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#2 memo	NSAM 342 C 2 p	3/4/66	A
#3 memo	Marks to President C 13 p	11/15/66	A
#4 memo	Rostow to Cater C 1 p	8/1/66	A
#4a memo	O'Connell to President C 7 p	7/28/66	A
#4b memo	NSAM 342 C 10 p	3/4/66	A
#4c memo	Duplicate of #2		
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MEMORANDUM

THE WHITE HOUSE

WASHINGTON

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~~CONFIDENTIAL~~

July 28, 1966

MEMORANDUM FOR MR. W. W. ROSTOW

Walt --

Jim O'Connell's office has now reviewed the State Department memo reporting on the implementation of NSAM 342, which was issued to encourage the construction of communications satellite earth stations in less-developed countries. O'Connell endorses the recommendations of the State Department set forth on page 4 of the State Department memo and further requests Presidential endorsement of stepped-up U. S. initiative in Turkey, Pakistan and Korea. Such initiatives would largely be a matter of encouraging AID to give earth stations a higher priority in the aid programs for these countries.

In view of Doug Cater's continuing association with this subject and the initial assignment the President made to Doug to kick off the NSAM 342 exercise, I suggest that the attached file be sent to Doug with our endorsement of the recommendations. He can secure what ever additional Presidential action seems indicated. Also, for your information, I understand that O'Connell has made further distribution of this report to Kintner, Moyers, Califano and Welsh. All of these individuals apparently at some point or other indicated interest in the subject.

I attach a short draft note to Doug for your signature.

Charles E. Johnson

~~CONFIDENTIAL~~

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THE WHITE HOUSE

WASHINGTON

March 4, 1966

~~CONFIDENTIAL~~

NATIONAL SECURITY ACTION MEMORANDUM NO. 342

TO: The Secretary of State
The Secretary of Defense
The Secretary of Commerce
The Secretary of Health, Education and Welfare
The Administrator, National Aeronautics and Space Administration
The Chairman, Federal Communications Commission
The Administrator, Agency for International Development
The Director, United States Information Agency
The Special Assistant to the President for Telecommunications and Director of Telecommunications Management

SUBJECT: U.S. Assistance in the Early Establishment of Communications Satellite Service for Less-Developed Nations

In carrying out his responsibilities under the Communications Satellite Act of 1962, the President has directed that the United States Government take active steps to encourage the construction of earth-station links to the worldwide communications satellite system in selected less-developed countries. Emphasis in this effort is to be on encouraging the selected countries to construct these stations out of their own resources, stressing the many benefits of direct access to the global communications satellites.

The Special Assistant to the President for Telecommunications/Director of Telecommunications Management has been designated by the President as the agent for coordinating this project.

The State Department and AID are to determine (a) the countries to be included in this program and (b) U.S. Government actions, if any, for encouraging the accelerated construction of earth stations and related facilities in these countries. In cases involving possible U.S. technical or financial assistance, the President has directed that no special funds should be requested. All funding of such projects is to be handled out of current AID FY 1966 appropriations or out of regular FY 1967 funds.

~~CONFIDENTIAL~~

The Department of State is to report its findings to the President, through the Special Assistant for Telecommunications/Director of Telecommunications Management, by July 1, 1966.

The President has directed that the Executive Agent and Manager of the National Communications System and U.S. Government agencies operating facilities outside the NCS utilize the global communications satellite system in handling traffic whenever possible and where national security requirements will not be compromised, consistent with sound cost-efficiency and other management considerations.

A Working Group is to be established, in accordance with the President's instruction, to study the possibilities of using the communications satellite system to advance information exchange and educational purposes, in line with his desire that the United States play a greater role in international educational efforts, particularly in less-developed countries.

Bromley Smith

Bromley Smith

NSAM 342

~~CONFIDENTIAL~~

3

Memorandum for The President

FROM: Leonard H. Marks

SUBJECT: Report of White House Working Group on Educational Uses Communications Satellites

Reference: National Security Action Memorandum 342

I am submitting herewith the report of the White House Working Group which you asked to study the possible international educational use of communications satellites. The group consisted of representatives from the White House, the State Department, AID, NASA and HEW. A list of Agency representatives is attached.

SUMMARY

The working group concludes, as a result of its study, that communications satellites, among other modern communications techniques, have a potentially important role to play in world education. Although the working group was charged with examining the problem only as it affects education overseas, it is obvious that the outcome of the current debate on the use of satellites for domestic educational and cultural purposes (i.e. the Ford Foundation proposal and others) will influence international activities in this field.

~~CONFIDENTIAL~~

In its studies, the group found that existing satellite technology is quite adequate for communicating the various kinds of material that may be used in educational programs (TV, radio, data transmission, etc.). However, the present generation of satellites can only serve prospective needs where large ground stations and adequate ground interconnection with home, community, or school receivers are available. Advanced satellite technology will be required to permit television transmission directly to the small community or the remote individual. Nevertheless, technology cannot be today considered the pacing factor: it is evolving at a considerably faster rate than any plans for satellite communications for educational uses. The key problems lie in determining (1) what specific educational programs school systems in the various, quite different, areas of the world need, (2) how this instructional material can most effectively and inexpensively be transmitted, and (3) where satellite communication is chosen over other methods for transmitting educational materials in a particular country or region, what particular combination of satellite and ground equipment will best carry out the educational requirement.

