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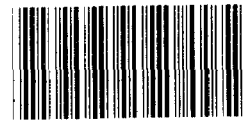
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REPORT BY THE  
**Comptroller General**  
OF THE UNITED STATES

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## FCC Can Further Improve Its Licensing Activities

During the past 5 years, the Federal Communications Commission has considerably improved the efficiency of its licensing procedures. However, the introduction of new communications services and growth in existing services have created processing delays. GAO is recommending additional improvements in licensing procedures and data automation management, which should allow FCC to process the increasing volume of license applications more quickly and efficiently.



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APRIL 26, 1983

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COMPTROLLER GENERAL OF THE UNITED STATES  
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B-210602


The Honorable Paul Laxalt, Chairman  
Subcommittee on State, Justice,  
Commerce, the Judiciary,  
and Related Agencies  
Committee on Appropriations  
United States Senate

The Honorable Ernest F. Hollings  
Ranking Minority Member  
Subcommittee on State, Justice,  
Commerce, the Judiciary,  
and Related Agencies  
Committee on Appropriations  
United States Senate

As you requested on March 18, 1982, we have reviewed the Federal Communications Commission's processing of applications for new common carrier, broadcast, and private radio licenses to identify changes needed to make these operations more efficient and productive.

This report makes recommendations to the Chairman, FCC, for improving licensing procedures and managing automatic data processing and other Commission resources more effectively. The report also makes recommendations to the Congress for revisions in the Communications Act of 1934, should the Congress determine that competition in telecommunications markets has developed to the extent that market forces eliminate the need for regulation in these areas.

We are sending copies of this report to the Director, Office of Management and Budget, and the Chairman, Federal Communications Commission.

  
Acting Comptroller General  
of the United States





D I G E S T

The Federal Communications Commission has received and processed a growing number of applications to establish stations in many broadcast, common carrier (services offered to the public for hire, such as telephone service), and private radio communications services during the past 5 years. The Commission issues licenses to qualified applicants for a wide variety of services, such as citizens band radio, radio and television broadcasting, and land mobile radio.

The Chairman and Ranking Minority Member of the Subcommittee on State, Justice, Commerce, the Judiciary and Related Agencies, Senate Committee on Appropriations, asked GAO to evaluate the Commission's applications processing operations to determine what can be done to increase their efficiency and productivity. They noted that while the Commission and the Congress have tried to improve license processing speeds, it still takes too long to get a license.

The Commission has considerably improved its productivity through data automation and other means to help process the increased volume of applications it has received. However, applications for new communications services, such as low-power television (a service in which signals are broadcast within relatively small areas) and cellular radio (a high-capacity mobile telephone service), have further increased the Commission's processing workload. The Commission is considering actions to expand broadcast service--for example, through changes in its FM radio and television allotment procedures--which could generate more applications and thus create larger processing backlogs. As a result, the Commission will need to continue to improve licensing efficiency and productivity.

## IMPROVING OVERSIGHT OF LICENSING ACTIVITIES

The Commission needs an effective mechanism for monitoring licensing speeds to ensure that they do not reach levels that impose undue costs on industry or delay the availability of communications services to the public. While the Commission does monitor application backlogs, it does not compute reliable information on the time it takes to process various types of broadcast and common carrier applications. This information is needed to help the Commission better determine where license processing times exceed Commission objectives and whether changes in procedures or additional resources are needed to avoid excessive delays.

The Commission has recently improved its ability to plan and oversee licensing and other activities by establishing a management by objectives system. However, for this system to function effectively, GAO recommends that the Commission develop reliable data on processing speeds for broadcast and common carrier services. (See p. 24.)

## USING DATA AUTOMATION TO INCREASE LICENSING EFFICIENCY

Over the past 20 years, the Commission has used data automation to process licenses more quickly and efficiently. Further improvements are planned in the next few years. To get the most from automation, however, the Commission needs to improve the planning and management of its automation activities.

The need for better planning and management is reflected in the Commission's recent efforts to decentralize its data automation operations. The Commission's data automation steering committee set forth the plans for decentralization in a 1980 report which proposed establishing a Commission-wide computer network to handle license processing and other information processing functions. However, network plans were never tied to specific system development requirements. In addition, the Commission has been unable to establish license processing systems on the network because it could not obtain the necessary operating system software commercially and has been unable to develop the

software itself. GAO recommends that the Commission improve its data automation planning and management by developing more detailed information requirements for systems included in its 5-year data automation plan. To improve its ability to determine future hardware and software needs, GAO recommends that the Commission develop a capability to perform computer capacity and workload management analyses. (See p. 40.)

REVISING LICENSING RULES  
AND PROCEDURES

The Commission has revised its licensing rules and procedures to improve its ability to process increased volumes of applications. Further increases in licensing speed and efficiency are possible through additional changes, some of which the Commission is considering. For example, the Commission can improve processing speeds and reduce paperwork by further simplifying current licensing requirements. GAO recommends that the Commission evaluate the benefits of using simpler notification procedures in licensing, consider methods for consolidating information that must now be filed separately for individual stations that make up a common carrier microwave radio system, and consider relaxing rules and procedures for amending applications and revising existing licenses. (See pp. 68 and 69.)

The Commission can reduce its processing workload by making greater use of the private sector to review the technical portions of applications and to assign frequencies to applicants. GAO recommends that the Commission consider requiring independent engineering certification as a substitute for its own review of technical data on applications and making greater use of frequency coordinators (non-Federal Government committees that assist the Commission in assigning portions of the radio spectrum) to assign frequencies for existing and forthcoming licensed services. The Commission also should consider providing applicants and other interested parties with online access to the Commission's data bases as a way to improve the quality of the applications it receives. (See p. 69.)

The Commission needs to experiment with a policy of returning defective applications more frequently to applicants to reduce the amount of time it spends handling nonroutine applications. As part of this experiment, the Commission should evaluate the need for developing more explicit criteria for determining when applications are defective and thus should be returned. Through additional automation the Commission can also improve procedures for processing applications that must be reviewed for compliance with Federal Aviation Administration antenna height regulations or coordinated with other countries. (See p. 69.)

When it receives competing applications, the Commission has traditionally used administrative hearings that weigh the merits of one applicant against another to award licenses. Public Law 97-259 authorizes the Commission to use a lottery to select among competing applications to reduce delay and costs. The Commission has proposed using the lottery in low-power television, common carrier mobile, and private radio services. GAO recommends that the Commission also use lotteries to select among competing full-power broadcast applications in situations where it promotes media diversity. (See p. 69.) As another way to reduce delays caused by competing applications, the Congress may wish to consider authorizing the Commission to use a procedure that awards licenses to the first qualified applicant under certain circumstances. (See p. 63.)

The Commission, in establishing the Mass Media Bureau, reorganized licensing activities to improve processing efficiency. Further processing efficiencies may be gained by consolidating the Commission's land mobile licensing activities and its microwave radio licensing activities, although these benefits may not offset the costs of consolidation. Because consolidation may also promote the development of improved regulatory policies and procedures in those services, GAO recommends that the Commission evaluate the benefits of these consolidations as it considers revised regulatory policies for these services. (See p. 69.)

REVISING LEGISLATIVE REQUIREMENTS  
THAT DELAY LICENSING

Recognizing the increased competition that has developed in and among communications services, the Commission has been able to place greater reliance on market forces rather than administrative regulation to ensure that the public interest is served. This has allowed the Commission to eliminate certain licensing requirements. The Congress may also be able to eliminate certain legislative requirements that may no longer be necessary in light of increased competition and that contribute to licensing delay. GAO makes several legislative recommendations to accomplish this objective. (See p. 56.)

REASSIGNING STAFF TO  
LICENSING ACTIVITIES

Proposed organizational and program changes, many of which the Commission identified in an evaluation of its activities in 1981, may eliminate the need for approximately 100 staff positions in various Commission programs. As it reviews these potential resource savings, GAO recommends that the Commission consider whether staff in these positions can be reassigned to license processing or data automation activities to help alleviate or avoid processing backlogs. (See p. 24.)

AGENCY COMMENTS

The Commission's Managing Director stated that because a formal evaluation of the report's conclusions and recommendations required more indepth consideration, the Commission would reserve comment on them until after receiving GAO's final report. However, the Commission staff did provide GAO with comments on technical matters in the report and revisions were made, where appropriate. However, they did not affect the report's conclusions and recommendations.



**Docket** The record of a proceeding which is assigned a docket number for administrative control purposes.

**Drop-in** A station which is added or "dropped in" between existing stations. The term is particularly used in reference to proposals to add stations between existing stations in television and FM radio broadcast tables of assignments.

**Fixed service** A service of radio communication between specified fixed points.

**Frequency coordinators** Non-Federal Government committees that assist FCC in coordinating and making spectrum frequency assignments.

**Frequency modulation (FM)** Transmission of information by varying the frequency of a radio signal. FM broadcasts are characterized by high quality sound and freedom from manmade interference and natural static. FM also is used for the sound portion of television and most of the nonbroadcast services.

**Low-power television** A new commercial broadcast service in which stations are allowed to broadcast their signals at limited powers and thus have limited geographical coverage.

**Microcomputer** A very small, inexpensive computer with limited capabilities most often used for a single process, such as data sampling.

**Microwave** The portion of the radio spectrum above approximately 1,000 megahertz.

**Minicomputer** A small- to large-capacity computer system which may approach large-scale computers in certain performance areas. These computers are generally much less expensive and do not have as wide a range of hardware/software options.

## GLOSSARY

Amplitude modulation (AM)	Transmission of information by varying the amplitude (strength) of a radio signal. This was the earliest form of broadcasting. Broadcast and shortwave stations as well as certain classes of nonbroadcasting stations use AM.
Auxiliary broadcast services	Supplemental radio services licensed to AM radio, FM radio, and television broadcast stations for relaying program material, orders, and cues from scenes of remote events to studios, from studios to transmitters, and from one station to another.
Cellular radio	A common carrier mobile telephone service that has a high capacity to serve subscribers. It derives its name from the fact that geographical service areas are divided into various zones, or "cells," within which frequencies may be reused.
Certification	Used in this report in reference to verifying that the engineering analysis filed with FCC as part of a license application is correct. Self-certification refers to the applicant's certifying the accuracy of the engineering analysis, while independent certification refers to the same done by an independent third party.
Common carrier	A company, organization, or individual providing wire or electronic communications services for hire.
Construction permit	A permit applicants are required to obtain from FCC before constructing stations to offer certain types of communications services. Once the station has been completed, the applicant may then apply for a license.



Mobile service	A service of radio communications between mobile and fixed stations or between mobile stations.
Paging	A one-way common carrier and private radio service in which messages are transmitted by tones, voice, and optical readout.
Petition to deny	A procedure guaranteed by section 309(d) of the Communications Act whereby any party of interest can file a formal objection to an applicant's filing.
Point-to-point microwave	A domestic public radio service on microwave frequencies by fixed stations between points which lie within the United States and its possessions or to points in Canada or Mexico.
Public notice	A procedure to notify the public that an application has been received. The public notice period for filing timely comments generally lasts 30 days.
Rulemaking	FCC's process for formulating, amending, or repealing a rule.
Speed of service	A measure of application processing speed, generally computed as the period between the time an application is received or a public notice is issued and the time a construction permit or license is granted.
Table of assignments	A list of predetermined channel assignments for various communities in the United States used for making frequency assignments in some services.
Translators	Low-power devices receiving a signal on one frequency and transmitting it on another without significantly altering its original characteristics. Used to carry FM radio and television programs to areas where direct reception is unsatisfactory.



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ABBREVIATIONS

ADP	automatic data processing
AM	amplitude modulation
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FM	frequency modulation
GAO	General Accounting Office
MBO	management by objectives
OMB	Office of Management and Budget
VHF	very high frequency

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## CHAPTER 1

### INTRODUCTION

The Federal Communications Commission (FCC) is responsible for processing applications to establish and operate stations offering broadcast, common carrier, and private radio communications services.<sup>1</sup> In fiscal year 1982, according to FCC budget data, the Commission spent approximately 500 staff-years, or about one-fourth of its total staff-year allocation, on applications processing.<sup>2</sup> As a result of continued technological improvements and increasing demand for both existing and new communications services, FCC's application processing workload has increased in recent years and is likely to continue increasing in the near future.

To deal with its growing workload, FCC has improved its application processing procedures over the past several years by

- revising or eliminating rules that affect processing,
- using automated techniques to supplement or replace manual processing,
- reorganizing the administration of licensing activities,
- reducing the level of review given applications, and
- streamlining procedures for choosing among mutually exclusive applications.

We were requested by the Subcommittee on State, Justice, Commerce, the Judiciary and Related Agencies, Senate Committee on Appropriations, to review FCC's actions to improve efficiency and productivity in applications processing. This report analyzes FCC's efforts to streamline applications processing and contains recommendations to FCC for further improving the speed and efficiency of its licensing procedures.

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<sup>1</sup>In this report, the process of authorizing stations to provide communications services will be referred to as licensing or applications processing. This includes FCC activities to issue a new license or to permit licensees to make major amendments in the conditions of their existing license. FCC classifies these activities for budgeting purposes as "authorization of service."

<sup>2</sup>Includes time spent on authorizing wireline facilities and radio stations as well as other related activities.

## FCC RESPONSIBILITIES AND ORGANIZATION

The Communications Act of 1934 established FCC for the purpose of regulating interstate and foreign communications by wire and radio. Under the Communications Act, FCC's regulatory responsibility is divided among three major service categories--common carrier, broadcast, and private nonbroadcast (commonly called private radio.) Common carrier services include telephone, telegraph, facsimile, data, telephoto, audio and video broadcast program transmission, satellite transmission, and other electronic communications services for hire. Broadcast services include AM and FM broadcast radio, television, pay television, and auxiliary services. Private radio services include police, fire, public safety, State and local government, aviation, marine, industrial, and land transportation services as well as the amateur and citizens band radio services.

Title III of the Communications Act sets forth provisions for non-Government use of radio frequencies to provide the above-mentioned services. Under this system, persons are allowed to use radio frequencies for limited periods by obtaining a license from FCC. A description of the licensing process is contained in chapter 2. Title III also directs FCC, among other things, to

- classify radio stations;
- prescribe the kind of service stations may offer;
- assign station frequencies and determine station power, location, and the time during which stations may operate; and
- regulate station apparatus.

These activities are to be carried out as required by "the public interest, convenience, and necessity."

FCC is an independent Federal agency headed by seven commissioners, one of whom serves as chairman.<sup>3</sup> Commissioners are appointed by the President and approved by the Senate for terms not to exceed 7 years. The commissioners supervise all FCC activities, delegating responsibilities to staff units, bureaus, and committees of commissioners.

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<sup>3</sup>Public Law 97-253, enacted Sept. 8, 1982, reduces the number of FCC Commissioners from seven to five effective July 1, 1983.

Licensing is carried out primarily by three bureaus: the Common Carrier Bureau, the Private Radio Bureau, and the Mass Media Bureau.<sup>4</sup>

#### OBJECTIVES, SCOPE, AND METHODOLOGY

The objective of this assignment was to answer questions asked by the Chairman and Ranking Minority Member of the Subcommittee on State, Justice, Commerce, the Judiciary and Related Agencies, Senate Committee on Appropriations, on how to improve FCC's efficiency and productivity in processing license applications in the broadcast, common carrier, and private radio services.<sup>5</sup> To answer these questions, we reviewed FCC's procedures and management controls for carrying out its licensing activities. A particular area of emphasis was how automatic data processing (ADP) techniques could be used to improve license processing. By agreement with the requestors' offices, we did not perform a formal ADP requirements study of this area but did examine how FCC uses automation to process license applications and what additional opportunities for automation exist. We also reviewed FCC's procedures for planning and managing its ADP activities.

We examined how changes in FCC rules or legislation could streamline applications processing and identified major costs and benefits of potential changes. We considered changes that could speed applications processing within FCC as well as those that could facilitate the filing of applications by industry and the public. Because FCC licensing staff members process both new license applications and amendments to existing licenses, we also considered changes that could improve the amendments process. However, we did not perform a detailed cost-benefit analysis to determine whether such changes should be adopted. In many cases, the changes involve questions of policy and regulatory philosophy as well as organizational and operational efficiency.

As part of our review, we also sought information on the volume of applications that are likely to be submitted to FCC in the next few years, the likelihood that new services will be introduced, and how this would affect FCC's applications processing workload.

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<sup>4</sup>The Mass Media Bureau was created by the merger of the Broadcast and Cable Television Bureaus in Nov. 1982.

<sup>5</sup>We did not analyze processing of licenses for services previously processed by the Cable Television Bureau but now processed by the Mass Media Bureau.

This review was performed in accordance with generally accepted government audit standards. Our work was conducted from April through October 1982 at FCC's headquarters in Washington, D.C., and at its Private Radio Licensing Division in Gettysburg, Pennsylvania.

In evaluating FCC's licensing activities, we reviewed the Communications Act of 1934; pertinent FCC rules, policies, procedures, records, and data; congressional hearing records and legislative histories. We interviewed FCC officials responsible for managing and carrying out licensing activities and spoke with representatives of the American Telephone and Telegraph Company; MCI Telecommunications Corporation; the National Radio Broadcasters Association; the National Association of Broadcasters; the Special Industrial Radio Service Association, Inc.; and the Telocator Network of America. We also spoke with representatives of law firms that represent license applicants. In general, these groups were selected because of their involvement in and familiarity with FCC licensing activities or their knowledge concerning a particular aspect of our review. While we recognize that their views may not represent those of all existing or prospective licensees, their comments were useful in identifying potential problems with and possible improvements in FCC licensing procedures as well as for verifying information we obtained from FCC. We also reviewed comments filed by other firms or individuals in formal FCC proceedings concerning licensing activities. In addition, we discussed and coordinated our activities with the Congressional Research Service and Office of Technology Assessment.

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In a letter dated February 15, 1983, FCC's Managing Director stated that FCC would reserve comment on the report's conclusions and recommendations until after receiving our final report, since formal evaluation of them would require more indepth consideration. Before receiving the letter, we met with FCC staff to obtain their comments on technical matters discussed in the report. We discussed these matters with FCC staff and revised technical material as appropriate. These revisions, however, did not affect GAO's conclusions or recommendations.



