

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

Date: June 30, 1970

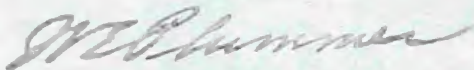
Subject: Dr. Whitehead's visit with Staff

To: Mr. Ralph Clark (Absent)
Mr. John O'Malley
Mr. Lee Fishkin
Mr. J. R. O'Connell
Mr. Will Dean
Mr. George Stelzenmuller
Mr. L. R. Raish
Mr. Richard Gould
Mr. Jack Cole
Mr. Don Jansky
Mr. Dave Hall
Mr. Charles Culpepper
Mr. Arthur Cooke
Mr. Henry Jones
Mr. Charles Lathey
Mr. Dalton Ward
Mr. Lyman Hailey
Mr. Chester Kirkevold

Dr. Whitehead will meet with those indicated Thursday, July 2, in Room 742 between the hours of 1 P. M. and 2 P. M. to get acquainted.

After the general staff meeting, Dr. Whitehead would like to meet with the following members of the staff concerning their current activities:

Messrs. Gould, Cole and O'Malley from 2 - 2:30 P. M.
Messrs. Hall, Cooke, Culpepper and Jones from 2:30 - 3 P. M.
Messrs. Lathey and Ward from 3 - 3:30 P. M.
Messrs. Dean, Hailey, Jansky, Kirkevold, Raish and Stelzenmuller from 3:30 - 4:30 p. m.



W. E. Plummer
Acting

Monday
Even 4/1

P (12) rd charact OTP & TRAC
re: computer & log processing
8th ?
Mr M¹ At St. Catharines
"Emergency Plan D" now in WH
check NSC.

4/26/70

OFFICE OF TELECOMMUNICATIONS POLICY

AND

THE RADIO FREQUENCY SPECTRUM

RADIO FREQUENCY SPECTRUM -

SUMMATION OF FREQUENCIES WHICH SUPPORT
THE TRANSMISSION AND RECEPTION OF RADIO
SIGNALS. (COMMUNICATIONS, NAVIGATION,
IDENTIFICATION, RADAR -- MISSILE CONTROL,
SURVEILLANCE, DETECTION).

WHY SPECTRUM EMPHASIS?

- o Limited & Highly Contested Natural Resource.
- o Common Denominator of All C-E.
- o Government Dependence -
 - National Defense, Safety of Life & Property,
 - Resource Management, Advancement of Science
 - & Technology, Mobilization Preparedness.
- o A Key For Telecom Policy Making.

SPECTRUM MANAGEMENT -- A BASIS FOR TELECOM POLICY

- o R. F. Spectrum is a Technological Base For Most Telecom Systems.
- o All Telecom Systems Affected By Efficiency of Spectrum Use.
- o Basically a Conflict Resolution Process.
- o Dictates Periodic Review of Effectiveness of Telecom Systems.
- o Basis for Weighing Costs & Effectiveness of Telecom Options.
- o Vehicle for Technological Change in Evolutionary Fashion.

EXTENT OF GOVERNMENT USE -

124,077 Authorizations

12,320 Frequencies

4-6,000 Changes Per Month

> \$ 50 B Depreciated Value

> 50 % C-E Industry Output

\$12.71 B in 1969

REGULATION -

- o International (ITU) (137 Member Nations)
- o National (Communications Act of 1934)

FCC - regulate interstate and foreign commerce in communication by wire and radio; assign radio frequencies

President (305) - assign radio frequencies to Government stations and classes of stations.

(606) - Wartime Powers.

- o E.O. 10995 - assign radio frequencies to Government agencies; ensure good management.

RESPONSIBILITIES OF OTP --

- o Policy Guidance and Direction.
- o Administer the Resource.
- o Support for International Negotiations.

NEEDS --

- to develop Executive Branch policy on the use and management of the radio frequency spectrum by Government and non-Government users taking into account technical, social and economic aspects and to conduct analyses in support of the formulation of such policy.
- to develop and promulgate policies and procedures applicable to Government agencies on the acquisition and use of radio frequency resources.
- to maintain cognizance of Government frequency requirements to facilitate:
 - (1) the assignment, amendment, modification or revocation of frequency authorizations to individual agencies.
 - (2) the division of radio frequency resources between Government and non-Government users.
 - (3) the development of United States positions for international conferences involving radio frequency matters.
 - (4) the availability of a development plan designed to accommodate changing needs, under both peacetime and mobilization conditions.

- to analyze the actual use of frequencies by Government agencies and determine whether such frequencies are still required and effectively used.
- to ensure Government compliance with the performance criteria necessary to good spectrum management.
- to provide policy guidance and direction within the Executive Branch with respect to:
 - (1) research and analysis in the areas of radio propagation, radio systems characteristics, and operating techniques leading to improved utilization of the radio frequency spectrum.
 - (2) the development and operation of the National Electromagnetic Compatibility Analysis Facility (NECAF).
 - (3) the administrative, technical and ADP support required by the Interdepartment Radio Advisory Committee (IRAC).