An American President, James Garfield, once described effective teaching as Mark Hopkins on one end of a bench and himself on the other. With present technology, a latter-day Mark Hopkins can be in a TV

studio in Chicago, lecturing by satellite to a thousand students in Bonn or in Bombay. The technique is different but the basic question remains: is it an effective, efficient way to teach, in itself and compared with alternative methods? Before we make decisions to transmit educational TV by satellite, we need to know more about the effectiveness of television itself as a teaching tool. These questions are only beginning to be asked here and abroad. Until they are answered, we will not have a clear idea of the potential role of communications satellites as an educational tool.

PROJECT OBJECTIVES

The working group adopted the following objectives as guidelines:

1. Support your program for a greater U. S. role in international educational efforts, as outlined in your Smithsonian Institute address last year and in the International Health and Education Act of 1966.

2. Maintain U. S. leadership in the application of space science and technology to the conduct of peaceful activities and for the benefit of all mankind.

3. Improve the U. S. position in the communications-satellite consortium (INTELSAT), in anticipation of the 1969 negotiations on a definitive INTELSAT agreement.

4. Anticipate and offset possible Soviet moves to take advantage

of "educational" transmissions via their own satellites as a propaganda channel to other countries.

PRESENT SITUATION

In considering what role existing satellite communications technology might now play in support of international educational programs, the working group determined that three interrelated factors required study: (i) the nature of the educational needs and the types of programs required in the foreign areas or countries of interest; (ii) the relative cost of alternative means of transmitting the required program material to these areas or countries; and (iii) current technological possibilities and limitations in employing communications satellites for this purpose. Two possibilities for "live" educational TV broadcasts by satellite between the United States and Latin America were considered. The first possibility involved educational programs for mass audiences in Latin America, the materials being transmitted from the U. S. via satellite and then retransmitted through local television to reach the desired audience. The second consisted of closed-circuit TV between U. S. and Latin American professional groups, particularly in the medical field.

In both cases, the working group concluded that consideration of the foregoing three factors lead to rejection of the proposal. From the standpoint of program content, it was apparent that comparable programs could be mounted in Latin America without the need for "live" broadcasting from the United States. Although the satellite and ground station technology exists to conduct such programs, the incurrence of the substantial costs necessary to accomplish either program by satellite communication could not be justified from an educational program standpoint.

FUTURE PROSPECTS

The long-term prospects for educational satellite transmissions are considerably more attractive. This judgment involves assumption regarding trends in both satellite and educational technology.

Satellite communications are developing at a time when education itself is being influenced by many forms of electronic technology. This range runs from television instruction to computers. Inevitably satellites will be added to other forms of advanced communications that will serve modern educational needs.

American education is currently on the threshold of developing electronic networks for the transmittal of educational material via microwave and cable circuits connecting schools, libraries, and research

institutions. It seems certain that satellites will be added to these other communications means. Although certain transmission problems will have to be taken into account, foreign exchanges of educational material might start first with institutions in Western Europe and Japan and, later, in Asia, Africa and Latin America. The question of long-range use of satellites for worldwide educational purposes would seem inevitably to be related to the ways in which the American educational system and its allied resources link up with educational resources abroad. Cultural and political factors might inhibit the development of these exchanges.

It is difficult to project precisely how these developments will evolve. However, it is possible that it will take place under the stimulus of both private and public agencies and institutions, including the Federal Government. Such development, for instance, would be consistent with the purposes and scope of the Center for Educational Cooperation, proposed in the International Health and Education Act. Any program for strengthening international educational exchanges should take into consideration the role of satellites and other electronic technologies as channels for such exchanges.

The working group identified several areas where satellite communications might in the future be employed:

1. Data Exchanges by Computer. It is likely that education in the future, like the business world, will rely heavily on computerized data banks to store the great amounts of information needed for its teaching and research functions. A number of U.S. universities and school systems are already experimenting with such systems. At the Federal Government level, the Committee on Scientific and Technologic Information (COSATI) is responsible for studies of a national information retrieval system. Inevitably these efforts will extend overseas, and satellite circuits will be capable of high-speed data transmission to and from foreign computers as the necessary facilities and capacity develop.

2. Document Exchange. Similarly, satellites are capable of use for high-speed transmission of documents, similar to present-day wire-photo transmission.

3. Instruction via distribution or direct-broadcast satellites. This is the most commonly cited possible use of satellites for educational television. However, at the present time there is a need for study regarding the nature of any such program on a country-by-country basis in those areas of the world of interest. When the program content has been defined, the relative cost and technical considerations can be weighed in determining the means of communication to be employed, and whether satellite communications is justified from a cost standpoint and technically within the state of the art.