## CHAPTER 2

### GROWTH IN NEW AND EXISTING COMMUNICATIONS SERVICES

#### INCREASES FCC'S LICENSING WORKLOAD

Over the past 5 years, FCC has received and processed an increasing number of license applications in most service categories. FCC has improved its productivity to help handle this growing workload without additional license processing staff. However, recently FCC has introduced new services, placing additional burdens on processing staff and delaying the issuance of licenses. FCC's processing workload is likely to grow further if new services now under consideration are approved.

FCC needs to revise its management information systems so that it can better monitor its licensing activities and provide the Commission and the Congress with accurate and up-to-date information on the time it takes to process applications. This should improve the Commission's and the Congress' ability to determine where processing delays may impose undesirable costs on industry and the public and, thus, where improvements in processing procedures or additional resources may be needed. In chapters 3 and 4 we discuss ways to improve license processing through additional automation and changes in licensing requirements. As FCC implements changes it is currently considering in other regulatory policies and programs, staff may become available for reassignment to license processing.

#### FCC LICENSING ACTIVITIES

The radio frequency spectrum--the full range of frequencies over which radio communication may be conducted--is a vital, limited natural resource that must be shared by many services and users. To regulate the spectrum to maximize its use and to eliminate interference among stations, the Congress passed the Radio Act of 1927, which created a Federal Radio Commission and gave it regulatory powers over radio. These powers were transferred to FCC under the Communications Act of 1934. FCC's responsibilities for regulating radio can be broken into several primary functions:

- To allocate blocks of frequencies to particular services. Allocations are made within limits established by (1) the International Telecommunications Union which allocates spectrum internationally and (2) treaties with other countries, especially Canada and Mexico.

FCC's responsibilities cover only the non-Government portions of the radio frequency spectrum.<sup>1</sup>

- To assign frequencies or channels within the frequency blocks to specific users. Generally, users must apply to FCC for licenses to operate radio stations on these frequencies.
- To set technical standards or regulations to prevent interference among users and to promote technical efficiency. These include restrictions on signal strength, bandwidth, distortion in the signal, type of emission, and hours of operation.

### The licensing process

FCC controls use of the radio frequency spectrum for non-Government users through a licensing system. Persons wishing to engage in interstate and foreign radio transmission are required to obtain licenses from FCC.<sup>2</sup> These licenses authorize applicants to operate radio stations for limited periods--up to 5 years for broadcast television, 7 years for broadcast radio, and 10 years for nonbroadcast radio services--after which the license must be renewed. For certain communications services, an applicant must receive a station construction permit from FCC before receiving a license.

FCC reviews applications for licenses and construction permits to ensure that applicants meet the requirements of the Communications Act of 1934 and FCC rules. Section 308(b) of the act requires applicants for station licenses to provide FCC information it needs on the citizenship, character, financial, technical, and other qualifications of the applicant to operate the station; the station's ownership and location, frequencies, and power; the hours of operation; and the purposes for which it is to be used. Applicants must also furnish FCC with information necessary to comply with the requirements of international treaties and international radio regulations.

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<sup>1</sup>Under the Communications Act, the President is responsible for managing the spectrum used by Federal agencies and departments. This responsibility has been delegated to the Assistant Secretary of Commerce for Communications and Information.

<sup>2</sup>Public Law 97-259 (Sept. 13, 1982) allows FCC to authorize service in the radio control and citizens band services without requiring individual licenses.

The amount of information FCC requires license applicants to file varies considerably from service to service, as does the time and effort FCC staff spend in reviewing applications. For example, applications for the citizens band radio service require little more than the applicant's name and address and can be reviewed in a matter of minutes whereas applications for the recently established common carrier cellular radio service contain thousands of pages in supporting documents and may take months or even years to process, particularly in those areas where two or more applications are mutually exclusive.<sup>3</sup>

Generally, FCC's procedures for reviewing applications for station construction permits and licenses include the following steps:

1. Checks for completeness and accuracy of information. Applications are reviewed to ensure that they contain required information. The application is also issued a file number. For many services, FCC prepares a public notice stating that the application has been received. The public is generally allowed 30 days to file comments with FCC on the application.
2. Engineering checks. Applications are checked to determine whether the proposed station is likely to cause technical interference with other existing or proposed stations. Engineering review varies considerably from service to service. For some services there is little or no engineering review, while for others FCC uses applicant certification or frequency coordinators to help coordinate station assignments. For example, applicants in the common carrier point-to-point microwave service coordinate their applications with the owners of nearby stations before filing with FCC. For some services, however, such as AM radio, FCC engineering review is much more complicated. FCC has developed computerized systems to help determine interference potential in such services. As part of its engineering review, FCC also checks to make sure station transmitting equipment has been approved, the station's radio towers meet air safety requirements, and the station meets international regulations and treaty requirements.

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<sup>3</sup>Applications are mutually exclusive when granting one applicant a license would preclude granting another applicant a license because of unacceptable interference or some other practical reason.

3. Other qualifications checks. In some services, FCC makes a variety of other checks to determine if an applicant is qualified to receive a license. A study of FM radio license processing indicated that about 75 percent of total processing time is spent on legal, clerical, paraprofessional, and other nontechnical processing.

In carrying out these reviews, FCC considers formal objections (petitions to deny) filed by other parties against an application as well as informal comments. As discussed in chapter 4, dealing with objections may considerably lengthen processing time.

License processing generally becomes even more complicated and time consuming if applications are mutually exclusive. Traditionally, FCC has resolved these situations by using a comparative hearing to weigh the merits of one applicant against another. FCC recently attempted to streamline the process for conducting comparative hearings in some services where it expected to receive a large volume of mutually exclusive applications. In addition, in September 1982 Public Law 97-259 gave FCC the authority to employ a system of random selection to choose among mutually exclusive applications when it is in keeping with the public interest.<sup>4</sup>

In most services FCC enters relevant data on station characteristics into a computerized data base. This helps FCC meet international notification and coordination requirements, enhances FCC's ability to enforce its rules and regulations, allows FCC to conduct computerized interference analyses, and aids FCC in analyzing spectrum use.

#### INCREASED APPLICATIONS FOR NEW AND EXISTING SERVICES INCREASE FCC'S PROCESSING WORKLOAD

During the past 5 years, FCC has received increasing volumes of applications in broadcast, common carrier, and most private radio services. By changing its processing procedures and using ADP, FCC has been able to process more applications with little or no increase in staffing levels. However, growth in applications for existing services coupled with applications for new services such as low-power television and common carrier paging and cellular radio have created increased backlogs in

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<sup>4</sup>FCC was originally given authority to employ a system of random selection in 1981 under Public Law 97-35. However, FCC declined to adopt rules to implement the law.

some areas.<sup>5</sup> Proposals being considered by FCC to further increase broadcast services could place a substantial additional processing burden on FCC staff.

#### FCC increases production to deal with increased application receipts

Since 1978 FCC's Mass Media, Common Carrier and Private Radio Bureaus have received increased volumes of applications in most services. Even though resource levels have remained relatively constant or have declined, FCC bureaus, with the assistance of FCC ADP staff, have been able to increase the number of applications processed to help deal with the increased volume of applications received.<sup>6</sup> In spite of FCC's efforts, some processing delays have resulted, particularly in areas where FCC has recently established new or expanded radio services. The processing workload for many services is expected to increase further over the next 2 years, producing increased backlogs. Table I provides information on FCC licensing resources and on application receipts, and table II shows actual and projected processing backlogs for fiscal years 1978-84. (An additional summary of FCC licensing workload data is presented in app. I.)

#### Mass Media Bureau

Broadcast applications to establish new stations or make major changes in existing facilities received by FCC have increased from about 3,700 in fiscal year 1978 to over 7,000 in 1982. (See table I.) The largest increase has been in broadcast translator stations, due in part to the filing of low-power television station applications. For example, translator receipts increased from about 540 in 1978 to over 6,000 in 1981 but declined in 1982 following a freeze on low-power television applications. Combined AM and FM radio and television application receipts were also twice as high in fiscal year 1982 as they were in 1978. Over the next 2 years, FCC expects total AM, FM, and television application receipts to decrease slightly from 1,627 to 1,590 but translator application receipts to increase dramatically to over 17,000 in 1983 as new low-power television applications are filed. Many of these applications are expected to be mutually exclusive. As discussed later, FCC is considering actions to increase broadcast services that

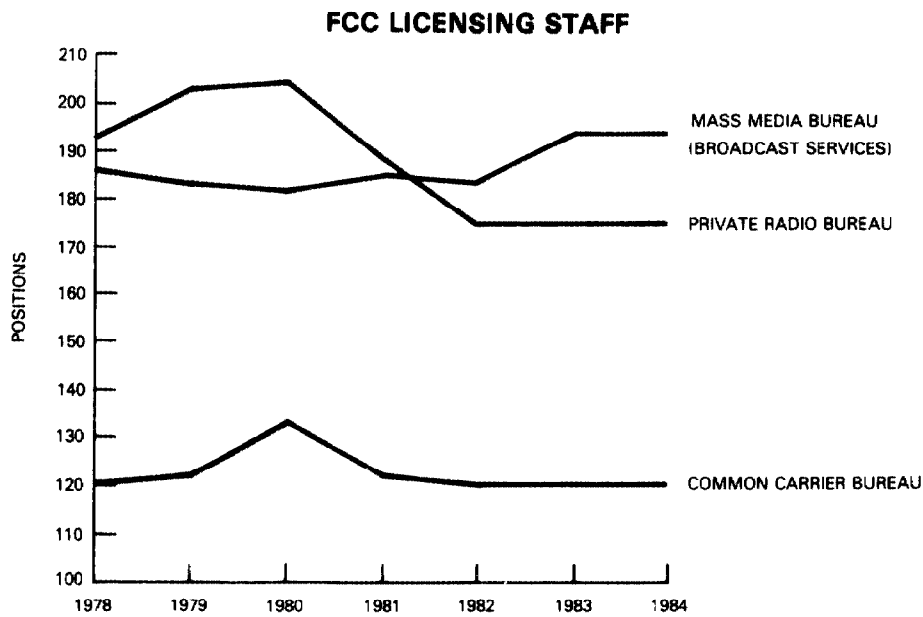
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<sup>5</sup>Backlogs are the number of applications pending at a given time.

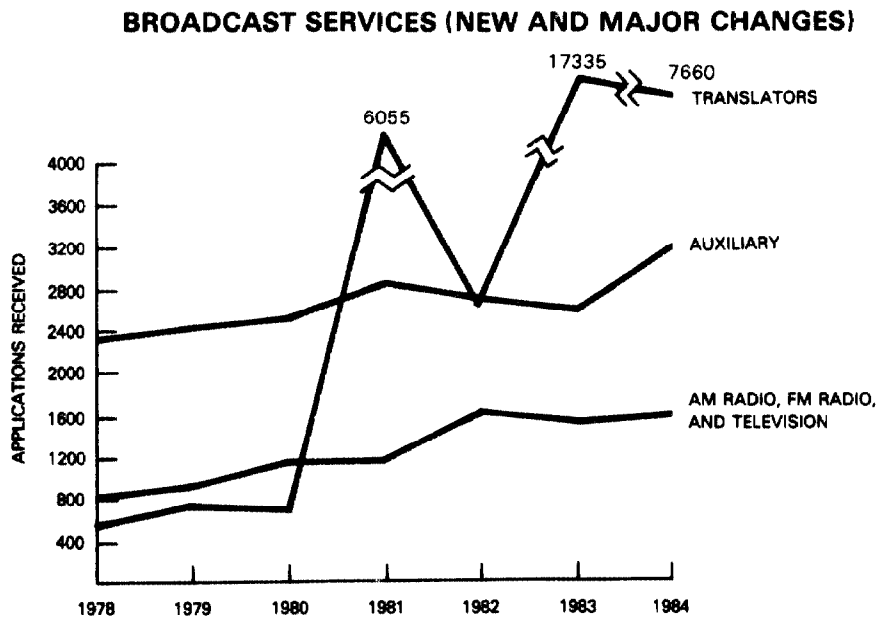
<sup>6</sup>Some of FCC's actions to increase processing productivity are discussed in chs. 3 and 4.

**TABLE I**

**FCC LICENSING STAFF AND APPLICATIONS RECEIVED  
(FISCAL YEARS 1978-1984)<sup>a</sup>**



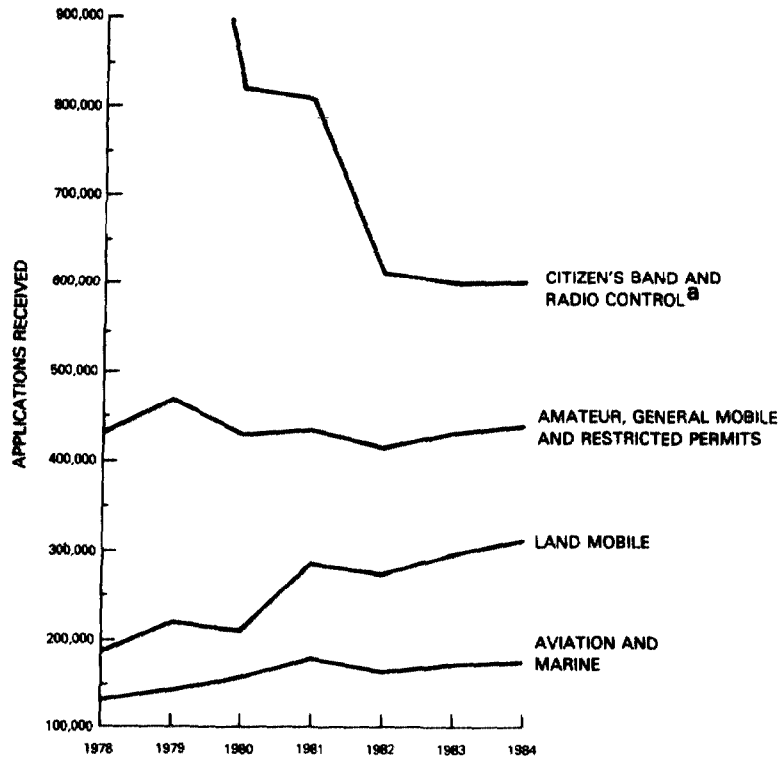
**FCC APPLICATIONS RECEIVED IN MAJOR SERVICE CATEGORIES**



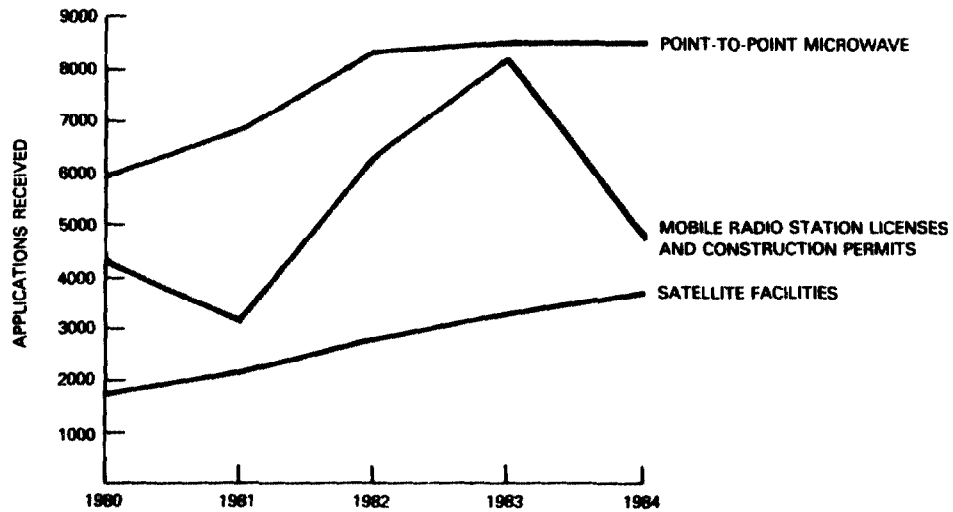
<sup>a</sup> Fiscal years 1983 and 1984 data are based on FCC projections