CURRENT MAJOR TASKS --

MEET UNSATISFIED SPECTRUM REQUIREMENTS.

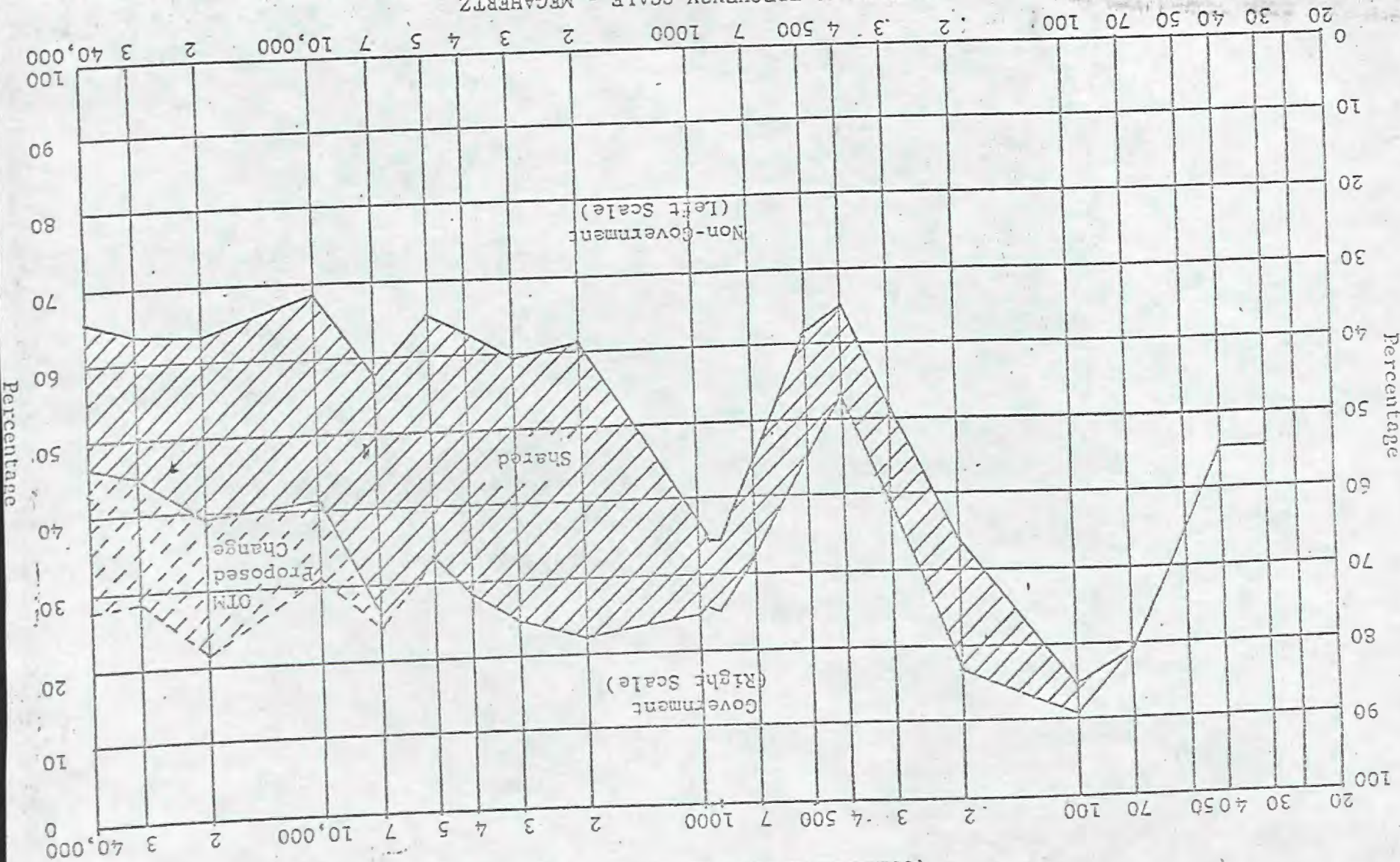
- o FY 1955 - 16,700 Assignment Actions) New needs constantly arising --
FY 1969 - 51,794 Assignment Actions) APOLLO, Direct Broadcasting, GOES,
(30% over FY 1968)) Defense, Environment Control.
FY 1970 - 60,500 Assignment Actions
- o Policy Guidance and Direction
 - National Objectives
 - Manual
 - Resolve Issues
- o National Table of Frequency Allocations
- o Mobilization Planning
- o International Registration

Continuation

DIVISION OF THE RADIO SPECTRUM BETWEEN GOVERNMENT AND NON-GOVERNMENT - 1969

(Cumulative--30 MHz to Any Frequency)

