

June 6, 1969

Dear Mr. Cain:

In reply to your letter of May 23rd to Clay T. Whitehead, I am sending a copy of the Final Report of the President's Task Force on Communications Policy, which was released on May 20, 1969.

If you wish additional copies, they may be purchased through the Superintendent of Documents, Government Printing Office, Washington, D. C. The Catalog No. is PR 36.8:C73/C73; the price is \$4.50 per copy.

Incidentally, when I received your letter, the envelope was detached -- so I am assuming your address is in London. I would appreciate it if you would drop me a note to let me know when you receive this report. Thanks.

Sincerely,

Eva Daughtrey  
Administrative Assistant  
to Clay T. Whitehead

Mr. Arthur Cain  
28 Linton House  
11 Holland Park Avenue W11  
London, England

cc: Mr. Whitehead  
Central Files

EDaughtrey

28 LINTON HOUSE · 11 HOLLAND PARK AVENUE · W11

TELEPHONE 01.727. 7263

Clay T. Whitehead, Esq.,  
The White House,  
Washington,  
U.S.A.

Friday,  
23rd May,  
1963.

Dear Mr. Whitehead,

I have read in the International Herald Tribune, Friday, 23rd May, 1969, page 9, a report by Robert J. Samuelson, dated 'Washington 22 May', of a 'massive report on the future of U.S.A. communications policy'.

Apart from earning a living in Public Relations I am also a lecturer at an evening college of a course and I would like to obtain a copy of this report.

Could you very kindly let me know what it would cost and from which office I could obtain a copy.

I have spoken to the Press Office of the U.S.A. Embassy in London and they said they would receive a copy of the report in due course, but they could not define 'due course'!

I am writing to you because you are named as the White House spokesman on this topic.

Incidentally, it often occurs to me that the amount of information made available to the world by U.S.A. trade, technical and professional press, and official reports, is a contribution to knowledge and education which is taken for granted by too many people. So I would add my very sincere thanks for any progress you can make on this matter for me.

Yours very sincerely,

*Arthur Cain*

Arthur Cain.

*Eva: Pae answer*



Friday 6/6/69

2:10 Called Timmons' office to let them know that Transportation had agreed to postpone testimony before the Dingell people on the communications thing and that unless you heard otherwise, you would assume that the thing is all solved.

She said they knew Transportation was agreeable -- that it was Dingell that wanted the hearings.

2:20 After receiving the call (see other sheet) from Bob Whittington called Timmons' secretary back and told her that a call had come in from Transportation and that you might want to call her back about this before giving Mr. Timmons the message we had called to her. She said Timmons is working on it from the other end -- with Dingell to try to have the hearings postponed.

Friday 6/6/69

2:10 When I gave Timmons' secretary the message, she said something else had come up.

Apparently there is a rumor that there is to be an announcement coming out very soon on the SST. (She was confusing -- so I'm not sure whether Gluck of the Senate Commerce Cmte. is the one who called or Lia Rathke (a woman traveling with the President)) -- however, they don't want to say the Administration was nothing on it and then have someone announce something within the next day or two -- from Transportation or else somewhere -- it would be embarrassing.

If you aren't handling it, she would like to know who is contact.



Friday 6/6/69

12:00 Tom asked me to call Dr. Lyons and tell him Tom has decided to put the staff papers out through the Commerce Department's document reproduction thing (??). Please see that they get a complete set, excluding, of course, the classified material.

12:40 Dr. Lyons will talk to Bill Morrill about the process and get these papers to Commerce.

Friday 6/6/69

11:15 Asher Ende called to say that Chris Lydon of the New York Times had called and wanted to see the staff papers of the Task Force on Telecommunications. 632-6910

He had called here yesterday afternoon when Tom was away -- so then he called Mr. Guthrie, House Interstate and Foreign Commerce Committee, who said, since the Report had been released, he would release the staff papers -- if Mr. Lydon wanted to come up and get them.



THE SECRETARY OF COMMERCE  
WASHINGTON, D.C. 20230

February 3, 1969

MEMORANDUM FOR THE PRESIDENT

Subject: Federal Telecommunications Policy Management

The present system for formulating and managing telecommunications policy is dysfunctional because there is no properly ordained central policy locus. Mismanagement of the electromagnetic spectrum has resulted in valuable spectrum space lying unused and technical improvements unexplored. I propose you delegate responsibility for policy formulation and management to the Department of Commerce.

Background

Prime coordination and policy responsibility for the Executive Branch and for emergency purposes in this field rest with the Director of Telecommunications Management, an Assistant Director of the Office of Emergency Planning in the Executive Office of the President. Prime control over non-Federal use of radio communications is vested in the Federal Communications Commission. As key issues have become increasingly technical, the Director has become less able to function because he lacks the substantial research facilities necessary to properly consider the policy changes required by evolving technology. This is also true to a lesser extent for the FCC.

Moreover, the Director often competes with the Federal Communications Commission on control over portions of the spectrum because both offices are responsible for aspects of spectrum management. This unfortunate situation is compounded by the needs of operating agencies (such as NASA, Transportation, Defense and GSA) whose heavy functional involvement with telecommunications creates competing demands which no central policy authority has been able to balance in the national interest.

The Bureau of the Budget and the so-called Rostow Task Force, late last year, both recommended consolidating telecommunications policy and research functions in an existing cabinet agency. No agency was named or other constructive action taken.

*Not True!*



### Action Proposal

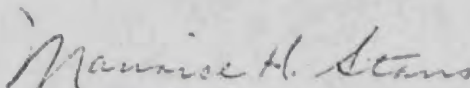
By Executive Order, you can transfer the policy function from your office to mine. I could then create a telecommunications analysis program to support the office by putting our research arm at the disposal of the Director. With the exception of the Defense and space agencies, Commerce has the largest research facilities in this field. I could also combine our data collection and economic analysis resources with the research effort in order to properly support the policy office.

May I submit for your consideration a draft Executive Order for this purpose?

Legislation (or a reorganization plan if the Reorganization Act of 1949 is revived) would be necessary to transfer the spectrum management function from the FCC to my office. The FCC would continue its regulatory functions and license spectrum space, but the policy direction would be unified under my office. This combined policy direction would materially assist coordinating the agencies in government who use the spectrum with private civilian and industrial requirements.

### Conclusion

Sufficient evidence exists that the present system cannot function. Logic suggests that the coordinating agency not be a heavy user of the spectrum (in order to remain objective) and that the agency have substantial telecommunications research facilities. Commerce meets these requirements. Finally, I believe it is essential that policy management in this vital area be directly responsive to you at the Cabinet level.

  
Maurice H. Stans



THE SECRETARY OF COMMERCE  
WASHINGTON, D.C. 20230

February 3, 1969

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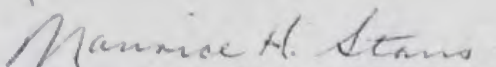
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Maurice H. Stans



MEMORANDUM

Date: February 3, 1969  
Time: 5:00 P.M.

THE WHITE HOUSE

WASHINGTON

FOR:

DR. LEE A. DuBRIDGE  
SCIENCE ADVISOR

cc (for information):

Robert Mayo  
Henry Kissinger  
John Ehrlichman

*Bob Ellsworth*

FROM THE STAFF SECRETARY

SUBJECT (see attached); Recommendation for transfer of telecommunications management to the Department of Commerce.

ACTION AND REMARKS:

☐ Prepare Agenda and Brief

☐ Draft Reply

☒ For Your Comments

☐ Draft Remarks

☐ For Necessary Action

☐ For Your Information

Other:

*1*  
DUE: Date: February <sup>7</sup>~~11~~, 1969

Time: 3:00 P.M.

Please attach this copy to material submitted.

If you have any questions or if you anticipate a delay in submitting the required material, please telephone the Staff Secretary immediately

*12*  
K. R. COLE, JR.  
For the President

TELECOMMUNICATIONS

Jan - April 1969

CHECKED FOR PERTINENT PAPERS

✓

NOTES WRITTEN

✓

COPIES XEROXED FOR CTW

✓

2.

Common Law  
Organization

June 14, 1954

Dear Mr. [redacted]

From Mr. [redacted]

Here are the names of the [redacted] in the [redacted] state. I  
have not had a chance to read through all of them yet  
so please [redacted].

[redacted]

cc: Mr. [redacted]  
[redacted]

[redacted]



Agency views on Budget Bureau recommendations

The Bureau circulated its study report among those agencies having significant telecommunications responsibilities and requested their views. The following is a summary of the agency responses:

-- The Department of Commerce concurred in the report's major findings and recommendations. The Department specifically supported vesting overall management of the spectrum in one executive agency. Its comment on the report's major organizational recommendation -- "The establishment and location of such an agency in an existing Department will enable meaningful Executive Branch participation in the development of comprehensive national policies."

-- The Department of Defense (including the views of the Executive Agent of the National Communications Systems) agreed with the need for a new and strengthened policy and long range planning organization but believes that it should be constituted as a separate office outside OEP but in the Executive Office of the President. The DOD does not concur in the need for an implementing study to transfer the Federal Telecommunications System from GSA to Defense nor does it favor a combination of the roles and functions of the Executive Agent and Manager, NCS within the Department. Instead, it recommends an exploration in depth of the entire NCS structure and concept.

-- The Federal Communications Commission agrees that the role of the Federal Government in communications can and should be strengthened and made more effective but within the organizational framework presently prevailing. The FCC completely disagrees with the recommendation to establish a single radio spectrum manager in an executive agency in that it would adversely affect the Commission's functions.

-- The General Services Administration agrees with all of the study report recommendations except the one that a strengthened NCS should be located in DOD. GSA states that a merger of the civilian and military administrative networks has "obvious merit" but it should not be organized within Defense.

-- The Department of Justice agrees with the formulation of a new communications policy organization. The Department disagrees with the transfer of the Federal Telecommunications System to Defense and questions the feasibility of assigning responsibility for procurement and procurement-related assistance for agencies without in-house capabilities to Defense.

-- The National Aeronautics and Space Administration -- (views not yet received).

-- The Special Assistant for National Security Affairs agrees in general with the study conclusions but does not believe that "policy guidance with respect to the objectives, requirements and composition of the NCS" should be vested in Commerce or Transportation. Further, he believes a National Security Council study should be initiated to re-examine the objectives and alternative system concepts prior to any reorganization.

-- The Office of Emergency Preparedness (including the views of the Director of Telecommunications Management) points out that the study report does not focus adequately on the emergency preparedness aspects of telecommunications management. General Lincoln proposes that the Office of Telecommunications Management remain under OEP until the emergency preparedness implications of relocation are examined thoroughly.

-- The Office of Science and Technology -- (views not yet received).

-- The Department of State has no objection to the study report's proposals from the standpoint of foreign policy considerations and believes that "advantages would flow from a strengthened central policy formulation and planning organization."

-- The Department of Transportation agrees on the need for coordinated policy direction at departmental level, improved procurement and technical assistance, and the unification of radio frequency spectrum management. The Department differs with the study report in that it believes that the Executive Agent role provided by DOD for the National Communications System should not remain within Defense but should be transferred to the policy organization.



6/30./69

Tom talked with Kenneth Norton in Boulder, Colo.

Had checked with Hinchman -- see note in phone messages.

Norton said he wrote to DuBridge a couple of months ago.  
Dr. DuBridge's office say they think it goes back further than  
DuBridge -- thinks he wrote to Hornig -- they will check and  
let us know.

Asked Dr. Lyons to send us a book Norton wrote on the  
"Silent Crisis". It apparently is a compilation of allsorts of  
things, including letters to Rusk, Johnson and Rostow.  
Lyons will send. Lyons said he's done some good work  
on the spectrum -- he's a technologist -- got the idea that Commerce  
was trying to bottle him up.

Dr. Lyons brought the material over; Tom looked at it  
for a few minutes and told him to take it back.

*Telecommunications*  
*HHDD*

June 30, 1969

Dear Mr. Evans:

Thank you for forwarding the biography of Mr. Richard E. Willey, who we discussed as a possible addition to the White House staff. He certainly sounds impressive, but we have decided for the time being not to add any more new people to our part of the White House staff.

I inquired about the status of Mr. Woodward Kingman and am informed that he has been cleared to be appointed Deputy Assistant Secretary for FHA at the Department of Housing and Urban Development.

It was good to have the chance to talk with you, and I hope we will be able to get together when you return from what sounds like a very pleasant vacation.

Sincerely,

Clay T. Whitehead  
Staff Assistant

Mr. Thomas W. Evans  
Mudge, Rose, Guthrie & Alexander  
20 Broad Street  
New York, New York

cc: Mr. Flanigan  
Mr. Whitehead  
Central Files

CTWhitehead:ed

July 9, 1969

Mr. [illegible]  
Mr. [illegible]

Read pages 2 and 3 -- proposing action -- check that not  
left page 2 or 3 page paper on how that would be  
implemented, timing, etc.

CTH

Blackwell



THE WHITE HOUSE  
WASHINGTON

Date \_\_\_\_\_

TO:

*Tom Whitehead*

FROM: Peter Flanigan

FYI \_\_\_\_\_

Draft reply \_\_\_\_\_

Please Handle ✓

File \_\_\_\_\_

Other remarks

THE SECRETARY OF COMMERCE

JUN 27 1969

MEMORANDUM FOR Honorable Peter M. Flanigan  
Assistant to the President  
The White House

Subject: Federal Telecommunications Policy Management

As you know, by letter dated May 19, 1969, the Department concurred in the major findings and recommendations set forth in the Bureau of the Budget's Study of Federal Communications Organization. You have asked for our comments on a variation of BoB's plan under which the Office of Emergency Preparedness would retain those functions of the Director of Telecommunications Management which relate specifically to the preparedness issue, with the balance being transferred to a Federal Telecommunications Policy agency to be located in the Department of Commerce or the Department of Transportation.

As I understand it, this Department would then be responsible for establishing broad policy on all phases of telecommunications, but not including the President's responsibility and authority to take emergency actions during national emergency or wartime, or to prepare for mobilization of communications in time of emergency. In addition, while this Department would allocate the frequency spectrum and set broad policies for its use, it would not be responsible for specific assignment of Federal, nor licensing of non-Federal, individual channels, nor the regulatory phases of non-Federal use.

Proposed Action

I strongly supported the establishment of a Federal Telecommunications Policy agency in the Department of Commerce in accordance with the proposal of the BoB. The variation proposed is not inconsistent with the general objectives of the BoB proposal and appears feasible. I would, therefore, like to describe to you an action proposal for accomplishing BoB's plan with this variation.

To fully establish such a new agency will require two major actions, one Executive and one Congressional. In our judgment, the Executive action can and should precede the Congressional action.

I. Executive Action

A. By Executive Order:

--Transfer to this Department the telecommunication policy coordination, and overall spectrum management functions now delegated to the DTM, Office of Emergency Preparedness, along with supporting staff and resources.

--Retain in OEP those functions of the DTM relating to the exercise of the President's emergency war powers concerning telecommunications, preparing for the mobilization of the Nation's telecommunications resources in time of national emergency, and assignment of specific frequencies to Federal agencies (pursuant to general principles of spectrum management established by the new agency in the Department of Commerce).

B. By Secretarial Order, establish in the Department of Commerce a new group to conduct economic studies and research directed towards more efficient use of the spectrum. This effort could be started by carefully specified outside contract studies while an in-house capability is gradually developed, drawing upon research capabilities in the Environmental Science Services Administration and the technical analysis and operations research capabilities at the National Bureau of Standards.



## II. Congressional Action

By legislation or Presidential Reorganization Plan, transfer to the Department of Commerce the following functions of the FCC and their supporting staff and resources:

- Policy making authority for the most efficient use of the telecommunications resource in the public interest.
- Allocation and geographic assignment of the frequency spectrum (but not individual station licensing).
- Authority to set technical standards for communication systems and equipment.

In this manner, the Department of Commerce would become responsible for the overall efficiency of use of the spectrum resource, including spectrum management and the allocation of the spectrum for various purposes. The FCC under this plan would confine itself to the regulatory and rate-making aspects of both common carrier and non-common carrier services and to the selection of individual licensees. The FCC would, of course, retain its character as an independent regulatory agency for this purpose.

The foregoing proposals reflect our belief that the Department's broad policy responsibility should clearly include the responsibility and authority to formulate national policy to encourage the more effective use of telecommunications broadly, to encourage appropriate new uses, and to provide more effective management of the overall telecommunications resource. Such an assignment will necessarily require transfer to the Department of the broader Federal communications responsibilities now vested in the Director of Telecommunications Management, as

well as certain significant responsibilities and activities in non-Federal areas now assigned to the FCC. In addition, this Department should be responsible for conducting economic studies and research looking toward new and more effective uses of the electrospace. Such studies will need to include carefully designed experiments and field tests of alternative ways of using the spectrum. New procedures should be devised for authorizing use of the spectrum incident to the conduct of such research.

#### Budget

We estimate that at the present time the total budget allocated to research and economic studies directed toward more efficient use of the spectrum by FCC, DTM, and DoC is not more than \$3 million and, if some fairly narrow areas of research are excluded, \$500,000 may be a more realistic figure.

If the new Federal Telecommunications Policy agency is to be effective, it must have adequate resources to conduct the economic studies, research and experimental field tests above mentioned, as well as the necessary legal authority.

We believe that the funds which could be transferred with the DTM functions indicated above, plus the funds in this Department identified with telecommunications research and services would cover our needs during the period of program preparation and initial limited implementation. We are confident that the progress shown with such limited funds during this initial period will demonstrate fully the desirability of putting into effect an expanded program for which additional funds would be needed. Our current estimate of such additional funding would nonetheless be comparatively small--about \$3 million per year.

#### CONCLUSION

Telecommunications plays an increasingly important role in the development of our society. Newly developing technologies in the field offer an expanding range of choices and opportunities. Because of the importance of Governmental use of



telecommunications and the limited nature of the spectrum resources, Government must have a leading role in making these choices. The Executive Branch must devote increased attention to the formulation of an environment that will encourage and effectively utilize these technological advances.

In the short run, the situation calls for immediate action. Increasingly significant communications issues are being argued before the Congress, without adequate Administration participation. As an example, the House Commerce Committee has been holding hearings on the differences between the broadcasters and the community antenna television interests. Congressionally-initiated legislation may be enacted in this and other controversial areas with too little assistance and direction from the Administration.

Prompt action on the proposal set out above would give the Administration some "breathing space" for preparation of legislation or other appropriate action proposals for the controversies now receiving Congressional action. In addition, such action will serve as a major step towards establishment of an appropriate Administration role in the formulation and implementation of long-range telecommunications policy.

My staff and I are ready to assist in any way we can.

(SIGNED) MAURICE H. STANS  
Secretary of Commerce



THE WHITE HOUSE  
WASHINGTON

June 28, 1969

To: C. T. W.

From: A. W.

Subject: Reorganization

At first blush I doubt that the solution put forward in your June 26th memo would accomplish the objective of first priority -- namely: the creation of a credible authority center to formulate and enunciate Government policies in the communications field. It is a rearrangement of the pieces of the puzzle with little assurance of improvement-- indeed with a fair possibility of slipping backward in this respect (if that were possible!).

I'll think about it some more and react in a memo to you-- possibly suggesting another approach.

(Trivia: a typo on page 4, and a seeming inconsistency on page 5.)

- *AW*

THE WHITE HOUSE

WASHINGTON

June 26, 1969

DRAFT MEMORANDUM

There are a number of important problems with respect to Federal telecommunications policies that suggest reorganization:

1. The communications industry is heavily regulated by the FCC and is heavily affected by the communications activities of Federal agencies. However, neither the FCC nor the executive branch have a significant capability for systematic analysis of telecommunications policies, their impact, their effectiveness, or their costs. The "cooperation" between the FCC and various parts of the executive branch appears to consist largely of gentlemen's compromises among competing interests and philosophies. The increasingly rapid rate of technological change and introduction of new services makes policy-by-precedent increasingly less relevant and more restrictive.

2. The so-called National Communications System remains a loose confederation of agency systems. In spite of the highly desirable interconnection capabilities that have been developed over the last few years, there has not been adequate specification of emergency capabilities, hardness, and priority override features necessary to permit informed decisions about the adequacy, performance, and cost of the system. No one seems to know what a "unified" NCS means, would cost, or would accomplish.

3. The extremely rapid rate at which communications are growing in the United States has brought about increasing conflicts over the use of various parts of the frequency spectrum and the beginnings of a spectrum shortage crisis.

Federal organization weaknesses:

Since World War II, there have been a number of studies of Federal communications organization and a number of reorganizations and shifts of responsibilities within the executive branch. None has

proved particularly satisfactory, and, indeed, there does not seem to be any neat solution to this problem. The lack of a good solution apparently is due to the quasi-independence of the FCC from the executive branch and to the conflicting requirements of Executive Office telecommunications coordination and individual agency mission responsibilities.

The study of the Federal Government communications organization completed in December 1968 by the Bureau of the Budget provides as good a statement of the shortcomings of our current organization. The Bureau of the Budget reported a need for:

(1) a strengthened organization for policy planning, formulation and direction of Federal communications activities.

(2) a reorganized and strengthened National Communications System (NCS) within the Department of Defense.

(3) an improved procurement and technical assistance effort in communications on behalf of those Federal agencies which do not now have their own resources in this field.

(4) unified frequency spectrum management process.

(5) a coordinated technical assistance program for State and local governments in this area.

Current organization for communications policymaking:

The Director of Telecommunications Management (DTM) in the Office of Emergency Preparedness is now charged by Executive Order and Presidential memorandum with the responsibility for coordinating telecommunications activities in the executive branch. The DTM also is designated Special Assistant to the President for Telecommunications. However, the history of the organization reveals that attempts by the DTM to exercise leadership in communications policy have been largely ineffectual. This situation results from a number of factors such as organizational location, inadequate staff, and fragmentation of policy authority among half a dozen agencies with no one having overall responsibility. In view of its claimed responsibilities, the credibility of the DTM is questioned by agencies with operating responsibilities.



There is now no office in the executive branch with the responsibility or the capability to review national telecommunications policies as expressed in legislation and in FCC policies. The antitrust division of Justice has occasionally filed briefs on competitive aspects of decisions before the FCC, but these derive largely from antitrust considerations rather than from familiarity with communications issues. The Council of Economic Advisers has shown almost no capability or interest in telecommunications, and OST is certainly not equipped for addressing the fundamental economic and institutional problems of the industry and its regulation by the FCC. The Administration is therefore largely unable to exert leadership or take initiatives in spite of vulnerability to criticism for FCC policies.

Executive branch responsibilities:

There are six major functions that are the responsibility of the executive branch in the telecommunications area:

1. Assignment of frequencies for Government communications.
2. Research and development.
3. Formulation of recommendations for national policy with respect to telecommunications.
4. Definition and assurance of emergency communications capabilities.
5. Policy planning responsibilities for Government communications activities.
6. Procurement of Government communications services and operation of Government communications facilities.

Agency views:

The Budget Bureau study of Federal communications organization made a number of major recommendations (see attached summary) and was recently distributed to the concerned departments. Agency

views on the Budget Bureau recommendations have been received. These views share a common theme that (1) stronger coordination from the top is required in establishing Government policy for its own telecommunications requirements and that (2) the Federal Government should take a stronger role in the evolution of national telecommunications to deal with the increasingly rapid rate of technological change and industry growth.

✓ There is, however, no consensus among the agencies as to the appropriateness of the Bureau's recommendations. The history of this area suggests strongly that it will be unprofitable to seek further agreement among the agencies. There is no solution that will represent a desirable compromise, and no solution appears sufficiently strong on its merits that it looms out as the obvious choice.

Alternatives:

A number of organizational arrangements that have been suggested in the Congress or the press can be rejected immediately as impractical or politically infeasible. These include establishment of a Department of Communications, transfer of DTM functions to an existing Cabinet department, and significant expansion within the Executive Office of the President by creation of a new Office.

Determination of emergency communications requirements clearly must remain in OEP. Likewise, major involvement by the executive branch in nongovernmental communications policy matters before the FCC and the Congress should be centered in one of the Cabinet departments -- probably Commerce. There appear to be two feasible alternatives:

(1) Maintain essentially the status quo, but clarify and strengthen the conflicting Executive Orders through which the DTM derives his authority. If this is done, the office should be strengthened by expansion of staff resources and perhaps by raising the DTM to the rank of deputy within OEP.



(2) Create a new organizational unit in the Department of Commerce to address explicitly the major national telecommunications issues and take an increasingly active role in advocating policy to the FCC and the Congress. This alternative would require some shifting of responsibilities from the current DTM, and the issue would be just where to draw the line in allocating responsibilities among the two offices.

Recommendation:

A Federal Communications Administration should be established in the Department of Commerce. The Administration would encompass the current ITS research program; the National Electromagnetic Compatibility Analysis Center; be responsible for Government spectrum allocation; provide guidance to the agencies of the Federal Government in communications procurement; and be responsible for developing recommendations on national telecommunications policy issues for submission through the President to the Congress or to the FCC.

→ The Director of OEP should be directly assigned all responsibilities for emergency communications requirements and preparedness. With the spectrum allocation responsibility removed from OEP, the roles of DTM and SAPT would be eliminated. OEP should continue to have an Assistant Director for Telecommunications who would be responsible for specification of emergency capacity requirements, priority override features, and survivability capabilities for Government communications.

A NSSM should be issued as soon as the new Assistant Director for Telecommunications is found for OEP. This study should define appropriate NSC machinery for dealing with telecommunications issues; should determine the advisability of continuing the National Communications System concept, including the Executive Agent and Executive Manager roles; and should provide general guidance to OEP on emergency communications requirements.

Each agency would be responsible for running its own communications system and for the design and procurement thereof, subject to the requirements of the DTM. The new FCA should be granted substantial

?  
Phased-out  
early, in  
above



funds to contract for economic and policy analyses and for key basic research related to policy questions. The FCC budget should be expanded significantly for policy analysis capabilities.

This proposal could be implemented immediately by Executive Order. The FCA would immediately incorporate the ITS and NECAC activities, and the spectrum allocation capabilities of the DTM could be shifted without too much delay. Staffing and phasing into active policy analysis and recommendations would be phased over a year or two.

The FCA should ultimately report directly to the Secretary who would become the Administration's leading spokesman for telecommunications matters. The recent Rostow report on telecommunications policy recommended a single spectrum management agency encompassing both governmental and civilian uses. If the President's Council on Executive Organization concurs in that recommendation, the FCA should be prepared to take on the civilian spectrum management functions now performed by the FCC. In the meantime, the FCA should become increasingly vigorous in filing objective analyses on civilian spectrum issues and representing the national interest in such filings with the FCC.