# TABLE I (CONT'D) FCC LICENSING STAFF AND APPLICATIONS RECEIVED

## PRIVATE RADIO SERVICES



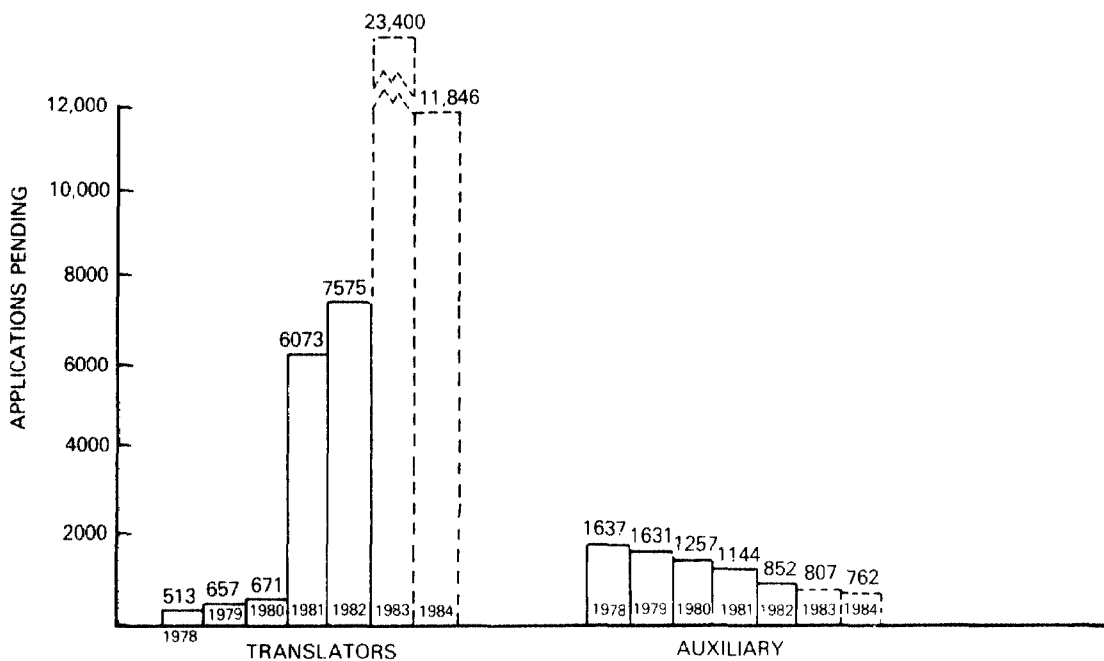
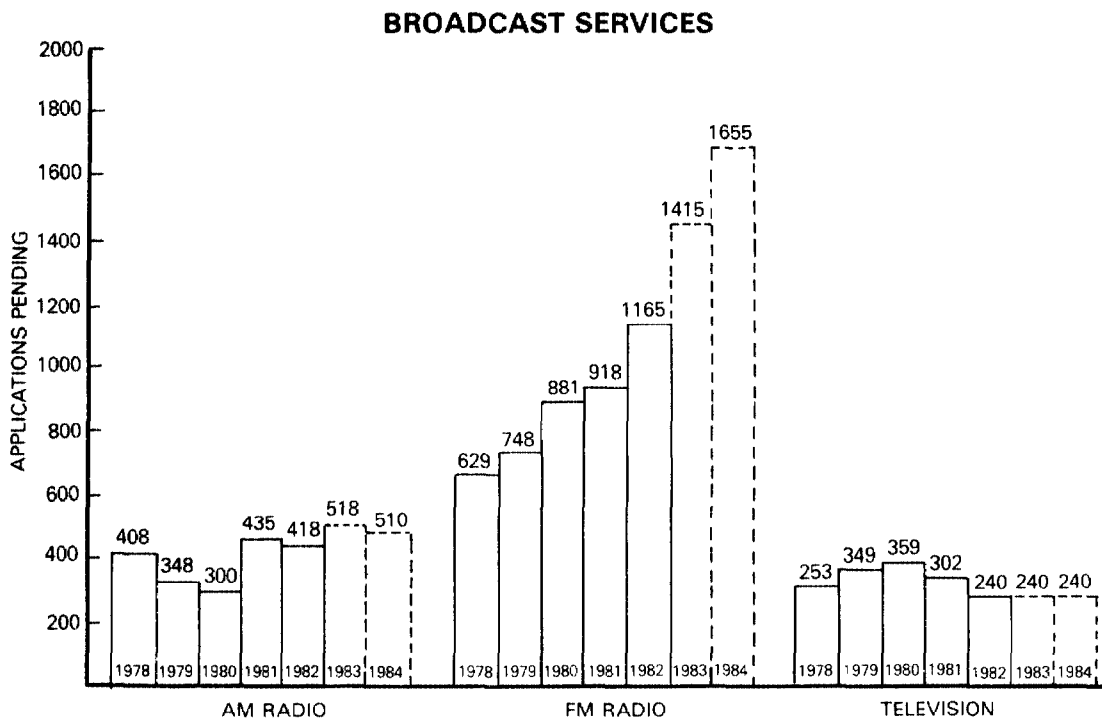
## COMMON CARRIER SERVICES<sup>b</sup>



<sup>a</sup> Application receipts for fiscal years 1978 and 1979 were, 2,831,000 and 1,207,806, respectively.

<sup>b</sup> Data for fiscal years 1978 and 1979 were not available in some services.

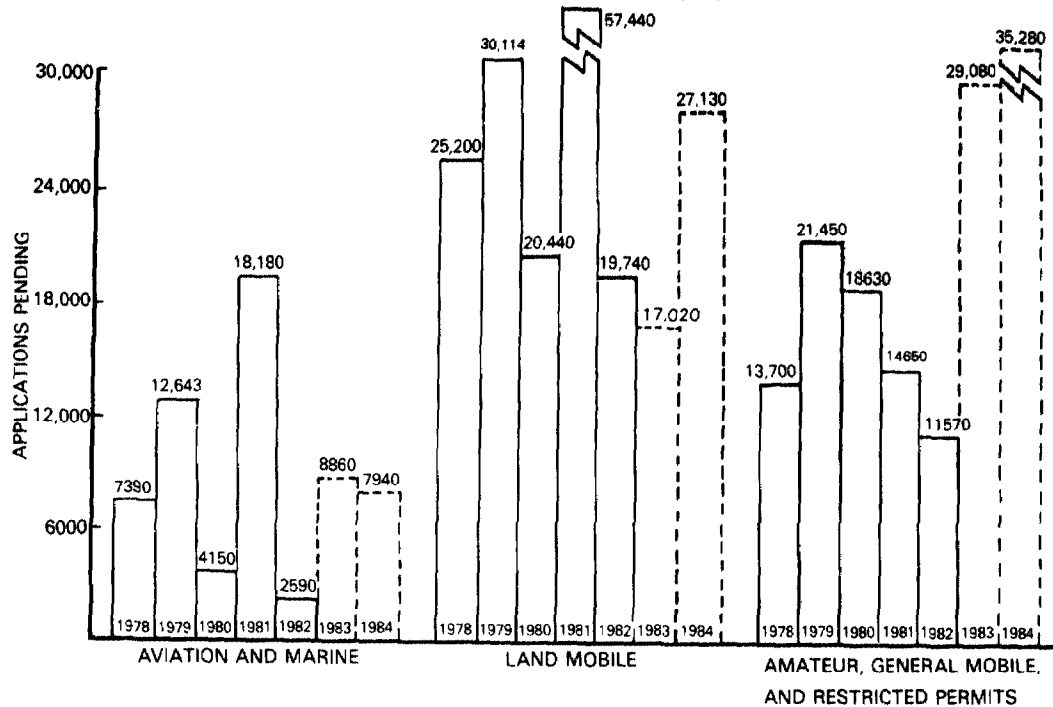
**TABLE II**  
**APPLICATIONS PENDING IN MAJOR COMMUNICATIONS SERVICE CATEGORIES**<sup>a</sup>



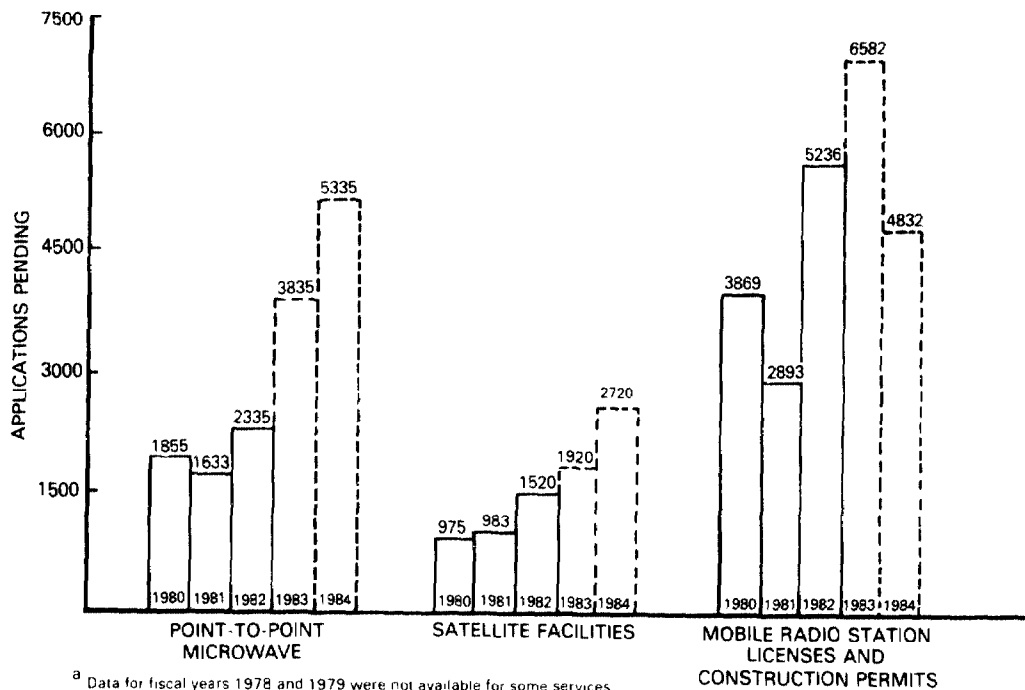
<sup>a</sup> Fiscal years 1983 and 1984 data are based on FCC projections



**TABLE II**  
**APPLICATIONS PENDING IN MAJOR COMMUNICATIONS SERVICE CATEGORIES**  
**(CONT.)**  
**PRIVATE RADIO SERVICES**



**COMMON CARRIER SERVICES <sup>a</sup>**



<sup>a</sup> Data for fiscal years 1978 and 1979 were not available for some services

could lead to a large influx of new applications, particularly in the FM radio service where applications may double over the next 3 years.

Since 1978 FCC has increased its disposal rates for broadcast applications by almost 60 percent. Nevertheless, as shown in table II, backlogs have increased in broadcast services other than auxiliary and television. FCC expects backlogs in most broadcast services to grow larger during fiscal year 1983.

While the bureau does not maintain reliable data on speeds of service (the time between the receipt of an application and FCC issuance of a construction permit or license), the Chief of the bureau's Audio Services Division estimated that at the end of fiscal year 1982 processing uncontested AM and television applications was taking about 5 months and processing uncontested FM applications was taking about 6 months. These times were generally confirmed by industry representatives with whom we spoke. A bureau report further indicated that as of August 1982 the bureau was disposing of half of the AM, FM, and television applications received in about 7, 10, and 6 months, respectively, and 95 percent in 33, 29, and 24 months.

The Mass Media Bureau Chief told us that he believed 3 months was an ideal processing time for uncontested broadcast applications--a view shared by industry officials with whom we spoke. The bureau chief hoped that through the use of additional automation the bureau would be able to reduce processing speeds to close to 3 or 4 months over the next couple of years. The bureau's goal is to process all uncontested applications for new stations or major changes to existing stations within 6 months of receipt and all contested applications within 9 months of receipt by the end of fiscal year 1983. Bureau projections indicate, however, that to reach this goal for FM radio new and major amendment applications 21 additional staffpersons would be needed (almost twice the staff assigned to FM processing at the end of fiscal year 1982). Problems also exist in AM processing.

#### Private Radio Bureau

Application receipts in the Private Radio Bureau have also increased over the past 5 years for most services licensed by the bureau, as shown in table I. The largest increase has occurred in land mobile radio where receipts increased from about 190,000 in fiscal year 1978 to about 280,000 in 1982. Over the next 2 years, FCC expects land mobile applications to increase to about 312,000. Receipts in aviation, marine, amateur radio, restricted permits, and microwave services are also expected to

increase, but to a lesser extent. Bureau licensing staff increased in 1979 and 1980 but has since declined. The bureau estimates that the need for approximately 10 staff-years of effort will be lifted from the bureau if the Commission eliminates individual licenses in the citizens band radio service, as is authorized by Public Law 97-259.

During fiscal year 1982, the bureau considerably improved its applications processing speeds so that speeds of service for most services were 25 days or less in September 1982. The Licensing Division Chief said speeds of 30 to 35 days or less are generally satisfactory to most applicants. The bureau expects that speeds of service should remain at or below 30 days for all services except aviation (ground) and microwave during fiscal year 1983. Projected speeds of service for aviation (ground) and microwave applications are estimated at 48 and 74 days, respectively. Bureau officials noted that the volume of applications received and, consequently, their processing speeds are likely to vary depending on the U.S. economy. Table II contains backlog data for private radio services.

#### Common Carrier Bureau

As shown in table I, applications in the three major common carrier service categories, point-to-point microwave, satellite facilities, and land mobile, have increased since 1980 while licensing staff levels have remained virtually constant. Between fiscal years 1980-82, point-to-point microwave applications increased 41 percent (5,900 to almost 8,400) while satellite facilities applications were up 56 percent and mobile station licenses and construction permits were up 48 percent. FCC expects point-to-point microwave receipts to remain at about 1982 levels over the next 2 years while satellite facilities applications are expected to increase by about 35 percent. FCC expects land mobile applications to increase by about 31 percent in fiscal year 1983 but to decrease in 1984.

Since 1980 application disposals in the microwave and land mobile services have generally remained constant while satellite facilities disposals have increased about 50 percent. However, due to increased receipts, backlogs have increased in each area. For example, during fiscal year 1982 the backlog in point-to-point microwave increased from approximately 1,600 to about 2,300 applications while the backlog in land mobile applications went from about 2,900 to 5,200. Backlogs are expected to get even larger by the end of fiscal year 1983--reaching over 3,800 in point-to-point microwave and almost 6,600 in land mobile. (See table II.)

## New services create processing problems

FCC has introduced new or expanded broadcast, common carrier, and private radio services, which have placed a substantial processing burden on its applications processing personnel. The large influx of applications for licenses in these services (many of which are mutually exclusive) has created substantial processing backlogs in both the broadcast and common carrier bureaus. The possible introduction of new or expanded broadcast services now under FCC's consideration could add to the processing workload.

During 1981 and 1982 FCC's Common Carrier Bureau introduced three new mobile services (cellular radio and two paging services) and a new fixed service (digital electronic message service), which produced a substantial influx of applications. While cellular radio has not produced the largest volume of applications, it has probably had the greatest impact on applications processing.<sup>7</sup> Under FCC rules two cellular systems will be authorized per market, one of which has been set aside for exclusive use by the local telephone company (wireline carrier)<sup>8</sup> while the other is available to nonwireline applicants. Under FCC's Order on Reconsideration in the cellular radio proceeding (FCC 82-99, Feb. 25, 1982) applications were to be filed within 90 days for the top 30 U.S. markets and another 90 days later for all other markets.

In June 1982 FCC received 194 applications to provide cellular radio service in the top 30 markets. The applications were both lengthy and complex, with some containing thousands of pages of supporting data. In addition, mutually exclusive applications were received to provide service in each market. Because of the importance of the service, the Common Carrier Bureau's Mobile Services Division made processing these applications its highest priority. Much of the division's engineering staff was assigned to cellular processing, thus taking them

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<sup>7</sup>Cellular radio is essentially a common carrier mobile telephone system which has a high capacity to serve subscribers due to a coordinated use of channels in the system. It derives its name from the fact that geographical service areas are divided into various zones, or "cells," within which frequencies may be reused. Cellular radio is expected to provide an efficient and less costly alternative to existing mobile telephone service.

<sup>8</sup>The set-aside is valid only if the company applies within 2 years from the time FCC begins accepting applications.

from their normal processing duties and consequently creating additional backlogs in other areas. In spite of these efforts, FCC has had to extend the filing dates for cellular radio applications in other markets because processing proved to be more time consuming than expected. On November 8, 1982, FCC received approximately 400 applications for the next 30 largest markets. Applications for markets 61-90 and all smaller markets are to be accepted beginning March 8 and June 7, 1983, respectively. Although FCC has developed expedited procedures for dealing with mutually exclusive applications, the Chief of the Common Carrier Bureau's Mobile Services Division estimated that it will take until mid-1984 before most mutually exclusive cases in the top 30 markets are decided.

The introduction of the low-power television service has placed an equally heavy processing burden on FCC's Mass Media Bureau.<sup>9</sup> In September 1980 FCC adopted a Notice of Proposed Rulemaking which proposed establishment of a nationwide low-power television service. In the notice, FCC permitted the filing of applications for low-power television stations even though final rules had not been issued in the service. Within a few months, FCC had received over 5,000 applications, which far exceeded its processing capabilities. Consequently, on April 9, 1981, FCC instituted a freeze on low-power television applications except for stations in those areas with fewer than two full-time television stations. FCC expects that approximately 17,000 additional low-power television applications will be filed when it solicits applications to compete with those already on file. FCC presently estimates that it will take until fiscal year 1985 before it will be in a position to lift the freeze on low-power television applications.

Several other new services or changes in existing broadcast services are now pending before FCC which could, if adopted, further increase FCC's processing workload. FCC staff estimates that FM application receipts could double in each of the next 3 years if FCC decides to change its commercial FM allotment

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<sup>9</sup>Low-power television is a new originating broadcast service which is expected to provide viewers with additional television programming. The power output of these stations will be limited to levels below conventional commercial television stations. Therefore, in most cases these stations will only be able to broadcast within an area with a radius of about 10 to 20 miles. Low-power television will be considered a secondary service; that is, if a low-power television station's signal interferes with the signal of a conventional station, it will be required to yield to the full-power station.

system to allow more stations to operate within the FM spectrum as it is now proposing (Broadcast Docket 80-90). Also pending are a proposal by FCC to change very high frequency (VHF) television allotment procedures to increase the number of VHF television stations (VHF drop-ins)<sup>10</sup> and a petition to establish a low-power FM radio service to be offered through FM translator stations. While the Mass Media Bureau has not yet determined the precise impact on application processing that would result from the VHF drop-in and low-power FM proposals, bureau officials believed that establishment of the low-power FM radio service could lead to a flood of applications.<sup>11</sup>

FCC NEEDS BETTER INFORMATION ON PROCESSING SPEEDS TO EFFECTIVELY MONITOR LICENSING ACTIVITIES

To administer its licensing activities effectively, FCC needs a system that can be used to establish applications processing objectives and accurately report on how resources are being used to meet these objectives. A key element of such a system is an accurate mechanism for tracking and reporting on applications processing speed (speed of service). Without such information, FCC may not be able to determine whether it has the resources to meet desired processing goals and whether resources are assigned most effectively among service categories. Such information is particularly important since unacceptable processing delays can result in added costs to industry and delay the offering of desired services to the public.

FCC has taken a major step toward developing necessary management information by introducing its management by objectives (MBO) system, which establishes objectives for licensing and other FCC activities. By making additional improvements in its management information to compute reliable speed of service data, FCC should have the information it needs to evaluate whether it is meeting these objectives and, thus, to manage its applications processing functions effectively.

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<sup>10</sup>Notice of Proposed Rulemaking in re: Table of Television Channel Allotments (FCC-80-545, Sept. 18, 1980).

<sup>11</sup>FCC is also considering actions to introduce new or expand some existing private radio and common carrier services. However, their impact on license processing appears to be less substantial.

The need for good management  
information on licensing activities

To maintain effective control over programs, managers must allocate and use resources effectively to achieve established goals and objectives. Licensing activities particularly need this kind of control since failure to meet processing objectives can result in economic harm to industry and delay service to the public. The potential economic harm that can result from unacceptable delays in processing was emphasized by industry representatives with whom we met. For example, representatives of common carriers stressed the importance of FCC maintaining consistent processing speeds to avoid their having to delay construction, which may keep them from meeting commitments for providing service to the public. FCC staff also recognized the need for timely and accurate information on application backlogs and processing speeds to ensure that processing goals are being met.

