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# ENVIRONMENTAL ASSESSMENT PROCEDURES FOR \* INDUSTRIAL PROJECTS

# Background:

Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969 requires the preparation of an Environmental Impact Statement (EIS) for "major Federal actions significantly affecting the quality of the human environment."

Five years of experience with the NEPA process have revealed major shortcomings which require careful diagnosis and correction. It has become clear that EIS's are not sufficiently useful to decisionmakers and are frequently considered more of a procedural requirement than a substantive input to the decisionmaking process. Moreover, the information sought for inclusion is that which is thought to be needed in making a specific Federal decision. However, most projects involve a series of decisions made by private individuals, business firms, and local and state agencies, long before the project comes up for Federal decision. During this time, the project usually gains considerable momentum, and possibly more effective and desirable alternative options are foregone without the benefit of the information and public participation involved in the Federal EIS process.

#### Issue:

Is the present format of the Federal EIS process adequate to utilize the Federal information and expertise in environmental, economic, and other considerations related to the initiation of the major Federal action?

# Analysis of Issue:

A study has been undertaken to evaluate the impact of EIS's on private and governmental decisionmaking. This study involves an analysis of representative case studies, the development of prescriptive procedures, and suggested improved institutional arrangements.

This study has been undertaken in the fourth quarter of 1976.

#### Schedule:

Study completion . . . . . . . . . . . . . . 2nd Quarter 1977

# IMPACT OF ENVIRONMENTAL LAW AND REGULATIONS ON COST AND RATE OF DEVELOPMENT AND TRANSFER OF TECHNOLOGY

Background: It has been asserted that the adoption of environmental laws and regulations leads to accelerated development of the technology needed to implement the laws and regulations. At the same time, however, it has been alleged that the premature enforcement of such laws and regulations frequently leads to narrowing, or even eliminating, options for development of the best total technology from the standpoint of cost effectiveness or energy efficiency.

<u>Issue</u>: Does the passage of environmental laws and promulgation of regulations requiring emission levels more stringent than those achievable by existing best practicable technology within an arbitrary time period lead to an optimum technology?

Analysis: This issue is of major importance both in terms of assuring that the Nation's environmental goals are achieved in the most effective manner, and also in assuring that the long-term effects of environmental laws and regulations are not counter-productive to their stated objectives.

<u>Schedule</u>: A study will be initiated in Fiscal 1977 to develop a model for predicting the possible impacts of proposed laws and regulations on the development, transfer and application of such technology.

Key Issue No. 1

IMPLEMENTATION OF POLICY PRINCIPLES TO BE FOLLOWED UNIFORMLY BY ALL FEDERAL AGENCIES WORKING WITH NON-FEDERAL STANDARDS-SETTING BODIES

### Background:

The Interagency Committee on Standards Policy (ICSP) was established by charter of the Secretary of Commerce on April 1, 1975. It is chaired by the Director of Commerce's Office of Product Standards. Its purpose is to facilitate the effective participation by the Federal Government in domestic and international standards activities, and to promote the development of uniform policies among agencies participating in these activities.

The establishment and application of appropriate standards for the characteristics or performance of goods and processes can contribute significantly to national and international prosperity, economic growth, and public health and safety. A well-considered Federal standards policy reflecting the public interest can expedite the development and adoption of standards which will stimulate competition, promote innovation, and protect the public safety and welfare. Additionally, a well-implemented Federal national standards policy would promote national defense objectives, reduce costs, and expand domestic as well as international trade.

After more than one year of deliberations the ICSP has developed a set of policy principles aimed at achieving the objectives described above, and has forwarded them through the Secretary of Commerce to the Office of Management and Budget (OMB) with the request that they be issued as an OMB Circular directive. Issuance of that Circular is expected to occur in December 1976.

#### Issue:

In accordance with the proposed OMB directive the Director of the Office of Product Standards (OPS), responsive to the committee's decisions, is charged with the responsibility for coordinating the actions of the 22 member departments and agencies of the ICSP in implementing the policy principles. As part of such implementation the actions of the member departments and agencies are to be monitored and OMB kept advised periodically so that any deviations from the policies may be acted upon as appropriate. The policy principles will establish uniform practices and procedures for all Executive Branch agencies working with commercial (non-Federal) standards-setting bodies to develop, improve and use standards for materials, products, systems and services. Federal reliance upon the principles will lead to reduction of the cost of developing standards and minimize confusion among those who deal with them.

Studies are underway to determine the possible impact of the proposed GATT (General Agreement for Tariff and Trade) Standards Code dealing with standardization in the private sector as well as the Federal Goverment, both in the United States and abroad. Standards can be employed

as non-tariff barriers to trade. The GATT is intended to avoid the imposition of such barriers. The GATT Standards Code will affect the activities of many Federal agencies and State and local government instrumentalities that write standards, prescribe test methods, or certify the conformity of products with standards. OPS is directly involved in the study involving the prospective impact of the Code on Federal Government agencies, and indirectly through its chairmanship of the Interagency Committee on Standards Policy (ICSP) is concerned with the study on the impact of the Code on State and local governments. In each situation OPS will be seeking to promote an efficient and effective international standards system which would broadly meet the objectives of the proposed GATT Code while optimizing economic benefits for the United States.

#### Schedule:

The issuance of the OMB Circular establishing the uniform, Federal Government-wide policies relative to participation in domestic and international standards activities is expected to occur in December 1976. Plans for implementation of that directive have been indicated by OPS and are already underway. Implementation guidelines are expected to be completed by February 1977 and each agency is expected to be publishing its respective implementation procedures with a month or so thereafter. The monitoring function will begin at about the same time that the guidelines are completed. This function will continue on an indefinite basis, with periodic reports being made to OMB together with recommendations for actions that may need to be taken if any of the concerned departments or agencies appear to be deviating substantially from the policies set forth in the OMB directive.

# NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM

# Background:

The national need to accredit testing laboratories that evaluate products for conformance to standards was the topic of a 1970 conference convened by the National Bureau of Standards. An ad hoc committee selected by that conference developed a concept of a voluntary laboratory accreditation program. concept received a broad informal review during 1972. In April 1973 the National Business Council for Consumer Affairs, in its publication, "Safety in the Marketplace", recommended that the Secretary of Commerce study the merits of establishing a quasi-public national laboratory accreditation board. response to a request for views on the need for legislation to establish a national laboratory accreditation program, the Department, in April 1974, advised Senator Magnuson, Chairman of the Senate Commerce Committee, that the Department was considering the establishment of such a program under its existing authority. The Department promulgated proposed procedures for the National Voluntary Laboratory Accreditation Program (NVLAP) in May 1975. In response to extensive comment received in two public hearings and in correspondence, the proposed procedures were revised and were made effective as Title 15, CFR, Part 7 on February 25, 1976. These procedures were incorporated into Title III, Senate Bill S 3555, which was introduced in June 1976 but not acted upon by the 74th Congress. A major difference of this legislation would require all Federal agencies having need for formal qualification of testing laboratories to utilize NVLAP services and those laboratories accredited under its procedures.

# Issue:

Product testing laboratories in the United States number in the thousands. Many private organizations and governmental agencies have initiated laboratory inspection and test sample audit programs. Generally, these programs operate independently, and use widely varying criteria and methodologies. Approval of a laboratory under one jurisdiction does not guarantee approval by another. A national system for testing laboratory accreditation is urgently needed to coordinate existing efforts, to provide for uniform national recognition with reduced duplication of assessment activity, to increase competition among qualified laboratories, and to promote needed assurance for users of testing laboratory services. Internationally, importing nations increasingly require some form of national recognition and accreditation of testing laboratory services. widespread interest in a national system among Federal and state agencies, Congress, professional and trade associations, major industries, laboratories, small businesses and individuals. Benefits will accrue to laboratories, standards writing bodies, Federal and state agencies and other users of laboratory services. Leverage derives from potential legislative alternatives, from interest in deregulation, from users increasingly seeking "nationally recognized" laboratories, and from states seeking harmonization of programs that impact upon interstate commerce.