4. Closed circuit television program exchanges. A specialized but potentially effective educational program involves closed-circuit transmissions between universities, scientific and other professional groups providing for two-way exchanges of ideas, demonstrations, etc. Some experimentation has already been done in holding seminars and other meetings on an inter-continental basis. This type of transmission will probably develop slowly, because of the costs,and time zone differences involved, but it has important possibilities in bringing key foreign individuals and groups in "face-to-face" contact with their American counterparts.

5. Educational Television programs, for general non-school use. This involves the possibility of "live" program exchanges between the present U.S. educational TV network and stations abroad. The American National Educational Television (NET) stations are not now completely linked in a single network but they may be eventually, either by satellite or other methods. It is reasonable to assume that this educational TV network will want to exchange "live" programs with other countries, servicing the full network or parts of it. Again, this may be slow in developing largely because of the cost, commercial competition, and policy factors but it is a possibility which should not be foreclosed.

Other kinds of educational programming for general use may also have important potential, particularly in the LDC's. Uses of satellite

to relay programs for social development purposes, as for instruction in health and agricultural practices or in mass literacy campaigns, will deserve careful analysis.

These are future possibilities, each of which has the potential for serving American national interests. They deserve to be considered along with other proposals for satellite educational transmissions as part of an overall program designed to expand the utility of satellite communications. However, a series of well-directed studies are required which focus on the programmatic, cost, and technical factors involved. Among the questions that should be the subject of study are the following:

1. What requirements are there for real-time transmission of educational material to either mass or selected audiences?

2. What significance do population distribution (concentrated as in Argentina, diffused as in India) and the existence of internal TV networks have for the use of communications satellites for point-to-point, distributions, or direct broadcasting?

3. What are the relative merits and cost effectiveness of instructional and cultural educational program distribution via TV broadcasting, closed circuit TV, film, radio, teaching teams, and other techniques?

4. What differences in educational program approach are indicated by reason of cultural and economic distinctions between regions (African vs. Latin American, rural vs. urban, agrarian vs. maritime, etc.)?

5. What are the political, economic, and technical considerations involved in placing responsibility for programming educational TV material for overseas use?

6. What impact should potential educational uses have on existing and planned programs of advancing the state of communications satellite technology?

7. What opportunities are made possible by existing or imminent operational communications satellites?

8. What opportunities are offered for demonstration programs through the use of experimental U.S. satellites?

9. What should be the future role of INTELSAT with regard to educational services?

RECOMMENDATIONS

The United States Government should continue to explore ways in which the international educational programs in support of U.S. goals can be furthered by the use of satellite communications. Specifically, the working group recommends:

1. As satellite communications technology advances and satellite capacity becomes available, the U.S. Government should encourage

different types of experimental programs involving the use of satellites with countries of foreign areas of interest to demonstrate to the leadership in these countries the potential educational uses of the satellites. Involvement of the Comsat Corporation in these programs should be considered. (Action: NASA, with the assistance of the Department of Health, Education and Welfare, USIA, and the State Department.)

2. In less-developed countries of concern to the United States, and where there is top-level interest in assessing the potential of educational broadcasting, the United States Government, working with American educators, should offer to assist in a careful study of the educational needs of each country and the cost and technical aspects of meeting these needs by communications in comparison with more conventional methods. Consideration should be given in such studies to using any advanced satellite in a practical demonstration of the use of satellite technology. (Action: AID with HEW and NASA.)

3. In proceeding with programs of advanced technology, NASA should bear in mind the potential use of satellite communications in educational programs abroad. (Action: NASA.)

4. At a propitious time, the U.S. Government should consider raising with the Soviet Government the possibility of "live" satellite cultural television exchanges under the now-dormant TV-exchange

section to the US-USSR cultural agreement (Action: Department of State.)

5. The Executive Branch's Committee on Scientific and Technological Information (COSATI) should develop a special study of the factors involved in overseas extensions of the proposed U.S. national information-retrieval network, utilizing satellite and other transmission means. (Action: Office of the Science Adviser.)

November 15, 1966

Members of White House Working Group
on Educational Communications
Satellites

Leonard H. Marks, Chairman
Director
U.S. Information Agency

Douglass Cater
Special Assistant to the President
The White House

Robert Kintner
Special Assistant to the President
The White House

Dr. Joseph Colmen
Deputy Assistant
Secretary of Education
HEW

Charles Frankel
Assistant Secretary of State
for Educational and Cultural Affairs

Dr. A. H. Moseman
Agency for International Development

Mr. Walter Sohier
General Counsel
NASA

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CONFIDENTIAL

NOTE FOR MR. DOUGLASS CATER

I understand that this is a subject in which you have had an early and continuing interest and that action in the White House on the State Department recommendations should probably be yours to initiate.

From my standpoint I think the State Department recommendations make sense and I also endorse O'Connell's suggestion that AID be encouraged to give sympathetic consideration to assisting with the construction of earth stations in Turkey, Pakistan and Korea.

Walt

W. W. Rostow

CONFIDENTIAL

Dispatched 8/1/66

MEMORANDUM

CONFIDENTIAL

W. W. Rostow

4a

THE WHITE HOUSE

WASHINGTON

Thursday, 4:00 P. M.
July 28, 1966

MEMORANDUM FOR THE PRESIDENT:

Subject: U. S. Assistance in the Early Establishment of Communications Satellite Service for Less Developed Countries

Progress has been made in recent months towards meeting the President's desire that the U. S. Government take active steps to encourage the construction of earth station links to the worldwide communications satellite system in selected less developed countries.

