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*Privacy
Mtl*

THE WHITE HOUSE
WASHINGTON

November 10, 1976

Dear Quincy:

Now that I have had a chance to read most of the report prepared by the Domestic Council Committee on the Right of Privacy and you on National Information Policy, I want to express my enthusiasm and commendation.

You have done an excellent job of covering the many aspects of a very broad subject, one that is of continually growing importance. I think you have made a significant contribution to the future development of government policy, and I hope there will be leaders in the next Administration who will implement some of your proposals.

Sincerely,



Philip W. Buchen
Counsel to the President



Mr. Quincy Rodgers
Executive Director
Domestic Council Committee
on the Right of Privacy
Room 709
1800 G Street, N. W.
Washington, D. C. 20504

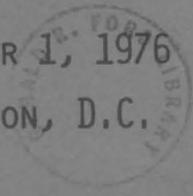
REPORT
TO THE
PRESIDENT OF THE UNITED STATES

NATIONAL INFORMATION POLICY

SUBMITTED BY
THE DOMESTIC COUNCIL
COMMITTEE ON THE RIGHT OF PRIVACY

HONORABLE NELSON A. ROCKEFELLER, CHAIRMAN

SEPTEMBER 1, 1976
WASHINGTON, D.C.



DOMESTIC COUNCIL COMMITTEE ON THE RIGHT OF PRIVACY

WASHINGTON, D.C. 20504

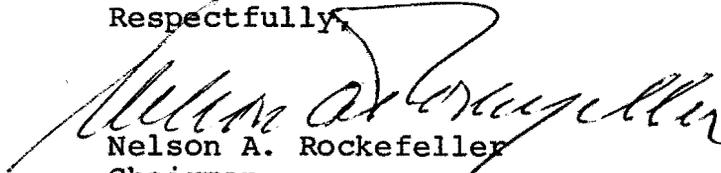
September 1, 1976

The President
The White House
Washington, D.C.

Dear Mr. President:

I have the honor to transmit to you a report entitled National Information Policy prepared by the staff of the Domestic Council Committee on the Right of Privacy in accordance with your directive of March 8, 1976.

Respectfully,


Nelson A. Rockefeller
Chairman



DOMESTIC COUNCIL
COMMITTEE ON THE RIGHT OF PRIVACY

Membership

Secretary of the Treasury
Secretary of Defense
Attorney General
Secretary of Commerce
Secretary of Labor
Secretary of Health, Education, and Welfare
Chairman, U. S. Civil Service Commission
Director, Office of Management and Budget
Director, Office of Telecommunications Policy
Special Assistant to the President
for Consumer Affairs
Administrator, General Services Administration



CONTENTS

	page
EXECUTIVE SUMMARY	
FOREWORD	i
CHAPTER ONE - STATEMENT OF THE PROBLEM	1
The Impact of Technology	
The Information Age	
The Role of Government In Shaping Information Policy	
Legislative Branch Responses	
Executive Branch Responses	
CHAPTER TWO - MAJOR INFORMATION POLICY ISSUES	23
ISSUE CLUSTER I - GOVERNMENT INFORMATION-COLLECTION, TRANSFER AND DISSEMINATION	25
Issue 1 - Formulate Collection Policies To Balance Governmental Needs Against Economic, Political And Social Costs	28
Issue 2 - Establish Principles For The Intra-Governmental Transfer Of Information Which Promote Efficiency And Provide Adequate Safeguards	35
Issue 3 - Continue Progress Toward A More Rational Disclosure System	49
ISSUE CLUSTER II - INFORMATION IN COMMERCE: A RESOURCE FOR PUBLIC GOOD AND PRIVATE GAIN	63
Issue 4 - Develop Appropriate Legal Doctrines To Respond To New Developments In Information Use	64



Issue 5 - Write Rules To Clarify The Relationship Between Government And The Private Sector In The Production, Publication, And Dissemination Of Information	77
Issue 6 - Determine The Appropriateness Of Restrictions On The Use And Transfer Of Personal Information In The Private Sector	85
Issue 7 - Consider The Proper Locus Of Regulation Of Information Within The Framework Of The United States Federal System	100
ISSUE CLUSTER III - THE INTERACTION BETWEEN TECHNOLOGY AND GOVERNMENT	107
Issue 8 - Establish A Rational Policy Framework For Balancing Issues Of Competition And Monopoly In Shaping The National Information Infra-structure	110
Issue 9 - Determining Appropriate Policies And Procedures For Federal Government Procurement And Research And Development Activities Because Of Their Impact On Information Systems	126
ISSUE CLUSTER IV - INTERNATIONAL IMPLICATIONS OF INFORMATION POLICIES AND DEVELOPMENTS	132
Issue 10 - Meet The Need For Interaction Among Developed Countries To Strengthen The Economic, Commercial And Social Dimensions Of Information Technology	136
Issue 11 - Establish Necessary Rules And Data Protection Mechanisms To Allow Continued Free Flow Of Information Across National Boundaries	141
Issue 12 - Respond To The Recognition By Less Developed Countries Of The Importance Of Information Sector Economic and Social Development	148

ISSUE CLUSTER V - PREPARING FOR THE INFORMATION AGE	153
Issue 13 - Consider The Economic Implications Of The Growth Of The Information Sector	154
Issue 14 - Consider The Implications Of Information Developments On The Institutional Relationships Between Governmental Units	164
Issue 15 - Evaluate The Political, Social And Economic Implications Of Information Networks And Information Utilities	172
SUMMARY	180
CHAPTER THREE - RECOMMENDATIONS	185
The Need For A Unified Approach Organizational Alternatives Office Of Information Policy Evolution Of An Office Council On Information Policy Advisory Committee Relationship With The Office Of Science And Technology Policy Principles Of Information Policy	
FOOTNOTES	206
BIBLIOGRAPHY	218



EXECUTIVE SUMMARY

Recommendations

- 1) That the United States set as a goal the development of a coordinated National Information Policy.
- 2) That there be established in the Executive Office of the President an Office of Information Policy by either structuring a new institutional entity or by refocussing and expanding responsibilities within any of several existing entities.
- 3) That an inter-agency Council on Information Policy be created, consisting of high-level agency representatives, chaired by the Director of the Office of Information Policy.
- 4) That an Advisory Committee be created to assist the Office of Information Policy in the performance of its duties, and that this committee be representative of the private sector, local government, and the academic and professional disciplines concerned with the information policy issues discussed in this report.



Rationale

A great number of public policy questions are being generated by advances in computer and communications technology, by shifts in the United States economy from a manufacturing to an information base, and by citizen demands for clarification of their rights to have and control information.

These questions are discussed in some detail in Chapter II, which surveys the major issues arising out of the convergence in recent years of a number of elements of information policy. One element consists of privacy, freedom of information and "sunshine" concerns and their effect on government and private sector use of information. Another relates to pressures on the communications infra-structure. A third is the result of the phenomenal spread of computers. A fourth element consists of attempts to improve the utilization of scientific and technical information and the application of that experience to broader fields.

The answers to the questions which are being raised will make up the national information policy, whether they are arrived at consciously or unconsciously,

by commission or omission, carefully or haphazardly, in a comprehensive or in a piecemeal fashion.

The issue thus is whether or not government will attempt to take a considered unified approach in arriving at these answers. A key question is how to structure the policymaking process so that the country can begin to develop a national information policy that is comprehensive, sufficiently sensitive to new technology, and responsive to the implications of the Information Age.

This report recommends that the first step toward structuring that process is the establishment of a policy-oriented organization within the Executive Office of the President, together with the creation of appropriate intergovernmental committees and non-Federal advisory bodies.

Bringing together the threads of a national information policy in one policymaking location meets several needs:

- 1) Information policy issues are interrelated so that actions taken in one area can have an effect in others. Decisions directed at one specific problem can have consequences for other problems, even though such decisions may have been initially prompted by discrete considerations.

An Office of Information Policy would provide a mechanism for responding to this reality.

- 2) Comprehensive attention to information policy issues provides the most efficient use of manpower and skills. By treating these problems in concert, an Office of Information Policy could develop strong and sustained policy skills, take maximum advantage of related experiences, minimize duplication, and enhance the processes of coordination and policy development.

- 3) An Office of Information Policy, with major responsibility for advising the President in these areas, could prevent information concerns from being compromised and traded away in the face of other concerns at the agency level (below the range of public visibility).

The approach represented by the establishment of this Office is a prudent and responsible beginning to the process of consolidating the policy machinery of the Federal government with respect to these issues, and providing the means by which leadership can be exercised to anticipate and prepare for public policy questions.

FOREWORD

This report discusses the need for a national information policy, describes the salient issues, and advances recommendations by which such a policy can be systematically formulated within the Executive Branch.

The term "information policy" has a variety of connotations. All of them, however, have one thing in common - they deal with the policies which govern the way information affects our society. To the Federal Communications Commission information policy may mean policy dealing with the regulation of information messages over common carrier facilities; to the Justice Department it may mean policy with respect to the implementation of the Freedom of Information Act; to the National Science Foundation it may mean policy concerning the communication of research results to the scientific and technical community in the public and private sector; to the library community it may mean policy with respect to postal rates for the distribution of books throughout the country; and to the businessman it may mean policy

affecting the information reporting requirements imposed by Federal and state governments.

Although the term "information policy" can have different connotations, the various perspectives which are brought to it are all part of a common family of interdependent and intersecting interests. It is this larger context and the expectation that information policy issues will become more pressing in the future which compel a national information policy. The interrelationships which exist between and among information communications, information technology, information economics, information privacy, information systems, information confidentiality, information science, information networks, and information management have signalled the need for a broader, more comprehensive approach to the problem.

Genesis of the Report

The President in a March 1976 memorandum to the Vice President, who serves as Chairman of the Domestic Council Committee on the Right of Privacy, directed the Committee to:

- o review and clearly define the information policy issues which confront Federal policymakers,
- o ascertain the status of information policy studies now going forward within a number of agencies in the Executive Branch, and
- o report to him by September 1, 1976, with recommendations on how the Federal Government should organize itself to deal with these information policy issues.

In response to this charge, a broad review of policy issues concerned with the creation, collection, dissemination, availability, access, and utilization of information in the United States was undertaken.

This process actually began much earlier on September 7-9, 1975, in Washington, D.C., when a Roundtable on Privacy and Information Policy was convened by the Vice President to examine information issues and discuss the need for a national information policy. The participants included a select group of experts from government, business and industry, and academic communities. They discussed a wide-ranging set of current and future information problems.

Another formal gathering was held on July 8-9, 1976, under the auspices of the National Commission on

Libraries and Information Science. At this Conference on National Information Policy Issues, 40 representatives from various parts of the public and private sectors came together to categorize and analyze the critical information issues.

In addition, numerous discussions were held with knowledgeable persons in government and the private sector. The great interest and widespread, if not universal cooperation of these individuals and others has been crucial to the process.

The contributions of a number of people to the preparation of this report should be acknowledged. First is the staff of the Domestic Council Committee on the Right of Privacy, which has worked diligently towards its completion, in addition to fulfilling its regular duties in connection with its original charge regarding personal privacy initiatives. Thanks are due to William Hermelin, the Committee's Deputy Executive Director; and the other members of the Staff, Robert R. Belair, Timothy D. Mead, Dawn MacPhee, George Trubow, David P. Milanowski, Mary Maurey, Janet Wartell,

Linda Kates, and Elizabeth Tarr. Support and cooperation from a number of people were also important. These include Peter Wallison, General Counsel to the Vice President; Richard Parsons and F. Lynn May, Associate Directors on the staff of the Domestic Council; and Thomas Houser, recently appointed Director of the Office of Telecommunications Policy. Finally, the role played by three persons deserves special mention: Andrew Aines, Joseph Becker, and Russell Pipe, whose expertise in the issues under consideration was invaluable.

The scope of this report is admittedly ambitious, particularly in light of the short time available for its completion. Nevertheless, efforts to limit its scope solely on the ground that it would make it more manageable have been resisted. We believe that an inclusive and comprehensive approach is necessary to the development of information policy. It is an approach which is essential if government is to have the ability to meet public needs in the modern age.

QUINCY RODGERS
Executive Director

September 1, 1976

CHAPTER I

STATEMENT OF THE PROBLEM

"Q. If we survive the technological crises, what should we then expect?

A. We shall enter a post-industrial society...." 1/

Herman Kahn, 1976

Continuing advances in computer and communications technology are raising new questions of public policy. The increasingly important role which such technologies play in the economic and commercial life of the United States lends a certain urgency to the answers to these questions.

Some of the more frequently asked of these questions include:

- o What to do about our national postal network which is already retrenching in the face of spiraling costs and which faces the further loss of business to new information networks, such as electronic funds transfer systems?

- o How to reconcile citizen demands for open government with the practical problems of administering freedom of information and Sunshine laws?
- o How to preserve a sense of individuality and privacy against a massive government which demands more and more information from individuals and businesses, and which argues that its restricted use promotes efficiency?
- o What to do about foreseeable dislocations brought on by the shift from an industrial to an information economy and the obsolescence in training and employment skills which could ensue?

