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UNITED NATIONS
GENERAL
ASSEMBLY



Distr.
GENERAL

A/AC.105/C.2/SR.273
28 March 1977
ENGLISH
ORIGINAL: SPANISH

COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

LEGAL SUB-COMMITTEE

Sixteenth session

SUMMARY RECORD OF THE 273rd MEETING

Held at Headquarters, New York,
on Wednesday, 23 March 1977, at 10.30 a.m.

Chairman: Mr. WYZNER (Poland)

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The meeting was called to order at 10.50 a.m.

GENERAL EXCHANGE OF VIEWS (continued)

1. Mr. BUTLER (Deputy Secretary-General, International Telecommunication Union), speaking at the invitation of the Chairman, observed that, although the obligatory texts of ITU did not regulate direct broadcasting (television) content, there were provisions which determined the extent to which the transmission and reception of programmes could take place. Those elements of transmission, reception and the relative conditions for sharing the radio frequency spectrum and the interrelated planning and use of satellite orbits were fundamental considerations in the work of ITU, since they ensured the orderly operation of all telecommunication systems. The Administrative Conferences of ITU determined the obligations of all members with regard to the manner in which the radio spectrum and orbits should be planned, used and shared by the various services.

2. In 1976 the major event in the field of direct satellite broadcasting had been the World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service in the 12 GHz Band. The Final Acts of that Conference would become an integral part of the Radio Regulations once approved by the general World Administrative Radio Conference in 1979; thus it could be said that the outcome of the Conference was binding on all members. The Final Acts had been designated as the World Agreement and Plan envisaged at the 1971 Conference, and the resulting provisions laid down general and specific obligations, as well as detailed conditions designed to assure the desired quality of service to the service areas concerned and coexistence with terrestrial services.

3. The planning of frequency assignments (i.e. the preparation of a table containing the precise parameters involved) had been effected with the use of computers, thanks to which it had been possible to obtain optimum use of the geostationary orbit and the frequency spectrum, in accordance with the provisions of article 33 of the ITU Convention and rule 428 A of the Radio Regulations. Among the provisions of the Radio Regulations, which applied to the stations foreseen in the Plan, mention should also be made of provision No. 470 V concerning the cessation of emissions. In the planning assignments, spill over had been minimized by taking as the reception spot from each satellite antenna beam, an ellipse of the minimum size compatible with an acceptable service in the countries concerned. In the majority of cases beams were intended for national or internal domestic zones of service; in a few cases beams were intended to cover neighbouring countries in full or in part. Such assignments, with their extraterritorial transmission coverage provided for in the Plan, were inserted only when the countries concerned gave their consent.

4. As far as the ellipse intended for a certain country or part of it covered some regions of neighbouring countries, in those regions it might be possible, from the point of view of the available power flux density, to receive the signals from the first country, although in such a case the television set used after the converter could only reproduce the programme if the television standards were the same in both countries. Moreover, some additional elements contributed to limit the reception of

the programme concerned. The use of different orbital positions, for example, would necessitate either the use of two different antennae or a resetting of the antenna, which was unlikely in the case of the average user in view of the fact that, for each reception centre, antennae would have to be fixed on external structures and placed in line-of-sight of the nominal orbit position(s) of the satellites concerned; in the current state of the art, the antenna itself was a parabolic dish some 80 centimetres in diameter. Thus, actual reception would be extremely difficult, particularly in the case of those countries which had agreed to different nominal orbital positions. Unless special provisions had been agreed upon in the planning process, the reception of programmes from neighbouring countries, in the current state of the art, was far less easy in the case of the broadcasting-satellite service than in that of terrestrial television broadcasting.

5. The preamble of the Final Acts specified the principle of equal rights of all countries, including those not represented at the Conference. In taking into account the potential needs of the countries not represented, the Conference had taken as a basis needs similar to the average of other countries.

6. Referring to the definition of outer space, he recalled that during the debates of the World Administrative Radio Conference some equatorial countries had sought to establish recognition of national sovereignty over segments of the geostationary orbit. That view had not been accepted by many other countries, which had stated that the ITU Convention provided the basis of a plan for the use of space, that there were no limitations in planning and that there could be no question of sovereignty in space. In establishing a plan, ITU always took into account the basic provisions of the ITU Convention and the resolutions of the United Nations. It considered that a plan should contain all the technical parameters necessary for ensuring the optimum use of available resources, including the frequency, the position, the power, the direction of the antenna beam and the beam width. The position was always indicated in the plan, whether it was on the earth or orbital. In the case of the geostationary orbit the term "nominal orbital position" was used, meaning that the use of that part of an orbit for a transmitter was compatible with the operation of the system free of interference to or from other users and that mention of the position did not, from the point of view of ITU, constitute an appropriation.