# Analysis of Issue:

An effective national system cannot be achieved without Federal Government participation. The Federal Government is a major initiator and user of laboratory assessment activity. The Federal Government is the only authority that can act legally to promote cooperation and coordination of states interest in removing barriers to interstate trade. With Federal participation, the national system can facilitate due process in accreditation matters and help ensure that the system does not hinder trade. DoC has the confidence of and long-term relationship with industry, trade and standards associations, business and technical societies to promote a national system for laboratory accreditation, and the National Bureau of Standards (NBS) has the broad technical base to assist DoC regarding test method technology and laboratory evaluation activity.

For these reasons, the DoC has promulgated NVLAP. In accordance with its procedures (15, CFR, Part 7) and in cooperation of the government and private sectors, NVLAP will establish laboratory accreditation programs (LAPs) in specific product areas. Thereafter, NVLAP will examine upon request the professional and technical competence of public and private testing laboratories that serve such product evaluation and certification needs, and will accredit those laboratories which meet the qualification requirements established. NVLAP will be reimbursed by fees for direct costs of examinations.

Under NVLAP procedures, potential LAP product areas are presented to the Secretary for his consideration by interested parties. The Secretary determines, after consultation with affected interests and public review (including hearings, if requested), that a product area needs a laboratory accreditation program (LAP). If a LAP request is believed to affect an existing or developing program of a Federal regulatory agency, the Secretary must seek the views of the head of that agency. For each LAP initiated an appointed advisory committee of government and private members recommends evaluation criteria and methodology, subject to public review and the Secretary's approval. During development and public review a LAP will receive input and cooperative support from affected Federal and state agencies and private sector interests.

After promulgation of final criteria for a LAP, interested laboratories apply for accreditation and pay established fees for examination and periodic audit. As each LAP is established, it will be supported by appropriated and/or other agency funds and grants and then will obtain self-support through fees charged for laboratory examination services. NBS provides technical, advisory, and occasional supporting services and is responsible for provision of qualified laboratory examination services, primarily by contract to qualified private individuals or firms. Other governmental and private agencies will be sources for required technical expertise. The Office of Product Standards (OPS) provides policy guidance and administrative support. A self-sustaining NVLAP is envisioned by 1985.

#### Schedule:

The planned schedule of resource committment to NVLAP is:

FY: 77 78 79 80 81 82 thru 84 \$236K \$990K \$1000K \$1000K \$1000K Self support from fees increases to \$900K The planned schedule of NVLAP events is:

Establish NVLAP priority schedule for initiation of requested LAPs,* and publish in Federal Register preliminary finding of need for first LAP	1st Quarter '77
Conduct public hearing, analyze oral and written comment, publish final finding of need; establish criteria committee for first LAP	2nd Quarter
Publish in Federal Register, proposed criteria and schedule of fees for first LAP	3rd Quarter
Publish in Federal Register, final criteria and	•

4th Quarter

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Dependent upon availability of resources as indicated above, two or more LAPs can be sequentially initiated, developed and made operational in each following year.

# \*Appendix:

Request for LAPs received or in process as of November 17, 1976

fees for first LAP after conduct of hearing and

analysis of comment; first LAP becomes operational

# Requests for Laboratory Accreditation Program Received or in Process

Product Area	Source Organization	Status
Testing of Thermal Insulation Material	Thermal Insulation Manufacturers Association, National Mineral Wool Insulation Association, National Cellulose Insulation Manufacturers Association	Preliminary request received, formal request expected December, 1976
Testing of Concrete .	National Ready-Mix Concrete Association	Preliminary request received, formal request expected December, 1976
Calibration of Power, Attenuation and Impedence Devices	Weinschel Engineering	Preliminary request received, formal request expected December, 1976
Testing of Processed Fish Products	. National Marine Fisheries Service	Preliminary request received, formal request expected December, 1976
Inspection Testing of Electrical Power Distribution Systems	National Electrical Testing Association, Incorporated	Proliminary request received, formal request expected January, 1977
Testing Solar Collectors	Energy Research and Development Administration and the Department of Housing and Urban Development	Request from Energy Research and Development Administration and the Department of Housing and Urban Devel- opment is being drafted
Testing of Home Building Products	Federal Housing Administration, Department of Housing and Urban Development	Discussions underway at the request of the FHA Commissioner

Testing of Waste Water

Metropolitan Sanitary District of Greater Chicago

Testing of Household Electronic Devices Rothenbuhler Engineering

Formal request received, DoC is determining the disposition of the U. S. Environmental Protection Administration in accordance with the Program Procedures

Preliminary request received and under analysis

NFS/11/17/76

# Government-Wide Automatic Data Processing Management System Under Public Law 89-306

Background: The Secretary of Commerce is responsible under Public Law 89-306 (October 30, 1965) for providing scientific and technological advisory and consulting services to assist Federal agencies in making effective use of computer technology; making recommendations to the President relating to the establishment of uniform Federal automatic data processing standards; and undertaking necessary research in computer sciences and technology. Technical execution of these responsibilities has been assigned to the Institute for Computer Sciences and Technology, National Bureau of Standards (NBS).

The technical areas currently receiving priority attention by the Institute include:

- o Computer Security: The development of Government-wide standards, guidelines, and techniques for Federal agency use in protecting valuable or confidential information in computer systems to safe-guard privacy, and controlling access to computer systems.
- o Performance Measurement: The development of Government-wide standards, guidelines, and methods for measuring the performance of computer systems and networks.
- o Managing Risks Associated With Computer Usage: The development of Government-wide standards, guidelines, and techniques to assist Federal agencies in insuring that computer systems perform their intended functions accurately and do not perform any unintended functions—and insuring adequate public accountability for the Federal use of computers.
- o Interface Standards: The development of Federal standards for interfacing or interconnecting computer components of different manufacture and provision of a basis for substantial cost savings in the procurement of computer peripheral equipment and core memory.
- o Increasing Productivity: The development of technical standards, guidelines, and methods to effect the application and spread of computer-based automation technology to increase productivity and quality of working life in both manufacturing and service industries.

The Legislation and National Security Subcommittee of the House Committee on Government Operations held hearings on the administration of Public Law 89-306 in late June 1976. The report resulting from these hearings stated that Public Law 89-306 "has been neither administered nor implemented in accordance with the intentions of Congress." The report criticizes the General Services Administration (GSA) for its handling of computer procurements and OMB for its failure to establish concise, clear-cut ADP management policy and for lack of adequate direction in the enforcement of the policies

it has issued. The report cites NBS for failing to provide "necessary hardware and software standards;" it recommends that NBS develop such standards "to incure maximum economies and efficiencies in the procurement and utilization of ADP resources." The report points out that NBS has not developed Input/Output Interface standards because "it apparently has been committed to the adoption of voluntary standards developed under American National Standards Institute (ANSI) procedures." The report does not acknowledge, however, that the OMB 1966 policy guidance to the Secretary of Commerce on implementing Public Law 89-306 emphasizes promotion of the "development and testing of voluntary commercial standards for automatic data processing equipment, technique, and computer languages."

Issue: How can NBS meet GAO and Congressional criticisms and achieve an acceptable rate of hardware and software standards development in light of admittedly inadequate resources and in spite of the necessity to be responsive to special unprogrammed assignments from OMB and GSA?

Analysis of Issue: The Executive Branch's implementation of Public Law 89-305 has been the subject of a continuing series of General Accounting Office (GAO) reports to the Congress and of a series of hearings by subcommittees of the House Committee on Government Operations. The GAO has issued some 12 reports that contain comments and findings about the National Bureau of Standards' performance of its responsibilities under Public Law 89-306. None of these reports found NBS having adequate resources to carry out all of its Public Law 89-306 responsibilities. The Bureau has planned responsive programs and requested necessary funding to carry them out and has responded with reprogramming and redirection to the maximum extent possible. For example, the Bureau has been directed by the Office of Management and Budget (CMB) to undertake special, unprogrammed tasks for which funds have not been budgeted. Such tasking occurred in early 1975 when OMB directed the Bureau to develop computer security guidelines for implementing the Privacy Act of 1974. This required the Bureau to reprogram already allocated funds with a resultant discontinuance or slippage of already budgeted projects.

