed at the promotion and furtherance of international co-operation whether in the political field or in the scientific and economic fields.

On this occasion I must say that this Committee has been fortunate to work under the devoted leadership of four outstanding Austrian diplomats. Your brilliant leadership of the Committee during the past few years, Mr. Chairman, was preceded by the outstanding leadership given by the former Chairman, the late Ambassador Match, by Ambassador Haymerle, whom I was very happy to see at the opening meeting, and by Secretary-General Waldheim, who was kind enough to send an encouraging message to the Committee. I had the privilege of working closely with the four Chairmen during the years I worked in the Outer Space Affairs Division, and I witnessed the landmark successes achieved by this Committee, its two Sub-Committees and its other subsidiary bodies. I am confident that this session will be crowned with similar success.

Turning to the work before us, I must admit that the Director of the Outer Space Affairs Division, Mr. Perek, frightened me when he said that the Committee and the two Sub-Committee have this year received 85 documents comprising over 2,000 pages. I have to be frank and admit that I have not read many of these documents. I will therefore confine my statement to a few salient points in the reports of the two Sub-Committees and other related matters. I will leave it to my colleague Mrs. Khattab to deal with the more difficult questions later on.

My delegation is happy to see that the Scientific and Technical Sub-Committee has once again made notable progress in its work under the able leadership of Professor John Carver. It has given detailed consideration to questions relating to remote sensing. We particularly welcome the support given by the Sub-Committee to the activities undertaken in this field in Africa through the African Remote

(Mr. Abdel Ghani, Egypt)

Sensing Council, which was recently been established under the auspices of the Economic Commission for Africa in accordance with the recommendation made by the Organization of African States at the ministerial level. The purpose of this Remote Sensing Council is to co-ordinate the work of the African ground stations as well as the training and user-assistance centres that are being established in five areas of Africa, including Egypt.

In this connexion we praise the decision of the Government of Sweden to offer financial assistance up to \$50,000 for the conduct of the on-site programme on remote sensing for the benefit of developing countries in East Africa, as noted in paragraph 105 of the Sub-Committee's report.

We also noted with satisfaction what was said yesterday by the Director of the Outer Space Affairs Division in this regard. He said that in order to increase the involvement of the Division in the activities carried out in Africa in the field of remote sensing a qualified expert from Africa will be appointed to the Space Applications Section and his main assignment will be to follow closely the activities of the Economic Commission for Africa and to be in charge of the organization of a seminar on remote sensing from space to be held in Kenya in 1978.

Concerning the Centre in Cairo, a few days ago I met with the Director of that Centre so that he could brief me on the activities carried out by the Centre, which started in 1971 as a co-operative venture between the Egyptian Academy of Scientific Research and Technology, the United States National Scientific Foundation and Oklahoma State University in the United States. At present the Centre employs a corps of 65 highly qualified scientists and specialists covering several areas of resources. The Centre has access to the laboratory facilities of specialized scientific institutes and research centres as well as several Egyptian universities. During the past four years the Centre has conducted several research and field projects in Egypt, and it is starting to extend its activities to one or two other Arab countries. I have brought with me three of the Centre's recent publications on its activities in three different areas of Egypt, and I shall make them available to the library of the Outer Space Affairs Division. There is also a list of other publications which will be sent to the library if they are of interest to the work of the Outer Space Affairs Division.

(Mr. Abdel-Ghani, Egypt)

We also note with satisfaction the recommendations of the Sub-Committee regarding the establishment of two international centres, one at the Food and Agriculture Organization, at Rome, in the area of renewable resources, and the other at the United Nations Centre for Natural Resources, Energy and Transport, in the area of non-agricultural resources. The centres have been assigned the important task of providing training and technical assistance relating to data interpretation, an area which is of particular importance to developing countries. In this connexion we should note paragraph 72 of the Sub-Committee's report, which emphasizes that the training and education of users is a continuing requirement and that the provision of technical advisory services is of special importance when developing countries are conducting their first experiments with a view to introducing this new technology into their economic and social systems. We support the recommendations of the Sub-Committee in this regard, and we hope that the necessary funding can be made available so that these recommendations can be effectively carried out on a reasonably large scale.

The United Nations programme on space applications is proceeding successfully in this field of training and education. Since it was established in 1970 it has slowly but steadily gained momentum. It has been providing a most useful service, especially through the series of training seminars and workshops organized in many countries, including Egypt. My delegation is appreciative of the work of the Expert on Space Applications, Mr. Murthy, who has ensured the implementation of the programme in a most satisfactory manner within its modest budget.

(Mr. Abdel-Ghani, Egypt)

I now turn to the report of the Legal Sub-Committee. The Sub-Committee has commemorated in a draft resolution the tenth anniversary of the chairmanship of Mr. Wyzner of Poland. My delegation is pleased to support this draft resolution, which it hopes will be reflected in the report of our Committee. Mr. Wyzner has guided the work of the Sub-Committee with skill and devotion like his predecessor, Mr. Lachs, who is now the President of the International Court of Justice.

The two distinguished personalities who have presided over the Legal Sub-Committee since its inception have frequently praised the very valuable and devoted services which Miss Chen has rendered to the Sub-Committee, which she served as its Secretary until the last session. Her many responsibilities in the Office of Legal Affairs will unfortunately deprive the Sub-Committee and our Committee of her future services. I take this opportunity to express the great appreciation of my delegation and myself for the valuable services she rendered with great skill and devotion.

With regard to the draft treaty relating to the moon, I have to state that there has been no change in the position taken by several delegations with regard to the question of the resources of the moon; and therefore there is no change in the position taken by the delegation of Egypt in this regard. For the record I state again that Egypt has sponsored, with India and Nigeria, a working paper laying down our basic position on this matter, to the effect that the moon and its natural resources should be declared the common heritage of mankind.