Answers to these and the many other questions discussed in this report will, when taken together, constitute the national information policy of the United States. All such answers will not be arrived at simultaneously. Answers will not come from one source, nor will they come by government fiat. They will involve many participants in the Executive Branch, in Congress, in the independent agencies, in study commissions, in the state legislatures, in the courts and in the private sector. Answers will come through confrontation and through accomodation. They will come as part of the continuing process by which policy is shaped.

The Report is both a part of that process and a blueprint for improving the contribution which the Executive Branch can make to it.

The balance of Chapter I discusses some of the forces which are raising public policy questions and looks at the manner in which Congress and the Executive Branch have responded to these forces. Chapter II provides a review of the major issues of information policy, and in so doing provides an agenda which the policy units proposed in Chapter III can use to begin the process of analysis.

The Impact of Technology

The advent of computer and communications technology is causing a quiet revolution to occur in the field of information. It is quiet because the signs of change are subtle and not always visible. It is a revolution because the rate of change is very rapid. Our country now possesses new information technology that can retrieve and dis-

tribute information faster, with greater facility to more people than ever before in history.

But information technology has brought problems as well as opportunities. Inadequate protection of the privacy of individuals, ineffective handling and retrieval of information, incompatibility of computerized information systems, and uncertain relationships between public and private sector groups involved in information activities, have all raised difficulties.

The consequences of this newly emerging information environment are poorly understood analytically, but they are destined to have an enormous impact on the Nation's economic growth, our social development, and our individual lives. How information is handled in this country determines, to a large extent, the quality of the decisions which our people make. Government must, therefore, be alert to the dynamics of change that are taking place. And, it should accept responsibility for facilitating the introduction of information technology and systems into our society in ways which conform to our democratic principles and respect our national ideals.

Some of the key characteristics of the new information environment created by information technology are as follows:

- o An exponential increase in the volume of information flow. Critical observers expect a fourfold to sevenfold increase by the year 1985.
- o A shrinkage of time and distance constraints upon communications. Satellite communications provide long distance capability to use computers and other information technology throughout the world.
- o Greater nationwide dependence upon information and communication services. There are already nearly one million computer terminals in the United States which provide interactive, on-line information services to people across country.
- o An increase in the interdependence of previously autonomous institutions and services. For example, the National Commission on Libraries and Information Science has observed a definite trend in the linking of libraries and information centers into networks designed to share resources across traditional jurisdictional lines. 2/
- o Conceptual changes in economic, social, and political processes induced by increased information and communications. The projected impact of a "checkless/cashless" society as a result of electronic funds transfer is a prime example.
- o A decrease in the "time cushion" between social and technical changes and their impact and consequences. The introduction of devices

such as the pocket calculator and citizen band radio have had immediate effects on the social environment in the United States. There is no longer time to anticipate the impact of information technology applications before they become part of our everyday lives.

- o Global shrinkage and its consequent pressures on increased international information exchange. The Swedish government has passed legislation regulating personal information about Swedish citizens and various national interests have begun to anticipate more such laws.

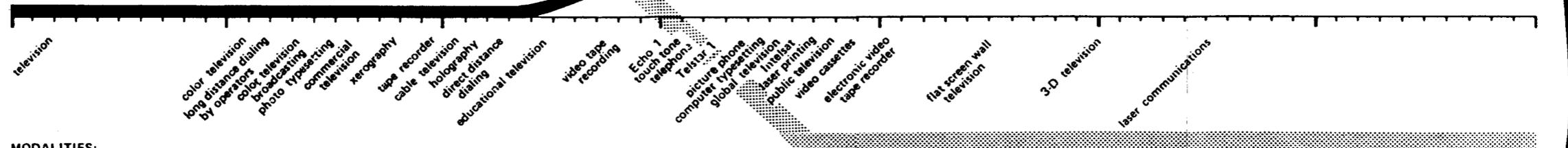
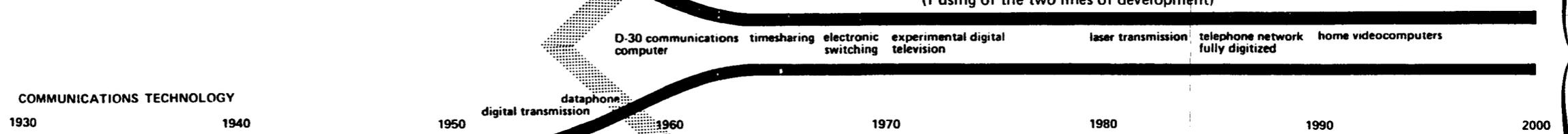
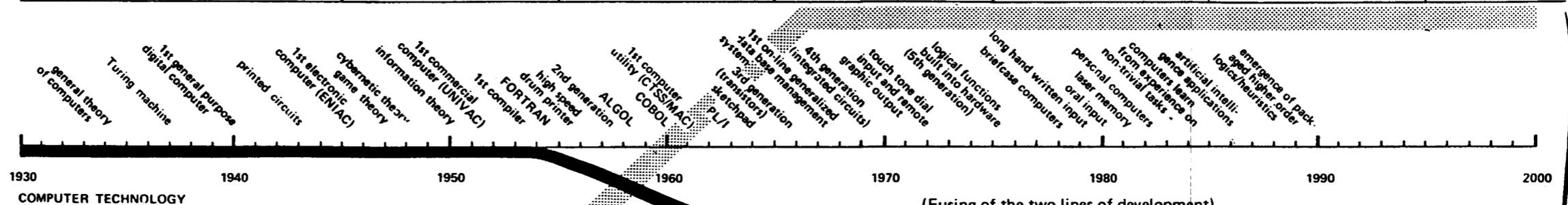
During the last fifty years, communication by telephone passed from occasional into general use. Likewise, radio and television have become integral parts of our daily lives. Computer communication networks are now commonplace in business, scientific work, and government. Satellites circling the earth bring voice and pictures from other continents into homes and offices. Lasers and fiber optics are on the threshold of general use.

While the spectacular growth of computer technology and communications technology in the last thirty years has been notable, what is even more significant is the rapid way these technologies are merging. Figure I (p.7), from an important report prepared by the Conference Board, graphically illustrates this trend. 3/ Computer

TIME LINE OF DEVELOPMENTS IN INFORMATION AND COMMUNICATION TECHNOLOGY

Figure II
Simplified Chart of Developments, Uses, and Impacts of Information Technology

COMPUTER COSTS	In 1945 it cost about \$1,000 to do a million operations on a keyboard and took at least a month	In 1952 it cost about \$300 to do a million operations and took ten minutes	In 1960 it cost \$.75 to do a million operations and took a second	Computers can do a million operations for less than 6 cents in about 1/2 a second	Computers can do a million operations for 1/10 a cent in 1/10 a second	Between 1983 and 1997 computer cost to decrease by a factor of 100
COMPUTER SPEED		In 1954 computers have a speed of 2000 operations per second	From 1955-1965 internal speeds have increased by a factor of 200 Computer speed is up to 150,000 operations per second	From 1965-1975 internal speeds have increased by a factor of 200 Computer speeds are up to 4,000,000 operations per second		
COMPUTER SIZE		Computers have capacity of 40,000 characters	From 1955-1965 the physical size of the central processing unit decreased by a factor of 10 Computer capacity is up to 200,000 characters	By 1975 fully integrated circuits begin to reduce the size by a factor of about 100 Computer capacity is up to 15,000,000 characters		



MODALITIES:					
ONE/ONE MODE OF COMMUNICATION	Modes of communication such as word-of-mouth, drums, smoke, relay runners and hand printed manuscripts were the major means of communication till the invention of the printing press.	Telephone and telegraph now provide individuals with access to a system which accommodates personalized, almost instantaneous communication over distance with ease of access, wide availability and individual control over content.	Telephone networks and equipment become increasingly complex, dial telephone, direct distance dialing, picturephone. Dataphone, tele-xerox facsimile services extend this into other modalities.	Computer applications and communications satellites provide highly sophisticated nationally and internationally linked one-to-one communication networks possibilities.	Developing are audio/video tape cassette systems enabling highly personalized and potentially one-to-one communication with wider access, availability and personal control over content.
ONE/MANY MODE OF COMMUNICATION	The introduction of the movable type printing press enhanced the possibilities of communication in a one-to-many print mode.	Mechanical improvements in techniques of printing resulted in proliferation of printed materials. e.g. books, newspapers, periodicals. Aural one-to-many communication was limited by range of unaided voice until the invention of the radio	Radio and television provide high capacity information systems to the home and give a variety of choices of news, entertainment and other information. Range of choices of programs but little direct control over content.	Print technology further augmented by the introduction of computer and laser technologies. e.g. computer typesetting and laser printing. Copying machines extend print technology into highly selective, personalized mode.	
MANY/MANY MODE OF COMMUNICATION			Sophistication of one-to-many and one-to-one modes convert these to potential many-to-many modes. News gathering through wire services and disseminating through newspapers, radio or television are examples.	Also note the recent growth of 'underground' services- news services and papers, journals, cinema, audio and video cassettes.	
MANY/ONE MODE OF COMMUNICATION			Increased efficiency and sophistication of media will make possible an expansion of existing modes into many-to-one situations. Community antenna television, video cassettes and electronic video tape recorders are emerging systems potentially capable of many new services.	Examples are more individually oriented information and educational services, specialized news services, remote marketing catalogue services, etc.	Potential but currently experimental and very limited, are systems which may be used for polling, plebiscites and other interactive response situations.

THE NEW INFORMATION ENVIRONMENT

and communication technology are not only merging but are also converging with related technologies such as printing and photography. When all of these elements are fully integrated, the resultant capability for information transfer and exchange could create a form of national information interdependence. Indeed, some believe the merger of computers and communications with other technologies will result in the development of a totally new information infra-structure for society. The possibility of networking local and regional information systems throughout the country or even ultimately throughout the world could greatly expand the citizen's access to the information needed to function effectively in tomorrow's technological and mobile society.

The Information Age

Collectively, these developments are seen by some of the most farsighted of our social commentators as ushering in a new period of human activity. In Daniel Bell's terminology, we are entering the "Post-Industrial Society." 4/

This evolutionary stage of societal change is characterized by a shift in the composition of the vectors responsible for economic growth. The "Post Industrial Society" is one in which economic growth is based on the expansion of a service economy built upon a sophisticated, information-based, capital-intensive production system rather than on technological innovation alone.

In the same vein, Peter Drucker describes the growth of a "knowledge economy":

The 'knowledge industries' which produce and distribute ideas and information rather than goods and services, accounted in 1955 for one-quarter of the United States gross national product. This was already three times the proportion of the national product that the country had spent on the 'knowledge sector' in 1900. Yet, by 1965, ten years later, the knowledge sector was taking one-third of a much bigger national product. In the late 1970's, it will account for one-half of the total national product. Every dollar earned and spent in the American economy will be earned by producing and distributing ideas and information, and will be spent on procuring ideas and information.

From an economy of goods, which America was as recently as World War II, we have changed into a knowledge economy. 5/

While economists struggle to improve their understanding of these developments and to refine their definitions and tools of analysis, it is nevertheless already clear that from one third to one half of the gross national product of the United States is currently attributable to the production and distribution of information and knowledge. Economists say that this trend signals a departure from a traditional economy of goods and that the United States is now entering the "Information Age." The economy will soon be one in which the production and application of knowledge will be the determining factor in competition. Just as the steam engine ushered in the Industrial Revolution and brought a host of public policy questions in its wake, the new information technology is ushering in the Information Age and its unique policy questions.

The Role Of Government In Shaping Information Policy

For more than three decades, observers in the United States have suggested the need for sharper governmental focus on information policy problems.

Threaded through their reports are recommendations for the establishment of government policies that would contribute to orderly growth of information technology in the public and private sectors, to improve management of information resources, and so forth.

Figure II (pp. 12-13) illustrates numerous studies, Congressional documents, laws, other significant documentation, and technological advances which have appeared concerning various aspects of information.^{6/} As can be seen, four major policy vectors - computers, communications, freedom of information and privacy, and science information - are rapidly converging. And, the milestones described in Figure II grow more numerous and more interrelated with the passage of time. What is happening is that streams of policy development which have previously existed independently of each other have begun to come together. Individuals within such streams, often having diverse backgrounds and training, have begun to interact. And yet, sharp governmental focus has so far been elusive. Dr. Anthony Oettinger of the Harvard Program on Information Technology and Public policy made the same point

Milestones in the Evolution of Information Policy Issues

	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
Freedom of Information and Privacy																				
Telecommunications																				
Data Processing																				
Scientific and Technical Information																				
Broad Policy																				

● Communications Act of 1934 ... Estab. FCC; empowered to regulate interstate and foreign communication by wire and radio in the public interest.

● Commercial television began in U.S. with the granting of first FCC license.

● Telecommunications; A Program for Progress. The President's Communications Policy Board.
● Direct distance-dialing inaugurated.

● University of Texas Library introduced a circulation system using punched cards.

● First operational program controlled computer in the U.S.

● U.S. Commerce Department established the Office of Technical Services.

● First all-purpose all-electronic digital computer invented.

● The first automatically sequenced high-speed electronic digital computer introduced in the U.S.

● First UNIVAC system delivered to the U.S. Census Bureau.
● First Joint Computer Conference held in Philadelphia.

● First electronic reservations system at LaGuardia Airport, N.Y. installed.

