U.S. COMMUNICATIONS POLICY:
A SURVEY AND DATABASE OF EXECUTIVE ORDERS
AND CONGRESSIONAL ACTS OVER 24 YEARS

Vincent Marier

Program on Information Resources Policy
Harvard University
Center for Information Policy Research
Cambridge, Massachusetts
A publication of the Program on Information Resources Policy.

U.S. COMMUNICATIONS POLICY: A SURVEY AND DATABASE OF EXECUTIVE ORDERS AND CONGRESSIONAL ACTS OVER 24 YEARS
Vincent Marier
July 1986, P-86-5

Project Director: Oswald H. Ganley

The Program on Information Resources Policy is jointly sponsored by Harvard University and the Center for Information Policy Research.

Chairman: Anthony G. Oettinger
Managing Director: John C. LeGates
Executive Director: John F. McLaughlin
Executive Director: Benjamin M. Compaine
Executive Director: Oswald H. Ganley

Vincent Marier is a senior manager in the telecommunications and computer services directorate at the National Security Agency. He developed this database while he was a visiting research fellow with the Program.

Copyright restrictions: The files on the disk are copyrighted by the Program on Information Resources Policy at Harvard University and are protected under Title 17 of the U.S. Code (See PL 96-517, Dec. 12, 1980, on the disk.)
PROGRAM ON INFORMATION RESOURCES POLICY

Harvard University

Affiliates

Action for Children’s Television
American Telephone & Telegraph Co.
Ameritech Publishing
Anderson, Benjamin & Read
Apple Computer, Inc.
Arthur D. Little, Inc.
Auerbach Publishers Inc.
Automated Marketing Systems
BellSouth Corporation
Bell Atlantic
Booz-Allen & Hamilton, Inc.
Cellular One
CBS Broadcast Group
Commission of the European Communities
Communications Workers of America
Computer & Communications Industry Assoc.
Copley Newspapers
Cowles Media Co.
Dai-Ichi Kangyo Bank, Ltd. (Japan)
Databit Inc.
Dialog Information Services, Inc.
Digital Equipment Corp.
Direction Generale
    des Télécommunications (France)
Dow Jones & Co., Inc.
Economics and Technology, Inc.
EIC/Intelligence Inc.
L.M. Ericsson (Sweden)
Gannett Co., Inc.
GTE Corporation
Hitachi Research Institute (Japan)
Honeywell, Inc.
Hughes Aircraft Co.
IBM Corp.
Information Gatekeepers, Inc.
International Data Corp.
International Resource Development, Inc.
Invoco AB Gunnar Bergvall (Sweden)
Knowledge Industry Publications, Inc.
Lee Enterprises, Inc.
Lotus Development Corp.
John and Mary R. Markle Foundation
Martin Marietta Corp.
MCI Telecommunications, Inc.
McKinsey & Co., Inc.
Mead Data Central
MITRE Corp.
Motorola, Inc.
National Telephone Cooperative Assoc.
NEC Corp. (Japan)
Nippon Telegraph & Telephone Corp. (Japan)

Center for Information Policy Research

Northern Telecom Ltd. (Canada)
NYNEX
Ing. C. Olivetti & C., S.p.A. (Italy)
The Overseas Telecommunications
Commission (Australia)
Pacific Telesis Group
Pitney Bowes, Inc.
Public Agenda Foundation
RCA Corporation
Reader’s Digest Association, Inc.
Research Institute of Telecommunications
and Economics (Japan)
RESEAU (Italy)
Salomon Brothers
Scaife Family Charitable Trusts
SEAT S.P.A. (Italy)
Seiden & de Cueva, Inc.
Southern New England Telecommunications Corp.
State of Minnesota Funding
State of Nebraska Telecommunications
and Information Center
Telecommunications Research
Action Center (TRAC)
Telecom Plus International, Inc.
Telematix International Ltd.
Third Class Mail Association
Times Mirror Co.
TRW Inc.