If the fact that this principle with regard to the resources of the sea-bed was adopted by the General Assembly at its last session by a vast majority -- as has been recalled by the representative of Indonesia in his statement this morning -- has been without any impact on the work of the Legal Sub-Committee in drafting the moon treaty, I wonder whether it would be improper to decide that the question should be formally closed for the time being, especially as one of the arguments that have been put forward by those who do not accept the concept of "the common heritage" is that the question of the resources of the moon is still academic and distant. We do not agree with this argument, and we should say again that one of the main features of the work already done by the Committee on the Peaceful Uses of Outer Space is that the lawyers have frequently been ahead of the scientists and that the Outer Space Treaty itself was adopted 10 years ago, even though many of its provisions could be considered distant on this its tenth anniversary.

(Mr. Abdel-Ghani, Egypt)

In this connexion, the delegation of Egypt welcomes the draft resolution in the report of the Sub-Committee concerning the tenth anniversary of the Outer Space Treaty, and we support its submission for adoption by the General Assembly at its next session.

However, the stalemate with regard to the moon treaty has been compensated for by the significant progress achieved with regard to direct broadcasting satellites. We feel that we are near agreement. We now have a text which is the result of complex and difficult consideration for quite some time. There is no full agreement on this text, but it represents a large measure of acceptance of apparently conflicting interests. There have been commendable continued efforts by Mr. Rydbeck of Sweden, as we heard from him in his statement yesterday, in which he provided further clarification of the package proposal put forward by Canada and Sweden with the intention of reaching compromise solutions on outstanding questions.

The delegation of Egypt is willing to agree to the principle of consultation and agreement and to concentrate consultations on the cases where they are needed. The three cases which the representative of Sweden mentioned show that consultations are needed.

If we bear this in mind, given goodwill on the part of all concerned, we are confident that we shall be able to comply with the wish expressed by the Legal Sub-Committee that the work on a final agreement on principles governing direct television broadcasting by satellites will be completed at this Vienna session.

In this connexion, I should like to say that we in Egypt are pleased with the success achieved by India in the Satellite Instructional Television Experiment (SITE) and we are very much interested in its development. Under the programme on space applications for this year, a seminar will be held in India in order that participants can evaluate and benefit from SITE. This is of particular importance to the Arab countries, which are now engaged in implementing a project using a communication satellite for broadcasts throughout the vast Arab region. The sum of one hundred million dollars has been agreed upon and pledged by the Arab countries for carrying out this project. Some thinking has also been given to the preparation of programmes worthy of such an expensive project.

(Mr. Abdel-Ghani, Egypt)

When I was assigned the task of looking into the contribution which Egypt should make in this regard, I realized that certain guidelines and norms should be worked out and agreed upon, in spite of the fact that the programmes of this Arab project would be directed towards a sort of homogeneous audience -- namely, the Arab audience, which speaks the same language and has a common heritage and background. This led me to think that the United Nations, UNESCO and, perhaps, WIPO should continue their consideration of the question of direct broadcasting by satellites, with special attention to broadcasts intended to be on a regional basis.

There are many other important points in the reports before us, but because I have already made a lengthy statement I should like to say only a few words about two questions.

With regard to a second United Nations conference on outer space matters, we support the recommendation in paragraph 114 of the report of the Sub-Committee that a small task force should be established to consider all the factors involved in convening such a conference. Among these factors is the advance of space technology during the last 10 years, both vertically and horizontally: vertically because technology is now bringing more meaningful applications directly related to economic development; and horizontally because, since the first Conference was held, a large number of countries of the third world have become more or less involved in this technology. We therefore feel it timely to consider preparations for a conference with a view to its being held within the coming two years.

The last point relates to what has been mentioned by Ambassador Rydbeck with regard to remote sensing. The Legal Sub-Committee has been able to make significant progress in this field. I am personally pleased at this, as I had the privilege of presiding over the first session of the Working Group on Remote Sensing when it was established two years ago. Now under the able and professional chairmanship of Mr. Tuerk of Austria, the Working Group has been able to draft no less than 11 principles in this field. But, as Ambassador Rydbeck has said, this is a highly complex matter, and it is important that all the technical aspects be clarified before the legal questions are dealt with.

We agree with the representative of Sweden that the useful work carried out by the Scientific and Technical Sub-Committee in this field should be given sufficient attention in the Legal Sub-Committee. In this respect, may I suggest that the interrelationship between the technical and the legal aspects of the question should

(Mr. Abdel-Ghani, Egypt)

be dealt with in a more co-ordinated way at the Secretariat level, where both technical and legal expertise are available. But this requires, as I say, some more co-ordination.

I avail myself of this opportunity to thank the representative of the Secretary-General, Under-Secretary-General Shevchenko, for finding time to attend this session, in spite of his heavy duties and responsibilities at Headquarters.

I would also suggest that perhaps the time has come to concentrate the work of the Secretariat, in all fields of outer space, including the legal field, in one Secretariat unit -- namely, the Outer Space Affairs Division. This Division has been of great assistance to our Committee and its subsidiary bodies. I can say with certainty that it is staffed by serious men and women, all qualified for the work entrusted to them. Our friend Mr. Marvin Robinson, the Secretary of the Committee, is well known for the friendly and cordial way in which he has assisted each and every one of us, as far as the Secretariat work is concerned. I am happy to see him here, as well as many of his colleagues, and would ask them to convey my thanks also to their colleagues who have remained in New York. I am confident that all of them are carrying out the work entrusted to them with great ability and devotion -- of course, under the very able and learned leadership of the Director of the Outer Space Affairs Division, Mr. Perek.

I apologize for this lengthy statement. I did not deal in depth with the questions before us, as I simply wanted to state my delegation's position with regard to various points in the reports of the Sub-Committee.

Mr. SCHOLTYSEK (Federal Republic of Germany): The delegation of the Federal Republic of Germany is very pleased to participate in the twentieth session of the Committee on the Peaceful Uses of Outer Space. Once again we meet under the able chairmanship of Ambassador Jankowitsch. We are delighted that this session is being held in beautiful and charming Vienna and should like to express our gratitude to the Austrian Government for offering its proverbial hospitality and for having set the scene for a fruitful session and an enjoyable stay in the

(Mr. Scholtyssek, Federal Republic  
of Germany)

capital of Austria. Above all, we have been most honoured by the welcome from the Federal President, Mr. Kirchschrager.