In its budgeting process, the Bureau intends to take full account of the GAO and Congressional criticisms of its Public Law 89-306 program; the results of the GAO audit of the FIPS program; and other special analyses to identify Federal ADP standards requirements and priorities. Our objectives are to plan programs to overcome the cited deficiencies in the Bureau's implementation of Public Law 89-306 and to state straightforwardly the magnitude of additional resources needed to carry out these programs.

Schedule: Respond to request for comments on the hearing report. First quarter FY 1977. Prepare requests for necessary resources as part of the budget cycle. Third quarter FY 1977.

Background: Section 383 of the Energy Policy and Conservation Act of 1975 (P.L. 94-163) assigned to the National Bureau of Standards (NBS) the responsibility to develop test procedures for the determination of substantial equivalency of re-refined oil with new oil for a particular end use. These procedures are to be transmitted to the Federal Trade Commission to provide the basis for modified labeling standards and Federal procurement guidelines. The goals of this legislation expressed by the Congress are to stimulate the re-refined oil industry and to promote the use of re-refined oil, to lessen the environmental damage caused by the improper disposal of waste oil, and to reduce virgin crude oil consumption. The test procedures are to be developed as soon as practicable.

Congressional interest in the NBS program has been great. Congressmen Vanik and Dingell, who sponsored the legislation, have corresponded with NBS staff on numerous occasions. A briefing has been given to Congressman Dingell's staff. It had been the assumption within Congress that specifications existed which would only have to be collected and that transmission to the FTC would be extremely rapid.

The scope of the legislation requires a variety of oils to be considered. The NBS Recycled Oil Program will address the use of waste oil as fuel, hydraulic oil, industrial cutting, and engine lubricating oils. In each of these areas, specifications for many of the tests do not exist. Waste oil is a complex mixture containing a number of contaminants for which test procedures are required. These contaminants include wear debris, lead from the gasoline, heavy metal atoms from oil soluble surfactants, polynuclear aromatics (demonstrated carcinogens), ethylene glycol, hydraulic fluids, and even gasoline. When waste oil is used as a fuel, wear debris can cause burner clogging, abrasive wear of the burner head, and excessive deposits heat transfer surfaces. All existing tests for ash are known, however, to be invalid in the presence of lead and metallo-organics, both present in high concentration. Tests for ash content will therefore have to be developed within the program. In other cases where tests exist, an evaluation of the matrix effects on the analysis will have to be made to confirm their validity. And finally, many of the required tests are expensive and time-consuming performance tests with which the staff will have to gain experience. The NBS program will address these measurement difficulties to provide the required sets of test procedures.

<u>Issue</u>: How can NBS meet its responsibilities promptly under the Energy Policy and Conservation Act of 1975?

Analysis of Issue: Resources necessary to carry out the qualification of all important classes of oil would amount to 13 positions and \$1,600,000 for three years. At present, four positions and \$200,000 from internal reprogramming are being applied to characterize waste oil as fuel, the largest volume, highest impact end use. Since many of the required positions are for new hires of lubrication experts not now on-board at NBS, additional resources are required.

Schedule: NBS shall resubmit an initiative in the FY 1979 DoC budget to obtain the necessary resources for implementation in October 1978. A favorable decision would enable greater progress, beginning 22 months from now, in support of the President's energy and materials conservation policies.

# DoC Response to S. 3555 The National Voluntary Standards and Certification Act of 1976

Background: Senators Abourezk and Hart have argued that the existing standardization process is anticompetitive, it impedes new technology, and is structured so as to maintain a quasi-monopoly status for a few testing, inspection, and certification laboratories. They have sponsored legislation which would mandate the Federal Trade Commission to establish rules of procedure and practices for standards-development organizations and certification laboratories. Title I (National Standardization) of this Bill provides for the development of a uniform national standardization system for all standards and certification activities undertaken by the private sector. Title II (International Standardization) of the Bill covers international standards and international certification programs. Title III (Accreditation) of S. 3555 directs the Secretary of Commerce to establish a National Voluntary Laboratory Accreditation Program for the purposes of accrediting certification laboratories

Issue: What should be the Department's position in this legislation in view of its role in the standardization process (Interagency Committee on Standards Policy) and laboratory accreditation (National Voluntary Laboratory Accreditatic Program).

Analysis of Issue: (A) The Department supports the overall principles of Title I to assure that the public interest will be protected and due process observed in voluntary standards activities carried out by the private sector. The guidelines which the Interagency Committee on Standards Policy is preparing for representatives of Federal agencies participating in outside standards activities set forth various principles which are aimed at protecting the public interest and assuring due process.

The Department also agrees with and endorses the principle contained in Title I that the Federal Government should not duplicate the standardmaking activities of the private sector and that wherever feasible, Federal agencies should utilize an existing non-Federal standard.

This principle is also included in the guidelines being prepared by the Interagency Committee on Standards Policy. The Department, however, is concerne about the rigorous regulatory framework provided by S. 3555. The central issue is a need for the proper assessment and evaluation of the cost of regulation vis-a-vis its benefits.

Before enacting S. 3555, the Department of Commerce urges that a proper assessment and evaluation of costs and benefits be undertaken. In these days of critical budget restraints, we must avoid any unnecessary cost to both the private sector and the Federal Government. Thus, the cost-benefit study should focus on the increased cost to the private sector to comply with S. 3555, as well as the cost to the Federal Government.

A basic legislative principle is that new legislation should not be enacted if existing legislation already contains enough authority to accomplish the intender purposes of the new legislation. It is our view that the Federal Trade Commissional Property and the sufficient authority under Section 5 of its act to deal with

aberrations in the voluntary standards system. One example of FIC action in this area is its investigation of the improper use of some ASTM standards to certify the flammability behavior of cellular plastic products.

For the reasons stated above, the Department opposes the enactment of Title I.

- (B) Regarding Title II, although it has long been recognized that national engineering and commodity standards are of great importance to the whole of our society, what has not been so evident is that standards are of such vital importance in international trade. In a study of the whole subject of possible non-tariff barriers to trade, it was found that incompatible national or international standards, or the lack of standards, do cause serious obstacles to the export of our products. The Department of Commerce strongly supports the concepts contained in Title II of S. 3555.
- (C) The Department of Commerce supports only the parts of Title III that establishes accreditation procedures to assure that laboratories are competent to test specific products. The Department opposes that part of Title III which would involve the Federal Government in the evaluation of a laboratory's capability to monitor manufacturing processes, evaluate a manufacturer's quality control procedures, determine proper sampling procedures, and label products in an appropriate manner. It should be noted that the Bill requires Federal agenciate use only certified laboratories. Thus, in the case of Government procurement the program would not be "voluntary;" it would be defacto "mandatory."

The Department of Commerce has already taken administrative action in establishi a program to accredit laboratories for testing specifice products. On February 25, 1976, the Secretary of Commerce published final procedures for a National Voluntary Accreditation Program. The form and substance which have evolved from that idea are now spelled out in detail in Title 15, Part 7 of the Code of Federal Regulations. The goal is to serve on a timely basis the needs of industry, consumers, the Government, and others by accrediting this Nation's testing laboratories. The program seeks to foster and promote a uniformly acceptable base of professional and technical competence in testing laboratories and in establishing evaluation criteria for testing laboratories and in providing on-site examinations, proficiency test samples, calibrated standards and material Several hundred laboratories working in areas such as concrete, cement, asphalt, paper, fiberboard, color and appearance, clinical and forensic testing make use of these services.

We believe that the Department has established an orderly and workable framework for the development of a meaningful system for the accreditation of testing laboratories. At this time, we do not feel that legislation in this area is necessary.