This organizational arrangement would still require White House staff involvement, but not nearly so much as at present. It leaves open, pending the NSSM review, the question of whether the NCS concept should be retained and whether policy responsibility therefor should be placed in OEP, the new FCA, or left to interdepartmental councils.

BOB recommendations concerning Federal communications organization

The Bureau of the Budget report recommended that:

1. The Federal Government should establish a new and strengthened central policy and long-range planning organization for communications in an existing executive branch agency -- either Commerce or Transportation.

2. The NCS staff should undertake implementing studies (a) to transfer the Federal Telecommunications System from the General Services Administration to the Department of Defense for merger with the military administrative communications systems to provide service for all Federal agencies and (b) to appropriately locate and combine the roles and functions of the Executive Agent and the Manager of the NCS within the Office of the Secretary of Defense to provide unified guidance to the NCS from within the Defense Department. An effective mechanism should be provided whereby the member agencies of the NCS can advise and be consulted by the Manager, NCS.

3. The National Communications System staff within the Department of Defense should provide a central source of procurement-related assistance for use by executive agencies.

4. The management of the Government's portion of the frequency spectrum should be a function of the new communications policy organization. If a single manager is provided for the entire spectrum, the total function should be placed in the new organization. The new organization should have a limited in-house research capability to support its frequency spectrum management and general policy development responsibilities.

5. The new communications policy organization should coordinate action on requests to Federal agencies from State and local governments for technical assistance in telecommunication and should provide such assistance to Federal agencies who lack in-house capability.



• Telecommunication

THE WHITE HOUSE  
WASHINGTON


June 27, 1969

MEMORANDUM FOR GENERAL LINCOLN

Attached is the draft memorandum I referred to in our telephone conversation of the 25th.

I am not strongly wedded to the final recommendation, but proceed on the assumption that a slight challenge evokes the most interesting discussion.

Give me a call at your earliest convenience when you want to discuss this. I am not distributing this to anyone else at this time, pending our discussion.

  
Clay T. Whitehead  
Staff Assistant

Attachment

cc: Gen. O'Connell  
Mr. Flanigan  
Mr. Whitehead  
Central Files

CTWhitehead:ed



*Down Set*

June 27, 1969

MEMORANDUM FOR GENERAL LINCOLN

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Clay T. Whitehead  
Staff Assistant

cc: Gen. O'Connell  
Mr. Flanigan  
Mr. Whitehead ✓  
Central Files

CTWHITEHEAD:ed

THE WHITE HOUSE'

WASHINGTON

June 26, 1969

DRAFT MEMORANDUM

There are a number of important problems with respect to Federal telecommunications policies that suggest reorganization:

1. The communications industry is heavily regulated by the FCC and is heavily affected by the communications activities of Federal agencies. However, neither the FCC nor the executive branch have a significant capability for systematic analysis of telecommunications policies, their impact, their effectiveness, or their costs. The "cooperation" between the FCC and various parts of the executive branch appears to consist largely of gentlemen's compromises among competing interests and philosophies. The increasingly rapid rate of technological change and introduction of new services makes policy-by-precedent increasingly less relevant and more restrictive.

2. The so-called National Communications System remains a loose confederation of agency systems. In spite of the highly desirable interconnection capabilities that have been developed over the last few years, there has not been adequate specification of emergency capabilities, hardness, and priority override features necessary to permit informed decisions about the adequacy, performance, and cost of the system. No one seems to know what a "unified" NCS means, would cost, or would accomplish.

3. The extremely rapid rate at which communications are growing in the United States has brought about increasing conflicts over the use of various parts of the frequency spectrum and the beginnings of a spectrum shortage crisis.

Federal organization weaknesses:

Since World War II, there have been a number of studies of Federal communications organization and a number of reorganizations and shifts of responsibilities within the executive branch. None has



proved particularly satisfactory, and, indeed, there does not seem to be any neat solution to this problem. The lack of a good solution apparently is due to the quasi-independence of the FCC from the executive branch and to the conflicting requirements of Executive Office telecommunications coordination and individual agency mission responsibilities.

The study of the Federal Government communications organization completed in December 1968 by the Bureau of the Budget provides as good a statement of the shortcomings of our current organization. The Bureau of the Budget reported a need for:

- (1) a strengthened organization for policy planning, formulation and direction of Federal communications activities.

- (2) a reorganized and strengthened National Communications System (NCS) within the Department of Defense.

- (3) an improved procurement and technical assistance effort in communications on behalf of those Federal agencies which do not now have their own resources in this field.

- (4) unified frequency spectrum management process.

- (5) a coordinated technical assistance program for State and local governments in this area.

Current organization for communications policymaking:

The Director of Telecommunications Management (DTM) in the Office of Emergency Preparedness is now charged by Executive Order and Presidential memorandum with the responsibility for coordinating telecommunications activities in the executive branch. The DTM also is designated Special Assistant to the President for Telecommunications. However, the history of the organization reveals that attempts by the DTM to exercise leadership in communications policy have been largely ineffectual. This situation results from a number of factors such as organizational location, inadequate staff, and fragmentation of policy authority among half a dozen agencies with no one having overall responsibility. In view of its claimed responsibilities, the credibility of the DTM is questioned by agencies with operating responsibilities.



There is now no office in the executive branch with the responsibility or the capability to review national telecommunications policies as expressed in legislation and in FCC policies. The antitrust division of Justice has occasionally filed briefs on competitive aspects of decisions before the FCC, but these derive largely from antitrust considerations rather than from familiarity with communications issues. The Council of Economic Advisers has shown almost no capability or interest in telecommunications, and OST is certainly not equipped for addressing the fundamental economic and institutional problems of the industry and its regulation by the FCC. The Administration is therefore largely unable to exert leadership or take initiatives in spite of vulnerability to criticism for FCC policies.

Executive branch responsibilities:

There are six major functions that are the responsibility of the executive branch in the telecommunications area:

1. Assignment of frequencies for Government communications.
2. Research and development.
3. Formulation of recommendations for national policy with respect to telecommunications.
4. Definition and assurance of emergency communications capabilities.
5. Policy planning responsibilities for Government communications activities.
6. Procurement of Government communications services and operation of Government communications facilities.

Agency views:

The Budget Bureau study of Federal communications organization made a number of major recommendations (see attached summary) and was recently distributed to the concerned departments. Agency

views on the Budget Bureau recommendations have been received. These views share a common theme that (1) stronger coordination from the top is required in establishing Government policy for its own telecommunications requirements and that (2) the Federal Government should take a stronger role in the evolution of national telecommunications to deal with the increasingly rapid rate of technological change and industry growth.

There is, however, no consensus among the agencies as to the appropriateness of the Bureau's recommendations. The history of this area suggests strongly that it will be unprofitable to seek further agreement among the agencies. There is no solution that will represent a desirable compromise, and no solution appears sufficiently strong on its merits that it looms out as the obvious choice.

Alternatives:

A number of organizational arrangements that have been suggested in the Congress or the press can be rejected immediately as impractical or politically infeasible. These include establishment of a Department of Communications, transfer of DTM functions to an existing Cabinet department, and significant expansion within the Executive Office of the President by creation of a new Office.

Determination of emergency communications requirements clearly must remain in OEP. Likewise, major involvement by the executive branch in nongovernmental communications policy matters before the FCC and the Congress should be centered in one of the Cabinet departments -- probably Commerce. There appear to be two feasible alternatives:

- (1) Maintain essentially the status quo, but clarify and strengthen the conflicting Executive Orders through which the DTM derives his authority. If this is done, the office should be strengthened by expansion of staff resources and perhaps by raising the DTM to the rank of deputy within OEP.



(2) Create a new organizational unit in the Department of Commerce to address explicitly the major national telecommunications issues and take an increasingly active role in advocating policy to the FCC and the Congress. This alternative would require some shifting of responsibilities from the current DTM, and the issue would be just where to draw the line in allocating responsibilities among the two offices.

Recommendation:

A Federal Communications Administration should be established in the Department of Commerce. The Administration would encompass the current ITS research program; the National Electromagnetic Compatibility Analysis Center; be responsible for Government spectrum allocation; provide guidance to the agencies of the Federal Government in communications procurement; and be responsible for developing recommendations on national telecommunications policy issues for submission through the President to the Congress or to the FCC.

The Director of OEP should be directly assigned all responsibilities for emergency communications requirements and preparedness. With the spectrum allocation responsibility removed from OEP, the roles of DTM and SAPT would be eliminated. OEP should continue to have an Assistant Director for Telecommunications who would be responsible for specification of emergency capacity requirements, priority override features, and survivability capabilities for Government communications.

A NSSM should be issued as soon as the new Assistant Director for Telecommunications is found for OEP. This study should define appropriate NSC machinery for dealing with telecommunications issues; should determine the advisability of continuing the National Communications System concept, including the Executive Agent and Executive Manager roles; and should provide general guidance to OEP on emergency communications requirements.

Each agency would be responsible for running its own communications system and for the design and procurement thereof, subject to the requirements of the ~~DTM~~. The new FCA should be granted substantial  
OEP.



funds to contract for economic and policy analyses and for key basic research related to policy questions. The FCC budget should be expanded significantly for policy analysis capabilities.

This proposal could be implemented immediately by Executive Order. The FCA would immediately incorporate the ITS and NECAC activities, and the spectrum allocation capabilities of the DTM could be shifted without too much delay. Staffing and phasing into active policy analysis and recommendations would be phased over a year or two.

The FCA should ultimately report directly to the Secretary who would become the Administration's leading spokesman for telecommunications matters. The recent Rostow report on telecommunications policy recommended a single spectrum management agency encompassing both governmental and civilian uses. If the President's Council on Executive Organization concurs in that recommendation, the FCA should be prepared to take on the civilian spectrum management functions now performed by the FCC. In the meantime, the FCA should become increasingly vigorous in filing objective analyses on civilian spectrum issues and representing the national interest in such filings with the FCC.

This organizational arrangement would still require White House staff involvement, but not nearly so much as at present. It leaves open, pending the NSSM review, the question of whether the NCS concept should be retained and whether policy responsibility therefor should be placed in OEP, the new FCA, or left to interdepartmental councils.

Attachment:

BOB recommendations concerning Federal communications organization

The Bureau of the Budget report recommended that:

1. The Federal Government should establish a new and strengthened central policy and long-range planning organization for communications in an existing executive branch agency -- either Commerce or Transportation.

2. The NCS staff should undertake implementing studies (a) to transfer the Federal Telecommunications System from the General Services Administration to the Department of Defense for merger with the military administrative communications systems to provide service for all Federal agencies and (b) to appropriately locate and combine the roles and functions of the Executive Agent and the Manager of the NCS within the Office of the Secretary of Defense to provide unified guidance to the NCS from within the Defense Department. An effective mechanism should be provided whereby the member agencies of the NCS can advise and be consulted by the Manager, NCS.

3. The National Communications System staff within the Department of Defense should provide a central source of procurement-related assistance for use by executive agencies.

4. The management of the Government's portion of the frequency spectrum should be a function of the new communications policy organization. If a single manager is provided for the entire spectrum, the total function should be placed in the new organization. The new organization should have a limited in-house research capability to support its frequency spectrum management and general policy development responsibilities.

5. The new communications policy organization should coordinate action on requests to Federal agencies from State and local governments for technical assistance in telecommunication and should provide such assistance to Federal agencies who lack in-house capability.



## Dissent

First reading of James D. O'Connell's dissent to the final report of the President's Task Force on Communications Policy has communications equipment makers uptight.

Some, in fact, are furious, claiming that O'Connell, director of the White House Office of Telecommunications Management, goes down the line for Ma Bell, supporting vertical integration in the industry—for example, Western Electric's role as manufacturing arm for AT&T—and discouraging competition. While most details of the Task Force's recommendations have been published, the nature of the O'Connell position has not been known until now.

Some of the points of controversy in O'Connell's disagreement with the Task Force recommendations fall in these areas:

• On competition: "There are two general themes which run through most of the report," the OTM director notes. "The first is the need for more competition; the second, the need for greater innovation. I have no disagreement whatever with these objectives, but I disagree with the philosophy that these are ends in themselves. . . . It is one conclusion of this dissent that all proposals for increasing or decreasing competition in this industry be examined . . . in the light of past history." What does history show? O'Connell says: "Adverse effects upon the public interest during the years of intense competition in the telephone industry."

• On innovation: "No case for lack of innovation in telecommunications has been made in the Task Force report." In a separate appendix, O'Connell lists telecommunications innovations to support his case; virtually all are products of the Bell system.

• On vertical integration: "Basic issues in respect to vertical integration have not been clearly set forth in the report. It is important to recognize that the achievement of reliable and economical service involves research, development, manufacturing, installation, and maintenance. More extensive development of separate manufacturing capabilities appears justified only to the extent that it would inevitably result in significant improvements in service to all classes of users. In this context it is not an end in itself, nor are we able to determine with confidence that the

objective of improved service would be achieved."

**Contrast.** Particularly irritating to industry sources is O'Connell's contrast of the satellite communications with the telephone industries.

Of the first, he says: "A large part of the aerospace industry has been developed with major financial support of the Government, where the market predominantly consists of the Department of Defense and NASA, where the market for commercial communications satellites form only a small share of total requirements, and where present aerospace industry capacity is more than amply sufficient to provide for commercial needs." Conclusion: creation of new manufacturing facilities for space hardware by Comsat or a new international corporation is unjustifiable.

But in the case of Bell, he says, "When one considers the past history of development to meet the needs of the telephone industry, it is clear that a major factor in the success, rapid progress, and low cost of telephone service in this country has been due to vertical integration, and the great improvements in planning and economies of scale which makes this possible."

Says one telecommunications executive opposed to the O'Connell views: "Thank God he's going to retire soon. I just hope his successor is able to clean house over there"—a clear reference to the former telephone company staffers now in the OTM director's shop.



June 26, 1969

MEMORANDUM FOR THE RECORD

Talked with Tom Evans today about two points:

1. He inquired about the status of Woody Kingman's application to be Assistant Secretary of State for Communications (I'm not sure such a post exists. ).
2. Suggested that Richard Wiley, a young lawyer from Bell & Howell might be an appropriate addition to the staff. He is head of the young lawyers section of the ABA. Was formerly with a large Chicago law firm and was a field director for Citizens for Nixon during the campaign. Evans will send a biography.



OFFICE OF THE ASSISTANT SECRETARY OF COMMERCE  
WASHINGTON, D.C. 20230

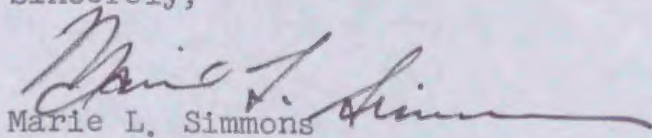
June 26, 1969

Dr. Thomas Whitehead  
Room 110  
Executive Office Building  
17th and Pennsylvania Avenue  
Washington, D.C.

Dear Dr. Whitehead:

We are pleased to send you a copy of "The Federal Role in Telecommunications," the address delivered by Dr. Tribus in Boulder on June 10 for the IEEE International Conference on Communications.

Sincerely,

  
Marie L. Simmons  
Editorial Assistant

Enclosure



UNITED STATES DEPARTMENT OF  
**COMMERCE**  
**NEWS**

WASHINGTON, D.C. 20230

OFFICE  
OF THE  
SECRETARY

FOR RELEASE AT NOON (MDT), TUESDAY, JUNE 10, 1969

ADDRESS BY ASSISTANT SECRETARY OF COMMERCE FOR  
SCIENCE AND TECHNOLOGY MYRON TRIBUS, PREPARED FOR  
DELIVERY AT THE INSTITUTE OF ELECTRICAL AND ELECTRONICS  
ENGINEERS INTERNATIONAL CONFERENCE ON COMMUNICATIONS  
AT THE UNIVERSITY OF COLORADO, BOULDER, COLORADO  
JUNE 10, 1969

THE FEDERAL ROLE IN TELECOMMUNICATIONS

We are here today because we have a revolution on our hands. It is bloodless--for most people--but it will change the world. I refer to the revolution in information processing and communications.

Already we feel its impact, yet it is just beginning. In the decades immediately ahead that impact will be so profound it could well overshadow the power revolution which freed man from the drudgery of hard physical labor.

For a comparison: the power revolution put mechanical muscles at the disposal of every worker in the home, farm and factory. It made human muscles obsolete as a source of power, but it greatly magnified man power in the sense of his ability to perform useful work.

The reason is purely economic. To lift a ton of coal from the ground to a 3-foot high truck bed requires about 6,000 foot-pounds of work, or about 0.0025 kilowatt hours. This means a cost of less than one-hundredth cent per ton. Obviously, a man can't compete; but using this cheap power, men can tackle whole classes of jobs which would have been impossible before. Imagine a Mesabi taconite plant, or a modern highway construction project if we had to depend on power from men and mules!

Now let's look at data processing. In 1945 (at a labor cost of \$1.00 per hour, and a rate of 16 operations per minute,



with no allowance for capital costs or overhead) it cost about \$1,000 to do a million operations on a keyboard and took at least a month. Today, computers can do a million operations for less than six cents, and by the early 1970's computers now under development will drop this figure by at least a factor of 10. At six-tenths of a cent for a million operations, no human can compete. But using these computers men will be able to develop whole new systems of processing, storing, retrieving, and transmitting data and information undreamed of even two decades ago.

The reduction in the economic value of what had once been a human operation, namely, lifting coal, by a factor of  $10^{-5}$  occurred over a century. The change in economic value of what we had always considered to be uniquely human, i.e., "thinking" at a computational level, has also changed by a factor of  $10^{-5}$  but this time in about a quarter of a century. Surely the resulting revolution will be profound.

The question is, how can we guide this revolution so that it will produce the maximum benefit for us all? Private industry will provide part of the answers; but the Federal Government must assume a major leadership responsibility for policy-making, planning, and regulation. It is this aspect of the problem that I will discuss with you briefly today. I will not touch on mission-oriented activities of the Federal telecommunications system such as defense and space. That is another topic.

The question is, how can the Government keep abreast of the opportunities and new problems that are sure to develop tomorrow? Governmental procedures were established in the era of the telephone and the radio; we are now confronted by complex systems which entertain us; inform us; measure whatever we want measured; transmit, process, store and occasionally retrieve the mountains of scientific, engineering, business, and economic data we generate; control our processes; report conditions on a space probe; read and report the conditions in the upper atmosphere which affect our weather; and link us with other nations in a global network.

Tomorrow we can have information networks linking our homes and offices with service and information centers; education networks linking students with master teachers; computer networks handling our traffic, our commerce, our financial transactions; and communication networks linking anybody, anywhere with anybody else, anywhere. We can have these things if our organizational patterns and our policies permit them.

The trouble is, we are here, now, and that glowing future lies over there beyond a challenging variety of problems--and the Government is not now organized to do its part in solving them. This problem is receiving our new Administration's most



careful attention.

What does the Government need? That is the first problem. We can pinpoint some of the specifics.

Government policy-makers need a solid research base.

In this rapidly changing, high technology field, policy formulation and planning must be based upon a thorough grasp of the scientific and technological options. Otherwise, decisions will be made upon insufficient data, and opportunities will be lost, or important gains will be delayed. If we want to compete--or take part in an international conference such as this--we'll have to do our homework.

Government policy-makers need a systems analysis capability.

Systems analysis has developed into a powerful tool for analyzing complex systems and helping managers to make choices among a variety of alternatives. In gearing up to cope with the job of policy formulation and planning for telecommunications, the responsible agency should have a solid, in-house capability for systems analysis.

Research and systems analysis do not replace social and political judgment; they simplify and clarify social and economic planning. They are among management's most powerful tools.

Governmental policy must consider not merely spectrum but "electrospace" management.

Oriented as we have been toward earlier concepts of the radio resource as a simple line of radio frequencies to be divided among users, our management of this valuable asset has become increasingly inefficient. We need to broaden our concept and our policy to cover the multi-dimensional reality of what is beginning to be called "electrospace." Here we are dealing with a hyper-space of a large number of dimensions. Instead of dealing only with frequency, we must now plan in such terms as frequency, location, polarity, intensity, time and direction of propagation. Using the "electrospace" concept, we can get much more use out of what once was regarded as a simple and inflexible spectrum.

The "electrospace" concept introduces opportunities and complexities which are not present in the simple view of a one-dimensional frequency space. The eight or so dimensions can be cut up into many different kinds of hyper-volumes. The ways in which interference can occur are more complex. We know too little now about scattering from rain, for example, so that we are unsure how close in space two microwave beams can be located.



We must regard all forms of communication as potentially interchangeable.

In considering management of the "electrocspace" we must surely include what goes on inside wires or cables. Our concern should be to increase the possibilities for communications, not just broadcasting. In the future many systems will probably use a combination of channels in series, some on cable, some on sharply beamed microwave and some on diffuse broadcast. It's done now. More will occur in the future.

As many of you are aware, the Federal Government has had several studies of the communications problem, and all of these studies have called by many of the changes I have been discussing. The new Administration is reviewing these studies.

We of the Department of Commerce expect our group in radio propagation here at ESSA's laboratories in Boulder to play a strong role, and that our National Bureau of Standards can certainly provide measurement, standards, and analytic expertise for telecommunications.

We must not underestimate the economic pressures which are developing in this area. For example, we seem to be not too far away from serious development of a national information grid. Imagine the demand for expansion of telecommunications when the home information center can offer direct access to great libraries; when we can dial a lecture, a course or a curriculum--a report, or a research pathway--a symphony, a market analysis, or a local high school basketball game as easily as we now dial the time or the weather.

Or imagine the impact of a computer-linked network in which all commercial and financial transactions immediately become part of the information flow into central processing, handling all of the data transfers now carried out so laboriously on a multiplicity of forms. At the national level it can mean instantaneous and accurate information on the state of the economy; at the personal level, the checkless, cashless society.

If cheap electric power, replacing muscle power, brought vast economic and social change in its wake, what can we expect when computers and information systems extend and enhance our mental capabilities?

But these changes will not come without planning by the private and public sectors, and policies which are adequate to the need. Each day's delay means that someone, somewhere, takes the wrong option, blocks a promising opportunity, or makes a wrong decision that will be hard to reverse after it becomes



set in hardware or practice.

This is true domestically; it is true in our attempts to develop a viable program for a global communications network; it is true wherever we have an option based on advanced technology and complex systems.

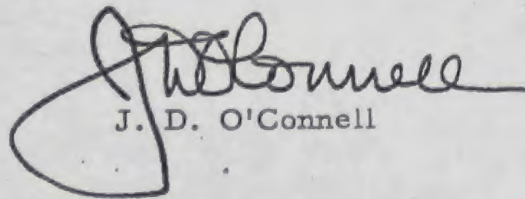
EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF TELECOMMUNICATIONS MANAGEMENT  
WASHINGTON, D.C. 20504

OFFICE OF THE DIRECTOR

June 25, 1969

MEMORANDUM FOR THE DIRECTOR:

In accordance with our current procedure, I am  
pleased to transmit this report of the significant  
activities of this office for the period ending  
June 24, 1969.



J. D. O'Connell

Encl.



June 24, 1969

WEEKLY ACTIVITY REPORT NO. 71

FREQUENCY MANAGEMENT

1. NAE Support

On June 18, OTM representatives met with a panel of the National Academy of Engineering to explore ways of determining the economic and social values of the radio frequency spectrum.

2. Joint Technical Advisory Committee Briefing

On June 19, the DTM, the Commissioners of the FCC, and their staffs met with the Joint Technical Advisory Committee to review progress on the JTAC report of 1968, entitled "Spectrum Engineering - The Key to Progress." Considerable progress has been made, particularly by OTM, toward meeting the problems of expanding use of the radio spectrum. Plans are that JTAC will present the results of their findings, together with remedial measures necessary to meet current deficiencies, to the Office of Science and Technology (OST) and the Bureau of the Budget on July 28, 1969.

3. National Electromagnetic Compatibility Analysis Facility

On June 20, the Director of OEP and his staff were briefed by the DTM on the need for a National Electromagnetic Compatibility Analysis Facility as an engineering tool to ensure that the billions of dollars being invested by the Federal Government annually in communications-electronics are being spent wisely. A concept was outlined looking toward a facility consisting of 120 people and costing approximately \$3 million annually in the development stage. It was agreed that coordination should be effected on this matter with the Office of Science and Technology and the Bureau of the Budget.

4. UHF Satellite Problem

On June 24, the DTM met with the Director, Telecommunications Policy, DOD, to determine the course of action with respect to the frequency accommodation of UHF tactical communications satellites for military



purposes. This is particularly important in view of the preparatory effort under way in respect to the World Administrative Radio Conference of International Telecommunication Union to be held in June 1971.

5. Meeting of Interdepartment Radio Advisory Committee

On June 24, the 969th meeting of the Interdepartment Radio Advisory Committee took place. The agenda included the following items:

- a. A briefing by the North American Rockwell Corporation on "The Next Ten Years in Space."
- b. The U. S. Councilor, Mr. Thomas Nelson, Department of State, gave a debriefing on the 24th Session of the ITU Administrative Council, held in the latter part of May in Geneva, Switzerland.
- c. Discussion took place with respect to the decision of the U. S. Supreme Court in the case of the Red Lion Broadcasting Company vs. Federal Communications Commission, which finding contained extensive recognition of the importance of the radio frequency spectrum, its scarcity, and the need for its careful management.
- d. A recommendation was approved with respect to the manner in which radio frequency provisions for oceanography should be processed, both nationally and internationally.

6. Procedure Initiated to Further Enhance Electromagnetic Compatibility

To assist in ensuring electromagnetic compatibility among all radio operations within the United States, proposals to use the radio spectrum are coordinated in the Frequency Assignment Subcommittee (FAS) of the IRAC. There are 11 Government agencies that use the radio spectrum, however, that are not represented on the FAS. With the increase in radio operations, recent cases of interference have resulted from failure on the part of applicants to consider fully the authorized



uses of these agencies. To improve this area of frequency management, a continuing procedure was implemented effective with June FAS meeting wherein the OTM staff makes an engineering analysis of the probable effect of all proposed new uses on the existing operations of the 11 nonmember agencies.