United States Government:
    Central Intelligence Agency
    Department of Commerce:
        National Oceanographic and
        Atmospheric Administration
        National Telecommunications and
        Information Administration
    Department of Health and Human Services
    National Library of Medicine
    Department of State
        Office of Communications
        Federal Communications Commission
        Federal Emergency Management Agency
        National Aeronautics and Space Admin.
        National Security Agency
    U.S. Army:
        Office of the Assistant Chief of
        Staff for Information Management
    United States Information Agency
    United States Postal Rate Commission

US West
United Telecommunications, Inc.
The Washington Post Co.
ACKNOWLEDGMENTS

Special thanks are due to the following persons who reviewed and commented critically on drafts of this report. These reviewers and the Program's affiliates are not, however, responsible for or necessarily in agreement with the views expressed herein, nor should they be blamed for any errors of fact or interpretation.

Anne Branscomb
Joan R. Bregman
Carolyn S. Burger
John W. Guy, III
Robert M. Hetterly
David Johnson
Yasukuni Kotaka
Jennifer L. Marks
Herbert E. Marks
John A. Mellen
Nette Nelson
Karen B. Possner
Thomas Potworowski
E. Laurence Povich
Robert Ribera
Hank Segal
Yoshiyuki Takano
Julia B. Wetzel
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>Caveat</td>
<td>ii</td>
</tr>
<tr>
<td>Notice to the Reader</td>
<td>iii</td>
</tr>
<tr>
<td>Observations on U.S. Communications Policy</td>
<td>1</td>
</tr>
<tr>
<td>The Record Summarized</td>
<td>7</td>
</tr>
<tr>
<td>Technical Considerations and Instructions for</td>
<td>13</td>
</tr>
<tr>
<td>Using the Disk</td>
<td></td>
</tr>
<tr>
<td>Disk Table of Contents</td>
<td>23</td>
</tr>
</tbody>
</table>
Executive Summary


- The database contains citations formatted to be searched by topic of interest.

- Major communications policy statements have appeared historically within policy for emergency preparedness, national security, intelligence, government's role in private industry, fairness and equity, and international relations.

- U.S. communications policy also reflects conflicting goals, between, for example, the public's right to know and the government's need for secrecy; between the need for emergency preparedness and the chief executive's statutory impotence, except in emergency, over the nation's communications facilities; and between the desire to regulate the common carriers' charges so that the public pays in proportion to costs and the desire to subsidize needy segments of society.

- Excluded from the survey are policy changes directed by the Federal Communications Commission as a result of its regulatory processes.
These summaries of policy are by their very nature selective and thus may suffer from omissions. The Program on Information Resources Policy believes them to be accurate, but assumes no liability for inaccuracies. Readers should consult the original record for details and specific language.
Notice to the Reader

This paper surveys changes to U.S. communications policy during the years 1961-1984. The document is comprised of very different parts. The first part, "Observations on U.S. Communications Policy," consists of observations on the nature of policy changes and is in printed form. The second part is on a computer diskette. It is a reference file of citations and summaries of policy changes. As a reference file it is not meant to be read as a story from beginning to end, but rather to be used more as a dictionary, with topics of interest chosen selectively. The information on the diskette also forms the basis of the observations made in the printed introduction. This format is experimental — the first publication done in this manner by the Program on Information Resources Policy at Harvard University.

Because the reference file supports the observations made in the printed introduction, it does not contain traditional citations. Instead, citation references are made by a policy identifier which can in most cases be found in the disk file accompanied by a summary. These identifiers appear in the traditional legal form, such as PL 98-356 which means the 356th public law passed by the 98th Congress. Policies referenced but not appearing in the file were made outside the time period covered by the file and are identified by an accompanying asterisk.
OBSERVATIONS ON U.S. COMMUNICATIONS POLICY

Who's in Charge?

This research project began in an attempt to uncover and to understand the continuing cycles of change in U.S. communications policy and in the organizations involved in these policies. Repeated reorganizations and the apparent redistribution of policy responsibilities have suggested to some that no one is in charge. Is this true?

How Was This Question Addressed?

To explore the question of who is in charge, this study assembles a comprehensive collection of policy statements that have survived the U.S. political process. While the collection documents the changes, its primary goal was to uncover not only the "whys" behind the changes but also other forces that motivated them. The legislative histories and other documents were relied upon to provide this background; if some of the forces behind the changes were known, the answer to the who's-in-charge question might be a little clearer.

Excluded from this survey were policy changes directed by the Federal Communications Commission (FCC) as a result of its regulatory processes. In general, this survey only included documents that required a presidential signature such as executive orders and legislative acts. This is not to judge the importance of FCC policy changes during this period; they simply were outside the domain of the survey.