Pursuant to your direction as conveyed in National Security Action Memorandum No. 342, dated March 4, 1966, the State Department has determined: (a) The countries recommended for inclusion in this program and (b) current and potential U. S. Government actions to encourage accelerated construction of earth stations and related facilities. Action has been limited in accordance with your direction in that no special funding has been considered appropriate.

The enclosed memorandum has been prepared for the President jointly by the Department of State and the Agency for International Development and is transmitted herewith in accordance with NSAM 342.

You will note the positive action taken with respect to Africa. This action was stimulated by the President's remarks to the Organization of African Unity on May 26, 1966 and the constructive assistance of Ambassador Ed Korry.

Planning for the construction of earth stations in only three of the thirteen countries selected by the State Department appears to be lagging. These countries are Turkey, Pakistan and Korea. As noted in the enclosed memorandum, AID is prepared to consider possible assistance to these countries.

I recommend that you approve the recommendations set forth in the enclosed memorandum and that you approve stepped-up U. S. initiatives with respect to Turkey, Pakistan and Korea.

CONFIDENTIAL

I will continue to serve as the President's agent for coordinating this project with the State Department and AID and will report by January 1, 1967 concerning further progress made.

J. D. O'Connell

Enclosure as stated

~~CONFIDENTIAL~~

MEMORANDUM June 27, 1966

SUBJECT: Communication Satellite Earth Station Construction in Less-Developed Countries--NSAM 342

Background

In June 1965 the Early Bird satellite was placed in commercial operation. Additional satellites will be launched this year and next, as indicated in Annex I. Earth stations required to receive and transmit messages via satellites are now in place in the United States, Canada, United Kingdom, France, Germany, Italy and Japan. Many more are planned in other developed countries. None have been built in less-developed countries.

The Communications Satellite Act of 1962 contemplates a single global system providing communication by satellite to less-developed as well as developed countries. In NSAM 342, Annex II, you requested that active steps be taken to encourage construction by selected less-developed countries of earth stations linking these countries to the global system. You asked that State and A.I.D., by July 1, 1966, determine the countries to be included in this program of encouragement and recommend appropriate action, if any, to be taken. You also directed that, to the extent possible, less-developed countries be encouraged to construct earth stations with their own resources, and that in cases involving United States financial or technical assistance, no special funds be requested other than those included in fiscal year 1966 and 1967 appropriations.

Conclusions

1. Prospects for early construction of earth stations are quite good in a few less-developed countries. In most LDCs, however, stations will not be built on a timely basis without some active United States governmental encouragement.

2. The absence of earth stations in LDCs to date is not particularly surprising. The basic characteristics of the satellites to be used in the global system (and thus the required earth stations) were not determined until April 1966 after experience with Early Bird had been evaluated. Moreover, earth stations make no sense in many of the poorer LDCs which lack the requisite local communication system.

3. In any program of assistance by the United States to extend the global system to less-developed countries the following countries should be given priority:

Central America (one station serving all 6 countries)
Colombia*
Chile*
Brazil*
Nigeria*
Ethiopia*
Kenya, Tanzania, Uganda (through their East African Common Services Organization (EACSO)
Turkey
Pakistan*
India*
Thailand*
Philippines
Korea

The criteria used in the selection of these countries are set out in Annex III.

4. There are three principal factors which tend to slow down the establishment of earth stations in developing countries. First, these countries require time to make the decision to build a station. This is not surprising considering how new this development is and the difficulty of allocating scarce resources. Second, the countries frequently have difficulty in determining the national policy as to the ownership of these stations--should they be nationally owned or should foreign interests be encouraged to participate in the ownership. Third, as earth stations involve a foreign exchange cost of $3 to $5 million, many countries will require some financial assistance.

5. The United States can help overcome the first and last of these three obstacles, and has indeed begun to do so. Through discussions with Embassy officials and visits from technical experts from Comsat Corporation and other United States companies, as well as by sponsorship of an international seminar on earth station technology, the United States has helped the LDCs understand how the global system functions and the kind of earth stations that are needed by such system. In the area of financial assistance, the United States has indicated to Ethiopia, Nigeria and the three East African Common Services nations willingness to consider assistance via the Export-Import

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*Member of INTELSAT

Bank or A.I.D. A fuller description of United States activities to date is attached in Annex IV.

6. The United States Government is by no means the only source of financial assistance. The available sources include the following:

1. Private companies and communication carriers (with or without help of the Export-Import Bank)
2. World Bank (I.B.R.D.)
3. Inter-American Development Bank (and similar regional development banks)
4. Export-Import Bank
5. United States Government assistance through A.I.D.

Financing plans generally contemplate that the country will finance the local currency component. A few countries, such as Brazil and the Philippines, may also be able to finance all or a part of the foreign exchange requirements. A discussion of each of these sources is attached at Annex V.