Schedule: Assistant Secretary for Science and Technology, Dr. Ancker-Johnson, presented testimony on S. 3555 on June 21, 1976, before the Subcommittee on Antitrust and Monopoly of the Senate Judiciary Committee. The legislation is expected to be reintroduced in the next session of Congress.

Background: Lionel Van Deerlin, Chairman of the House Communications Subcommittee, has announced that he intends to begin hearings on a new Communications Act. The old law, the Communications Act of 1934, was written before the advent of satellites and television. Even then, it was hastily cribbed from the Radio Act of 1927 and the Interstate Commerce Act. has been called more appropriate for grain elevators and steamboats than communications satellites and computer networks. Rew technologies and new applications have been forced into the old structure, and the growing convergence between different communications technologies and between computing and communications make the old Act increasingly obsolete. same time, recent decisions by the Federal Communications Commission have eroded the traditional monopoly of the telephone industry. In response, the industry has supported introduction of a number of versions of a bill that would limit the FCC's power. That bill, the Consumer Communications Reform Act (CCRA) of 1976, is discussed in the next paper.

Issue: A great many issues are at question in telecommunications policy, and this rewrite will serve as a focus for many of them. They include the regulation of competition within and between the traditional telephone industry and the new equipment suppliers, specialized common carriers and domestic satellite firms, the cable television industry, the broadcast industry, and the data processing equipment and service industries. Another set of issues may concern content, including privacy, access, First Amendment rights, sex and violence on TV, and the Government's role in relation to them. A last group of issues may involve the structure with which the Covernment deals with telecommunications, and may result in restructuring the FCC, the Office of Telecommunications Policy, and OT.

Analysis of Issue: Little work has been done on a new Act, although there are volumes on many aspects that will probably be considered. Therefore, it is premature to advocate any position. Some aspects are analyzed in the light of CCRA in the following paper.

Schedule: Resolution of major issues in telecommunications policy tend to take from six to eight years. Therefore, guick resolution of the yet-undefined issues raised by a new Communications Act is unlikely. We do not expect passage of such an Act in this coming Session, and possibly not in this Congress or this Administration.

Background: Technological progress and decisions by the Federal Communications Commission since the late Sixties have begun to erode the traditional monopoly of the telephone companies. Carterphone decision, in 1968, allowed customers to attach their own equipment to the telephone companies' lines. An appeals court recently upheld an FCC ruling that an expensive "protective device" was not required on such customer-owned equipment as private automatic branch exchanges (PABX's) and an appeal on individual telephones is pending. In the Specialized Common Carrier (SCC) decision (1971), the Commission permitted new firms to offer private line long distance service in competition with the telephone companies. One of the largest of the SCC's has now gone bankrupt and is suing AT&T, and the others are struggling. In the Domestic Satellite (domsat) decision (1972), the Commission permitted new firms to offer long distance service by satellites. Such service is much cheaper than telephone company lines for distances over a few hundred miles. The present satellite firms are still in the red, but may become viable. However, AT&T has recently entered the market, after having been shut out for several years by the Domsat decision.

According to the FCC, the Bell System had revenues of about \$30 billion in 1975. The other established telephone companies had \$5.5 billion. The SCC's had \$49 million and the domsat companies had \$16 million. Private equipment sales and rental revenue was \$143 million.

The telephone industry is a state monopoly in most countries of the world. In the United States, it is probably one of, if not the single, most regulated industries. It is the structure and purpose of that regulation that is at issue.

Issue: On one level, this issue concerns who is going to make money on the growing demand for telecommunications. On another, it concerns how best to provide the best communications at the lowest price to the American public. Specifically, the Consumer Communications Reform Act (CCRA or the "Bell Bill"), would forbid the FCC to declare any proposed price too low. Opponents of the Bill, which includes the new carriers and equipment suppliers and much of the computing industry, say that this would allow the carriers to raise their prices for their monopoly services, especially local telephone service, and use the profits to subsidize their competitive services. Their competitors, having no monopoly services from which to "cross-subsidize", would be driven out of business by this predatory pricing. The telephone companies, on the other hand, say that they are already crosssubsidizing from long distance revenues to keep local telephone prices low. Both sides claim that if they lose, the consumer will suffer.

Analysis of Issue: Most of the debate has been weak in analysis. It has centered on the issue of lowest cost without considering what is meant by best service. One recent FCC decision (in Docket 18128) has found that AT&T has been undercharging for its Telpak service, which is threatened by the competing SCC's. Another (in Docket 20003) has found little harmful effect from competition. It cites studies by state regulatory commissions that find that local service is subsidzing long distance service. OT has been unable to contribute substantially to the analysis of this issue because of resource constraints.

Schedule: As stated earlier, telecommunications issues are seldom settled quickly. It is unlikely that the Congress would act without hearings by the Communications Subcommittee. The attention of its Chairman is on rewriting the Communications Act, not CCRA, as a vehicle for resolution of a number of issues. However, given the number of sponsors, hearings will probably be held in the coming session. OT expects to be asked to testify, and hopes to contribute without necessarily being associated with either side.

NOTE: A separate paper on this subject has been prepared under the DIBA issues

# A National Telecommunications Agenda

Background: In 1975, the United States had the most advanced telecommunications technology in the world, but was faced with slow domestic and export growth. The Assistant Secretary for Science and Technology created a Task Force on Telecommunications, with representatives from NBS, the Patent Office, and OT. Its job was to identify new technologies with significant growth potential that seemed to be blocked, and to make recommendations on what could be done to remove barriers to growth. It focused on four new technologies: Girect communication satellites, optical fiber communications, broadband cable systems, and land mobile radio. The Task Force report, "Lowering Barriers to Telecommunications Growth", proposes creation of a National Agenda, as the first step in resolving the issues raised by their investigation. It also proposes some issues which, from the S&T viewpoint, need to be considered.

Issue: New technology, which could offer immense benefits, is blocked by inappropriate regulation, lack of standards, failure to transfer technology from military to civilian applications, absence of any institution to deliver the technology to users, and market uncertainty. Some of the most pressing needs are:

- Accelerating the development of direct communication satellite systems and networks, using advanced technology to bring satellite service directly to the user's site at low cost.
- Developing strong U.S. positions in preparation for the 1979 General World Administrative Radio Conference, the international body that will decide how we use radio for the next twenty years.
- Improving the foreign trade balance in telecommunications, especially in telephone equipment and consumer electronics.
- ☑ Developing a means to systematically review proposed Federal telecommunications systems for duplication, consolidation possibilities, efficiency; and cost-effectiveness.

Analysis of Issue: Some portions of this issue has been extensively analyzed and discussed with industry. Recommended actions on them are given in the Executive Summary of the Task Force report, which is attached as an appendix. OT currently does most of the administrative and analytical work, under the policy direction of OTP, for frequency coordination like that proposed for the system review. The Office of Management and Budget requires that the frequency review be done before they will approve funds for new radio equipment. OT proposes an analogous process for new systems.



Schedule: OT's program to accelerate development of direct satellite communications systems began last year. However, if the present course of development is not changed, such systems may not be in use in the United States in this century. Preparations for the WARC have already begun. Positions must be established and proposals circulated in the first guarter of FY 1979. Improving the balance of trade in telephone equipment is dependent on developing a domestic manufacturing industry. That in turn is dependent on the existence of a domestic market, which will exist only if the appeals court, mentioned in the paper on CCRA upholds the FCC. Preliminary proposals on developing a system review procedure have been made and may be accepted by the third quarter of FY 1977.



#### LOWERING BARRIERS TO TELECOMMUNICATIONS GROWTH

# EXECUTIVE SUMMARY

This report is based on the work of a Telecommunications Task Force formed in August 1975 under the direction of the Assistant Secretary of Commerce for Science and Technology, Dr. Betsy Ancker-Johnson.