In carrying out the mandate given to it by the General Assembly, our Committee has long been a focal point for international co-operation in the peaceful exploration and use of outer space. It has given considerable impetus to international co-operation in the field of space activities; it has deepened public understanding of the potential benefits of space technology; and it has introduced a legal régime based on principles which serve all countries and make for freedom of investigation and access to information. I think it is a good omen that this year sees the tenth anniversary of the entry into force of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space.

(Mr. Scholtyssek, Federal Republic of  
Germany)

This Treaty was the first of a series of legal instruments worked out by the Legal Sub-Committee. My delegation is convinced that the widest possible adherence to the Outer Space Treaty would further promote international co-operation in the peaceful exploration and use of outer space. We should, therefore, in accordance with the recommendation of the Legal Sub-Committee, forward the draft resolution concerning the tenth anniversary of the Treaty to the General Assembly.

Before turning to the tasks of our Committee during this session, I should like to inform members of the space activities of the Federal Republic of Germany during the past year. They have been focused on the joint programme of the European Space Agency (ESA), which will be highlighted this year by the launching of five satellites. The objectives of these projects and their practical implementation again partly go beyond the European scope. For instance, the meteorological satellite METEOSAT is a contribution to the Global Atmospheric Research Programme; the magnetospheric satellite GEOS is an important element of the International Magnetospheric Study Programme; and the B-Satellite of the International Sun-Earth Explorer Programme is also designed for magnetospheric research in co-operation with the National Aeronautics and Space Administration (NASA)

We are confident that SPACELAB will bring appreciable progress in the exploration of space and research and application purposes in orbit. The development work on ESA's contribution to NASA's reusable space transport system -- the space shuttle -- is running according to schedule under the prime contractorship of one of our firms.

The procedure for the selection of European scientists to conduct experiments on the first SPACELAB flight in 1980 has been initiated. The German Research and Testing Agency for Aviation and Aeronautics will undertake the preselection of candidates on behalf of the Federal Republic of Germany.

Since the beginning of June 1977 one of the two Franco-German experimental communication satellites SYMPHONIE, having been shifted from its Atlantic orbit to one over the Indian Ocean, has been in contact with Indian ground stations, mainly to help in the preparation of an Indian satellite system. Other regions too, especially in the third world, are interested in using SYMPHONIE as an experimental object with a view to resolving communication problems which arise on account of the lack of infrastructure.

(Mr. Scholtyssek, Federal Republic of  
Germany)

States members of the world-wide telecommunication organization INTELSAT have agreed on broader participation in the establishment of universal telecommunication systems. As a result, our industry is playing a part in the construction of the INTELSAT V satellites.

Remote sensing is being considered with a view to the participation of the Federal Republic of Germany in a future European and world-wide remote sensing programme. The current national airborne remote sensing programme is providing practical experience with sensors to be used later in spacecraft. In conjunction with the United Nations and the Food and Agriculture Organization (FAO), the German Research and Testing Agency for Aviation and Aeronautics held a training seminar in August 1976 on the possibilities of using remote sensing technology in countries of the third world. The evaluation of the scientific data produced by the United States-German solar probes HELIOS A and B has come up with most interesting scientific information about solar-terrestrial relations. The evaluated data of experiments carried out under the aeronomy programme AEROS A and B with the United States have been presented at an international symposium.

The scientific programme of the ESA has become one of our main areas of activity. In addition, the Federal Republic of Germany is still involved in NASA projects, such as the Pioneer Venus.

After this short review of the space activities of the Federal Republic of Germany, I wish to make a few general observations on the reports of both the Legal and the Scientific and Technical Sub-Committees, whilst reserving the right to comment on substantive points later in the debate. I should like first of all to express my thanks to the Chairmen of the two Sub-Committees, Ambassador Wyzner and Professor Carver, for their able and experienced guidance of the meetings, and to the Secretariat for its assistance and the great effort put into the preparations.

Having studied the report of the Legal Sub-Committee, my delegation feels that considerable progress has been made, particularly as regards the problems connected with direct television broadcasting by satellites. There has been a thorough exchange of views, which included technical considerations, and new avenues have been explored which have opened up new aspects giving due consideration to the results of the International Telecommunication Union Conference at Geneva earlier this year.

(Mr. Scholtyssek, Federal Republic of  
Germany)

Since our work is based on the consensus principle, it often requires much good faith and a spirit of compromise. The Legal Sub-Committee has an excellent record in this respect, as proved once again by the results of its sixteenth session, for which Ambassador Wyzner, in his capacity as Chairman of Working Group II, takes much credit. I therefore think that we have every reason to ask the Sub-Committee to continue, through Working Group II, its successful work on questions relating to direct television broadcasting during its next session.

Since, however, the Committee feels that we should try to work on the remaining questions ourselves, the delegation of the Federal Republic of Germany can support such work and will be guided by the following considerations:

My Government consistently adheres to the principle of free flow of information. This principle embraces the right of every person to seek, receive and impart information and ideas through any media and regardless of frontiers, as laid down in article 19 of the Universal Declaration of Human Rights as early as 1948. Over the past 20 years my Government and others have successfully introduced this principle in international organizations. It is now well established within the Council of Europe, within the United Nations Educational, Scientific and Cultural Organization (UNESCO) and also in the Final Act of the Helsinki Conference on Security and Co-operation in Europe. Only through the free flow of information can the individual fully develop his capabilities. The delegation of the Federal Republic of Germany is therefore gratified to see that this principle deriving from article 19 of the Universal Declaration of Human Rights has been embodied in the draft preamble to principles for direct television broadcasting, and we shall make every effort to ensure that it occupies the place it deserves.

My Government makes a very clear distinction between the universal recognition of this political principle and its technical implementation. In the case of direct television broadcasting by satellites, it is a question of common sense to make sure that every State may participate in a limited natural medium such as frequencies and orbit positions. The institutional framework for their agreed and binding allocation is the International Telecommunication Union (ITU).