● Microwave radio relay system commercially operated between Boston and New York. —Wiener's Cybernetics is published. —Royal Society of London convened Scientific Information Conference.

● Passage of the National Science Foundation Act.
● "Berkner Report" advised U.S. State Department on science, foreign relations, and the national flow of sci/tech information.

● Armed Services Technical Information Agency is established.

1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
				<ul style="list-style-type: none"> ● Administrative Procedures Act, Amendment on withholding information by the Federal Government 					
		<ul style="list-style-type: none"> ● First transoceanic telephone cable with underwater amplifiers connected North America and Europe. 		<ul style="list-style-type: none"> ● President Eisenhower broadcast first voice transmission via satellite. 		<ul style="list-style-type: none"> ● NASA launched its first experimental communications satellite, Echo I, to herald the arrival of the age of intercontinental communications through space. 		<ul style="list-style-type: none"> ● The Communications Satellite Act of 1962. ● Communications Satellite Corp. (COMSAT) authorized to own and operate commercial communications satellites. ● First live television programs are relayed between America and Europe via Telstar I satellite. 	
<ul style="list-style-type: none"> ● UNIVAC 1 became commercially available. Optical scanners are introduced and perfected. 	<ul style="list-style-type: none"> ● First "supercomputer" Naval Ordnance Research Calculator (NORC) delivered to U.S. Naval Weapons Laboratory. 			<ul style="list-style-type: none"> ● Second generation computers using solid state circuitry, stored programs, and user-oriented programming languages begun. 		<ul style="list-style-type: none"> ● On-line Airline information system for reservations begun. ● National Data Center proposed. 			
		<ul style="list-style-type: none"> ● U.S. Armed Forces Medical Library became the National Library of Medicine. 	<ul style="list-style-type: none"> ● Creation of the President's Science Advisory Committee and the position of the White House Science Advisor. ● Office of Science Information Service established in U.S. National Science Foundation. 	<ul style="list-style-type: none"> ● International Conference on Scientific Information held in Washington. ● <u>Improving the Availability of Scientific and Technical Information in the United States</u>, Panel Report of the President's Science Advisory Committee. ● National Defense Education Act, created Science Information Council and Office of Science Information Service in NSF. 	<ul style="list-style-type: none"> ● Federal Council for Science and Technology established. 		<ul style="list-style-type: none"> ● Office of Science and Technology created in Executive Office of the President. ● Library of Congress organized National Referral Center for Science and Technology. ● <u>Scientific and Technical Communications in the Government</u> Task Force Report to the President's Special Assistant for Science and Technology. 	<ul style="list-style-type: none"> ● U.S. Committee on Scientific and Technical Information (COSATI) is formed. ● <u>Science, Government, and Information: the Responsibilities of the Technical Community and the Government in the Transfer of Information</u>, Report of the President's Science Advisory Committee. 	
	<ul style="list-style-type: none"> ● Congress commissioned U.S. Copyright Office to initiate studies on a revised copyright law. 						<ul style="list-style-type: none"> ● Federal Plans for Improvement in the Design, Management and Use of Scientific Engineering and Other Information Systems, Senate hearings. ● <u>The Production and Distribution of Knowledge</u>, Fritz Machlup. 	<ul style="list-style-type: none"> ● First statement of uniform Government patent policy set forth in Presidential Memorandum. 	



Milestones in the Evolution of Information Policy Issues (con't)

1964	1965	1966	1967	1968	1969	1970	1971
	<ul style="list-style-type: none"> • Griswold vs. Connecticut, Supreme Court Decision set in motion a new legal definition of the concept of privacy. • Use of psychological tests as a requirement for Federal employment, Senate hearings. • National Data Center recommended by Social Science Research Council. • Psychological testing procedures and the rights of federal employees, Senate hearings. • Invasions of Privacy (Government Agencies), Senate hearings 	<ul style="list-style-type: none"> • Freedom of Information Act, enacted. • Invasions of privacy, Senate hearings. • The computer and invasion of privacy, House hearings. • Report of the Task Force on Storage of and Access to Government Statistics U.S. Bureau of the Budget. • Invasions of privacy by government agencies, Senate hearings. 	<ul style="list-style-type: none"> • <u>Privacy and Freedom</u>, Alan Westin. The first comprehensive study of social and legal basis of privacy. • Privacy and the Rights of Federal Employees, Senate Report. • Government Dossier, Senate Report on Computer Privacy, Senate hearings. • Limiting categories of questions in decennial censuses, House hearings. 	<ul style="list-style-type: none"> • "Privacy and the National Data Bank Concept" House Report. • "Computerization of Government Files: What Impact on the Individual?". <u>UCLA Law Review</u>. 	<ul style="list-style-type: none"> • OECD Computer Utilization Group formed. 	<ul style="list-style-type: none"> • Fair Credit Reporting Act enacted. Availability of Information from Federal Departments and Agencies House Report. 	<ul style="list-style-type: none"> • <u>Information Technology in a Democracy</u>, Alan Westin. Federal Data Banks, Computers and the Bill of Rights, Senate hearings. • Invasion of Federal Employees' privacy, House hearings.
	<ul style="list-style-type: none"> • <u>Report of the Committee of the National Citizens' Commission of International Cooperation</u>. White House Conference on International Cooperation. • First commercial communications satellite, Early Bird, is placed in orbit. 	<ul style="list-style-type: none"> • "Electromagnetic Spectrum Utilization - The Silent Crisis," A report by U.S. Department of Commerce. 	<ul style="list-style-type: none"> • Public Broadcasting Act of 1967. • <u>Global Communications System - Recommendations Relative to World Communications</u>, President Johnson's Message to Congress. 	<ul style="list-style-type: none"> • Carterfone Decision - FCC decision opened terminal devices for connection to the telephone system. • "Final Report," of the President's Task Force on Communications Policy, (Rostow Report). 	<ul style="list-style-type: none"> • <u>Review of Status of Development Toward Establishment of a Unified National Communication System</u>, Government Accounting Office. • MCI Decision - FCC decision authorizing the provision of private line microwave services by carriers other than established common carriers. 	<ul style="list-style-type: none"> • Office of Telecommunications Policy established by Executive Order. 	
<ul style="list-style-type: none"> • Federal Property and Administrative Services Act of 1949 amended (Brooks Act) directed General Services Administration to coordinate and provide for the economic and efficient procurement of computers for the Government. 	<ul style="list-style-type: none"> • Third-generation computers, using integrated circuits, miniaturization, system logic improvements, and higher speeds, came into being. 		<ul style="list-style-type: none"> • Pierce Panel Report to the President's Science Advisory Committee. 		<ul style="list-style-type: none"> • <u>Man and the Computer: Technology as an Agent of Social Change</u>. John Diebold. 	<ul style="list-style-type: none"> • FCC Computer Inquiry Decision on the problems presented by the interdependence of computer and communications services. • <u>The Information Society: A Year 2000 Japanese National Goal</u>. Japan Computer Usage Development Institute. 	<ul style="list-style-type: none"> • Permanent charter for the International Telecommunications Satellite Corp. (INTELSAT) signed by 54 nations. • TELECOM '71, world's first telecommunications exhibition, held in Geneva.
	<ul style="list-style-type: none"> • Recommendations for National Document Handling Systems in Science and Technology made report by COSATI. 				<ul style="list-style-type: none"> • <u>Run, Computer, Run</u>. Long range computer potential in schools. Anthony Oettinger. • National Academy of Sciences - National Academy of Engineering, Staff of the Committee on Scientific and Technical Communication (SATCOM). <u>Scientific and Technical Communication: A Pressing National Problem and Recommendations for its Solution</u>. 	<ul style="list-style-type: none"> • <u>The Management of Information and Knowledge</u>. U.S. House Committee on Science and Astronautics. 	
	<ul style="list-style-type: none"> • Scientific and Technical Information Policy Group established at OECD. • Federal Council on Science and Technology established Committee on Government Patent Policy. 	<ul style="list-style-type: none"> • Report of the President's Commission on the Patent System issued. 			<ul style="list-style-type: none"> • <u>The Age of Discontinuity</u>. Peter F. Drucker. 	<ul style="list-style-type: none"> • <u>The Information Utility and Social Choice</u>, Conference Papers. • <u>Future Shock</u>. Alvin Toffler. • U.S. National Commission on Libraries and Information Science is created. 	<ul style="list-style-type: none"> • <u>The Information Machine</u>, Ben Bagdikian. • UNESCO Intergovernmental Conference Society - Some Policy Considerations (Piganiol Report) OECD. • Second Presidential Memorandum on government patent policy.

1972	1973	1974	1975	
<ul style="list-style-type: none"> ● Records Maintained by Government Agencies, House hearings. ● Sale or Distribution of Mailing Lists by Federal Agencies, House hearings. ● <u>Databanks in a Free Society: Computers, Record-Keeping and Privacy</u>, Alan Westin and Michael Boker. ● Bank Secrecy Act, Senate amendment hearings ● FCC Monitoring of Employees' Telephones, House hearings ● Great Britain's Report of the Committee on Privacy. ● First Federal Sunshine Bill introduced. ● Federal Advisory Committee Act signed opening agency advisory committee's to public scrutiny. ● Records Maintained by Government Agencies, House hearings ● Security and Privacy of Criminal Arrest Records, House hearings ● FCC Monitoring of Employees' Telephones, House hearings. 	<ul style="list-style-type: none"> ● U.S. Department of H.E.W. Secretary's Advisory Committee on Automated Personal Data Systems. <u>Records, Computers, and the Right of Citizens.</u> 	<ul style="list-style-type: none"> ● Educational Rights and Privacy Act of 1974, enacted. ● President established Domestic Council Committee on the Right of Privacy. ● Report on Federal data banks and Constitutional rights, Senate Report. ● Privacy Act of 1974. ● Military Surveillance, Senate hearings. 	<ul style="list-style-type: none"> ● "Privacy Developments in Europe and Their Implications for U.S. Policy", Senate report. ● Amendments to the Freedom of Information Act enacted. 	Freedom of Information and Privacy
<ul style="list-style-type: none"> ● Optical fibers became prospective "wires" of future communications systems. ● Canada became the first country to launch a geostationary satellite for domestic use of long-distance communication. ● FCC decision ruling that all technically and financially qualified applicants could establish domestic satellite systems in competition with one another. 		<ul style="list-style-type: none"> ● The Cabinet Committee on Cable Communications Report to the President. 	<ul style="list-style-type: none"> ● <u>Broadcasting and Cable Television - Policies for Diversity and Change.</u> Research and Policy Committee of the Committee for Economic Development. 	Telecommunications
<ul style="list-style-type: none"> ● ARPANET, experimental coast-to-coast network of computers became operational. ● Computers applied to functions of U.S. court system. <u>Computer Law Service</u>, Robert P. Bigelow 	<ul style="list-style-type: none"> ● FEDNET proposal - to link Federal agency's data systems not implemented. ● Federal Use and Development of Advanced Information Technology, House hearings. 		<ul style="list-style-type: none"> ● Congress expanded its information retrieval capacity by installing remote terminals in Members' offices. ● Low-cost, limited-capacity "micro-computers," introduced. 	Data Processing
<ul style="list-style-type: none"> ● <u>Making Technical Information More Useful; Management of a Vital National Resource.</u> Report to Chairman of Federal Council for Science and Technology. 			<ul style="list-style-type: none"> ● <u>Federal Management of Scientific and Technical Information Activities; the Role of the National Science Foundation,</u> Senate Report. 	Scientific and Technical Information
<ul style="list-style-type: none"> ● Information Technology: Some Critical Implications for Decision Makers. The Conference Board. ● "Information Technology: Its Social Potential" <u>Science</u>, Edwin Parker and Donald Dunn. ● <u>Information Technology: Initiatives for Today - Decisions That Cannot Wait</u>, Conference Board. ● Report of the Commission on Government Procurement. 	<ul style="list-style-type: none"> ● <u>Forecasting Information Needs and Resources in 1985</u>, OECD. 	<ul style="list-style-type: none"> ● "The Information Revolution" <u>The Annals of the American Academy of Political and Social Sciences.</u> 	<ul style="list-style-type: none"> ● Conference on Computer/Telecommunications Policies sponsored by the Committee for Scientific and Technological Policy, OECD. ● National Commission on Libraries and Information Science. <u>Toward a National Program for Library and Information Service: Goals for Actions.</u> 	Broad Policy

in a different way. He argues that there is currently no lack of information policy in the United States but that policy which is already in place is neither comprehensive nor coordinated. 7/ Review of actions taken by Congress and Executive Branch agencies shed some light on how this has happened.

Legislative Branch Responses

The Congress has been frequently asked to resolve questions of information policy in recent years, although there is little indication that it has seen these questions in any related form.

Within the past few years, for example, the strong public outcry against potential threats to individual privacy from increased use of computerized data banks and from misuse of information maintained in Federal files prompted the passage of the Privacy Act of 1974. Pressures for more open government have also led to consideration of laws by the Congress such as the Freedom of Information Act 8/ enacted

in 1966 and the Sunshine proposal 9/ recently passed by both Houses of Congress. Congress has acted on or has under serious consideration consumer legislation, legislation on telecommunications and telephone company structure, legislation creating a Presidential Science Advisor, and so forth. But with the exception of a bill pending before the 94th Congress which would require that all reports accompanying proposed legislation include an information impact statement, there is little evidence that Congress has seen the need to consider the overall information policy aspects of its legislation. 10/ That bill, moreover, is given little chance of passage at this time.