The objective of the report is twofold:

- o To identify actions that will pave the way for the application of a few promising technologies to the benefit of users of telecommunications.
- o To suggest any such actions as a basis for Government program development, for industry initiatives, and for joint Government and industry activities.

The heart of this report consists of analyses of diverse telecommunication issues, along with recommended actions. These analyses and recommendations should be read as a contribution to the drafting of an agenda of national telecommunication concerns. Such a national agenda would presumably serve first as a vehicle for discussion and ultimately as a basis for action. The process of writing it, moreover, should help us establish priorities for this vital field. To be an effective instrument, however, the agenda will have to represent far more than just Government thinking; it will, rather, have to reflect a common effort by all the institutions of our national telecommunication community.

Although there is no question that U. S. telecommunication systems as a whole are the most pervasive and reliable in the world, it is possible to discern some barriers that are impeding the long-term growth of the field. An effort to lower these barriers would surely be a desirable national goal. Two major reasons support this view:

o First, the United States is increasingly engaging in information-related activities -- to the point where productivity gains in many parts of our services sector may come to depend on improved access to and management of information. Clearly these information activities rely heavily on telecommunications; furthermore, advance in information handling will require a steady infusion of new telecommunication technology.

o Second, with present national decisionmaking processes, we may not be deriving the fullest possible benefit from a variety of attractive technological choices. Prime examples of such choices are satellites, solid state technology, lightwave communications, and new regions of the electromagnetic spectrum for expanded communications use.

The long-range importance of telecommunications as well as the complexity of the issues may well bring increased Government participation in communications affairs. So far some of the results of this participation have been less than encouraging: confict over new policies, confusion over the question of appropriate Government and industry roles, and delay in national decisionmaking.

Such delays on the part of Government may cause — or be causing — similar delays in the developments of new services or products. When such a commercial delay occurs — especially when it affects a technology or a service that reduces costs — the public is deprived of the benefits during the period of the delay. The public interest, therefore, calls for corrective action.

It is understood that any such corrective action will require cooperation among three parties: Government, industry, and users. Government activities must be evaluated in terms of six of the roles it may play: policy-maker, regulator, spectrum manager, user and purchaser, coordinator of public sector requirements, and supporter of key technological development. Industry's role, however, is vital: assembling the factors of production and bringing the product or service to the marketplace. Users, or customers, have to make known what they need. In many cases this is done in cooperation with industry; the result is "market pull." In other cases, such as the specifying of public sector requirements, much has to be done to identify user communication needs, to consolidate them, and to translate them into system requirements.

In setting about its assignment, the Task Force tried to identify those technologies and services holding the most promise for future application while, at the same time, seeming to be most inhibited by current barriers.

More specifically, the Task Force asked five questions about each technology and service it considered: How much will it benefit the public? How significant is technology as a barrier to its growth? How detrimental to its

application would be the effects of no action? Has it reached a relatively advanced level of maturation? And, how appropriate would Federal involvement be?

After screening a long list of "candidates" according to these criteria, the Task Force decided to concentrate on four major technologies: Direct Satellite Communications, Land Mobile Radio, Broadband Communications Networks, and Fiber Optic Communications. This report accords each a separate section.

With each technology, the report discusses its current status, the issues affecting its growth, actions designed to address these issues, and the impact of the proposed actions. The discussion is organized under four general categories as follows: needs and the market, system development and performance, policy and regulation, and spectrum management. Those issues and actions we believe to be most urgent and feasible are restated in our conclusions and recommendations, the final chapter of the report. At the end of that chapter — and at the end of this Executive Summary — will be found a suggestion relating to the process of formulating a national draft agenda.

#### NEEDS AND THE MARKET

Here we must consider the choices for providing new services and the relative cost of the choices. An additional consideration is the services' potential for increasing national productivity.

The use of satellites for the transmission of public sector services may hold great promise. This possibility, as well as concern about future U. S. plans for the employment of this band and others, generates the following recommendation:

o Government and user organizations should accelerate the process by which the basic communication needs to be met by public service satellites will be defined. They should also determine the most economic way of using such satellites and who will pay for them.

Because of the growing pressure on the radio spectrum to provide different services, all of which can claim appreciable economic value:



o Spectrum administrators should encourage further research on the economic and social values of services that are provided through the use of the spectrum in order to achieve optimum allocation of this resource in the light of the associated needs and markets.

With respect to nonentertainment broadband communication services, we recommend that:

o Industry should establish a group composed of industry, institutional users, and providers of public sector services to plan and finance a demonstration designed to reduce the present uncertainties about market demand for and economic viability of aggregated broadband nonentertainment services.

Fiber optic communications promises a great deal in the way of lowered costs and expanded capacity. The challenge is to accelerate its nonmilitary applications. To do this, we should identify those applications for which it will be most competitive.

In addition, a demonstration of fiber optic communication capabilities would do much to increase the market for its systems and components; a demonstration of sufficient size would also reduce the cost of these systems and increase their availability.

#### Our recommendations are two:

- o OTP should establish a Federal interagency group to identify a significant broadband communications need, the satisfaction of which will advance the solution to an important public service problem (e.g., health care delivery). The group should then compose a statement of the necessary communication requirements as a basis for a fiber optic demonstration project.
- o The Department of Commerce should establish an advisory committee on commercial implications of fiber optics.

SYSTEM DEVELOPMENT AND PERFORMANCE

This category focuses on systems planning and research, performance criteria and measurement, and standards of practice and of equipment operation. The elements that

compose this category play important roles in determining whether new services or equipment can be provided economically and without foreclosing future opportunities for better resource use.

Are additional standards or performance criteria needed for small earth terminal satellite systems in order to foster their early application and to ensure their orderly development? This question is of particular importance.

The evolution of satellite systems operating at frequencies above 14.5 GHz is making slow progress, partly due to technology limitations. At the same time, however, demands for orbit/spectrum space below 14.5 GHz are growing significantly. These demands could be eased if the higher frequencies could be used as reliably as the lower frequencies.

The recommendations are that:

- o Industry should take the initiative, in cooperation with users and Government, to explore the need for criteria and standards for small earth terminal satellite systems operating in the 2.5, 4, 6, 12, and 14 GHz bands. It should also assess the effect of these standards on future technological development, and, if appropriate, define and recommend performance criteric or standards for FCC adoption.
- o NASA should undertake, in conjunction with industry, to identify the hardware and other reliability barriers that limit the use of frequencies above 14.5 GHz for satellite communications and to recommend a program for lowering these barriers.

Land mobile radio systems are totally dependent on the spectrum. Already, the spectrum allocated to these systems is being used intensively. Substantial growth in the demand for their services is expected. To ensure that the spectrum will be used in the most efficient way, it is desirable to have better quantitative information about the performance, spectrum utilization, and capacity of land mobile systems.

In addition, several Federal agencies support the development of better land mobile and other communications systems for use by public safety services. However, the objectives of Government support often differ, a situation that can lead to inefficient employment of the spectrum and insufficient long-range planning. To meet these land mobile radio issues, we have three recommendations:

- o Telecommunication authorities should foster research to develop better criteria for describing and measuring land mobile service performance.
- o Telecommunication authorities should foster research to develop better methods for describing and measuring spectrum capacity and utilization for land mobile radio systems.
- o One Government agency should be responsible for coordinating Federal support of local land mobile radio programs. This Federal effort should support local agency attempts to achieve better spectrum use and lower costs through the development of integrated local communication systems serving several functions or user groups.

The design techniques of current CATV systems may affect the potential growth of broadband nonentertainment services. The question is: Are these techniques adequate to provide systems that will be capable of handling additional nonentertainment services? Therefore:

o Industry and users should seek early resolution of certain problems of system performance associated with delivery of broadband communication services. These problem areas include: (1) frequency management in broadband systems, (2) interface standards or specifications, (3) security and privacy, and (4) terminal equipment characteristics.

To help fiber optic communications fulfill its promise as promptly as possible, the development of appropriate standards should begin soon. It is therefore recommended that:

o The informal Optical Communications Task Force initiated by the Office of Telecommunications should identify what specifications (or voluntary standards) and codes are desirable to ensure rapid and orderly implementation of fiber optic technology in the commercial and public sectors.