(Mr. Scholtyssek, Federal Republic of Germany)

All participants have agreed to the Plan drawn up by the World Administrative Radio Conference (WARC) in 1977. It ensures the technically perfect functioning of direct television broadcasting by satellites. With the system of prior agreement having been accepted for the technical sphere, the question arises whether it is at all necessary for this Committee to formulate a principle of agreement. After an initial study of the question, my Government does not think it is.

My delegation trusts that, in view of the spirit of goodwill and successful co-operation prevailing in our Committee, we shall be able to make further headway. Once we have managed to finish the task of drafting principles, it will be necessary to have another reading of the complete set of principles in order to see them in a general context and to streamline them. The delegation of the Federal Republic of Germany has already made this point on previous occasions.

Progress was also made in considering the legal implications of remote sensing of the earth from outer space. I should like to congratulate the Chairman of Working Group III, Mr. Tuerk, for conducting discussions in a most efficient manner, thus expediting the work. The Working Group covered a lot of ground and was able to elaborate six more draft principles, bringing the total to 11. Those principles, it is true, still contain several brackets. However, it is important that we have made progress along the lines which my delegation has always claimed to be the most appropriate ones, that is to say, conducting remote sensing of the earth through international co-operation, including technical assistance and timely and non-discriminatory access to data on reasonable terms, to the benefit of the developing countries in particular.

In addition to the draft principles, we find a text that refers to the sovereignty of States over their natural resources and to information with respect to those resources. As not all delegations could support that text, it was placed within special brackets. In fact, my delegation does not see any justification for the inclusion of a draft principle of this kind. While no one will contest the sovereignty of States over their natural resources,

(Mr. Scholtyssek, Federal Republic of Germany)

it cannot be accepted that there is an equal right of States to dispose of information concerning their natural resources. My Government strongly believes that only the free dissemination of data -- besides the free collection of data -- uninhibited by rules of prior consent, affords the best chance of maximizing the benefits of this new space technology, because it alone offers the guarantee that no one, whether a State, an institution or an individual, will be privileged or handicapped.

The topic of remote sensing is a very complex one. This is small wonder because we are dealing with a very young and intricate technology. Moreover, user requirements are still rather vague. Therefore, we have to be very careful in trying to formulate draft principles which will have legal implications without hampering this new technology. We should direct our efforts in a way that will not be too restrictive but which will make it possible for everyone to co-operate to his own benefit and which will, in particular, help the developing countries.

Another subject before us is the draft treaty relating to the moon. The key issue continues to be the question of the exploration and exploitation of the natural resources of the moon. Working Group I again concentrated its efforts on this problem, and I should like to express my thanks to Mr. Haraszti for his able chairmanship. Though they had an exhaustive discussion, the Working Group were unable to reach a consensus. It is my delegation's belief that we need still more time to bridge the different viewpoints on this matter. We should not, however, lose sight of the right of freedom of exploration and exploitation as our future guide. We should encourage the Legal Sub-Committee to continue its endeavours to find appropriate solutions in the near future.

I also wish to address myself to the question of the definition and/or delimitation of outer space. Both Sub-Committees have dealt with this matter for some time, and thorough studies of the problems involved have been presented. However, mostly because of a lack of time during the last session, this topic has been given less priority than others. My delegation feels that



(Mr. Scholtyssek, Federal Republic  
of Germany)

the time has now come to take a closer look at this issue. The working papers submitted to date provide an excellent basis on which, taking into account all relevant scientific and technological criteria, we could find a realistic and politically tenable solution. We should ask the assistance of the Scientific and Technical Sub-Committee in our further work so that the results may be given due consideration by the Legal Sub-Committee.

This brings me to the question of priorities for the topics on the agenda of the next session of the Legal Sub-Committee. This year the Sub-Committee did not make any recommendations in this respect. It is only natural that from session to session some topics become more important than others, since we are dealing with new technologies, and certain aspects may become clearer only as time elapses. Differing political views may hamper joint solutions today, but agreement may be possible tomorrow. All in all, I believe that the Legal Sub-Committee should continue to give the same high priority to these matters, including the question of the definition and delimitation of outer space.

I should now like to draw the attention of members to the report of the Scientific and Technical Sub-Committee. The Sub-Committee was seized of new specific issues. For instance, with respect to remote sensing, it managed to define the terms "data" and "information" as "primary data" and "analysed information". I do hope that those terms, which will enter official United Nations language, will soon prove their practical value and facilitate discussions within the Legal Sub-Committee also. As for a possible classification of remote sensing data into various categories, the Sub-Committee made a new proposal. My delegation feels that further studies are needed before an answer can be given to the question as to whether any such categories will be helpful in bridging the different viewpoints regarding the open dissemination of data.

The Sub-Committee also asks for guidance in the question of the co-ordination of space activities within the United Nations system. The delegation of the Federal Republic of Germany is of the opinion that, in order to facilitate the work of the Sub-Committee, the widest possible use should be

(Mr. Scholtyssek, Federal Republic  
of Germany)

made of existing facilities, which also include contacts with entities engaged in space affairs but outside the United Nations framework. As far as I can see, a number of useful contacts already exist. As a result of the rapid development of space technology, there is a growing need to take new avenues of co-operation and co-ordination. The Sub-Committee should clearly define appropriate areas, discuss possible options and report on its findings to our Committee.

(Mr. Scholtyssek, Federal Republic  
of Germany)

On our agenda we also find the question of convening a United Nations conference on outer space matters. The Sub-Committee found that there appeared to be several reasons why such a conference should be held at an appropriate time. However, views differ considerably as regards the concept of such a conference. The Sub-Committee therefore suggests that a small task force or ad hoc working group be set up to look into the matter. My delegation feels this is perhaps the best approach. Before we embark on such an undertaking which will focus world attention on the peaceful uses of outer space, we must be very clear as to the scope, the organization and the financial implications of such a conference. We should therefore follow the recommendation of the Sub-Committee and study all aspects before we draw any conclusions.