Thus information policies emerging from the Congress continues to be developed in an ad hoc piecemeal fashion by numerous Congressional committees struggling to frame responses without the benefit of a comprehensive overview of the field. And information issues have apparently been mounting beyond the Congressional capacity to respond. One

result of this has been the proliferation of study commissions designed to look at some of the ticklish and distinct aspects of information policy issues.

These Commissions include:

- o National Commission for Review of Federal and State Laws on Wiretapping and Electronic Surveillance, P.L. 90-351, June 19, 1968
- o National Commission on Libraries and Information Science, P.L. 91-345, July 20, 1970
- o Electronic Funds Transfer Commission, P.L. 93-495, October 28, 1974
- o National Study Commission on Records and Documents of Federal Officials, P.L. 93-526, December 19, 1974
- o National Historical Publications and Records Commission, P.L. 93-536, December 22, 1974
- o Commission on Federal Paperwork, P.L. 93-556, December, 27, 1974
- o Privacy Protection Study Commission, P.L. 93-579, December 31, 1974
- o National Commission on New Technological Uses of Copyrighted Works, P.L. 93-579, December 31, 1974

Such Commissions are evidence of both growing interest and policy fragmentation. In some cases their jurisdictions overlap. There is a risk that they will themselves spawn new policies which may

be in conflict. They also represent a Congressional attempt to delegate or postpone the resolution of difficult information policy issues. Such delegation is also reflected in issues left for judicial determination such as the balancing of open access and privacy considerations.

Executive Branch Responses

The same ad hoc, piecemeal approach which has characterized Congressional responses can also be found in the Executive Branch. Moreover, while institutional mechanisms which could have helped coordinate parts of the problem have occasionally existed, they have always been so beleaguered by constant proposals for their abolition, by inadequate resources and by limited authority that such a role has been impossible. Examples of such mechanisms are the Office of Telecommunications Policy, the Domestic Council Committee on the Right of Privacy, and the former Office of Presidential Science Advisor which once was the only locus in the Executive Office of the President concerned with information policy.

The present piecemeal approach to information policy has a historical antecedent in a similar and related area: the transportation infra-structure of the United States, which is a collection of ad hoc arrangements, many representing the overlay of new technology upon existing systems. The fact that they are interrelated has frequently been ignored, and as a result, transportation development in the United States has often been in disarray. A similar pattern could recur where the infra-structure is communications and the traffic is information, knowledge and ideas rather than people and goods.

One should be careful not to overstate these shortcomings in the information area. In the Executive Branch as in the Congress, the rapidity with which the issues of the Information Age have arrived has been the single biggest problem in framing coordinated and appropriate responses. In both Branches, the focus has been on the immediate pressures generated by technology and by citizen demands. Moreover, developing a conceptual overview which will permit a government-wide perspective and improved coordination is difficult, at best, when

issues are familiar; it is next to impossible to do in the abstract. But the past few years have provided considerable experience. That "critical mass" of issues, which clarifies the interrelationship of the problems may have been reached.

The signs that this is happening are numerous. The gradual awakening to this complex of issues is apparent in increased attention to the problems of coordination both on an inter-agency and an intra-agency basis.

As might be expected, the issues of current concern to the agencies reflect information problems attendant to their missions. These would include: difficulties encountered in implementation of the Privacy Act of 1974, the Freedom of Information Act (as amended), the Federal Advisory Committee Act, and the Federal Reports Act of 1942; the convergence of computers and communications technologies; burdens of reporting; need to ensure diversity of outlets of expression while preventing monopoly; content regulation in broadcasting; efficient use of data as a resource; ownership of information-handling services; export of

information; and government subsidies. The agencies express concern about public trust in government, information-gathering, replacement of technologically outmoded information systems, standards and safeguards for Federal information managers, cost and responsibilities for information retention, effective flow of information between the Federal, state and local governments, improvement of data definitions and standards to improve the rapid and economical exchange of information, training of information personnel, clarification of policies regarding justification for data collection and exchange, impact of communication on the information sector, and better understanding of the information sector in socioeconomic terms.

Some Federal agencies report that they are undertaking a number of information policy studies internally and through contractors. Some of the subjects being studied include: impact on business if the Privacy Act is extended to the private sector; privacy and confidentiality as factors in research survey response; the information economy; the effect of growth in the information sector; issues and stakeholders

in electronic transfer of information; and the need for a national research service to help crime laboratories identify evidence. Mention should also be made of several studies being undertaken by the Office of Telecommunications Policy (which were commissioned in the aftermath of the Presidential directive for this report); a study dealing with information policy for science and technology being conducted by the Division of Science Information at the National Science Foundation; studies by the National Commission on Libraries and Information Science in the library and information service areas; and, studies by other National Commissions in information-related areas.

Two agencies, the Department of Commerce and the Department of Justice, it should also be noted, have not only recognized the critical role of information, but they have also created high level bodies responsible for agency information policy. And the recently confirmed Director of the Office of Telecommunications Policy has announced that he is considering establishing an information policy capability within that office.

In summary, the Federal agencies have responded to information policy issues in reaction to specific stimuli, such as the Freedom of Information Act and the Privacy Act regulations. But as a general rule, they have not considered in any systematic way the impacts they are having on government-wide policy development or even the information needs of their own agencies.

The driving force of technological innovation, the convergence of previously diverse streams of policy development, and the attempts by government to respond to public demands for reform are elements that have given rise to the public policy issues of the Information Age. These issues are the subject of Chapter II of this Report.

CHAPTER II

MAJOR INFORMATION POLICY ISSUES

"The major public policy issues revolving around information technology have just begun to be raised. The next quarter century will see an emphasis on what is done, applications that directly affect a large part of the population, consumer as well as capital goods, and the raising of major public policy questions..." 1/

John Diebold, 1976

This Chapter contains a survey of the major information policy issues which face government. It is also an agenda for government attention to national information policy. The choices made in the selection and organization of issues necessarily involve value judgments about priorities in this area. The further refinement of this agenda and the continual review of these priorities is the mission of the proposed organizational entities recommended in Chapter III.

The issues in this Chapter are discussed separately and numbered sequentially. They are grouped in issue clusters that provide another perspective in demonstrating how they are interrelated. The issues are also stated as imperatives, although the discussion of each issue frequently takes the form of questions.

The clusters are:

- I. Government Information: Collection, Transfer and Dissemination
- II. Information in Commerce: A Resource For Public Good and Private Gain
- III. The Interaction Between Technology and Government
- IV. International Implications of Information Policies and Developments
- V. Preparing for the Information Age

Following the discussion of these issues, a summary of this Chapter provides a focus for recapping some of the major events requiring attention in each cluster.

ISSUE CLUSTER I

GOVERNMENT INFORMATION-COLLECTION, TRANSFER AND DISSEMINATION ISSUES

Information policy questions with regard to government-held information fall into three broad issue areas: (1) Federal collection of information from non-Federal sources; (2) Federal maintenance of information including inter-agency and intra-agency transfers, information system management and information disposal policies; (3) access to and dissemination of Federally held information to parties outside the Executive Branch.

Today Executive Branch information processing is estimated to cost 20 billion dollars per year. Agencies annually print ten billion sheets of paper. The yearly flow of paper among executive agencies is estimated to fill 4 1/4 million cubic feet of space. 1/ Agency reports submitted in compliance with Privacy Act requirements indicate that the Executive Branch maintains 6,723 record systems which contain more than 3.8 billion records about individuals. 2/ A considerable amount of information held by the Executive Branch is now in automated systems. At last count the Federal Government has about 9,260 computers of which 6,000 were

acquired in the last ten years. Expenditures for the automation of agency information systems reached approximately 3.2 billion dollars in 1975. 3/

The issues outlined in this cluster are increasingly the subject of attention in the Executive Branch, the Congress, the courts, and the media. They involve complex interactions between the Freedom of Information Act, the Privacy Act, the Federal Records Act, and other legislation. They will soon require weighing the recommendations of at least two major study commissions. They touch on some of the most important management elements of the agencies and of the Office of Management and Budget.

When these issues are examined together, the likelihood that they will receive further Congressional attention becomes apparent. Not only are they imbedded in a host of prior Congressional actions, but they involve fundamental and competing choices which are properly the subject of ultimate solutions through the legislative process where both Congress and the Executive can participate. In addition, these issues demonstrate the need for continual adjustment of policies in information management, and that legislative theory

needs testing through experience.

Given these considerations, it is reasonable to assume that Congress will readdress itself to some or all of these issues within the next three to five years. An attempt at a comprehensive legislative scheme for government-held information which would address collection, transfer, and dissemination is conceivable. In the meantime, the Executive Branch should be preparing for a cooperative approach to this process.

ISSUE 1 Formulate Information Collection Policies To Balance Governmental Needs Against Economic, Political And Social Costs

Background

Collection of information is vital to the functioning of government. The Executive Branch's power to collect information derives principally from the President's authority to, "take care that the laws be faithfully executed." 4/ As the nature and character of governmental activity has expanded, the classical governmental functions (police, public health, tax collecting) have been joined by a host of other programs including public assistance, grants and loans, licenses and permits, and others. The Government makes a legitimate and powerful claim for the collection of information for the purpose of determining whether its programs are working and standards being met.

Discussion

There are presently 10,000 to 12,000 Federal statutes that authorize Executive Branch collection of information. 5/

Most of these statutes contain standards that control the type of information to be collected, the source of information, and the permissible collection methods.

The Federal Records Act

The Federal Records Act provides three standards for collection of information by Federal agencies: (1) it shall constitute as minimal a burden on businesses and individuals supplying it as possible; (2) it shall be at a minimum cost to government; and (3) unnecessary duplication in collecting information shall be avoided. 6/

The Federal Records Act charges the Office of Management and Budget (OMB) with reviewing information collection practices of Federal agencies, determining Federal needs and coordinating information collection. 7/ To meet this responsibility the Act directs OMB to establish a report clearance process. 8/ Any agency form, questionnaire or information collection device (including verbal survey instruments) that asks for identical information from more than ten non-Federal sources must be submitted to OMB for review and clearance.

Amendments to the Act give the General Accounting Office (GAO) clearance authority for information collection activities of independent regulatory agencies. 9/

The Office of Management and Budget's reports clearance office receives approximately 3,000 requests per year, and devotes about seven and one-half professional man years to collection requests. 10/ It is estimated that they reject less than five percent of collection requests.

Critics, particularly in the Congress, charge that the OMB (and the General Accounting Office) clearance process is ineffective and understaffed.

Agencies sometimes collect informaton without submitting the program to OMB. Public sources are relied upon to discover violations. This year, for example, OMB learned that the Department of Health, Education and Welfare's Office of Civil Rights had sent a questionnaire to 3,000 school districts without clearance. The questionnaire required information on disciplinary procedures and practices.

OMB required the Office of Civil Rights to notify recipients of the questionnaire that the questionnaire program had been halted and that no replies were expected until further notice. 11/

A problem connected with the present information collection review mechanism is its limited coverage. The Office of Management and Budget has testified that only about one-third of the Federal Government's information collection activities are covered by its reports clearance process. 12/ The Internal Revenue Service is exempt from the clearance provisions of the Act and most sources agree that the IRS accounts for roughly one-third of all Federal data collection. The Federal Reserve Board and the Federal Energy Administration are also excluded. Independent regulatory agencies account for another one-third of the Federal information collection effort. The General Accounting Office concludes that its collection review efforts make only a limited contribution to the formulation of an intelligent Federal information policy. 13/ Review by the Comptroller General is strictly limited to a determination of burdensomeness and duplication. 14/

The present information collection clearance process prevents the Executive Branch from evaluating agency information needs effectively. No effort is made to audit an agency's use of information; and therefore, there is no way to determine if agencies accurately describe their information needs.

Standards for Federal Collection of Personal Data

The government's collection of personal data is one of the more sensitive and regulated areas of information policy. The Privacy Act places several restrictions on Federal collection of personal information.

Limitations include the following:

- o Federal agencies should collect only information about an individual that is relevant and necessary; 15/
- o Agencies should not collect information concerning the exercise of First Amendment rights; 16/
- o Information should be collected from the subject of the information where possible; 17/
- o Individuals must be advised of the use contemplated for information, the authority for its collection, and possible consequences of refusal to provide it. 18/

In the past few years, several efforts were made to limit the quantity of information collected from individuals and businesses. In 1970, the President ordered the Office of Management and Budget and the General Services Administration to lead a reduction in Federal reporting requirements. In March, 1976, President Ford ordered a ten percent reduction in Federal information collection and another five percent cut in July, 1976.

In 1974, a Commission on Federal Paperwork was created to "study and investigate statutes, policies, rules, regulation, procedures, and practices of the Federal Government relating to information collection processing, and dissemination, and, the management and control of these information activities." 19/ The Commission's report, due in October of 1977, is expected to include extensive recommendations for reform of Federal information collection activities.