\* 7. Expansion of Field Level Engineering Proposed to Army and Air Force

On May 1, a new procedure was initiated in the southern California area to improve the field level selection and coordination of frequencies in the band 1435-1535 MHz. The procedure is effected through the facilities of the Navy at Pt. Mugu, California. On June 23, the DTM requested Army and Air Force cooperation in making available the use of their facilities for the expansion of the procedure to the States of Arizona, Florida, and New Mexico.

\* Statement of National Telecommunications Policy

A comprehensive statement of national telecommunications policy was submitted to the White House at the request of Mr. Clay T. Whitehead. Also included was a statement identifying policy issues to which the Federal Government should address itself. The FCC submitted a similar statement, also at the request of Mr. Whitehead.

TELECOMMUNICATIONS EMERGENCY PREPAREDNESS

\* 1. Office of Intergovernmental Relations Briefing

On June 18, the DTM briefed Governor Nils Boe, Executive Director, and Mr. Robert Janes, Assistant Director, Office of Intergovernmental Relations, on the DTM Federal-State Telecommunications Program. Governor Boe was extremely interested in the activities of OTM in this area and expressed the hope that OTM would continue its day-to-day assistance and advice to the states. Governor Boe also asked the DTM to establish a closer relationship between the OIR and the OTM on Federal-State activities. The DTM agreed to do this and designated Mr. Charles E. Lathey (OTM) as his focal point for liaison in this regard.

\* 2. Industry Coordination

At the request of the Director, OEP, OTM representatives met on June 20 with representatives of the American Telephone & Telegraph



Company in order to obtain information which will permit the Director, OEP, to ascertain whether certain past emergency planning concepts are still valid from the telecommunications standpoint. The objective of this meeting was to obtain an agreement that AT&T would provide specific industry information on the subject. To this will be added other specific telecommunications information which will be obtained from various Federal agencies. Subsequent to receipt of the industry and government information, a briefing on the matter will be provided to the Director, OEP, by the DTM.

### 3. State Telecommunications Coordination

On June 20, OTM representatives met with representatives of the Bell System and the United States Independent Telephone Association to review the telephone industry's participation in state telecommunications programs. The information provided by the industry representatives was worthwhile in that it confirmed OTM appraisal of the status of state activities in this regard.

## NATIONAL TELECOMMUNICATIONS

### 1. OEP Senior Staff Briefing

In response to a telephoned request by Lt. Col. Heiberg, OEP, arrangements were made for an OTM member to brief the OEP senior staff on the background of the National Communications System on June 23.

### 2. Visit to the Bell Telephone Laboratory in Whippany, New Jersey

An OTM representative conducted a visit to the Bell Telephone Laboratory in Whippany, New Jersey, on June 24, 1969 for representatives of the OEP, Office of the Joint Chiefs of Staff, Army, Navy and Air Force for the purpose of a briefing on RDT&E with respect to the Electromagnetic Pulse (EMP).

### \*3. Federal Program Standards Regarding Data Elements and Codes

On June 23, representatives of OTM met with members of the NCS Manager's staff to discuss actions contemplated toward implementing Federal Program Standards regarding Data Elements and Codes used



in Federal telecommunications systems. This responsibility, delegated to the Manager's office by the OTM in September 1968, is to be applied to all Federal agencies and is not confined to NCS member agencies only. It was concluded that a discussion should be held with the Bureau of Standards concerning methods and procedures in publishing Federal Program Standards regarding Data Elements and Codes and that a "blanket" letter would be sent to all Federal agencies to introduce the subject and obtain interested agency responses.

\* 4. TACSATCOM Briefing

The TACSATCOM briefing mentioned in the activities report of June 10, 1969 was presented to interested OTM personnel by representatives of DDR&E.

SATELLITE COMMUNICATIONS

1. The INTELSAT Conference

The opening session of the Preparatory Committee for the INTELSAT Conference was held at the State Department on June 23. Ambassador Scranton welcomed the representatives from 40 nations and observers from 10 nations on behalf of the U. S. Government. The representative of the United Kingdom, John E. Killick, was elected Chairman of the Preparatory Committee. The Preparatory Committee is meeting during the next three weeks to prepare for consideration by the reconvened conference the draft text of the Definitive Arrangements for the INTELSAT Consortium, which will be considered at the Plenipotentiary Conference scheduled to reconvene in Washington on November 18, 1969. Members of the OTM staff serve as advisers to the U. S. Delegation.

*Telecommunications*

THE WHITE HOUSE  
WASHINGTON

June 20, 1969

MEMORANDUM FOR TOM WHITEHEAD

After making a check of our facilities, I find that we will be unable at this time, to allocate any space for your new study group.

*Larry Higby*  
Larry Higby



*Telecommunication*

June 19, 1969

MEMORANDUM FOR GENERAL O'CONNELL

Thank you for your memorandum of June 16th regarding correspondence between your office and NASA on the procurement of communications satellite service to support the Apollo program.

Your position seems eminently reasonable with regard to the timing of a conference with the terrestrial carriers. However, I still have reservations about the authorized user question and the question of certification of national interest. I would like to discuss this with you before a final decision is reached in this matter.

Clay T. Whitehead  
Staff Assistant

cc: Mr. Flanigan  
Mr. Whitehead  
Central Files

CTWhitehead:ed

## SECOND F.C.C. SEAT BECOMING VACANT

6/18/69  
Nixon Given Early Chance  
to Set Agency's Course

By CHRISTOPHER LYDON  
Special to The New York Times

WASHINGTON, June 17—The Nixon Administration will have an early opportunity to put its own stamp on national communications policy.

James J. Wadsworth, whose term on the Federal Communications Commission does not expire for another two years, confirmed today reports that he plans to leave his post within the next few weeks, creating a second vacancy to be filled this summer on the seven-member commission.

The chairman, Rosel H. Hyde, whose term expires at the end of this month, has been asked to stay on duty until the President finds a successor. The White House indicated today that the search for a new chairman would not take more than a month or two.

Mr. Hyde and Mr. Wadsworth are both Republicans. In choosing their replacements, President Nixon will have a chance to shift the shaky balance of philosophies on the commission, particularly on the policy by which broadcasting performance is reviewed and licenses are renewed.

Mr. Hyde, who has served as a commissioner for 23 years and 18 more on the commission staff, is regarded as a gentle regulator. He has taken a strong stand against the encouragement of challenges to established broadcast license holders.

Mr. Wadsworth, who served for eight years on the United States delegation to the United Nations during the Eisenhower administration, has been an unpredictable maverick on the commission.

Last February Mr. Wadsworth cast the key vote to take Boston's Channel 5 away from WHDH-TV and The Boston Herald-Traveler, the first time the commission had ever denied renewal to a major television licensee. More recently, Mr. Wadsworth joined the bare majority to withhold renewal for San Francisco's KRON-TV, owned by The San Francisco Chronicle.

During the Presidential cam-

paign last year, Mr. Nixon indicated he would not rule out broadcasting executives for membership on the commission. The White House declined today to name any of the men under consideration for the two openings.

"Finding a new chairman is really hard," said a White House aide today. "We need someone who is concerned about television, who's aware of the new technological possibilities, who's not totally unacceptable to the industry. When you add up all the qualifications, you realize you're looking for a superman."

Mr. Wadsworth said today that he had been asked to join the American team negotiating a permanent charter for the International Telecommunications Satellite Consortium, known as Intelsat. He said he

was eager to accept the appointment, but that details were not yet final.

William Scranton, the former Governor of Pennsylvania, is the chief United States representative to Intelsat, which is now preparing for a new and presumably final conference of its approximately 70 members in Washington in November.

The chief issue before the conference is the future role of the United States' communications satellite corporation, which until now has had exclusive responsibility for managing the Intelsat system.

Telecommunications

6/18/69



*Copy for Mr. Whitehead*

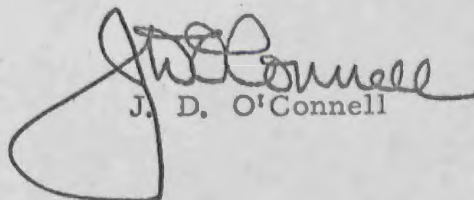
EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF TELECOMMUNICATIONS MANAGEMENT  
WASHINGTON, D.C. 20504

OFFICE OF THE DIRECTOR

June 18, 1969

MEMORANDUM FOR THE DIRECTOR:

In accordance with our current procedure, I am  
pleased to transmit this report of the significant  
activities of this office for the period ending  
June 17, 1969.

  
J. D. O'Connell

-Enclosure

June 17, 1969

## WEEKLY ACTIVITY REPORT NO. 70

### TELECOMMUNICATIONS EMERGENCY PREPAREDNESS

#### \*1. Pennsylvania Telecommunications Coordination

On June 12 a meeting was held in OTM at the request of state government officials in Pennsylvania. Attendees at the meeting included: Mr. Charles E. Lathey (OTM); Director and Assistant Director, Bureau of Management Information Systems, Commonwealth of Pa.; Director of Information Systems, Pa. State Police; and representatives from Page Communications Engineers, Inc., Syntonic Technology, Inc., and Planning Research Corporation.

The purpose of this meeting was to discuss Pennsylvania's initiation of a computer-communications system to serve on a statewide basis, and of a separate telecommunications program which would provide improved statewide communications.

#### \*2. TELALERT

On June 16 a meeting was held in OTM to explore alternative means for internal alerting within OEP which might substitute for the present telephone cascade system. In attendance at the meeting were representatives from OTM, the Emergency Operations Office (OEP), the Chesapeake & Potomac Telephone Co., and the American Telephone & Telegraph Co. A memorandum for the record is being developed by Mr. Robert Mills of OEP.

#### \*3. Assumptions for Planning

Since the last weekly activity report, representatives of OTM have attended two OEP meetings on planning assumptions. As this study proceeds, it is expected that OTM will be called upon to provide input to the working group's activities.

### EMERGENCY PREPAREDNESS PLANNING

#### \*1. NATO Civil Communications Planning

OTM representatives met with representatives from State, International Security Affairs (ISA), and Department of Defense on June 13 to formulate a U. S. Position for NATO Military-Civil coordination on communication matters for the forthcoming Civil Communication Planning Committee meeting on 23-26 June 1969. A position paper was prepared and has been circulated to appropriate agencies for coordination.



A U. S. Position paper on 14 communication agenda items for the 23-26 June 1969 Civil Communications Planning Committee meeting has been prepared and is being coordinated with State, ISA, OASD (I&L), and the Military Communications Electronics Board (MCEB).

\*2.. Emergency Relocation Plans

An OTM representative met with representatives of NCS on June 12 to discuss emergency relocation plans for the NCS planning group. NCS representatives plan to visit the present OTM relocation site in the near future to determine its suitability for their operations. This would involve about 15 additional personnel at the OTM site.

NATIONAL TELECOMMUNICATIONS

1. Defense Atomic Support Agency Added as a Subscriber to the WASHFAX System

Approval was forwarded to the Executive Agent, NCS, on June 13 to add the Defense Atomic Support Agency as a subscriber to the WASHFAX System. He was further advised that submission of requests for new subscribers to the WASHFAX to the DTM is no longer required; future requests should be submitted directly to the Manager, NCS.

FREQUENCY MANAGEMENT

1. Direct Broadcasting from Satellites

On June 11 the DTM and staff members met with Dr. Walter Radius of NASA in respect to the planning by that agency for experimentation looking toward the use of satellites for relay of broadcasting (TV, FM, AM) via satellites. On June 13 NASA offered certain features of the Applications Technology Satellite (ATS) to the broadcasting industry and educational interests (Ford Foundation and Carnegie Foundation) for these activities to develop investigative programs as to how satellites might be applied in the broadcasting and educational fields. The OTM is particularly interested in following this effort since basic policy questions will evolve should the investigation look toward operational employment. Such questions arise as to proper use of the radio frequency spectrum, competition with existing terrestrial modes of communications, etc.



## 2. New Technology

On June 12 OTM staff representatives met with Drs. Merkels and Vaill of VERSAR, Inc., to explore certain new technological concepts with respect to telecommunications. One area treated was the feasibility of a new type of low frequency antenna, which, if satisfactory, could have significant implications with respect to the use of low frequencies such as those involved in the Navy's project SANGUINE (new command and control concept). Another area treated was the feasibility of using sensor devices vice radar applications for such purposes as surveillance, detection, collision avoidance, etc.

## 3. FY 1970 Budget Hearing

On June 13 the DTM and staff members briefed the Director, OEP, on their planned contribution to the forthcoming Senate hearings with respect to the FY 70 OEP budget. On June 17 OTM participated with the OEP in presenting the Telecommunications portion of the OEP budget to the Senate Appropriations Subcommittee.

## \* 4. Military Frequency Planning

On June 16 OTM personnel met with the Joint Frequency Panel of the DOD to discuss matters of mutual interest with respect to national and international frequency management problems. The J/FP consists of membership from the Army, Navy, Air Force, Joint Chiefs of Staff, Defense Communication Agency, and the National Security Agency. Items treated included certain aspects of military planning with respect to the use of radar devices and preparatory efforts for the forthcoming ITU WARC on Space Telecommunications, with particular emphasis on military planning for a tactical communication satellite system in the UHF portion of the radio spectrum.

## \* 5. House Small Business Subcommittee Hearings

The Subcommittee headed by Congressman Dingell conducted hearings on June 9, 10, and 11 on allocation of the radio frequency spectrum and its impact on small business. These hearings were another of a series held over the past year concerning the accommodation of "land mobile" radio requirements in the frequency spectrum. A long list of witnesses representing primarily "land mobile" interests appeared, plus the General Counsel of the All-Channel Television Society and six of the seven FCC Commissioners. The hearings are to resume in about a month with witnesses from DOT, Commerce, FCC, and OTM to be asked to testify on radio frequency management matters.



\* 6. "Landmark" Supreme Court Decision

In its recent decision on the "Red Lion Broadcasting Co., Inc. case", the court upheld the "fairness doctrine" requiring broadcast stations to provide "equal time" for both sides in controversial public issues and to all qualified candidates for public office. The court based its decision on "the prevalence of scarcity of broadcast frequencies, the Government's role in allocating those frequencies, and the legitimate claims of those unable without governmental assistance to gain access to those frequencies ----". Contained in the opinion of the court written by Mr. Justice White, are extensive references supporting the need for frequency spectrum management and the practices related thereto. The decision is thus a "landmark" for two reasons: The constitutionality of the "fairness doctrine" is upheld, and the need is reaffirmed for the Government to manage the radio frequency spectrum. The court's opinion will be adequately weighed in respect to our continuing management of the spectrum, particularly in the context of our studies on the question of "selling" the spectrum.

*See also for Radio Hydro  
dated 6/27/49*

STATEMENT OF NATIONAL COMMUNICATIONS POLICY  
PREPARED BY  
THE FEDERAL COMMUNICATIONS COMMISSION

The basic statement of national communications policy is section 1 of the Communications Act of 1934, as amended, 47 U.S.C. §151, which creates the Federal Communications Commission,

For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio communication, \* \* \*

The Communications Act applies, except for the Canal Zone, to "all interstate and foreign communication by wire or radio and all interstate and foreign transmission of energy by radio, which originates and/or is received within the United States, and to all persons engaged within the United States in such communication or such transmission of energy by radio, and to the licensing and regulating of all radio stations as hereinafter provided; \* \* \* (section 2(a)). It provides for the regulation of interstate and foreign communications common carriers (sections 201-222), and for the allocation by the Commission of spectrum space for all non-Federal Government uses of the radio spectrum (sections 303, 305.) 1/

All stations are licensed by the Commission under a broad standard of the public interest, convenience and necessity (sections 307, 308, 309, 310). The Communications Act has been consistently interpreted by the courts as conferring upon the Commission flexible, comprehensive and expansive powers "to promote and realize the vast potentialities of radio. \* \* \*" National Broadcasting Co. v. United States, 319 U.S. 190, 217 (1943). It has also been interpreted as conferring a broad jurisdiction over all forms of electrical communication to be exercised as a unifying force to insure that developments in the various fields of communications will be guided by paramount national goals. United States v. Southwestern Cable Co., 392 U.S. 157 (1968); Carter Mountain Transmission Corp. v. Federal Communications Commission, 116 U.S. App. D.C. 93, 321 F.2d 359 (1963).

1/ Under section 305 it is the President's function to assign frequencies for Federal Government use. Executive Orders 10995 (27 Fed. Reg. 1519) and 11084 (28 Fed. Reg. 1531) delegate this function to the Director of Telecommunications Management in the Office of Emergency Preparedness. Coordination with the Commission is maintained through the Interdepartment Radio Advisory Committee, which coordinates the needs of Government agencies on behalf of the D.T.M. This paper is not directed to Federal Government use of radio or Government communications generally.



Thus, the basic policy set forth in the Communications Act is that there shall be a single agency to regulate all non-Federal Government communication by wire and radio, with comprehensive authority to realize the vast potentialities of a medium whose distinguishing characteristic is its dynamism. National policy has been developed under this Act, and succeeding statutes dealing with particular areas, to achieve certain broad goals. These are: (1) to inform the public on political and other matters through local outlets; (2) to meet the public's educational, cultural and entertainment needs and interests; (3) to advance rapid, efficient and low cost private communications, both domestic and international; (4) to make communications an efficient and reliable adjunct to the preservation of life and property, the maintenance of public safety, the conduct of State and local government, and the development of the commerce of the United States; (5) to aid the national defense; (6) to promote harmonious international relations, and (7) to advance the state of the art. These policies are carried out through frequency allocation and regulatory procedures. The Commission set forth its basic concerns on frequency allocation in 1944 when it undertook a complete revision of frequency allocations. In a proceeding thoroughly revising the overall allocation of frequencies to non-Governmental services (Docket No. 6651), it directed all interested persons to evaluate services from the standpoint of public need and benefit under the following criteria (9 Fed. Reg. 10270, 10271):

- (a) The dependence of the service on radio rather than wire lines.
- (b) The probable number of people who will receive benefits from the service.
- (c) The relative social and economic importance of the service, including safety of life and protection of property factors.
- (d) The probability of practical establishment of the service and the degree of public support which it is likely to receive.
- (e) The degree to which the service should be made available to the public, that is, whether on a limited scale or on an extended competitive scale.
- (f) Areas in which service should be provided and, in general, the points to which communication must be maintained.
- (g) When it is proposed to shift a service from its present location in the spectrum, data should be presented showing the feasibility and cost of the shift, particularly with respect to the technical, economic and other considerations involved, and the length of time and manner for completing the shift.

These criteria have remained as guiding principles, in addition, of course, to purely technical considerations. See Report and Order in Docket Nos. 8658, et al., 14 Fed. Reg. 2264, 2265.

I. THE CREATION OF AN INFORMED PUBLIC  
THROUGH LOCAL OUTLETS OF EXPRESSION

"The maintenance of the opportunity for free political discussion to the end that government may be responsive to the will of the people and that changes may be obtained by lawful means, an opportunity essential to the security of the Republic, is a fundamental principle of our constitutional system." Stromberg v. California, 283 U.S. 359, 369 (1931). It has been United States policy to further this objective through the licensing of broadcast stations, privately owned, on channels over which the United States maintains full control. Section 301 of the Act thus provides "for the use of such channels, but not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority, and no such license shall be construed to create any right, beyond the terms, conditions and periods of the license." 2/

In section 315 of the Act, Congress has required that when a broadcast station affords time to a legally qualified candidate for public office, it must afford equal time under equal conditions to other qualified candidates for the office, and has also confirmed the policy enunciated by the Commission, Report on Editorializing, 13 F.C.C. 1246 (1949), that every licensee "must operate on a basis of overall fairness, making his facilities available for the expression of the contrasting views of all responsible elements in the community on the various issues that arise." (13 F.C.C. at 1250.) In the Report on Editorializing,

2/ Section 304 provides that, "No station license shall be granted by the Commission until the applicant therefore shall have signed a waiver of any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise."

Section 307 limits broadcast licenses to a three year period, and sections 307, 308, 309 and 310 require that a public interest finding be made before any initial license, renewal or transfer may be authorized. Section 309(h) requires that the license be issued subject to the conditions that no right of use is vested beyond the term of the license or in any manner other than authorized, and that the President may impose special conditions in a national emergency under section 606 of the Act.



13 F.C.C. at 1249, the Commission stated that a large part of the spectrum had been allocated to broadcasting because of the contribution it could make to the discussion of public issues. As part of the fairness policy, the Commission has promulgated rules requiring an opportunity to respond to personal attacks made in connection with discussion of controversial issues of public importance. 33 Fed. Reg. 5362. 3/ The Commission has also further stated its view that programming in the public interest includes news and public affairs in its Report and Statement of Policy Re: Commission en banc Programming Inquiry, 20 Pike & Fischer, R.R. 1901, 1913 (1960).

A complementary policy in this area has been to prevent monopolistic control of broadcast facilities and to preserve our broadcast system on a free competitive basis. The antitrust laws of course apply (section 313) and the economic aspects of the national policy in this area are fully relevant. But, beyond that, the Commission has adopted the view that the operation of broadcast stations by a large group of diversified licensees will also "maximize diversification of program and service viewpoints." Amendment of Multiple Ownership Rules, 18 F.C.C. 288, 291 (1953) (amending the rules limiting the number of stations which may be licensed to any one person); see also Policy Statement on Comparative Broadcast Hearings, 1 F.C.C. 2d 393 (1965); Scripps-Howard Radio, Inc. v. Federal Communications Commission, 89 U.S. App. D.C. 13, 189 F.2d 677 (1951), cert. den., 342 U.S. 830; Clarksburg Publishing Co. v. Federal Communications Commission, 96 U.S. App. D.C. 211, 225 F.2d 511 (1955), with respect to the broad principle of diversification as it applies to applicants with ownership interests in other media of mass communications.

These policies are further strengthened by the basic policy of providing for a nationwide system of local broadcast stations (television, standard broadcast and frequency modulation) which can serve as local outlets of expression. 4/ See, with respect to television, Sixth Report and Order in Docket No. 8736, et al., 17 Fed. Reg.

3/ The validity of these rules was affirmed by the Supreme Court in Red Lion Broadcasting Co. v. United States, No. 2, and United States v. Radio Television News Director's Assn., No. 717, on June 9, 1969.

4/ Section 307(b) of the Communications Act directs the Commission to "make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same." In accord with this mandate, the basic effort in station or channel assignments to communities is first to provide everyone with a reception service, and then, so far as is possible, to give every community its own outlet for local expression. Sixth Report and Order, 17 Fed. Reg. 3905, 3912; Clear Channel Broadcasting, 31 F.C.C. 565, 567 (1961).

3905; the 1962 all-channel receiver legislation, 76 Stat. 150, 47 U.S.C. §303(s); H. Rept. No. 1559, 87th Cong., 2d Sess., pages 2-6, S. Rept. No. 1526, 87th Cong., 2d Sess., pages 2-5. Under the mandate of section 307(b) (see footnote 4, infra) that there be an equitable distribution of service, and the policy of fostering local television service through the use of UHF channels in an integrated plan with VHF channels, which is at the heart of the all-channel receiver legislation, the Commission has adopted for community antenna television (CATV) service the basic policy that it shall be so regulated as to provide a supplementary service to television broadcasting without destroying, through unfair competition, the basic system of viable local television outlets. Second Report and Order in Docket Nos. 14885, et al., 2 F.C.C. 2d 725 (1966). Policy formulation in the broad and important area of wired services to the home continues to be an extremely active field.

## II. EDUCATIONAL, CULTURAL AND ENTERTAINMENT NEEDS AND INTERESTS.

The value of broadcast stations as purveyors of entertainment is clear, and the Government cannot appropriately regulate the selection or the content of such programming. However, as in other areas, the Commission has sought to promote diversity in general entertainment. Thus, in a pending proceeding in Docket No. 12782, 30 Fed. Reg. 4065, the Commission has proposed rules to limit the number of hours of programming that each television network may supply to affiliates in prime time in which the network has an interest. The Commission has also adopted new rules authorizing a subscription television service which it hopes will bring diversity in television programming. Fourth Report and Order on subscription television, released December 13, 1968, 15 F.C.C. 2d 466, 33 Fed. Reg. 19104 (now under judicial review). To the same purpose, the Commission has prohibited more than 50% program duplication by FM and AM stations owned by the same person in the same local area. Section 73.242 of the rules, 47 CFR 73.242; see Report and Order in Docket No. 15084, 2 Pike & Fischer, Radio Regulation 2d 1658 (1964). The Commission has also taken account of the problem of undue interruption of programs by commercial announcements, determining to examine it on a case-by-case basis. Commercial Advertising, 36 F.C.C. 45, 29 Fed. Reg. 503 (1964).

Moreover, because the basic system of broadcasting is dependent upon advertiser support, with the attendant pressure to maximize audience throughout the broadcast day, the fullest use of the broadcast frequencies for educational and cultural purposes could not be achieved without specific government help to be rendered as a matter of national policy. That help has taken several forms.



The Commission determined in 1952, in a general revision and expansion of the television allocation plan, that a number of channels should be reserved for non-commercial, educational use, even though it might be some time before use could be made of them. Sixth Report and Order in Docket Nos. 8736, et al., 17 Fed. Reg. at 3908. Since that time, additional channels have been reserved. Similar reservations have been made in the FM portion of the spectrum, not city-by-city as was done with television, but rather by frequency groups: See Section 73.501 of the Commission's Rules, 47 CFR 73.501. No particular reservations are made in the AM portion of the spectrum. This policy is also reflected in the opening by the Commission of special television channels (in non-broadcast frequency bands) for use by educational organizations to transmit programs to fixed locations, primarily schools. This "Instructional Television Fixed Service" is provided for in Sections 74.901-74.984 of the Commission's Rules, 47 CFR 74.901-74.984.