7. Firm decisions to build and finance earth stations will take some additional time--both for the LDCs involved and the potential sources of financial help. If it were vital that earth stations be constructed in the priority countries not just in the near future but on a crash basis, the United States could achieve this goal best by not waiting for other sources but rather by strong promotional efforts of the Export-Import Bank or, more likely, direct offers of A.I.D. assistance. This does not seem to be a necessary or desirable course of action. The field of satellite communication is so glamorous, the general interest so high, and the various plans for earth stations are being so actively pursued, that in most of the countries on the priority list other forms of financing will probably become available in the relatively near future. The reason A.I.D. has expressed willingness to help the African countries referred to in paragraph 5 is that these seemed to be unlikely to obtain other forms of assistance. For the same reason A.I.D. is prepared to consider possible assistance to Turkey, Pakistan and Korea, in each case with appropriate Export-Import Bank coordination. A country by country resume of prospects for financing of each of the selected countries is attached at Annex VI.

Recommendations

In view of the above conclusions we recommend:

1. That the United States continue its present program of educating the LDCs as to (i) the value of membership in the global system, and (ii) the desirability, in selected LDCs, of establishing earth stations.

2. That we continue to encourage and stimulate sources of possible financial and technical assistance other than A.I.D. to provide such assistance to the countries on the priority list at an early date.

3. That A.I.D. continue to consider financing for earth stations in those countries on the priority list, assuming other financing is not available on reasonable terms and that the project satisfies development loan criteria.

4. That State and A.I.D. keep abreast of the progress in the construction of earth stations, and plans for such construction, and by January 1, 1967 report to you (a) the status of earth station construction in the priority countries, (b) whether, generally, anticipated assistance from non-United States Government sources has indeed materialized, and (c) what, if any, further United States Government action should be taken.

Annex I

Schedule of Launching of Communication Satellites by INTELSAT

INTELSAT I (Early Bird) was launched April 1965 and placed in commercial operation in June 1965 for service between North America and Europe. This satellite has a capacity of 240 telephone channels which are used to provide normal telecommunication services including telephone, telegraph and the exchange of TV programs.

INTELSAT II. Two satellites of this series are scheduled to be launched in August and September of this year--one over the Atlantic and one over the Pacific. They have the same capacity as the INTELSAT I satellite and will be used to provide commercial telecommunication service for the United States Apollo program. This will, however, leave some excess capacity which can be used to provide service between all areas of the world where earth stations are or will be located, with the exception of the Indian subcontinent.

INTELSAT III. Four satellites in the INTELSAT III series are to be launched in late 1967 or early 1968. These satellites are designed to provide the space segments needed for complete global coverage. The designed capacities of these satellites are in the order of 1200 telephone channels each with the capability of providing all types of telecommunication services including TV.

THE WHITE HOUSE

WASHINGTON

Annex II 4-b

March 4, 1966

~~CONFIDENTIAL~~

NATIONAL SECURITY ACTION MEMORANDUM NO. 342

TO: The Secretary of State
The Secretary of Defense
The Secretary of Commerce
The Secretary of Health, Education and Welfare
The Administrator, National Aeronautics and Space Administration
The Chairman, Federal Communications Commission
The Administrator, Agency for International Development
The Director, United States Information Agency
The Special Assistant to the President for Telecommunications and Director of Telecommunications Management

SUBJECT: U.S. Assistance in the Early Establishment of Communications Satellite Service for Less-Developed Nations

In carrying out his responsibilities under the Communications Satellite Act of 1962, the President has directed that the United States Government take active steps to encourage the construction of earth-station links to the worldwide communications satellite system in selected less-developed countries. Emphasis in this effort is to be on encouraging the selected countries to construct these stations out of their own resources, stressing the many benefits of direct access to the global communications satellites.

The Special Assistant to the President for Telecommunications/Director of Telecommunications Management has been designated by the President as the agent for coordinating this project.

The State Department and AID are to determine (a) the countries to be included in this program and (b) U.S. Government actions, if any, for encouraging the accelerated construction of earth stations and related facilities in these countries. In cases involving possible U.S. technical or financial assistance, the President has directed that no special funds should be requested. All funding of such projects is to be handled out of current AID FY 1966 appropriations or out of regular FY 1967 funds.

~~CONFIDENTIAL~~

The Department of State is to report its findings to the President, through the Special Assistant for Telecommunications/Director of Telecommunications Management, by July 1, 1966.

The President has directed that the Executive Agent and Manager of the National Communications System and U.S. Government agencies operating facilities outside the NCS utilize the global communications satellite system in handling traffic whenever possible and where national security requirements will not be compromised, consistent with sound cost-efficiency and other management considerations.

A Working Group is to be established, in accordance with the President's instruction, to study the possibilities of using the communications satellite system to advance information exchange and educational purposes, in line with his desire that the United States play a greater role in international educational efforts, particularly in less-developed countries.

Bromley Smith

Bromley Smith

~~CONFIDENTIAL~~

Annex III

Criteria

The following factors entered into the selection of the listed countries:

a) The countries generally have a domestic communication network that would permit them to make effective use of satellite communication as a link to the outside world.

b) Most, though not all, of these countries have adequate facilities that would permit them to serve neighboring countries in the same geographic area. Thus, the earth station would provide maximum usefulness.

c) The requirements of the United States National Communications System will be served by earth stations located in certain of the listed countries.

d) The selections take into consideration attempts to gain the maximum political advantage for the United States in these areas.

