Judy

Remarks of

Clay T. Whitehead, Director

Office of Telecommunications Policy
Executive Office of the President

at the

Annual Meeting
American Institute of Aeronautics and Astronautics

Sheraton-Park Hotel
Washington, D.C.

January 9, 1973

Last week, three more countries joined the European Economic Community. This expansion of the E.E.C. from six to nine members is almost as significant as its original establishment. In spite of the fact that economic policies and theories are still couched in terms of an "international" economy, in which nations operate as separate individual units, the trend is unmistakably toward a world economy and society. In this world economy, in Peter Drucker's words, "common information generates the same economic appetites, aspirations, and demands -- cutting across national boundaries and languages, and largely disregarding political ideologies as well."

In the world political scene, the same sort of changes are evident. New directions in international politics -- such as President Nixon's recent trips to the People's Republic of China and the Soviet Union -- suggest a movement toward international political harmony and a new understanding of the common aspirations and goals of all nations.

One of the major catalysts behind these developments -- and one which will be even more important in the future -- is communications technology. For example, last December, the permanent charter of INTELSAT was ratified culminating a decade long effort to establish a global commercial communication satellite system.

There are fewer social and economic barriers confronting the introduction of communications technology than most of the other advanced technologies. Communications technology relies on the spoken word rather than on huge repositories of natural and industrial resources. Moreover, it takes only a small corps of highly trained technicians to run an advanced communications system in any country. The remaining operational requirements can be filled by large groups of lesser trained equipment operators and used by or for workers who have only the bare minimum of training. Communications technology thus can provide a much higher rate of social and economic return than the other advanced industrial technologies.

There are signs of a change in the traditional pattern of national economic development. By using the new communications technology, developing countries are able to reduce the time needed to advance their economies and standards of living. Communications technology has developed and been applied in the advanced countries to such an extent that it is a new economic factor of production. Advanced communications systems are now serving as an important impetus toward more productive uses of the traditional factors of production such as land, labor, and capital.

Communications technology is spreading out of the developing countries and into the lesser developed countries. Information and knowledge is not yet uniformly distributed; but it has begun to spread and this proliferation will continue. The result will be a reduction of the traditional time factors in the economic and social development cycles for the lesser developed countries. For example, it is likely to take significantly less time for literacy development and the development of highly trained indigenous entrepreneurs.

Satellites and television offer a means for meeting the world-wide need for education. It is conceivable that for the cost of a few billion dollars, sometime in the future, many small countries could own and operate their own educational satellite system or combine for satellite system use and operation on a regional basis.

The potential of the new communications technology is truly inspiring. The technology is or soon will be here for community reception satellite systems. And it

is time to think about how national or international institutions are going to be used to guide the applications of this new technology and the conditions under which satellite systems are going to operate in the future.

We have recently seen the first efforts of the international community to deal with this new communications technology. Perhaps naturally, but none the less unfortunately, the discussion has focused largely on the dark side of this technology, on the potential for misuse rather than on the immense benefits available from satellite technology. Rather than using as a focal point the trémendous international cooperation that has marked the recent operations of INTELSAT, the global common carrier system, or the potential benefits available from community broadcast systems, UNESCO and the United Nations have unfortunately focused on direct broadcast satellites.

Community reception satellite systems are basically "closed" technological systems. Receiving facilities can be controlled, and the possibility of broadcasting without the consent and cooperation of the recipient country is ruled out.

On the other hand, direct broadcast systems are basically "open" technological systems. Since direct broadcast satellite

signals could be picked up by a home receiver, the possibility of one country broadcasting programs directly into viewers' homes in other countries would exist and could not be easily controlled. Direct broadcast systems are obviously of special significance and present rather special problems.

In November 1972, UNESCO adopted a Declaration of Guiding Principles on the Use of Satellite Broadcasting which envisages restrictions by receiving nations on the content of broadcasts transmitted via outer space. The Declaration specifically stated that States should "reach or promote prior agreements concerning direct satellite broadcasting to the population of countries other than the country of origin of the transmission." Though the UNESCO Declaration is not legally binding, it reflects a widespread apprehension among nations that there are special problems in the use of direct broadcast satellites and a concern about how agreements and restrictions on the operations of any future direct broadcast satellites can be reached.

During the last session of the United Nations, the Soviet Union proposed a convention to govern the use of direct broadcast satellites for television. In contrast to the UNESCO declaration, this convention would be legally binding upon signatory states. The United Nations did not endorse the

Soviet proposal, recognizing that it was too early to adopt a legally binding approach. However, it did adopt a resolution which, as in the case of UNESCO's action, reflected the belief that agreements and some restrictions on direct television broadcasting are necessary.

The United States voted against the UNESCO resolution and the United Nations resolution for very solid reasons. The crux of our objections derived from this country's firm commitment for over 200 years to the principle of freedom of information or the unimpeded flow of information and actions. Our own social and governmental institutions depend on a free and open marketplace for ideas and information. We believe the same principle is important to the well being of the international community, and it is indeed enshrined in the Universal Declaration of Human Rights.

The United States has a proud tradition of respecting freedom and liberty domestically, and also a tradition of respecting the national, ethnic, religious, and cultural values of different societies. Our reasons for objecting to these resolutions were based on the failure of the resolutions to address the fundamental question of how to maintain the principle of the free flow of ideas and information. Both

resolutions left unresolved the complex question of how to achieve a balance between the expansion of communications obtainable through direct satellite broadcasting and legitimate sovereign interests while protecting the freedom of information principle. Most importantly, the resolutions simply did not sufficiently recognize the positive potential of this new technology in helping to better understanding among peoples, in expanding the information flow, and in promoting cultural exchanges, but rather spoke primarily in negative terms regarding possible misuse of this future technology.

The United States has come under some criticism for our opposition to these resolutions. Our opposition has led some critics to claim that we wish to utilize such future systems for disruptive purposes and that the United States might be insensitive to other countries' attitudes.

The United States has a proud record on the rights of self determination and always will. This country has made possible the space age and the broad based applications of space age technology and will continue to follow this tradition. We are a party to the Outer Space Treaty of 1967 which states specifically that:

> In the exploration and use of outer space... Parties to the Treaty shall be guided by the principle of co-operation and mutual assistance and shall conduct all their activities in outer space ... with due regard to the corresponding interests of all other ... Parties to the Treaty ...

You will recall the distinctions I made earlier between the two satellite systems. The community reception systems are essentially controllable, closed technological systems whereas the direct broadcast systems are open and essentially uncontrolled systems. These narrow technical distinctions between the two forms of satellite broadcast may be important operationally but it is extremely difficult, if not impossible, to reflect such distinctions politically. And the danger inherent in all the debate and discussion presently concerning the future direct broadcast satellites is that any controls and restrictions agreed to will apply, with far more devastating impact, to the community satellite systems. These latter systems -- which hold out so much promise to our lesser developed countries -- could be damaged irreparably by any binding precedents set for direct broadcast satellites.