The President of the United States and Congress have also enunciated the place of education and cultural affairs in our national communications policy. See Public Law 87-447, the Educational Television Facilities Act of 1962, approved May 1, 1962, 76 Stat. 64, providing for grants in aid for the construction of television broadcasting facilities, to be administered by the Secretary of Health, Education, and Welfare in cooperation with the Commission. See also Public Law 90-129 (Public Broadcasting Act of 1967), approved November 7, 1967, 76 Stat. 65, sections 390-399 of the Communications Act, which, among other things, created the Corporation for Public Broadcasting. The Congressional purpose in that Act is stated as follows:

(a) The Congress hereby finds and declares--

"(1) that it is in the public interest to encourage the growth and development of noncommercial educational radio and television broadcasting, including the use of such media for instructional purposes;

"(2) that expansion and development of noncommercial educational radio and television broadcasting and of diversity of its programming depend on freedom, imagination, and initiative on both the local and national levels;

"(3) that the encouragement and support of noncommercial educational radio and television broadcasting, while matters of importance for private and local development, are also of appropriate and important concern to the Federal Government;

"(4) that it furthers the general welfare to encourage noncommercial educational radio and television broadcast programming which will be responsive to the interests of people both in particular localities and throughout the United States, and which will constitute an expression of diversity and excellence;

"(5) that it is necessary and appropriate for the Federal Government to complement, assist, and support a national policy that will most effectively make non-commercial educational radio and television service available to all the citizens of the United States;

"(6) that a private corporation should be created to facilitate the development of educational radio and television broadcasting and to afford maximum protection to such broadcasting from extraneous interference and control."

The Public Broadcasting Act of 1967 also specifically authorized communications common carriers to render free or reduced rate communications interconnection service for noncommercial educational television or radio services, subject to Commission rules. The enactment of this statute followed a message of the President of the United States to Congress on Health and Education of February 28, 1967 recommending enactment of the Public Television Act of 1967, and stating that, "Noncommercial television can bring its audience the excitement of excellence in every field." This statement also referred to a study directed by the President of the use of satellites for an educational television and radio network. (House Doc. No. 68, 90th Cong., 1st Sess.)

### III. RAPID, EFFICIENT, LOW COST PRIVATE COMMUNICATIONS

The basic national policy set forth in section 1 of the Communications Act is that there should be available to all of the people of the United States a rapid, efficient, nationwide and worldwide wire and radio communication service with adequate facilities at reasonable charges. This basic policy declaration is implemented with respect to common carriers in Title II of the Act, sections 201-222, which grants the Commission pervasive powers for the regulation of common carriers providing all types of interstate and foreign service by wire or radio. The Commission's regulatory responsibility encompasses:

- (a) The review of all rates and practices with the power to prescribe just and reasonable charges, classifications and practices after opportunity for hearing;
- (b) The prevention of unlawful discriminations and preferences;
- (c) The authorization of radio and wireline facilities required in the public interest;
- (d) The prescription of accounting regulations;



- (e) The prescription of other reports;
- (f) Prescription of depreciation charges;
- (g) The examination into transactions relating to services, equipment and related matters;
- (h) The conduct of inquiries into management; and
- (i) Action on complaints and requests for damages.

In addition, the Commission is given plenary powers to institute inquiries on its own motion and to issue appropriate orders at the conclusion thereof.

In the discharge of its responsibilities, the Commission, over the years, has procured very substantial reductions in rates for interstate telephone services. In 1967, after formal hearing, the Commission adopted an Interim Decision and Order in Docket Nos. 16258 and 15011, A.T.&T., 9 F.C.C. 2d 30, in which it reviewed and reformulated its basic policy with respect to both rate of return and separation of telephone plant between the interstate and intrastate jurisdictions. The Commission is now engaged in further aspects of the issues in these proceedings designed to reevaluate existing standards for pricing of individual service offerings in the light of current technology, user requirements and availability of alternative methods of satisfying user requirements.

In a recent decision, Carterfone, 13 F.C.C. 2d 420 (1968), the Commission enunciated the policy that the interest of the using public could best be served by permitting interconnection of private communication systems with the telephone network and the use of customer-owned equipment, provided that such interconnection or use was privately beneficial and had no substantial adverse effect on service generally supplied by the telephone companies. A further informal inquiry has been instituted into all aspects of the A.T.&T. tariff provisions as revised after the Carterfone decision, including the question of the extent, if any, to which equipment not furnished by the telephone company could be used for the control of the network signalling function, A.T.&T., 15 F.C.C. 2d 605 (1968).

The vast growth of the computer industry and its growing reliance on the communication network has resulted in a broad based inquiry into the interrelationship between computers and communication services. Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities, Docket No. 16979 (1966), FCC 66-1004. The first phase of this inquiry has now been

completed and further aspects remain to be explored. Essentially, this inquiry is designed to determine the needs of the computer industry; the extent to which they are now being met; the changes in practices, services, and rates which should be required to meet legitimate needs of the computer industry; the extent to which particular services provided, or proposed to be provided, by either communication or computer entities are, or should be, subject to regulation; and the changes in applicable statutes or rules or regulations which should be made to achieve the most efficient and effective use of the communications network as well as in the provision of computer services.

In the field of international communications, the Commission has formulated and implemented a series of policies designed to insure efficiency and economy of service. It has permitted competition between international telegraph carriers wherever it has found that such competition is reasonably feasible and may be expected to confer some public benefit. Federal Communications Commission v. RCA Communications, Inc., 346 U.S. 86 (1953); Mackay Radio and Telegraph Co., Inc., 19 F.C.C. 1321 (1955), affirmed RCA Communications, Inc. v. Federal Communications Commission, 99 U.S. App. D.C. 163, 238 F.2d 24 (1956). When the introduction of high capacity transoceanic cables threatened to upset balance in the industry, as well as the ability of the international telegraph carriers to provide efficient and economical telegraph service to the public, the Commission adopted a series of policies designed to safeguard the interest of the public in the maintenance of these services. Thus, it provided for joint ownership of the transoceanic cable facilities, interconnection between the domestic facilities of the telephone companies and the international facilities of the telegraph carriers, and reasonable divisions of tolls between domestic telephone companies and the international carriers in the provision of international TELEX services which originated or terminated over the facilities of the telephone companies. In addition, to preserve the viability of the international telegraph companies and their ability to provide alternate voice record services, the Commission has limited A.T.&T.'s service offerings in the international field to message telephone service, private line circuits for voice use only and program transmission services. Exception was made for preexisting services and the service to Hawaii. American Telephone and Telegraph Co., 37 F.C.C. 1151 (1964); ITT Cable and Radio Inc.-Puerto Rico, et al., 5 F.C.C. 2d 823 (1966); A.T.&T., et al., 7 F.C.C. 2d 959 (1967); A.T.&T., et al., 13 F.C.C. 2d 235 (1968).

In regulating international telegraph rates, the Commission has adopted the basic policy that rates should be fixed on the basis of the revenue requirements of that international telegraph carrier or segment of the industry which provides general worldwide service and



has the highest relative net earnings. This policy was designed to implement the current policy of requiring competition in international telegraph communications. It should insure maintenance of sufficient facilities to provide adequate international telegraph services while resulting in rates for such services sufficient to satisfy the revenue requirements of that segment of the industry which is needed to provide such services (rather than the average revenue requirements of the industry as a whole). The Western Union Telegraph Company, 25 F.C.C. 535 (1958).

The Western Union Telegraph Company was permitted to merge with Postal Telegraph, Inc. in 1943, and a virtual monopoly in domestic telegraph message services was established. In order to insure that this monopoly would divide international traffic it originated over its facilities in this country equitably among the various international carriers and its own international cables, the Commission prescribed a formula for the division of international traffic among all of the competing record carriers, including the Western Union cable division, and fixed the divisions of tolls between Western Union and the various international telegraph carriers. Application for Merger Western Union and Postal Telegraph, 10 F.C.C. 184 (1943).

In 1961, the Commission adopted a decision implementing the requirement that Western Union should divest itself of its international cable facilities and revised the formula for division of international traffic in light of the new situation resulting from this divestment. Western Union Divestment, 30 F.C.C. 323, and 30 F.C.C. 951 (1961).

Post-war developments in the field of rocketry and electronics, followed by the successful launching of various satellites, indicated clearly that an early use of this new technology could be made in the field of communications. In 1962 Congress enacted the Communications Satellite Act of 1962, 76 Stat. 419, 47 U.S.C. §§701-744, which established basic international policy for exploitation of this scientific breakthrough. International policy in the communications field was considerably expanded by this Act, which declared that it be the policy of this country to establish as soon as practicable, in conjunction and cooperation with other countries, a commercial communications satellite system as part of an improved global communications network. This system was to be responsive to public needs and international objectives; to serve communication needs of the United States and other countries; and contribute to world peace and understanding. The satellite system envisaged was to be extended to provide global coverage at the earliest practicable date and care and attention was to be given to the provision of satellite communications services to economically less developed countries, as well as the more highly developed ones, and toward reflecting the benefits of the new technology in both the quality of services and the charges therefor. Additional responsibilities were given the Commission in the field of procurement,

access to earth stations, licensing of earth stations, financing of the corporation established to exploit the technology, and additions to the system. It was also charged with insuring that economies available from satellite services would be reflected in charges to the public.

The Satellite Act established a global commercial communications satellite system through a private corporation subject to regulation by the Commission. To date, four separate generations of satellites have been authorized, and policy has been established with respect to the ownership and operation of earth stations, the division of traffic between satellite and cable facilities, and the entities which may be served directly by the Communications Satellite Corporation.

Insofar as earth station ownership is concerned, the Commission was authorized by the Act to license either ComSat alone, one or more terrestrial carriers, or ComSat and one or more terrestrial carriers jointly. The Commission has adopted an interim policy, subject to review at the end of 1969, that in the early stages of this development, ComSat should own 50 percent of the earth stations with the terrestrial carriers owning the remaining 50 percent in proportion to their expected prospective use of such stations. Ownership and Operation of Earth Stations, 5 F.C.C. 2d 812 (1966). This policy was designed to give due weight to ComSat's basic responsibility in the satellite field, while at the same time encouraging the terrestrial carriers to maximize their use of satellite facilities by giving them a direct investment and ownership interest in earth station facilities which would parallel their direct investment and ownership interest in cable facilities.

The Communications Satellite Act authorized ComSat to furnish channels of communications for hire to United States communication common carriers and other authorized entities, foreign and domestic. Questions arose early regarding the extent to which ComSat might bypass the terrestrial carriers and provide service directly to ultimate users. After a lengthy inquiry into this subject, the Commission determined that ComSat was authorized, as a matter of law, to provide communication service directly to entities other than common carriers. It held, however, as a matter of policy that ComSat was to be primarily a carriers' carrier and that, except in unusual circumstances, ComSat should provide its services and facilities to the terrestrial carriers. In reaching this decision, the Commission took into account the legislative history of the Act, the fact that ComSat was given a monopoly in satellite facilities for international service, and the adverse effect on the general using public if large users, particularly for leased services, were permitted to deal directly with ComSat. As part of its decision in this matter, the Commission required the terrestrial carriers to reflect the economies available to them from the use of satellite facilities in the rates charged to the public. Since the issuance of this decision, rates for leased services provided by both cable and satellite facilities have been reduced between 30 and 40 percent. Authorized Entities and Users -- ComSat, 4 F.C.C. 2d 421 (1966); 6 F.C.C. 2d 593 (1967).



The Commission was also confronted with the problem of insuring that the terrestrial carriers make appropriate use of satellite facilities and do not favor their wholly owned cable facilities in providing international telecommunication service. This question first arose in connection with service between the continental United States and the Puerto Rico-Virgin Islands area. In authorizing both cable and satellite facilities to serve this area, the Commission required that, in general, the terrestrial carriers meet their needs on a 50-50 cable/satellite basis so that they would be taking as many satellite circuits as they used in their own new cable to meet communication needs for the entire Caribbean area and beyond. ITT Cable and Radio Inc.-Puerto Rico, et al., 5 F.C.C. 2d 823 (1966); A.T.&T., et al., 7 F.C.C. 2d 959 (1967). Subsequently, in authorizing a 720 circuit cable between the United States and Spain, the Commission required that cable and satellite facilities be used in such proportions as to insure that the 720 circuit cable would be filled at the same rate as a new generation of satellites with a capacity of some four or five thousand circuits, to the end that both facilities are fully filled at approximately the same time. A.T.&T., et al., 13 F.C.C. 2d 235 (1968).

Implementation of the Congressional mandate that the commercial communications satellite services be established in conjunction and cooperation with other countries required the conclusion of agreements with such countries. After some nine months of intensive negotiations, in which the Federal Communications Commission took part, Interim Arrangements were concluded in August 1964 for the creation of a global satellite communications system. These agreements, which were to be reviewed in 1969, have the status of an executive agreement in this country. Treaties and Other International Acts Series 5646 (1964). The United States is now engaged in further negotiations with some 68 other countries who have become members of the international consortium, looking toward the establishment of Definitive Arrangements. Of basic concern is that business character of the Interim Arrangements be maintained with a view to insuring efficient and economic operation to implement the policy of the Satellite Act. The basic policy which is being followed is to provide arrangements for the continuation of a consortium which would own the space segment in undivided shares, with ownership related to use and voting power in a Governing Body following ownership. It is also firm United States policy that ComSat retain its position as Manager of the system to insure dynamic progress and economic and efficient operation.

It has also been Commission policy to authorize the use of certain portions of the radio spectrum for personal or business, non-common carrier use, to carry out the mandate of section 1 of the Act for efficient, low cost communications. 5/ Thus, for example, the

5/ Before authorizing any such non-common carrier use, the Commission has given full consideration to the effect on common carrier regulation in the sense that such operations may "skim-the-cream" and adversely affect common carrier services and/or rates to the general public.

Commission has allocated frequencies above 890 MHz to private microwave users. Allocation of Microwave Frequencies Above 890 Mc., 27 F.C.C. 359. The Commission has also established the Business Radio Service, which is designed to provide frequencies on a shared basis for miscellaneous commercial activities, educational and philanthropical institutions, ecclesiastical institutions, and medical use. Sections 91:551, et. seq., 47 CFR 91:551, et. seq.

IV. COMMUNICATIONS FOR THE PRESERVATION OF LIFE AND PROPERTY;  
PUBLIC SAFETY; STATE AND LOCAL GOVERNMENT USE; AND COMMERCE

The promotion of the safety of life and property is a fundamental purpose for the creation of the Federal Communications Commission. (Section 1.) The Communications Act accordingly has specific requirements governing radio equipment and radio operators on board ship. (Sections 351-364.) Basic policy on the use of radio for safety of life at sea is also contained in the International Convention for the Safety of Life at Sea and Annexed Regulations, London, 1960, TIAS 5780, TIAS 6284, and the U.S.-Canada Agreement for the Promotion of Safety on the Great Lakes by Means of Radio, Ottawa, 1952, TIAS 2666. Use of communications for air safety is covered in the Convention on International Civil Aviation, Chicago, 1944, TIAS 1591, Annex 10. <sup>6/</sup> The Commission's rules, of course, make provision for aeronautical services (Part 87, Sections 87.1-87.525), as they do for maritime services (Part 81, Sections 81.1-81.604); (Part 83, Sections 83.1-83.803).

Comprehensive use of radio for other governmental (State and local) and public safety purposes, including police, fire, highway maintenance, etc., is provided for in Part 89 of the rules, Sections 89.1-89.559.

<sup>6/</sup> The President's Air Coordinating Committee in a Report of May 1954 on Civil Air Policy, states (page 33):

"2. The policy of the Federal Government is to assure the availability and efficient operation of integrated systems of communications facilities including communications for distribution of meteorological information, notices to airmen, and air traffic control messages where such communications are necessary to the safety of air commerce. It will bear the cost of such services within the limits of appropriations for that purpose made by the Congress. When the Government does not bear the cost of such services it will nevertheless assure their availability and encourage others to provide them.

"3. Civil aviation operators requiring communications services to meet operating needs in excess of those provided by the basic safety communications network shall bear the cost thereof. The Federal Government shall assure the availability of communications necessary for such purposes and shall require that systems for handling such communications be made available to any civil aircraft operator who makes necessary arrangements for use of these facilities."



Finally, the commerce of the United States is promoted not only by the use of common carrier facilities by business and industry, but also by the allocation of parts of the radio spectrum. See Report and Order in Docket Nos. 8658 et al., 14 Fed. Reg. 2264, and various provisions of the rules, e.g., Part 91, Sections 91.1-91.755, making frequency space available as an adjunct to the production or distribution of power, to the petroleum industry, to logging operations, etc. 7/

## V. THE NATIONAL DEFENSE

The Federal Government itself maintains extensive communications facilities for national defense purposes, as well as making use of private common carrier facilities geared to defense needs.

Section 606 of the Communications Act contains specific provisions to insure that the nation's non-Government communications facilities will be available in the national defense in the event of war. Under section 606(a), the President may, during wartime, direct communications priorities for common carriers; under section 606(b), he may use the armed forces to protect communications facilities; under section 606(c) he may, during war, a threat of war, or national emergency, suspend or amend all rules governing the use of radio and close or assume control over radio communication facilities; under section 606(d), he may, upon proclaiming a state of war or threat of war, suspend the rules applicable to wire communication facilities, close such a facility, or assume control over it for Government operation.

By Executive Order 10530 of May 10, 1954, 19 Fed. Reg. 2709, the President authorized the Commission to exercise his authority under 47 U.S.C. 34 to 39 with respect to submarine cables. On February 26, 1963, by Executive Order 11092, 28 Fed. Reg. 1847, the President directed the Commission, subject to the policy guidance of the Director of the Office of Emergency Planning, to prepare national emergency plans for communications "to develop a state of readiness in these areas with respect to all conditions of national emergency \* \* \*." Pursuant to

---

7/ A significant policy question which is before the Commission in a variety of proceedings, is the provision of adequate frequency allocations for the various land mobile services, use of which has been expanding rapidly, particularly as an adjunct to business operations. See, e.g., proposals to permit land mobile users to share the lower seven UHF television broadcast channels (Docket No. 18261; 33 Fed. Reg. 10943) and to reallocate UHF channels 70-83 for land mobile use (Docket No. 18262; 33 Fed. Reg. 10807).

this Order and a "Statement of White House Requirements on Presidential Communications with the General Public During Periods of National Emergency" issued on February 1, 1967, the Commission (with the cooperation of national industry advisory committees), the Department of Defense and the Office of Emergency Preparedness have prepared a basic Emergency Broadcast System Plan for broadcast and other services in the event of an emergency. This plan is being further implemented by specific state plans. 8/

Section 4(j) of the Communications Act also provides that the Commission may "withhold publication of records or proceedings containing secret information affecting the national defense." Under this provision, the Commission has been sustained in reassigning frequencies to be reserved for Government use upon representations by the Executive Branch that the frequencies were needed for defense purposes, and without divulging to the affected parties the content of the documents submitted to the Commission by the Executive Branch, Bendix Aviation Corp. v. Federal Communications Commission, 106 U.S. App. D.C. 304, 272 F.2d 522 (1959).

## VI. INTERNATIONAL RELATIONS

Adequate communications are an essential ingredient of harmonious international relations. At the present time, the mainstay of our international communications is the global system of radio and cable facilities maintained by United States carriers. 9/ This system and the allocation of the radio spectrum for various uses, and in a manner which avoids harmful interference, are, of course, the product of international negotiations and the international determination that communications should be of mutual and general benefit.

The Communications Satellite Act of 1962, discussed above, reflects a major policy decision by the United States to work with other countries, with particular "attention \* \* \* directed toward providing such services to economically less developed countries and areas as well as those more highly developed." The policy objectives of the Satellite Act were further implemented by the establishment of the INTELSAT consortium, and fundamental United States policies in this area are currently being developed in connection with negotiation of Definitive Arrangements for INTELSAT, as noted above.

8/ By Executive Order 10312 of December 10, 1951, 16 Fed. Reg. 12452, the President had delegated to the Commission the task of preparing plans to minimize electromagnetic radiations from non-Government stations which could guide hostile aircraft, missiles or other devices.

9/ The Commission has also licensed a class of international broadcast stations (Sections 73.701-73.791 of the Rules) to "reflect the culture of this country and which will promote international goodwill, understanding and cooperation." (Section 73.788.)



## VII. TELECOMMUNICATIONS RESEARCH AND TECHNOLOGY

Research in telecommunication technology has very largely been conducted by private industry, including the regulated common carriers. Examples of the fruits of this research are the development of hardware such as basic solid state devices and wide-band cables. In addition, considerable research is conducted in laboratories associated with educational institutions, aided by foundations and contracts with Government agencies such as the National Science Foundation. Although the amount of in-house research by Government agencies is relatively small in comparison, many significant research programs in this field are conducted by a number of agencies. Such programs include basic research, as well as the development of techniques for advancements in technology. In terrestrial facilities research there is no emphasis in the development of equipment intended for direct use by the general public--a role traditionally filled by the communications industry. In satellite communications NASA has done much pioneering work, directly and through contracts with private industry which have led to the development of hardware and equipment used in space communications, e.g., RELAY and SYNCOM as the forerunners of the Intelsat I, II, III and IV series.

Section 303(g) of the Communications Act directs the Commission to "Study new uses of radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest; . . ." Accordingly, the Commission fosters private research and development through the adoption of rules to provide for a wide scope of experimental research and developmental radio operations throughout the radio spectrum, and conducts rule making proceedings to provide for new uses of radio on a regular basis. The FCC maintains a small laboratory at Laurel, Maryland, which conducts studies of radio systems, radio spectrum uses, radio equipment performance, etc. and, in addition, has a Research Division, also under the Office of the Chief Engineer, which engages in research studies generally of a more theoretical nature in similar areas. Specialized technical studies are also conducted by other offices.

During the past few years there has been a greatly increased interest in one specialized area of research studies--the development of more sophisticated techniques in the allocation and use of the radio spectrum ("software"). As part of this interest, the Commission initiated a policy and research studies program in FY-1967. The objective of this program is to strengthen the Commission's capacity to resolve the numerous complex policy issues and technical problems concerning selected aspects of telecommunications. In addition to work conducted by FCC employees, the Commission has been funded to obtain assistance through contracts which amount to two to three percent of our total budget.

Two critical program areas were selected for our initial effort. The Stanford Research Institute was awarded a \$500,000 contract in June 1967 to (1) investigate the feasibility of increased interservice frequency sharing in the Land Mobile Radio Services and other progressive improvements in frequency assignment practices, and (2) explore the complex issues associated with the growing interdependence of computers and communications facilities and services of the common carrier industry.

At present in the communications field there is no centralized Governmental agency with authority to coordinate or direct the various activities, public and private. There is a large and growing feeling that such an agency should be established. However, in our opinion, before such a radical departure is made from current practices the questions should be examined in depth on a Government-wide basis. This study should address itself to the following matters:

- (a) the nature and extent of R & D effort in the private sector and the Government sector;
- (b) the relationship between the respective efforts;
- (c) the areas which require attention which are not now encompassed by existing programs;
- (d) the policies and objectives which govern each type of R & D and the respects in which such policies require clarification, revision or expansion;
- (e) the extent of effectiveness and relevance of existing R & D programs in the Government and private sector;
- (f) the most effective means of implementing R & D policies in each sector on a coordinated basis;
- (g) the potential benefits and costs of an optimum program and policy.

When such a detailed study has been completed and the recommendations of both the interested entities in Government and the private sector have been examined, an informed decision will be possible on what improvements should be made.

June 1969.



*Communications*

6/17/69

Called Trudy Brown and requested pass for  
Richard Gable to work for approximately 1 or 2 months on  
the communications matters.

Richard Gable  
3059 South Abingdon St.  
Arlington, Virginia  
931-4772

Brn. New York City 1/18/20

Coming from Department of Transportation

(13) 34313

June 17, 1969

MEMORANDUM FOR GENERAL O'CONNELL

Regarding your memorandum of June 16th on Administration testimony on communications organization, I think this is something we will have to discuss early next month after we have a better idea of where we are going.

I requested that Commerce and Transportation be let off the hook for the Dingell hearings this month for a number of reasons, but we are thereby under pressure to deliver next month. One of the purposes in delaying was precisely your point that we should not have conflicting views presented. We should both remember to raise the subject again in a couple of weeks.

Clay T. Whitehead  
Staff Assistant

cc: Mr. Flanigan  
Mr. Trent  
Mr. Hofgren  
Mr. Whitehead ✓  
Central Files

CTWhitehead:ed



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

OFFICE OF THE DIRECTOR

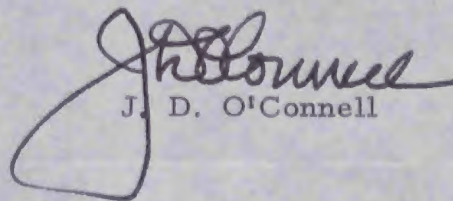
June 16, 1969

MEMORANDUM FOR MR. CLAY T. WHITEHEAD

Enclosed is a copy of an article from the June 16 issue of Telecommunications Reports. This is the subject which I discussed with you last week.

One of the questions to which I will need an answer is whether the White House will wish to have me testify and if so to what effect. The question will also arise as to whether it will be considered desirable to have witnesses from the Commerce and Transportation Departments appear.

Subject to further deliberation and discussion, it appears to me that on the subject of organization there should be one spokesman for the Executive Branch rather than to have the Committee get involved in developing a number of conflicting ideas, views, and recommendations.



J. D. O'Connell

Attachment

cc: General Lincoln



ADMINISTRATION VIEWS ON REORGANIZATION OF COMMUNICATIONS ACTIVITIES  
MAY COME TO LIGHT AT HOUSE SMALL BUSINESS UNIT'S UPCOMING HEARINGS;  
DINGELL SUBCOMMITTEE HOLDS FURTHER SESSIONS ON SPECTRUM ALLOCATIONS

The avenues being pursued in seeking ways to reorganize the federal government's activities in the area of telecommunications may be mapped out in about another month when key administration officials are called to testify before the House Small Business subcommittee on regulatory agencies, it was indicated last week.

During the course of hearings by the group last week, witnesses scheduled to appear from the Commerce and Transportation departments were removed from the previously published list--reportedly at the request of the White House--and a subcommittee spokesman said they will be called to testify in about another month. It was also indicated that Director of Telecommunications Management James D. O'Connell will be invited to appear at the same future hearings.

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HIGHLIGHTS: Hyde, Robert E. Lee, and Johnson statements to House subcommittee points up opposing positions on Commission regard "block allocation" principle. . .Dingell, sharp critic of FCC in past, has kind words for agency's work "of late," but condemns budgeting procedures which handicap Commission in doing its work. . .JTAC and Arinc spokesmen among witnesses at week's sessions.

---

The development stirred speculation that executive branch studies--centered in the Budget Bureau--involving possible means of reorganization, including particularly the question of management of the frequency spectrum, might come to light in somewhat the same fashion that the report of President Johnson's task force on communications policy was prodded loose recently by a House Commerce subcommittee.