FCC has traditionally set goals for and tracked its licensing functions through several reporting mechanisms. FCC's budget sets forth annual processing objectives, accomplishments, resource projections, and expenditures and contains yearly workload summaries. FCC's management data notebook provides a month-by-month recapitulation of application receipts, disposals, and backlogs for services licensed by FCC. In addition, FCC bureaus develop and maintain various reports for their own management purposes.

Our 1979 report "Organizing the Federal Communications Commission for Greater Management and Regulatory Effectiveness" (CED-79-107, July 30, 1979) showed that both the management data notebook and FCC's budget did not provide sufficient information to be effective management tools. For example, we stated that while the management data notebook included quantitative data on applications processing, it did not provide standards for managers to compare the data against and so its value was limited. We also noted that FCC's budget lacked adequate performance measurement information.

FCC has improved reporting of license  
processing data, but additional  
refinements are needed

Since 1979 FCC has made improvements in the mechanisms it uses to monitor and report on license processing as well as other FCC activities. In fiscal year 1982 FCC began using an MBO system which establishes specific objectives for FCC bureaus, divisions, and branches and provides quarterly data on progress made toward achieving these objectives. This system

should improve FCC's ability to plan, monitor, and evaluate its activities and can be particularly useful for encouraging efficiency and productivity in FCC licensing operations. Further, through its tie into FCC's budget process, the system can improve FCC's ability to establish processing goals and ensure optimum resource utilization. Beginning in 1983 FCC plans to use quarterly MBO reports to provide management information on license processing activities and to eliminate the management data notebook which was previously used for that purpose. The quarterly reports are to include information on application receipts, disposals, productivity (disposals per staff year), and speed of service.<sup>12</sup> As discussed below, however, the Mass Media and Common Carrier Bureaus do not currently prepare reliable speed of service data. Using the data currently prepared by the bureaus as part of the MBO system could present a misleading picture of the actual status of licensing activities, weakening the system's effectiveness as a management tool.

FCC needs to improve its ability to track license processing speeds if it is to have all of the information it needs to adequately monitor license processing activities. As noted earlier, the ability to accurately determine speed of service is important since delays in processing applications can cause economic harm to applicants and the public. FCC's Private Radio Bureau computes speeds of service for each of the major service categories licensed in the bureau based on actual application receipts and disposals within a given time period. FCC's Mass Media and Common Carrier Bureaus, however, do not perform such computations. Instead, their assessments of processing speeds are generally based on estimates made by bureau licensing staff.

Officials in the Mass Media and Common Carrier Bureaus cited two problems in developing meaningful speed of service data. First, they noted that processing speeds for applications within even a single service classification may vary considerably depending, for example, on whether they are uncontested, contested, or mutually exclusive. Thus, the average processing time for all applications within a classification often conveys little meaning. Further, the variation in processing times makes it difficult to determine actual or expected processing speeds from receipt, disposal, and backlog data unless the data is broken down into categories such as uncontested and

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<sup>12</sup>Disposals will be used, however, as the primary means of performance measurement.



contested. Secondly, they said the bureaus lack automated systems that can be used to track and report on processing speeds based on actual receipt and disposal data.

For example, the engineering assistant to the Chief of the Common Carrier Bureau's Domestic Facilities Division told us that problems with entering data in the division's point-to-point microwave automated data base preclude using this system to produce timely and accurate management information reports. Instead, he keeps a duplicate log of applications which is used to prepare division reports on applications processing. While the division does report speed of service data, these figures are simply an estimate of average processing times for applications processed during the previous month. The engineering assistant told us that the division does not have a system for compiling processing speeds for various types of applications (for example, contested and uncontested) based on actual data. The bureau's Mobile Services Division Chief noted similar problems which have prevented his division from calculating reliable speed of service figures. He said he had requested that no speed of service figures for common carrier mobile services be included in FCC's fiscal year 1984 budget since the only figures available were estimates of average processing times, which could be misleading. However, speed of service figures were included in FCC's budget submission to the Office of Management and Budget.

Both the Mobile Services and Domestic Facilities Division Chiefs as well as the Common Carrier Bureau Chief said that they recognized the need to develop better speed of service data and would explore the possibilities of developing automated programs for capturing this data as part of their plans to update existing systems in fiscal year 1983. FCC's Associate Managing Director for Operations told us that he agreed with our concerns about the need for improved data on Common Carrier Bureau licensing activities and that the Office of the Managing Director would be working with the bureau to help develop a better breakdown of categories for reporting processing data.

Mass Media Bureau officials also agreed that their bureau needs to develop improved speed of service data. The bureau's Assistant Chief for Management said that through improved automation in the bureau, the bureau expects to be able to develop this data for inclusion in FCC's fiscal year 1986 budget. The Chief of the bureau's Audio Services Division said, however, that he hopes that his division will have better data developed by the end of fiscal year 1983.

OPPORTUNITIES TO INCREASE PROCESSING  
SPEEDS THROUGH REASSIGNMENT OF STAFF

While FCC has done an effective job of increasing productivity to help keep up with increased processing workloads, in some areas FCC licensing officials believe processing speeds are less than desirable. Furthermore, license processing could worsen if substantial increases in applications are filed in response to improved economic conditions and FCC's introduction of new services, creating the need for additional productivity gains or perhaps additional staff.<sup>13</sup> Opportunities may exist for FCC to reassign additional staff to license processing activities and other high priority areas as a result of resource savings obtained through currently planned changes in FCC's organization, policies, and programs.

In October and November 1981, in connection with the preparation of its fiscal year 1983 budget, FCC evaluated and ranked according to priority all of its existing program functions and activities to determine what reductions could be made in FCC expenditures to enable it to operate at a substantially reduced funding level of \$64.2 million--the tentative budget mark given to FCC by the Office of Management and Budget. FCC expected that it would have to cut its staff by 296 persons through a reduction in force. It now seems likely, however, that FCC's appropriation for fiscal year 1983 will allow it to operate at fiscal year 1982 staff levels.

FCC's evaluation of its activities indicated that the anticipated budget cut would produce detrimental effects in a variety of FCC programs. On the other hand, FCC also identified a number of staff reductions that could be made with little or no effect on its operations. Included among these are the following:

- Eliminating individual licenses for citizens band radio. FCC estimated this action would ultimately eliminate the need for 10 positions. (Five positions would need to be retained temporarily to return application requests.)
- Using volunteers to administer amateur radio examinations, which FCC estimated would eliminate six positions.

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<sup>13</sup>In chs. 3 and 4, we discuss ways FCC can improve processing speed and efficiency through increased automation and further changes in its rules and procedures.

--Restructuring FCC's equipment authorization program, which FCC estimated could save 17 positions, although it could increase interference risks and cause an increase in complaints.

Public Law 97-259 recently authorized FCC to eliminate individual citizens band radio licenses and to use volunteers to administer amateur radio examinations. In January 1982 FCC began restructuring its equipment authorization procedures.

FCC's Associate Managing Director for Operations told us that he recognized that the 1981 evaluation had identified approximately 100 positions that could be eliminated with little or no impact. He said that the Office of the Managing Director plans to review these positions along with bureau managers to determine how many of the positions may still be eliminated. Based on the results of this review, we believe it would be useful for FCC to consider whether any of these positions should be reassigned to applications processing and data automation activities to help eliminate licensing backlogs.

#### CONCLUSIONS

Increases in the volume of license applications over the past 5 years have substantially increased FCC's processing workload. FCC has stepped up its processing productivity to help deal with the heavier workload; however, in some areas FCC licensing officials believe processing speeds are less than desirable. In particular, FCC's introduction of new services in the last 2 years has created processing backlogs in common carrier land mobile and broadcast services. New broadcast services FCC is considering may create additional backlogs.

To effectively monitor its licensing activities, FCC needs to improve its ability to compile reliable speed of service data for broadcast and common carrier services. This data should be derived from actual receipts and disposals and classified into categories that facilitate management review--for example, service category, type of application, and status (such as whether the application is contested, uncontested, or mutually exclusive). This information should allow FCC to determine if actual processing speeds exceed the objectives that it has established for the service and whether changes in procedures or additional resources are needed to avoid delays in station authorizations that may impose economic costs on industry and slow the provision of service to the public.

As FCC reviews the resource savings that are likely to result from proposed changes in other FCC programs and operations, it should determine whether these resources can be

reassigned to FCC bureaus or its data automation operations to help alleviate or avoid license processing backlogs.

RECOMMENDATIONS TO THE CHAIRMAN, FCC

We recommend that the Chairman:

- Improve procedures for monitoring license processing activities by developing reliable speed of service data for broadcast and common carrier services.
- Determine, as part of FCC's evaluation of resource savings that may result from changes planned in other FCC program areas, whether these resources can be used to alleviate or avoid undesirable license processing backlogs.

### CHAPTER 3

#### IMPROVED ADP PLANNING AND MANAGEMENT

##### CAN SPEED LICENSE PROCESSING

Automatic data processing can increase the efficiency of FCC licensing activities and improve speeds of service. Over the past 20 years, FCC has recognized the value of automating its licensing functions and has used automated processing techniques to improve licensing productivity. FCC plans to further automate its licensing activities over the next few years. To get the maximum benefit from automated license processing, FCC needs to improve the planning and management of its ADP activities by better defining information requirements before developing individual software systems or procuring computer hardware.

##### FCC's USE OF ADP TO SPEED LICENSE APPLICATION PROCESSING

FCC license applications vary considerably in complexity. Processing applications for some radio services, such as the Private Radio Bureau's citizens band radio service, is quite simple--requiring little more than a cursory check that the application form is complete and the printing of a license. In other services, such as the Private Radio Bureau's land mobile and microwave services and many common carrier and broadcast services, license processing involves technical, legal, and engineering reviews by FCC staff. Many of these reviews cannot be fully automated. However, using automation where feasible to facilitate these functions can improve the efficiency of processing license applications. For example, over the past decade, FCC has used automation to

- compile and update data bases to provide up-to-date information on licensed stations for technical purposes and international needs;
- expedite processing of modifications and renewals of existing licenses;
- print public notices and authorizations required during license processing (Mass Media Bureau's AM and FM radio and television and Common Carrier Bureau's mobile and microwave services);
- print station construction permits and licenses;

- analyze signals to be emitted by a proposed station to determine if interference will result to existing or other proposed stations; and
- track applications' status, answer public inquiries, and produce management reports.

Since the early 1960's FCC has used ADP to reduce backlogs in services such as citizens band and amateur radio. As applicants' demand for faster service has increased and computer technology has evolved, FCC has used automated techniques widely in its processing activities. However, many licensing activities can be further improved through additional automation.

The value of using automation to improve licensing activities was clearly demonstrated in a 1973 study funded by FCC to provide a cost-benefit analysis of its automated information requirements. The purpose of the study was to provide FCC with information for making decisions on budgeting ADP systems development resources and establishing priorities for developing proposed systems. The study identified automated licensing systems as "indispensable" to carrying out FCC's mission and projected that about 85 percent of the quantifiable benefits of automation in the future would be derived from automating licensing functions. Accordingly, a large part of FCC's systems development efforts since 1973 has focused on designing new and upgrading old automated systems to facilitate licensing service in the Private Radio, Common Carrier, and Mass Media Bureaus. Nevertheless, automation of these systems remains only partially completed.

#### Private Radio Bureau

The Private Radio Bureau began automating licensing in the early 1960's. Today, automation is widely used in the bureau to help process license applications. Automated systems are used, among other things, to validate input data on license applications, modify licenses, produce management reports, and issue licenses. Over the next few years, the bureau plans to upgrade a number of systems and to use automated techniques to replace or facilitate reviews that are currently done manually.

The bureau's automation efforts during the past few years have concentrated on reviewing and upgrading systems to provide more efficient and effective service. These efforts include (1) developing an applications tracking system for land mobile applications processing, (2) improving the efficiency of transferring information between the bureau's Gettysburg, Pennsylvania, license processing center and FCC's central computer center in Washington, D.C., and (3) designing a

comprehensive system for land mobile license processing. Improvements to be completed during the next 3 years include the following:

- Consolidating the current land mobile front-end automated tracking system and many manual procedures into a comprehensive license processing system. This system will eliminate the need to enter application data twice-- in the bureau's tracking system and again in FCC's master frequency file<sup>1</sup> when the license is ready for authorization. Current plans call for a phased development ending in fiscal year 1986.
- Improving the microwave processing system. Remote job entry and printing equipment installed at the Gettysburg location in November 1982 is expected to save 5 days' processing time. Further improvements are planned during fiscal years 1983 and 1984.
- Redesigning completely the aviation and marine systems' computer software during fiscal years 1984-86 to increase license processing efficiency through enhancements such as online inquiry and update capability.

FCC also plans to buy a minicomputer to facilitate land mobile applications processing and other future processing requirements, which were described earlier.

#### Common Carrier Bureau

In the Common Carrier Bureau automated systems are used to support license processing managed by two divisions--Mobile Services and Domestic Facilities. While these systems have facilitated processing, officials in both divisions have noted problems and pointed out the need for improvements. The bureau plans to upgrade systems in both divisions during fiscal year 1983.

The Mobile Services Division uses an automated processing system to maintain and authorize licenses for land mobile radio service from wire and radio common carriers. The system contains a data base of mobile systems and prints construction permits and licenses. The system can also compare and evaluate engineering data and produces various management reports on the status of licenses. The division also uses an automated system

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<sup>1</sup>FCC's central data base for license authorizations and frequency assignments.

to perform engineering checks for proposed stations. Previously, division staff had to plot data manually and calculate effects using mathematical formulas.

The Domestic Facilities Division currently maintains two major automated license support systems:

- The common carrier microwave applications processing system creates and maintains data bases for evaluating microwave application data and produces a variety of management information reports.
- The earth station applications processing system collects and maintains data needed for processing earth station and other satellite radio applications.

Automation is also used to help process applications filed in the multipoint distribution and digital electronic message services.

The bureau plans major enhancements and new systems developments during fiscal year 1983, including upgrading some of the current automated systems in both the Mobile Services and Domestic Facilities Divisions from batch processing to online capability. The bureau's top priorities are to upgrade the land mobile and microwave systems to online. These older systems correct errors slowly and cannot issue timely management reports. Converting them to a data base format using online editing and update for error correction can speed license processing. The bureau has proposed these enhancements for several years, but other ADP priorities have delayed assignment of ADP development personnel to these efforts. FCC's current 5-year ADP plan calls for this work to be completed during fiscal year 1984. FCC began to analyze the requirements for the land mobile system in December 1982 and plans to begin work on the microwave requirements in March 1983.

The bureau's data automation liaison officer told us that because of delays in getting started with these systems, the bureau has not attempted to identify requirements for additional systems. However, he as well as other bureau officials felt that other improvements could be made if requirements were analyzed.

#### Mass Media Bureau

Automated broadcast licensing services in the Mass Media Bureau include applications such as AM and FM broadcast radio, television, low-power television, and automated engineering and



technical support services. Currently, the bureau is concentrating on

- continued development of the broadcast application processing system,
- development of engineering data bases to assist in processing license applications, and
- installation and testing of a dedicated minicomputer and development of an automated system to assist in processing low-power television license applications.

Considerable work remains to be done before current automation plans are completed. For example, the broadcast applications processing system that was originally conceived in 1974 is in the second phase of a three-phase development. The system currently helps bureau staff process applications by establishing data bases to generate application status and other reports and print public notices.

Most of the bureau's licensing services require engineering analysis. Automated engineering data bases assist engineers in performing these analyses and are widely used in the bureau. By maintaining data in an online data base, bureau engineers can easily access data and thus can complete their analyses in less time. FCC plans to improve the capabilities of its AM, FM, and television engineering data bases between now and fiscal year 1985. In addition, according to the bureau's Assistant Chief for Management and Personnel, the bureau may consider merging the engineering and broadcast application system data bases into a single data base.

FCC has recently obtained a minicomputer to process low-power television license applications. The computer is to perform engineering analyses on low-power television applications exclusively. FCC plans to link the central computer with the minicomputer so that information, such as antenna heights and painting information, can be accessed by engineers.

PROBLEMS WITH ADP PLANNING REDUCE  
EFFECTIVENESS OF FCC'S ATTEMPTS  
TO AUTOMATE LICENSING ACTIVITIES

While FCC has used automation to improve the efficiency of licensing operations, inadequate long-range planning has led to problems in identifying and developing automated systems that can best meet FCC's license processing needs. Without adequate planning FCC cannot effectively determine what computer hardware

can satisfy its future requirements in the most cost effective fashion.

In July 1979 we issued a report addressing organizational problems within FCC.<sup>2</sup> Recommendations were made to correct ADP management and planning problems in the following areas:

- Top management direction and control.
- ADP program planning.
- Interaction between the Data Automation Division and user bureaus and offices.
- Analysis and review of systems requirements.

FCC partially implemented our 1979 recommendations. However, planning problems persist which have prevented FCC from fully using automation to speed licensing activities and which raise questions about FCC's decision to divert valuable resources to develop a computer network that may have little value to license processing.<sup>3</sup>

ADP planning needs improvement to satisfy users' information requirements

FCC has not adequately identified and analyzed its information requirements. This has weakened its long-range ADP planning and reduced its ability to deliver automated license processing support to users. Specifically, the absence of adequately defined information requirements for all license processing activities and a comprehensive 5-year plan to address them continues to adversely affect timely development of automated license support services.

A comprehensive long-range ADP plan is an essential ingredient to achieving efficient, effective use of automated information resources. A fundamental early step in developing an ADP plan is the identification and analysis of detailed information

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<sup>2</sup>"Organizing the Federal Communications Commission for Greater Management and Regulatory Effectiveness" (CED-79-10, July 30, 1979).

<sup>3</sup>A computer network links separated computer systems. Terminals are connected to the local computer which then is connected via communication circuits to the other computers in the network.

requirements. Software systems that can satisfy these requirements can then be identified, analyzed, and ranked in priority order as part of a long-range ADP plan. This process includes conducting feasibility studies to examine prospective costs, quantifiable and unquantifiable benefits, risks, and compliance with laws and regulations. Finally, information obtained from these studies can be furnished to top-level management or a steering committee for review and concurrence. Additionally, top management or a steering committee should review projects during key phases of development and after implementation to identify needed changes in procedures, methods, training, and management.