The Office of Telecommunications Policy is the focal point for formulating U. S. policy for the President on this and other issues dealing with satellite communications. This satellite issue is not a major domestic communications issue with serious political ramifications or one that will have an immediate impact on U.S. technology. The reason we are concerned about it is because of the dangerous precedent any serious restrictions on satellite broadcasting would set. This Administration is firmly committed to free and unfettered flow of information worldwide and at home and without the stifling effect of Government intervention and censorship.

The United States is willing to study and explore this whole question of satellite broadcasting. The potential benefits of broadcast satellite systems should not be retarded out of fear of the chance of misuse. Severe and premature restrictions on such future satellites would constitute a giant step backwards, a step which the United States sincerely hopes would not be taken.

If the world ever evolves to the point where it actually becomes, in Marshall McLuhan's term, a "global village," a large part in this evolution will have been played by technological development. And the role that will be played by you people here today -- as the developers and orchestrators of this changing technology -- will be even greater. For this reason, as well as for many others, I hope that your conference is a success. Thank you.

Friday 9/15/72 INV. 1/73

2:00 Charles Matthews, NASA, called. His secretary advises he wants to discuss with you an invitation for you to address the annual meeting of the American Institute of Aeronautics and Astronautics in January 1973. He seems to feel strongly about talking with you Personally about this.
Helen Hall is in the process now of dealing with Dr. Marsten of Mr. Matthews' staff re this invitation -- trying to get a letter with all the details of the invitation.

Do you want to talk with Mr. Matthews, or let Helen handle it?

755-8588

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

REPLY TO ATTN OF: E

September 20, 1972

Mr. Clay T. Whitehead
Director, Office of Telecommunications
Policy
1800 G Street, N.W.
Washington, D.C. 20504

Dear Mr. Whitehead:

I have accepted responsibility for organizing an Applications Program as part of the Ninth Annual Meeting of the American Institute of Aeronautics and Astronautics to be held in Washington next January. The theme of this meeting is "Aerospace and the Public Interest - Security, Transportation, and Space Applications." The program dealing with Applications is scheduled for January 8 and 9. A preliminary outline of the program we have planned is enclosed for your information.

My purpose in writing you is to invite you to deliver a keynote address for the program session on Communications scheduled for January 9. Associated with this will be a concluding panel discussion involving chairmen of all the technical sessions and keynote speakers, which I will chair. We will arrange for organizing the sessions and selecting and inviting speakers and chairmen of the interior technical sessions. We will keep you informed and will welcome your views and recommendations on any aspect of the process.

It is my intent to use this forum to discuss the benefits that may result from the variety of efforts underway to apply advanced technology more broadly and efficiently to the public need. Hence, the emphasis will be on the application rather than on the ways and means of achievement.

As of today, the field of Communications has perhaps seen more progress from the application of space technology than any other area, and we anticipate a most interesting group of presentations. I am certain that the vantage point from which you view this arena will provide for a most interesting address. I do hope you will be able to participate.

Sincerely,

Charles W. Mathews

Charles W. Mathews
Associate Administrator
for Applications

Enclosure

NINTH ANNUAL AIAA MEETING
SPACE APPLICATIONS PROGRAM

January 8 and 9, 1972

Session I EARTH OBSERVATIONS	Session II COMMUNICATIONS	Session III TECHNOLOGY APPLICATIONS
Keynote Address Technical Session Land	Keynote Address Technical Session User Expectations and Needs	Keynote Address Technical Session Domestic Applications
Technical Session Sea	Technical Session Communications Applications	Technical Session Special Applications
Technical Session Air	Technical Session Advanced Capabilities	Technical Session Medical Applications
Space Applications Panel Discussion		

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

September 20, 1972

To: Mr. Whitehead

From: Helen C. Hall

Subject: Invitation to Speak to the Annual Meeting of the American Institute on Aeronautics and Astronautics, January 9, 1973

You have been invited by Dr. Richard Marsten, Director of Communications Programs at NASA, and Dr. Charles Mathews, Associate Administrator for Applications at NASA, to give a paper entitled "Toward Total Communications" at 1:45 p.m. on January 9, 1973 in Washington, D. C. January 9, of the three-day annual meeting which runs from January 8-10, is devoted to space applications and it appears that Dr. Mathews wants you to give the keynote paper in the principal communications session of that day. Morning sessions on that day will have already discussed satellites for navigational purposes, air traffic control, and information networking by satellite. Other space applications, including earth resources sensing and meteorological programs are also going to be discussed as part of the day's program.

The AIAA was established in 1963 to foster overall technical progress in the field; it has approximately 32,000 members, mostly scientists and engineers in aeronautics, astronautics, and hydronautics; it is affiliated with the International Astronautical Federation. Approximately 1000-1200 of the members will be attending the annual meeting.

I talked to Dr. Marsten last Friday who said that a letter of invitation was on its way to you spelling out further details of the meeting. I was waiting for that letter to get Mr. Smith's comments before submitting the information to you but thus far we have not received the letter. I have talked to Steve Doyle, who received the initial call from Dr. Marsten, and Steve recommends that it would be an appropriate forum if we will have something to say at that time about Aerosat or a related space application topic; otherwise not.

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

October 10, 1972

To: Mr. Whitehead

From: Helen C. Hall hch

Subject: Invitation to Speak to the Annual Meeting of the American Institute on Aeronautics and Astronautics, January 9

The attached letter from Dr. Charles W. Mathews (Associate Administrator for Applications at NASA) and my previous memo to you explain this AIAA speaking invitation for January 9. You have been asked to give the keynote address on the day devoted to communications with special emphasis being given to the application of space technology to the field of communications.

Dr. Mathews seems extremely anxious for you to accept this invitation--has called several times. Bromley Smith feels that this is an appropriate and useful group for you to address.

Shall I: accept ✔

regret ____

other ____

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

C. Copy: BKS
1-18

January 8, 1973

To: Tom

From: Abbott A.

Subject: Your Speech Draft of 1/4/73

Your speech draft of 1/4/73 on direct-broadcasting, in paragraph 3 of page 7, speaks of "beaming propaganda and other subversive programs" and, on page 8, labels propaganda "an insidious device" which "this country has overwhelmingly condemed ... in any form."

One man's propaganda is another man's truth and vice-versa. All of our USIA activities are regarded as propaganda by the Communist bloc, and of course Radio Free Europe and Radio Liberty are anathema to them.