The Executive Branch lacks a set of overarching information collection principles which can guide agency practices. These principles, particularly if developed and monitored from a centralized source, would bring consistency and coordination to Executive



Branch collection practices.

Examples of pressing information collection issues that currently confront the Executive Branch are:

- o On what basis should some agencies be exempted from the information collection restraints of the Federal Records Act?
- o Should efforts to reduce information collection be aimed at certain types of information or certain information gathering activities? or both?
- o How is information collection related to its use and dissemination?
- o Is cost a relevant factor in influencing collection practices?
- o Can the Federal Government develop principles for determining when the public need for information outweighs the reporting burden on the public?
- o Can fraud in government benefit and social service programs be policed without leading to increased information collection?
- o How should the Executive Branch develop, review and evaluate agency information needs?
- o Does openness in government and closer review by Congress and the media lead to more or less information collection?

ISSUE 2 Establish Principles For The Intra-governmental Transfer Of Information Which Promote Efficiency And Provide Adequate Safeguards

Background

The sharing of information within government has attracted considerable Legislative and Executive Branch attention. For some people, it is the key to more efficient programs, lower costs, effective policing of fraud, and the means by which the private sector can escape a massive and growing burden of reporting requirements. For others it raises the spectre of unlimited exchange of information, particularly personal information, invasion of privacy, and for some individuals, an inability to escape their past or achieve rehabilitation. The social security number, the FEDNET, data banks, and even the computer have become symbols of these concerns.

Discussion

Despite Congressional urging, the existence of clear transfer standards, and occasional Office of

Management and Budget intervention, some Federal agencies share their data with sister agencies only minimally. This condition may persist even when agency heads have made it clear that they desire a proper interchange of information and data.

The Office of Management and Budget has publicly complained that Federal agencies too often put confidential labels on information in order to limit its transferability. 20/ Section 3508 of Title 44 of the United States Code contributes to the non-circulation of confidential data. Not only does it provide that confidential data need not be transferred, but furthermore, it establishes that in the event such data is shared with another agency, the receiving agency is forbidden from making any further transfers. 21/

Critics point out that lack of data-sharing results from agency (and Congressional) failure to incorporate transfer strategies in their information programs. For example, the U.S. Global Atmospheric

Research Program collects climatology data from satellites, balloons, aircraft, and oceanographic vessels. At present the program has assembled 10^{14} bits of data, an amount roughly comparable to a substantial part of the collections of the Library of Congress. However, the program does not have computing resources, technical staff or operating funds necessary to make this information available in usable form to other agencies in the Executive Branch (or, of course, to the public). 22/

The benefits of such sharing have long been understood in the scientific and technical information areas. The large government investment of taxpayers' dollars in research and development, and the importance of the flow of scientific and technical information provides a rich and necessary nutrient for industry, commerce, agriculture, education, and other fields.

Even so, progress toward optimal use of scientific and technical information has been interrupted. At one time, this subject was addressed under the auspices of the Committee on Scientific and Technical Information (COSATI), related to the Presidential Science Advisor.

When that Committee was dissolved, an important forum for dealing with these issues was lost. Recent legislation reestablishing the Science Advisor and his staff in the Executive Office of the President seeks to rectify this situation. 23/

The issue is much broader than scientific and technical information. It involves the quality of management, coordination, planning, and operations for all of the proliferating information and communications programs of the Federal government - an extraordinary estate with computers, communications conduits, data banks, micro-graphics readers, radios, photocopiers, word processors, libraries, information centers, clearinghouses, computer centers, and other forms of equipment and systems.

These questions are raised: How efficiently and effectively are the Federal agencies applying new and old information technology to keep information-processing costs down to a minimum? How effectively is the information machine processing the information and data that passes through it? How well is the machinery used to move the information within, between, and to and from the Federal agencies? Have

the agencies used the extraordinary speed and power of the information machine to improve missions and public services? What steps are the Federal agencies taking to determine costs, performance, and benefits derived from better information processes?

Are the agencies using processes of management that apply more to conventional and inkprint-based information systems than the new electronic forms? Being capital-intensive, are the new information systems being planned so that information generators, managers, workers, and users are part of a total system that will operate with a high probability of success to warrant large initial and continuing resource investments?

Within individual agencies, the size and number of information systems and amount of information equipment is significant. But when these systems and resources are viewed in the aggregate, the extent of the government investment is staggering. Yet even within the more narrow and easily defined scientific and technical information area, there is no clear data on what is being spent. Agencies can be expected to resist attempts to standardize government practices and

place additional limitations on their freedom to make decisions which affect their information systems. It will be important to distinguish between resistance which represents legitimate needs connected with agency missions and resistance based on general bureaucratic reluctance to change in-place systems. Improved knowledge about the different information systems will be necessary before the competing choices are clear and decisions can be made.

FEDNET

On the positive side, efforts are made occasionally which do lead to economies and efficiencies of information sharing. The Brooks Act mandates the efficient use of data processing equipment among the Executive agencies, as well as cost effective procurement. 24/ Some have seen such efficiency in networking and sharing of data processing equipment. It is now possible to interconnect previously independent data banks, so that information once collected by a single agency could be made available to many.

The first attempt to centralize government-held computerized information was made in the mid-1960's

with the proposal to establish a National Data Center. A second proposal called FEDNET would have resulted in a computer sharing and interconnected data system, thus allowing any agency the technical means to access the data banks of all others whether or not the information was relevant to the functions of the inquiring agency. Both programs were cancelled because of their failure to include privacy safeguards.

FEDNET and similar proposals for computerized networking have engendered heated opposition each time they are proposed. Of course, a long time source of concern has been the absence of restrictions on transfers between manual systems. But the inefficiency and slowness of manual systems has itself been viewed as a safeguard. By removing inefficiency through the use of advanced data processing linkages, these systems remove the only existing safeguard and increase the need for restrictions on use.

Federal Use of Personal Data

Ironically, numerous charges are made that although the Executive Branch has failed to develop policies

and strategies to effectively use non-sensitive information, Federal exchange of at least some kinds of sensitive information may be overbroad and excessive.

The most commonly cited example concerns the government's use of personally identifiable information. As mentioned, the Federal Government maintains 3.8 billion records containing personal information. Fifty-eight percent of this information is maintained by three agencies: the Department of Defense, the Department of the Treasury, and the Department of Health, Education and Welfare. 25/ Sixty-eight percent is compiled in administrative systems, defined as data banks that deal with internal agency operations such as personnel records, travel records, or parking permit records. Thirteen percent of the government's personnel records are in domestic assistance program systems, defined as data banks that deal with the operation of Federal assistance or benefit programs, for which individuals or organizations must request or apply in order to participate. Eighteen percent of the information is contained in other types of data systems, including law enforcement, intelligence and financial systems. 26/

The Privacy Act set numerous standards for Federal maintenance and inter-agency transfer of personal information. For example, the Act requires that personal records used by agencies to make decisions about individuals be maintained with a degree of accuracy, relevance, timeliness, and completeness. 27/ Under the Act agencies must also develop rules of conduct for personnel handling personal information to assure that the information is maintained in a secure environment. 28/

Nevertheless, policy questions still plague Federal managers of personal information systems. For example, there is little understanding of what constitutes a requisite degree of accuracy, relevance, timeliness, or completeness. Furthermore, despite study efforts by the National Bureau of Standards and the Domestic Council Committee on the Right of Privacy, there is little consensus in the Executive Branch concerning the proper standards for system integrity and security in personal data systems. The courts have not yet ruled on any of these questions.

The Privacy Act generally prescribes intra-agency and inter-agency transfer of personal information without subject consent but recognized a number of significant exceptions. First, agency employees with a "need to know

in the performance of their duties" can access the information. 29/ Information that would be public under the Freedom of Information Act can be transferred within the agency and the Executive Branch without limitation. 30/ Transfers pursuant to a proper "routine use," (defined as a use of such record for a purpose which is compatible with the purpose for which the information was first collected) are authorized under the Privacy Act. 31/ Finally, the Act permits transfers of information to the Census, to the Archives and for a criminal or civil law enforcement activity. 32/ The Act provides that as to any of these transfers except those that are intra-agency or mandated by the Freedom of Information Act, the transferring agency must make an accounting of the date, nature and purpose of the transfer and the identity of the receiving party. 33/

Preliminary evidence suggests that the Privacy Act's transfer provisions have not provided agencies with usable standards on the basis of which they can make discerning and consistent judgments about personal information transfers. One problem concerns the

intra-agency, "need to know," disclosure standard. Executive Branch agencies are in reality a conglomerate of many different kinds of organizations. The Department of Health, Education and Welfare (HEW), for example, has eleven component agencies, 130,000 employees and controls one-third of the Federal budget. Offices as diverse and sensitive as the Social Security Administration, the Office of Education, the Indian Health Service, the National Institute of Mental Health, and the Parent Locator Service can exchange personal information at their own discretion and without compliance with the transfer standards that would obtain if these offices were housed in different agencies. In view of the Department of Health, Education and Welfare's massive potential for data exchange, the Office of Management and Budget has asked the agency to voluntarily adopt transfer limitation standards. 34/

A second major deficiency lies in the Act's routine use concept. By simply publishing notices in the Federal Register 30 days prior to initiation of a transfer, agencies are free to share sensitive personal data throughout the Executive Branch. The routine use test - that the receiving agency must use

the information for a purpose compatible with the purpose for which the data was originally collected 35/ - is probably too vague and subjective to constitute an effective transfer limitation. Although no one has as yet completed an empirical review of agency routine use notices, the feeling among many knowledgeable observers is that the Privacy Act has not significantly altered Federal agency personal information transfer practices.

Social Security Number

Concern over the creation of a universal identifier stems, in part, from the fear that this would expedite the process by which information is shared in both the public and private sector. Despite its shortcomings when applied to such a purpose, the social security number has often been seen as one such identifier.

A moratorium on further spread of the Social Security Number was included in the Privacy Act of 1974. 36/ Nevertheless, the problem continues to be a source of concern to many Americans. Many of these issues were presented recently when the Senate considered the Tax Reform Act. An amendment to that Act would have permitted the Parent Locator Service at the

Department of Health, Education and Welfare, established to combat welfare fraud and force absent parents to fulfill their support obligations, to have access to its Social Security system. The Senate, with many members troubled by the difficulty of reconciling the competing values at stake, opted for a compromise course and allowed the Parent Locator Service (though no other system at this time) such access.

Law enforcement has generally stated a claim of access to information in Federal files. The Attorney General has advised agencies that access for law enforcement purposes should be listed as a routine use in the system notices required under the Privacy Act.37/ Other attempts to write ground rules for sharing of information among law enforcement agencies have focussed on procedural safeguards, such as limiting the number of people who can make requests and providing an audit trail to permit oversight.

Listing Of Information Use Issues

This quick overview of policies and practices concerning maintenance, transfer and disposal of

information held by the Executive Branch suggests that a great deal of policy development remains to be done in this area. Many of these questions are the subject of the inquiry now being conducted by the Federal Paperwork Commission. Although numerous policies exist that speak to specific parts of the puzzle, others have not been given attention and nowhere have we developed a unifying body of principles to guide Federal information use. A catalogue of pressing policy issues helps to illustrate the nature of the problem.

- o Should the Executive Branch further standardize agency procedures for the maintenance, transfer and disposal of information?
- o Should agency information systems be compatible?
- o What standards should be developed for information accuracy, relevance, timeliness, and completeness?
- o What principles should govern the relationship between information sensitivity and system security?
- o What principles can be developed to improve inter-agency sharing of non-sensitive data?
- o What principles can be developed to limit intra-agency and inter-agency sharing of sensitive data?
- o When and under what circumstances should information be destroyed?

Background

Today, beneath a thin layer of perfunctory affirmation of the principles which underly policies of open disclosure, there exists sharp disagreement over the extent and nature of access to government-held personal information, national security information, law enforcement information, financial trade secrets, and other information describing the internal operations of the government. From the secret deliberations which marked the drafting of the Constitution, through the development of a government decisionmaking framework in the Administrative Procedures Act, through the passage of the Freedom of Information Act in 1966, the role of disclosure and openness in a democracy has been the subject of great debate.

Today freedom of information, the foundation of government disclosure, is by no means settled law. Its policies and its administration remain controversial. But this should not be surprising. It is an ambitious attempt to establish principles covering a variety of diverse circumstances in a discipline, information management, which is in its infancy.

Discussion

Government disclosure policy stands on several pillars. The most important of these is the Freedom of Information Act (FOIA), enacted in 1966 and amended in 1974. Another is the Privacy Act. The FOIA has also been used to amend the older Federal Administrative Procedure Act 38/ with respect to some requirements for public information operations. Another pillar is the Federal Register, itself the subject of discussions as to its effectiveness for information dissemination. Yet another is the Federal Advisory Committee Act. 39/ The newest pillar is Sunshine legislation which, as this report was in preparation, had passed both Houses of Congress after successfully establishing its popularity in numerous state legislatures. Such legislation is designed to open access to the deliberations of governmental bodies. These are the main elements of disclosure, although others exist.

The scope of this report precludes an exhaustive discussion of all of the controversies which attend this

disclosure framework. For instance, the FOIA has nine exemptions delineating types of information which need not be disclosed. 40/ Each of these presents issues of concern to various constituencies. Judicial interpretations are mounting as to the scope of each. And Congress already made one attempt at the redefinition of some in the 1974 amendments. Indeed, to discuss the FOIA exemptions alone could provide a report equal in length to this entire effort.