Although current regulations restrict the permanent use of satellite small earth terminals, some users wish to develop systems with terminals as soon as possible. In spite of the possible benefits to be derived from these systems, our future freedom of choice ought not to be precluded by premature approval of proposals for systems that inordinately "consume" available spectrum and orbit positions.

Moreover, it is imperative that we better understand and describe the resources that will determine how many -- and in what form -- satellite services can be provided.

In view of these concerns, we recommend that:

- o Government -- through the OTP, FCC, and other agencies -- should reexamine its policy and regulations with respect to use of domestic and international small earth terminal satellite systems. In the process, it should intensify its search for advice from interested parties.
  - o The FCC and OTP should give priority to obtaining additional and more comprehensive descriptions of the spectrum/orbit and spectrum/geography resources and the dependence of these on technical parameters of satellite systems.

Regulatory delay is a matter of widespread concern to the telecommunications community. To reduce the delays incurre by full hearings, the FCC has from time to time brought interested parties together for informal gatherings prior to formal proceedings. Accordingly, we recommend that:

o Consideration should be given to the desirability, feasibility, and legality of making greater use of open, informal discussions between interested parties prior to the start of FCC formal proceeding particularly those that are to consider largely technical matters.

CATV regulation may be a barrier to the implementation of nonentertainment broadband services. Partial deregulation of CATV services is being addressed by the Domestic Council the FCC, and Congress. The Domestic Council regulatory group, however, concluded that not enough data were available on the effects of deregulation to support a



decision, which might influence the general availability of nonentertainment services. It is recommended that:

o The Domestic Council Working Group should arrange to obtain necessary research to establish the probable consequences of partial deregulation of CATV.

#### SPECTRUM MANAGEMENT

In the next three years, two World Administrative Radio Conferences (WARC's) dealing with matters germane to this report will be held. The first, in 1977, is primarily concerned with satellite broadcasting in the 11/12 GHz band. The second, scheduled for 1979, will review the Radio Regulations, including the Table of Frequency Allocations. These WARC's will establish the pattern of worldwide spectrum use for many years to come. Moreover, their decisions will affect the rules and regulations of the United States, which are based on the international agreements. It is therefore important that the United States meticulously prepare its conference positions in all areas.

The evolution of public service satellite systems in the 2.5 GHz band is likely to be inhibited by the limited variety of services that can be provided in the narrow bandwidth available. Expanding the bandwidth would increase the number of services that might employ it. This would distribute the cost of the satellite over a greater number of users.

#### It is recommended that:

- o U.S. preparation for the 1979 World Administrative Radio Conference should place emphasis on:
  - (1) Provision of spectrum space for small earth terminal satellite systems.
  - (2) Optimization of orbital spacing of satellites sharing the same frequencies.
  - (3) Imbalance of spectrum/orbit utilization above and below 14.5 GHz.
  - (4) Need for greater bandwidth allocations at 2.5 GHz for public service satellites.

o Public service satellite users should determine the cost advantages that could result from increasing the bandwidth available to them at 2.5 GHz and use the information as the basis for requesting the FCC to negotiate for an increase in the available bandwidth.

For land mobile services, we recommend that:

O U. S. preparation for the 1979 World Administrative Radio Conference should emphasize the resolution of differences between the planned use of the 900 MHz band by the United States for land mobile systems and the international frequency allocations.

#### COMPOSING A NATIONAL TELECOMMUNICATIONS AGENDA

As was discussed above, the recommendations of this report should be thought of as a contribution to the composition of a national draft agenda. The final agenda, of course, must be the product of an extensive dialogue among Government, industry, and users. A question arises: What is the best way to begin this process of joint discussion? Possible answers abound: congressional hearings, industry and professional association workshops, academic seminars, and Federal Executive Branch initiatives.

However, all the best intentions will most likely be rendered futile if at the outset some agency does not assume the responsibility of receiving and processing the ideas and proposals regarding the agenda. Therefore:

o The services of the Office of Telecommunications will be available for initial coordination of reactions to this report and, by extension, of all suggestions pertaining to the formulation of a national telecommunication draft agenda. This tenure will last only until a permanent "Keeper of the Agenda" is named.

In conclusion, implementation of all the recommendations should foster the long-term growth of telecommunication technology in the United States. This growth will benefit not only service users but also industry, which will profit from the creation of new markets.



Background: Toward the end of the Johnson Administration, a Task Force on Telecommunications Policy recommended the creation of a centralized focus for telecommunications policy in the Executive Branch. Such an agency would advise the President on telecommunications, speak for the Executive Branch in the development of national and international policy, and coordinate the Executive's use of telecommunications, especially the radio spectrum. Executive Order 11556 created an Office of Telecommunications Policy in the Executive Office in 1970. The same Order tasked the Secretary of Commerce with providing administrative and analytical support to OTP, resulting in the creation of OT.

Recently, proposals have been made to restructure OTP. A McKinsey study offers six options: as a policy counselor group in the Domestic Council, as an EOP Telecommunications Office (the present situation), as an Assistant Secretariat, possibly in the Department of Commerce, as a policy-oriented independent agency, as a policy and operations-oriented agency, and as a Department of Telecommunications.

Information transmission (computing) and information transmission (telecommunications) are becoming increasingly interdependent as America becomes a post-industrial society. They share problems of privacy, standards, and a high rate of technological change. Computers evolved from telephone switch gear, and now are used as switching exchanges. Communications, even voice and video, is being transmitted digitally. The Department has two agencies concerned with information technology: OT, with its Institute for Telecommunication Sciences, and the Institute for Computer Science and Technology in NBS.

Issue: What is the optimal arrangement of the various Executive Branch agencies concerned with telecommunications and information technology?

Analysis of Issue: Interagency coordination and Executive Branch policy determination and articulation really need to be done at the Executive Office level, although possibly in the Domestic Council or Office of Science and Technology Policy. However, there is no reason that other Executive Branch agencies should not formulate policy options, especially where their particular missions are concerned. A mission agency might also provide administrative and analytical scrvices to an agency that decides matters of policy. Much of the awkwardness in the OT/OTP relationship has come from OT's dual roles: to support OTP and to support development of telecommunications science and industry. Mutual appreciation of the validity of both roles and the trade-offs this sometimes implies is required. A review of various Federal agency roles toward recommending an improved structure should be undertaken on a Government-wide basis.

Schedule: Resolution depends on the willingness of the new Director of OTP to recognize the importance of resolving procedural guestions as an aid to resolving the many substantive issues he will face when he assumes office. The review of Department organization should be started in the third quarter of FY 1977.

# Background

Concerned that the U.S. patent system, which has remained fundamentally unchanged since 1836, has not kept pace with the changing conditions brought about by modern technology, the 1966 President's Commission on the Patent System proposed 35 recommendations for its modernization. The Administration first prepared a patent bill based on the report of the Commission in 1967. Features of the initial bill were vigorously opposed by segments of industry, bar and inventor groups. By 1969 a modified version of the bill had general support from the Administration and the private sector. In 1970, however, a dispute arose between the Commerce and Justice Departments over the provisions of the bill. Each department presented its independent views to the patent subcommittee of the Senate Judiciary Committee.

An Administration bill, developed through joint negotiation by the Departments of Commerce and Justice, arbitrated by OMB, was transmitted to Congress in the fall of 1973.

There was immediate and strong opposition to this bill from all interested segments of the private sector, including industrial organizations, patent law associations and inventor groups. The bill, with slight modification, was reintroduced as S. 1308 in the beginning of the 94th Congress. In the fall of 1975 the Senate approved S. 2255, which is very similar to the Administration's bill. The House took no action and the bill died in the 94th Congress.

# Issue

To have enacted a new patent revision law more closely responsive than our present law to the contemporary and future needs of the Nation.