It will be interpreted that what you are saying, in this language, is that the U.S. will never use direct satellite broadcasting for VOA or RFE and RL programming. USIA, in fact, is anxious to keep this option open; and the Eisenhower Commission Report, which goes to the President later this month, contains language stating that the USSR has always jammed our short-wave broadcasts (VOA and RL) and that their purpose in the UN is to prevent these programs from ever reaching their citizens by direct-broadcast satellites. The Report also points out that jamming is contrary to a specific ITU convention.

It is unclear to me what you mean by the sentence on page 8 beginning "the US will continue to advocate a flexible approach ...". By "flexible" do you mean that there is some possibility of compromise in our position?

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

REPLY TO ATTN OF: E-2

DEC 19 1972

Mr. Clay T. Whitehead
Director, Office of Telecommunications Policy
1800 G Street, N.W.
Washington, D.C. 20504

Dear Mr. Whitehead:

This is to provide you with final plans for the Applications Program of the American Institute of Aeronautics and Astronautics annual meeting in January.

The session which you have agreed to keynote is concerned with Applications of Space Communications. The session is scheduled for January 9, 1973 and will feature technical sessions on "Users Expectations and Needs" chaired by former Governor of New Mexico, Jack Campbell, now President of the Federation of Rocky Mountain States, "Communications Applications" chaired by Dr. Henri G. Busignies of ITT, and "Advanced Communications Capabilities" chaired by Dr. Harold A. Rosen of Hughes. I have attached an outline listing authors and topics for the entire program.

On January 9th following the technical sessions, there is scheduled a panel discussion in which all keynote speakers and session chairman have been asked to participate. Chuck Mathews will chair this panel to discuss the "Issues Facing Applications Activities". A copy of a related article by Chuck appearing in the latest issue of the AIAA publication, Astronautics and Aeronautics, is attached.

Please let us know if we can be of any assistance as you prepare for the meeting. We are looking forward to hearing your address.

Sincerely,

Samuel H. Hubbard
Special Assistant to the
Associate Administrator
for Applications

2 Enclosures

10/3/72
Revised: 11/22/72

NINTH ANNUAL AIAA MEETING

SPACE APPLICATIONS PROGRAM

EARTH OBSERVATIONS SESSION

Keynote Speaker: Dr. Homer E. Newell
NASA

Technical Session on "Sea"

Dr. John W. Townsend, Jr. - Chairman
NOAA

Papers:

- Dr. John Apel, NOAA
  "Ocean Dynamics"
- Mr. William Stevenson, NOAA
  "Marine Life"
- Dr. Stephen W. Hitchcock
  Agricultural Experiment Station, Connecticut
  "Wetlands"

Technical Session on "Land"

Dr. Vincent E. McKelvey, USDI - Chairman

Earth Observations Session - Continued

Papers:

- Dr. Robert N. Colwell
  University of California/Berkeley
  "Agriculture"

- Mr. Ira Bechtold
  Argus Exploration
  "Mineral Exploration"

- Mr. Gary North, USDI/MTF
  "Land Use Planning"

- Mr. Morris Deutsch, EROS/USDI
  "Hydrology"

Technical Session on "Air"

Dr. Verner E. Suomi - Chairman
University of Wisconsin

Papers:

- Mr. Vincent E. Oliver, NOAA
  "Applications of Satellite Observations to Global Weather Forecasting"

- Dr. James D. Lawrence, Jr.
  NASA/Langley Research Center
  "Atmospheric Pollution Monitoring"

- Mr. Thomas O. Haig
  University of Wisconsin
  "Applications of Satellite Observations to Local Weather Forecasting"

Technology Applications Session

Keynote Speaker: Dr. Lawrence Goldmuntz
Consultant

Technical Session on "Domestic Applications"

Mr. Harold B. Finger, HUD - Chairman

Papers:

- Dr. William Gouse, Jr.
  Carnegie Mellon University
  "Total Energy Systems"

- Mr. Carl Morrill
  United Aircraft Corporation
  "Fuel Cells for the Home"

- Mr. Otto Klima, GE
  "From Technology to the Market Place"

Technical Session on "Special Applications"

Mr. Fred Bagby, Chairman
Batelle Memorial Institute

Papers:

- Dr. Aden Meinel
  University of Arizona
  "Solar Power"

- Dr. Leo Steg, GE
  "Materials Sciences Manufacturing in Space"

Technical Session on Special Applications - Continued

- o Mr. Robert L. Maxwell
  DOT
  "Review of Transportation Systems Technology Needs"

Technical Session on "Medical Applications"

Dr. Charles W. Berry, NASA - Chairman

Papers:

- o Cmdr. William H. Crawford
  Medical Corps
  "Application of Global Alarm Network System"

- o Dr. Sam L. Pool
  NASA/Manned Spacecraft Center
  "Remote Health Care Services"

- o Dr. Albert Feiner, NIH
  "Application of ATS-F to the Remote Health Care Problems of Alaska"

Communications Session

Keynote Speaker: Mr. Clay T. Whitehead
Office of Telecommunications Policy

Technical Session on "User Expectations and Needs"

Governor John Campbell - Chairman
Federation of Rocky
Mountain States

Technical Session on "User Expectations and Needs" - Contd.

Papers:

- Dr. Theodore Ledbetter
  Urban Communications Group
  Washington, D.C.
  Cable & Broadcast TV

- Mr. E. P. Fitzgerald
  Standard Oil of New Jersey
  "Maritime Services"

- Gen. J. F. Taylor
  President, ARINC
  The Airline View of Air Traffic Control Satellites

Technical Session on "Communications Applications"

Dr. Henri G. Busignies, Session Chairman
Sr. Vice President and Chief Scientist
ITT

Papers:

- Mr. Walter R. Hinchman
  Federal Communications Commission
  "Domestic Satellites"

- Mr. David R. Israel
  Federal Aviation Administration
  "Aerosat"

- Mr. James Baker
  NASA/Goddard Space Flight Center
  "Maritime Satellite"

Technical Session on "Advanced Capabilities"

Dr. Harold A. Rosen - Chairman
Hughes Aircraft Company

Papers:

- Mr. Edwin J. Istvan, NBS
  Computer Networking - Some Implications

- Mr. J. B. Wright
  Mgr., Telecommunications
  and Information
  General Electric Co.
  "Private Lines"

- Dr. Burton I. Edelson
  COMSAT Laboratories
  "Small Mobile Terminal Service"

DRAFT:MMcCarthy:kmj:1-8-73

DIRECT BROADCAST SATELLITE SPEECH

January 9, 1973

Last week, three more countries joined the European Economic Community. This expansion of the E.E.C. from six to nine members is almost as significant as its original establishment. In spite of the fact that economic policies and theories are still couched in terms of an "international" economy, in which nations operate as separate individual units, the trend is unmistakably toward a world economy. In this world economy, in Peter Drucker's words, "common information generates the same economic appetites, aspirations, and demands -- cutting across national boundaries and languages, and largely disregarding political idealogies as well."