Instead, this discussion will be limited to a few of the issues which are receiving the most attention, with the understanding that more are undoubtedly lurking just over the horizon.

Straining Agency Resources

The first year of experience with the FOIA as amended suggests that there are at least some questions about its practicality. The short response time which Congress set (10 days for initial decision, 20 days for administrative appeal) is creating controversy. For

example, the FBI claims that 200 people working full time cannot reduce its nine month backlog. However, in contrast, the Department of Defense claims that it is able to process 44,000 FOIA requests during 1975 without building up a backlog. The resources which will be devoted to administration of the Act are directly related to the speed of administration as well as the accuracy with which determinations can be made.

That the problem is exclusively, or even primarily, one of resources, however, is not a universal view. Members of Congress and the judiciary have charged that bureaucratic hostility and lack of adequate attention are the major problems in implementation of the Act.

Decentralized Administration

Another issue that FOIA implementation has raised is the extent of decentralization both within agencies and within the Executive Branch as a whole. For example, the Department of Defense has eleven separate agencies with their own independent review procedure for the FOIA. Treasury has nine autonomous units. Each of

the Department of Health, Education and Welfare's 130,000 employees is authorized to release information under the FOIA. The result has naturally been conflicting practices among and within agencies.

The Department of Justice is the primary Federal agency with responsibility for coordinating Executive Branch disclosure policy. By its own estimate its efforts in this regard are inadequate. 41/

A Department of Justice FOIA Committee, staffed by lawyers from its Office of Legal Counsel and its Civil Division, review Executive agency decisions to deny FOIA requests where the matter has a reasonable possibility of leading to litigation. The Committee's review process is informal but it does serve to bring some consistency to at least those FOIA matters that are likely to go to court. Despite this procedure, many observers claim that the basic problem with the government's FOIA coordination process is that the Department of Justice assumes a number of conflicting roles. First, it is an agency that is substantively affected by the Act. Secondly, as the Government's lawyer, the Justice Department traditionally works to serve its client agencies by doing the best job that

it can of defending agency decisions and actions. Thirdly, the Justice Department, through its Office of Legal Counsel and its FOIA Committee, has responsibility for directing and coordinating agency compliance with the Act. These tasks are by no means complementary and they undermine Justice's ability to contribute to a consistent and national Federal disclosure policy.

Data Havens

Another issue that has emerged from implementation efforts concerns the scope of the Freedom of Information Act. Because the Congress and its offices (such as the General Accounting Office and the Library of Congress), the States, and the private sector including Federal contractors, are not covered by the Act, agencies sometimes attempt to take information that would normally belong in their own files and maintain the material in these "data havens." For instance, Department of Health, Education and Welfare personnel reported to us that they no longer

accept possession of drafts of General Accounting Office audit programs because it cannot shelter the documents from FOIA requests. Instead, HEW personnel inspect the drafts at GAO which is exempt from the FOIA. 42/

The extent of the "data haven" problem is not yet clear, but insofar as the Federal Government must meet a disclosure standard that exceeds the policies in other sectors, pressures exist for Federal agencies to "hide" information in exempt systems.

Personal Information Exemption

The Freedom of Information Act's exemption for information that if disclosed would violate personal privacy is controversial and difficult. 5 U.S.C. (b)(6) exempts "personnel and medical files and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy." Therefore, the Freedom of Information Act and now the Privacy Act, determines Federal policy for the disclosure of personal information.

Some observers see problems here. Because the privacy concern is stated as an exemption from FOIA's normal pattern of disclosure, it is narrowly construed by the courts. Particularly when combined with the language of the exemption which bans only "clearly unwarranted" invasions of privacy, this has the potential for permitting overbroad disclosure. In signing the Privacy Act of 1974, President Ford recognized this shortcoming and expressed regret that the Congress had not used the Privacy Act to construct a new and strong definition of privacy.

It is ironic that despite its failure to set an independent standard for privacy, the Privacy Act may nevertheless work to limit disclosures of personal information. Observers note that because most personal information in agency files is organized according to Privacy Act procedures, agencies have a tendency to automatically apply Privacy Act confidentiality standards and disregard the FOIA's broader disclosure requirement. If true, this example of form over substance would have the inadvertent effect of increasing citizens' privacy rights.

In addition to these effects which result from the relationship in which the Congress put FOIA and Privacy, there are a number of key policy issues which are ignored or not given sufficient emphasis under the present scheme. They include:

- o The identity of the requesting party (under some circumstances it may make a difference whether the party seeking access is a family member, a business partner, a public interest organization, etc.);
- o The requestor's purpose (A commercial purpose may be assigned one priority, an educational purpose another, a political purpose a third, etc.);
- o The identity of the subject whose information would be released (It can be relevant that the subject is a public figure, a recipient of a government benefit, the subject of government regulation or penalty, etc.);
- o The nature of the information sought (Information, even though personally identifiable, has different levels of sensitivity. A Domestic Council Privacy Project headed by the National Bureau of Standards has developed a methodology for measuring personal information sensitivity that could make Executive Branch information analysis more uniform and articulate.); and,
- o Any special circumstances that affect the government's relationship to the information (For example, if the information was obtained on a promise of confidentiality).

FOIA And Business

Two major areas of disclosure are continuing to receive attention. These have to do with trade secret and commercial information and with the role which competition plays in the business/government information environment. In order to bring information within the trade secrets exemption, an agency must be able to show that the data is: (1) commercial or financial; (2) obtained from a person, and; (3) privileged or confidential. 43/ The exemption for a "trade secret and commercial or financial information obtained from a person and privileged or confidential" is principally used by corporations and other business organizations. It also protects individuals from disclosure of their privileged financial information. 44/ The purpose of the exemption is to protect the privacy and competitive position of persons who provide information to assist governmental decisionmaking under assurances of confidentiality. 45/

There is wide consensus that financial information and trade secrets given to the government under promises of confidentiality should be closely guarded by the agency receiving the information. Nevertheless, controversies often arise over access to specific financial data. The courts have held that agencies have no right to even require that requestor's inform them of their true identity. 46/

In a related vein, many agencies report that the great majority of FOIA users are corporations seeking information that will give them competitive advantage or insight into Federal regulatory intentions. The Federal Trade Commission disclosed that in 1975 more than two-thirds of its FOIA requests came from corporations or their law firms. Only 12.5 percent of their requests came from individuals, 9.3 percent from state and local government, 5.3 percent from the press and 4.2 percent from public interest groups. 47/ Alexander M. Schmidt, Food and Drug Administration Commissioner, has stated that about 90 percent of FDA's disclosure requests come from corporations seeking information about their

competitors for what he calls "industrial espionage." 48/

This use pattern raises a question of whether the Act is in fact turning out to be a vehicle for creating a well-informed, vigilant electorate. Some critics charge that the Act is really useful only to the information elite. Surely for those who would contest agency denials of their FOIA requests, litigation is a sophisticated and expensive remedy beyond the reach of most of the public. Observers argue that if the Congress and the Executive have in fact adopted disclosure as a national policy, information held in Federal files will not reach the general public without a far more affirmative and coordinated effort than is required under the FOIA.

Pricing Policy

In practice, agencies annually publish and distribute hundreds of thousands of documents.

Every Executive agency has at least a few and many have hundreds of major publications.

Section 483(a) of Title 31 of the United States Code establishes the basic standards for agency pricing decisions. As regards user charges for government information it directs agencies to establish fees that are fair and equitable, taking into account direct and indirect cost to the government, value to the recipient, public policy or interest served and other pertinent facts. 49/

The Freedom of Information Act however, sets entirely different fee standards for Federal information that is available to the public but not mandated for dissemination. 50/ The general effect of these differing standards is that information which agencies actively disseminate is free or very inexpensive whereas information that agencies do not actively disseminate but which is available if requested tends to be very expensive.

Existing policies fall short, in many respects, of creating a rational and satisfactory Federal information disclosure system. This discussion has identified a number of information disclosure issues that the present policies have not resolved satisfactorily or completely. On what basis should the Executive Branch make determinations concerning the kinds of information it should actively disseminate to the public? What should the fee policy be for information that is actively disseminated? And, for information that is public but not actively disseminated? When and in what form should intra-agency and inter-agency memoranda, policy discussions and other internal exchanges of information be open to the public? Immediately? After a sufficient period of time? Only in oral proceedings but not in written form?

ISSUE CLUSTER II

INFORMATION IN COMMERCE: A RESOURCE FOR PUBLIC GOOD AND PRIVATE GAIN

Information is a national resource. It is the raw material of knowledge and, therefore, an essential part of modern economic, political, and social life. It has a central role in the market place not only in the creation of goods and services, but also as a commodity in its own right.

The importance of information as a resource is increasing with the advent of the Information Age. As it does, questions about the adequacy of the legal and market mechanisms which have governed its production, dissemination, and use in the past have become more critical.

The issues in this cluster deal with problems which arise out of the major roles which information plays in commerce. This is not to say that commercial considerations are or ought to be paramount in the determination of these issues. Certainly there are other values which must be served by public policy. The commercial aspects, however, serve to heighten the trade-offs involved.

ISSUE 4 Develop Appropriate Legal Doctrines
To Respond To New Developments In
Information Use

Background

Property concepts have been central to legal theory and social and economic activity in our society. But concepts of property were formulated to deal with tangibles, primarily land and chattels. When information, ways of dealing with information, or information products are treated as property, issues arise which differ from those resulting from the application of property theories to tangible matter.

Property, both in law and economics, is the right and power to exclude others from the various incidents of possession and use. 1/ Some of the characteristics of information make definition and enforcement of property rights difficult.

- o Information can be infinitely shared. It can be sold, exchanged, or given away, and yet retained by the transferor.
- o Information is transferred via a marker or carrier (e.g. books, magnetic tape, microfilm), but the value of the information is independent of the value of the marker.

- o There are no established units for measuring the value or quantity of pure information (information separate from any marker).

As our society becomes increasingly information oriented, the problems inherent in a bare property rights analysis of information issues become more apparent and the need to modernize legal doctrines in response to new developments in information use becomes critical.

Discussion

The limitations of legal doctrines and mechanisms based on property concepts are evident in a variety of information issues. Specific areas illustrative of the inadequacy of property analysis for the resolution of information policy issues are: third party record-keeping, copyright and photocopying, copyright and data banks, and computer software protection.

Third Party Record-Keeping

In this age of extensive record-keeping, the information exchange pattern is frequently triangular; the subject of the record, the holder of the record,



and the party seeking access to the record mark the points of the triangle. In this triangle, information can travel from one point to another without coming into contact with the third point. An individual record subject, therefore, may at times be effectively divorced from control of information about himself held by a record-keeper. At issue are the rights of the individual with respect to that information.

Bank records, which have been the focus of considerable judicial and legislative attention provide a useful example. In the course of providing full banking services to its customers, a bank can receive information about customer income, past and present employment, amount and type of indebtedness, marital and family status, social and business relationships (for credit reference purposes), and other personal data. Even photocopies of checks maintained over a long period of time reveal more than financial information; they evidence the customer's personal and business associations, spending habits, travel, political beliefs, and other personal affairs.

Narrowly defined notions of property can be a pitfall in grappling with the real issues presented here. An individual can assert neither ownership nor possession of the record. However, to dismiss the individual's potential rights on these grounds, is to apply tests that are becoming increasingly inappropriate in an information age. This sidesteps the need to resolve conflicting interests of law enforcement, personal privacy, and commercial practices. Here, as in many other information issues, the bounds imposed by traditional property analysis present a barrier to the development of rational information policy.

Copyright/Photocopying/Databanks

Legal mechanisms for dealing with property rights in information comprise a body of law which is generally described as the law of intellectual property. The classic justification for offering protection to intellectual property is the need to provide incentives for the production and dissemination of information in our society. Today, however, developments in information use and technology have changed the context in which these

mechanisms operate, and reassessment of the effectiveness of these laws in implementation of information goals is crucial. Copyright is one example.

Underlying the copyright and patent systems of the United States is Article 1, Section 8 of the Constitution which provides:

Congress shall have the Power...to promote the Progress of Science and Useful Arts, by securing for Limited Times to Authors and Inventors the exclusive right to their respective Writings and Discoveries.

This authority is permissive, not directive; copyright is a privilege granted by Congress and not a natural property right.

Photocopying

At its inception, copyright was primarily concerned with the right to make copies. The copyright holder was granted certain rights which resembled property in the sense that the holder was permitted to exclude others from certain uses of his publication (e.g. copying, sale, etc.). The scarcity of printing presses enhanced the enforceability of these rights. Today, however, every

person with access to a photocopier is a potential publisher. As a result, the ability to enforce the copyholder's right to restrict copying and collect revenue has been severely eroded.

The impact of photocopying on the operation of the copyright laws is illustrative of the ways in which technological developments have enhanced the unique characteristics of information and made application of exclusionary property concepts inappropriate. There is a clear need for reassessment of the goals of information laws and a restructuring of these laws in a manner consistent with the characteristics of information and flexible enough to accomodate future developments in information technology.