# Analysis of Issue

Commerce is concerned that any new patent bill provide strong incentives for inventing, publicly disclosing the invention, investing in research and development and commercializing new and improved products, all to the Constitutional end of "promoting the progress of . . . the useful arts." Participation in the patent system by inventors and businessmen is voluntary. The patent law is not a regulatory statute; it must encourage inventors and businessmen to seek patents. Only by providing such encouragement can the system achieve its objective of stimulating technology and the economy.

The Department of Justice position stated in simplistic terms, is that the patent laws should restrict rather than expand the opportunity for a patentee to fully develop a patent position.

The former Administration bill, S. 1308, included several new features with which there is little controversy, such as opportunity for the public to present reasons why an invention is not patentable, encouragement of arbitration of patent disputes, and change to a 20-year term from the date of filing rather than a 17-year term from the date of grant. It also contained a great many additional procedural requirements which would not only be burdensome to the applicant but would also provide new grounds for invalidating the patent if the applicant carelessly or through errors in judgment failed to comply. Under this bill, protection would frequently be denied on meritorious inventions for failure to get over the many procedural hurdles.

# Schedule

In September 1976, after unsuccessful efforts at OMB to modify the Administration position, the Secretary of Commerce wrote to House Judiciary Committee Chairman Rodino expressing concern over the cost and expense of the pending legislation. The Commerce letter suggested several specific changes. In October the Patent and Trademark Office proposed rule changes that would accomplish some of the same objectives as the legislation but with far less expense. A hearing on the rule changes will be held on December 7. The staff currently is preparing a draft bill for possible introduction in the next Congress.

# Appendix

None required.

#### PATENT EXAMINATION QUALITY

# Background

Applications for the grant of a patent are examined before a patent is issued to determine, to the extent possible, whether the invention disclosed meets the statutory requirements for the issuance of a patent. Examination enables both patent owners and their competitors to better gauge their rights and better make related business decisions. Examination before the issuance of a patent also avoids shifting much of the examination burden to the courts and to the public.

Good quality examination enables patent owners and the public to act and make decisions related to the utilization of new technology with greater confidence and assurance of their rights. It enhances the value of patents and the incentives of the patent system for the creation and utilization of new technology.

There have been strong criticisms of the quality of examination conducted in the Patent and Trademark Office by the Courts, including the Supreme Court, in their opinions in some cases and in the statements of some judges, by some in the Congress, by some in industry and by some in academic circles.

Certain of these criticisms are valid and certain are not. The statistics on patent invalidity holdings in the courts have not been accurately quoted and represented by some critics. On the other hand, factors do exist which adversely affect the quality of examination (e.g., there are defects in the completeness and integrity of the search file containing existing technology and utilized in the examination of a patent application.)

#### Issue

What can be done to improve the quality of examination? What are the priorities among the available alternatives? What resources should be devoted to improving the quality of examination?

# Analysis of Issue

Studies of the issue have been conducted and a number of programs for improving quality have been undertaken, and are being planned.

The studies which have been completed have reviewed the available measures of examination quality and the alternatives

which exist for improving quality. A multiyear plan of action for improving quality is under development.

Among the more significant programs already instituted in recent years to improve quality are: (1) the establishment of a quality review program under which a sample of the patents issued are reviewed for quality of examination, (2) provision for additional time for patent examiners to conduct the examination, (3) continuous review of the court decisions invalidating patents for learning purposes and to help pinpoint problem areas, and (4) improvements in certain aspects of the search files utilized by the examiners.

# Schedule

The multiyear plan of action mentioned above is expected to be completed in December, 1976. Its principal focus will be upon improvement of the search files. It will probably also include (1) an enhanced educational program for examiners, (2) an enlargement of the quality review sample size and followup on the results of the review, (3) studies of the feasibility of systems for the replacement of the paper search file with microfilm, (4) continuation of the updating of the classification schedule (or subject matter breakdown) of the search file, and (5) continued study of mechanized searching. In addition, changes in the rules of practice to improve the quality of patents are under consideration. A decision on their adoption may be made by the end of 1976.

#### IMPROVED PAPER HANDLING

# Background

The Patent and Trademark Office recognizes that effective handling of the multitude of paper is required to provide timely service, quality products to the public and to reduce complaints. In all cases, the major problem is availability of funds.

# Controlling the Whereabouts of Pending Applications

Data: Over 500 new patent and trademark applications received daily; over 3,000 individual pieces of mail relating to the 200,000+ pending applications are received daily relating to the applications.

In 1973 the PTO began utilizing a computer for locating 200,000+ applications. The initial success of the system leads the PTO to believe that greater savings in manpower and time can be realized through use of more sophisticated computer systems.

# Controlling File Histories and Assignment Rights

Data: Maintaining the examination and assignment histories of the over four million patents and trademarks (or 150 million individual sheets of paper) readily accessible to the public and the courts; 500-1,000 requests daily.

Currently all records are maintained on paper, updated by hand and requests fulfilled by pulling of information. Studies under way indicate the most cost-effective approach to handling these massive paper files require significant initial cash outlay in return for substantial reductions in space required for storage, man years and decrease in public complaints.

# Controlling Patent and Trademark Search Files

Data: Twenty million patents and trademarks contain 150 million individual sheets of paper.

PTO is continuing to examine mechanized methods for maintaining the file integrity and for searching of both patents and other references. This is required to insure good tools for searching (hence, affecting quality of search product) and to control time required for searching (maintain productivity).

## Controlling Requests for Orders

<u>Data</u>: 20,000 orders for patents and trademarks received daily.

In 1976 the PTO undertook to update its copy fulfillment system. New equipment to be delivered in 1977 is the first phase. The second phase contemplates a computer-controlled system for inventories and order fulfillment. Savings resulting from greater control will be measured in reduced complaints, increased public service and manpower savings for PTO.

## Upcoming Paper Handling Problems

Operations under the Patent Cooperation Treaty may begin in fall 1977. This international cooperation effort will ultimately reduce duplicative processing of patent applications by member nations. Because the U.S. Patent and Trademark Office will be both an international filing and searching office, significant start-up problems such as control of monetary exchange, time limits, paper sizes, procedures, completeness of search files, etc., create additional paperwork and control. Control mechanisms are now under study.

## Background

The subject treaty, signed by the United States in 1973 and transmitted to the Senate for advice and consent to ratification on September 3, 1975, will establish an international trademark filing arrangement, by which firms in member countries can more easily register trademarks (and service marks) and maintain these property rights in all member countries. Since the Treaty is not self-executing, the instrument of United States ratification will not be deposited until the necessary implementing legislation is enacted.

Proposed implementing legislation, submitted by the Department to OMB on November 2, 1975, would have effected the necessary changes in the federal trademark statutes and provided persons filing domestic United States trademark applications with the same substantive benefits in the United States as are available to persons filing under the Treaty. OMB clearance was not secured prior to the adjournment sine die of the 94th Congress due primarily to objections raised by the Department of Justice and the long delay before these objections were surfaced.

## Issue

The Justice Department objections principally concern changes in the use requirements of United States trademark law which are necessary in order to comply with the Treaty. Essentially, the required change is that an application for registration could be based upon a declared intention to use a trademark in United States commerce, as an alternative to actual use. In the case of an application based on intent to use, the owner would be required to commence use of the mark in commerce by the expiration of three years, counted from the filing date of the application, and to file a declaration of such use in the Patent and Trademark Office before the end of the fourth year. Failure to meet these requirements would result in cancellation of the registration. The proposed change is supported by the Departments of Commerce and State. The Federal Trade Commission is neutral. Justice Department is opposed.

## Analysis of Issue

Justice's opposition is based primarily on its concern that the intent to use alternative will be abused, causing a proliferation of filings and enabling firms to secure unfair advantages by reserving marks. The proponents argue that the proposed legislation contains safeguards to prevent abuse; that the present requirement of actual use prior to filing is out of touch with the realities of modern business; that foreign nationals, pursuant to requirements of the Paris Convention, can already secure enforceable trademark registrations in the United States without use; and that this advantage should, and would under the Treaty, be made equally available to U.S. nationals.