LOGARITHMIC FREQUENCY SCALE - MEGAHERTZ



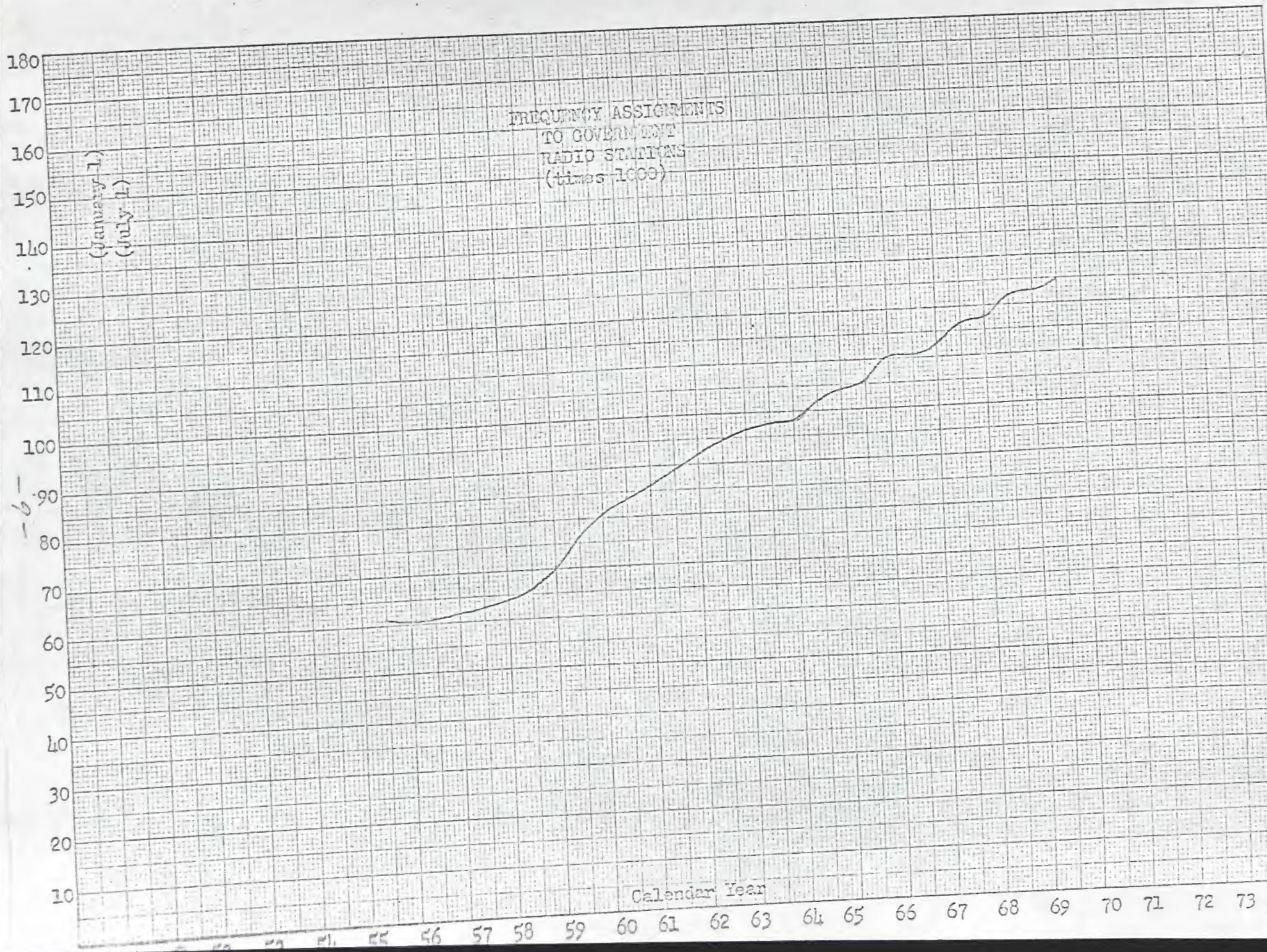
737

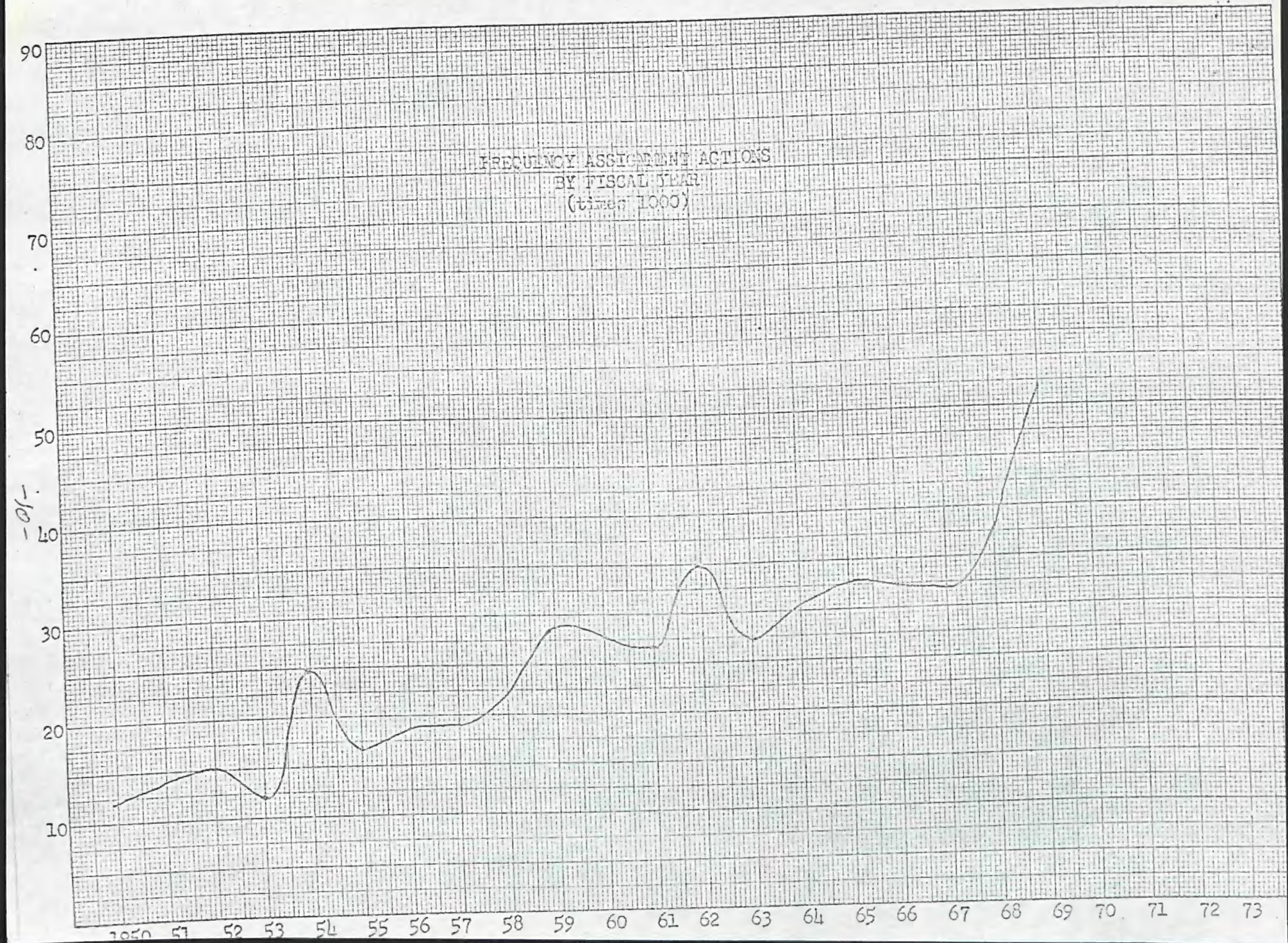
SELECTED GOVERNMENT FREQUENCY ASSIGNMENT DATA
(As of January 1, 1970)

Department or Agency	Discrete Freq. *	Freq. Assignments		
		Number	%	Rank
Agriculture	289	7,213	5.81	6
Air Force	4,693	24,417	19.78	2
Architect of the Capitol	1	1		
Army	3,279	18,826	15.17	4
Atomic Energy Commission	807	2,400	1.93	9
Coast Guard-DOT	(756)	(7,523)	(6.06)	
Commerce	537	3,223	2.60	8
Federal Aviation Administration-DOT	(1,454)	(17,618)	(14.20)	
Federal Communications Commission	23	1,247	1.01	10
Federal Reserve System	9	32	.03	
General Services Administration	18	58	.05	
Health, Education & Welfare	78	252	.20	
Housing & Urban Development	1	1		
Interior	1,016	7,878	6.35	5
International Boundary & Water Comm.	12	23	.02	
Joint Assignments	271	590	.48	
Justice	401	6,975	5.62	7
Library of Congress	1	1		