FCC's Associate Managing Director for Information Management and its ADP Steering Committee are responsible for ADP planning. The Planning and Analysis Division, under the Associate Managing Director, carries out policies for ADP planning, budgeting, and procurement in support of the ADP long-range plan. The ADP Steering Committee is responsible for determining system development priorities, reviewing and recommending significant new software development projects, and reviewing the performance of all ongoing systems.

Problems with long-range ADP planning are not new to FCC. Our 1979 report highlighted its lack of effective long-range ADP planning and inadequate systems justification and review--two areas that continue to weaken FCC's information management efforts.

FCC has made some progress by involving top management more in the ADP planning and review process, but problems persist. For example, multiyear ADP plans required by OMB and FCC directives were not prepared for fiscal years 1980-81. A multiyear ADP plan should outline both overall and specific objectives and ADP system priorities. It identifies both short- and long-range system development projects and hardware acquisitions and enables assessments to be made of past performance. The prospective software systems described in any multiyear ADP plan also need to be supported by valid requirements studies including the quantification of benefits, costs, and resources to be allocated. Plans should also be periodically reviewed by top management or a steering committee. In this regard, FCC's own ADP policy directives require that feasibility studies, systems requirements, and cost-benefit analyses be performed to assist management in making decisions on the use of ADP resources.

During fiscal years 1981-82 some planning guidance was provided by a document prepared by FCC's ADP Steering Committee in October 1980 entitled "The Future of Electronic Information

Handling at the FCC, Blueprint for the '80's." This document provided a long-term guide for changing FCC's data processing operations from a large centralized computer facility providing batch and time-sharing services to a computer network that would satisfy user data processing and information handling needs, including license applications processing. The blueprint document was supplemented in March 1981 with a transition ADP plan consisting of short descriptions of current and planned software developments and a brief description of budget needs to undertake these developments in fiscal years 1981 and 1982. However, the blueprint document and transition plan did not provide all information necessary for FCC to identify, select, develop, and implement new systems applications because detailed information requirements needed to support the plans were not developed.

FCC has published a 5-year ADP plan for fiscal years 1982-86. The plan is an improvement over the previous 2-year planning efforts because it includes

- statements of ADP program objectives,
- an expanded overview of FCC's ADP resources, and
- a schedule for systems development and other projects to be undertaken during the next 5 years.

However, this plan is deficient in that, in many cases, requirements, feasibility, and cost-benefit studies have not been performed for the systems proposed in the plan.

The lack of adequate ADP systems requirements identification has reduced the ADP Steering Committee's ability to carry out its planning responsibilities. The steering committee was formed in 1979 to involve top management directly in ADP long-range planning. Members of the committee are selected from among senior bureau and office officials and are appointed by the FCC Chairman. According to its charter, the committee's objectives are to "ensure that the ADP program is consistent with the overall FCC objectives, and that the program is accomplishing its goals in a cost effective manner." The committee is to accomplish this objective by determining ADP systems development priorities, based on FCC's objectives, by reviewing and recommending significant new systems development projects and by reviewing the performance of all ongoing projects.

Committee work in developing overall ADP policy has improved since 1979. During 1980 the committee completed a general review of the use of ADP in FCC and prepared the blueprint document. Additionally, committee membership has been increased to include top officials from all bureaus and offices,

and in 1982 the committee tried to analyze and put in priority order each bureau's and office's list of proposed requirements. However, the committee does not always carry out all of its important management oversight responsibilities because it lacks information needed to make decisions. In our discussions with FCC data automation officials, we found that staff is not available, in some cases, to perform requirements analyses for prospective software developments included in 5-year ADP plan submissions. Accordingly, bureaus' 5-year plan submissions often lack feasibility studies and cost-benefit analyses when submitted for review. For this reason, the ADP steering committee has not been able to effectively carry out one of its primary responsibilities--determining FCC ADP systems development priorities as part of the 5-year ADP planning process. Instead, FCC has for the most part continued to divide resources among bureaus rather than apportioning them FCC-wide according to need.

FCC's Associate Managing Director for Information Management told us that he agrees that coordinating identification of information requirements among FCC's bureaus for prospective software projects is a prerequisite to good long-range ADP planning and meeting users' ADP needs. He told us that, nevertheless, FCC's resources available for this task are so scarce that in many cases it could not be done without jeopardizing day-to-day operations.

To help improve FCC's ability to identify automated systems requirements, some bureau officials believed that computer analysts should be assigned to the bureaus to work directly with prospective systems users in developing overall as well as individual systems requirements. Currently, analysts are assigned from the Associate Managing Director for Information Management's Office to work on individual systems development requirements and do not work directly for bureaus.

Inadequate requirements analysis  
affects the planning and development  
of automated licensing systems

ADP planning problems, particularly the lack of adequate requirements analysis for planned ADP systems, have hampered FCC's efforts to automate licensing. Prolonged development of the Mass Media Bureau's broadcast application processing system is an early example of these problems. The system was originally conceived as part of a 1973 requirements study performed for FCC by a contractor. Its original purpose was to provide an automated system to process broadcast license applications by linking various systems within the bureau so that information such as call sign changes could be entered into FCC records only once. Previously, this information sometimes had to be written or keyed 8 to 10 times.

Following the contractor study a separate contract was awarded in 1975 to develop an automated system in 13 months. However, the contractor could not meet the deadline for development and FCC terminated the contract in 1976 with system specifications as the only delivered product. After bureau officials analyzed the specifications, they decided not to develop the system as designed because the design would not allow for frequent changes in broadcast rules and regulations. Mass Media Bureau officials attributed these problems to inadequate requirements analysis early in the project. The system's specifications and requirements were scaled down and a three-phased development was initiated in 1980. The original concept of an automated license processing system was dropped in favor of an automated license tracking system to be completed by 1985.

A more recent example of inadequate planning is the October 1980 blueprint document, which called for establishing a computer network that would satisfy virtually all FCC information and data processing needs, including license processing. The blueprint document did not, however, tie the planned network development to FCC information requirements. The blueprint document indicated that user profiles and information requirements were to be developed using sampling techniques. These profiles were to describe procedures used, identify the amount of time spent on specific tasks, determine information volumes, and identify with whom information would be shared. The results of the sampling were to be extended to other individuals and offices throughout FCC and would be the basis for determining the network's detailed information requirements.

FCC, however, determined the structure for the network after performing only a limited analysis of some network requirements, such as word processing, and before resolving several key issues. For example:

- What kind of data exchanges among the various FCC bureaus and offices would be required?
- What kind of data bases would be used and where would they be located?
- What would be the effect of consolidating computer support capabilities on a bureau/office or functional basis?
- What access controls would be required among the network computers?
- What role would FCC's current central computer facility play in the network?

These are basic issues in the selection of any major computer system but were only generally addressed in the blueprint document, transition plan, and the current 5-year ADP plan. The design and implementation of a responsive information network must be based on comprehensive information requirements including the volume, frequency, accuracy, and timeliness of data that must be transmitted among sites.

During 1981 and 1982 FCC began to procure computer hardware to be used in the network even though the above issues were not resolved. In addition, for the network to handle high-volume data processing such as is involved in licensing and to interact with large-scale data bases on the central computer, FCC staff had to attempt to develop new operating system software with capabilities that FCC was not able to obtain commercially. In essence, this requirement committed FCC to a research and development project that so far has proved unsuccessful and has delayed development of applications that could have been implemented using software compatible with FCC's existing computer facility. For example, microcomputers procured as part of the network plan were installed in the Private Radio Bureau's Gettysburg location to satisfy the requirements for an automated system to track the status of land mobile license applications. The applications tracking system was designed to capture "front-end" data to track applications and provide status inquiries. The original target date for implementing this system was January 1982. However, due to equipment and software problems with the microcomputers, the applications tracking system was not operational until September 1982--an 8-month delay. Private Radio Bureau officials told us that FCC had originally planned to procure a minicomputer compatible with the central computer in Washington which would handle the tracking system's requirements plus other bureau requirements. However, FCC decided instead to purchase six network microcomputers, two of which were used to support the tracking system requirement, and the minicomputer procurement was canceled. If comprehensive current and future information requirements had been identified, computer capacity could have been planned and made available to satisfy other bureau requirements besides the application tracking system.

The tracking system today is a stand-alone system being operated on two stand-alone pieces of hardware. Additionally, the microcomputers used for the system are not currently compatible with FCC's central computer in Washington, requiring the data to be recorded twice--once in the tracking system and again in FCC's master frequency file.

FCC has recently begun to correct these problems. To avoid the mistakes made with the applications tracking system, FCC's

Associate Managing Director for Information Management decided to study alternatives to network concepts in satisfying the requirements for the Private Radio Bureau's automated land mobile application system. This comprehensive system will incorporate the current tracking system into a total license processing system for land mobile licenses. During 1982 one of FCC's computer specialists began studying various system alternatives, including using the network for this system. The study found that FCC's license processing requirements could not be handled efficiently by the network and recommended using the existing central computer facility to develop this application.

FCC's Associate Managing Director for Information Management told us that network technology had to be tried out to prove whether or not it could satisfy license processing requirements. However, he agreed that the land mobile alternatives study should have been performed before FCC resources were committed to that effort.

Accordingly, FCC has decided to exclude large-volume license processing from its present plans for the network. Instead, the network will focus on such things as word processing and transmitting messages and files among various offices. In light of this change in plans, FCC needs to reconsider the benefits to be gained from using network technology and weigh these benefits against providing ADP support for needed high-volume automation projects that support license processing through currently available computer technology.

A computer capacity and workload policy  
can help satisfy bureau requirements  
and speed license processing

FCC has not adequately monitored computer performance and user workload on its central computer facility in Washington, D.C. This along with the problems in ADP planning discussed above has led to the procurement of computer equipment that does not meet the total information requirements of any bureau or office but rather is tied to satisfying individual software system requirements.

FCC's data processing activities are handled primarily through a central computer facility under the direction of the Associate Managing Director for Information Management. This facility supports several different types of processing including batch, interactive batch,<sup>4</sup> online access, and remote job

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<sup>4</sup>FCC defines interactive batch as a process in which programs are created in an online mode and performed in a batch mode.



entry. The facility is operated Monday through Friday on three shifts.

With the development of the October 1980 blueprint document, FCC began to change certain ADP operations from a centralized ADP facility to a decentralized network concept. The blueprint identified six general categories of information requirements:

- Applications and authorizations, including licensing.
- Information processing and communications.
- Scientific and technical data processing.
- Graphics.
- Data storage and retrieval.
- Micrographics and electronic printing.

The blueprint document indicated that ADP requirements existed in each of these categories for which FCC lacked computer capability. However, FCC has not adequately analyzed computer capacity and workload management to determine which of these requirements can be handled on its existing facility.

Some benefits of decentralization were identified in a November 1981 study to address the feasibility of transferring computer software support from the Office of the Associate Managing Director for Information Management to the individual bureaus. These included increased accountability for system development, increased user control over software systems, and greater flexibility in using resources. Many problem areas and concerns were also identified as part of this study.

The study recommended that unless significant resource reductions could be realized in agreements between the bureau and the Associate Director for Information Management, computer software support should not be decentralized because the disadvantages outweighed the advantages. However, FCC has taken steps toward decentralizing computer hardware through the network plans. Some of the same problems and concerns noted in the software study also apply to decentralizing hardware operations. To make this difficult change efficiently and effectively, current and future computer capacity and workload must be monitored. FCC's blueprint document, transition plan, and current ADP plan, however, do not recognize the need for a computer capacity and workload management policy and do not outline

how the centralized large-scale computer system will be used in the planned network structure.

Determining what computer hardware capacity is needed to handle projected workloads is an important part of any organization's efforts to properly plan and manage automated information resources and meet the information requirements of users. This information can help provide data processing managers with realistic projections of future workload and computer capacity needs.

FCC's present efforts in computer capacity and workload management, carried out by its Information Processing Division, are largely confined to satisfying day-to-day and week-to-week capacity requirements of users rather than evaluating what type of computer hardware is needed to meet long-term information processing requirements of users in the most efficient and cost effective manner. Some standard systems performance reports are produced on current software applications. However, the following information necessary for proper computer capacity management is not available:

- Estimates of capacity needed to handle all known user requirements.
- Measurements of capacity being used and how long it will last.
- Future workload requirements of the central computer and the distributed minicomputers and microcomputers now in place and those soon to be installed.

The Chief of FCC's Information Processing Division told us that one person used to be assigned to monitor computer usage. However, since he left FCC in 1982, computer performance has not been evaluated. Additionally, FCC has not adequately monitored online versus batch usage on the central computer during the prime shift. This information could be used to determine how batch and online work can best be allocated among the three operating shifts.

FCC has computer performance monitoring capability in its central computer, and a software package has been ordered that will perform the technical part of this work. Additionally, ADP specialists from the Computer Applications Division currently assigned to work with the bureaus and offices to measure current workload and develop detailed information requirements for high-priority individual prospective software systems could be used to help monitor computer usage.

Developing and implementing a computer capacity and workload management policy to require that this important work is performed will better support FCC's 5-year ADP plan and will more efficiently and effectively satisfy users' total information requirements. This requirement will also provide FCC with needed information concerning future computer capacity needs to support license processing as well as other information processing requirements.

## CONCLUSIONS

ADP plays an integral role in FCC's ability to efficiently and effectively carry out licensing activities. Over the past 20 years FCC has at least partially automated many of its licensing systems. For the full benefits of automation to be realized, however, improvements in FCC's long-range planning process are needed. FCC's blueprint document, transition plans, and fiscal years 1982-86 5-year ADP plan are not complete guides for FCC to follow in handling its data processing and information needs. They provide little information on the role of FCC's current large central computer facility under the network concept and lack the necessary measurements of costs and benefits for current and future projects. Furthermore, FCC's most cost effective automated function--license processing--cannot be adequately supported by the network technology because it cannot presently provide the capabilities needed. FCC also lacks a computer capacity and workload management policy needed for it to effectively plan and manage use of its ADP resources.

FCC needs to correct these problems by being more orderly and thorough in its approach to completing the detailed identification of information requirements for the six general categories listed in the blueprint document. Once this has been accomplished and the requirements have been ranked according to priority, alternative data processing approaches that support these requirements can be studied, including centralized, decentralized, and network operations. The data processing environment finally selected could involve one or a combination of approaches that will effectively meet FCC's identified requirements. FCC's ADP Steering Committee also needs to review the Commission's annual 5-year ADP plan more thoroughly and provide FCC's ADP staff with better guidance.

We recognize that FCC has made a number of improvements in its ADP management to address weaknesses identified in our 1979 report. However, further improvements are needed and can be accomplished by refining the ADP planning process.

## RECOMMENDATIONS TO THE CHAIRMAN, FCC

We recommend that the Chairman, to effectively plan and manage FCC's information resources and increase license processing efficiency:

- Develop specific information requirements, including feasibility and cost-benefit analyses, for all prospective computer system applications included in the 5-year ADP plan. This should allow FCC's ADP Steering Committee to more effectively perform annual reviews of the 5-year ADP plan, including ranking prospective bureau and office computer system applications in priority order and allocating ADP resources.
- Develop and implement a computer capacity and workload management policy to address FCC's short- and long-range data processing needs. This policy should include assessments of the costs and benefits of centralized, decentralized, and network computer operations.

## CHAPTER 4

### CHANGES IN FCC PROCEDURES

#### CAN SPEED LICENSE PROCESSING

By examining many of its licensing rules and procedures, FCC has been able to improve processing speed and efficiency in many services to deal with increased applications. Although FCC has devoted considerable time and effort toward revising its licensing procedures and has made a number of noteworthy improvements, FCC and the Congress can do more to speed license processing, such as

- simplifying licensing requirements to improve speed and reduce paperwork,
- shifting technical information tasks from FCC staff to applicants,
- improving coordination of FCC license activities with other agencies and governments,
- eliminating policies and procedures that may no longer be needed due to increased competition in markets FCC regulates, and
- reorganizing the administration of licensing activities.

#### SIMPLIFYING LICENSING REQUIREMENTS

FCC has improved processing speeds and reduced paperwork burdens on applicants by simplifying many of its licensing procedures. Recently passed legislation has created an additional opportunity to grant applications faster in some services by simplifying the two-step licensing system of issuing construction permits and licenses. By making wider use of procedures for licensing radio systems rather than individual stations, FCC can further reduce paperwork. FCC can also improve processing speed by changing its rules governing amendments.

#### Combining construction permits and licenses

FCC makes frequency assignments for many broadcast and common carrier services by issuing a construction permit after reviewing an application to construct a radio facility. After constructing the facility, the applicant files a separate form with FCC stating whether construction was completed in accordance with the terms of the construction permit. FCC then

issues a license to the station. In many services, the licensee cannot use the facility until it receives the license. According to FCC staff, the two-stage construction permit and license system provides the following benefits:

- Alerts FCC that the applicant has completed facility construction and is ready to use the assigned spectrum.
- Demonstrates compliance with the terms and conditions of construction permits.
- Helps FCC maintain an up-to-date data base.
- Prevents licensees from acquiring frequencies that they do not intend to use immediately.

The detrimental effect of this is, however, that the system creates paperwork which can delay service authorization.

The Congress in 1982 enacted Public Law 97-259, which eliminated the requirement that FCC issue construction permits for public coast stations, privately owned fixed microwave stations, and stations licensed to common carriers unless it makes a public interest finding that construction permits are necessary. However, the Congress did not authorize FCC to abandon this requirement for broadcast services. The conference committee report accompanying the legislation stated that requiring a separate construction permit and license in some services "may delay market entry and place an unnecessary administrative and financial burden on both the potential licensee and on the Commission."

FCC staff and industry officials we spoke with believed that changes were needed in existing procedures, but they had reservations about simply eliminating construction permits for common carrier services. One problem cited is that FCC could be faced with having to deny operating licenses to companies after the companies have made a considerable investment to construct facilities, which could induce FCC to approve applications that otherwise would be rejected. FCC staff also believed that more legal delays could result if an applicant, having constructed a station and being turned down for a license by FCC, found it more advantageous to challenge FCC's decision than to change the station to get a license. Both industry officials and bureau staff were concerned that this approach could disrupt the frequency coordination process used in common carrier microwave services.

