

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON, D.C. 20504

December 21, 1970

*frequency
authorizations*
DIRECTOR

Mr. William H. Goodman
Deputy Assistant Secretary
for Communications
Department of State
Washington, D. C. 20520

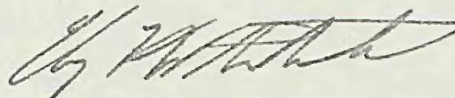
Dear Mr. Goodman:

I am enclosing an original and two copies of frequency authorizations for the radio stations which have been authorized for the embassies in Washington of Belgium, Czechoslovakia, and Yugoslavia.

It is requested that the frequency authorizations for embassy Belgium on 11106.0, 14353.5, and 18808.0 kHz be returned for cancellation.

We understand the terms and conditions of these authorizations will be incorporated in an appropriate form of agreement for consummation with the governments involved.

Sincerely,



Clay T. Whitehead

Enclosures

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON, D.C. 20504

*frequency
allocations*

Date: June 16, 1971

Subject: UNESCO Paper

To: Tom Whitehead

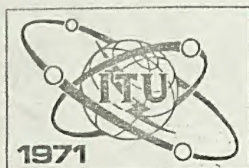
The attached UNESCO paper urges the ITU and the WARC to give consideration to the "needs of education, science, culture and information when determining national and regional requirements for space frequency allocations."

Your Paris speech relates nicely with this.

Bob Raish
L. R. Raish

cc: Dr. Mansur

8 June 1971

Original : English

SPACE CONFERENCE

WORLD ADMINISTRATIVE RADIO CONFERENCE FOR SPACE TELECOMMUNICATIONS - GENEVA - 1971

PLENARY MEETING

A PAPER SUBMITTED BY THE SECRETARIAT OF THE UNITED NATIONS
EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

FREQUENCY ALLOCATIONS FOR SPACE COMMUNICATION

The importance for UNESCO's objectives of the World Administrative Radio Conference for Space Telecommunications was brought to the attention of the Organization's Member States in August 1970 in a communication from the Director-General. An accompanying Aide-Memoire, prepared with the assistance of the Secretariat of the International Telecommunication Union, explained the background of UNESCO's interest and urged that consideration be given to the needs of education, science, culture and information when determining national and regional requirements for space frequency allocations. The present paper is based on that Aide-Memoire and the responses received to it.

The significance of the World Administrative Radio Conference for UNESCO, is its relevance to the organization's objectives of promoting the free flow of information, the spread of education and greater cultural exchange. Modern technologies are opening up great new possibilities of reforming the whole process of education, of removing the barriers which have stood in the way of equality of access to education and retarded the social and economic progress of two thirds of the world's population.

Space communication is one of these new technologies. A Report from UNESCO prepared for the Extraordinary World Administrative Radio Conference in 1963, stated: "Space communication techniques may well permit developing countries to by-pass some of the intermediate steps which have hitherto been necessary in establishing a communication system, and thus have at their disposal within a relatively short span of time, more plentiful and versatile communication facilities than would have seemed possible even a decade ago". The problems raised are as crucial today as

they were in 1963, and decisions taken during this Conference will profoundly affect the development of systems of communication and education which can influence the quality of life of millions of people throughout the world.

The United Nations Working Group on Direct Broadcast Satellites, reporting at its first session, on the likely time-scale for achievement of community reception, stated that "direct broadcasting into community receivers could be close at hand. Technology currently under development might allow this in the mid-70's". It is this phase of community reception which has particularly interested UNESCO, and it has been assumed that frequencies for this purpose will be accommodated in the "broadcasting satellite service".

While up to now, satellites have been used mainly for international communication, it may well be that during the next decade, one of their main applications will be at the national or regional level, and particularly for education. It is significant that the first use of a satellite for direct broadcasting - the Indian experiment in 1974, under a bilateral agreement with the United States - will be for an educational purpose. The word education is used in its widest sense. We refer not only to lessons in the classroom by radio and television - important as these are - but also to programmes for adult audiences. Education is recognized as a life-long process; it is relevant to man's daily life; it may help him to be a better farmer, to maintain better standards of health for himself and his family; to learn new skills; to participate in the development of his community and the making of his nation; to enjoy the cultural riches of his society.

The great significance of space communication, in its phase of direct broadcasting to community receivers, is its ability to deliver programmes far beyond the range of the terrestrial television systems which, in most cases, serve only the centres of major population. Furthermore, a satellite can provide great advantages in time, because it can anticipate, in some cases by decades, the slow extension of ground based telecommunication networks capable of relaying television programmes to remote areas. Indeed, a space system may be the only economic option available to secure 100% coverage of dispersed populations.

Studies which UNESCO has made have pointed to the fact that educational television by satellite, is potentially the most promising way to improve both the spread and the quality of education in the rural areas.

It probably constitutes the best practical solution to one of the most perplexing and crucial problems of the countries in development - the ever widening gap between the educational levels and opportunities of the rural and urban populations.