Copyright embodies two traditions fundamental to our society: a system of private incentives and the encouragement of learning. The photocopying problem is just one example of how these traditions sometimes work at cross purposes and create obstacles to the maximum flow of information.

The fair use doctrine has been aptly characterized as a safety valve on the law's definition of copyright. 2/ Judicially designed to prevent copyright from imposing

unreasonable restrictions on the use of copyrighted works, this elusive doctrine has presented a number of troublesome issues in application, but has been useful in providing a degree of elasticity to the copyright system. Developments in information technology, however, have presented problems and created conflicts of such magnitude that accommodation by the fair use doctrine is not possible without distortion of the balance between the interests of providers and users of intellectual works which the current system attempts to establish.

While the inadequacy of the current copyright system is universally acknowledged, proposals for modernization range from modification which would accommodate new technology to modification of the term of copyright, to elimination of copyright altogether, and to substitution by an alternative mechanism for compensation of authors and publishers. Compulsory licensing, though strenuously resisted is one of the proposals which has frequently been suggested.

Changes in the regulation of any part of the information flow will have an effect throughout the information system. In the copyright area, Congress has

spent twenty years trying to balance competing interests and effect compromises between the parties involved. One major handicap in this revision process, and in the field of intellectual property law in general, has been the paucity of empirical evidence to support conflicting claims. Such evidence must be gathered and carefully analyzed if legal mechanisms for regulating the flow of information are to be effectively restructured.

Data Banks

Present day computer-based information storage and retrieval systems have the ability to process information in ways never dreamed possible by the framers of the Constitutional copyright clause. The legal complexities of copyright and computers are enormous. Potential copyright infringement is involved in computer input, storage, retrieval, and output.

Many issues revolve around the right and methods of compensation. At what point of computer usage does the author's right to compensation arise? Should a copy-

right fee be exacted for computer input on the grounds that it may be retrieved in a different format to which no copyright liability attaches? Should the fee be assessed at output, determined by recorded usage of the material? What about selective input - is this fair use? How would this affect the author's market for his copyright product? How can copyright violations be detected?

Copyright problems, however, extend beyond the question of compensation. The administrative burden or "transaction cost" of obtaining permission for use of copyrighted works poses significant problems as well. The difficulty and expense of locating proper parties and negotiating permissions for input of copyrighted materials from diverse sources could present a substantial handicap to the use of modern information systems.

The moral rights of authors with respect to input must also be considered. Does the author have the right to control input, or only output? What implications arise from the omission of the author's name from output, or the modification of his work in the process of input or internal manipulation?

At present, these and other questions are being raised in the context of information centers located in the government, large libraries, educational institutions, and private industry. In the future, answers to these questions will be primary factors in defining the scope of information available to the individual through home information systems. The capacity of technology to record, store, and retrieve information has already exceeded the ability of current legal mechanisms to govern effectively the relationship between the creator and user of this information. The copyright permission system of compensation presents a potential legal obstacle to the achievement of the goal of assuring maximum possible access to information for society as a whole, while failing in many cases to provide adequate compensation to authors.

Software Protection

Software provides another illustration of the limitations of current legal mechanisms based on property concepts. Two characteristics of software make effective protection from unauthorized use essential

to its producers: the extent of investment required for its development, and the ease and inexpensiveness of software reproduction. There are serious shortcomings in each of the major forms of intellectual property law in providing such protection.

Patent protection offers the strongest form of protection for intellectual property, but the statutory requirements preclude most forms of software from coverage. Further, the delay between filing and issuance of a patent, and the requisite search of the prior art make the current patent system inadequate as an effective form of protection of this rapidly developing information product.

Copyright protection is generally available for computer programs, but there are a number of significant drawbacks. Protection is limited to the form of expression; valuable concepts, techniques, and intellectual processes expressed in the program may be freely copied, regardless of the novelty or innovation involved. Copyright infringements of program copyrights are difficult to detect, and just as difficult to define under current statutory language. What constitutes copying of a computer program?

Does the copyright law proscription against unauthorized translation apply to translation into other computer languages? Should copyright protection of computer software be limited to the right to make and vend copies of the program or should the right extend to the use of a program to operate a computer in a manner similar to the performance right in a musical or dramatic work? 3/

Trade secret protection is a common law alternative to the statutory protection of the copyright and patent systems. The primary advantage of this form of protection is that limited access results in less opportunity for misappropriation; therefore, problems associated with detection of infringement or unauthorized use are reduced.

The inadequacies of the copyright and patent systems as a form of investment protection make trade secret treatment of software a more attractive alternative to statutory protection in many instances. This has serious public policy implications. If one accepts maximum dissemination of useful information as

a goal of information policy, trade secrets are socially the least satisfactory form of protection.

Secrecy leads to a wasteful expenditure of talent and skill on solving problems already solved and writing programs already written. Markets for ideas and their expression are made gravely imperfect when information is suppressed. 4/

The information explosion made possible by technological advances is becoming increasingly critical. If public policies are to be responsive to public needs, the information on which these policies are based must be readily accessible in usable form. Information technologies have the capacity to facilitate research and knowledgeable decisionmaking. Technological developments also, however, have seriously impacted on current legal mechanisms governing the relationship between creators and users of knowledge, and threaten to undermine the economic incentive to knowledge production.

Careful attention must be paid to the design of mechanisms which promote both the origination and the accessibility of information in our increasingly information oriented society.

ISSUE 5 Write Rules To Clarify The Relationship
 Between Government And The Private
 Sector In The Production, Publication
 And Dissemination Of Information

Background

Some of the most difficult issues facing the government result from the growth of a new commercial information service sector in the United States. This new industry often finds itself in conflict with government dissemination services. It seeks a resolution of these conflicts and a uniform set of policies that will provide a climate for its growth and investment. The problem is complex, since the dissemination of government-generated information is a legal responsibility

of the Federal agencies, either specifically written into the agency legislation, or implied in agency mission descriptions. Moreover, many of the information programs of Federal agencies have grown over the years and have become national and international in scope, making dismantling difficult. Several of the agencies have taken steps to turn some parts of their dissemination programs over to private sector contractors, but the commercial information industry believes this effort to be insufficient.

Also at issue is the status of government data bases that are being produced in machine-readable (computer magnetic tape) format. Commercial on-line, interactive information retrieval organization are establishing popular retrieval services that provide remote access to users who are equipped with terminals. Legal suits have been made to force agencies to provide data bases; more are expected in the future, especially if the commercial on-line services prove to be profitable. This and other issues argue for a uniform government policy that will minimize contention between the two sectors.

The For-Profit Sector View

1. Private industry's role is to guarantee full and open choices to information users from multiple sources.

2. While publicly supported library functions providing free information should not be abolished, it should be recognized that there is no such thing as free information.

3. The information industry is equipped to re-format information to fit the needs of users more flexibly than the government.

4. "The deadening effect of the generosity of Big Brother (in disseminating information) will impose perhaps not an iron curtain but certainly a wet blanket on creativity, choice, and the competition of ideas this Nation needs to function." 5/

5. There is no clear policy guidance for government agencies in the offering or pricing of products or services to non-government customers.

As a result, a wide variety of tape distribution practices exists within government depending, it appears, on the motivations of the individual agency.

6. Competition between the government and private sector in data base services results in withdrawal of the commercial offering. Government agencies offer data base services that overlap free enterprise offerings. The market for information retrieval services cannot support a large number of overlapping products.

7. OMB Circular A 76, governing policies for acquiring private sector products and services for government use, should be updated and revised to apply to information products and services provided to the public.

8. In some instances, private sector copyright of works produced by the Federal government should be permitted to enhance dissemination of useful information and reduce distribution costs.

The Government View

1. The public has paid for the generation of information and should be entitled to get it without paying for it a second time.

2. Federal agencies are adhering to the law in their dissemination and regulatory practices.

3. To the extent possible, agencies are using private industry in lieu of creating their own, government-manned facilities.

4. The private sector is relatively free to repackage and disseminate government-generated information.

5. It is not in the public interest to vest control of dissemination of government-generated information in the hands of individual entrepreneurs who might raise prices to prospective users.

6. Individual agencies set policies in accordance with their missions and goals. The lack of a government-wide policy cannot be charged to them.

7. "Free" dissemination of government-generated information and data has been sharply

curtailed as a result of Office of Management and Budget directives. For example, OMB Circular A-25 sets forth the general policy that a reasonable charge should be assessed against each identifiable recipient for a measurable unit, or amount of government service, or property from which he derives a special benefit.

The Professional Society's View

1. Government assistance to disseminate information is needed as the costs of dissemination rise faster than society members can pay for the publications.

2. There is no way to obtain funds necessary to "mechanize" their information dissemination programs except from government agencies. Without mechanization, they cannot cope with the proliferation of information in their fields.

3. They need the help of the Federal agencies in obtaining funds for preliminary studies necessary to improve their information services.

The Information User's View

1. There has been an extraordinary rise in the costs for informational materials. As a result, purchasing has been curtailed.

2. Libraries cannot afford to buy all of the books and magazines that they need. Establishment of networks that will permit the sharing of collections is necessary for the survival of libraries.

The Publisher's View

1. Costs of materials, labor and facilities are rising precipitously; a larger market is needed to bring a reasonable return on investment.

2. Sharing of collections by libraries as an economy measure may be calamitous to publishers.

3. Photocopying by users is destroying sales; the government should do more to protect intellectual property.

4. Capital needed to modernize processes of production is costly; publishing is becoming a marginal industry.

Discussion

It is evident that all segments of the information chain face strong economic and other problems brought about by new information technologies and other forces. The problem for the government is especially difficult. In addition to managing its own information programs, it must determine when and what to subsidize in the non-government sector; the effect of telecommunication policies on information services; how to cope with a non-profitable postal service that provides subsidies to some and higher costs to others; how to obtain a balance between freedom of information on one hand and agency mission efficiency on the other; how to provide information services to the public and at the same time establish policies that will not penalize the commercial information sector; how to work out a harmonious relationship with all groups in the public and private sector that will result in a minimum of overlap and duplication; and how to formulate policies that will result in electronic networks interconnecting all sectors that will be able to interchange information

and data while simultaneously protecting privacy rights. The solutions needed to solve the myriad and complex problems will be difficult to achieve in light of the continuing introduction of new information technology into the process. Only the government is in the position to formulate policies that can contribute to reasonable accomodation to the realities.

ISSUE 6 Determine The Appropriateness Of
Restrictions On The Use And Transfer
Of Personal Information In The Private
Sector

Background

The Congress has before it an omnibus privacy bill for private sector record systems. 6/ The bill mirrors all of the major provisions in Section 3 of the Privacy Act. Some industry observers feel that it is representative of the kind of privacy legislation that the Congress is eventually likely to pass.

The Privacy Protection Study Commission is preparing a two year study of private sector information practices, including consideration of medical and insurance records; employment and personnel records; credit, banking, and financial records; commercial reporting activities; mailing list brokerage firms; travel, hotel and entertainment reservation information; private sector use of the Social Security number; and State information laws. Its recommendations are likely to be given careful consideration by Congress.

The Department of Commerce is completing plans to survey 3,500 businesses concerning personal information policies and practices.

Private sector groups are also conducting studies. The Bank of America has a major project on disclosure and information practices. The Krannert School of Business at Purdue University has established a Center for the Study of Privacy Issues in cooperation with TRW Credit Data, the J.C. Penney Company, IBM and several other large corporations. The National Chamber of Commerce has announced plans to conduct its own privacy study.

In the meantime, numerous bills have been submitted in state legislatures and the Congress to regulate the private sector. At present more than 35 States have privacy legislation pending; nineteen include provisions for private sector regulation. Some cover only automated systems; most specify kinds of information that can be collected, the conditions of collection, and permissible transfers and dissemination; almost all have notice requirements comparable to the provisions in the Privacy Act; all provide for subject access to records about himself.

Discussion

Information collection as an adjunct to business activity is immense. A partial list which focuses on personal information about individuals would include financial records held by banks and other financial institutions; information on travel, entertainment, and spending patterns held by credit card companies; employment records, including information concerning

absenteeism, and evaluations by supervisors; health and insurance records; educational records of various kinds including transcripts, letters of recommendation and other forms of student evaluations; records of credit service bureaus including information about promptness of loan payments, denials of credit, and such other items alleged to be of use to the credit grantors; and the direct mail industry tabulations and cross tabulations of almost every category of American imaginable.

Virtually all of this potentially sensitive information is gathered, managed and distributed without any comprehensive scheme of Federal regulation. Only the credit reporting industry is now subject to Federal regulation. Those areas likely to receive attention in the near future are discussed below.

Employer Information Practices

Regardless of its size, mission or charter, organizations must maintain personal information about their employees. As a consequence, information

in employee files normally include full biographic data, sensitive objective reports (absenteeism records, medical history information, aptitude test scores, etc.), and at the same time, highly sensitive subjective and normative materials (supervisors evaluations, third party employment recommendations, etc.). In most instances employees do not know how much information about them their employer has collected. They are usually not able to look at their personnel file to determine the relevancy, accuracy or timeliness of information in their file. There is often no guarantee that information will be used for the same purpose for which it was collected. In many parts of the country, law enforcement agencies, banks, credit reporting agencies, and other outside parties have access to employment records. At present, there are no satisfactory standards to govern the length of time that an employee's records should be maintained after the termination of employment.