National Aeronautics & Space Admin.	373	952	.77	
National Science Foundation	51	92	.07	
Navy	3,821	21,371	17.22	3
Office of Economic Opportunity	1	7		
Post Office	43	180	.15	
Smithsonian Institution	17	20	.02	
State	59	68	.05	
Tennessee Valley Authority	123	542	.44	
Transportation (other than CG & FAA)	(62)	(154)	(.12)	
" -Total	2,272	25,295	20.39	1
Treasury	170	1,101	.89	11
U. S. Capitol Police	2	2		
United States Information Agency	363	1,023	.82	12
Veterans Administration	50	191	.15	
Other	85	96	.08	
Totals (do not * column)	12,320	124,077		
Military Services			52.08	
Transportation			20.39	
Total			72.47	

Distribution with Frequency

Below 2,505 kHz	761	5,971	4.8
2,505 to 24,990 kHz	5,083	36,251	29.2
24,990 kHz to 162 MHz	2,143	19,803	16.0
162 to 174 MHz	612	20,464	16.5
174 to 420 MHz	1,697	15,969	12.9
420 MHz and above	2,024	25,619	20.6



FREQUENCY ASSIGNMENT ACTIONS
BY FISCAL YEAR
(times 1000)

HOW IS SPECTRUM USED?