## Schedule

The Department hopes to resolve the issue in the first quarter of 1977 and to secure early clearance to introduce legislation in the Congress. It is expected that the Senate would then schedule hearings on both the Treaty and legislation. We would urge that these hearings be held before the end of the First Session.

## Appendix

None required.

## Assistant Secretary for Science and Technology

## CONGRESSIONAL OVERSIGHT

## House

House Commerce Committee

House Committee on Science and Technology

## Senate

Senate Commerce Committee
Senate Committee on the Judiciary

## Office of Product Standards

## CONGRESSIONAL OVERSIGHT

House Committee on Commerce

House Committee on Science and Technology

Senate Committee on Commerce

Senate Committee on Judiciary

#### 9. CONGRESSIONAL OVERSIGHT

The House Science and Technology Committee, Subcommittee on Science, Research and Technology and the Senate Commerce Committee have general oversight responsibility for NBS. The House Interstate and Foreign Commerce Committee, Subcommittee on Energy and Power exercises occasional oversight on the NBS energy-related programs and the House Government Operations Committee exercises occasional oversight on the NBS computer-related programs.

#### OFFICE OF TELECOMMUNICATIONS

#### CONGRESSIONAL OVERSIGHT

## House Committee on Interstate and Foreign Commerce Subcommittee on Communications:

Lionel Van Deerlin (D-Cal.), Chairman Charles J. Carney (D-Ohio)
Goodloe E. Byron (D-Md.)
Martin A. Russo (D-Ill.)
Timothy E. Wirth (D-Col.)
Henry Waxman (D-Cal.)
Louis Frey, Jr. (R-Fla.)
W. Henson Moore, III (R-La.)

## House Committee on Appropriations Subcommittee on State, Justice, Commerce, the Judiciary:

John M. Slack (D-W. Va.), Chairman Neal Smith (D-Iowa) John J. Flynt (D-Ga.) William V. Alexander (D-Arkansas) Yvonne B. Burke (D-Cal.) Joseph Early (D-Mass.) Elford Cederburg (R-Mich.) Mark Andrews (R-N.D.) Clarence E. Miller (R-Ohio)

## Senate Commerce Committee Subcommittee on Communications:

John O. Pastore (D-R.I.), Chairman (retiring)
Vance Hartke (D-Ind.) (defeated)
Phillip A. Hart (D-Mich.) (retiring)
Russell B. Long (D-La.)
Frank E. Moss (D-Utah) (defeated)
Howard W. Cannon (D-Nev.)
Ernest F. Hollings (D-S.C.)
Daniel K. Inouye (D-Ha.)
John A. Durkin (D-N.H.)
Howard H. Baker (R-Tenn.)
Robert P. Griffin (R-Mich.)
Ted Stevens (R-Alaska)
J. Glenn Beall, Jr. (R-Md.) (defeated)
Lowell P. Weicker (R-Conn.)

## Senate Committee on Appropriations Subcommittee on State, Justice, Commerce, the Judiciary:

John O. Pastore (D-R.I.), Chairman (retiring) John L. McClellan (D-Ark.) (retiring) Mike Mansfield (D-Mont.) (retiring) Ernest F. Hollings (D-S.C.)
Warren G. Magnuson (D-Wash.)
Thomas F. Eagleton (D-Mo.)
J. Bennett Johnston (D-La.)
Walter D. Huddleston (D-Ky.)
Roman L. Hruska (R-Neb.)
Hiram L. Fong (R-Ha.) (retiring)
Edward Brooke (R-Mass.)
Mark Hatfield (R-Ore.)
Ted Stevens (R-Alaska)

#### Patent and Trademark Office

## CONGRESSIONAL OVERSIGHT

## Senate Judiciary Committee

Subcommittee on Patents, Trademarks and Copyrights

Thomas C. Brennan, Chief Counsel

## House Judiciary Committee

Subcommittee on Courts, Civil Liberties and the Administration of Justice

Herbert Fuchs, Counsel

#### ASSISTANT SECRETARY FOR SCIENCE AND TECHNOLOGY

### OUTSIDE CONTACTS

- William O. Baker, President, Bell Laboratories
  - Guenther Baumgart, President, Association of Home Appliance Manufacturers
  - Arthur Bueche, Vice President for R&D, General Electric Company
  - Paul F. Chenea, Vice President, Research Laboratories, General Motors Corporation
  - Herbert I. Fusfeld, Director of Research, Kennecott Copper Corporation
  - Arthur Kantrowitz, President, AVCO Corporation
  - John Landis, President, American National Standards Institute
  - Richard Morse, President, MIT Development Foundation, Inc.
  - Harry Paynter, President, Gas Appliance Manufacturers Association
  - Malcolm Pruitt, Vice President, Dow Chemical Company
  - Malcolm T. Stamper, President, Boeing Company
  - Adrian Weaver, Chairman, American National Metric Council

OTHER MAJOR OUTSIDE CONTACTS, INCLUDING ADVISORY COMMITTEES

The Office of Environmental Affairs is in contact with numerous trade associations and those sectors of the industrial community involved with the implementation of major environmental legislation, e.g., the Clean Air Act, the Federal Water Pollution Control Act, the Federal Insecticide, Fungicide and Rodenticide Control Act.

## Office of Product Standards

## OTHER MAJOR OUTSIDE CONTACTS

American National Standards Institute, American Society for Testing and Materials, and other non-Federal standardssetting bodies, American National Metric Council, et al.

## 10. MAJOR OUTSIDE CONTACTS, INCLUDING ADVISORY COMMITTEES

## A. Congressional

Senate Commerce Committee
Senator Daniel K. Inouye

Mr. Eric Lee, Staff Assistant

Senator Claiborne Pell

Mr. William Young, Legislative Assistant

Senate Committee on Interior and Insular Affairs

Mr. Benjamin S. Cooper, Professional Staff Member

Dr. Willis Smith, Professional Staff Member

House Science and Technology Committee

Congressman Don Fuqua of Florida

Congressman Mike McCormack of Washington

Congressman George Brown of California

Mr. Phillip B. Yeager, Counsel

Mr. Frank R. Hammill, Counsel

Mr. Mike Superata, Minority Counsel

Mr. Thomas J. Ratchford, Science Consultant

Dr. John D. Holmfeld, Science Policy

Mr. Kirk Hall, Technical Specialist

Dr. Radford Byerly, Science Consultant

Mr. William B. Wells, Technical Consultant

Miss Barbara Sutton, Secretary

Dr. James Cox, Professional Staff Member

House Committee on Interstate and Foreign Commerce

Mrs. Elizabeth Harrison, Professional Staff Member

Congressman Teno Roncalio of Wyoming

Mr. Dennis Earhart, Administrative Assistant

Mr. Brec Cooke, Legislative Assistant

Mrs. Mary Etta Cook, Secretary

Congresswoman Lindy Boggs of Louisianna

Congressman Mike McCormack of Washington

Dr. John Andelin, Administrative Assistant

Congresswoman Marjorie Holt of Maryland

## B. Interagency

Environmental Protection Agency
Dr. Wilson K. Talley, Assistant Administrator for R&D

Housing and Urban Development Dr. Charles J. Orlebeke, Assistant Secretary for Policy Development and Research

Consumer Product Safety Commission John Byington, Chairman

Department of Justice Richard W. Velde, Law Enforcement Assistance Administration

Federal Energy Administration Roger W. Sant, Assistant Administrator, Energy Conservation and Environment

Advanced Research Projects Agency (DoD) Dr. George Heilmeier, Director

Energy Research and Development Administration
Dr. Chalmer G. Kirkbride, Science Advisor to the Administrator
Dr. Richard W. Roberts, Assistant Administrator for Nuclear Energy
Mr. Hal Hollister, Deputy Assistant Administrator for Environment
and Safety

## C. NBS Statutory Visiting Committee

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