At last week's hearings, the Small Business subcommittee continued its exploration of the "allocation of radio frequency spectrum and its impact on small business," with appearances by members of the Federal Communications Commission; Alan Novak, who was Staff Director of the communications policy task force; Richard P. Gifford, Chairman of the Joint Technical Advisory Committee; John S. Anderson, Chairman of Aeronautical Radio, Inc.; and representatives of a number of user groups.

Subcommittee Chairman John D. Dingell (D., Mich.), one of the most outspoken Congressional critics of the FCC since his panel began looking into the spectrum allocation situation, softened his attack last week and was, in fact, complimentary as far as the FCC is concerned.

Noting the "significant progress" which has been made "of late" by



the agency, Congressman Dingell said it is a source of "comfort" to the subcommittee. He particularly commended FCC Chairman Rosel H. Hyde for his strong efforts over the past couple of years in concentrating much of the Commission's efforts on the land mobile frequency problem, but he continued his condemnation of the budgeting procedures within the federal government which, he feels, have resulted in denying the FCC sufficient money and manpower to do its work.

The testimony of FCC members--with a "main" statement by Chairman Hyde and independent presentations by Commissioners Robert E. Lee and Nicholas Johnson--added substantially to public knowledge as to how the members of the agency feel about some of the "nuts and bolts" of the land mobile radio frequency problem, and what should be done about it.

There were, however, no new indications of a "breakthrough" past what the Commission has formally proposed in its outstanding rule proceedings, or what it had outlined to the House Independent Offices subcommittee in testimony reported earlier.

Chairman Hyde's statement, which he read in full on behalf of himself and Commissioners Kenneth A. Cox, Robert T. Bartley, H. Rex Lee, and James J. Wadsworth, was described by Commissioner Lee as a "defense" of the "block allocation" system for land mobile radio; Mr. Lee's statement was in strong opposition to the "block" system; and Mr. Johnson's emphasized, as he put it, "the urgency for increased resources if the FCC or any other agency is to deal effectively with the problems of frequency management so tardily identified."

The FCC Chairman pointed out in his statement that "block allocations" is "merely a shorthand description of the allocation of a particular part of the spectrum for a particular use on a nationwide basis. Because of operational, technical, and economic considerations, block allocations are the basis of worldwide standardization of frequency allocations. They are, therefore, the basic framework within which the Commission must approach its allocation duties. This is particularly so with respect to such services as aeronautical mobile, aeronautical radionavigation, maritime mobile, maritime radionavigation, international fixed, international broadcasting, radio astronomy, and the several space services."

After stressing the need for standardization and the "advantages" of block allocations, Mr. Hyde said that "Lastly, but of substantial importance, block allocations have permitted the Commission to make frequency assignments at a fraction of the administrative cost that would otherwise have been required."

While "we recognize the shortcomings of the block allocation system and agree that current allocations should be reviewed and reapportioned in accordance with current and foreseeable future spectrum needs



and technological developments," the FCC Chairman stated, "complete departure from this allocation principle should not be made until alternative methods are well documented and thoroughly tested."

Commissioner Lee's main thrust, in his prepared statement, was in opposition to a continuation of the block system. He pointed out that in 1958 he advocated reallocation of all television broadcasting to the UHF band, confident that it would resolve disparities between VHF broadcasters and the "then floundering UHF broadcast industry. . . . An integral part of my proposal was to turn over the VHF television bands to the land mobile radio services."

Since passage of all-channel TV receiver legislation, he added, "I have been forced to abandon this proposal," but "I am no less sympathetic today than I was then that the inequities in spectrum allocation have caused havoc in certain portions of the land mobile services."

He observed that the United States "is the only country" where "authority over the entire radio spectrum is not vested in a single entity. I have stated my view that the entire radio spectrum should be made the responsibility of the FCC. Upon the proper administration of the spectrum, which will take some improvement over current practices, I am confident that government and non-government services alike will have an equitable allocation to satisfy their spectrum needs."

Commissioner Lee said he intends to "press for. . . a comprehensive study to be made to test claims that land mobile equipment in the 900 mc range would not be fully adequate and of reasonable cost to consumers."

Commissioner Johnson said that while there is "much" in the FCC majority statement to the subcommittee with which he agrees, "I cannot subscribe to the general impression given by the Commission's statement that all is well with the Commission as spectrum manager, that our past behavior has been well-considered, and that expeditious resolution of frequency management problems is in the offing."

He declared that "We continue to function under the unarticulated assumption that demands for frequency utilization will continue to increase by no more than small increments over the years to come. I believe someone ought to be considering the possibility that our estimates are woefully inadequate--that, indeed, our present conceptions of use and administrative procedure are actually significantly impeding mobile communications in this country. . . ."

The Joint Technical Advisory Committee, Mr. Gifford, of the General Electric Co., reported, believes that "the time has come to get technically organized for the task of managing this fantastic (spectrum) resource in the public interest. Old-time administrative conveniences of long-term unfilled reservations no longer can be tolerated."



"We've got to have tools on hand to do special jobs of cutting and fitting services on regional bases. We've got to have sound technical guidance available to the spectrum managers to push for more efficient use with the passage of time or even to plan ahead to replace old uses with new uses, wherever new technologies create new demands on the spectrum or new substitutes for the spectrum. . .

"To do that will require an entirely new outlook in funding the technical foundation for management of this resource. The building of a spectrum engineering capability and facility may now be identified as the key to progress in utilization of the radio spectrum in the public interest."

For Arinc, Mr. Anderson, looking ahead to large capacity and supersonic aircraft, as well as continuing increases in commercial and general aviation volumes, commented that "air/ground/air radiotelephone communications capability must be substantially increased, and an air/ground/air digital data communications exchange with a computerized ground system must be implemented as rapidly as possible. On overseas routes, the air/ground/air path must be via satellite.

He said that Arinc has forecast a need for 428 channels by 1985 and 581 by the year 2000. But, he pointed out, radio frequency allocations to the aviation services have not changed materially over the past 20 to 30 years, and at present 64 channels are available for operational control purposes and 10 for air terminal use.

Noting that his estimates do not include any space for air traffic control, he said that Arinc believes that if 22 megaHertz were provided for the aviation services--enough to meet the estimated 1985 requirements--technological advances should make that space adequate for added channels "for the foreseeable future." -End-

#### FCC AUTHORIZES 122 SATELLITE VOICE CIRCUITS FOR AT&T AND HAWAIIAN

Authority to lease jointly and operate 122 satellite voice circuits between the United States mainland and Hawaii was granted to the American Telephone & Telegraph Co. and Hawaiian Telephone Co. by the Federal Communications Commission last week.

The two companies had stated in requesting the facilities that the 122 circuits will be required to meet the demand for service by the end of 1969, with 107 for message telephone and the remaining 15 for private line services.

In other international service developments last week, ITT World Communications announced that telex service between the U.S. mainland and Puerto Rico and the Virgin Islands became available on a one-minute minimum time basis Thursday, June 12. -End-

*Telecommunications*

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

OFFICE OF THE DIRECTOR

June 16, 1969

Memorandum for Mr. Clay T. Whitehead:

Subject: Communications Satellite Traffic -- United States  
Mainland and Hawaii

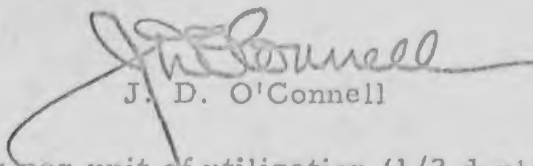
This memorandum highlights the existing and projected estimates of subject traffic. The number of equivalent duplex voice circuits using INTELSAT satellites is as follows:

<u>USER</u>	<u>Actual</u> <u>1 June 1969</u>	<u>End</u> <u>1969</u>	<u>End</u> <u>1970</u>	<u>End</u> <u>1971</u>	<u>End *</u> <u>1972</u>
Commercial	99	140	-	-	-
Government	<u>30</u>	<u>39</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total	<u>129</u>	<u>179</u>	<u>278</u>	<u>385</u>	<u>614</u>
% of Total Pacific Ocean Area	22.2	17.1	19.5	19.5	25.5

An estimate of the value to the INTELSAT Consortium of the traffic volume depicted above is as follows:

Space Segment Revenue to INTELSAT

End 1969 rate	\$7,160,000 per year **
End 1970 rate	11,120,000 per year ***
End 1971 rate	15,400,000 per year ***
End 1972 rate	24,560,000 per year ***

  
J. D. O'Connell

\* See ICSC 38-10

\*\* Based on \$20,000 per year per unit of utilization (1/2 duplex voice circuit)

\*\*\* Rates are expected to be reduced nominally during future years.



June 13, 1969

Dear Mr. Sauter:

I am sending under separate cover a copy of the staff papers of the Task Force on Communications Policy for inclusion in the Clearinghouse collection. This report is free of copyright or any other limitations on its distribution and can be made available to the general public in accordance with standard Clearinghouse practice. Since the report is so voluminous, the Clearinghouse is free to divide the report into manageable sections.

It is requested that the White House be provided with four copies and that the Bureau of the Budget be supplied with three copies.

Sincerely,

Clay T. Whitehead  
Staff Assistant

Mr. Robert Sauter  
Director  
Clearinghouse for Federal,  
Scientific and Technical Information  
Springfield, Virginia 22151

cc: Mr. Flanigan  
Mr. Whitehead  
Mr. Hofgren  
Central Files

WNLyons:ed

*Telecommunications*

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Clearinghouse for Federal  
Scientific and Technical Information  
Springfield, Virginia 22151

cc: Mr. Flanigan  
Mr. Whitehead   
Mr. Hofgren  
Central Files

WNLyons:ed



## MEMORANDUM FOR THE PRESIDENT

Subject: Federal communications organization

A December 1968 Bureau of the Budget study of the Federal Government's communications organization has just been evaluated by White House staff, several Executive Office groups and concerned departments and agencies as the basis for determining an Administration position on this subject. Prepared at the request of President Johnson, the Bureau study was completed so late in the previous Administration that no action was taken on it or general evaluation made.

Conclusions concerning Federal communications organization

The Bureau of the Budget reports a need for:

- (1) a strengthened organization for policy planning, formulation and direction of Federal communications activities.
- (2) a reorganized and strengthened National Communications System (NCS) within the Department of Defense.
- (3) an improved procurement and technical assistance effort in communications on behalf of those Federal agencies which do not now have their own resources in this field.
- (4) unified frequency spectrum management process.
- (5) a coordinated technical assistance program for State and local governments in this area.

Current organization for communications policymaking

The Office of the Director of Telecommunications Management (ODTM) in the Office of Emergency Preparedness is now charged by Executive order and Presidential memorandum with the responsibility for coordinating

telecommunications activities in the executive branch. The Director of Telecommunications Management also serves as Special Assistant to the President for Telecommunications. The history of the organization reveals that attempts by the ODTM to exercise leadership in communications policy have been largely ineffectual. This situation results from a number of factors such as the organizational location, an inadequate staff and the fragmentation of policy authority among half a dozen agencies with no one having overall responsibility. In view of its claimed responsibilities, the credibility of the ODTM is questioned by agencies with operating responsibilities.

#### Organizational alternatives

There have been a variety of possibilities discussed for locating various Federal communications functions. These possibilities include:

1. An independent office of telecommunications within the Executive Office -- or an office of telecommunications attached to the Office of Science and Technology or other Executive Office component.

Communications policy development and planning ideally should not be an isolated activity of a Presidential staff office. Rather, it should be one element contributing to an expanded telecommunications competence within an appropriate executive agency.

Much of the support for this alternative is presented on the basis that the formulation of policy with a national perspective is better accomplished by an organization within the Executive Office of the President with "frequent and easy access" to the President as contrasted with an executive agency which may have a "parochial" viewpoint due to its operating program responsibilities. Experience does not warrant a



conclusion that Executive Office location improves Presidential access; indeed, it is sometimes lessened. Further, the day-to-day problems of telecommunications management do not require the continuing attention of the President. Policy matters will on occasion warrant Presidential attention but organizational location in the Executive Office is not a necessary requisite to gaining the President's attention. The contention that organizational location in the Executive Office is better than in a department or agency with respect to objectivity and broad perspective also does not agree with experience. Parochialism is usually a function of people rather than organizational location if the organization's authorities are effectively established.

2. A Department of Communications. The Bureau study concludes that a full-fledged Department of Communications would distort the relative importance which should be attached to the Federal communications role which is insufficient at this time to justify a new Cabinet department. A "Department of Communications" would be under strong pressure to assume comprehensive operating control of existing governmental communications systems. We support the study conclusion that such a charge is both unnecessary and undesirable at this point in time.

3. A new Administration within an existing department or agency. This organizational alternative -- favored in the Budget Bureau's study would establish a discrete organizational function in an existing executive agency. It is described below as a part of the recommendations.

Recommendations concerning Federal communications organization

The Bureau of the Budget report recommended that:

1. The Federal Government should establish a new and strengthened central policy and long-range planning organization for communications in an existing executive branch agency -- either Commerce or Transportation.

2. The NCS staff should undertake implementing studies (a) to transfer the Federal Telecommunications System from the General Services Administration to the Department of Defense for merger with the military administrative communications systems to provide service for all Federal agencies and (b) to appropriately locate and combine the roles and functions of the Executive Agent and the Manager of the NCS within the Office of the Secretary of Defense to provide unified guidance to the NCS from within the Defense Department. An effective mechanism should be provided whereby the member agencies of the NCS can advise and be consulted by the Manager, NCS.

3. The National Communications System staff within the Department of Defense should provide a central source of procurement related assistance for use by executive agencies.

4. The management of the Government's portion of the frequency spectrum should be a function of the new communications policy organization. If a single manager is provided for the entire spectrum the total function should be placed in the new organization. The new organization should have a limited in-house research capability to support its frequency spectrum management and general policy development responsibilities.



5. The new communications policy organization should coordinate action on requests to Federal agencies from State and local governments for technical assistance in telecommunication and should provide such assistance to Federal agencies who lack in-house capability.

Agency views on Budget Bureau recommendations

The Bureau circulated its study report among those agencies having significant telecommunications responsibilities and requested their views. The following is a summary of the agency responses:

-- The Department of Commerce concurred in the report's major findings and recommendations. The Department specifically supported vesting overall management of the spectrum in one executive agency. Its comment on the report's major organizational recommendation -- "The establishment and location of such an agency in an existing Department will enable meaningful Executive Branch participation in the development of comprehensive national policies."

-- The Department of Defense (including the views of the Executive Agent of the National Communications Systems) agreed with the need for a new and strengthened policy and long range planning organization but believes that it should be constituted as a separate office outside OEP but in the Executive Office of the President. The DOD does not concur in the need for an implementing study to transfer the Federal Telecommunications System from GSA to Defense nor does it favor a combination of the roles and functions of the Executive Agent and Manager, NCS within the Department. Instead, it recommends an exploration in depth of the entire NCS structure and concept.

-- The Federal Communications Commission agrees that the role of the Federal Government in communications can and should be strengthened and made more effective but within the organizational framework presently prevailing. The FCC completely disagrees with the recommendation to establish a single radio spectrum manager in an executive agency in that it would adversely affect the Commission's functions.

-- The General Services Administration agrees with all of the study report recommendations except the one that a strengthened NCS should be located in DOD. GSA states that a merger of the civilian and military administrative networks has "obvious merit" but it should not be organized within Defense.

-- The Department of Justice agrees with the formulation of a new communications policy organization. The Department disagrees with the transfer of the Federal Telecommunications System to Defense and questions the feasibility of assigning responsibility for procurement and procurement-related assistance for agencies without in-house capabilities to Defense.

-- The National Aeronautics and Space Administration -- (views not yet received).

-- The Special Assistant for National Security Affairs agrees in general with the study conclusions but does not believe that "policy guidance with respect to the objectives, requirements and composition of the NCS" should be vested in Commerce or Transportation. Further, he believes a National Security Council study should be initiated to re-examine the objectives and alternative system concepts prior to any reorganization.



-- The Office of Emergency Preparedness—(including the views of the Director of Telecommunications Management) points out that the study report does not focus adequately on the emergency preparedness aspects of telecommunications management. General Lincoln proposes that the Office of Telecommunications Management remain under OEP until the emergency preparedness implications of relocation are examined thoroughly.

-- The Office of Science and Technology -- (views not yet received).

-- The Department of State has no objection to the study report's proposals from the standpoint of foreign policy considerations and believes that "advantages would flow from a strengthened central policy formulation and planning organization."

-- The Department of Transportation agrees on the need for coordinated policy direction at departmental level, improved procurement and technical assistance, and the unification of radio frequency spectrum management. The Department differs with the study report in that it believes that the Executive Agent role provided by DOD for the National Communications System should not remain within Defense but should be transferred to the policy organization.

The General Accounting Office's report on communications

On March 17, 1969 the GAO submitted its draft report -- "Study of the Progress made toward Establishment of a Unified Communications System" -- to the executive branch for comment. The GAO's draft report, directed toward the operations of the National Communications System, found that:

-- The objectives of a unified NCS, as outlined in the President's Memorandum of August 21, 1963, have not been fully achieved.

-- The NCS management has little, if any, participation in the development and improvement of the agency networks and no assurance that national objectives will be met by their continuation or proliferation.

The GAO report recommended that:

-- a major realignment of the existing NCS structure and organizational arrangements should be undertaken;

-- the Office of Telecommunications Management should be removed as a component part of the OEP and reconstituted as a new organizational entity; and

-- the roles and functions of the Executive Agent and Manager, NCS, should be assigned to the new organization.

#### Evaluation of Commerce versus Transportation

The Budget Bureau study recommends the establishment of a Federal Communications Administration within either the Department of Commerce or the Department of Transportation. The relative merits of locating the program in these agencies are:

##### (a) Commerce

##### Advantages

(1) The Department of Commerce currently has an important communications research capability located in elements of ESSA and the National Bureau of Standards which could provide a technical base for a telecommunications policy organization.



(2) The Department has no major communications consumers within it and therefore could constitute an "honest broker" for all executive agencies in planning, formulating, and directing Government-wide telecommunications policy (e.g., the spectrum management process).

(3) Its other functions are not so large in size or aggravated by serious problems that its leadership could not devote substantial attention to telecommunications problems.

#### Disadvantages

(1) The Department has an "image" with many of being primarily representative of business interests and thus might not provide a balanced representation of all interests.

(2) The Department's reputation with other executive agencies raises doubts about its ability to provide forceful leadership.

#### (b) Transportation

##### Advantages

(1) Developments in modern technology are increasingly identifying the interconnections and tradeoffs between transportation and communications. The Department of Transportation would be the most logical location within the executive branch to monitor and provide governmental leadership for these developments.

(2) The Department of Transportation has strong operating bureaus with extensive working relationships with the appropriate segments of industry.

(3) Its present modal Administrations, particularly the Coast Guard and FAA, give it useful experience in dealing with the large competing forces in the telecommunications field.

### Disadvantages

(1) To the extent that operating components of Transportation such as the Coast Guard and the FAA have interests as major Federal consumers of communications equipment and services there could be a conflict-of-interest situation in the view of other executive agencies if the responsibility for Government-wide telecommunications policy were placed in the Department.

(2) The Department of Transportation is a relatively new organization combining strong operating agencies with a tradition of independence. To bring these components within an effectively-operating departmental setting is a major undertaking which still needs much effort to accomplish. The next few years may not be an opportune time to add another major operating responsibility such as telecommunications.

### Recommendations on communications organization

1. We agree with the Budget Bureau study finding that an organizational change is required and that it should be accomplished by establishing a communications policy organization in an existing executive department. Our recommendation is based on the belief that the executive branch should provide more effective leadership in the Federal Government's role in communications as contrasted to the ad hoc policy provided by the FCC through the regulatory process. Providing greater leadership will require good policy and systems analysis people who can achieve status in a high-level organizational setting. We do not believe that the Office of Telecommunications Management can fulfill the need for the expanded Government-wide policy formulation role envisioned.



2. Both the Secretaries of Commerce and Transportation have made strong representations for locating the communications policy organization in their respective Departments. If you approve the concept in our first recommendation, we would recommend that you select either Commerce or Transportation, depending upon your wishes with respect to the future of both Departments.

3. We agree with General Lincoln's proposal that the emergency preparedness aspects of telecommunications management remain with the OEP and so recommend.

4. We recommend that you name a successor to General O'Connell as Director of Telecommunications Management pending your decision on the overall organizational recommendation.

5. We believe that the policy organization should not direct the operational activities of the National Communications System except to establish overall standards for their guidance. We agree with the Special Assistant for National Security Affairs and /Department of Defense's comments on transfer of the Federal Telecommunications System from GSA to DOD and on the consolidation of the Executive Agent and Manager, NCS roles within DOD. Our agreement is based on Defense's comment and the GAO recommendation that the entire NCS structure and concept should be thoroughly reexamined and recommend that you direct the National Security Council to proceed with such a review.

Sequence and timing of communications reorganization

Many of the desirable changes which can be done in this field do not require -- nor is it possible to have -- immediate action. Some important changes can be made by Executive direction while other may

require legislative action. We believe you should take a number of administrative steps in the communications field to vest responsibility for communications policymaking in either Commerce or Transportation. At the same time, we can upon your direction take the necessary steps to develop the reorganization plans and other legislation necessary to implement the full range of proposals for improving Federal communications programs.



*Telecommunications*

Wednesday 6/11/69

12:50 Dr. Lyons advises the staff reports are in the  
process of being printed.

*Pollock's office*

Tuesday 6/10/69

2:15 Les Parker of Congressman Pollock's office called. 225-5765  
Said that they were told that the successful bidder for the sale of Alaska Telecommunications was made aware of the situation as far as the bids were concerned and who the probable winner would be. They hear that it is to be announced today. He said it was done in secrecy and the Alaska Delegation wants to be in on it when the announcement is made. (Apparently Dent's office told them you were the one to talk with)

Attached are the notes of a previous conversation with Les Parker.

Also attached is an exchange with Sen. Stevens' office on Alaska Communications, in case you will need it for your meeting tomorrow with Gen. Gould and Gen. O'Connell.



10 June 1969

"COMMUNICATIONS ON THE MOVE"\*

by

Albert D. Wheelon  
Vice President - Engineering  
Hughes Aircraft Co.  
Culver City, California

The trends in satellite communications have been set consistently by advances in technology. This technology has evolved so rapidly, that we have been hard put to make adequate policy and economic plans for harnessing it. That situation is as true today as it was in 1962, when the international trunking task assigned Comsat was overestimated by a factor of 4. In that non-synchronous era, we also failed to anticipate the possibility of domestic satellite service and did not provide for it in the 1962 Comsat Act. Technology is still driving policy.

Part of our problem has been that we have had difficulty in forecasting the reach and pace of synchronous satellite technology. The other part is that we have tended to consider all satellites as pretty much the same, regarding them as competition for existing cable and long line installations. While we may wish to do old jobs with the new technology, it is just as important to establish new communication services which are not otherwise available.

Worldwide mobile communications is such a service. There is an evident need for a thin hard line of communications to ships and aircraft

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\*Delivered as part of the Keynote Session on "Communication Needs for the Next Decade", at the IEEE International Conference on Communications, Boulder, Colorado, 10 June 1969.



and remote outposts of civilization around the world. In my view, such service continues to be one of the most important uses of the radio spectrum. Furthermore, satellites bring an exciting new way to provide it. They can do so with a bandwidth, reliability, and coverage that was never available with conventional VLF or HF.

It is important first to examine the opportunities and limitations of satellite communication. The spacecraft is the highly leveraged element in a satellite communication system. For example, the four Intelsat Two satellites cost Intelsat about 25 million dollars. The fifth odd ground stations with which they work cost roughly 250 million or ten times the satellite cost. If the satellite can be made more powerful and the ground station size reduced, the system can be better balanced and the total cost minimized. This is especially true of mobile services, where the user equipment must be very cheap if it is to be proliferated. In this case one wishes to throw the heaviest possible burden on the satellite.

To see how far we can go in this direction, let us examine the historical progression of spacecraft technology. There are two basic measures of satellite performance: weight/size and radiated power. The weight history of synchronous communication satellites is shown in Figure 1, indicating that the next generation of commercial communication satellites - Intelsat 4 - will weigh over one thousand pounds in orbit. This is ample for backup repeaters, multiple antennas, and mode changing in the satellite. It allows enough batteries and propellants to be carried for long and continuous service. Size also means available power, which is derived from solar cells on the cylindrical surface of the spinning spacecraft. With



existing boosters, however, it is difficult to launch a spacecraft generating more than a kilowatt and this must be distributed between housekeeping functions and radiated power.

Technology has therefore turned to ways in which the limited radiated power can be used most effectively. The key here is directive focusing of the electromagnetic waves by the antenna on the spacecraft. This is the area in which the most exciting progress has been made. The next three figures show the progression of satellite power patterns.

The first was Telstar, shown in Figure 2, with almost equal radiation in all directions, most of which was wasted on empty space.\* The first synchronous satellite was Syncom, also shown in Figure 2, which incorporated a dipole antenna. Since the spin axis was oriented perpendicular to the equatorial plane, its toroidal beam always intercepted the whole earth. Its drawback was that substantial quantities of radiation were going off in all azimuth directions; the only useful portion was that falling on the earth.

The next step was to confine the radiation only to the cone intercepting the earth, as shown in Figure 3. This was accomplished first by an electronically-despun circular array of dipoles. Here the radiation fed to each dipole is phase shifted so that a directive beam is formed falling on the earth. To compensate for the spin of the vehicle, the individual phase shifts are continuously varied at the spin rate of the spacecraft and in the opposite direction. This was successfully demonstrated by ATS in 1966 and forms the likely basis for the first operational VHF mobile service satellites.

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\*In contrast to all the succeeding, Telstar was flown in medium altitude orbits which required tracking ground stations with handover and acquisition control.



An alternate means for providing earth coverage beams at the microwave communication band (4000 MHz) is the small mechanically despun antenna also shown in Figure 3. Here a small reflector is held stationary with respect to the spinning spacecraft by means of bearing and focuses the energy fed up along the vehicle's spin axis on to the earth. This was demonstrated by ATS-3 in 1967 and is the basis for the Intelsat 3 spacecraft now being launched by Intelsat. The mechanical despin technique is approximately 3 db more efficient than the electronic means because it does not suffer phase shifter losses. However, it does not lend itself to VHF or UHF, because the reflector required at these frequencies is so large that it would make the spacecraft unstable.