- o 5-year review program instituted. (1968 - 45,000 assignments reviewed -- updated or deleted; 26 MHz to FCC; 35,000 reviewed in FY 70).
- o Federal Government Usage Program --
 - 4-30 MHz - (30,000 reports/quarter).
 - VHF) Under development -- 5-year effort.
 - UHF)
- o Inspection Program
- o Future -- Trends, \$ in detail.

MODERN MANAGEMENT METHODS

- o Computer Support (NRAC)

Data Handling (\approx 600,000 line entries, \approx 40 data elements per line entry).

Models for Frequency Selection.

Quick Reaction Capability (Civil Disturbances -- 50 major cities).

- o Data Communications -- Agency to agency, remote access.
- o Efficiency Analysis -- Best methods, new techniques.

IMPROVED ENGINEERING -- National and Local

- o JTAC -- OTM instigated, 4 years, 200 experts, \$2M.

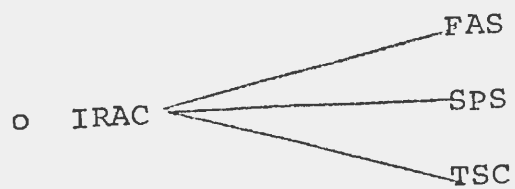
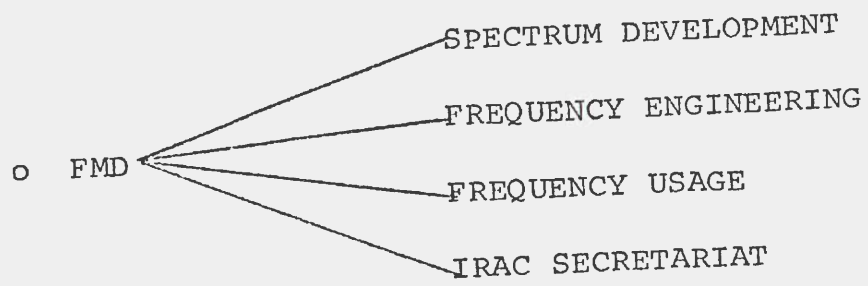
"SPECTRUM ENGINEERING - THE KEY TO PROGRESS."

- o Presidential Task Force -- Engineer vice Block Allocations.
- o Improved Standards -- TSC, EIA.
- o Analytical Capability -- NECAF
- o Monitoring Tool
- o Local Engineering
- o Better Data Base

ADVANCEMENTS IN STATE OF ART

- o Frequency Support for Advancements in Space Technology -- COMSATS, ERS, GOES, Direct Broadcasting, Radio Astronomy, Research.
- o WARC - June 1971 -- 137 Countries.
- o Value Indexes -- technical/economic/social - NAE.
- o Figures of Merit -- JTAC.
- o Side Effects -- ERMAC.

SUPPORT STRUCTURE -



o FMAC

o ERMAC

o CCIR

CONTRACT SUPPORT -

o Current -

-Usage Information Handling Techniques/NECAF SACHS/FREEMAN	\$88,970	(FY 69/70)
-Spectrum Monitoring S.R.I.	\$102,755	(FY 70)
-Economic & Social Values NAE	\$75,000	(FY 70)
-ADP Development H R B - SINGER	\$101,000	(FY 70)
-Maritime Satellite Requirements	\$5,000	(FY 70)
-RIPP NASA/ITS	\$500,000	(FY 69)
-Standards MELPAR	\$74,895	(FY 69)
-Orbital Spectrum Studies G.E.	\$76,373	(FY 69)

CONTRACT SUPPORT -

o FY 71 Proposed -

- Improved Computer (ADP) Support. (200K)
 - Improved Spectrum Development
 - (a) Ensure Modern Technology Employed (Standards).)
 - (b) Control of Electronic Pollution (Noise).) (150K)
 - (c) Experiment in Spectrum Management Alternatives)
 - Improved Management Techniques
 - (a) Implement Monitoring Capability (Enforcement)) (150K)
 - (b) Better Management Tools (Graphic Display Techniques).) _____
- \$500K

NECAF

\$960K

MAJOR PROBLEMS -

- o Lack of Appreciation High Levels

- o Plan Ahead -

 - Space WARC

 - Priorities

 - Next Decade in R.F. Spectrum

- o More Engineering
 - Staff
 - Consultants
 - Contract Studies

 - Analysis Capability

 - Better Data Base

 - Alternate Means

 - Standards

 - Conservation

 - Pollution

 - Side Effects

- o Economic/Social Values

- o Long Range Solution Re Personnel Support

 - Interdisciplinary

 - Graduate Schools

 - (Engineering/Law/Sociology/Economics)

NEED - More Muscle and More Brains

SELECTED GOVERNMENT FREQUENCY ASSIGNMENT DATA

(As of January 1, 1970)