~~CONFIDENTIAL~~ Annex IV

United States Government Actions to Date

1. In 1964 the Department of State in cooperation with the Communications Satellite Corporation initiated a program of visiting and contacting many nations, including each of the listed LDCs, to explain the potentials of satellite communications and to urge their membership in INTELSAT. Membership in INTELSAT has grown from the initial eleven signatories in August 1964 to fifty-two at the present. Of the listed LDCs, the following are INTELSAT members: Brazil, Chile, Colombia, Ethiopia, India, Nigeria, Pakistan and Thailand. These countries are committed to invest a total of approximately 7-1/2 million dollars in the space segment of INTELSAT. They are paying their monthly assessments regularly.

2. The United States Government has encouraged the construction of earth stations. The joint State/Comsat contacts promoting membership in INTELSAT also include discussions on technical assistance, and in depth discussions of such subjects as circuit requirements and site selections. With the Department's active encouragement United States industry has been promoting the sale of earth stations throughout the world.

3. On May 16-27, the Department conducted a Seminar on Communications Satellite Earth Station Technology. From May 28-June 3 field trips to earth stations and space installations in this country and Canada were provided the foreign participants by United States industry and NASA. The Seminar provided delegates from thirty-five new or developing countries, as well as eleven more advanced countries, with basic knowledge and practical information on earth station economics, earth station technical requirements, and space segment access requirements. This information is useful to the LDCs in implementing their respective earth station programs. Commercial exhibits, field trips, and receptions provided opportunity for extended discussions between the participants at the Seminar and suppliers of earth station equipment.

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~~CONFIDENTIAL~~ Annex V

Sources of Financial Assistance

1. Private Companies. United States telecommunication carriers and manufacturing companies have been active in promoting the establishment of earth stations in LDCs. There have been a variety of financing arrangements proposed. For example, IT&T has proposed to establish stations on a basis consistent with continuation of their role of a common carrier, under license or franchise, in Brazil, Central America, Chile, Argentina and Peru. In these countries it has proposed the creation of a new company to be jointly owned by IT&T and the government or local nationals. It has proposed to fund the government's investment with repayment of such a loan from revenues. It would operate the station under contract for ten years, and at the conclusion of the ten year period the government could assume full ownership and terminate IT&T's operating rights.

Typical of the manufacturers' proposals is that of Hughes Aircraft. Hughes has made offers in a number of countries to sell a "turnkey" installation to the government agency with either full or partial financing. Hughes would accept the management contract if desired, and in sound cases a minority position in an operating company.

Thus far these efforts have not resulted in any contract for a variety of reasons. The biggest problem is that in most of the countries involved, communications are a government-owned function and therefore the concept of equity participation appears unacceptable as a matter of national policy. Another factor is that some of the governments are not ready to go forward with construction of an earth station because of other more pressing needs.

2. World Bank. World Bank activity in telecommunication loans of any kind has been limited. The Bank has made five or six loans for conventional communication systems and approximately an equal number are being processed. The principal considerations of the World Bank in determining whether or not to make telecommunication loans are as follows: a) will the borrower be able to manage and operate the facilities; b) is there a reasonably sound financial plan, including a realistic rate structure; c) would the new facility fit into the country's over-all plan for telecommunications. The Bank is to provide financing for an earth station in India.

3. Inter-American Development Bank. This Bank cannot be counted on to do any earth station financing in the immediate future with the possible exception of a station for Chile. With respect to Chile, the Bank currently has a request for $43 million to provide an internal microwave system, which includes funds for an earth station.

The Bank recently engaged a private engineering firm to conduct a study of existing communications facilities and probable future requirements of the Latin American countries. The study will include an appraisal of plans for, and the feasibility of, satellite coverage; possible location of earth stations; the economics of intercontinental circuits; and recommendations for communications policy as one aspect of Latin American economic integration. Until this study is completed (late 1966) and has been reviewed by the Directors, the Bank is not likely to consider financing for earth stations in any Latin American country.

In general, the Bank does not finance projects for which private capital is available on reasonable terms. The Bank has recently stated that no over-all policy with respect to financing earth stations has been established. It has also stated that any requests for such financing will be considered on their individual merits. The financing would probably cover the total foreign exchange components and be on local commercial terms with interest at 6% or 7%.

4. Export-Import Bank. The Bank is receptive to applications for earth station financing. It has no pending applications for loans but has had recent conversations with Thailand and Ethiopia. The Bank would make loans on a project basis, preferably to the foreign government involved, or, if to a local corporation, with a government guarantee. The Bank would loan up to 100% of the United States component over a period of ten years.