The next technological step is the gyrostat, by which means an arbitrarily large antenna can be despun on a spinning spacecraft. This is the technical basis for the Intelsat 4 and Milcomsat programs shown in Figure 1, and provides this opportunity for mounting classical narrow beam radar or communications antennas on a synchronous satellite. The ways in which this capability can be exploited are shown in Figure 4. The first is for a US domestic service where the earth oriented beam falls roughly on the United States. Offset feeds can also be utilized to divide the coverage into individual time zones for TV distribution as shown in the top drawing. A second use of narrow beams is for high volume trunking between major traffic centers as planned for the two-dish Intelsat 4. The leverage of this approach is that the energy is carefully focused only on the high volume terminals. It has a second advantage, in that the flying cable



so-established can be shifted easily between any pair of terminals, giving one the prospect of almost instant high volume communication capacity, without the traditional liability of an unused plant after the need passes (i.e., South Vietnam). For this reason, the flying cable also lends itself well to military communications.

Our last example of beam focusing is for local or metropolitan services, as shown at the bottom on Figure 4. With sufficiently large antennas and/or high enough frequencies it is possible to lay a very narrow beam only on Greater Los Angeles or London or Berlin. The ways in which such a beam could be used for fixed and mobile services have only begun to be examined, but they clearly reach well into the future of our technology-dominated lives.

The above sequence shows how satellite beams have become progressively more focused. The corollary benefit has been progressively greater antenna gain. If one couples antenna gain with the power delivered from the traveling wave tube repeaters, one has effective radiated power or ERP. This is the relevant measure of communication capacity, since it determines the number of channels - and their quality - which a satellite can deliver to a specified ground station. ERP has grown dramatically, both as a result of antenna gain and increasing power. The history of ERP for various synchronous spacecraft is shown in Figure 5. Corresponding increases in channel capacity have grown from 5 voice circuits in Syncom to 7500 in Intelsat 4. It is clear that the first six years of synchronous technology have provided a broad and powerful range of possibilities. Our problem is to relate this fast-flowing technology to the operational needs of mobile services.



A satellite mobile service is necessarily a narrow band one. The reason for this is two-fold. First, one must cover large areas of the earth and this precludes the type of narrow beaming described above. Secondly, mobile terminals are necessarily small and have very little antenna gain. The combined effect means that one needs about 23 dbw per voice channel at VHF. Because of the heavy load imposed on the satellite, it is likely that such a service will be provided by a dedicated satellite, as opposed to multipurpose birds. A 40 dbw satellite could thus provide 50 voice channels. Another consideration is orbital slot availability which is different than for higher frequency, large dish trunking ground stations which can discriminate beam-wise against adjacent satellites, whereas the omnidirectional VHF user cannot. A probable initial system might weigh 600 lbs. and radiate 30 dbw through a circularly polarized earth coverage antenna, providing four high quality voice channels. With the large number of channels required to meet mobile needs, it is possible that we will have to adopt digital data teletype link procedures in which the available power and bandwidth would be shared by a significantly greater number of narrow band channels. The net result is that permanent channel assignments like those now used by Intelsat are an unrealistic luxury for mobile services. Instead, we will use demand assigned multiple access techniques - which are technically feasible now. This approach is spectrum economic, since all channels are filled most of the times. Furthermore, a pay-as-you-use charge for the service, together with small terminal costs, will tend to promote its growth.



It is not clear what frequencies will be most appropriate for this mobile service, although VHF is the most likely initial area of the spectrum. The airlines now have large investments in 136 megacycle transceivers. The marine interests also have valuable VHF channel allocations. However, frequencies near 1600 megacycles are also available and offer advantages because of the lower background noise. The issue probably turns on the cost of user equipment. On a rolling ship or in a maneuvering aircraft, it is necessary to keep the narrow beam of the user antenna pointed at the stationary satellite. This requires beam steering which is expensive. An omnidirectional user beam overcomes this problem at the expense of antenna gain. The cost exchange between beam steering and power amplifiers for the transceivers or higher power satellites is one that will need careful examination. It is likely that this will also point the way in frequency.

We judge that the first important use of mobile satellite service will be made by the airlines. The airline communication consortium - ARINC - working with NASA, FAA, and Hughes, have conducted a vigorous program to explore the feasibility of VHF voice communication with jet aircraft via satellite since 1964. Single-channel voice communication was established between aircraft using improved VHF receivers and ATS-1 soon after its launch in December 1966. These tests have continued on a regular schedule for the past three years and have involved most of the major airlines. The launching of ATS-3 in November 1967 provided a satellite with greater radiated power, allowing the demonstration of multichannel VHF communications. The present ATS satellites do not



represent an adequate operational system - the power levels and polarization are wrong. However, these tests have established a basis for confidence which has allowed ARINC, Comsat, and others to make specific proposals for implementing such a service.

A parallel program to explore marine communications via satellite was pursued by the Coast Guard, NASA, and Hughes. Successful voice communication was first demonstrated in April 1967 between the ATS-1 satellite and a 500 watt shipboard terminal. Coast Guard vessels using the same transceiver have since verified this capability over wide areas, and it is now clear that such service is very reliable in all but the arctic latitudes. There are two important questions about implementing such a service. In view of the large number of potential small vessel users, the first question is one of shipboard terminal cost. With a satellite providing 25 dbw per channel, one can establish two-way voice communication with a 250 watt VHF transceiver. Such units can probably be provided eventually for a cost comparable to that of LORAN navigation or ship-to-shore telephone equipment.

The second problem is more difficult and centers on who should provide the space segment of a marine mobile service. We suspect that this will involve both economic and bureaucratic considerations. One must recognize an enormous diversity in the marine community, running from a few large shipping lines to the enormous fleet of privately owned fishing and pleasure boats. It will probably be a difficult market to organize, and therefore a risky business proposition. It is logical to consider



combining the aeronautical and marine VHF services in a single satellite. Even that is not easy, because of differing requirements, frequency assignments, and competitive business objectives of sea and air carriers. We do not mean to overemphasize the problems, for we believe that it is a vital service to be provided.

When the first satellite VHF voice service becomes an operational reality, we believe that many other user groups will come forward eagerly. Oil exploration teams in desert areas and offshore drilling rigs will probably want such service. Scientific expeditions in remote areas or regions not now served by good communications will seek it. Remote consular outposts of our own government and US Embassies abroad will want to have such a standby capability for emergencies. This will be a difficult market to organize simply because of its enormous diversity and varying economic standards.

With all this, we must conclude that the government will have to play an important on-going role in the establishment of a worldwide mobile civil service. Such a service will cross both jurisdictional and economic boundaries. There is a crucial matter of frequency assignment and standardization, which the FCC must resolve. I see a need for the government to bring diverse users (airlines, shippers, oil companies) and interested Federal agencies (Coast Guard, FAA, NASA, Maritime, FCC) together to create appropriate institutional structures in which all potential users may share fairly. Such a service will surely involve continuing negotiations with foreign government and interests.



Finally, we believe that it will prove an essential but expensive luxury service for most potential users. It may be that Comsat can organize and provide this service on a basis that is attractive to its stockholders. If it cannot, there are strong parallels with the air traffic control and marine navigation services that would encourage a government subsidy or operation by suitable agencies. Our hope is that such a service can be brought into being promptly and that wise provisions for future users of this technology can be made simultaneously.



# GROWTH OF SYNCHRONOUS COMMUNICATION SATELLITES

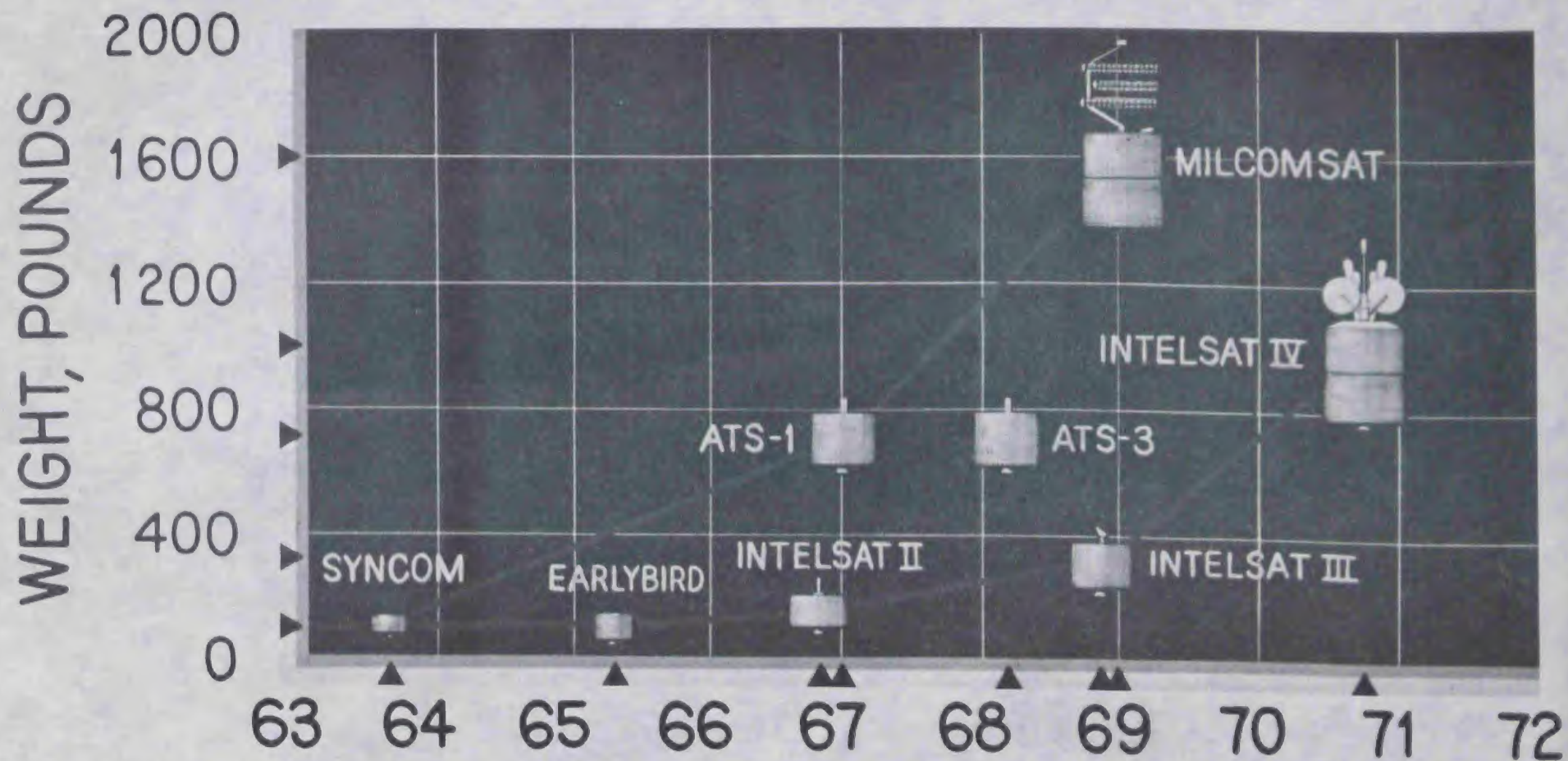
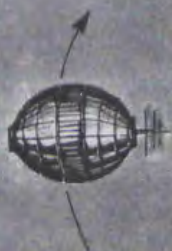


FIGURE 1.



# ***SATELLITE EVOLUTION***

**TELSTAR  
(1962)**



**SYNCOM  
(1963)**



FIGURE 2



# ***EARTH COVERAGE BEAMS***

**ELECTRONIC DESPIN  
ATS-1 (1966)**



**MECHANICAL DESPIN  
ATS-3 (1967) INT III**

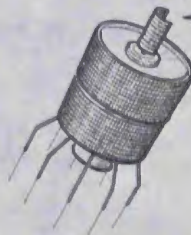


FIGURE 3

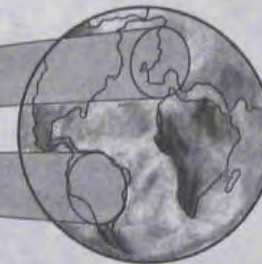
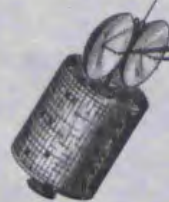


# ***EARTH FOCUSED BEAMS***

DOMESTIC SERVICES (U.S. PILOT)



FLYING CABLE (INTELSAT IV)



LOCAL SERVICE (FUTURE)

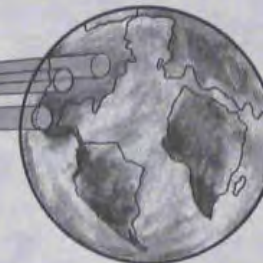


FIGURE 4



# GROWTH OF RADIATED POWER

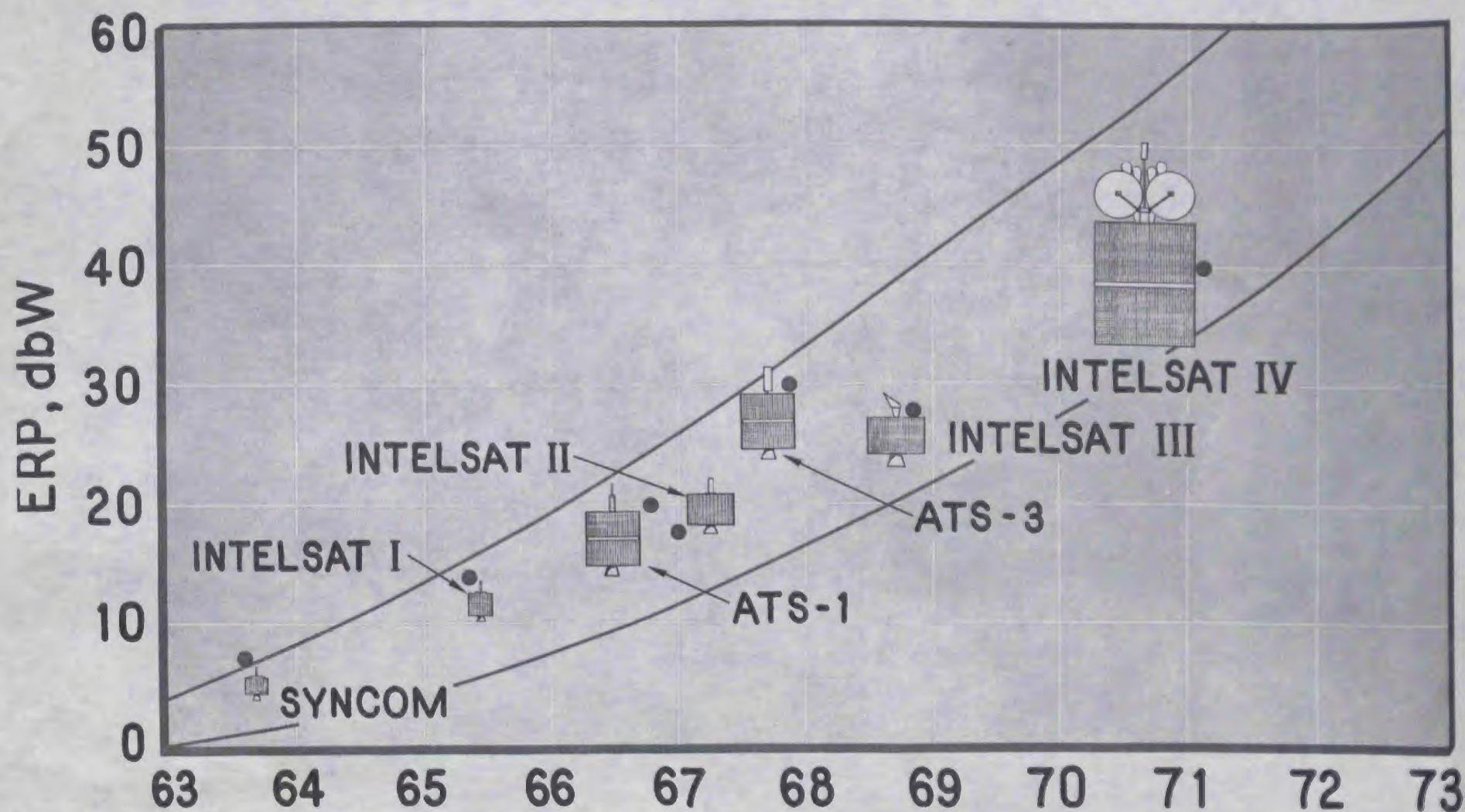


FIGURE 5

*Timmons*

Friday 6/6/69

4:45 Timmons advised that the Dingell hearings have been postponed a month.

At Tom's request, I passed this information on to Sol Moser and Bob Whittington.



*Telecommunications*

Friday 6/6/69

4:15 Dr. Lyons has been unable to get in touch with Morrill -- but said Morrill has the originals of the staff papers and he will wait until Monday to get them from him so he can take them to Commerce.

Friday 6/6/69

2:20 Checked Dingell's office --

They have scheduled hearings for Monday, Tuesday,  
and Wednesday of next week -- at 10 a.m.  
on radio frequencies ---- Rm. 2359 Rayburn Bldg.



Friday 6/6/69

2:20 Bob Whittington from Transportation called.  
Concerns the hearing on June 10 before the  
Small Business Cmte. -- subject: radio frequency

(13) 21493

*Telecommunications*

June 6, 1969

Dear Mr. Cain:

In reply to your letter of May 23rd to Clay T. Whitehead, I am sending a copy of the Final Report of the President's Task Force on Communications Policy, which was released on May 20, 1969.

If you wish additional copies, they may be purchased through the Superintendent of Documents, Government Printing Office, Washington, D. C. The Catalog No. is PR 36,8:C73/C73; the price is \$4.50 per copy.

Incidentally, when I received your letter, the envelope was detached -- so I am assuming your address is in London. I would appreciate it if you would drop me a note to let me know when you receive this report. Thanks.

Sincerely,

Eva Daughtrey  
Administrative Assistant  
to Clay T. Whitehead

Mr. Arthur Cain  
28 Linton House  
11 Holland Park Avenue W11  
London, England

cc: Mr. Whitehead  
Central Files

EDaughtrey



28 LINTON HOUSE · 11 HOLLAND PARK AVENUE · W11

TELEPHONE 01.727. 7263

Clay T. Whitehead, Esq.,  
The White House,  
Washington,  
U.S.A.

Friday,  
23rd May,  
1963.

Dear Mr. Whitehead,

I have read in the International Herald Tribune, Friday, 23rd May, 1969, page 9, a report by Robert J. Samuelson, dated 'Washington 22 May', of a 'massive report on the future of U.S.A. communications policy'.

Apart from earning a living in Public Relations I am also a lecturer at an evening college of a course and I would like to obtain a copy of this report.

Could you very kindly let me know what it would cost and from which office I could obtain a copy.

I have spoken to the Press Office of the U.S.A. Embassy in London and they said they would receive a copy of the report in due course, but they could not define 'due course'!

I am writing to you because you are named as the White House spokesman on this topic.

Incidentally, it often occurs to me that the amount of information made available to the world by U.S.A. trade, technical and professional press, and official reports, is a contribution to knowledge and education which is taken for granted by too many people. So I would add my very sincere thanks for any progress you can make on this matter for me.

Yours very sincerely,

*Arthur Cain*

Arthur Cain.

*Eva: Please answer*

OFFICE OF SCIENCE AND TECHNOLOGY  
WASHINGTON, D.C.

June 6, 1969

TO: Eva Daughtrey

*Sent  
6/10*

Enclosed is the request for the  
Task Force Report which I  
discussed with you on the phone  
today.

Linda DiMaggio  
(Sec'y to Dr. Drew)



# DOCUMENT REQUEST AND TRANSMITTAL

Date 5/26/69

TO: Office of Science and Technology  
ATTN. Mr. Charles V. Kidd  
Executive Secretary, Federal Council for  
Science and Technology  
Executive Office Building 20506

FROM:  
U. S. National Aeronautics & Space Administration  
Ames Research Center  
Attn: Library (Technical Documents) 202-3  
Moffett Field, California 94035

## 1. The documents listed below, in item 2, are:

van vleck 202-6

Requested for Official Use

☐ Loan

☒ Retention

☐ Other (Specify)

Signature:

☐ Forwarded for Retention

☐ Forwarded for Loan

To be returned:

Date

Chief, Library Branch

PLEASE RETURN ONE COPY OF THIS REQUEST FORM  
WITH DOCUMENT OR REPLY.

## 2. Document Description/Remarks

Please send copy of task force report referred to in this article.

dated December 1968

1 Enclosure: Copy of Article, San Jose Mercury, Thursday, May 22, 1969

If this is a purchase item, please forward pertinent cost information only.  
TID Test Form, Jan. 66

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MAY 28 8 45 AM '69

OFFICE OF SCIENCE  
AND TECHNOLOGY



# Competition Urged For TV

WASHINGTON (AP) — The White House released without comment Wednesday a task force report recommending greater competition in the domestic telecommunications industry.

The task force also recommended, however, greater centralization in certain aspects of communications — particularly in the international area and in management of the full spectrum of broadcasting bands.

It recommended "consolidation of the spectrum management function in a single executive agency" which it did not name—perhaps a new one.

The possibility of a new Cabinet-level department of communications has been suggested in earlier speculation about the report.

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He said the Nixon administration is continuing to review communications policy questions and the task force report will be considered along with other studies.

Numerous government agencies now handle various phases of communications activity.

On the question of communications policy, the report said:

"Policy should continue to rely largely on the spontaneous

initiatives of private business and nongovernmental research, supplemented where necessary by government-supported or sponsored research and development," it said.

"The main concern of policy in this field should be to improve the effectiveness of regulation where regulation is necessary, to remove unnecessary restraints on private initiative, and to provide as free a field as possible for the imagination and enterprise of innovators."

That means greater freedom for newcomers to compete with established services.

The task force favored establishment of community antenna television services as a competitor in the market with existing broadcasting, for example.

It also urged that "greater opportunities should be opened for suppliers of supplementary services" in the use of common carrier facilities, with tariff regulations designed to keep the common carriers themselves in the running.

These two issues — CATV and supplementary uses of common carrier lines — are among the toughest now under consideration by the Federal Communications Commission.

The task force said its recommendations would increase the burden on the FCC, which should be enlarged, enriched with higher funding, and strengthened through amendments to the 1934 Communications Act, its basic law.

In the international field, the task force recommended "a single international transmission entity, and . . . a consolidation of transmission and switching facilities designed to bring about such an entity."

# Competition Urged For TV

WASHINGTON (AP) — The White House released without comment Wednesday a task force report recommending greater competition in the domestic telecommunications industry.

The task force also recommended, however, greater centralization in certain aspects of communications — particularly in the international area and in management of the full spectrum of broadcasting bands.

It recommended "consolidation of the spectrum management function in a single executive agency" which it did not name—perhaps a new one.

The possibility of a new Cabinet-level department of communications has been suggested in earlier speculation about the report.

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initiatives of private business and nongovernmental research, supplemented where necessary by government-supported or sponsored research and development," it said.

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THE WHITE HOUSE

WASHINGTON

from Gable  
of DOT. 169  
6/5/69

signed  
signature  
Mr. James M. Beggs  
Acting Secy.

6/5/69

Mr. Phillip S. Hughes  
Deputy Director  
Bureau of the Budget  
Washington, D. C. 20503

Dear Mr. Hughes:

This is our response to your letter of May 3, 1969 transmitting the Bureau study of Federal Communications Organization. We are in agreement with the essential conclusions reached by the Bureau but disagree with one major recommendation.

We agree on the need for coordinated policy direction at departmental level.

We agree on the need for improved procurement and technical assistance effort in the telecommunication area.

Few will dispute the need for unification of radio frequency management.

While virtually all participants in the National Communications System (NCS) recognize that it requires strengthening, we differ from the Bureau recommendations in one respect. We believe the Executive Agent role provided by Department of Defense (DoD) for NCS should be allied to the policy role and not, as the report suggests, be contained within the DoD.

The proposed plan of the study contemplates two primary organs for the conduct of Federal Government communication functions -- a policy making body and a second body responsible for the management and operation of the Government's own communication services. The study suggests that the policy responsibilities be conducted by either the Department of Transportation or the Department of Commerce; the management function would be conducted by the NCS within DoD. This latter proposal is cause for concern.

The National Communications System (NCS)

The NCS was established in 1963 as a mechanism to achieve integration of the major operating communications systems of the Government. While



the NCS does not operate any system, the major long haul communications systems are contained within it as reporting elements. The Director of Telecommunications Management (DTM) is responsible for policy direction of the NCS while the Secretary of Defense is the "Executive Agent" responsible for integrated planning and operation. The Director of the Defense Communications Agency (DCA) functions as "Manager" of the NCS. In his role as DCA Director, the NCS Manager reports to the Secretary of Defense through the Joint Chiefs of Staff.

There are 47 separately organized communications systems under the general coordination and direction of the NCS. The major systems are Defense, Diplomatic, Space and Air Traffic Control communications systems and the Federal Telecommunications Systems (FTS) -- the administrative voice network used by the civil agencies and administered by the GSA. In addition, there are a number of smaller communications systems operated by the Coast Guard, Veterans Administration and others.

The Bureau study would amend the NCS structure in three regards: 1) the FTS would be transferred to the Department of Defense for merger with the military administrative communications systems (AUTOVON and AUTODIN); 2) the function of the Executive Agent and the Manager of NCS would be combined within the Office of the Secretary of Defense and provide direction to the NCS from within DoD. We construe this as a suggestion to create a position of Assistant Secretary for Communications within DoD in recognition of this enlarged responsibility; 3) the Federal agencies responsible for operation of the separate systems would act in an advisory role to the Executive Agent providing "support, cooperation and guidance". This role differs from current arrangements in that the operating agencies now serve somewhat as a Board of Directors seeking unanimity of views or consensus. Responsibility for improvement of the NCS would be placed directly on the Executive Agent.

We recognize the need for consolidating the separate administrative network, and the desirability of more decisive administration of the NCS. However, we question the practicability of establishing the Executive Agent within DoD. There are two primary reasons for our reservations.

The study recommends that the policy organization "provide guidance" to the NCS. This is precisely the role now played by the DTM vis-a-vis NCS, and is subject to the same infirmities. Theoretically, policy making, in our view, functions more effectively with management as its executive arm. The NCS role is basically that of coordination and management of the separate networks. To be effective the policy maker must be constantly abreast of the problems -- technical, operating and regulatory -- which merit policy considerations. The development of long range plans -- a paramount function of the policy maker --



requires continuing knowledge of intermediate and short term operations. The NCS should be the focal point for generation of this information and more logically can be structured with the policy authority as its Executive Agent. On the other hand, consolidation of the management and policy role within DoD would be inappropriate. Traditionally, our Government has been organized with policy leadership over civilian functions performed by the civil departments of the Government.