We can be satisfied with the progress made in the past year, but because of the complex nature of the questions under discussion we still find obstacles on the road we have taken together. The delegation of the Federal Republic of Germany trusts that the common experience of successful co-operation and good faith shown during the past will guide us again and clear the way for the benefit of all States and individuals wishing to improve their living conditions with the help of the peaceful uses of outer space.

Mr. YASH PAL (India): Mr. Chairman, my delegation would like to join others in expressing its gratification that this special anniversary session of the Committee is being held in Vienna and that it is being held under your able leadership.

In the last 20 years the space adventure of mankind has come of age. Many directions have been set and we are at the threshold of qualitatively new programmes. The drive and ingenuity of scientists and technologists, while adding to the possibilities of enriching life for mankind, keep throwing up new challenges to this Committee and other organs of the United Nations to evolve wise and progressive policies, principles and guidelines so that the new capabilities can be addressed to the real needs of man, so that additional power does not flow only to the powerful, and so that the focus of all effort is the enhancement of the human condition on this spaceship earth.

(Mr. Yash Pal, India)

I am sure that with the Committee's history of working in a spirit of co-operation, consideration and consensus, this special anniversary session will lead to significant progress in our work during the next 12 days.

Once again, let me express my happiness, Mr. Chairman, that this will be done in this beautiful city and under your leadership.

India's space efforts are based on wide-ranging international collaboration, on the one hand, and great emphasis on self-reliance to develop systems and techniques suitable for our own needs and infrastructure, and possibly of special relevance to the needs of other developing countries, on the other.

As representatives are aware, India in co-operation with the United States conducted the Satellite Instructional Television Experiment (SITE) from 1 August 1975 to 31 July 1976. A large amount of data available from pre-SITE, during-SITE and after-SITE evaluation is at present being analysed and documented. We expect to complete this work within a month or so. We hope to share our experience and insight gained through this experiment with the participants of the UN/UNESCO study panel on the SITE experience for which we shall be serving as host during the first week of November this year in Ahmedabad.

My delegation would also like to inform this Committee -- as the representative of the Federal Republic of Germany has already done -- that on the first of this month we commenced the Satellite Telecommunication Experiment in India using the Franco-German SYMPHONIE satellite under an agreement between India and the SYMPHONIE Council. This experiment is called the Satellite Telecommunication Experiment Project (STEP), and we hope this will be an appropriate step towards satellite communication in India. For the purpose of this experiment the Symphonie satellite has been moved to 49 degrees East within view of India. A number of ground stations, including transportable and airliftable terminals developed and built in India are in use for this project. The experiments include television origination from remote areas using transportable terminals, communication with remote areas and communication with disaster-stricken areas using jeep mountable or airliftable terminals. Technical experiments involving various modulation schemes, multiple audio with video and digital communication are also planned.

(Mr. Yash Pal, India)

In this connexion, on 15 June a significant event in the history of human communication took place -- significant, at least, in India. A live programme made using a low cost outdoor van and a transportable terminal was transmitted from a remote town called Amreli via SYMPHONIE to Ahmedabad Earth Station and from there to a rural television broadcast transmitter in a village called Pij for transmission to community receivers in villages around Pij. Our home-built video equipment, the half-inch video system, the transportable terminal, the satellite, the Ahmedabad Earth Station, the Pij transmitter and the whole chain worked beautifully, and the programme came through clear, fresh, authentic and live. In India, this was the first time that a live programme had originated at a point several hundred kilometres from the broadcast transmitter, off the microwave routes, and probably the first such programme using inexpensive video equipment. I emphasize this question of the programme-making equipment being light, portable and inexpensive because unless we have that element we will not go far in satellite broadcasting. The STEP experiment will last two years, and my delegation believes it to be a magnificent example of active collaboration between three countries -- France, the Federal Republic of Germany and India.

The construction of a receiving terminal to receive data from the NOAA series of weather satellites has been completed in Ahmedabad. This station will be operational shortly, and will soon be augmented to work with the TIROS-N series of satellites. We hope to make this terminal an integral part of our weather forecasting efforts and our research in the area of hydrometeorology.

After the successful launch into orbit of India's first satellite, ARYABHATA, with the co-operation of the USSR, India undertook the building of its second satellite, the Satellite for Earth Observations (SEO), which we hope to place in orbit in 1978, again with the continuing collaboration of the USSR. SEO will carry two-channel vidicon cameras and two frequency microwave radiometers. It will also have a transponder to work with data collection platforms which are being built and deployed in collaboration with our Meteorological Department. There is, however, no provision on this satellite for the recording of imageries. The spatial resolution for the visual and near-infra-red channels will be of the order of one kilometre. Simulation studies using LANDSAT imagery as the base are proving very useful in assessing the capabilities of SEO. We are quite enthusiastic about its possibilities.

(Mr. Yash Pal, India)

As a further step to gain experience in building satellites with communication transponders, India has started building a three-axis stabilized experimental communication satellite to be launched as a passenger payload on one of the ARIANE launch vehicle qualification flights, availing itself of an opportunity provided by the European Space Agency. That is another aspect of our collaborative programme.

Besides building SEO and the associated ground system, including the data products system, India's remote sensing efforts cover research, development and operational aspects. Various sensors and image-analysis systems have been built and are under development both for aircraft and for satellite based programmes. A five-channel multispectral scanner and a thermal scanner have been developed and test-flown on aircraft. The thermal scanner is now being used operationally to measure sea-surface temperatures in an intensive study of the monsoon phenomena.

There is an active programme in developing methods of crop-yield predictions. Some recent work in regard to cotton-yield production looks very promising. It is interesting that some of the methodology used for this was learned during the SITE experiments, while working with the villagers. Usual seminars for planning and influencing system development have become common. The National Remote Sensing Agency has acquired a multispectral scanner and an image-processing system and has assigned aircraft to survey natural resources. A number of organizations in the country -- perhaps as many as 100 -- have started using LANDSAT imagery.

As the Committee is aware from 23 October to 10 November 1978 India will be hosting a United Nations/Food and Agriculture Organization training seminar on remote sensing applications for agriculture. About 30 participants sponsored by the United Nations and the Food and Agriculture Organization are expected to participate in this seminar.