Drucker sees us moving toward a "global shopping center." Marshall McLuhan earlier termed it the "global village." But no matter how it is characterized, this evolution from separate and distinct national markets to a world market is evident in practically every national economy today.

One of the major catalysts behind these developments -- and one which will be even more important in the future -- is communications technology. There are fewer social and economic barriers confronting the introduction of communication technology than most of the other advanced technologies. Communications technology relies on the spoken word rather than on huge repositories of natural and industrial resources.

Moreover, it takes only a small corps of highly trained technicians to run an advanced communications system in any country. The remaining operational requirements can be filled by large groups of lesser trained equipment operators. Communications technology thus can provide a much higher rate of social and economic return than the other advanced industrial technologies.

There has been a change in the traditional pattern of national economic development. By using the new communications technology, developing countries are able to reduce the time needed to advance their economies and standards of living. Communications technology has developed and been applied to such an extent that it is a new economic factor of production. Advanced communications systems are now serving as an important impetus toward more productive uses of the traditional factors of production such as land, labor, and capital.

Communications technology is spreading out of the developing countries and into the lesser developed countries. Information and knowledge is not yet uniformly distributed; but it has begun to spread and this proliferation will continue. The result will be a reduction of the traditional time factors in the economic and social development cycles for the lesser developed countries. For example it will take significantly less time for literacy development and the development of highly trained indigenous entrepreneurs.

For such reasons, the forthcoming experimental use of the new satellite technologies in India is of wide interest and importance. Satellites and television offer a means for meeting the world-wide need for education. A successful India satellite experiment in cooperation with the United States would do much to pave the way for the widespread use of the new communications technology. It is conceivable that for the cost of a few billion dollars ~~a year~~, sometime in the future, ~~each~~ country could own and operate ~~their~~ own educational satellite system or combine for satellite system use and operation on a regional basis. Such systems could significantly reduce illiteracy worldwide and significantly increase the access of all peoples to the education and training they so eagerly seek.

The potential ~~behind~~ the new communication technology is truly inspiring. The technology is or will be here ~~in the near future~~ for community reception satellite systems. And it is time to think about how national or international institutions are going to be used to guide the applications of this new technology and the conditions under which satellite systems are going to operate in the future.

We have recently seen the first efforts of the international community to deal with this new communications technology. Unfortunately, the discussion has focused largely on the dark side of this technology, on the potential for misuse rather than on the immense benefits available from

satellite technology. Rather than using as a focal point the tremendous international cooperation that has marked the recent operations of INTELSAT, the global common carrier system, or the potential benefits available from community broadcast systems, UNESCO and the United Nations have unfortunately focused on direct broadcast satellites.

Community reception satellite systems are basically "closed" technological systems. Receiving facilities can be controlled, and the possibility of broadcasting without the consent and cooperation of the recipient country is ruled out.

On the other hand, direct broadcast systems are basically "open" technological systems. Since direct broadcast satellite signals could be picked up by a home receiver, the possibility of one country's broadcasting programs directly into viewers' homes in other countries would exist and could not be easily controlled. Direct broadcast systems are obviously of special significance and present rather special problems.

In November, 1972, UNESCO adopted a Declaration of Guiding Principles on the Use of Satellite Broadcasting which envisages restricitions by receiving nations on the content of broadcasts transmitted via outer space. The declaration specifically stated that States should "reach or promote prior agreements concerning direct satellite broadcasting to the population of countries other than the country of origin of the transmission." Though the UNESCO Declaration is not

legally binding, it reflects a widespread apprehension among nations that there are special problems in the use of direct broadcast satellites and a concern about how agreements and restrictions on the operations of any future direct broadcast satellites can be reached.

During the last session of the United Nations, the Soviet Union proposed a convention to govern the use of direct broadcast satellites for television. In contrast to the UNESCO declaration, this convention would be legally binding upon signatory states. The United Nations did not endorse the Soviet proposal, recognizing that it was too early to adopt a legally binding approach. However, it did adopt a resolution which, as in the case of UNESCO's action, reflected the belief that agreements and some restrictions on direct television broadcasting are necessary.

The United States voted against the UNESCO resolution and the United Nations resolution for very solid reasons. The crux of our objections derived from this country's firm commitment for over 200 years to the principle of freedom of information or the unimpeded flow of information and actions. Our own social and governmental institutions depend on a free and open marketplace for ideas and information. We believe the same principle is important to the well being of the international community, and it is indeed enshrined in the Universal Declaration of Human Rights.

The United States has a proud tradition of respecting freedom and liberty domestically, and also a tradition of respecting the national, ethnic, religious, and cultural values of different societies. Our reasons for objecting to these resolutions were based on the failure of the resolutions to address the fundamental question of how to maintain the principle of the free flow of ideas and information. Both resolutions left unresolved the complex question of how to achieve a balance between the expansion of communications obtainable through direct satellite broadcasting and legitimate sovereign interests while protecting the freedom of information principle. ~~Finally,~~ the resolutions simply did not sufficiently recognize the positive potential of this new technology in helping to better understanding among peoples, to expand the information flow, and to promote cultural exchanges, but rather spoke primarily in negative terms regarding possible misuse of this future technology.

Besides these substantive objections, springing from our belief that the free flow of information is of central importance, there were some procedural objections by the United States regarding the proper manner for consideration of these issues.

The United States has come under some criticism for ~~our~~ opposition to these resolutions. That opposition has led some critics to claim that we wish to utilize such future

systems for disruptive purposes and that the United States might be insensitive to other countries' attitudes.

The United States has a proud record on the rights of self determination and always will. This country has made possible the space age and the broad based applications of space age technology and will continue to follow this tradition. We are a party to the Outer Space Treaty of 1967 which states specifically that:

> In the exploration and use of outer space... Parties to the Treaty shall be guided by the principle of co-operation and mutual assistance and shall conduct all their activities in outer space ... with due regard to the corresponding interests of all other ... Parties to the Treaty ...

You will recall the distinctions I made earlier between the two satellite systems. The community reception systems are essentially controllable, closed technological systems whereas the direct broadcast systems are open and essentially uncontrolled systems. These narrow technical distinctions between the two forms of satellite broadcast ~~may be~~ are important operationally but it is extremely difficult, if not impossible, to reflect such distinctions politically. And the danger inherent in all the debate and discussion presently concerning the future direct broadcast satellites is that any controls

and restrictions agreed to will apply, with far more devastating impact, to the community satellite systems. These latter systems -- which hold out so much promise to our lesser developed countries -- could be damaged irreparably by any binding precedents set for direct broadcast satellites.