A second reason for concern over proposed assignment of the NCS Executive Agent role to DoD stems from operating considerations. The requirements of all Government communications users are common with respect to the need for reliability, speed and flexibility. Military requirements for exercising command and control functions under emergency conditions warrant separate communications facilities (though interconnected with the administrative networks). Although AUTOVON handles predominately administrative traffic, its design was geared to the relatively small military command functions. The impasse within NCS, since its formation, has been a reflection of the conflict to "unify" on the basis of military standards, whereas civil government representatives have insisted on more frugal service standards. If economy of operation is one objective of unification, this goal might well be lost under DoD direction of the NCS.

#### Some Alternative Operating Structures

In order of preference, we submit two alternative proposals for organizing the operating management responsibilities.

The necessity for consolidating all common user administrative communications systems is apparent. "The reality of the situation where the DoD operates a massive portion of the total Governmental communication network is easily recognized." With this reality, it may be appropriate for DoD to assume responsibility for consolidation of all common user administrative systems. It would, of course, continue to operate its own special purpose, mission oriented communications systems. As suggested above, the NCS role would be strengthened and broadened. It would be strengthened by structural modifications proposed in the Bureau study, except that the function of Executive Agent would be furnished by the policy organization, rather than by the DoD. The NCS role would be broadened to encompass the authority to issue standards of network design applicable to common user systems, as well as guidance applicable to special user systems. The NCS mission heretofore has been that of "network integrator". This added role, as system designer, would place it as an arm of the policy organization. The interest of the DoD would continue to be protected by virtue of its position and representation within the NCS.

A second suggestion is a compromise between the Bureau recommendation on operating structure and our suggestion made above. If political exigencies dictate a requirement for the NCS structure as proposed in your paper, we urge that clear and unequivocal authority be assigned



to the policy organization in at least the following areas: 1) the policy organization should have power of review over the establishment of new networks and over significant expansion of existing networks; 2) it should be responsible for exercising post-audit review to ascertain that stated requirements are in conformity with actual utilization; 3) the policy organization should have authority for establishing standards of network design applicable to Government-user systems, and 4) working in liaison with the BoB, the policy organization should provide budgetary review of major capital or annual recurring communications expenditures of each agency or department.

#### The Role of the Department of Transportation

The latter part of the study contains a brief evaluation of the advantages and disadvantages of the DOT assuming policy making authority under the reorganization plan. A few additional remarks may be in order.

Advantages. The study recognizes the large scale tradeoffs between transportation and communications. A number of these technical means for substitution are well within the state-of-the-art today; they will become commercially and economically feasible at a more rapid pace if energetically pursued by a single rationalizing department, rather than through coordination of two cabinet departments. The emergence of videophone, broadband data and conferencing services will be a substitute for jet flights. Low-cost, high-speed facsimile services could eventually permit the removal of thousands of postal delivery trucks and newspaper vans from congested city streets. A massive cheapening of transmission and switching costs may make possible the restructuring of industry's central office complex into decentralized office-home operations and change the whole nature of urban problems. But "systematic optimization" will require centralization of planning responsibility. We believe DOT can effectively do this job.

There are several other considerations which are pertinent here. DOT is a "conflict-oriented" agency. Unlike more placid, old-line Government operations, we are constantly at the forefront of disputes, none of which have easy solutions. The ability to function purposively is thrust on the Department by the nature of the transportation industry. The same ability is called for in the communications field.

A major key to effectiveness in the telecommunications policy area is possession of the technical and engineering competence which is derived from experience in actual communications operations. Outside of DoD, the Department, through its administrations (FAA and Coast Guard) has such unique capability within the Government.

A further advantage of the DOT exercising the policy role is its experience in the representation area. The study recognizes the needs to establish an effective public interest advocacy role in



telecommunications proceedings before Federal and State regulatory bodies. DOT is currently fulfilling this responsibility in the transportation regulatory field. Only DOT, of the executive departments, has the experience and background to exercise public interest advocacy before the regulatory commissions.

Disadvantages. DOT contains administrations which are major consumers of communication services and equipment. The study contends that location of policy responsibility within DOT could bias decision making in favor the Department's user interests. If this point has validity, it is universally applicable throughout the Government. All departments are large users of communication services. The same potential conflict of role would arise regardless of where the policy authority is located. Even this theoretic disadvantage is balanced by offsetting considerations.

The Bureau study recommends that DoD contain the major operating systems, including the Governmentwide administrative networks. It is reasonable to presume that DoD, because of the vast scope of its user role, its extensive staff and constituency, would exercise countervailing influence to any abuse of policy authority. The Defense establishment has been singularly zealous in the protection of its interests in communication matters; it may be presumed that its voice will not be muted by transformation of policy authority.

If the Department of Transportation is assigned communications policy authority, it would seek to assure objectivity by establishment of a separate communications organization reporting to the Secretary. The major foreseeable issues which will confront the communications policy organization are issues which are highly controversial and with representation of major industrial groups on both sides of every question. There is nothing clandestine about communications policy decisions; they must be constantly exposed to the public arena to be known and to be effective. It would seem clear that any systematic "in-dealing" on the part of the policy organization would become the subject of rapid criticism, raised to the highest level, by other Governmental bodies and by private advocates who may be adversely affected.

### Conclusions

In discussing the substantive portions of the study, it has been necessary to emphasize the area of our differences. Nonetheless, it should be clear there are far greater areas of agreement with the conclusions reached by the Bureau than disagreement. Recently, I submitted a paper to the President on "DOT's Potential Role Regarding Telecommunications". You may be interested in the close



parallel of the DOT views on federal communications organization and those set forth in the Bureau study. A copy of this paper is enclosed.

The implementation of the recommendations contained in the Bureau study, as modified by our suggestions, would be a timely recognition of the importance of communications to the national economy and the role of civilian policy making in enhancing contributions of the private sector.

Sincerely,

*15/ James M. Biggs  
Acting Secretary*

Enclosure

RGabel:pap:5/15/69

cc: S-10 (3)

TPI-1

TPI-3

TIA-50 subj

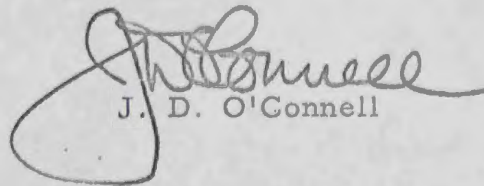
EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF TELECOMMUNICATIONS MANAGEMENT  
WASHINGTON, D.C. 20504

OFFICE OF THE DIRECTOR

June 4, 1969

MEMORANDUM FOR THE DIRECTOR:

In accordance with our current procedure, I am  
pleased to transmit this report of the significant  
activities of this office for the period ending  
June 3, 1969.

  
J. D. O'Connell

Encl.



June 3, 1969

WEEKLY ACTIVITY REPORT No. 68

TELECOMMUNICATIONS EMERGENCY PREPAREDNESS

\* 1. Nebraska Telecommunications

On May 28, former State Senator George Gerdes and State Senator Clark from Nebraska visited the OTM. Purpose was to discuss the status of the State telecommunications system being developed in Nebraska. The first increment of the system will be placed under construction shortly by the Nebraska Consolidated Communications Corporation, under contract to the State. Both Senators Gerdes and Clark were interested in sources of funding to permit development of the second increment of the system. OTM arranged appointments for the Senators with telecommunications officials in other departments and agencies so that they could explore funding possibilities.

\* 2. Telecommunications Concept for Planning

As a result of a memorandum from the Director, OEP, coordination was effected by OTM with other elements of OEP, particularly the Emergency Operations Office, on the subject of a concept for post attack recovery and restoration operations which could be used as a basis for telecommunications emergency preparedness planning. It is expected that the DTM will reply to the Director, OEP, on this matter in the next few days.

\* 3. Pennsylvania Telecommunications

Telecommunications representatives in Pennsylvania have made arrangements to visit the OTM on June 12 for a general discussion of statewide communications. In anticipation of this visit, the OTM asked for and received briefings from representatives of two industrial concerns which are providing telecommunications support to several governmental elements in the State.

\* 4. High Heels Exercise (Communications)

OTM and NCS representatives met on May 28 to discuss NCS/OEP participation in the forthcoming High Heels 69 exercise. It was agreed that communication play in this year's exercise should concentrate more on the policy issues taken from Federal Emergency Plan D rather than communication outages.

\* 5. Government and Public Correspondence Precedence System

OTM and NCS representatives met on May 29 to discuss possible changes in criteria for the message and voice precedence system. The present proposed NCS precedence system covers government agencies while the DTM/FCC precedence system covers government and commercial systems. NCS representatives felt that the DTM/FCC precedence criteria were not restrictive enough and would permit too many users to qualify. It was finally agreed that the NCS criteria would follow the standards set by the DTM/FCC papers. The DTM/FCC papers have been circulated to all Government agencies for approval. All but two agencies (whose comments have not been received) have concurred.

FREQUENCY MANAGEMENT

\* 6. National Electromagnetic Compatibility Analysis Facility

On May 28 OTM, in company with OEP representatives, briefed DOD interests (Mr. Benington, Director, Electronics, DDR&E; General Schloegren, Deputy Director J-6, and their staffs) on the concept for a National Electromagnetic Compatibility Analysis Facility. The OTM proposal, for inclusion in the FY 71 budget envisages the first phase of such a facility to the extent of 120 personnel and a budget of approximately \$3 million. DOD indicated concurrence in the concept. The next briefing will be given to the Director, OEP, to be followed by discussions with BOB.

\* 7. U. S. CCIR Efforts

On May 28, OTM chaired a joint U. S. CCIR Working Group IV/IX meeting convened to develop improved sharing criteria among microwave and communication satellite systems. This has been a contentious item in view of the conflicting desires of the microwave interests to protect



their systems and the desires of the communications-satellite advocates to relax the present limitations on the power flux density permissible at the earth's surface from satellites in frequency bands shared with terrestrial systems. After extensive deliberation, a recommendation, and supporting report, were approved and transmitted to the Department of State. This material will be forwarded to Geneva for consideration at the forthcoming international meeting of the International Radio Consultative Committee in Geneva, September-October 1969.

8. Frequency Usage Program

On May 29, OTM representatives met with contractor personnel from the Illinois Institute of Technology Research Institute, which is currently engaged in a study to define the data base to be used at the national level with respect to radio frequency management. An outline of a final report was agreed upon with a target date of July 1 for submission to OTM of the first version of the final report.

9. TV Broadcasting Versus Community Antenna TV (CATV)

On May 29, a member of OTM attended a meeting of the Federal Communications Bar Association where a plan was made public to end the controversy between TV station owners and CATV systems. The plan was worked out by staff members of the National Association of Broadcasting (NAB) and the National Community Antenna Association (NCTA).

10. U. S. - Canada Meeting on Maritime Communications

On May 29 a member of OTM attended a meeting at which preparatory work on U. S. position papers for the forthcoming U. S. - Canada meeting on maritime communications was completed. The papers are being sent to Canadian authorities for study in advance of the meeting to be held in Washington, D. C., June 25-26-27.

11. DTM Speaks to Industry Group

On June 3 the DTM, as co-host with the Martin Marietta Corporation, Baltimore, made the welcoming address to the annual Washington meeting of the Aerospace & Flight Test Radio Coordinating Council (AFTRCC). In addition, a staff member spoke on recent improvements in frequency management and the Government's reliance on the use of the radio spectrum.

NATIONAL TELECOMMUNICATIONS

12. Response to NCS Long Range Plan (FY 1972-1976)

A letter to the Executive Agent NCS, dated June 2, approved the subject plan as a general planning guide. In addition, he was advised that the studies proposed with the objective of structuring and presenting a concept for the NCS for the 1970's are needed as a matter of urgency and that continuation of quarterly progress reports would be appreciated.





# REPUBLICAN NATIONAL COMMITTEE

CARL L. SHIPLEY  
MEMBER FOR DISTRICT OF COLUMBIA  
1204 NATIONAL PRESS BUILDING  
WASHINGTON, D.C. 20004  
(202) 783-1847

June 3, 1969

Honorable Clay T. Whitehead  
White House  
Washington, D. C.

Dear Clay:

We have a number of people interested pro and con on communications matters such as pay TV, CATV, etc. Can you send me a copy of the Johnson Administration's Task Force Report on Communications. Apparently it was publicly released last week by Ron Ziegler.

Sincerely,

Carl L. Shipley

CLS:bh

*6/4/69*  
*ref. to GPO.*  
*copy sent*  
*with info. as to*  
*how to purchase additional copies.*

*Telecommunications*

Thursday 5/29/69

12:00 Checked with Mr. Wasilewski's office --  
told them that we had heard that NAB and  
NARA had reached a decision on the cable matter  
and that it was being circulated.

Mr. Wasilewski's secretary said that it is still  
at the staff level -- still requires approval of  
both boards which will meet the middle of June --  
but they feel they can live with it. On the basis  
of that, she will send you a copy of the paper.  
Mr. Wasilewski is making a speech today about it --  
she will also send a copy of that.



BENNY L. KASS

*Attorney at Law*

1810 H STREET, N.W.  
SUITE 200  
WASHINGTON, D.C. 20006  
202 - 833-9088

May 26, 1969

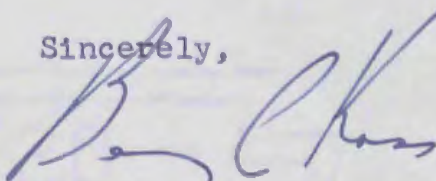
Mr. Clay T. Whitehead  
The White House  
Washington, D.C.

Dear Mr. Whitehead:

Would appreciate receiving a copy of  
the recently released report of the Task  
Force on Communications Policy.

Kind regards.

Sincerely,



Benny L. Kass

BLK:blg

*copy sent 6/4/69*

May 26, 1970

To: Dr. Lyons

From: Eva

Attached are Reports 219  
(Evaluation of Alternatives for the  
Production, Distribution, and  
Financing of Television Programs)(4/67)  
and Report 226 (Identification and  
Analysis of the Alternatives for Achieving  
Greater Television Program Diversity  
in the United States) (7/26/68) by  
John A. Dimling, Jr., Manager,  
Communications and Systems,  
Spindletop Research, Iron Works Road,  
Lexington, Kentucky 40505.

Could you please add to your library.  
Thanks.



# Task force study finally reaches Hill

But White House withholds support,  
issues report to promote 'discussion'

Twenty-one months after it was commissioned and five months after it was completed, the Johnson administration's task force report on communications policy was released by the White House last week.

But the release was in response to insistent demands from Congress and was unaccompanied by any endorsement from the new Nixon administration. White House news secretary Ronald L. Ziegler said the release of the document was simply to provide a basis for "further discussion" of communications policy matters.

He said the report would figure in an "over-all review" of communications matters that has been undertaken by Dr. Lee DuBridge, the President's science adviser, and James D. O'Connell, director of the Office of Telecommunications Management.

The administration's position on the report was made even more emphatic in a letter Clay T. Whitehead, a White House aide, sent to Representative James D. Broyhill (R-N.C.), of the House Communications Subcommittee, along with a copy of the document. "I must emphasize that the administration in no way endorses the recommendations of the task force or its analysis of the issues," Mr. Whitehead said.

The release of the report provided no new information. The document had leaked to the press, and was the subject of extensive coverage (BROADCASTING, Dec. 16, 1968). An early draft of the report had been available since September (BROADCASTING Sept. 9, 1968).

Congressional pressure for its official release, which has been building for months, reached a climax on Monday, when Representative Torbert H. Macdonald (D-Mass.), chairman of the House Communications Subcommittee, wired President Nixon.

Representative Macdonald requested release of the document prior to the scheduled appearance before his panel on Tuesday of Eugene V. Rostow, former under secretary of state for political affairs, who was chairman of the task force (see page 19). Word that the report would be released was received shortly before 10 a.m. Tuesday. (The actual release of the report to Representative Broyhill left Representative Macdonald visibly annoyed. He felt it was "petty" of the White House to look for a Republican to whom it would send the document.)

The task force made a number of far-reaching, and controversial proposals:

It called for the creation of a cabinet-level agency with broad powers to allocate the spectrum to both government and nongovernment users, a function now divided between the director of telecommunications and the FCC, to coordinate government research in spectrum problems and to provide technical assistance in connection with regulatory policy. Mr. Rostow, in his appearance before the Communications Subcommittee, said he would rank that recommendation as first in his order of priorities.

It said CATV can provide an "abundance" of channels, at relatively low cost, and suggested, without being explicit, that the FCC loosen some of its restrictions on CATV growth. CATV representatives have seized on this portion of the report in opposing commission proposals to regulate their industry.

It urged the commission to authorize the start of a pilot domestic satellite system and recommended that the Communications Satellite Corp. be authorized to operate it. But it said no commitment should be made as to who would eventually operate a permanent system. The commission has been struggling with the question of who should be authorized to operate a domestic system since 1965. Comsat two years ago proposed that it be allowed to establish a pilot program (BROADCASTING, April 10, 1967).

The task force, in a section that caused some concern among broadcasters, also suggested that executive branch agencies participate in commission proceedings involving the grant or renewal of broadcast licenses. The report said that agencies responsible for such matters as health, education and the improvement of race relations have a "legitimate interest" in the programming practices of licensees. The medium, the report noted, "offers significant potential as a support to a variety of governmental missions. . . ."

The general view on Capitol Hill was that the report would wind up as footnotes to studies still to be made. No hearings are even contemplated in the Senate on any aspect of the report. And congressional sources said that, "as a practical matter, no substantive legislation could be enacted without strong administration backing—which is plainly lacking."

Mr. Rostow, however, in a private meeting with Representative Macdonald, offered his assistance to any effort to translate the report's recommendations into law.

But regardless of the fate of the report, he expressed pleasure publicly at the official release of the document, which has circulated privately all over Washington for months. Representative Macdonald put the same sentiment in a quip: "It no longer needs to be circulated in a plain brown wrapper."

*Telecommunications*

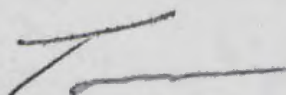
THE WHITE HOUSE

WASHINGTON

May 26, 1969

MEMORANDUM FOR MR. FLANIGAN

Here is a rather long account of the Rostow Report release and my dealings on the Hill. After an admittedly very short exposure to these problems in AEC, maritime, and communications matters, I must confess an uneasiness at the impression that the Republicans are a bit less well organized and professional than the Democrats. I think we should devote a little more time to developing our relationships with both sides.



Clay T. Whitehead  
Staff Assistant

Attachment



THE WHITE HOUSE

WASHINGTON

May 27, 1969

MEMORANDUM FOR MR. FLANIGAN

Shortly after Inauguration, I touched base with the Republican staff of both the House and the Senate to tell them that we would be handling telecommunications matters, that we hoped to keep in touch with them, and that they would do the same. I subsequently talked to the Majority counterparts. There seems to be little interest among the Republicans on these matters. I have had occasion for contact with the Majority from time to time but not with the Minority.

On May 9, Eugene Rostow called to say that he would testify in early June and that, unless the report were released prior to his testimony, he would have no recourse but to say that the White House was sitting on the Rostow Report and that he was not free to talk about it. I had earlier concluded that we should release it without endorsement and began to prepare for release the last week in May in order that the report would be out prior to Rostow's testimony. At this point, I again informed Berry of what was going on and requested that he keep me informed of any significant developments.


On Monday, May 19th, I prepared a memorandum for your signature recommending to the President that the report be released. At 7 o'clock that evening, I received a call from Mr. Guthrie, the Democratic counsel for the Communications Subcommittee in the House, informing me that Rostow would appear the next morning at 10 o'clock and that the Rostow Report would be prime target as it had been that day. He suggested that it would look better if the White House released the report and that they were that evening requesting it. (We received later that evening a telegram from the Subcommittee Chairman, Torbert Macdonald of Massachusetts, asking that the report be released.) We then had the exchange of phone calls that I am sure you remember, and the President approved the release at 9:30 Tuesday morning.

I called Lew Berry the next day to ask what had happened, and his comment was to the effect that "you never know what's going to happen around that place." I told him that the report was being

released and offered to send up the only copy we had. I suggested that it would be preferable to send it to the ranking Republican, Mr. Broyhill, in order that the Republicans would get the credit for receiving it from the White House and in order that Macdonald could not get too much mileage out of getting it released. Berry agreed that that was acceptable. I am told Macdonald was a little peeved at this procedure, but it worked well.

It is quite possible that the Rostow testimony was moved at the last minute without Berry's knowledge. However, it is rather disappointing that so much of our cooperation on these communications matters seems to come from the Democrats in spite of attempts on our part (not always to our advantage) to work through the Republicans.

I met yesterday with Berry and the Democratic staff of the Subcommittee (Bob Guthrie) to make sure we knew what each other was doing. I still have the uneasy feeling we will get more useful cooperation out of Guthrie than Berry.



Clay T. Whitehead  
Staff Assistant



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He said the report would figure in an "over-all review" of communications matters that has been undertaken by Dr. Lee DuBridge, the President's science adviser, and James D. O'Connell, director of the Office of Telecommunications Management.

The administration's position on the report was made even more emphatic in a letter Clay T. Whitehead, a White House aide, sent to Representative James D. Broyhill (R-N.C.), of the House Communications Subcommittee, along with a copy of the document. "I must emphasize that the administration in no way endorses the recommendations of the task force or its analysis of the issues," Mr. Whitehead said.

The release of the report provided no new information. The document had leaked to the press, and was the subject of extensive coverage (BROADCASTING, Dec. 16, 1968). An early draft of the report had been available since September (BROADCASTING Sept. 9, 1968).

Congressional pressure for its official release, which has been building for months, reached a climax on Monday, when Representative Torbert H. Macdonald (D-Mass.), chairman of the House Communications Subcommittee, wired President Nixon.

Representative Macdonald requested release of the document prior to the scheduled appearance before his panel on Tuesday of Eugene V. Rostow, former under secretary of state for political affairs, who was chairman of the task force (see page 19). Word that the report would be released was received shortly before 10 a.m. Tuesday. (The actual release of the report to Representative Broyhill left Representative Macdonald visibly annoyed. He felt it was "petty" of the White House to look for a Republican to whom it would send the document.)

The task force made a number of far-reaching, and controversial proposals:

It called for the creation of a cabinet-level agency with broad powers to allocate the spectrum to both government and nongovernment users, a function now divided between the director of telecommunications and the FCC, to coordinate government research in spectrum problems and to provide technical assistance in connection with regulatory policy. Mr. Rostow, in his appearance before the Communications Subcommittee, said he would rank that recommendation as first in his order of priorities.

It said CATV can provide an "abundance" of channels, at relatively low cost, and suggested, without being explicit, that the FCC loosen some of its restrictions on CATV growth. CATV representatives have seized on this portion of the report in opposing commission proposals to regulate their industry.

It urged the commission to authorize the start of a pilot domestic satellite system and recommended that the Communications Satellite Corp. be authorized to operate it. But it said no commitment should be made as to who would eventually operate a permanent system. The commission has been struggling with the question of who should be authorized to operate a domestic system since 1965. Comsat two years ago proposed that it be allowed to establish a pilot program (BROADCASTING, April 10, 1967).

The task force, in a section that caused some concern among broadcasters, also suggested that executive branch agencies participate in commission proceedings involving the grant or renewal of broadcast licenses. The report said that agencies responsible for such matters as health, education and the improvement of race relations have a "legitimate interest" in the programming practices of licensees. The medium, the report noted, "offers significant potential as a support to a variety of governmental missions. . . ."

The general view on Capitol Hill was that the report would wind up as footnotes to studies still to be made. No hearings are even contemplated in the Senate on any aspect of the report. And congressional sources said that, "as a practical matter, no substantive legislation could be enacted without strong administration backing—which is plainly lacking."

Mr. Rostow, however, in a private meeting with Representative Macdonald, offered his assistance to any effort to translate the report's recommendations into law.

But regardless of the fate of the report, he expressed pleasure publicly at the official release of the document, which has circulated privately all over Washington for months. Representative Macdonald put the same sentiment in a quip: "It no longer needs to be circulated in a plain brown wrapper."



Telecommunications  
Congressional contacts  
Barnes

✓ House

→ Bill Springer

Ranking Repub.

Health gave intro to Staggers  
asked abt commo subcomm

Talk w/ Barry abt who

knowledgeable / involved

Bob Guthrie

→

Ray Hurley <sup>Rep</sup> Staff Commence  
Corte

✓ Senate  
(AA)

Norris Cotton

Peter Holmes for Bob Griffen

Cong. Jim Brayhill  
Ranking Rep. Commo & Power SubCorte



*Telecommunication*

May 23, 1969

Dear Mr. Hardy:

I have inquired about the matter we discussed at our meeting on April 16, regarding use of network equipment and crews, rather than White House Communications Agency equipment and personnel for Presidential television and radio appearances.

I am informed that this matter is under discussion with the networks, and I am sure they can give you an appropriate rundown on the status of these discussions.

Sincerely,

Clay T. Whitehead  
Staff Assistant

Mr. Al Hardy  
Director of Radio, TV and  
Recording Division  
International Brotherhood of  
Electrical Workers  
1200 15th Street, N. W.  
Washington, D. C.

cc: Mr. Flanigan  
Mr. Hofgren  
Mr. Whitehead ✓  
Mr. Rose  
Central Files

CTWhitehead:ed

*Full communication*

May 23, 1969

Dear Mr. Gorsuch:

I have inquired about the matter we discussed at our meeting on April 14, regarding use of network equipment and crews, rather than White House Communications Agency equipment and personnel for Presidential television and radio appearances.

I am informed that this matter is under discussion with the networks, and I am sure they can give you an appropriate rundown on the status of these discussions.

Sincerely,

Clay T. Whitehead  
Staff Assistant

Mr. Clifford Gorsuch  
Regional Director  
National Association of Broadcast  
Employees and Technicians  
4530 Connecticut Avenue, N. W.  
Washington, D. C. 20008

cc: Mr. Flanigan  
Mr. Hofgren  
Mr. Whitehead ✓  
Mr. Rose  
Central Files

CTWhitehead:ed



May 23, 1969

MEMORANDUM FOR

MR. HARRY FLEMMING

Abbott Washburn feels this man might be a good choice to replace Frank Loy as Deputy Assistant Secretary of State for Transportation and Telecommunications.