What Happened?

As this collection grew, a number of subject areas emerged, intermingled with communications policy. Principally, communications policy was enmeshed within policy for emergency preparedness, national
security, intelligence, government's role in private industry, fairness and equity, and international relations. This intermingling was extensive, bringing in diverse forces concerned primarily with other policy concerns: Communications is used as a means to achieve other policy goals.

**Goals in Conflict**

This collection of policy statements shows a number of conflicting forces and goals competing for priority.

There is the continuing conflict between the efficiency and responsiveness of the Federal Communications Commission at odds with its lengthy procedures to assure fairness and the public interest [PL 88-306].

There is the conflict between the public's right to know at odds with the government's need for secrecy [EO 11652].

There is the conflict over control of emergency preparedness, a conflict between the government's need to be prepared for emergencies and the chief executive's statutory impotence (except when actually in an emergency) over the nation's communications facilities [47 USC 706*].

There is the story of the government's attempt to forge a national public broadcasting system in a private broadcasting nation. It began with financial uncertainty and grew until congressional charges of "serious [fiscal] mismanagement of National Public Radio" led to the resignation of Radio's top management [PL 98-214].

There is the conflict between the desire to regulate the common carriers' charges so that the public pays in proportion to costs and the desire to subsidize rural and handicapped segments of the society [PL 97-410].
There is the story of the Interdepartmental Radio Advisory Committee called IRAC. This committee, which antedates the Communication Act, has never had statutory authority, yet it is the forum for the resolution of conflicts over frequency assignments. It was the work of this committee which produced the division of the spectrum between government and non-government "ownership," a division that crept into the Code of Federal Regulation [CFR 2.1*] under the guise of being part of the International Geneva Radio Convention which it is not. The Land Remote-Sensing Commercialization Act of 1984 [PL 98-365] provides an example of the conflicts that arise in this arena.

Where is the Policy Power?

In tracing back to the roots of the division of responsibility for U.S. communications policy, the analysis repeatedly returns to the primary source, the U.S. Constitution. While this observation may seem obvious, the extent of this document's influence on the policy process was not obvious at the beginning of this research.

Congress was made responsible for interstate commerce, the states for their own intrastate commerce. The president was made responsible as commander in chief and treaty maker (with the advice and consent of the Senate). The judiciary was made responsible for adjudication of legal conflict. Individuals were left with the freedom to pursue their own interests.

Congress chose not to delegate its share of responsibility to the executive branch for management of interstate communications, with one major exception. Instead, it spawned its own operational and policy entity, the Federal Communications Commission, and gave it quasi-
legislative responsibility while severely restricting its discretion by dictating many of its procedural mechanisms.

In the exception just mentioned, Congress gave the president control over the management of radio communications through stations the federal government owns and operates, as well as through the president's treaty-making and chief-of-forces powers.

The judicial branch's role is through its constitutionally vested power extended to "all cases, in law and equity." Thus it was the federal court that recently provided the forum for the effort to dismember the major national communications carrier, AT&T.

As a result of this seminal division, policy control is dispersed across the three branches of the federal government, the states, and private individuals. The powers not only appear distributed but also somewhat independent. For example, the Communication Act of 1934, which chartered the Federal Communications Commission, did not and still does not make the Commission responsible (i.e. subordinate) to the president under normal conditions (absence of declared emergencies). Even in emergencies, the president's powers over the Commission are carefully limited [47 USC 706]. It is, therefore, questionable whether any executive order signed by the president can strictly regulate the Commission's activities.

If the president is not in charge of communications policy, then the president has no power or control over policy to delegate within the executive branch, since power must be possessed to be delegated. Thus, as in the establishment of the Office of Telecommunications Policy [OTP] which was later dissolved, attempts to make a communications policy
office within the Executive Office or elsewhere within this branch will be under broad constraints.

Individuals and private institutions build and own much of the nation's communications capability. Many of the proposals of what to build, how to build it, where to put it, and how to run it emanate from the private sector. The federal and state governments, in the main, authorize and encourage. There is a curious public perception and national tradition that public telecommunications services are not provided by the government.