My agency -- the Office of Telecommunications Policy -- ~~has the ultimate responsibility for~~ formulating policy ~~for the President~~ on ~~this and other~~ issues dealing with satellite communications. This satellite broadcasting issue is not a major domestic communications issue with serious political ramifications or one that will have an immediate impact on U.S. technology. The reason ~~OTP and the President~~ we are concerned about it is because of the dangerous precedent any serious restrictions on satellite broadcasting would set. This Administration is firmly committed to free and unfettered flow of information worldwide and without the stifling effect of Government intervention and censorship.

The United States is willing to study and explore this whole question of satellite broadcasting. The potential benefits of broadcast satellite systems should not be retarded out of fear of the chance of misuse. Severe and premature restrictions on such future satellites would constitute a giant step backwards, a step which the United States sincerely hopes would not be taken.

Wednesday 9/13/72

SPEECH INV.
1/9/73

9:30 HELEN

Re the AIAA invitation, Mr. Doyle asked we give you the following:

The invitation is for Mr. Whitehead to address the Annual meeting which should be for Jan. 9 at a session in Washington, D. C. The annual meeting runs Jan. 8, 9, 10 and overlaps with an annual Aerospace Sciences Meeting which will run Jan. 10, 11, 12 in the same hotel.

Jan. 9 is devoted to space applications and a keynote paper is scheduled at 1:45 entitled, "Toward Total Communications." Morning sessions on that day will have already discussed satellites for navigational purposes, air traffic control, and information networking by satellite. Other space applications, including earth resources sensing and meteorological programs are also going to be discussed as part of the day's program.

It appears that Marsten's call is a preliminary inquiry to find out if Mr. Whitehead is available on Jan. 9 to do such a paper as a keynote address in the principal communications session.

Thursday 9/7/72

INVITATION
1/9/73

9:50 HELEN HALL

Dr. Richard Marsten, Director of Communications Programs at NASA, has called to speak with Mr. Whitehead re the possibility of his giving the keynote address on January 9, 1973, at the annual meeting of the American Institute on Aeronautics and Astronautics (?).

Checked with Steve Doyle, who recommends you call James Harford in New York City for the details of the affair, if you think this may be something CTW is interested in.

OCT 13 1972

Dr. Charles W. Mathews
Associate Administrator
for Applications
National Aeronautics and
Space Administration
Washington, D. C. 20546

Dear Dr. Mathews:

Thank you for your invitation to give the keynote address at the communications session of the AIAA annual meeting on January 9.

I am delighted that I will be able to accept your invitation. My Assistant, Mr. Brian Lamb, will be happy to work out the details with your office when the plans for the program become more definite.

The annual meeting as outlined promises to be a rewarding exchange of views, and I am very much looking forward to participating.

Sincerely,

Signed
TOM
Clay T. Whitehead

cc: DO Records
DO Chron
Mr. Whitehead
Eva
Mr. Lamb (2)
HCH Subject
HCH Chron

HCHall:slb 10-12-72

The Issues Before Us

Space Applications

By CHARLES W. MATHEWS
NASA Associate Administrator
for Applications
Organizer of Space Applications Sessions for the AIAA 9th Annual Meeting and Technical Display

The Space Applications program for the 9th Annual Meeting has been structured with two principal objectives in mind. First, the program will present an overview of applications activities, both near- and far-term, in the fields of Earth observations, space communications, and advanced-technology applications. All of these areas of our space effort have provided significant values to the public and show promise of much greater future benefit. Secondly, in presenting this overview, the program will surface many issues, which range over the entire spectrum of these undertakings. Some of the issues are technical, some economic, some jurisdictional; and some have special social or political connotations.

By our definition, an application means an activity that brings a *net benefit* to someone or to some group that has a need, a problem to overcome, or a responsibility to fulfill. The benefit may take the form of a new or improved capability, service or product; and it may appear in a variety of disciplinary areas. The cost of a new product or service will be of paramount importance in determining its acceptance.

Numerous possibilities for space applications exist—solar-power generation in and materials processing in space have recently received considerable attention in the Congress and elsewhere. Still, it appears most likely that the capabilities for Earth observations from space, in combination with global communications, will continue to produce the most important applications in the near term. For the environment and resources of the Earth's atmosphere, its continents, its coastal shelves, and its oceans, seas, and lakes have rightly become of great concern to people everywhere. This concern reflects a recognition of the closed-loop ecology and finite resources of Earth, just as in the spaceships we build. The spaceship analogy is widely used these days when discussing the environment, and quite fittingly so.

In one sense, the world has become small—a tight complex of interactions among activities of nations, continents, and hemispheres. In another sense, the world is still large, involving tens of billions of acres of land and oceans many times larger. Yet we know humans have changed much of this immense area. How shall we establish a baseline and how shall we measure changes and differentiate between man-caused and natural changes? To answer these questions we must gather large amounts of data from the various regions of the world—in many cases, on a global basis. These data must flow to centralized points for processing into interpretable information, and this information must flow to appropriate decision-makers. But equally important, a parallel flow of information must go to the public to aid in their preparedness and understanding and to achieve their support.

This human interface probably challenges us more than the technical problems involved, for considerable effort must be spent in establishing an understanding of the benefits of such actions, their economic viability, and in avoiding the concerns of vested interests.

Remote sensing of the Earth encompasses perhaps the widest variety of potentially beneficial space applications. The chart here illustrates the extent of this work. As I have noted, people increasingly recognize, both nationally and internationally, the finite character of Earth's natural resources and the burgeoning demand for them. Not only is there an increasing awareness of the need to establish more precise estimates of mineral reserves, for example, but also there is the com-

panion realization that better use and protection of the environment—the land, sea, and air—must be achieved if the beauty and life-giving character of our planet is to be maintained in the years to come.

As a simple example of need in this respect, *no up-to-date, accurate inventory of how the land is being used exists*, even for the United States. By means of new sensing techniques, however, which permit collection of necessary information on a major scale, it will be possible not only to establish but to maintain certain of these inventories and produce data that bear importantly on others.

For instance, remote-sensing techniques promise the ability to inventory agricultural production as to acreage commitments and to provide estimates of yields as well. This can be of vital importance to the agricultural economy as it will provide a firmer basis for planning and for decision making than has been available before.

A significant factor, and perhaps the one which has most discouraged attempts to solve these problems solely with aircraft, is the *dynamic nature of the information*, once acquired. The rate at which we are using our resources and redoing our landscape outdate in a very short time any static view. Hence, the information must be acquired and analyzed nearly continuously in a manner both economical and effective.