*Woodward Kingman*

Clay T. Whitehead  
Staff Assistant

Attachments

CC: Mr. Whitehead  
Central Files

CTWhitehead:ed

THOMAS W. EVANS  
20 BROAD STREET  
NEW YORK, N. Y.

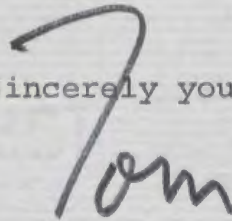
May 2, 1969

Dear Abbott:

Enclosed is the resume of an old friend of mine, Woody Kingman, who would seem ideal for the post at State which you mentioned. Woody is not a lawyer, but then, nobody is perfect.

Very best regards.

Sincerely yours,

A handwritten signature in dark ink, appearing to be "Tom", written in a cursive style.

The Honorable Abbott Washburn  
Department of State  
Washington, D.C. 20520



*File - communications*

May 22, 1969

MEMORANDUM FOR GENERAL O'CONNELL

Thank you for your memorandum of May 14th, informing me of the recent inquiries by Congressional staff about new developments in communications policy. I think your proposed response to further inquiries is the best until we do have a better idea of where we want to go.

Clay T. Whitehead  
Staff Assistant

cc: Mr. Whitehead  
Central Files

CTWhitehead:ed

*tags*

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

OFFICE OF THE DIRECTOR

May 14, 1969

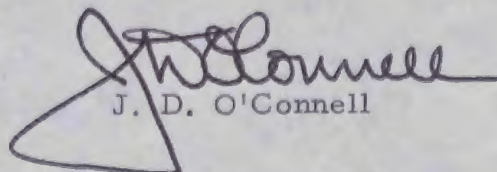
MEMORANDUM FOR MR. CLAY T. WHITEHEAD

You may be interested in knowing that a member of the staff of a House Commerce subcommittee has made inquiries at the staff level here as to whether there are any new developments in the communications policy areas that I addressed in my testimony before the Holifield Committee in July 1967. A copy of the memorandum for record of the conversation is attached, as well as my statement to the Holifield Committee.

As the record memorandum states, I did not bring these matters to the attention of Congress with the idea that my office would necessarily be the focal point for solutions of all the problems listed. The purpose of the chart was to merely lay out the problems and to suggest a time table for addressing them.

Until such time as this office receives guidance as to the priority of the items described in my testimony, as well as the Administration's policy on the substance, I propose to give a general response to further inquiries from Congressional committees to the effect that the Administration is studying the policy implications of these various areas and will be making appropriate determinations in their order of urgency.

If you have specific thoughts as to how this could be more appropriately handled, I would be glad to receive them. In the meantime, I intend to discourage the thought of Congressional staff personnel going into any of these matters in greater detail.

  
J. D. O'Connell

cc: General Lincoln  
Attachments

- (1) Memorandum for the Record, dtd May 14, 1969,  
from J. J. O'Malley, Jr.
- (2) Statement of DTM before Military Operations  
Subcommittee, House of Rep., July 25, 1967.



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

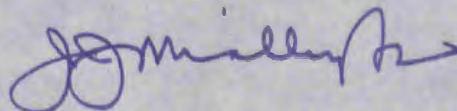
May 14, 1969

MEMORANDUM FOR THE RECORD

Subject: Telephone Conversation with Mr. Daniel Manelli, Staff Member,  
Special Committee on Investigations, House Interstate and  
Foreign Commerce Committee

On Friday, May 8, Ray O'Connell advised me that Mr. Manelli had called him inquiring whether he could obtain up-to-date information from this office on the status of certain legislative proposals that General O'Connell had discussed in testimony before the Holifield Committee in July 1967. Ray referred Mr. Manelli to me, and I talked with him on May 13. Mr. Manelli was especially interested in a chart which General O'Connell had used during his testimony. The chart, which is page 16 of General O'Connell's testimony, is entitled "Legislative Outlook in Telecommunications, 1968-72," and lays out in PERT chart fashion specific important problems in the national telecommunications policy area, and suggests a time frame in which these problems can be addressed by the Congress and appropriate legislation enacted.

Mr. Manelli was particularly concerned about the interaction of communications and computers and the question of adequate management of the radio spectrum. He also mentioned the matter of merger of the international carriers as one in which he was interested in having updated information. I advised Mr. Manelli that General O'Connell's testimony before the Holifield Committee at various times had pretty fully covered the problems described in the PERT chart. I also told him that the chart was not intended to describe the problems within the responsibility of this office, but was merely intended to describe the problems which were national in scope and were facing the Congress, the FCC, and the Executive Branch. I stated that before furnishing any further information in these areas I would have to advise General O'Connell of the conversation and receive some guidance from him as to how the matter should be pursued further.



J. J. O'Malley, Jr.  
Legal Counsel



**OFFICE OF  
TELECOMMUNICATIONS  
MANAGEMENT**

**STATEMENT  
OF  
HONORABLE JAMES D. O'CONNELL  
DIRECTOR OF TELECOMMUNICATIONS MANAGEMENT  
EXECUTIVE OFFICE OF THE PRESIDENT  
BEFORE THE  
MILITARY OPERATIONS SUBCOMMITTEE  
HOUSE OF REPRESENTATIVES**

**JULY 25, 1967**



STATEMENT OF JAMES D. O'CONNELL  
DIRECTOR OF TELECOMMUNICATIONS MANAGEMENT  
EXECUTIVE OFFICE OF THE PRESIDENT

Introduction

Mr. Chairman and Members of the Committee: I have been asked to appear today to review activity within the executive branch taken in response to recommendations of the Committee on Government Operations as presented in their October 19, 1966 Report, "Government Use of Satellite Communications". You have heard testimony from Dr. Gardiner L. Tucker, Deputy Director, Electronics and Information Systems, Defense Department, and from General Alfred D. Starbird, Manager of the National Communications System, with respect to specific responsibilities and activities concerning the Department of Defense and the National Communications System.

The Department of Defense testimony included substantial detail concerning actions taken by the Department of Defense in response to a number of Committee recommendations.

Rather than repeat the detailed position of the executive branch on issues which have already been covered in substantial depth by the Department of Defense witnesses, I will limit my comments to brief summary statements of the policy

issues involved. The remaining Committee recommendations constitute primarily policy matters or matters outside the direct purview of the Department of Defense. In these cases, my testimony will provide greater definition and detail as to the steps that have been taken in response to Committee recommendations.

INITIAL SYSTEM READINESS-- SYSTEM REPLENISHMENT AND UPGRADING

During the past 10 months, much progress has been made by the Department of Defense in bringing the IDCSP to a state of operational readiness. Specifically:

- The space segment of the system currently provides full design capacity by means of the 17 near synchronous satellites currently in orbit.
- Two fixed ground satellite terminals plus 7 AN/MS-46 portable terminals are deployed throughout the world and in operation. Six additional AN/MS-46 satellite earth terminals will be deployed by February 1968. Further augmentation of earth terminal capability is being achieved through the procurement of the smaller highly transportable AN/MS-54 terminals; 13 of these will be delivered by January 1968.



--- Two satellite terminals are available for use aboard two U. S. Navy ships to improve communications between shore terminals and the Navy task force afloat. Five additional shipboard terminals will be delivered by October 1967.

All in all, this program has been most successful in providing improved communications channels for the direction of U. S. forces throughout the world.

#### CAPACITY EXPANSION

Much progress has been made by the Department of Defense in developing a logical growth capability for the IDCSP. As outlined in General Starbird's testimony, steps are currently underway to increase the capacity of the IDCSP earth terminals from an original design capacity of two voice channels to eleven voice channels.

General Starbird also highlighted DOD studies concerned with a Phase II space segment for the IDCSP. These studies are aimed at increasing capacity and the capability of the system to meet urgent Defense needs as has been suggested by the Committee.

ADVANCED SYSTEM CAPACITY

The system alternatives that have been developed for the Advanced System or Phase III of the Defense Satellite Program include the option of high capacity trunks between the U. S. and overseas points. The degree to which such high capacity trunks may be needed will be determined during the Joint Chiefs of Staff requirements studies mentioned by General Starbird.

Certainly capacities of 200 or more voice grade circuits are within the range of technology. It is further within the range of technology to provide trunk circuits that are secure, reliable, flexible and resistant to enemy jamming activities. There are, however, fundamental policy questions to be faced in the design of high capacity systems for Governmental use.

Our policy has been to avoid direct duplication by Government of available commercial service when such commercial service meets Government requirements and is available at competitive or lower cost. An exception to this policy has been made in the case of "unique and vital national security needs which cannot reasonably be met via commercial services. However, in announcing the initial decision



to proceed "with the development of interim independent military systems" President Johnson stated that:

"This decision to proceed with a system responsive to unique and vital national security needs does not alter the policy under which the National Communications System and other government services will use the commercial satellite and other common carrier communications systems for the transmission of the bulk of its traffic between the United States and various overseas areas."<sup>1/</sup>

All in all, the greatest assurance of continuous communications capability lies in maximum diversification of facilities and routes. Underseas cables, communications satellites, both commercial and Government owned, and high frequency radio all have their particular set of design advantages and disadvantages from the viewpoint of reliable worldwide service. A special advantage of the commercial communications

---

<sup>2/</sup> President Lyndon B. Johnson, Annual Report to the Congress for the year 1964, on activities and accomplishments under the Communications Satellite Act of 1962.

complex lies in its capability for rapid expansion during times of unusual communications requirements and in the economies that are possible through the concept of using the commercial demand pattern as the underlying base to support Government needs which are subject to wide fluctuations as a result of world events. For these reasons it is prudent to utilize both commercial and Government systems and to provide diversity in routes and mode to include cables, satellites, and where appropriate, some reasonable backup via high frequency radio.

#### TACTICAL SYSTEM DEVELOPMENT

Since the date of the Committee Report on "Government Use of Satellite Communications" much progress has been made in the research program that has been undertaken to develop tactical communications satellite equipment for Defense needs. Contracts have been awarded for the development of the space segment and launch of the first satellite is scheduled within the coming year. Contracts have also been awarded for the development of the mobile terminals for use within the Army, Navy and Air Force. These



mobile terminals are scheduled for delivery within approximately 1 year so that integrated space segment and earth terminal tests can begin concurrent with the initial launch.

One of the objectives of the TACSAT research and development program has been to identify the portion of the radio spectrum best suited to tactical satellite needs and a great deal of advanced development work has been carried out in the field of frequency interference and propagation characteristics.

In general, I think it is fair to say that the recommendations of the Committee have been vigorously pursued and good progress made. Because of the very complex interservice coordination task involved in this tactical system, it will be necessary to give continuing attention in the hardware development programs to the interface points and to the ultimate system structure.

#### PROCUREMENT OF COMMERCIAL SATELLITE SERVICES

Since I last appeared before this Committee in August 1966, there have been a number of developments in the 30 circuits case and in the procedures for the procurement of

commercial satellite services. You are aware, I am sure, of many of these procedures, so I will be brief in my discussion of this matter.

As you know, at the time of the hearings about a year ago, the terrestrial carriers were giving active consideration to a major reduction in their overseas rates to reflect the cost savings which would be afforded by satellite technology. A number of rate reductions were proposed by the individual carriers in the Pacific area, so that by January 1967 the Department of Defense concluded that the lowest proposed composite rates would provide a major cost saving in the procurement of long-haul communications service in the Pacific area. The Department of Defense agreed, therefore, to assign its contract with COMSAT based upon these proposed cost savings. I transmitted a letter to the Commission on January 31, 1967, advising them of this decision. The Commission, in an order entered February 1, 1967, authorized the four terrestrial carriers to provide the 30 circuits to the Department of Defense.

The Commission Order of February 1, 1967 stated "we recognize that the determination of communications services



needed because of defense requirements in the national interest is a matter peculiarly within the province of the Executive." The Commission has also stated that it will look to my office as the focal point in these matters. I expect to keep the Commission as fully informed as I can of Government requirements as they relate to commercial communications satellites. In this way we hope to aid the integration of commercial communications satellite service in an orderly and economical way.

The Department of Defense and the Government generally recognize that there is an important need for cable services and that this need will continue in the future. At the same time the rapid expansion of communications satellite facilities is also considered an important objective.

#### EXTENSION OF RATE REDUCTIONS

This recommendation falls within the purview of the FCC. From the point of view of the executive branch, I fully concur with the recommendations made by the Committee.

The actions that have been taken by the FCC with respect to rate reductions in the Pacific have resulted in a very

substantial savings of over \$7 million annually to the Government (see Table 1).

It is my understanding that similar rate reductions will be achieved in the Atlantic Basin as soon as full period satellite service is available (see Table 2). Such service should be realized by October 1, 1967.

#### TIMELY NOTICE AND ADVANCE FILINGS

General Starbird outlined the steps that had been taken within the Department of Defense to improve coordination and planning activities relative to new telecommunications requirements. I should also point out that the Commission order of February 1, 1967 sets up a procedure in which the FCC will look to my office as the focal point for advice on communications requirements of the executive agencies, particularly in those cases where a national interest determination is involved. The Executive Agent, National Communications Systems, keeps me advised on requirements as they develop so that I can properly discharge the special role and responsibility that the Office of Telecommunications Management has in coordinating new telecommunications requirements, particularly



COMPARISON OF MONTHLY RATES  
FOR DOD LEASED VOICE GRADE  
CHANNELS IN THE PACIFIC  
AS OF 15 JULY 1967

11

TERMINALS	NO. OF CHAN- NELS	CHARGES AT 1 OCT 66 TARIFF RATES	CHARGES AT 20 JAN 67 COMPOSITE RATES	DIFFERENCE (SAVINGS)
US-HAWAII	56	784,000	548,800	235,200
US-JAPAN	7	210,000	164,500	45,500
US-PHILIPPINES	2	58,052	50,000	8,052
US-GUAM	5	135,500	80,000	55,500
SUB TOTAL	70	1,187,552	843,300	344,252
HAWAII-GUAM	7	126,000	84,000	42,000
HAWAII-JAPAN	11	242,000	199,100	42,900
HAWAII-PHILIPPINES	19	437,000	372,400	64,600
SUB TOTAL	37	805,000	655,500	149,500
GUAM-PHILIPPINES	9	1,023,133	908,500	114,633
GUAM-JAPAN	4	48,000	46,000	2,000
SUB TOTAL	13	1,071,133	954,500	116,633
JAPAN-PHILIPPINES	8	160,000	138,000	22,000
SUB TOTAL	8	160,000	138,000	22,000
GRAND TOTAL	128	3,223,685	2,591,300	632,385

TABLE NO. 1

TRANS-ATLANTIC LEASED CHANNEL RATES

On October 1, 1966, the United States half-circuit monthly rates for leased channel services between the United States and Europe were reduced as follows:

Voice Channels -- Half-Circuit Per Month

<u>Rate Prior to 1 Oct. 1966</u>	<u>Present Rate</u>	<u>Rate with 24 Hr. Satellite Serv.*</u>
\$ 8,500 (UK)	\$8,000	\$6,500
10,000 (Europe)	8,000	6,500

Teletype Channels -- Half-Circuit Per Month

\$3,500	\$3,000
---------	---------

\*The U. S. international carriers have stated that they will reduce their rates for leased voice channels when the European satellite earth stations go on 24-hour operations, on or about October 1, 1967.

TABLE NO. 2



those which involve commercial satellite communications.

#### COOPERATION AMONG GOVERNMENT AGENCIES

Much progress has been made in the development of improved procedures and patterns of coordination among the Government agencies involved in the field of commercial satellite communications.

In August 1966, procedures were adopted providing for close collaboration between the FCC, State Department and my office in carrying out United States policy in the commercial communications satellite field. These procedures provide that the Department of State shall give guidance to the Communications Satellite Corporation, as the United States entity in INTELSAT, on matters of concern to the United States Government. During the past year, we believe these procedures have worked quite satisfactorily. The procedure requires close contact with officials of the Communications Satellite Corporation with the result being a very clear understanding by the concerned Government agencies of the various matters being considered by the governing board of INTELSAT. This contact, together with the interagency collaboration, permits the issuance of

necessary guidance of a foreign policy nature to the Corporation in a timely and proper fashion. While this arrangement has not solved all of the problems stemming from the complex relationship between the international INTELSAT arrangements and domestic law, nevertheless, the difficulties stemming from this relationship have been minimized, and we believe progress is being made in eliminating the major problems that have caused the most difficulty with our international partners.

The Committee recommendation on cooperation among Government agencies also highlighted the need for studies to clarify agency responsibilities and identify areas in which new legislation might be required. As suggested by the Committee, my office has aggressively undertaken to study telecommunications legislative requirements.

This chart (Chart 1, Legislative Outlook in Telecommunications) highlights some of the issues which in my opinion will require Congressional attention in the immediate future. They include:

- Authorization for merger of the international common carriers;



- Updating of Section 606 of the Communications Act of 1934;
- A statutory base for national policy on the communications aspect of CATV and other wired distribution systems.
- Attention to the issue of "privacy in telecommunications;
- Interaction of communications and computers;
- Improvement in the structure for the Federal operation of communication systems and facilities;
- Consideration of the national issues involved in the application of communication satellite systems to domestic needs;
- The International Agreement for Global Communications Satellites -- INTELSAT Definitive Arrangements;
- Use of advanced telecommunication systems in supporting the needs of developing nations;
- Adequate management of the radio spectrum.

Our study has focused upon the specific recommendations in this Committee's October 1964 Report. In the coming months the results of our OTM studies will be coordinated with the agencies and departments of the Federal Government

# CHART 1

## Legislative Outlook in Telecommunications, 1968-72 +...

1934

1962

1968

1969

1970

1972+

Communications  
Act

International  
Common Carrier  
Merger

Emergency  
Telecommunication

Frequency  
Management

Privacy  
in  
Telecommuni-  
cations

CATV &  
Copyright

Federal Telecommunications  
Management

Federal  
Operations

Post Roads Act 1866  
Radio Act 1912  
Radio Act 1927

Domestic  
Satellites

International  
Agreement

Communications  
Satellite Act

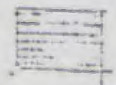
Public Television

Federal Telecommunications Act

International  
Telecommunications  
Development

Communications  
Computers

### Legend



Existing Statute



Proposed Independent  
Legislation



Proposed Legislative  
Amendments



in order to develop an Administration position on each of the issues that have been identified.

#### SATELLITE INDUSTRY LIAISON COMMITTEE

I have discussed the Committee recommendation on the establishment of an industry liaison committee with the chairman of the FCC. It is our belief that the Satellite Industry Committee on Earth Terminal Coordination provides a good forum for consideration of the problems highlighted during the hearings last August. This Industry Committee on Satellite Earth Terminals has the representation suggested and has been quite successful in improving industry coordination in the satellite field.

#### SEPARATE OFFICE FOR TELECOMMUNICATIONS MANAGEMENT

The question of a separate office for Telecommunications Management is currently under study and active consideration within the executive branch. It is clear that there is a growing recognition at all levels of the importance

of telecommunications in Government affairs and of the growing backlog of policy problems which require Government attention.

There are a number of thorny questions to be dealt with and many problems to be faced in arriving at a structure that best meets the needs of the Government in this complex situation.

One alternative, of course, is to leave the office as it is. This has certain disadvantages. OEP is in a different line of work. They are concerned with emergency planning; accordingly, they have somewhat different interests and are guided by different priorities.

Another alternative is to make the office a part of the Department of Transportation. This would in effect create a Department of Transportation and Communications; this, too, presents a great many problems. There are bound to be difficulties in developing an over-all set of national policies in a situation where one Department is charged with coordinating the communications policy of others. Also there could be conflicts of interest if one user of the spectrum were in a position to exercise also the power of allocating over all of the spectrum.



the President's authority over all of the other departments.

The third alternative is to combine Telecommunications with the Office of Science and Technology in the Executive Office of the President. The two offices have similar responsibilities in considering the impact of research and the pace of technology on national policy and do have a fair amount in common in other areas. Frequency management is a somewhat separate consideration, but is not incompatible.

The fourth alternative is to create a separate agency reporting directly to the President. This approach would appear to avoid many, if not all, of the problems of the other three proposals, but it does require the establishment of an additional government agency.

There may be organizational alternatives which would be more advantageous than those outlined above, accordingly, all of the factors involved in a decision on organizational structure are being studied.

As you can understand, a decision on the optimum organizational alternative will require the most careful consideration.

The exact timing for an organizational change of this nature is a matter of major importance and one which will require serious consideration on the part of the President and the executive departments and agencies.

In summary, with respect to this specific Committee recommendation, I believe I can say that the matter is receiving active consideration across a wide range of possible organizational alternatives. I am hopeful that the decision on this matter will be consistent with the views that have been stated by the Committee.

CLEAR DELINEATION OF POLICY --  
DEFENSE MANAGEMENT OF TELECOMMUNICATIONS

We have studied the Committee's recommendations and suggestions for action with respect to clarification of responsibilities within the National Communications System structure.

As a part of these studies we have considered a proposed revision of Executive Order 10995 which would clarify responsibilities.

We have concluded, however, that with the active consideration now being given to the governmental structure



for telecommunications policy and management, it would be wiser to withhold action on NCS organization matters until one of the four alternatives for OTM organization has been decided upon.

In the meantime, I can report that the initial evolutionary stage of the NCS has now been completed in general consonance with preliminary guidance stated in the Presidential Memorandum which established the National Communications System. What we have today can be described as a federation of systems with arrangements for mutual assistance and some exchange of traffic. However, it is not yet a fully unified system as was originally envisioned and there are still many important Government communications assets that are not included in the NCS.

Considerable effort has been expended during the year in working out procedural methods that are more effective. We now have very smooth working arrangements on a day-to-day basis between the Executive Agent, the Manager and his staff and my office. We have not yet formulized a statement of separate areas of responsibility but have been able to reach agreement on actions required in a number of cases without significant difficulty by operating

on a case-by-case basis. It is anticipated that these relationships can continue and be further refined. My staff works closely with the Executive Agent and Manager in the accomplishment of periodic reviews as to the status and progress of work on the next Long Range Plan.

We are in the process of developing by trial a procedure for cooperative action between the OTM, the BOB and NCS regarding various agency requirements and their satisfaction within the context of the NCS. The direction these arrangements are taking is to assume that the Executive Agent and Manager should not be responsible for judging or validating agency requirements. Rather, it should be done in connection with the individual agency budget reviews where provision is made for funding such requirements. The Executive Agent and Manager, it is believed, should be responsible for a determination, with the individual agency and the OTM, in cases where difficulties arise, of the best and most economical method of satisfying validated requirements.

The details of such procedures are far from being complete and there is the possibility that executive or



legislative action may be required in the future. The procedures under development are designed to avoid the difficulties and problems summarized by the Committee Report. Implementation of the Planning, Programming and Budgeting System, which is being started this year, will provide a good basis for this action and basic figures for making better judgments. However, at least another two years of effort will be required before fully adequate data are available.

The Executive Agent is also in the process of completing studies requested by my office that should provide the basis for moving ahead on devising procedural methods which will enable us to reach decisions on further and more rapid development of the NCS into a fully integrated system.

In summary, I can say that the preliminary work has been done and the stage set for substantial progress.

TRAFFIC POTENTIAL IN NASA SATELLITES

The conditions established by the FCC at the time of initial authorization of frequencies for the NASA ATS program limited their use to experimental purposes.

In a letter to Chairman Holifield dated April 20, 1967, the Administrator of NASA stated, "If after successful attainment of mission objectives there remains a potentially useful system or system capacity, we consider it to be a responsibility of NASA to make this available to whatever instrumentality can best use it in the national interest." My office concurs in and supports the general position that when residual capacity results at the end of an experimental program, this capacity should be utilized and not wasted. We wish to make a careful distinction, however, between the utilization of excess or residual capacity in an experimental satellite and the granting of authorization to carry operational traffic over experimental satellites on a programmed basis. In the first instance, operational circuits could be placed on an experimental satellite on a temporary or "as available" basis for



the period that such capability existed. Since predictions cannot be made in advance of this residual lifetime or excess capability, it would be unwise for any user to plan on this capability for a needed portion of their operational circuits.

This office will, however, cooperate with NASA and the other appropriate government agencies in effecting the coordination necessary to insure that any excess capacity which may be available in experimental satellites is used in the best national interest.

#### SATELLITES FOR AIR TRAFFIC CONTROL

The FAA has continued to work quite closely with NASA regarding the technical feasibility and alternatives of applying satellite technology to air traffic control. In June of this year, FAA completed a series of instrumented flight tests, using an agency aircraft, with the NASA ATS-1 satellite. The data obtained during these tests is currently being analyzed. FAA has also made plans, in cooperation with NASA, to continue VHF experimentation with the ATS-C satellite to be launched later this year and to conduct

experimentation in the "L" band (1540-1660 MHz) as soon as appropriate FAA/NASA funding can be made available.

As of the present time, no formal discussions have been initiated with the airline industry to work out appropriate cost-sharing arrangements. Such discussions seem premature at this time as systems studies and experimentation with NASA have not yet been completed. There has, however, been continuing coordination between FAA and the air carriers on the results of tests made to date. In the meantime, the FAA is continuing to work closely with COMSAT. FAA expects definitive proposals and cost quotations from COMSAT in the near future.

#### SATELLITE POWER FOR THE FUTURE

The NASA letters to this Committee dated April 20, 1967, January 25, 1967 and January 17, 1967 provide a definitive summary of NASA activity in the development of improved power supplies for satellite purposes. The National Aeronautics and Space Administration has been very diligent in pressing for the early development and application of nuclear power for satellites where it has found it to be appropriate.



The most recent studies of NASA which are supported by work done by the General Electric Company and the Radio Corporation of America do indicate, however, that recent developments in the solar power field will permit the generation of sufficient quantities of electric power to meet the needs of direct broadcast radio satellites. This preference for solar power conversion systems for radio broadcast satellites in no way affects the requirements for nuclear power to achieve the generating capabilities which may be needed to supply space segment needs of the future.

#### CONCLUSION

Mr. Chairman -- distinguished Members of this Committee -- I appreciate your courtesy in listening to my statement and I would like to express appreciation for the service that this Committee has rendered in identifying policy issues and areas for improvement in the field of satellite communications generally, and Government use of satellite communications in particular.

I am now prepared to elaborate on any further points that you may suggest or to answer questions you may have.