As representatives are aware, India for a number of years conducted courses in satellite communication technology for participants from Member States especially from developing countries. Owing to our involvement in major programmes such as SITE, these courses were discontinued except for a few seminars. My delegation is happy to announce that India proposes to resume the organization of training courses/seminars on a yearly basis in the areas of satellite communication

(Mr. Yash Pal, India)

remote sensing and developmental communication. The first course is planned for early 1978 and will be in the area of satellite communication, with particular emphasis on digital communication for a period of six weeks. We expect to accommodate a maximum of 25 participants, of which about 15 will be from Member States outside India. And India will offer fellowships to cover local expenses for these participants.

Following an informal inquiry, India proposes to offer training facilities in the science and practice of remote sensing to half a dozen candidates for a period of six months.

(Mr. Yash Pal, India)

We hope that we shall be able to do this on a continuing basis and that this offer will be made use of by developing countries because of the compatibility of their infrastructure and the nature of their problems with our own.

Mr. de Jager, speaking on behalf of the Committee on Space Research, referred yesterday to the importance of balloons for space research. India has had a national facility for the design and manufacture of large balloons and a launch range near Hyderabad which has been used for several collaborative programmes over the years. In a few months from now scientists from the Soviet Union and India will conduct flights to study cosmic gamma rays and look for gamma ray bursts from Hyderabad. Some of the instruments will be prototypes for the type of payloads which Professor Sagdeev showed last night in his last slide. It is a curious fact that, because of the background problems, the best location for studying low-energy gamma rays is a high-flying balloon at low geomagnetic latitude and not a platform high in space outside the magnetosphere.

Indian scientists continue to collaborate with various countries on a number of projects. We have received moon samples from the United States and the USSR. We have had experiments on SKYLAB and we shall have some also on SPACELAB.

This year a new satellite tracking and ranging station has been set up in collaboration with the Soviet Union and has started functioning. This station incorporates an optical tracking camera and laser ranging. Scientists from the Soviet Union, Czechoslovakia, Poland and the German Democratic Republic are involved in many of the aspects of this station.

My delegation would like to express its appreciation for the continued United Nations sponsorship of the Thumba Equatorial Rocket Launching Station (TERLS). This station, as representatives know, continues to be used for international programmes.

My delegation would now like to make a few remarks about the agenda items before this Committee. Before doing so, we should like to stress our appreciation to the Chairmen of the two Sub-Committees for their excellent work and guidance of the work of the Sub-Committees and the significant progress that has been achieved at the last two sessions.

(Mr. Yash Pal, India)

The Scientific and Technical Sub-Committee during its fourteenth session discussed in considerable depth the questions relating to remote sensing of the earth by satellites. The Sub-Committee examined in detail the terms 'data' and 'information' and suggested that the term 'data' be replaced by the term 'primary data' and the term 'information' be replaced by 'analysed information'. While this was a positive outcome -- which will, I hope, lead to the use of these terms on a continued basis -- the deliberations on the question whether or not primary data about a sensed country finer than a certain spatial resolution might be disseminated to a third country without the permission of the sensed country did not lead to a consensus. The discussions, however, pointed to the need for a scientific and technical study to find out which type of data corresponds to which specific resources applications, and the Sub-Committee suggested that the Secretariat conduct such a study within the available resources. My delegation maintains the view that the dissemination of primary data with a resolution finer than a certain limit should not be allowed without the consent of the sensed country. My delegation also believes that the suggested study would help in defining such a limit. India hopes to contribute to such a study scientifically.

The next major item discussed during the fourteenth session of the Scientific and Technical Sub-Committee was the consideration of the options relating to a possible United Nations conference on outer space matters. A great number of countries have expressed their support in principle for the convening of a United Nations conference on outer space matters around 1980. My delegation reiterates its support for the holding of such a conference in 1980 or soon thereafter and strongly urges the establishment of an ad hoc working group of Member States to consider all the factors involved as recommended by the Sub-Committee.

The report of the Legal Sub-Committee contains the outcome of deliberations on a draft treaty relating to the moon, direct television broadcasting by satellites and the legal implications of remote sensing of the earth from space.

The Legal Sub-Committee at its sixteenth session did not make much progress on the remaining issues connected with the draft treaty relating to the moon, owing to differences in the views of various delegations, though a considerable amount

(Mr. Yash Pal, India)

of discussion took place. My delegation hopes that the Legal Sub-Committee will be able to make progress and complete the work on this item during the next session.

Regarding direct television broadcasting by satellites, Working Group II during the sixteenth session of the Legal Sub-Committee, in an effort to harmonize the differing views on one of the three remaining principles, namely, 'consent and participation', sought to replace it tentatively with the text of a principle of 'consultation and agreements between States'. A tentative text of a draft principle of 'consultation and agreements between States' was formulated but had to be put in square brackets since a few delegations questioned the very need for such a principle, some of them pointing out that the Agreement and Plan concluded at the World Administrative Radio Conference (WARC) held by the International Telecommunication Union (ITU) in 1977 rules out the possibility of intentional broadcasts to other countries. This fact has emerged at the current session also, and several delegations have referred to this very important event which took place early this year in Geneva. In this respect, my delegation feels that it would have been useful if the representative of ITU -- I do not know whether he is present here -- could have briefed the Committee on the salient points relating to the question of direct television broadcasting by satellite arising out of WARC. This, in our view, would help in clarifying the points and possibly reaching a consensus on this principle. For example, the ITU Conference this year, after all, was concerned only with the 12-GHz and 14-GHz bands and does not affect broadcasting in other bands, such as, for example, the S-band. Yet, as members are aware, many countries in the Middle East, North Africa and the Americas are thinking of using that band for broadcasting purposes in the near future. So the question cannot be settled only by the technical discussion held by WARC.

My delegation will comment further on this and other items during the discussions in the Committee.

Mr. Chairman, my delegation would like to thank you for having provided this opportunity to express our general views. We look forward to fruitful discussions during this session of the Committee.