At any rate, history shows (as can be seen in this collection) that policy concerns arise for attention and resolution in many different public and private segments. It is not surprising that many different forums are used, and that the results sometimes seem inconsistent. Competing views have extensive opportunity for appeals. The emergent picture is not one of a federal government organized to produce a single coherent policy. It is a picture of a system explicitly and intentionally divided. It is a system of competition between technological opportunities, political forces, economic tradeoffs, social and security perceptions (of individuals, groups, and the nation), and international concerns. The ebb and flow of these competitive forces leave a jagged wake through the last 24 years of communications policy enactment. There is no captain at the helm because responsibility to steer was dispersed over the crew before the ship was launched. The course is set by the winds and tide of community compromise and national mood.
Bottom Line

Who is in charge? No one and everyone.

This, at least in this observer's view, is not a result of a system broken but of a system working, for better or for worse, exactly the way it was designed.
THE RECORD SUMMARIZED

The second part of this document consists of a collection of policy statements.

It contains information extracted and summarized from executive orders, legislative acts, and other official documents covering the period from 1961 to 1984. These years were chosen because two of the major changes to communications policy occurred during this period. The collection begins in the year that the forward-looking policy concerning international communications satellites was formulated [PL 87-624]. This public law led to the establishment of Comsat and Intelsat, and with subsequent treaties created the foundation for international relationships that were to deal with this then-new technology. The collection ends in the year that the Cable Communications Act became law [PL 98-365]. After years of vacillation, this law attempted to deal with and define national relationships between regulators and providers of cable communications service. To some extent it attempts to set policy over a technology that had already become established. In this sense the Comsat Act looked forward and the Cable Act looked back.

What's Included?

Only subjects that affect national communications and information policy have been included. This record is believed to be reasonably comprehensive. Every executive order or legislative act that was found has been included in the summary if it had any direct bearing on communications, national security handling and classification of information, or emergency preparedness with respect to communications and intelligence.
Included in the list, for example, are the history of the communication excise tax and details of the many reorganizations of the emergency preparedness and telecommunications functions in government. Also included are the sometimes seemingly arcane statutory changes to communications law. The record shows how different forces, such as a recognition of Samoan loyalty to the U.S. [PL 87-445] and the hosting of a World Boy Scout Jamboree [PL 90-58], have brought changes to policy. Different perceptions by different administrations have also changed policy. These assumptions may have been subtle, but their effects are interwoven into the public record.

Treaties made during this period are also included. They reflect U.S. policy's accommodation of international concerns.

What's Excluded from the Collection?

Some policies have not been included in this collection although they are related. These include information-policy-related subjects such as postal service, education, and libraries. In addition, some laws concerning appropriations have been excluded. Also excluded have been FCC policy decisions except where they surface in public laws.

Also excluded are policy statements not on the public record, such as classified appropriations or policy statements protected by executive privilege and not in the literature. National security decision directives fall in this latter class.

What Do the Entries on the Disk Look Like?

The following is a typical entry, shown here to illustrate the
nature of the contents of the collection. The disk includes 200 entries similar to this:

Type: Public Law.
Citation: PL 87-306; 75 Stat 669; S 1990.
Date: Sep 26, 1961.
Title: "Communications Facilities-Malicious Damage".

Summary: This Act provided criminal penalties for "whoever willfully or maliciously injures or destroys any of the works, property, or material of any radio, telegraph, telephone or cable, line, station, or system, or other means of communication, operated or controlled by the United States, or used or intended to be used for military or civil defense functions of the United States." The legislative history set out in HRpt 87-995 laid out the purpose of the act: to "strengthen the criminal law against willful or malicious interference with or destruction of any communication facility used or intended to be used for military or civil defense functions of the United States."

The report also cited the extent to which the internal security of the United States is dependent upon secure, positive, and instantaneous communications recognizing that it "represents the frontline of our defense".

Concern was reflected over communications facilities "operated or controlled by the United States" which were covered by sanctions previous to this act. This term was seen as too narrow in that it did not cover commercial communications systems "used" or "intended to be used" in carrying out defense responsibilities. Types of these systems (e.g. engineered military circuits) were described along with the concern that "It would cost untold billions for the United States to replace the commercial facilities which are enmeshed with the Government-owned or operated facilities and it would likewise require still further millions to provide Government personnel to operate such replacement facilities."