Department or Agency	Discrete Freq. *	Freq. Assignments			C-E Applications
		Number	%	Rank	
Agriculture	289	7,213	5.81	6	National forest management and fire fighting, insect and disease control, soil conservation.
Air Force	4,693	24,417	19.78	2	National defense (communications, surveillance, missile control, navigation, etc.,).
Architect of the Capitol	1	1			Facility security.
Army	3,279	18,826	15.17	4	National defense (communications, surveillance, missile control, navigation, etc.,).
Atomic Energy Commission	807	2,400	1.93	9	Development, testing, "readiness to test."
Coast Guard (DOT)	(756)	(7,523)	(6.06)		Marine safety, oceanography, law enforcement, military readiness.
Commerce	537	3,223	2.60	8	Weather Bureau (radar, satellites), radio research, Coast & Geodetic Survey, National Bureau of Standards.
Federal Aviation Administration (DOT)	(1,454)	(17,618)	(14.20)		Aviation safety and control.
Federal Communications Commission	23	1,247	1.01	10	Monitoring support and enforcement.

Department or Agency	Discrete Freq. *	Freq. Assignments			C-E Applications
		Number	%	Rank	
Federal Reserve System	9	32	.03		Facility security.
General Services Administration	18	58	.05		Facility security.
Health, Education & Welfare	78	252	.20		Remote H.F. Alaska, research, facility security.
Housing & Urban Development	1	1			Facility security.
Interior	1,016	7,878	6.35	5	Land and wildlife management, law enforcement, civil communications (Trust Territories), irrigation & power projects (Bonneville).
International Boundary & Water Comm.	12	23	.02		Hydrological conservation and facility security.
Joint Assignments	271	590	.48		
Justice	401	6,975	5.62	7	Law enforcement.
Library of Congress	1	1			Facility security.
National Aeronautics & Space Admin.	373	952	.77		Security, safety, communications, telemetry, ranging and tracking, navigation support, research.
National Science Foundation	51	92	.07		Research

Department or Agency	Discrete Freq. *	Freq. Assignments			C-E Applications
		Number	%	Rank	
Navy	3,821	21,371	17.22	3	National defense (communications, surveillance, missile control, navigation, etc.,).
Office of Economic Opportunity	1	7			Facility security.
Post Office	43	180	.15		Facility security, law enforcement.
Smithsonian Institution	17	20	.02		Facility security.
State	59	68	.05		Embassy radio - D. C. area.
Tennessee Valley Authority	123	542	.44		Telemetering, facility management and security.
Transportation (other than CG & FAA)	(62)	(154)	(.12)		
" -Total	2,272	25,295	20.39	1	Research, road construction, high speed train.
Treasury	170	1,101	.89	11	Law enforcement, secret service, facility security.
U. S. Capitol Police	2	2			Facility security.
United States Information Agency	363	1,023	.82	12	High frequency broadcast.
Veterans Administration	50	191	.15		Facility security.
Other	85	96	.08		
Totals (do not * column)	12,320	124,077			

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF TELECOMMUNICATIONS POLICY
FREQUENCY MANAGEMENT DIRECTORATE

ORGANIZATIONAL LOCATION OF AGENCY FREQUENCY MANAGEMENT ACTIVITY

<u>Department or Agency & Organization</u>	<u>Official</u>	<u>Telephone</u>
<u>AGRICULTURE, Department of - Secretary</u>		
1. Departmental Administration - Director, Plant & Operations	Honorable Clifford M. Hardin Elmer Mostow *	111-3631
1. Rural Development & Conservation - Assistant Secretary		
2. Forest Service - Chief	Edward P. Cliff	
3. Communications & Electronics Branch	W. B. Morton #	1234-203
<u>ATOMIC ENERGY COMMISSION - Chairman</u>		
1. General Manager	Dr. Glenn T. Seaborg	119-5601
2. Operations - Assistant General Manager	R. E. Hollingsworth	
3. Division of Construction - Director	John A. Erlewine	
4. Logistics - Assistant Director	John A. Derry*	119-3157
5. Staff Communications Branch	D. R. Swindle	
	N. M. Snell	119-3047
	G. E. Dodrill #	119-3046
<u>COMMERCE, Department of - Secretary</u>		
1. Science & Technology - Assistant Secretary	Honorable Maurice H. Stans	189-2113
2. Office of Telecommunications - Director	Honorable (Dr.) Myron Tribus	189-3111
3. Radio Frequency Management - Director	Dr. John M. Richardson	189-5171
	James E. Ogle #	189-5446
	W. J. Van Winegarden %	189-5446

Notes: * Designated as Policy Liaison with OTM
IRAC Representative
+ IRAC Liaison
% IRAC Emergency Supplemental Group
@ Member MCEB
\$ Member JFP (MCEB)

DEFENSE, Department of - Secretary

1. Administration - Assistant Secretary
2. Installations & Logistics - Assistant Secretary
3. Supply & Services - Deputy Assistant Secretary
4. Directorate for Telecommunications Policy - Director

1. Joint Chiefs of Staff - Chairman
2. Military Communications-Electronics Board - Chairman
3. J-6 (Communications-Electronics) - Director
4. Joint Frequency Panel (JFP) - Chairman