Mr. OXLEY (Australia): I must first express the Australian delegation's appreciation to the Government of Austria for hosting this twentieth session of the Committee on the Peaceful Uses of Outer Space.

I suspect that the timing of this meeting will present some of our colleagues with a particular problem, since it coincides with an especially active period in the Viennese cultural calendar. But I expect, Mr. Chairman, that you are confident, as you justly deserve to be, that any members of the Committee faced with such a dilemma about contending demands on their time will in resolution of them apply the same ingenuity which has been used in the past in the Committee to resolve apparently irreconcilable political differences.

Mr. Chairman, I am unable to add anything to the quite lavish praise you have already received about your qualities as Chairman of the Committee. And finally, my delegation recognizes the obvious weight the Austrian delegation attaches to this meeting, given its opening by the Federal President, and appreciates the honour his attendance brought to the Committee.

Whereas in the past it has been the practice of my delegation to give a short resumé of Australian activities in the outer space field in the year preceding the session, the anniversary which this meeting represents suggests that a brief overview of Australian activities and interests in this area from a broader standpoint would seem more appropriate.

Much of Australia's contribution to space research has centred on the use of the Woomera Rocket Range, which extends over vast areas of South Australia and Western Australia and was established after the Second World War. The unique research facility the Range provides, and its location as one of the few rocket ranges in the southern hemisphere, have made it a particularly valuable base for conducting scientific experiments in geophysics, upper atmospheric physics and astronomy. Much of Australia's contribution to space research has centred on upper atmosphere research from the Range's many small research rockets which have been launched to measure the density, temperature, composition and structure of the upper atmosphere, to determine high-altitude wind patterns, to measure solar ultra-violet and x-ray fluxes and to observe the absorption of these radiations in the atmosphere, to study the earth's ozone layer and the ionosphere, to measure airglow emissions and to investigate

(Mr. Oxley, Australia)

the ultra-violet spectrum of moonlight. The first X-ray surveys of the southern skies were made in rocket flights from Woomera.

Also, through the provision of Woomera for test-firing facilities, Australia at one stage became part of the European Launcher Development Organisation (ELDO) programme when the British Blue Streak launcher programme became part of the ELDO programme.

Australia's first satellite, WRESAT-1, was launched from Woomera in 1967. It conducted atmospheric composition and solar radiation experiments. This project involved considerable international co-operation: the satellite was tracked by United States, British and French stations.

Australia's geographical location has made it a logical site for the location of tracking stations, the first of which was established in association with the International Geophysical Year in 1957-1958 as part of the international space tracking network to support the United States VANGUARD project. Currently the Australian Government operates three tracking stations for the United States National Aeronautical and Space Administration.

In an unrelated area, Australia has been able to make significant contributions to the science of radio astronomy by virtue of research conducted with the large radio telescope at Parkes, New South Wales, which is operated by the Commonwealth Scientific and Industrial Research Organisation.

A relatively new Australian activity in the outer space field is participation, through the establishment of a ground station in Canberra, in the Lunar Laser Ranging Programme. The opportunity to conduct this project arose with the placement of facilities on the moon during the APOLLO programme.

Applications of space technology in meteorology, communications and earth resources are important for Australia, given its geographical location and the vast domestic communications difficulties inherent in its situation. It may be an understatement to say that the era of satellite communications has had a significant impact on the lives of Australian citizens, particularly in the areas of meteorology and international communications. Ground stations for the reception of satellite weather pictures are located at Melbourne, Brisbane, Darwin, Perth, and Mawson -- in Antarctica. Thanks to the capacity of this system, for the first time weather patterns in all parts of Australia can be

(Mr. Oxley, Australia)

observed simultaneously. Australian meteorologists are involved in the Global Atmospheric Research Programme, and special ground station equipment has been built to support the geostationary meteorological satellite launched by Japan.

Many of Australia's overseas communications rely on satellite transmission. Commercial satellite broadcasting, which commenced in Australia in 1967, use ground stations located in New South Wales, Western Australia and South Australia, and are connected to world-wide satellite communications through Intelsat satellites over the Pacific and Indian Oceans. The economic and technical aspects of introducing a national satellite communications system to meet Australia's internal communications needs have been investigated.

In the field of earth resources surveys, LANDSAT imagery has been used in Australia for such purposes as mapping, land use surveys, forestry, hydrology, bushfire investigations and geological surveys.

Australia has supported the work of the Committee on the Peaceful Uses of Outer Space since its inception. It has had the honour of providing the Chairman for the Scientific and Technical Sub-Committee and is prepared to support the work of the Committee by this means for so long as it is the Committee's wish.

I should now like to touch in very general terms on some of the matters brought before the Committee through reports of the Legal Sub-Committee and the Scientific and Technical Sub-Committee.

The report of the Working Group on Direct Television Broadcasting by Satellite contained in the report of the Legal Sub-Committee on the work of its sixteenth session (A/AC.105/196) expressed the hope that all delegations would try their best to overcome the remaining differences so that work on this subject could be concluded. My delegation is ready to support any efforts which might result in consensus on a set of guiding principles for the use of direct television broadcasting by satellite. The starting point for my delegation, as it appears to be for many others, is that, given the results of the ITU World Administrative Radio Conference (WARC) held in Geneva in February, it should be possible to achieve consensus on a set of guiding principles governing the use of satellites for direct television broadcasting which would be consistent with those agreements.

(Mr. Oxley, Australia)

Positions have occasionally been promoted in the Legal Sub-Committee which imply that the principles which that Committee has been working on should perhaps be superior to the ITU regulations and WARC agreements. My delegation's position is that ITU instruments constitute obligations binding on us in international law, and it is therefore essential that the draft principles evolved at a more general level are entirely consistent with, and do not derogate from, those instruments. The form of any final documentation ultimately agreed should be that of "guiding principles".