An alternative approach that could reduce paperwork while retaining some of the present system's advantages is to retain

construction permits, but to only require applicants to notify FCC that their facilities are completed. While applicants would still have to file a construction permit application, a simpler notification form would replace the license application, which would eliminate duplicate paperwork. The notification form would tell FCC that the facility has been tested and is ready to begin operation and would describe any changes made in the facility's specifications. The applicant would retain a copy of the notification form which, along with the construction permit, would serve as a license. Some FCC staff and common carrier industry officials favored this approach as an alternative to the current system or a system without a construction permit. FCC suggested this approach as part of a proposed revision of its rules for common carrier mobile services.

Common carrier bureau staff told us that they plan to initiate a proceeding in the near future to explore whether eliminating construction permits for common carrier microwave and mobile services would be in the public interest. Given the reservations expressed to us about eliminating construction permits, FCC needs to explore other alternatives for simplifying the existing process, such as using the notification system described above for common carrier microwave as well as mobile services.

#### Combining duplicate applications

Opportunities exist for FCC to reduce existing paperwork requirements in common carrier microwave services by allowing applicants to combine on one application form information which must now be filed separately. This includes (1) permitting applicants to submit applications covering a system of radio stations and (2) allowing them to combine information on transmitting and receiving stations on a single form when changing a microwave frequency.

Permitting applicants to license a system of radio stations instead of requiring them to file a separate application for each station could reduce the paperwork burden imposed on applicants under existing FCC requirements. The Private Radio Bureau has used systems licensing in its land mobile services with some success. In the Common Carrier Bureau, however, applicants building a microwave system are still required by FCC rules to license individually each station in the system. For a large system, an applicant must now prepare numerous applications.

Based on our discussions with FCC staff and industry representatives, it appears desirable to allow a common carrier applicant to file a consolidated system application for related

microwave stations. Such an approach would reduce the applicant's paperwork burden while still providing FCC with the technical information on individual stations that it needs to maintain its data base. An industry official we spoke with supported systems licensing to reduce paperwork but believed FCC would still need to maintain separate files for individual stations. Another official suggested that FCC should apply systems licensing rules flexibly to let applicants use it to their advantage. Specifically, he recommended that applicants be permitted to choose between individual and systems licensing and, if using systems licensing, be permitted to decide what stations would be included in the systems.

FCC could reduce existing paperwork requirements in the common carrier microwave service by allowing common carriers to file only one application when changing frequencies on a microwave link. When companies need to change the frequency used in a microwave link between a transmitting station and a receiving station, separate applications for each station must be filed. One carrier we spoke with believed that filing a separate application for the receiving station is redundant since all of the necessary information is included on the application for the transmitting station. Domestic Facilities Division officials stated that they would explore the idea of eliminating this requirement as well as the possibility of using a systems licensing approach when they review FCC's rules for microwave services.

#### Changes in rules for amending the operations of stations

FCC can process applications more quickly by changing its rules governing major and minor amendments. When information furnished in a pending application is no longer accurate, applicants must file additional information to amend their applications. These amendments are classified as either major or minor when they are received by FCC. Major amendments are placed on public notice for at least 30 days. This permits affected licensees or other members of the public to protest the proposed amendment or bring public interest considerations to FCC's attention. Public notice is not required for minor amendments since, even with the proposed modifications, the facilities remain substantially unchanged from those described in the applicant's earlier proposal, which was already placed on public notice.

Two methods that could be used to expedite the amendment process are reclassifying major amendments that do not have a public interest impact as minor amendments to eliminate the public notice period and permitting applicants to make minor amendments before FCC approval.



### Reclassifying major amendments as minor amendments

Amendments may be approved more quickly when they are classified as minor. Unlike major amendments, minor amendments do not have to be placed on public notice, triggering a 30-day comment period during which parties may raise public interest concerns that FCC must consider. This procedure may delay the issuance of a license even in cases where comments are either not filed or are rejected by FCC.

Opportunities exist for FCC to reclassify some of its major amendments as minor amendments, thus potentially speeding processing of some applications. For example, FCC recently adopted a notice of proposed rulemaking (Docket 80-57, Sept. 8, 1982) which in part seeks to process some major amendments in the common carrier mobile radio services as minor. Another area where this can be done is the Mass Media Bureau. A Mass Media Bureau division chief said that the bureau plans to initiate a rulemaking to reclassify some television and FM radio major amendments as minor amendments. Under current rules, television and FM radio broadcasters licensed under a table of assignments must file a major amendment if they change their service area by 50 percent or more. These broadcasters have rights to particular broadcast areas but frequently transmit their signal to only part of it. When they want to increase their service area within their broadcast area by 50 percent or more, they have to file a major amendment even though this change will not interfere with adjacent broadcasters. Mass Media Bureau officials are expected to propose that these amendments be treated as minor.

Further opportunities may exist to reclassify major amendments as minor amendments in the Mass Media Bureau. A former FCC general counsel remarked that a public notice period was often not necessary for amendments because amendments to existing facilities almost never have a public impact, except when a change results in a new broadcast area. A National Radio Broadcasters Association representative also supported further reclassification, arguing that few comments were ever filed against major amendments. He added that reclassification would improve licensing speed and fit in with a marketplace-oriented licensing philosophy.

### Making minor changes before approval

FCC could also improve the amendment process by expanding the use of procedures that allow applicants to make minor changes in station facilities without having to wait for formal FCC approval. The Common Carrier Bureau had proposed relaxing

the procedures for making minor amendments to microwave facilities, such as lowering antenna heights, in 1975 as part of a proceeding to amend part 21 of FCC's rules.<sup>1</sup> The proposal was to permit applicants to make certain proposed minor amendments in their operations without prior authorization from FCC. Other more important changes were to be permitted if FCC did not disapprove of the application within 21 days. The rule change was never submitted to the Commission for adoption even though bureau officials as well as common carriers we spoke with believed the change was desirable. The Common Carrier Bureau Domestic Facilities Division Chief said evaluation of other more controversial rule revisions which were proposed in the 1975 proceeding had delayed adoption of this change. He added that the change is likely to be included in a new evaluation of the part 21 rules which the division plans to undertake later this year.

Automatic approval procedures could facilitate processing in cases where applicants make minor changes in the technical specifications of their station while it is under construction. Common carrier representatives said that in order to meet new service demands in a timely fashion, they may have to submit applications before all technical specifications for a proposed station have been precisely determined. In such cases, the specifications for the constructed facilities will sometimes deviate somewhat from those in the construction permits. In cases where only minor changes have been made in the station, FCC may be able to employ a notification system, such as the one discussed earlier, in place of existing licensing procedures or, alternatively, use an automatic approval mechanism for license applications relating to such facilities.

#### SHIFTING TECHNICAL INFORMATION TASKS TO APPLICANTS

Opportunities exist for FCC to improve licensing speed by shifting some of its engineering analysis requirements to applicants and by taking actions to improve the quality of information submitted by applicants. Requiring applicants to do more of the engineering analyses themselves would reduce the workload on FCC staff, enabling the staff to process applications faster. It would also shift the cost of conducting the engineering analyses to the parties benefiting most directly

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<sup>1</sup>See notice of proposed rulemaking entitled "In the Matter of Amendment of Parts 21 and 43 of the Commission's Rules and Regulations Relative to Various Procedural Requirements for the Domestic Public Radio Services," docket no. 20490, May 21, 1975.

from them. Improving the quality of applications received would also lead to faster processing because it would reduce the number of nonroutine cases FCC staff must process.

### Shifting engineering tasks to applicants

FCC can eliminate some of its processing requirements by shifting some of its engineering analysis tasks to applicants. Although FCC is responsible for regulating interference among licensed radio stations, it could in some licensed services rely on applicants to certify that their engineering analyses are correct or require them to have their applications processed through frequency coordinators before submitting them to FCC. Both options would reduce the engineering review FCC now conducts--some of which may duplicate work performed by applicants--and help FCC to process these applications more quickly. Shifting the burden of conducting engineering analyses to applicants would also transfer the cost of these analyses from the general public to the parties benefiting from the work. FCC would be able to further reduce its workload and facilitate processing by providing applicants with better access to its data bases. Having better access to FCC's data bases would aid applicants in preparing the engineering portions of their applications and would be particularly beneficial in helping them identify applications that are mutually exclusive.

### Certification of engineering data

FCC could reduce license processing time by relying more on applicants to certify that the engineering portions of their license applications are correct. For example, revision in the Mass Media Bureau's commercial FM radio licensing rules to require self-certification could save from 4 to 6 weeks of processing time for clean,<sup>2</sup> new applications and for major amendments, according to a bureau study. However, a disadvantage in relying solely on the applicant to certify the accuracy of a station's engineering is the greater risk of interference. Instead, FCC could adopt an intermediate certification approach that could reduce workload while providing an acceptably low risk of interference.

In 1982 FCC staff conducted evaluations of various FCC programs and activities. As part of this effort, FCC's Office

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<sup>2</sup>An application is considered clean if it is uncontested and has no deficiencies, waivers, or amendments.

of Plans and Policy studied the feasibility of using self-certification in processing applications. The study, which focused exclusively on the commercial FM radio licensing system, concluded that it was feasible for FCC to rely on applicants to certify the technical data contained in an application. The study, although noting uncertain resource savings, recommended that this new licensing approach be tried for commercial FM radio applications. The study concluded that:

--It would place full responsibility for preparing an application on the applicant, including all cost associated with correcting an improperly constructed station. This would provide a strong incentive for more careful preparation of applications.

--Although there may be short-term interference costs, these would diminish in the long-term as application quality improves.

Furthermore, the study's project officer told us that it might be appropriate to assign the cost of certifying the engineering to the private sector since the applicant is the primary beneficiary of this work. He added that larger savings could result if self-certification were applied to other services.

The Chief of the Mass Media Bureau disagreed with the study's recommendation. He believed that engineering self-certification by applicants would lead to more interference problems, some of which would be difficult to resolve. As an example, he noted that FCC has spent about 3,200 hours trying to resolve interference between an Atlanta television station and numerous land mobile stations. He believed that, given the minimal resource savings involved, the costs of self-certification would exceed the benefits and that the plan should be rejected. Industry officials we spoke with were also cautious about the plan, although one thought it would be appropriate for use in processing major amendments.

It appears, however, that an intermediate approach exists which may eliminate the concerns of increased interference while maintaining the other benefits of self-certification. Under this approach, instead of having applicants certify the technical data they provide on applications, FCC could require applicants to have this data certified by a member of a pool of engineers which would be created by FCC for this purpose. Having applicants pay these engineers to certify the technical data could achieve the objectives of self-certification--reducing FCC workload and allocating the engineering costs to the person benefiting from the review--while ensuring that the potential for interference would remain small. The Chief of the

Mass Media Bureau told us he would adopt this approach, even if the time and resource savings were small, as long as the interference potential remained minimal. FCC's Common Carrier Bureau's Mobile Services Division is planning to explore a similar proposal for use in its services.

#### Frequency coordination

FCC can reduce its workload and improve licensing speed by making greater use of frequency coordinators. Frequency coordinators are non-Federal Government committees that assist FCC in assigning private land mobile and fixed services spectrum use. Although used informally in the past, recently passed Public Law 97-259 specifically authorizes FCC's use of frequency coordinators in making frequency assignments.

Besides the advantage of relieving the Private Radio Bureau of the task of assigning frequencies, relying on frequency coordinators is expected to result in improved frequency coordination. Some of the larger frequency coordinators, because of superior computer resources, can assign frequencies and fill in gaps among existing stations more efficiently than can FCC staff. For example, some frequency coordinators, by using sophisticated computer systems, are able to coordinate narrow route systems needed for railroads and utility lines--a capability that FCC's Private Radio Bureau currently lacks.

Although FCC has used frequency coordinators in the past, the relationship had no basis in law and the parties' responsibilities were unclear. Public Law 97-259 changed this by specifically permitting FCC to use the services of frequency coordinators. Given this new relationship, the Private Radio Bureau expects to rely more on frequency coordinators to recommend frequency assignments. By relying on these recommendations without having to doublecheck their accuracy, the bureau expects to be able to process land mobile applications faster and at less cost.

The conference report accompanying Public Law 97-259 encouraged FCC to develop rules or procedures for monitoring frequency coordinators' performance. Developing standards will be particularly important because, according to Private Radio Bureau staff, frequency coordinators in the past did not always provide reliable recommendations when FCC used their services. A frequency coordinator suggested that FCC could develop these standards expeditiously by establishing and relying on the advice of an advisory committee of users, frequency coordinators, manufacturers, and dealers.

## Public access to FCC data bases

Another way FCC can reduce its workload by shifting some of its licensing tasks to applicants is by providing them better access to its data bases. Once applicants gain direct access, they may be able to prepare higher quality applications that will require less FCC review. For example, applicants would be able to use FCC data bases to identify mutually exclusive applications before filing. Frequency coordinators would also benefit from better access, which would provide them with additional research tools.

The Association of Federal Communications Consulting Engineers petitioned FCC on February 6, 1981, to institute a rulemaking for providing the public with direct remote access to its electronic data files. The petition noted that FCC's current method of access--either visiting FCC or requesting printouts of the data from research files--was very time-consuming and not in keeping with the current state of the art in data processing. FCC also makes its data available on a computer tape through the National Technical Information Service. However, a Mass Media Bureau engineer noted that the tape is not compatible with all computers and it is not updated frequently enough to be useful for engineers.

To overcome these problems, FCC could provide direct remote access to its data bases. According to a feasibility study prepared by FCC's Management and Analysis Branch, direct remote access would eliminate delay in retrieving information and ensure public access as soon as FCC made changes in its data bases. This could result in more accurate applications, reducing both the applicants' and FCC's cost of processing defective applications. With direct access, applicants would also be able to determine before filing with FCC whether applications already on file would be mutually exclusive with their applications.

FCC has cited several problems that it must overcome before providing direct access to its data bases. FCC's Associate Managing Director for Information Management said that FCC would have to upgrade its computer facilities to provide direct access and estimated that the cost would be about \$200,000. Furthermore, he stated that FCC would have to adopt new methods for ensuring the security of these data bases, since direct access could provide opportunities for fraud and manipulation and for preventing unauthorized access to privileged data bases which include proprietary and sensitive information. In addition, he said FCC would need to develop a method for recovering from users the costs of providing direct access.

The Associate Managing Director for Information Management has proposed issuing a notice of inquiry to solicit comments on how FCC should address these problems as well as to determine the demand for access to its data bases. However, some FCC staff have expressed reservations about the idea, delaying the issuance of the notice. We believe that issuing the notice will enable FCC to consider various alternatives for providing the public access to its data bases. In light of the benefits that direct access to FCC's data bases could provide to the public, serious consideration needs to be given to overcoming the identified problems.

Adopting a strict return policy for applications may further increase processing speed

Improvements in the public's access to FCC's data bases is expected to enable applicants to prepare better quality applications. Consequently, for some services FCC may be able to implement a policy of returning defective applications to applicants instead of the various practices which FCC now uses for handling such applications. This policy could improve licensing speed since defective applications disrupt the license processing routine, which leads to processing delays. This policy could also provide applicants with greater incentives for ensuring that applications are filed with complete and accurate engineering analyses.

An application can be defective either because it is incomplete or incorrect. When FCC staff determine that an application is defective, a decision is made to either return the application or have the applicant correct the deficiency. If the second option is chosen, FCC either issues a deficiency letter or telephones the applicant to request whatever additional information is needed. When a deficiency letter is issued, an application is usually delayed longer than the 30 days given for a response. An FCC study showed that the average age of an AM radio application when a deficiency letter was sent was 19.9 months. In contrast, a clean application's average age was only 4.9 months.

There is no uniform policy within FCC for dealing with defective applications. Instead, different policies are applied to different services even within the same bureau. One reason for this inconsistency is FCC's perception of the clientele for each service: better quality applications are expected from services where consulting engineers and attorneys prepare most of the applications submitted. Another reason is that FCC officials differ on the best method for dealing with the problem. While some consider working with the public to correct

defective applications to be an FCC public service responsibility, others argue that the public is capable of submitting quality applications and that by returning all defective applications FCC will be able to decrease the resources required to process them.

While adopting a strict return policy for handling defective applications may not be desirable for all services, one service in which such a policy appears likely to reduce processing time is AM radio. A February 1982 FCC study of AM radio applications processing, conducted by the Broadcast Bureau's planning and evaluation staff, concluded that deficiency letters provide a disincentive for applicants to file complete and accurate engineering analyses. Instead of being used just to correct minor deficiencies or obtain additional information, some applicants have relied on deficiency letters to help them conduct their engineering analyses. The study argues that it is not necessary for FCC to provide this assistance through its deficiency letters since applicants can virtually guarantee an acceptable application if they use a qualified consulting engineer in preparing their applications. Therefore, the study recommends that FCC impose a cost on applicants who submit defective applications by returning the applications and not allowing them to be refiled for a specified time period. This period of time was to be sufficiently long to encourage applicants to file acceptable applications. This action, in addition to reducing the amount of time spent correcting defective applications, would result in fewer defective applications being filed. Having fewer defective applications would enable the AM radio licensing staff to begin processing applications during the public notice period, a change that is expected to reduce the processing time for clean AM radio applications by 3 to 4 weeks.

One argument for a flexible rather than a strict return policy is that current AM radio policies permit application processors to return very bad applications but to work with other applicants in finding minor modifications that will let them "wriggle out" of engineering problems. If, however, AM consulting engineers are given complete access to the AM data base, they could do all of the engineering work that had to be done without having to consult with FCC staff. Thus, providing such access would appear to overcome this concern.

Another step FCC could take to reduce the number of defective applications being filed is to better define the criteria for returning defective applications. A former FCC bureau chief claimed that FCC was lax in its treatment of defective applications because of a series of court rulings upholding applicants' procedural rights that made FCC attorneys reluctant to



act too harshly against them. He believed that if the Commission better defined its criteria for returning defective applications and used a tougher return policy, FCC would receive better applications that would take less time to process. A Mass Media Bureau division chief estimated that licensing speed could be reduced by 2 weeks for unopposed applications if the Commission issued and enforced a specific policy on when to return a defective application.