5. Agency for International Development (AID). AID is receptive to financing earth stations on a loan basis in some of the listed countries if other financing is not available. Following the President's recent Policy Statement on Africa AID has indicated its willingness to extend necessary earth

station financing and technical assistance to Nigeria and Ethiopia as well as Kenya, Tanzania and Uganda through the East African Common Services Organization, a joint organization to provide public utility or similar service. It does not appear likely that financing from non-United States Government sources will be available in Turkey, Pakistan and Korea. The Export-Import Bank and AID are prepared to consider financing stations in these countries. No applications for assistance have yet been received.

~~CONFIDENTIAL~~ Annex VI

Prospects for Financial Assistance for Each of the Selected Countries

1. Central America (one station serving all 6 countries). There are no current plans to finance or build an earth station in any of the six Central American countries. Panama, however, has taken the first steps leading to membership in INTELSAT, and is interested in an earth station. A number of American companies have made proposals to Panama, and these proposals include financing. The companies include IT&T, General Telephone and Electronics International, and ABC. Hughes Aircraft is also expected to make an offer to Panama. The terms of the various offers differ. Panama will probably insist on its retention of control.

2. Colombia. Colombia recently substantially completed negotiations with the IBRD for a $23 million loan covering a domestic internal microwave and cable system. Financing for an earth station was also discussed but Colombia did not make a request for requisite finances. Colombia will need both financial and technical assistance in the construction of an earth station but will not need assistance for operation and maintenance of the station.

3. Chile. Chile intends to begin construction of earth station near Santiago as soon as financing is arranged. Chile has received offers from five United States companies, one French and one British company but seeks IDB financing. Application has been made to IDB for a $43 million telecommunication loan, which includes an earth station. It is expected the loan will be approved. The Bank has requested the Government of Chile to submit a statement certifying that the earth station is to be "owned and operated by Chile". It is understood that this assurance has been given but that it does not rule out minority participation by private Chilean or foreign interests.

4. Brazil. Brazil intends to construct an earth station and has requested and received assistance from Comsat in selecting a site. Date of construction will depend on financing. Brazil would finance the station itself, but in order to conserve existing funds for high priority domestic communication projects it will probably seek external financing. IT&T has presented a proposal to Brazil under which IT&T would finance the entire cost of the station in return for a ten year lease during which IT&T would recover the investment and receive an operation fee. The IDB study includes Brazil, and IDB could also be a source of financing. Technical assistance will be required but it is contemplated that it will be provided by the

supplier of the equipment.

5. Nigeria. Instructions have been sent to the Country Team in Nigeria by State and AID that the United States Government is prepared to move ahead with assistance in the establishment of an earth station. The team has been instructed that if Nigeria is interested in establishing such a station the United States is prepared to assist it in its financing, either on the basis of a privately sponsored venture or through such organization as the Government of Nigeria considers appropriate. The United States assistance would be provided through the Export-Import Bank or AID if requested. The Team has been instructed to provide advisory service to Nigeria in preparing request for assistance. It is contemplated that the United States would not only finance the capital investment but also finance managerial and technical assistance required for station operation.

6. Ethiopia. As in the case of Nigeria, State and AID have instructed the Country Team that the United States Government is prepared to assist Ethiopia in the establishment of a ground station. The Team was informed that, subject to some additional feasibility investigation, the United States is prepared to assist in financing either on the basis of privately sponsored venture or through such organization as Ethiopia considers appropriate. The Team has been instructed that United States assistance would be provided through Export-Import Bank or AID financing, and that the United States is prepared to provide advisory services to Ethiopia in requesting assistance in financing. Technical assistance would also be required for the operation of the station.

7. Kenya, Tanzania and Uganda, through the East African Common Services Organization (EACSO). As in the cases of Nigeria and Ethiopia, and on essentially identical terms, State and AID have instructed the Country Team to inform EACSO of our Government's interest in the establishment of an earth station in this area.

8. Turkey. Turkey is interested in the construction of a ground station but because of other needed improvements in its communication facilities, particularly between Ankara and Istanbul, its decision can be expected to be delayed for some time. AID is prepared to consider assistance to Turkey for the construction of an earth station.

9. Pakistan. The UN Special Fund is now financing a general communications study for Pakistan. Pakistan's principal communication problem is that of communication between East and West Pakistan. If this problem, as well as Pakistan's international communications needs are to be solved by satellite communication Pakistan will require two earth stations, one for each region. The World Bank is giving thought to financing a station for Pakistan. AID also is prepared to consider assistance to Pakistan for the construction of these stations.

10. India. The World Bank will finance an India earth station through the International Development Association, IDA. The site and plans for the India earth station are completed. There is some delay in the beginning of construction because of a difference between India and IDA concerning internal financing.

11. Thailand. Thailand intends to build an earth station and also to have a temporary station in operation early in 1967. It desires external financing and prefers Export-Import Bank financing. Such financing is under active discussion with the Bank.

12. Philippines. Numerous proposals from Philippine and United States firms have been submitted to the Government of the Philippines for the construction of an earth station. No final decision has been made, but the contract for the station will be awarded to a company or group with ability to finance and operate the station. The Philippines will also, like Thailand, have a temporary station in operation early in 1967.