Banking and Financial Institutions
Information Practices

One of the largest aggregations of personal information in the private sector is maintained by banks and other financial institutions. In 1974, there were 14,448 commercial banks, 480 mutual savings banks, 5,170 savings and loan associations, almost 23,000 Federal and state chartered credit unions and over 3,400 consumer finance companies. ^{7/} Americans had savings accounts valued at roughly 41.4 billion dollars and showed a consumer debt of 880 billion dollars, most of it owed to these financial institutions. ^{8/} By 1970, fifty percent of American families used credit cards and has run up a credit card debt in excess of 8 billion dollars. ^{9/}

It is estimated that more than 60 percent of adults maintain checking accounts and a large, but smaller percentage have savings accounts.

In order to administer this system, financial institutions collect extensive and sensitive personal information. Financial institutions generally rely on three sources for their information; (1) information

that the individual discloses in his application form; (2) information that the institution learns from other creditors and consumer reporting agencies; and (3) information developed over time from the organization's own experience with the consumer. These sources produce three conceptually distinct kinds of information. In order to determine eligibility for extensions of credit and, in many instances, for opening special checking and savings accounts, financial institutions and credit card companies first collect varying amounts of personal and financial history information. Depending on the type of account, this data can include salary information, employment history, medical history, arrest and conviction information, and personal residence information. Secondly, financial and credit card organizations collect and maintain extensive account information including the consumer's account balance, amount and frequency of payments and collection experience. Third, in some instances, the files of these organizations may contain information on the consumer's activity and travel itinerary.



There has been agitation by the financial community and consumer groups and within the Congress to substantially change standards for collection, use, and particularly dissemination of credit and financial information. Federal legislation has been proposed to tighten law enforcement access to bank and credit card records and give consumers notice of the impending dissemination.

Consumer Reporting Agencies Information Practices

Perhaps the largest compilers of personal information in the private sector are the commercial or consumer reporting agencies. The Fair Credit Reporting Act (FCRA) 10/ defines a credit report as a written record of an individual's financial history or of his character, life style, or personality compiled by a consumer reporting agency. The Act defines a consumer reporting agency as any person or organization that regularly assembles or evaluates consumer credit information for the purpose of furnishing reports to third parties. Reports compiled by credit grantors, including credit card

companies, relating to a transaction between the credit grantor and the consumer are not covered by the FCRA.

Reporting agencies collect information from the individual himself, from institutional sources (such as educational, military and employment records) and from personal sources (such as neighbors, business associates and social acquaintances). Their reports are typically purchased by banks, retail merchants, employers and insurance companies who most often use the information to make decisions about extensions of credit, employment and insurability. Some of the larger consumer reporting agencies amass files on millions of individuals. Equifax, for example, (formerly known as the Retail Credit Company) in 1972 had 300 offices, more than 7,000 employees, 45 million files on individuals and businesses and produced more than 35 million reports annually. 11/

Among the deficiencies of the present statute are said to be:

- o It places no restrictions of any kind on industry collection of information.
- o Consumers often have no way of knowing that a report on them has been ordered.
- o Record subjects cannot physically inspect their files or obtain a copy of the reports.

- o Record subjects are not given any information about sources of information or medical data in their files.
- o The dissemination standards are so broad and vague that they permit circulation of the report to virtually anyone the company chooses to give it to.
- o The law does not set standards for destruction of dated information.

Insurance Industry Information Practices

Five out of six families are covered by life insurance. Over 85 percent of the nations automobiles are insured. Over 90 percent of the nation's homes have some form of insurance. Roughly 80 percent of the public under 65 has some type of health insurance. 12/

In order for an insurance company to make a decision about insuring an individual or his property against a particular type of potential harm, the company must collect what usually amounts to a substantial amount of sensitive personal information. Depending on the kind of policy, the data is likely to include, in addition to complete biographic data concerning health, driving, employment and

educational history, criminal record, living situation, life style information, sexual affinities, and personality and character information.

The insurance industry has established centralized data exchanges. The most notable is the Medical Information Bureau (MIB) operated by some 700 life insurance companies. MIB has information on 12 million people 13/ supplied by member companies. In addition, much of the information compiled by the health insurance industry is managed by computer service houses. For example, Electronic Data Systems Corporation processes 75 million health insurance claims each year. 14/

Information in insurance files is actively traded among insurance companies, government agencies and employers. Individuals are often denied access to their insurance files, particularly when it contains medical information. Although no Federal or state legislation specifically covering the information practices of insurers has yet been enacted, there is a growing consensus among consumers and insurance industry officials that some

reforms are needed. Some of the issues most likely to be faced by Federal policymakers include: (1) the overbreadth and vagueness of applicant authorization forms that give insurance companies virtually unchecked authority to access the applicants' records; (2) sharing of insurance information with incompatible users including employers and law enforcement agencies; (3) subject access; and (4) standards for the accuracy, security and timeliness of information.

Hospital and Medical Record Information

America's health care system is changing in a basic and rapid way. More people are receiving health care and fewer are paying for it out of personal funds. The growing importance of third party payors, be they private insurance companies, employers, private sector intermediaries for government programs, or the government itself, introduces a new and information hungry participant into the health care environment. A second phenomenon is the spiraling use of computers in the collection, maintenance and dissemination of medical data.

At present there are few specific legislative or judicial restrictions on use of information by health care providers. Almost everyone agrees that physicians and other medical professionals should have unfettered discretion to collect whatever information they think is relevant. Similarly, there is wide agreement that society should not restrict exchanges of medical data within health care systems or otherwise establish standards for use, maintenance or disposal of medical data.

However, some believe that society ought to impose standards for dissemination of and access to medical data. There already exists a variety of legislative and judicial standards such as laws requiring physicians to report cases of communicable disease and deaths from unnatural causes. In addition several states have statutes that specifically require doctors and hospitals to release requested information to law enforcement agencies. 15/

Educational Institutions

In 1972, 59,289,000 individuals were enrolled in schools, including institutions of higher education.



For each enrolled student, educational institutions often maintain many dozens of pages of information. Schools, colleges and universities, collect, maintain and disseminate a great volume of extremely sensitive information about students and occasionally about their parents. These student files characteristically contain extensive economic and social background data, evaluations of attitudes, behavior, performance and ability, and health information.

Concern about the sensitivity and scope of student information held by schools and their dissemination practices led Congress in 1974 to enact the Family Educational Rights and Privacy Act (Buckley Amendment). 16/ It provides that any school receiving assistance from the Department of Health, Education and Welfare's Office of Education must provide parents (or students if over 18) the right to inspect all school records concerning their children and the right to challenge misleading or inaccurate entries. Furthermore, subject to a few exceptions, schools are prohibited from disseminating any information

from these files absent parental consent. Prior to enactment of the Buckley Amendment, only 24 States permitted some degree of parental access to school records.

Unresolved Policy Issues

Most observers predict that over the next several years, Federal policymakers will be asked to make definitive judgments about private sector personal information practices. Key issues that are involved in that policymaking process are listed below:

- o Should private organizations be permitted to maintain secret personal information systems?
- o Should general limitations on private sector collection of personal information be imposed?
- o When private sector organizations collect information from individuals, should they be required to tell subjects the purpose of the collection, the expected uses, access rights, if any, and consequences for failure to provide information?
- o Should standards for accuracy, timeliness, relevance, and security be imposed on private sector collectors of personal information?

- o Should government create a regulatory structure for private sector information practices?
- o What weight should be given to cost factors, organizational effectiveness, and organizational prerogative in considering the creation of information standards?

ISSUE 7 Consider the Proper Locus Of Regulation Of Information Within The Framework Of The United States Federal System

Background

An increased attention to the possibility of regulation of private sector use of information about individuals and the blurring of distinctions between communications and computers have raised difficult regulatory issues which can have significant impact on our Federal system.

Seven states have already enacted legislation to provide privacy protection for personal information held by state or local governments. No state has

yet enacted "omnibus" legislation dealing with the private sector as a whole, although several have enacted privacy legislation regulating specific industries. An example of these are state fair credit reporting statutes.

The prospect of continued legislative attention has raised concern in the private sector over the probability of conflicting requirements in different jurisdictions which would significantly increase costs or even impede interstate data flow. Consequently, some information industries are warning of the need for uniformity between Federal and state legislation. One such warning has come from the Association of Data Processing Service Organizations (ADAPSO). 17/ Another has come from insurance representatives, an industry traditionally regulated at the state level which has relied on that tradition to resist Federal incursion in other areas of regulation. 18/ Those representatives have argued that if such regulation is deemed necessary, there should be Federal preemption of state authority. 19/

Countering the arguments for preemption are many state government interests who claim that states have a right and duty to resist encroachment on their power to provide protection for their citizens. Representatives of this point of view contend that the Federal Fair Credit Reporting Act does not provide sufficient protection and that the preemptive clauses of that Act improperly restrict the States' ability to do so. They would probably agree with Justice Brandeis that state government should "serve as a laboratory; and try novel social and economic experiments." 20/

Discussion

The problem of achieving uniformity among the laws of differing states has a parallel in the problem of harmonizing national law for the orderly development of international markets. On the domestic scene, of course, the traditions, institutions, and legal doctrines by which this can be achieved are more thoroughly understood and highly developed.

Uniformity of Federal and state laws could occur in several ways: by chance; by special interests coordinating legislative activities in the Congress and state legislatures; by the drafting of uniform state laws by prestigious organizations such as the National Commission on Uniform State Laws; or through Federal preemption.

Preemption rests on the Supremacy clause of the Constitution and presents major issues for our system of Federalism. Consequently, the preemption power has been the subject of much legal attention. In Pennsylvania v. Nelson, 21/ the Supreme Court distilled three tests for preemption where state regulation must yield to Federal: (1) If the scheme of Federal regulation is so pervasive as to make reasonable the inference that Congress left no room for the states to supplement it; (2) If the Federal statutes touch an area in which the Federal interest is so dominant that the Federal system must be presumed to preclude enforcement of state laws on the same subject; (3) If enforcement of the state law presents a serious danger or conflict with the

administration of the Federal program.

In the past, legislatures and courts have not generally focussed on information as a discrete subject. They have instead looked at the medium that communicates the information. Consequently, several bodies of law have developed concentrating on such systems as wireless communications, cable communications, and telephone communications. For example, many of the relevant preemption precedents center on the role of the Federal Communications Commission and the Communications Act of 1934.

In several instances, however, the legislatures and courts have broadly addressed information as a distinct subject matter. The patent and copyright laws are the best examples of this. Here, Federal law exclusively occupies the field of patents and principally occupies the field of copyright. In a 1973 decision, the Supreme Court ruled that the Copyright Clause of the Constitution does not expressly or by inference vest all power to grant copyright protection in the Federal government. 22/ A state may grant

copyright protection as long as it does not clash with Federal law or prejudice the interest of other states.

State information laws are probably vulnerable to the doctrine of "subsequent Federal jurisdiction" in the event that Congress enacts a comprehensive regulatory scheme. Before such a step is taken, it will be necessary to give careful attention to all the ramifications of the use of the preemption rules in new information policy areas.

The rapidly changing character of information technology and usages means that new problems are constantly surfacing. For instance, continued merging of computers and telecommunications has necessitated reopening of the FCC's Computer Inquiry. The issues presented by this inquiry may have implications for the locus of regulation of computer/communications in our Federal system since the Federal government does not regulate the computer industry but does regulate interstate communications. As activities which have heretofore not been the subject of Federal regulation become increasingly intertwined with those that have,

the power of state governments could be eroded with respect to the former.

Whether the activities in question are of a nature to warrant a comprehensive national scheme or whether divided or concurrent responsibility would be appropriate can only be determined after a thorough airing of all the factors involved. This means adequate policy analysis which should be initiated by the Federal government.

ISSUE CLUSTER III
THE INTERACTION BETWEEN
TECHNOLOGY AND GOVERNMENT

The issues in this cluster are examples of the way in which technological developments and government regulation interact. This interaction occurs with regard to decisions which affect the national information infra-structure, and decisions on Federal procurement and information related research and development policy. Government action can enhance or restrict competition, establish or erode monopoly, encourage or discourage new technological developments, and accelerate or prevent obsolescence.

In the exercise of its responsibilities, the government impacts on technological development in the following ways:

- o As a regulator of information exchange process;
- o As a consumer or user of information technology;
- o As a funder of information technology research and development;

- o As a policymaker in the broad sense of exercising responsibilities for long-range social and economic planning.

Currently, responsibility in these areas is scattered throughout the government. The Office of Telecommunications Policy is clearly the lead Executive Branch agency for questions that pertain to the communications infra-structure, although its influence is limited by the independence of the Federal Communications Commission and the Postal Service. The Office of Management and Budget is responsible for overall policy control for government data processing. But, the Brooks Act locates administration of data processing procurement within the General Services Administration (GAO) 1/ and the National Bureau of Standards sets standards for procurement of such equipment. The lack of coordination of data processing activities has been criticized by GAO and by private interests. There has been no centralized authority for research and development in information science and information systems, although considerable expertise exists in the Division of Science Information at the National Science Foundation, the Institute for Computer Sciences