#### IMPROVING PROCEDURES FOR PROCESSING APPLICATIONS REQUIRING INTERNATIONAL COORDINATION OR ANTENNA CLEARANCE

As part of its license processing responsibilities, FCC must ensure that radio station applications are in compliance with Federal Aviation Administration (FAA) antenna requirements and international agreements. These requirements add to FCC's processing workload. While antenna clearance activities do not generally produce substantial processing delays, some changes can be made to make FCC antenna review operations more efficient. While much of the delay that results from international coordination of applications is beyond FCC's direct control, some improvement is possible in this area as well. For the most part, these improvements are based on the use of automation--much of which is either planned or being considered by FCC bureaus.

#### Antenna clearance

FCC requires applicants to comply with FAA antenna height regulations. FAA's regulations require that it be notified about all antennas above 200 feet in height and certain shorter antennas closer to airports before construction. FCC therefore checks that FAA has been notified about every proposed antenna subject to FAA regulation. FCC's Antenna Survey Branch (which is part of its Field Operations Bureau) is responsible for coordinating this activity with FAA. The branch delegates this clearance activity to the application processing groups in the various bureaus by providing data on previously cleared antennas. This data is provided by either microfiche or online access to the branch's antenna data base. If the bureaus cannot clear the antenna, they forward the application to the Antenna Survey Branch for clearance. Antenna clearance is usually concurrent with other license processing activities and generally does not produce licensing delays. However, improved use of ADP can reduce the amount of work needed to clear antennas.

#### International coordination

Requirements for coordinating applications with Canada have led to processing delays. For example, during 1982 coordination

of frequency assignments with Canada took up to 4 to 5 months for both the Common Carrier and Private Radio Bureaus' land mobile services. According to FCC officials, FCC has also needlessly sent applications to Canada and has mistakenly cleared some Canadian applications that interfere with U.S. radio stations because FCC data bases are incomplete. FCC recently released new land mobile spectrum on the Canadian border which is expected to increase the Canadian coordination workload for the Private Radio Bureau.

Agreements between the United States and Canada require most radio stations transmitting along the border to be coordinated by both countries. A major exception to these agreements is that stations can be granted a shadow clearance, a procedure which permits FCC to unilaterally grant applications for stations operating within 15 miles of a previously cleared station with similar operating characteristics. Most other applications near the Canadian border are sent to Canada for coordination.

According to FCC staff, while the United States processes Canadian requests within 6 weeks in the private radio services, in much of 1982 Canada took up to 5 months to process FCC requests. The Chief of the Land Mobile Branch in the Private Radio Bureau attributed this problem, in part, to the fact that the United States sends many more requests to Canada than Canada sends to the United States. According to the president of a land mobile frequency coordination organization, this delay resulted in some land mobile users operating land mobile stations near the Canadian border without a license, placing land mobile users who wanted to comply with FCC rules at a competitive disadvantage. Private Radio Bureau officials told us, however, that as of November 1982 Canada had decreased its processing time to 30 days.

The incomplete data bases in the Private Radio Bureau's land mobile and the Common Carrier Bureau's microwave services have contributed to processing delay for some applicants and interference problems for some licensees. For example, according to the Deputy Chief of the Private Radio Bureau, the bureau has sent some applications to Canada for coordination even though these channels previously had been coordinated with Canada. These mistakes occurred because the land mobile data base contains data on only 85 to 90 percent of the licensed land mobile users. Applications are needlessly delayed whenever this occurs. The lack of a complete data base has also affected the Private Radio Bureau's ability to clear Canadian stations. The Private Radio Bureau Land Mobile Branch Chief said that the bureau has cleared Canadian stations that were later found to interfere with existing FCC-licensed stations--a situation which

he said occurs about six times every year. When this happens, an accommodation between the parties has to be worked out, sometimes with one party having to change to a different radio frequency. He said that changing the radio frequency for a large land mobile system can cost as much as \$10,000.

The Common Carrier Bureau's Domestic Facilities Division has experienced similar problems in determining whether Canadian stations will interfere with an existing U.S. station since the division does not have a good method of identifying stations and facilities that FCC has authorized. Because the division's data base often does not include all recent applications, it assumes that the Canadian applicant has coordinated informally with the U.S. microwave users. The engineering assistant to the bureau chief said that informal coordination almost always occurs, but if FCC makes a wrong assumption a licensee could have to relocate a facility, such as a \$1 million earth station.

Improved use of ADP could  
improve antenna and  
international coordination

While there are limits to what FCC can do to reduce delay in antenna and international coordination, some procedural improvements can be made through better use of automatic data processing. These include providing all bureaus with online access to the antenna data base and automating the screening process for antenna and international coordination.

Although the bureaus make use of the Antenna Survey Branch's data base, not all users are provided with online computer access. Some receive the data in microfiche. Since this data is updated only every 3 months, the licensing branches will not have information on antennas that were recently cleared. Consequently, some applications are forwarded needlessly to the Antenna Survey Branch for coordination. The branch chief estimated that online access to the branch's data base throughout FCC would reduce referrals by 10 to 15 percent.

Screening applications to determine if antenna or international coordination is needed is another function that could be handled automatically by a computer program. An automated screening process would be more accurate and timely and could result in savings in licensing resources. Such a system is being considered for the Private Radio Bureau's land mobile services. The engineering assistant to the Domestic Facilities Division Chief also stated that he would like to have a computer program that could be used for coordination checks. Furthermore, FCC officials believed that using an electronic mail system to transmit data between Canada and the United States

could hasten application coordination, but that such action may also raise legal problems.

#### INCREASED COMPETITION MAY ALLOW FURTHER STREAMLINING OF LICENSING PROCEDURES

FCC has a variety of regulatory powers over radio station operations that are to be exercised as required by the public interest, convenience, and necessity. As competition has developed in and among various communications services, FCC has been able to place increased reliance on market forces rather than administrative regulation to ensure that the public interest is served. This increase in competition has allowed FCC to eliminate certain requirements for licensing radio stations. As competition continues to develop, the Congress and FCC may be able to revise or eliminate other regulatory requirements and eventually develop a more marketplace-oriented system for assigning radio frequencies.

#### Increased competition may reduce the need for regulatory requirements

Under the Communications Act of 1934, as amended, FCC is empowered to license radio stations as required by "the public convenience, interest, or necessity," to provide for a "fair, efficient, and equitable distribution of radio service" to all communities. FCC's licensing powers encompass not only technical interference considerations but also more substantive issues such as broadcast programming. In broadcast services, in particular, an entire regulatory scheme has developed based around the "public interest" standard. Under this scheme licensees are, in essence, treated as trustees--agreeing to comply with a variety of regulations aimed at promoting the public interest in return for the conferral and retention of a license.

As competition has developed in telecommunications markets, increasing criticism has been directed at this public trusteeship regulatory scheme. During the past two decades, the number of AM and FM commercial and educational broadcast radio stations on the air has increased by about 90 percent and the number of commercial and educational television stations by almost 100 percent to 9,871 and 1,301 stations, respectively, as of January 31, 1983. In addition, new or expanding services such as cable television, pay television services, and other information services, all may provide competition to broadcast services. Given the increased competition in broadcast services, as well as in other communications services, it has been argued that, for a variety of reasons, a greater reliance on market forces rather than administrative regulation in station licensing may produce results which more closely serve the public interest.

For example, in a recent law review article FCC's chairman argued in favor of applying a marketplace approach to broadcast regulation.<sup>3</sup> In the article the Chairman argued that FCC's traditional regulatory approach can, among other things, impede the licensing of new stations. He noted that existing broadcast licensees can under the so-called Carroll doctrine forestall competition from new stations by presenting evidence that a new station will cause economic harm to an existing licensee. Under the Carroll doctrine, the Commission must consider such evidence and, if substantial, deny the new station's license. While FCC has never used the doctrine to deny a new license, considering the issue can delay the licensing process.

A similar viewpoint was presented in the AM radio applications processing study. The study presented arguments in favor of reducing or eliminating existing "due process" requirements to expedite the authorization of service, noting that "due process procedures \* \* \* have come to be used in many situations more to impede the provision of service than to guarantee any improvement in the responsiveness of broadcasters to the public they serve." Some of the study's findings are discussed in the following sections.

A change from a licensing approach based on traditional considerations of public trusteeship and FCC determination of the public interest to one that relies largely on market forces raises a variety of public policy concerns that were not addressed in this review. However, in light of increasing competition in telecommunications services and in view of the changes' potential for improving licensing speed, FCC and the Congress should consider the following regulatory policy changes:

- Restricting petitions to deny.
- Relying on competition to distribute broadcast licenses.
- Revising procedures for selecting among competing applications.

#### Restricting petitions to deny

Petitions to deny are used by interested parties to formally object to an applicant's filing. The right to file a

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<sup>3</sup>Mark S. Fowler and Daniel L. Brenner, "A Marketplace Approach to Broadcast Regulation," Texas Law Review, Vol. 60:207, 1982.

petition to deny against an application placed on public notice is guaranteed by section 309(d)(1) of the Communications Act. The petition to deny sets off a pleading cycle and a decision-making process that adds to licensing delay. One FCC study found that the pleading cycle itself can add up to 6 months to the processing of AM radio applications. Delay caused by petitions to deny can be limited by narrowing the permissible grounds for filing these petitions.

In an environment where competition will ensure that the public interest is being met, many of the questions raised by petitions to deny may no longer be relevant. For example, as noted earlier, petitions to deny are often filed by existing users of the spectrum alleging economic harm. In testimony before the Subcommittee on Communications, Senate Committee on Commerce, Science, and Transportation, the former Chief of FCC's Office of Plans and Policy, stated that parties "\* \* \* often appear to file petitions to deny to prevent new entry, new competition, and adverse impacts on their own profits." Because petitions to deny were being used as anticompetitive weapons against potential licensees, the former chief recommended that the Communications Act be revised to prohibit economic harm from being used as a reason for filing petitions to deny.

The FCC AM radio applications processing study also found that petitions to deny are often used by competitors to delay FCC in processing applications by potential licensees. The study stated that petitions to deny very often will challenge applications on every conceivable legal or engineering issue, whether well founded or not. This, it noted, sets in motion a very time-consuming process because FCC must determine the validity of each allegation. Applicants must respond to every point in these petitions to protect their rights should FCC determine that there is merit to some of the petitioners' objections. Thus, even if the petitioners' objections are groundless, considerable time and resources can be spent. The study's analysis of 328 AM radio applications showed that the average age of applications for which FCC had received petitions to deny was 21.3 months, compared to 4.9 months for clean applications.

The question arises whether the benefits brought about by petitions to deny compensate for the time and resources needed to resolve the issues they raise. Permitting petitions to deny to be filed for character or financial qualifications, coverage, or economic issues may no longer be necessary if competition can be relied upon to induce licensees to act in the public interest. Under this scenario, the Congress may wish to narrow the grounds for filing petitions to deny to only those rules that regulate interference with existing or proposed stations.

Relying on competition to distribute  
broadcast licenses

Broadcast license processing speed can be improved if market forces can be relied on to equitably distribute licenses among communities. Currently, section 307(b) of the Communications Act requires that FCC's license application processing lead to a fair, efficient, and equitable distribution of radio services. However, FCC has concluded that competition in the broadcast services has increased to the extent that section 307(b) no longer serves the public interest because it delays licensing and is no longer necessary to ensure equitable service distribution.

Section 307(b) of the Communications Act requires FCC, when considering license applications, to distribute licenses, frequencies, hours of operation, and power among States and communities to provide for a fair, efficient, and equitable distribution of radio service. This provision ensures that broadcast stations are distributed equitably throughout the Nation and are not concentrated around large population centers. FCC fulfills this requirement by assigning FM radio and television channels from a table of assignments it developed for each service. These tables contain predetermined channel assignments for communities throughout the United States. In contrast, AM and non-commercial FM radio assignments are allocated by demand, without using predetermined assignments. FCC's policy is to give preference to applicants applying for licenses in unserved or underserved communities.

While not all FCC officials agreed with the Commission's determination that section 307(b) is no longer needed to distribute broadcast services fairly and equitably, they generally agreed that this section of the law increases FCC's administrative workload and delays broadcast licensing. In fact, a former FCC bureau chief said that eliminating section 307(b) would expedite licensing more than anything else.

Two recent FCC analyses illustrate how section 307(b) delays licensing. In a June 1982 notice of proposed rule-making,<sup>4</sup> FCC stated:

\*\*\* because a section 307(b) preference can be dispositive when selecting among basically qualified candidates in a comparative hearing, allegations are frequently made that FM radio and TV competitors do not intend to serve their

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<sup>4</sup>See In the Matter of the Suburban Community Policy, the Berwick Doctrine and the DeFacto Reallocation Policy, docket no. 82-320, June 10, 1982.

designated communities, but rather a larger nearby one. These allegations, often not well founded and propounded by licensees in the larger market, are merely tactical actions intended to delay or to prevent new competition. Resolution of them requires the parties to expend large sums for legal and engineering counsel and the Commission to allocate increasingly scarce resources." [Footnotes eliminated.]

A February 1982 study on AM radio license processing also discussed how 307(b) requirements can delay AM licensing and concluded that they work against the public interest.

In September 1981 FCC recommended to the Congress that it repeal section 307(b) because a fair and equitable distribution of service currently exists and that further implementation would delay new service and not be in the public interest. However, the 97th Congress did not repeal section 307(b). FCC has also proposed to amend its rules to eliminate three policies it uses to implement section 307(b).<sup>5</sup> FCC issued these policies to ensure that applicants serve the community in which they are applying for a license rather than a larger nearby community. The legal assistant to the Mass Media Bureau Chief said that eliminating these policies should expedite licensing by reducing the number of issues FCC considers. However, she said section 307(b) will still delay licensing because FCC will still have to consider whether applications meet its service distribution requirements.

If section 307(b) is eliminated, FCC may be able to simplify its two-step process for adding stations to the FM radio table of assignments, which may reduce processing times in this service. An applicant seeking a license for an assignment not listed on a table must first petition the Commission to amend the table. If the petitioner is successful, the Commission will amend its rules and establish a new channel. This permits the petitioner and other parties to apply for a license on that channel. The rest of the process is similar to other broadcast licensing (as described in ch. 2). FCC officials estimate that it takes approximately 6 months to complete a rulemaking to amend the FM table of assignments and at least an additional 6 months to process the new channel's license applications.

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<sup>5</sup>In Feb. 1983 FCC eliminated the Berwick Doctrine, the Suburban Community Policy, and the DeFacto Reallocation Policy.



FCC may be able to do away with the FM radio table of assignments if section 307(b) is repealed. If the table is no longer included in FCC's rules, a rulemaking would no longer be needed as part of the licensing process. Instead, a one-step demand driven system, similar to the AM radio licensing system, could be adopted for licensing FM radio stations. The Chief of the Audio Services Division said that a demand driven approach might improve licensing speeds but only if a simplified, distance separation method for avoiding interference was used. However, he said this interference system would reduce the efficiency of FCC's spectrum assignments. In addition, a former bureau chief, who favored the repeal of section 307(b), cautioned that a demand driven system for making FM radio assignments would improve licensing speed for a single application but would also encourage more applications to be filed and therefore, he believed, would create larger back logs. Therefore, he believed that this system should be adopted only along with a first come, first served approach for selecting licensees. (See p. 63.)

Revising procedures  
for selecting among  
competing applications

Competing applications are one of the major impediments to expeditious authorization of service, particularly in the broadcast services. When two or more applicants compete for use of a single frequency, and are therefore mutually exclusive, FCC must decide among the competing applicants. FCC has traditionally resolved these conflicts through a comparative hearing, where it compares the merits of the competing applicants. Dealing with mutually exclusive applications, however, considerably delays the issuance of licenses. For example, the FCC AM radio applications processing study found that 25 percent of the AM radio applications analyzed were mutually exclusive. The average age of these applications was 12.3 months, while the average age of clean applications was only 4.9 months. According to the Audio Services Division Chief in the Mass Media Bureau, processing time for FM radio applications has also increased recently because increased numbers of competing applications have been received.

To deal with this problem, FCC has improved its comparative hearing procedures and established streamlined procedures for dealing with competing applications in new services such as cellular radio, low-power television, and private radio 800 megahertz land mobile. In addition, the Congress recently granted FCC permission to use a random selection method, or a lottery, to choose among mutually exclusive applicants. The lottery is designed to " \* \* \* alleviate many of the delays and

burdensome costs faced by both applicants and the Commission in an initial comparative licensing proceeding with mutually exclusive applicants."<sup>6</sup> Before using the lottery in a given proceeding, FCC must conduct a preliminary review of each application to determine if it meets basic FCC filing requirements. The "winning application" is then selected at random. Following the selection, FCC evaluates the application to ensure that the applicant is fully qualified to become a licensee and, if not, another application is selected. In evaluating when to use the lottery, FCC is to consider whether there is a large number of licenses available; whether there is a large number of mutually exclusive applications; whether using a lottery would significantly speed up the process of getting the service to the public; and whether selection of the licensee will significantly improve the level of diversity of information available in the community. FCC has proposed to use the lottery for low-power television, most of the Common Carrier Bureau's mobile services, and some Private Radio Bureau services.

In our 1979 report entitled "Selected FCC Regulatory Policies: Their Purpose and Consequences for Commercial Radio and TV" (CED-79-62; June 4, 1979), we recommended that the Congress amend the Communications Act of 1934 to authorize a lottery system for granting new broadcast licenses and licenses that have been revoked. In that report we stated that a lottery system of licensee selection offers greater speed and economy and less subjectivity than the existing comparative process for granting broadcast licenses. We continue to hold this view.

The conference report accompanying Public Law 97-259 expressed the committee's reservations about the use of a lottery for full power broadcast stations. The committee's main concern was that considerations of media ownership and information diversification, which are central goals of the traditional comparative licensing process, should not be sacrificed for the sake of expediency. While we share the committee's concerns, we believe that in many instances FCC may be able to address media diversification considerations in the context of a lottery through use of its existing station ownership limitation rules and the system of preferences created in Public Law 97-259 for use in the lottery which is designed to promote media diversity.<sup>7</sup> Furthermore, Public Law 97-259 appears to give FCC

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<sup>6</sup>House Conference Report No. 97-765, Aug. 19, 1982.