Not only the land but our total environment is affected, most generally, adversely, by man's *day-to-day activities*. Even the oceans, which have heretofore been considered much too vast to be impacted by activities on its surface or outpourings from the land, now exhibit signs of pollution, most dominantly along the coastal shelves. The seriousness of fouling the oceans cannot be ignored.

Early results from the Earth Resources Technology Satellite (ERTS) program, backed up by numerous observations from aircraft, already give us ample evidence that remote sensing can effectively detect both the existence and extent of marine pollution. Similarly, some preliminary work suggests that information pertaining to the concentration of marine life can be inferred from remotely sensed data, and in time such information may help us farm the seas and meet mankind's food needs better.

Meteorology, of course, made the first systematic, synoptic use of remote sensing, and this area of space applications has advanced significantly in a methodic way. It is now possible to provide early detection and continuous tracking of major storms throughout the Western Hemisphere. And as the Europeans, Japanese, and Russians plan to provide synchronous meteorological satellites also, this capability will probably exist in the near future on a global basis.

In recent years the paths of severe storms, including hurricanes, have been accurately forecast, so savings of many lives and much property. Also, advances in meteorological sensing techniques, such as the use of atmospheric sounding to acquire temperature profiles in the atmosphere, have made powerful contributions to weather forecasting. We still find it difficult, however, when weather conditions are marginal, to predict with any certainty whether or not there will be precipitation in a given locality within a specific time period. But perhaps of even greater significance, *we have much to learn about how to portray the information we have to special users in the most meaningful form.*

The local weather situation intensely concerns the average citizen and the special user. The housewife on her way downtown, a family planning a picnic, the farmer setting out his day's work, construction activities—all of these and many other so-called day-to-day, routine activities are sensitive to weather disturbances and would benefit from the ability to predict accurately and portray simple events, such as whether or not it is going to rain and how hard. In meteorology the space scientist will be moving ever-

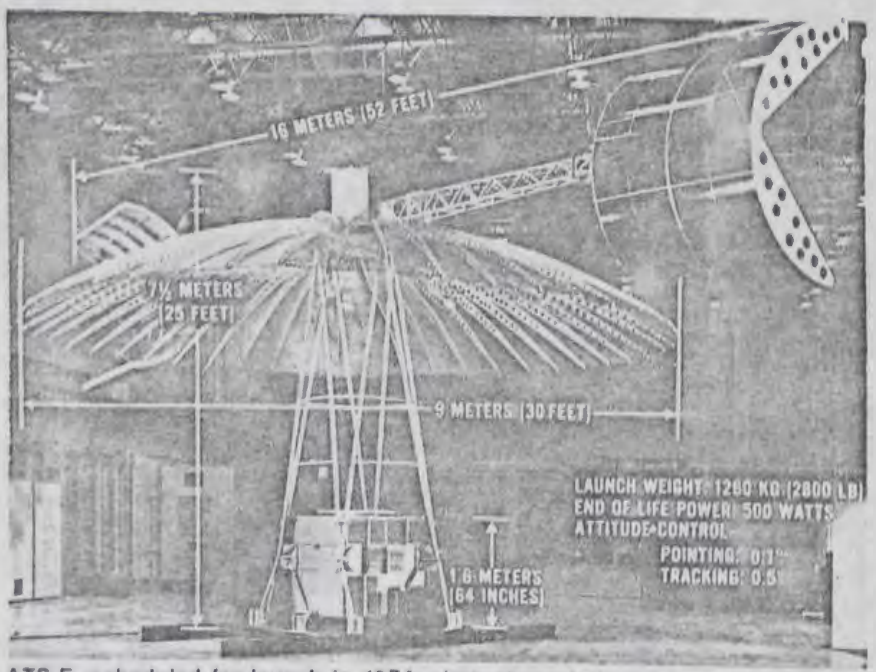
EARTH OBSERVATION PROGRAMS

closer to such detailed prediction during this decade.

But our success in realizing the maximum benefit from Earth observations faces far more than such technical challenges. In Earth-resources surveys, for example, what mechanisms must we develop to provide equitable distribution and sharing of information? How do we manage the tremendous amount of data becoming available? What interpretive techniques must be developed to allow the extraction of useful information from the data that will be collected? How do we use such information for overall benefit and in a manner to obtain public acceptance on a worldwide basis? Our principal problem with meteorological observations is perhaps more technical in nature, but still includes the question of how to present information in a way that can fulfill the needs of the user, as well as the professional meteorologist as long-range forecaster.

Environmental monitoring is another area with interesting issues. For example, remote sensing is beginning to demonstrate application to the detection of marine and atmospheric pollution. In many instances, particularly as regards atmospheric and ocean pollution, the problem is international in scope. In what way should the data be handled to deal effectively with pollution problems of local, regional, national, or even international interest?

I should not dwell too much on remote sensing from space. Other space applications have already proved striking too, especially space communications. For almost a decade, the progress made in space communications has been phenomenal. In recent years we have come to accept live television broadcasts from all parts of the world. These are now so routine that they are scheduled with hardly any unusual effort into daily broadcast schedules. The quality and reliability of signals relayed by spacecraft equal or better those of other systems. A large commercial endeavor has grown out of this space application, and today a telephone call to Europe costs about a third of what it did 10 years ago, principally because of the capacity added by synchronous satellites.



ATS-F, scheduled for launch in 1974, aims at revolutionizing educational and medical services through communications.

More recently, efforts have been undertaken to exploit satellite communications in education and medical services.

ATS synchronous satellites have made possible effective medical consultation to patients in remote areas, and even these demonstrations have been credited with saving lives. Much of the world's population rarely, if ever, sees a doctor. In time, communications satellites may change this; and experiments aimed at doing so will continue.

Investigations in the continental United States and Alaska will use ATS-F to broadcast experimental educational programs to low-cost receivers located in areas which currently lack communications facilities and other services associated with highly developed urban areas. These experiments may well provide the basis for a revolution in bringing to the widest possible population the best educational material.

During the past several years, there has been considerable discussion of the Indian instructional-TV experiment being prepared to utilize the ATS-F spacecraft. This effort by India in cooperation with NASA to use advanced communications capabilities to assist in solving some fundamental and far-reaching problems is indeed imaginative.

Applications such as these involve complex programming problems. In India, for example, there are different dialects among the population which must in some way be accommodated with the broadcast capability. The problem of providing a format suitable for all users of this instructional tool may pose severe problems. Similarly, in the United States, the precedent of local control of schools requires careful consideration of program content to be broadcast by satellite.