7. ITU had also established regulatory provisions defining various concepts - definitions which related more to the activity than to a precise delimitation of outer space. Thus, a "space station" was defined as "a station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the earth's atmosphere", a definition which covered the satellite before launching or during its re-entry into the atmosphere. "Space radiocommunication" was defined as "any radiocommunication involving the use of one or more space stations or the use of one or more passive satellites or other objects in space" and "terrestrial radiocommunication" was defined as "any radiocommunication other than space radiocommunication or radioastronomy". Terrestrial radiocommunication might involve ionospheric layers at an altitude between 500 and 1,000 kilometres; that explained why the definition of space by ITU was based on what might be qualified as a "functional approach".

8. Mr. RENIER-THOMAS (Sierra Leone) said that the catalogue of achievements of the fifteenth session of the Sub-Committee was impressive but that, inevitably, some important questions were still outstanding. His delegation renewed its pledge of full co-operation so as to ensure maximum progress, for Sierra Leone attached increasing importance to the work of the Sub-Committee. As a developing country, it was aware of the immense benefits to be derived for the whole of mankind through close international co-operation aimed at making maximum use of the technological progress relating to outer space.

9. His country had benefited from one of the fruits of such co-operation in October 1976, when Sierra Leone and Liberia had had their first transatlantic satellite communication with the AIDSAT (Aid Space Technologies) demonstration; the programme had included a live video discussion, transmitted in colour, between one panel in Freetown and another at the Goddard Space Flight Center in the United States. Questions discussed had included the use of satellite communications systems for the development of agriculture and forest and fishing industries in Sierra Leone and Liberia, possibilities of using satellite technologies for economic and social advancement and the assistance which the United States and other countries could provide in that connexion, the effectiveness of satellite systems in mapping countries with dense vegetation and peculiar coastal waters, the possibilities of setting up a West African regional satellite communications system and related training and education centres. Such prospects were very reassuring, especially as, for a long time, owing to limited resources, developing countries had not been able to participate fully in, or benefit substantially from, the vast opportunities made available to mankind through space activities.

10. Regarding the treaty relating to the moon, his delegation wished to reiterate its full belief in the principle that the moon and its resources should be declared the common heritage of mankind, its hope that the treaty would incorporate a realistic basis for the establishment of an international régime governing the exploitation of the moon's resources, and its willingness to co-operate in order to achieve a pragmatic compromise solution. With respect to the other two priority items, direct television broadcasting by satellite and remote sensing, he emphasized the need to respect the sovereign rights of States. In the first case, the sovereign right concerned was the right of the receiving State to grant or withhold consent and its right to participate in broadcasting in accordance with its own economic, social and cultural needs. As to remote sensing, it would be wrong to minimize the legitimate fear of certain States that harmful use could be made of data collected. The dissemination of information in the interests of international co-operation should only be done in a clearly defined manner and with the full knowledge of the sensed State.

11. Mr. EL-ZOEBY (Egypt) said the need for a treaty relating to the moon was quite evident and it was unfortunate that so far no consensus had emerged on the status of the moon and its natural resources. He hoped that the various proposals on that subject and on the scope of the treaty and the information to be furnished on missions to the moon, which were contained in the documents prepared by the Secretariat, would make it possible to reach a compromise in the near future. With regard to the natural resources of the moon, his delegation

(Mr. EL-Zoebby, Egypt)

basic position was contained in the working papers that it had sponsored with India and Nigeria. It believed that the treaty relating to the moon should contain an article stipulating that the moon and its natural resources were the common heritage of mankind. That concept had been endorsed in connexion with the sea-bed by the vast majority of Member States at the most recent session of the General Assembly. It also believed that, at the appropriate moment, an international régime should be established to regulate the exploitation of those resources for the benefit of all countries.