13. Korea. The Government of Korea has shown an interest in the establishment of an earth station. This interest has not resulted in any concrete government decision to date. The Export-Import Bank would be willing to consider financing an earth station in Korea if the project is feasible. The Bank is particularly interested if such a project in Korea were handled with a United States supplier (e.g. IT&T, RCA, etc.) taking the initiative. AID would be willing to consider financing an earth station in Korea, assuming other financing is not available on reasonable terms and assuming that the project satisfies development loan criteria.

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THE WHITE HOUSE

WASHINGTON

March 4, 1966

~~CONFIDENTIAL~~

NATIONAL SECURITY ACTION MEMORANDUM NO. 342

TO: The Secretary of State
The Secretary of Defense
The Secretary of Commerce
The Secretary of Health, Education and Welfare
The Administrator, National Aeronautics and Space Administration
The Chairman, Federal Communications Commission
The Administrator, Agency for International Development
The Director, United States Information Agency
The Special Assistant to the President for Telecommunications and Director of Telecommunications Management

SUBJECT: U.S. Assistance in the Early Establishment of Communications Satellite Service for Less-Developed Nations

In carrying out his responsibilities under the Communications Satellite Act of 1962, the President has directed that the United States Government take active steps to encourage the construction of earth-station links to the worldwide communications satellite system in selected less-developed countries. Emphasis in this effort is to be on encouraging the selected countries to construct these stations out of their own resources, stressing the many benefits of direct access to the global communications satellites.

The Special Assistant to the President for Telecommunications/Director of Telecommunications Management has been designated by the President as the agent for coordinating this project.

The State Department and AID are to determine (a) the countries to be included in this program and (b) U.S. Government actions, if any, for encouraging the accelerated construction of earth stations and related facilities in these countries. In cases involving possible U.S. technical or financial assistance, the President has directed that no special funds should be requested. All funding of such projects is to be handled out of current AID FY 1966 appropriations or out of regular FY 1967 funds.

~~CONFIDENTIAL~~

Dispatched 3/4/66 - Rcpts nos. 71-79

The Department of State is to report its findings to the President, through the Special Assistant for Telecommunications/Director of Telecommunications Management, by July 1, 1966.

The President has directed that the Executive Agent and Manager of the National Communications System and U.S. Government agencies operating facilities outside the NCS utilize the global communications satellite system in handling traffic whenever possible and where national security requirements will not be compromised, consistent with sound cost-efficiency and other management considerations.

A Working Group is to be established, in accordance with the President's instruction, to study the possibilities of using the communications satellite system to advance information exchange and educational purposes, in line with his desire that the United States play a greater role in international educational efforts, particularly in less-developed countries.

Bromley Smith

Bromley Smith

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~~CONFIDENTIAL~~

NATIONAL SECURITY ACTION MEMORANDUM NO. _____

TO : Secretary of State
Secretary of Defense
Secretary of Commerce
Secretary, Health, Education and Welfare
Administrator, National Aeronautics & Space Administration
Chairman, Federal Communications Commission
Administrator, Agency for International Development
Director, United States Information Agency
Special Assistant to the President for Telecommunications
and Director of Telecommunications Management

No underlining

SUBJECT : ~~Policy Concerning~~ U. S. Assistance in the Early Establishment of Communications Satellite Service for Less-Developed Nations

The Communications Satellite Act of 1962 specifies that the President take steps to insure that a worldwide communications satellite system be established as quickly as possible. The satellites for servicing such an essentially global network will be in place this year. However, the full development of the system will be retarded by the lack of earth-station links to the satellites in most parts of Asia, Africa and Latin America.

In ~~order to~~ carry out his responsibilities under the Communications

Satellite Act of 1962, the President has directed that the United States Government take active steps to encourage the construction of earth-station links to the worldwide communications satellite system in selected less-developed countries. ~~The~~ Emphasis in this effort ~~should be~~ is to be on encouraging these selected countries to construct these stations out of their own resources, stressing the many benefits of direct access to the global communications satellites.

The Special Assistant to the President for Telecommunications/Director of Telecommunications Management ~~is~~ has been designated by the President as the agent for coordinating this project.

The State Department and AID are ~~directed~~ to determine (a) the countries to be included in this program and (b) U. S. Government actions, if any, for encouraging the accelerated construction of earth stations and related facilities in these countries. In cases involving possible U. S. technical or financial assistance, the President has directed that no special funds should be requested. All funding of such projects ~~should~~ is to be handled out of current AID FY 1966 appropriations or out of regular FY 1967 funds. The Department of State ~~should~~ is to report its findings to the President, through the Special Assistant for Telecommunications/Director of Telecommunications Management, by July 1, 1966.

The President has also directed that the Executive Agent and Manager of the National Communications System and U.S. Government agencies operating facilities outside the NCS utilize the global communications satellite system in handling traffic whenever possible and where national security requirements will not be compromised, consistent with sound cost-efficiency and other management considerations.

The President has also appointed a Working Group to study the possibilities of using the communications satellite system to advance information exchange and educational purposes, in line with his desire that the United States play a greater role in international educational efforts, particularly in less-developed countries.

Working Group will consist of representatives of the State Department, AID, NASA, USIA, the Department of Health, Education and Welfare and the Executive Office of the President.

McGeorge Bundy