1. Defense Research & Engineering - Director

ARMY, Department of - Secretary

1. Chief of Staff
2. Deputy Chief of Staff for Military Operations
3. Assistant Chief of Staff, Communications-Electronics
4. Frequency Management Directorate - Director
Deputy Director
Spcl Asst for FM

NAVY, Department of - Secretary

1. Chief of Naval Operations
2. Assistant Chief of Naval Operations
(Communications & Cryptology)
3. Assistant for Radio Frequency & Electromagnetic Compatibility

AIR FORCE, Department of - Secretary

1. Chief of Staff
2. Program & Resources - Deputy Chief of Staff
3. Command Control & Communications - Director
4. Frequency Management Group - Chief

Honorable Melvin R. Laird 11-55261
Honorable Robert F. Froehlke 11-78225
Honorable Barry J. Shillito 11-55254
11-71368
LG Harold W. Grant, USAF (Ret)* 11-44671

Adm Thomas H. Moorer, USN 11-79121
LG Richard P. Klocko, USAF 11-43115
MG A. T. Shtogren, USAF 11-71998
Col. John Ledding, J-6 11-75104

Dr. John S. Foster, Jr. 11-79111
Dr. Gardner L. Tucker 11-57345
Herbert D. Benington 11-57245

Honorable Stanley R. Resor 11-53211
Gen W. C. Westmoreland, USA 11-52077
LG Bruce Palmer, Jr., USA 11-54371
MG George E. Pickett, USA 11-56604
Col. Thomas W. Doeppner, USA 11-52903
11-52903
A. R. Rasmussen # % 11-53115

Honorable John H. Chafee 11-53131
Adm Zumwalt, USN 11-56007

R Adm F. J. Fitzpatrick, USN 11-57284
Capt Dale Brumbaugh, USN # 11-77222
V. G. Stingley \$ 11-77222
J. McDonald % 11-60882

Honorable Robert C. Seamans, Jr. 11-77376
Gen John P. Ryan, USAF 11-79225
LG G. S. Boylan, Jr., USAF 11-55226
MG Gordon T. Gould, USAF *@ 11-56324
Robert H. Simmons # 11-69383
11-69383
D. A. Davis % 11-69269

FEDERAL COMMUNICATIONS COMMISSION - Chairman

Defense Commissioner

1. Chief Engineer
2. ACE & Chief, Frequency Allocation & Treaty Division

Honorable Dean Burch	9-632-6336
Honorable Robert Wells	9-632-
William H. Watkins	9-632-7060
S. M. Myers +%	9-632-7025
W. R. Torak %	9-632-7025
Wilkes %	9-632-7025

GENERAL SERVICES ADMINISTRATION - Administrator

1. Transportation & Communications Service - Commissioner
2. Transportation & Communications - Deputy Commissioner
3. Utilities & Communications Management - Assistant Commissioner
- 4.

Honorable Robert L. Kunzig	183-4312
Robert M. O'Mahony	183-5246
Elmer D. Jones	183-2178
	183-5335
H. H. Merkel	183-5185

HEALTH, EDUCATION & WELFARE, Department of - Secretary

- 1.
- 2.
- 3.
- 4.

Honorable Elliot L. Richardson

Paul A. Miller +	13-27953
------------------	----------

HOUSING & URBAN DEVELOPMENT, Department of - Secretary

- 1.
- 2.
- 3.
- 4.

Honorable George W. Romney

R. Althaus +	9-755-5123
--------------	------------

INTERIOR, Department of - Secretary

1. Administration - Assistant Secretary
2. Office of Management Operations - Director
3. Telecommunications Staff Office - Chief

Honorable Walter J. Hickel	183-6704
----------------------------	----------

S. L. Windes *#%	183-6758
------------------	----------

JUSTICE, Department of - Attorney General

1. Executive Assistant to The Attorney General
2. Federal Bureau of Investigation - Director
3. Laboratory Division - Assistant Director
4. Radio Engineering Section

Honorable John N. Mitchell	187-2101
Sol Lindenbaum *	
Honorable J. Edgar Hoover	
Ivan W. Conrad	175-776
E. J. Landreville #%	175-726

LABOR, Department of - Secretary

- 1.
- 2.

Honorable James D. Hodgson

Albert C. Lockmuller +

110-4584

NATIONAL AERONAUTICS & SPACE ADMINISTRATION - Administrator

1. Deputy Administrator
2. Associate Deputy Administrator
3. Associate Administrator for Tracking & Data Acquisition
4. Operations, Communications and ADP - Director
5. Communications & Frequency Management Section - Chief

Honorable (Dr) Thomas O. Paine

128-21271

Willis H. Shapley *

13-24715

G. M. Truszynski

H. R. Brockett

Paul A. Price

13-20131

J. B. McElroy #

13-20131

NATIONAL SCIENCE FOUNDATION - Director

- 1.

Dr. William D. McElroy

Dr. E. H. Hurlburt+

9-632-4188

OFFICE OF ECONOMIC OPPORTUNITY-Director

1. Telecommunications Division, Chief

Honorable Nicholas Bromfeld

R. W. Mackey+

179-3350

PEACE CORPS - Director

- 1.