12. It had been argued that it was dangerous to adopt legal norms which were lacking in practical value and bore no relationship to the real tasks of current moon exploration, and that the resolution of such a complicated issue should therefore be deferred until the exploitation of the resources of the moon became feasible. However, most delegations had rightly countered that what might not be feasible at the current stage might be feasible in a foreseeable future and that, moreover, the draft treaty relating to the moon already contained articles dealing with activities which were not yet feasible and were not expected to be feasible in the foreseeable future - for instance, the establishment of military bases and the conduct of military manoeuvres on the moon. While his delegation could not accept the idea of deferring the whole issue of the legal régime of the moon and its resources, in a spirit of compromise it had presented an informal proposal on the timing of the establishment of an international régime to the previous session of the Sub-Committee. Unfortunately, that proposal had not been accepted by some delegations. He hoped none the less that, at the current session, the Sub-Committee would be able to reach a compromise and finalize the draft treaty.

13. With regard to remote sensing, his delegation's position had not changed. It supported the general principle of prior consent of the sensed State and that State's right to unlimited access to all the data and information relating to its territory. In that respect, the Legal Sub-Committee might consider it advisable to wait for the results of the study which the Scientific and Technical Sub-Committee had asked the Secretariat to conduct on the proposed classification of remote-sensing data.

14. Mr. SIMANI (Kenya) said that his Government was still studying the various issues before the Sub-Committee and reserved the right to express its views on those issues at a later stage.

LEGAL IMPLICATIONS OF REMOTE SENSING OF THE EARTH FROM SPACE, WITH THE PARTICULAR AIM OF FORMULATING DRAFT PRINCIPLES ON THE BASIS OF COMMON ELEMENTS IDENTIFIED BY THE LEGAL SUB-COMMITTEE (continued)

15. Mr. DOYLE (United States of America) said that although the Scientific and Technical Sub-Committee had made progress in the definition of such terms as "primary data" and "analysed information", he wished to quote paragraph 32 of the report of that Sub-Committee (A/AC.105/195) which pointed out that any definition would be relevant only for the current state of technology and that, if significant changes should emerge, those definitions, and any decisions based

(Mr. Doyle, United States)

upon them, might have to be re-examined in the light of those changes. It might also be useful for the Legal Sub-Committee to consider the possibility of a future review or reassessment in the light of changed circumstances.

16. With regard to the dissemination of data obtained by satellite, he recalled that at the previous meeting one speaker had mentioned the possibility of making a distinction between "global" and "local" data concerning natural resources and the environment, on the basis of their level of spatial resolution. Although that proposal had been discussed by the Scientific and Technical Sub-Committee, it had not been accepted as either possible or desirable. His country believed that some additional study was required before a conclusion could be reached on that proposal, as indeed paragraph 35 of the report of that Sub-Committee seemed to indicate.

17. His country's position on data dissemination was clear and well known. It believed that data would continue to be collected by remote sensing techniques and that the number of States acquiring such data would increase in the near future. The basic question was whether the data collected by one State would be available to all States or whether the collecting State would have a right to exclude others from the use of those data. In that connexion, data acquired over a five-year period using the United States LANDSAT system, the characteristics and prospects of which were described in documents A/AC.105/155/Add.4 and A/AC.105/178, as well as in paragraphs 45 and 46 of the report of the Scientific and Technical Sub-Committee, had been openly disseminated on a non-discriminatory basis. Data relating to North America, Europe and a large part of South America were being collected by earth stations in those regions and disseminated by the earth-station operators to all interested users. It was expected that, by the end of the decade, there would be earth stations operating in Africa, the Middle East and Asia as well. His country welcomed the growing use of LANDSAT data as constructive and beneficial and thought that the Legal Sub-Committee should keep in mind the features of that experimental system of remote sensing by satellite when it came to draft the relevant legal principles.

18. In the past five years, NASA had conducted four international symposiums to publicize and evaluate the results of remote sensing research programmes. Of the hundreds of projects that had been carried out using those techniques, the following were of particular interest: the study on desertification linked with the Sahel ranch experiment; the discovery of copper deposits in Pakistan, iron in Egypt and lithium in Bolivia, and the work of a joint Mexico/United States team which had located concentrations of copper, zinc and lead in both countries; the assessment, with the assistance of the World Bank, of the impact of the floods in Bangladesh in order to improve that country's efforts to rehabilitate the most affected areas; the measurement of sedimentation in the Bay of Bengal; and the improvement of topographical and geological surveys in Bolivia, Mexico and Thailand which had resulted in savings in the routing of highways and pipelines.

19. In conclusion he suggested that, just as one could list all the benefits enjoyed by nations throughout the world as a result of five years of remote sensing by satellite, comparable data should be collected, where they existed, on the damage and adverse economic effects of remote sensing to which reference had already been made.