Of the various proposals so far put formally to the Committee, it is my delegation's opinion that the draft compromise principle and accompanying package proposed jointly by the delegations of Sweden and Canada offers so far the best prospect of resolution of the differences of approach that have emerged on the question of direct television broadcasting by satellite from among those presented within the Committee's framework. Needless to say, my delegation is ready to be attentive to any other proposals which may hold out the prospect of agreement.

(Mr. Oxley, Australia)

The claim of some equatorial States to sovereignty over the geostationary orbit was discussed in the Legal Sub-Committee. At that meeting, and at the World Administrative Radio Conference (WARC) in February, Australian delegations set out the Australian position that scientific fact is difficult to reconcile with the descriptions of the nature of the geostationary orbit upon which the claim rests and that, in our view, the claim is in conflict with the ITU regulations and WARC agreements. But my delegation does understand the concerns about the use of the geostationary orbit as expressed in the Bogota Declaration and subsequently by equatorial States, and sees the sense in suggestions that the technical aspects of the geostationary orbit be examined thoroughly in the Scientific and Technical Sub-Committee.

Turning to the matters raised in the report of the Scientific and Technical Sub-Committee (A/AC.105/195), my delegation supports the recommendation that the Secretariat carry out a study about the technical definition of spatial resolution. My delegation stated its position in that Sub-Committee earlier this year that, in approaching the question of the uses to which data or information obtained by remote sensing from satellite might be put, it would be more productive to establish what sorts of applications exist for data obtained at various spatial resolutions rather than to attempt to reach agreement on some arbitrary limit of spatial resolutions above which restrictions should be applied on the manner in which the data might be disseminated. My delegation believes, therefore, that the study proposed by the Sub-Committee would yield valuable information which would enable the Sub-Committee to consider this subject further in an informed manner.

As for the proposal that an ad hoc committee or a small task force be established to consider the question of the convening of an outer space conference, my delegation supported that proposal in the Sub-Committee and continues to do so.

I shall reserve any further detailed comments for subsequent discussion of subjects under specific agenda items.

Mr. PEINADO BARRIOS (Venezuela) (interpretation from Spanish): The twentieth session of the Committee on the Peaceful Uses of Outer Space could not have been held under better auspices and in a more meaningful atmosphere. The progress of the Committee over the years has been achieved under the capable leadership of eminent representatives of Austria, who have underscored the particular interest which this country has always shown in outer space matters.

The delegation of Venezuela is grateful to the Federal President of Austria, Mr. Kirchschrager, for his cordial welcome and wishes to express its gratitude to the Government of Austria for having invited the Committee to meet in the hospitable city of Vienna. Following the recent visit of the President of Venezuela to this capital, the friendly relations which have traditionally existed between our two countries have grown even stronger.

Mr. Chairman, our delegation also wishes to express its pleasure at seeing you once again preside with your characteristic skill over the work of the Outer Space Committee.

The first exploits in space, which now date back 20 years, opened up a promising world, whose exploration and exploitation led to the establishment of this Committee. At the dawn of the space era, the United Nations took upon itself the task of duly directing its development. From that time the bases have been gradually laid to promote international co-operation in an area which is as fascinating as it is complex and which is acquiring ever greater importance as its numerous applications become more sophisticated and more widely known.

A body of innovative rules and principles has been elaborated, and efforts are now being made to harmonize divergent stands on delicate questions relating to the use of the various space satellites. In all this process the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies, whose tenth anniversary we are celebrating this year, takes pride of place.

All this presents an encouraging enough picture, although, human affairs undoubtedly have new responsibilities in store for the Committee.



(Mr. Peinado Barrios, Venezuela)

Man's imagination, perhaps as infinite as the very space which man is trying to conquer, will continue to conceive spectacular events in space which will require a legal order and an organized structure. The particular character of the subjects being considered by the Committee stems precisely from this ceaseless flow of achievements, for which it is necessary to have guidelines with a view to ensuring universal benefit.

The commemoration of this anniversary year is a propitious occasion on which to emphasize the progress achieved to date and to promote speedy agreement regarding the items currently on our agenda.

As a developing country aware of the advantages offered by the applications of space technology, Venezuela, like the other nations of the third world, attaches particular importance to the various matters being considered by the Committee. Experience has indeed shown that space technology can contribute to the economic and social development of all peoples. The advantages to be derived therefrom are well known, particularly those relating to remote sensing of the earth by satellite.

Therefore, we regard as vital the structuring of a legal framework which, taking into account the interests and the needs of the developing countries in particular, will be the mainstay of international co-operation in this sphere.

We believe that this can be achieved because of the futuristic character of the questions which we are tackling. It represents a unique opportunity to avoid definitively in space the injustices which in one way or another have characterized other areas of international relations and which arose in an era in which the rule of force prevailed over the rule of law.

As we have already indicated, we consider that the subject-matter with which this Committee is dealing should be closely connected with the efforts being made to establish a new international economic order and with the negotiations designed to regulate the uses of the sea-bed and the ocean floor, which, notwithstanding the difficulties in reaching an agreement, start from the fundamental premise that such resources are the common heritage of mankind.

(Mr. Peinado Barrios, Venezuela)

In reality, the main aspiration is to introduce a new world order, for which a relationship of harmony between the three above-mentioned spheres is necessary, as well as the equitable regulation of activities in each and every one of them.

In the spirit of the views I have just expressed, the delegation of Venezuela has already on previous occasions expressed its position with regard to the items on our agenda, and, like preceding speakers we hope that during the present session it will be possible to reach a final agreement with respect to the principles which should govern the activities of States in direct broadcasting by satellite.

We believe that the draft principles on consultation and agreements between States evolved at the last meeting of the Legal Sub-Committee constitute an adequate basis for reaching an understanding. This would undoubtedly be the best possible tribute in this commemorative year.

We should like to reiterate our gratitude to the Chairmen of the Legal and the Scientific and Technical Sub-Committees for the valuable role which they are continuing to play in these most important offices. We also greatly appreciate the diligence and zeal of the Outer Space Affairs Division in discharging its functions.

The delegation of Venezuela intends to speak again on the reports of the two Sub-Committees and on any other matters which may be discussed in this Committee.

The meeting rose at 1 p.m.