Amended: 18 USC 1362.
End:

Note: The abbreviation "HRpt" stands for House Report and refers to the report produced by the U.S. House of Representatives which reflects part of the legislative history of this Act. (See list of abbreviations for others used.)
What Does an Entry Like This Show about National Communications Policy?

This summary suggests a number of aspects of national communications policy.

For example, within the summary, the motivation for this change to communications policy is described. This legislative change, as do others, points out that government-controlled and operated communications facilities are treated differently, in law, from other communications facilities. As mentioned earlier, federal government radio facilities are exempt from direct Federal Communications Commission regulation and are managed by a separate entity (in fact entities) within the executive branch. Non-federal city police radios, for example, do fall under the aegis of the commission in some respects, while in other respects they can also fall under a state regulatory agency.

This law illustrates, as well, the extent to which the national communications capabilities depend on the private sector, especially in policy concerning emergency preparedness [see EO 12382, Sep 13, 1982 for example]. Because of the architecture of the chartering arrangements, the federal government is left mainly to depend on the voluntary cooperation of private institutions in its efforts to prepare for emergencies.

Most U.S. communications law has been codified into what is called Title 47 of the U.S. Code (Titles are the primary divisions of legal acts or laws). Title 47 is also called, at times, the Communication Act of 1934 (as amended) because that Act originally provided the heart of the Title. That Act also provided the basic structure for federal and non-federal relationships for 50 years. The Act has been continuously
amended over the years although the basic relationships among those affected have remained essentially unaltered.

This example also shows how some communications law is scattered elsewhere in the U.S. Code outside of Title 47. Title 18 contains provisions for criminal sanctions; thus the criminal code is where this amendment was tucked away.

The primary divisions of the Communication Act are also called titles with Title II concerning communication common carriers of telephone and telegraphic services and Title III concerning regulation of the radio spectrum including broadcasting. The exemption referred to above is contained in Title III.

As can be seen throughout this collection, the distinction between these two titles is becoming blurred. The Cable Communication Policy Act of 1984 [see PL 98-365] provides a quintessential example of the incoming fog generated by technological opportunities' having little respect for legal distinctions.
TECHNICAL CONSIDERATIONS AND INSTRUCTIONS FOR USING THE DISK

Why a computer disk?

The collection is presented in the format of a computer-readable disk. Given wide availability of personal computers, using this format hopefully will be more useful to the reader than would traditional approaches to this subject matter. The public record is so tightly interwoven by different subjects that ordering the collection by any particular subject would displace all the other subjects of possible interest. While a large cross-index could be assembled, it might inevitably be cumbersome and tedious to use, suffering from the selectivity of the editor compounded by the difficulty of searching in an alphabetically arranged list for a subject not easily referenced. Also lessened are the bulk and costs of storage of a several-hundred-page document. A computer-searchable file minimizes some of these problems while introducing the new problems of availability of and reader familiarity with a compatible personal computer and software. Compatible systems capable of reading this disk are now ubiquitous. Even if more complicated software to search the disk is not available, a simple 'TYPE' command of text files included on the disk will display and can print the document (see below for instructions). Time will tell if the tradeoffs are worth the exchange.

Experiments will show, however, that even single word or phrase searches through this file can be illuminating. Titles can be retrieved in context serially, a backward reference to a U.S. statute located, and a thread can be traced through organizations. The collection contains many cross-references and identifies names of laws and their many
synonyms which researchers need for tracking down the record.

Technical Format Considerations

This compilation is contained on a machine-readable magnetic medium. The text files are in MS-DOS format (5 1/4" floppy disk), double density, double sided, IBM PC compatible and over 1/4 million characters in length. The [ASCII] files are formatted to aid computer search.

What all this technical gibberish means is that an IBM Personal Computer or a compatible equivalent along with a word processing program can be used to search these files, or tailored programs could be used to suit individual requirements. [WORDSTAR, from Micropro, was used for building the files]. The files were subsequently stripped of internal hidden format characters in order to make them into just plain text files. This was done to increase the probability that more programs will be able to read the files.

There are multiple files, each covering different periods of time. The file was "broken up" into smaller pieces because personal computer programs are, in general, poor at handling large files, and WORDSTAR is no exception.