Space communication systems devised for direct community reception may be used flexibly for school broadcasts at all levels, for "open university" courses, for adult literacy, for the training of teachers and other vocations, for programmes for adults on agriculture, health, family planning or similar development topics, and on current affairs and cultural subjects.

UNESCO's concern is that the Conference, in its assessment of long-term needs, will make adequate provision for the likely future requirements for space frequencies of education, information, science and culture.

When considering the appropriate allocation of frequency bands for the broadcasting satellite service, and bearing in mind the special problems and needs of developing countries, account should be taken of the following factors:-

1. The United Nations General Assembly has resolved that "communication by means of satellite should be available to the nations of the world as soon as practicable on a global and non-discriminatory basis" (Resolution 1721(XVI)). Endorsing this pronouncement, the Plenipotentiary Conference of the International Telecommunication Union in 1965, called upon its members to promote the principle that "all countries should have equal opportunity to use space telecommunication facilities".

2. In the latter half of the present decade, the ability of developing countries to establish a satellite system, broadcasting to community receivers, will depend on economic rather than technical consideration. The frequency band available for use will be a crucial factor in determining whether a system can be economic or indeed whether it can be established at all. The proposals of some governments for allocations in the lower frequency bands may, therefore, be of critical importance, because of the bearing this has on the cost of receiving equipment, on good propagation conditions and on the much greater difficulties imposed on developing countries in the manufacture of the highly sophisticated equipment required if the upper spectrum is used.

3. Many developing countries are only just beginning to consider the potentialities of space communication for education and development. Though they may not see any likelihood of launching their own satellite for domestic purposes, they may well have opportunity in the future, of participating in a communication satellite system shared by a number of countries. At the present moment, however, they do not know precisely what their requirements may be in the next ten years. Their concern is that the "first come first served principle" might preclude the possibility of obtaining an appropriate frequency assignment when, in due course, they need one. To minimize this risk, the allocation of frequency bands for use by the broadcasting satellite service on a primary basis, rather than a shared or secondary basis would be very desirable. The interests of these countries would also be served if formal procedures could be established to ensure coordinated frequency planning in all regions, which would take into account future needs as well as present demands for utilization of those parts of the spectrum allocated to broadcasting - both terrestrial and space.

The trend toward a regional approach to space communication problems, is illustrated by the requests received by UNESCO from a number of its Member States, to carry out studies on the potentialities of space communication for education and development. A survey among a number of Latin American countries in 1969 was followed by a mission to the Arab States region in 1970, and a preliminary study is now being made on the possibilities of a regional communication satellite system for Africa. All these surveys have been undertaken in collaboration with the International Telecommunication Union.

The initial Latin American mission led to a request by eight countries for a feasibility, planning and pre-investment study of a South American regional system, using advanced communication technology including satellites, for purposes of education, culture and development. The United Nations Development Programme is financing the study, for which UNESCO has been appointed the Executing Agency, in association with the International Telecommunication Union. The draft Plan of Operations for this project has been prepared and the team of international experts to carry out the study is in course of recruitment. Several of the key experts are already working on the preliminary phase and are preparing a tentative model of the system, which would be wholly controlled by the participating countries.

While the fullest possible use would be made of terrestrial communications, it is foreseen that a satellite will prove to be the most economical way of distributing television programmes to the 40% of population

of the region, residing in rural areas. The theoretic model, which will later be examined critically in the field, sees the need to provide for the simultaneous use of four television channels to serve the whole region. Programmes would be educational and cultural and cover current affairs and would cater for schools, universities and adult groups.

If the envisaged system proves to be feasible and the countries in the region desire to implement it, it could be in operation in 1976. Obviously, a basic requirement would be adequate bandwidth at a suitable frequency, taking into account the additional needs of other countries in the same region.

In this paper, reference has been made so far, only to the broadcasting satellite service. It is not intended to imply that the communication satellite service does not have very important education and information applications. A rapidly rising demand for telecommunications for the mass media and for education will reach great proportions, particularly in advanced countries, during the next decade. Depending on the available communication networks, use may be made of satellites for relays of radio and television programmes; transmission of news and photographs for newspapers and news agencies; facsimile transmission; retrieval and transmission of scientific data; exchanges between universities; computer assisted instruction.

In many cases, however, these services will be provided on demand by the Telecommunications administrations, and requirements of the media and of educational institutions will have been taken into account in their assessment of frequency needs for the communication satellite service.

UNESCO has noted the proposals of many I.T.U. members for frequency allocations for the communication and broadcasting satellite services which would accommodate the various educational uses of space systems. The need has been widely recognized; the problem is to find sufficient bandwidth for all these important purposes.

It is acknowledged, of course, that as the radio spectrum is a scarce resource, it is not possible to make all the frequency allocations requested by the various services. The Conference will be faced with the task of meeting as many of the stated needs as possible and of reserving the spectrum for the most important uses.

In the communication field, terrestrial telecommunications in the first place, will no doubt be fully exploited. But for many developing countries, space communication may provide the only option, for decades to come, of reaching the millions of rural and isolated people, whose need is greatest, with the most powerful available tool of development. In this Second Development Decade this is a high priority objective, and one in which the present Conference can play an important role.