Another application of com-

munications satellites may result in routine, interactive video transmission of meetings involving participants in different geographic locations, possibly even different countries. It has been suggested that a live TV linkage between all the "attendees" at a conference could make it unnecessary for each of them to travel to a single place. At the same time, much remains to be learned about effective interchanges in this mode. While there is no question that by use of satellite links and suitable ground stations all the information presented would be available to all, there may be some more obscure aspects, such as reluctance on the part of participants to freely express ideas or controversial thoughts using this medium.

Many other potential uses of satellites in communications are envisioned. With "electronic mail" the postal service might use satellite links to relay specially formatted mail rapidly and economically over great distances. Similarly, some large industrial concerns, with many widely separated branches, are giving thought to linking their various elements through communication satellites. Still other users may employ a communications capability to support ocean shipping, thereby minimizing the delays, damage, and other inefficiencies associated with poor routing and rough sea conditions.

In time, the so-called "wired city" may prove feasible and attractive to urban communities. this, in essence, would provide, through advanced communications, real-time computerized record keeping, utilities servicing, intercity communications, public computing facilities, and highly integrated management of emergency and routine city services. Satellites may very well provide trunking services for such systems. Another significant area of interest involves the application of space flight to technological applications associated with the unique properties of the space environment. A great deal of study and some experimentation has been done on utilizing the gravity-free environment of space to effect materials processes not possible in the ever-present gravity field near the surface of Earth. It has been suggested that compounds such as vaccines might be manufactured in the space environment with such a high degree of purity that the resulting value of the product would offset the costs associated with acquiring it. Similarly, the growth of large, very pure, single crystals becomes possible and, also in theory, cost-effective. Most such applications, which depend on a "space manufacturing" facility, probably will remain in the status of basic research until the space shuttle makes practical a space facility for large-scale experimentation. But this is an open field of great commercial and industrial potential.

A still different aspect of the application of space flight and space technology involves solar energy. As power needs begin to outstrip the nation's ability to produce electricity by conventional means, solar energy will undoubtedly play some part in the total energy picture. Most other sources, however, will continue to be extensively used. The precise relationship of solar-generated power to that produced by other means will depend predominantly on future technical achievements that will make the concept's attractive features economically viable as well. Associated with these are the questions of whether the collection system is to be ground- or space-based and how its development should be phased. In either case, experience with space systems in areas of thermodynamics, power conversion, and distribution should be applicable.

In other areas of national interest quite removed from activities directly associated with space flight, certain very "down-to-earth" applications of advanced technology are involving aerospace personnel. NASA has an agreement with the Department of Housing and Urban Development, for example, to investigate the feasibility of integrated utility systems for application to urban housing. The goal: to define housing concepts that both minimize the impact of the housing on the environment and the demands on utilities —power, water, waste disposal.

A related undertaking, now just in early stages of discussion, may evolve into a cooperative effort between NASA and the Department of Transportation. Here we are exploring with DOT possible areas in which NASA experience may be applied to the challenges of urban mass transit. We are also discussing with the Department of Health, Education and Welfare the application of certain physiological analyses and monitoring techniques developed in the manned-spaceflight program to the problem of providing high-quality medical monitoring in remote areas.

In all these endeavors, we in aerospace must pass the test of economics. "Is it effective?" We will be asked. "An improvement over more conventional ways of solving the problem?" "Worth more than the going system?"

These and other facets of the Space Applications program will be topics front and center at AIAA's 9th Annual Meeting. both topics and speakers have been chosen with the view of providing a *public forum* in which the issues may be throughly aired. Time has been allowed in each presentation for questions and floor discussion. Don't miss the opportunity to make your opinions heard. Bring that neighbor who has been needling you about your work if you can. I look forward to seeing you in Washington at the 9th Annual.

Wednesday 1/3/73

SPEECH
1/9/73
9:00 a.m.

4:00 Mr. Hubbard, NASA, called to make sure Mr. Whitehead knew he will address the AIAA at 9:00 a.m. on Tuesday, Jan. 9, in the Delaware Room of the Sheraton.

Also inquired whether Mr. Whitehead will be attending the panel session that afternoon at 3:45 in the same room (will last approx. 1 and 1/2 hours).

Per Brian, we will call him and tell him Mr. Whitehead will NOT be able to attend the panel session.

755-8608

Friday 12/29/72

TW-Inv. Accepted
1/9/73
1:45 p.m.

2:10 Called Chuck Mathews' office to find out where the AIAA meeting will be held on January 9, 1973.

It will be held in the Sheraton Park Hotel.
They will be in touch later about which room.

OTP FORM 6
December 1971

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TO Director
FROM Charles Mathews, NASA
SUBJ.

Thanks to Dir. fr speech before the AIAA

ROUTING	DATE SENT
~~M Hall~~	~~1/29~~
~~Director~~	
B. SMITH	
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COURIER NO.	ANSWERED	NO REPLY

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

Sprint 1/9/73

REPLY TO ATTN OF: E-2

JAN 25 1973

Mr. Clay T. Whitehead
Director, Office of Telecommunications Policy
1800 G Street, N.W.
Washington, D. C. 20504

Dear ~~Mr. Whitehead:~~ Clay

Thank you for taking part in the Space Applications Program of the Ninth Annual Meeting of the American Institute of Aeronautics and Astronautics. Your remarks keynoting the communications program area were quite interesting and effective in setting the stage for the presentation that followed.

I am sorry that I was unable to discuss your address with you at the meeting and thank you personally for taking part.

Sincerely,

Charles W. Mathews
Associate Administrator for Applications

OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON

Mr. Whitehead.

Attached is a final draft of Mr. Whitehead's 9:00 speech tomorrow. Mike McCarthy will return this afternoon at 5:00 p.m. Any comments, questions, or criticisms should be given to him then to coordinate for the final speech.

DRAFT:MMcCarthy:kmj:1-8-73

DIRECT BROADCAST SATELLITE SPEECH

January 9, 1973

Last week, three more countries joined the European Economic Community. This expansion of the E.E.C. from six to nine members is almost as significant as its original establishment. In spite of the fact that economic policies and theories are still couched in terms of an "international" economy, in which nations operate as separate individual units, the trend is unmistakably toward a world economy. In this world economy, in Peter Drucker's words, "common information generates the same economic appetites, aspirations, and demands -- cutting across national boundaries and languages, and largely disregarding political idealogies as well."

Drucker sees us moving toward a "global shopping center." Marshall McLuhan earlier termed it the "global village." But no matter how it is characterized, this evolution from separate and distinct national markets to a world market is evident in practically every national economy today.

One of the major catalysts behind these developments -- and one which will be even more important in the future -- is communications technology. There are fewer social and economic barriers confronting the introduction of communication technology than most of the other advanced technologies. Communications technology relies on the spoken word rather than on huge repositories of natural and industrial resources.