No programs are supplied. No particular hardware or software is recommended.

Instructions for Use

The following instructions can be used in case no other software is available to read the file.

These instructions assume no special software other than what should be on-hand:

a. a compatible operating system (MS-DOS or PC-DOS version 2 or a later version.) If you don't know whether the system you have
is compatible or the right version, try it out -- you shouldn't be hurting anything if it does not work;

b. for text searches, a program called edlin which is, as a rule, supplied on the same original disk as the operating system.

Directory. Typing DIR followed by a carriage return should list the files on the disk. By the way, DIR stands for directory, one of the many words taken and changed from the English language by software writers. This directory gives an unsorted list of names of files on the disk but does not say where they are: Their location on the disk is not important for our and most other purposes. To ask the directory to list one page at a time, type DIR/P.

Printed copy. To get a printed copy of the files make sure there is a printer connected to the PC and turned on. Then pressing the key combination of CTRL and holding it down while pressing the P key will toggle a software switch. (This key combination is known as the CTRL-p and is only one of the many arcane conventions particular to this type of personal computer). The first time this key combination is used, it turns on the “print switch” and all subsequent characters displayed on the screen will also be sent to the printer. Pressing this key combination again will stop sending characters to the printer.

To print the file named POL1961, place the disk into drive B. The 24 files on the disk are actually named POL1961, POL1963, and so on to POL1984 -- these file names should be used for the year desired. Turn on the print switch (CTRL-p) and enter “TYPE” followed by the name of the file you would like to print followed by a carriage return on a line with the operating system prompt (e.g. “A\>TYPE B:POL1961”) and without further mysterious commands to the computer it should print the file.
"POL1961". Then turn the print switch off (press CTRL-p again) when finished printing.

To do file searches for words, you could buy a "Lexical Electronic Filing" software package (see PC Magazine, August 20, 1985, for a review of several packages). But for only simple searches you could also use the "line editor" called EDLIN which is on the original master disk mentioned above. While this program is documented in the instructions that came along with the disk, a set of boiled down rules are given here to help you get started quickly.

(The use of the program EDLIN is documented here only because it is universally available. If you have an MS-DOS or PC-DOS personal computer, which you must to read the disk in any form, you should have received a copy of this program with the original system. It could not be assumed that most users had any other particular program. In fact, the program is only marginally useful for our purposes here. Among its shortcomings is its inability to search large files. Having 24 short year-by-year policy files each requiring a separate search is hardly convenient. If all the files were merged, however, EDLIN would fail to search them all, and, worse, it would not report the failure.)

Put the disk with the EDLIN program into drive A and type "A:EDLIN
B:POL1961" followed by a carriage return. Don't type the quotes. This line should also be typed on the same line that has the operating system prompt (e.g. "A>"). This command, in effect, tells the system to start the line editor program (found on the disk in drive A) and read in the file POL1961 in drive B.

For users with hard disks, there is no floppy disk drive B. Instead, there is a hard disk drive C. For those users, copying all the
24 policy year files to the hard disk first ("COPY A:*.* C:" ) along with the program EDLIN ("COPY A:EDLIN C:" ) will make the searches faster and will eliminate the further need for the A and B drive prefixes.

A further word of caution before proceeding. The line editor was not designed to do what we are asking of it (we want only to read the file and search it, we don't want to edit lines). It turns out that the human engineering design aspects of this particular program were made to please a programmer (i.e. cryptic commands, numbered lines, ad hoc syntax). Not all is lost, however. The good news is that, first of all, only a few of the instructions need to be used and in simplified versions. Secondly, the program is reasonably speedy, and finally, all owners of a personal computer capable of reading the disk, as mentioned above, should have a copy of this program. So now on with the program.