Joseph H. Blatchford

Tedson J. Meyers +

POST OFFICE DEPARTMENT - Postmaster General

- 1.
- 2.

Honorable Winton M. Blount

John E. Lloyd+

177-7685

SMITHSONIAN INSTITUTION

- 1.

R. S. Minnich +

144-5658

STATE, Department of - Secretary

1. Political Affairs - Under Secretary of State
2. Administration - Deputy Under Secretary
3. Communications - Deputy Assistant Secretary

Honorable William P. Rogers

632-9630

Honorable U. Alexis Johnson

632-2471

William Goodman *

632-9251

Jacaruso

632-1000

1. Economic Affairs - Deputy Under Secretary of State

Honorable Nathaniel Samuels

2. - Assistant Secretary

Honorable Phillip Trezise

3. Transportation & Telecommunications - Dep. Asst. Secy.

Bertram Rein

632-1498

4. Office of Telecommunications - Director

William K. Miller

632-2592

Gordon Huffcutt #

632-2631

TRANSPORTATION, Department of - Secretary

1. Research and Technology - Assistant Secretary
2. Telecommunications Policy - Director

FEDERAL AVIATION ADMINISTRATION - Administrator

1. Development - Associate Administrator
2. Systems Research & Development Service - Director
3. Frequency Management Division - Chief

U. S. COAST GUARD - Commandant

1. Office of Public & International Affairs
2. Telecommunications Liaison Division - Chief

TREASURY, Department of - Secretary

1. Administration - Assistant Secretary
2. Office of Radio Frequency Management - Director

U. S. CAPITOL POLICE

- 1.

UNITED STATES INFORMATION AGENCY - Director

1. Broadcasting Service - Director
2. Engineering Manager
3. Frequency Division

VETERANS ADMINISTRATION

- 1.
- 2.

Honorable John A. Volpe

Richard L. Beam

13-33855

Honorable John H. Shaffer

13-25111

13-25444

John A. Weber

13-27001

William B. Hawthorne #

13-27068

C. H. Stadler %

13-27087

Adm Willard J. Smith

R Adm R. Y. Edwards

Joe L. Stewart #

13-35148

W. A. Pappas %

"

Honorable David M. Kennedy

Honorable A. E. Weatherbee *

Harold R. Patterson #

184-8011

R. O. Myers %

"

Zeke Johnson+

9-225-2456

Honorable Frank Shakespeare, Jr. 9-632-4906

Honorable

Edgar T. Martin *

9-755-4778

George Jacobs #

9-755-4711

W. R. Martin %

C. C. Noble +

148-5125

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF EMERGENCY PREPAREDNESS

FREQUENCY MANAGEMENT ADVISORY COUNCIL - - -

Chair-W. E. Plummer 395-5180
Exec. Secy.-P. F. Siling 395-5174

ELECTROMAGNETIC RADIATION MANAGEMENT ADVISORY COUNCIL - - -

Chair-W. E. Plummer 395-5180
Exec. Secy.-P.F.Siling 395-5174

DIRECTOR
OF
TELECOMMUNICATIONS MANAGEMENT

W.E.Plummer-Acting 395-5180

- INTERDEPARTMENT RADIO ADVISORY COMM.

Chair-W. Dean, Jr. 395-5623
Exec. Secy. C.R.Kirkevold 395-5610

FREQUENCY ASSIGNMENT SUBCOMMITTEE

Chair-Lyman G. Hailey 395-5616

SPECTRUM PLANNING SUBCOMMITTEE

Chair-Lt Col Leo Buss 395-4636

TECHNICAL SUBSOMMITTEE

Chair-G.V.Stelzenmuller 395-5623

Staff

LEGAL COUNCIL

John O'Malley 395-5174

EXECUTIVE ASSISTANT

J.R.O'Connell 395-5174

ASSOCIATE DIRECTOR
INTERNATIONAL TELECOMMUNICATIONS

R. L. Clark-Acting 395-5196

-International Telecommunications
Col. W. T. Olsson-Actng 395-5190
-Advanced Technology
Richard G. Gould 395-5190

ASSOCIATE DIRECTOR
NATIONAL TELECOMMUNICATIONS

W. E. Plummer 395-5180

-National Telecommunications
David B. Hall 395-5186
-Domestic Telecommunications
Henry Jones-Acting 395-5186
-Telecommunications Readiness
Charles E. Lathey 395-5170
-Standards
Arthur Cooke 395-5186
-Teleprocessing
C. H. Culpepper 395-5186

ASSOCIATE DIRECTOR
FREQUENCY MANAGEMENT

W. Dean, Jr. 395-5623

-Spectrum Development
D. M. Jansky 395-4636
-Frequency Engineering
G.V.Stelzenmuller 395-5623
-Frequency Usage
Lyman G. Hailey 395-5616
-IRAC Secretariat
C. R. Kirkevold 395-5610