Moreover, it takes only a small corps of highly trained technicians to run an advanced communications system in any country. The remaining operational requirements can be filled by large groups of lesser trained equipment operators. Communications technology thus can provide a much higher rate of social and economic return than the other advanced industrial technologies.

There has been a change in the traditional pattern of national economic development. By using the new communications technology, developing countries are able to reduce the time needed to advance their economies and standards of living. Communications technology has developed and been applied to such an extent that it is a new economic factor of production. Advanced communications systems are now serving as an important impetus toward more productive uses of the traditional factors of production such as land, labor, and capital.

Communications technology is spreading out of the developing countries and into the lesser developed countries. Information and knowledge is not yet uniformly distributed; but it has begun to spread and this proliferation will continue. The result will be a reduction of the traditional time factors in the economic and social development cycles for the lesser developed countries. For example it will take significantly less time for literacy development and the development of highly trained indigenous entrepreneurs.

For such reasons, the forthcoming experimental use of the new satellite technologies in India is of wide interest and importance. Satellites and television offer a means for meeting the world-wide need for education. A successful India satellite experiment in cooperation with the United States would do much to pave the way for the widespread use of the new communications technology. It is conceivable that for the cost of a few billion dollars a year, sometime in the future, each country could own and operate their own educational satellite system or combine for satellite system use and operation on a regional basis. Such systems could significantly reduce illiteracy worldwide and significantly increase the access of all peoples to the education and training they so eagerly seek.

The potential behind the new communication technology is truly inspiring. The technology is or will be here in the near future for community reception satellite systems. And it is time to think about how national or international institutions are going to be used to guide the applications of this new technology and the conditions under which satellite systems are going to operate in the future.

We have recently seen the first efforts of the international community to deal with this new communications technology. Unfortunately, the discussion has focused largely on the dark side of this technology, on the potential for misuse rather than on the immense benefits available from

satellite technology. Rather than using as a focal point the tremendous international cooperation that has marked the recent operations of INTELSAT, the global common carrier system, or the potential benefits available from community broadcast systems, UNESCO and the United Nations have unfortunately focused on direct broadcast satellites.

Community reception satellite systems are basically "closed" technological systems. Receiving facilities can be controlled, and the possibility of broadcasting without the consent and cooperation of the recipient country is ruled out.

On the other hand, direct broadcast systems are basically "open" technological systems. Since direct broadcast satellite signals could be picked up by a home receiver, the possibility of one country's broadcasting programs directly into viewers' homes in other countries would exist and could not be easily controlled. Direct broadcast systems are obviously of special significance and present rather special problems.

In November, 1972, UNESCO adopted a Declaration of Guiding Principles on the Use of Satellite Broadcasting which envisages restricitions by receiving nations on the content of broadcasts transmitted via outer space. The declaration specifically stated that States should "reach or promote prior agreements concerning direct satellite broadcasting to the population of countries other than the country of origin of the transmission." Though the UNESCO Declaration is not

legally binding, it reflects a widespread apprehension among nations that there are special problems in the use of direct broadcast satellites and a concern about how agreements and restrictions on the operations of any future direct broadcast satellites can be set.

During the last session of the United Nations, the Soviet Union proposed a convention to govern the use of direct broadcast satellites for television. In contrast to the UNESCO declaration, this convention would be legally binding upon signatory states. The United Nations did not endorse the Soviet proposal, recognizing that it was too early to adopt a legally binding approach. However, it did adopt a resolution which, as in the case of UNESCO's action, reflected the belief that agreements and some restrictions on direct television broadcasting are necessary.

The United States voted against the UNESCO resolution and the United Nations resolution for very solid reasons. The crux of our objections derived from this country's firm commitment for over 200 years to the principle of freedom of information or the unimpeded flow of information and actions. Our own social and governmental institutions depend on a free and open marketplace for ideas and information. We believe the same principle is important to the well being of the international community and it is indeed enshrined in the Universal Declaration of Human Rights.

The United States has a proud tradition of respecting freedom and liberty domestically, and also a tradition of respecting the national, ethnic, religious, and cultural values of different societies. Our reasons for objecting to these resolutions were based on the failure of the resolutions to address the fundamental question of how to maintain the principle of the free flow of ideas and information. Both resolutions left unresolved the complex question of how to achieve a balance between the expansion of communications obtainable through direct satellite broadcasting and legitimate sovereign interests while protecting the freedom of information principle. Finally, the resolutions simply did not sufficiently recognize the positive potential of this new technology in helping to better understanding among peoples, to expand the information flow, and to promote cultural exchanges, but rather spoke primarily in negative terms regarding possible misuse of this future technology.

Besides these substantive objections, springing from our belief that the free flow of information is of central importance, there were some procedural objections by the United States regarding the proper manner for consideration of these issues.

The United States has come under some criticism for our opposition to these resolutions. Our opposition has led some critics to claim that we wish to utilize such future

systems for disruptive purposes and that the United States might be insensitive to other countries' attitudes.

The United States has a proud record on the rights of self determination and always will. This country has made possible the space age and the broad based applications of space age technology and will continue to follow this tradition. We are a party to the Outer Space Treaty of 1967 which states specifically that:

> In the exploration and use of outer space... Parties to the Treaty shall be guided by the principle of co-operation and mutual assistance and shall conduct all their activities in outer space ... with due regard to the corresponding interests of all other ... Parties to the Treaty ...

You will recall the distinctions I made earlier between the two satellite systesm. The community reception systems are essentially controllable, closed technological systems whereas the direct broadcast systems are open and essentially uncontrolled systems. These narrow technical distinctions between the two forms of satellite broadcast may be important operationally but it is extremely difficult, if not impossible, to reflect such distinctions politically. And the danger inherent in all the debate and discussion presently concerning the future direct broadcast satellites is that any controls

and restrictions agreed to will apply, with far more devastating impact, to the community satellite systems. These latter systems -- which hold out so much promise to our lesser developed countries -- could be damaged irreparably by any binding precedents set for direct broadcast satellites.

My agency -- the Office of Telecommunications Policy -- has the ultimate responsibility for formulating policy for the President on this and other issues dealing with satellite communications. This satellite issue is not a major domestic communications issue with serious political ramifications or one that will have an immediate impact on U.S. technology. The reason OTP and the President are concerned about it is because of the dangerous precedent any serious restrictions on satellite broadcasting would set. This Administration is firmly committed to free and unfettered flow of information worldwide and without the stifling effect of Government intervention and censorship.

The United States is willing to study and explore this whole question of satellite broadcasting. The potential benefits of broadcast satellite systems should not be retarded out of fear of the chance of misuse. Severe and premature restrictions on such future satellites would constitute a giant step backwards, a step which the United States sincerely hopes would not be taken.