After EDLIN starts it prints out an asterisk as a prompt character. Whenever the asterisk appears on a line by itself, it means that a command can be entered. If it should happen to appear following a number, just press the carriage return key and the solo asterisk should reappear. For our purposes we will need to know only three commands: the page (P) command, the search (S) command, and the quit (Q) command. Entering the "P" all by itself will display the next page, and you can page through the whole file this way by repeating the "P" command. To search the file, the search command "S" is used preceding the character string to match. The commands can be entered as either upper or lower case. Thus "P" works the same as "p". For example, * Scommunication will search the whole file for the character string "communication" (Don't type the *, the program should do that). Several hints are offered here about using this program:
a. Searches look for an exact match. Upper case letters are treated differently from lower case letters. Thus "Equal"s are not "equal"s. To avoid a potential mismatch try searching for a word less its first character.

b. Searches only consider the forms of words used. Some words are "ending" sensitive. The phrase "to propose policy" means about the same as "to make policy proposals." Both forms, however, would only be found if the search was for the truncated form of the word (i.e. "propos").

c. We are not out of the woods yet, however. The search just described would also find "apropos" (which may or may not be depending on how you look at it). This problem can be circumvented by including space in front of "propos" as part of the search (i.e. "S propos").

d. This, of course, brings us full circle since if you do this, you can't use the trick in part a. above. All this "glitching about" is a reflection of trying to use something in a way not accounted for in its original design.

If the search is for multiple occurrences of a character string, typing the "S" alone without any characters following it will search for the last string entered. For example, if you wish to look at all the titles in the file, "STitle:" could be typed the first time. The program will display the line containing the first match. Then typing a "P" command will display a page full of text after the title. To go on to the next title, just type "S" alone and the next title will appear.

The commands "search" and "page" can be preceded by a pair of line numbers indicating the range of the command. For example, "* 23,56 P"
tells the editor to page through the file starting at line 23 and ending at line 56. The only way to page backwards is to use this method subtracting 20 from the lowest line number displayed at the top of the screen and to enter that number followed by the "P".

Searches go forward through the text file starting from the line you last looked at. So to search the whole file you must go to the beginning of the file. One quick way to do this is to type the number 1 after the asterisk followed by a carriage return. This leaves you with an asterisk preceded by a line number: 1*. Entering another carriage return returns you to the solo asterisk and from that position you can go off searching again.

When you are finished, type "Q" for quit and the program will stop after asking whether you want to abort the edit (type "y" for yes). Don't worry about changing the file. It has been "write-protected" and shouldn't be changeable even if it looks like you changed it on the screen by accident. (In this case restart the program to get an original copy of the file.) The print scheme (turning it on and off) described above will work while this program is running.

**Data File Format Conventions**

1. Each document description is bounded by a line beginning with "Type:" and ending by a line beginning with "End:"

2. Identifiers within each description (when present) are in the following order:

   Type:
   Citation:
   Date:
   Title:
   Authority:
   Summary:
   Referenced:
   Rescinded:
3. Acronyms first appear in each description following their expansion of name. For example, if a description of a statute referenced the Department of Defense, the first reference to this department in the description would appear as: "Department of Defense [DOD]". Elsewhere within the description the acronym "DOD" alone may appear. The reason for this is to standardize references so an automatic search through the file looking for a single keyword will consistently catch all the references. References to positions within an organization (e.g. Secretary of Defense) are associated with the organization (e.g. "Secretary of Defense [DOD]").

4. All dates are in the form "month day, year" where month is the first three letters of the month (e.g. Sep 12, 1983).

5. The sequence "..." appearing within a quote represents omitted text.

6. Word(s) found within a quote and within square brackets "[  ]" represent words changed from the original quote for contextual reasons.

7. Citations and abbreviations contain no periods.

8. The "Date:"'s identified are the effective date of the policy and can differ from date of signature. For example, executive orders are usually effective on the date of publication in the Federal
Register, not the date of signature. Thus the Federal Register date is given unless otherwise indicated.

9. The "Authority:" cited for executive orders does not include references to Title 3 of the U.S. Code or references to the president of the U.S. As a rule, these two references are assumed as a minimum in each executive order.

10. If a "Source:" entry is not present, then the source used was the citation listed. The text of the summaries follow the sources as closely possible.

11. Some abbreviations used are:

   [EO]  An Executive Order, "EO" followed by a serial number.

   [PL]  A Public Law, "PL" followed by the Congress number, a hyphen, and a serial number beginning with one for each new Congress.


   [FR]  The Federal Register, "FR", preceded by a volume number and followed by the page number.

   [USC]  United States Code, "USC," preceded by the title number and followed by the section number.

   [HRpt]  A House of Representatives report which is made up of the Congress number followed by a serial number.

   [SRpt]  A US Senate report which is made up of the Congress number followed by a serial number.