<sup>7</sup>Public Law 97-259 establishes a preference system that would increase the likelihood of selecting applicants with no or less than three other mass communications media holdings.

flexibility to use lotteries or comparative hearings on a case-by-case basis, allowing it to use a comparative hearing if it believes media diversity or other concerns in a particular instance are so significant that they cannot be addressed adequately by a lottery.

To overcome delay caused by mutually exclusive applications, it may be worthwhile in certain instances to consider yet another method to expedite the licensing process: simply awarding licenses to the first qualified applicant who applies. A first come, first served system would eliminate the need to comparatively evaluate applicants. In addition to expediting licensing, the policy could help eliminate equity concerns that may now arise as part of the licensing process. For example, in applying for an FM broadcast license, a competing applicant can now wait for the first applicant to perform all of the engineering and legal work needed to prepare a petition to the Commission to amend the FM table of assignments and an application (a time-consuming and costly endeavor) and then file a competing application based on the first applicant's work. This practice can be unfair to the petitioner and discourage spectrum utilization since the costs of filing a petition are high and the chance of succeeding in obtaining a license when there are competitors is comparably lower. FCC Commissioner Sharp recently commented that the appropriation of one applicant's work by another is becoming increasingly common, particularly in the low-power television service and, in his view, constituted an abuse of FCC facilities.

FCC officials expressed differing views on the first come, first served approach. While an official in FCC's General Counsel's office supported the approach, the Chief of FCC's Mass Media Bureau expressed reservations about it, noting that it contradicts FCC's historic policy of encouraging many applications for each station in order to select the one that best serves the public interest. Instead, he advocated using alternatives to the comparative hearing system, such as a lottery, to speed application processing. In addition, FCC officials believed adoption of a first come, first served approach may require the repeal of section 307(b) of the Communications Act.

#### REORGANIZING LICENSING ACTIVITIES

FCC could increase licensing speed and efficiency by consolidating licensing operations which are now handled in different FCC divisions or bureaus. FCC has recognized this in its recent creation of the Mass Media Bureau, which combined the Broadcast and Cable Television Bureaus' activities, and its consolidation of private radio licensing activities. FCC has also begun to explore the possibility of increasing processing

efficiency by combining all microwave applications processing and all land mobile applications processing. While it appears that resource savings alone may not outweigh the costs of such consolidations, changes in FCC policies for regulating these services may make these consolidations more desirable.

### Microwave consolidation

FCC now licenses a number of separate microwave services in the Common Carrier, Mass Media, and Private Radio Bureaus. Each of these services support different industries, varying from instructional television and local television distribution to multipoint distribution and point-to-point microwave. Each bureau has different microwave policies, licensing standards, and application processing staffs. For example, while the Mass Media Bureau and Common Carrier Bureau microwave processing staffs are located in FCC's Washington headquarters, the Private Radio Bureau's microwave processing staff is located at FCC's Gettysburg facility.

While there may be some resource savings from consolidating microwave activities, they may not outweigh the costs of consolidation, such as staff relocation and retraining costs. However, the benefits of consolidation could be substantially increased should FCC revise its regulatory procedures for microwave services. For example, the Chief of FCC's Private Radio Bureau stated that in addition to the economies of scale that would result from microwave consolidation, it could facilitate FCC's ability to efficiently allocate the spectrum set aside for microwave licenses. He said that consolidation would help overcome administrative problems if FCC chose to base assignments more on the technical characteristics of the proposed microwave system rather than on its service classification.

The Chief of the Common Carrier Bureau's Domestic Facilities Division expressed some reservations about consolidating his division's microwave processing functions with those in other bureaus. He believed that division processing was currently being handled efficiently and that close interaction between processing staff and other bureau staff is desirable. In addition, he as well as other bureau officials believed that most bureau staff would not relocate if consolidation took place in Gettysburg. Recognizing the possible costs of consolidating common carrier and private microwave services, the Private Radio Bureau Chief said an intermediate step that could be taken is to consolidate only the Private Radio and Mass Media Bureaus' microwave operations.

Consolidation of microwave services may also become more desirable as a result of changes in frequency assignments

resulting from FCC's recent authorization of direct broadcast satellite service. After an interim period of approximately 5 years, terrestrial microwave licensees will be allowed to operate in frequency bands used by direct broadcast satellite systems only if they do not cause interference. The Commission has expanded an ongoing inquiry<sup>8</sup> to consider proposals for reaccommodating microwave users displaced by direct broadcast satellite service. In doing this, the Commission noted that the proposals would lead to a considerable amount of sharing among various types of fixed service users and that it would be beneficial in the long run to develop a use policy based on sharing in order to make efficient use of the spectrum. The Chief of the Private Radio Bureau stated that if sharing occurred, there would be many more benefits from consolidation and that, in fact, centralized processing could become a necessity.

#### Land mobile consolidation

Currently, land mobile services are licensed in the Private Radio and Common Carrier Bureaus under different regulatory structures. However, the services are similar, both providing one- or two-way service between a base station and mobile subscriber units. For example, FCC recently introduced both common carrier and private radio paging services in adjacent 900 megahertz frequency bands.

As is the case with microwave services, it appears that resource savings resulting from the consolidation of land mobile processing operations may not offset the costs of consolidation. However, as with microwave, consolidation might produce benefits that go beyond resource savings and increases in processing efficiency. For example, the Chief of FCC's Private Radio Bureau has supported consolidation on the grounds that it could improve FCC land mobile regulation. He stated that land mobile radio has increased in importance to the extent that it could be desirable for FCC to establish a separate land mobile bureau. This, he believed, would produce a stronger land mobile voice in Commission deliberations and improve the quality of FCC decisions in that area. Moreover, he believed that consolidation of land mobile functions could benefit FCC in its effort to reconsider its regulatory policies for land mobile services, as is currently planned.

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<sup>8</sup>Notice of Proposed Rulemaking in the Matter of: Establishment of a Spectrum Utilization Policy for the Fixed and Mobile Services' Use of Certain Bands Between 947 Megahertz and 40 Gigahertz (FCC-83-2, Jan. 13, 1983).

Common carrier and private radio systems have become increasingly competitive, thus raising questions about whether regulatory policies for the services should be modified. Although Public Law 97-259 establishes a revised demarcation between private and common carrier land mobile services, the latter will still be regulated as a common carrier. A common carrier voiced concern with this distinction because common carriers often compete with the private radio services for the same customers and have encountered difficulties because of differences in regulatory requirements. For example, common carriers may not be able to change prices as easily as private radio licensees because they may be required to file a tariff and receive approval from FCC or a State commission before changing their rates.

Common Carrier as well as Private Radio Bureau officials have supported the need to reevaluate land mobile regulatory policies; however, unlike the Private Radio Bureau Chief, the Common Carrier Bureau Chief believes consolidation should be evaluated after these policy decisions are made.

#### CONCLUSIONS

FCC has modified many of its licensing rules and procedures to improve processing efficiency and increase the volume of license applications it can handle. Although FCC has made considerable improvements, other policy and procedural changes could be made that would further improve licensing speed and efficiency. FCC is currently considering some of these changes.

Public Law 97-259 authorizes the Commission to eliminate construction permits for common carrier services unless it determines that the public interest requires them. FCC plans to initiate a proceeding in the near future to explore this issue. As part of this proceeding, FCC should evaluate the benefits of retaining construction permits for common carrier fixed and mobile services but substituting a simpler notification form for the license application. Under such a system, a copy of the notification form, along with the construction permit, would serve as a license. This approach may create fewer problems for FCC and licensees than if construction permits are eliminated while at the same time simplifying existing procedures. FCC has already proposed using such an approach for mobile services.

In evaluating other revisions in its rules governing fixed common carrier services, FCC should also explore possibilities for consolidating information on microwave systems, which must now be filed on individual station applications. FCC should consider revising its rules for processing amendments to station applications and existing station licenses to permit certain

minor amendments to be made by simply notifying FCC of the change and to treat more amendments as minor, thus eliminating public notice requirements.

By shifting some of its technical information tasks to applicants, FCC will be able to reduce its licensing workload. For example, greater use can be made of independent engineers to certify the accuracy of technical data submitted on applications, relieving FCC staff of this task. Such an approach could also allocate the costs of certification to the applicant who benefits from this review. In order to rely on applicants more extensively, it would be helpful for FCC to provide applicants with better access to its data bases. Current access to FCC's data bases is cumbersome and does not provide information to applicants in a timely manner. Furthermore, it appears likely that FCC can reduce its workload resulting from handling defective applications in some services by providing applicants with incentives for filing complete and accurate applications. This can be achieved by developing criteria for determining when an application is defective and by penalizing applicants for filing defective applications.

FCC licensing procedures require it to coordinate certain applications with FAA for antenna height and with international agencies and other countries for interference. While antenna coordination does not generally delay licensing and while FCC is not primarily responsible for delays caused by international coordination, FCC can take steps to improve the efficiency of its operations and reduce the risk of making mistakes in its coordination activities by increasing its use of automated processing techniques. Improved automation can reduce the amount of applications that are needlessly forwarded to the Antenna Survey Branch for review and reduce the risk of mistakes in international coordination. Improved automation would include providing all antenna data base users with online access and automating antenna and international screening checks that are now performed manually.

As competition in telecommunications markets increases to the extent that it can be relied on instead of regulation to serve the public, the Congress and the Commission may be able to eliminate certain substantive and procedural requirements that are a primary source of licensing delay. For example, as competition develops the Congress could narrow the grounds on which interested parties may file petitions to deny a license application so that FCC would no longer have to consider, among other things, petitions from existing licensees alleging economic harm if a new station is authorized. Under current practice these petitions may delay the issuance of station licenses even when FCC determines the petition to be groundless. If the Congress

decides that regulation is no longer necessary to provide an equitable distribution of radio service among States and communities, it can also reduce the time it takes to license broadcast stations.

By allowing FCC to use lotteries in place of comparative hearings to choose among mutually exclusive broadcast, common carrier, and private radio applications, the Congress has already taken an important step to reduce licensing delay. As we noted in our 1979 report on broadcast policies, a lottery system is quicker, more efficient, and less subjective than comparative hearings. For this reason, we believe FCC should make wide use of the lottery, including using it to grant broadcast licenses in situations where media ownership diversification would be promoted adequately. The Congress may also wish to consider the use of a first come, first served approach to broadcast licensing in services where such an approach would be faster and more equitable than existing procedures and would create incentives for applicants to submit proposals to establish additional stations.

As FCC revises its regulatory policies and procedures for land mobile and microwave services, it needs to consider carefully the costs and benefits of consolidating licensing and related activities currently carried out in several bureaus. While consolidating microwave services and land mobile services may not save many resources, consolidation may promote the development of improved regulatory policies and procedures for these services, and, thus, help outweigh its costs.

#### RECOMMENDATIONS TO THE CHAIRMAN, FCC

We recommend that the Chairman, to improve the Commission's license processing procedures:

- Evaluate, as part of the Commission's planned proceeding to determine whether construction permits for common carrier stations are still necessary, the benefits of retaining construction permits and substituting a simpler notification form for the license application. The construction permit and a copy of the notification form would serve as a license under such a system.
- Evaluate, in the Commission's proposed proceeding to revise the rules for fixed common carrier services, methods for consolidating information on microwave systems that must be now filed separately on each of the applications for the individual stations included in the systems.



--Evaluate the merits of changing FCC's rules for processing amendments to applications or existing licenses to allow certain minor amendments to be approved via notification and to reclassify additional amendments as minor.

We recommend that the Chairman, to shift some of the Commission's licensing tasks to applicants:

--Initiate a notice of inquiry to develop a system for providing the public with direct remote access to FCC's data bases. This inquiry should explore methods for upgrading FCC's computer facilities, securing privileged data bases and preventing fraud, and recovering the costs of providing this service.

--Evaluate the use of an independent engineering certification system to eliminate the need for FCC verification of technical data included in license applications and the potential for expanding the use of frequency coordinators in existing and forthcoming licensing services.

--Establish criteria for determining when an application is defective and experiment with the use of a strict return policy in selected licensed services to determine its effectiveness. If the experiment demonstrates that use of a strict return policy is effective, the policy should be applied to all services where applicants are capable of submitting high-quality applications.

We recommend that the Chairman, as part of FCC's ADP planning, evaluate the feasibility of providing licensing divisions that currently lack online access to FCC's antenna data bases with such access, thereby providing them with up-to-date antenna clearance data. The Commission should also study the feasibility of implementing automated screening programs to assist licensing staff in carrying out antenna and international coordination responsibilities.

We recommend that in addition to using lotteries to decide among mutually exclusive applications in private radio, common carrier, and low-power broadcast services, the Commission use lotteries for full-power broadcast services where such action is consistent with the promotion of media ownership diversity.

We recommend that the Chairman evaluate the costs and benefits of consolidating land mobile and microwave licensing functions as the Commission reevaluates its regulatory policies and procedures for these services.

## RECOMMENDATIONS TO THE CONGRESS

Should it determine that competition in telecommunications markets has developed to the extent that market forces eliminate the need for regulatory intervention, we recommend that the Congress:

- Amend section 309(d) of the Communications Act of 1934 as it pertains to applications for new station licenses to require that FCC not accept petitions to deny based on allegations of economic injury to existing licensees as well as other allegations unrelated to technical interference issues.
- Repeal the provisions of section 307(b) which require FCC to distribute licenses among States and communities so as to provide a fair, efficient, and equitable distribution of radio service but which may no longer be necessary in a competitive market.

We will be happy to assist the Congress in developing legislative language to implement these recommendations after the Congress has made the necessary policy decisions to determine if their adoption is warranted.

## MATTER FOR CONSIDERATION BY THE CONGRESS

To overcome the delay caused by mutually exclusive applications, the Congress may want to consider authorizing FCC to use a licensing procedure in which a license would be granted to the first qualified applicant who applies. Such a procedure would eliminate the need to comparatively evaluate applications and, therefore, improve licensing speed and also would help eliminate equity concerns that may now arise as part of the licensing process.

FCC LICENSING WORKLOAD DATA<sup>1</sup>BROADCAST SERVICES (NEW AND MAJOR CHANGES)<sup>2</sup>

<u>AM radio</u>				<u>FM radio</u>			
<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>	<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	202	272	408	1978	459	419	629
1979	202	262	348	1979	566	447	748
1980	186	234	300	1980	748	615	881
1981	383	248	435	1981	628	591	918
1982	368	327	418	1982	917	621	1165
1983	340	240	518	1983	970	720	1415
1984	320	328	510	1984	1000	760	1655

<u>Television</u>				<u>Translators</u>			
<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>	<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	147	47	253	1978	544	459	513
1979	165	69	349	1979	737	593	657
1980	228	218	359	1980	728	714	671
1981	186	243	302	1981	6055	653	6073
1982	342	354	240	1982	2643	1062	7575
1983	280	280	240	1983	17335	1510	23400
1984	300	300	240	1984	7660	19214	11846

<u>Auxiliary</u>			
<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	2361	1950	1637
1979	2418	2408	1631
1980	2559	2949	1257
1981	2877	2990	1144
1982	2732	2591	852
1983	2605	2650	807
1984	3210	3255	762

<sup>1</sup> Fiscal years 1983 and 1984 data are based on FCC projections.

<sup>2</sup> Pending figures are adjusted to reflect actual inventories by FCC.

PRIVATE RADIO SERVICESAviation and marine

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	137470	133890	7390
1979	144376	139157	12643
1980	158000	166490	4150
1981	178530	164500	18180
1982	167480	183060	2590
1983	169700	163430	8860
1984	172700	173620	7940

Land mobile

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	188900	176700	25200
1979	221289	216960	30114
1980	215990	225680	20440
1981	284010	247010	57440
1982	277440	315140	19740
1983	294000	296720	17020
1984	312500	302390	27130

Microwave

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	4100	3400	3600
1979	4086	4851	1065
1980	5090	4650	1510
1981	5760	3900	3370
1982	6600	7520	2450
1983	7500	8270	1680
1984	8500	8440	1740

Amateur, general mobile,  
and restricted permits

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	431600	432800	13700
1979	469586	462159	21450
1980	432500	435320	18630
1981	435760	439740	14650
1982	415840	418910	11570
1983	428000	410490	29080
1984	438000	431800	35280

Citizens band and  
radio control

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1978	2831000	3047300	128700
1979	1207806	1255457	81004
1980	819430	820710	79720
1981	808180	791590	96310
1982	610110	676050	30360
1983	600000	582400	47960
1984	600000	598400	49560

COMMON CARRIER SERVICES (note a)Point-to-point microwave

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1980	5934	7923	1855
1981	6880	7064	1633
1982	8390	7688	2335
1983	8500	7000	3835
1984	8500	7000	5335

Satellite facilities

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1980	1759	1481	975
1981	2092	2084	983
1982	2744	2207	1520
1983	3300	2900	1920
1984	3700	2900	2720

Mobile radio station licenses  
and construction permits

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1980	4238	3802	3869
1981	3008	3984	2893
1982	6267	3924	5236
1983	8200	6854	6582
1984	4800	6550	4832

Multipoint distribution service

<u>Year</u>	<u>Receipts</u>	<u>Disposals</u>	<u>Pending</u>
1980	530	391	690
1981	425	497	607
1982	472	596	483
1983	400	500	383
1984	400	500	283

a Data for all services unavailable for fiscal years 1978 and 1979.

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTONOFFICE OF  
MANAGING DIRECTOR

FEB 15 1983

J. Dexter Peach  
Director, Resources, Community, and  
Economic Development Division  
United States General Accounting Office  
441 G Street, N.W.  
Washington, D.C. 20548

Dear Mr. Peach:

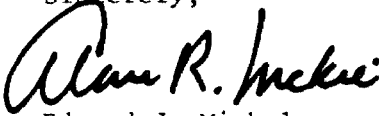
We appreciate the opportunity to review the General Accounting Office's draft report entitled "FCC Can Further Improve Its Licensing Activities."

Our staff has completed its preliminary review of the report, and we have met with the resident GAO auditors to discuss our initial comments, which for the most part were limited to questions of fact, correctness of data, and representations which we believed to be contrary to actual Commission policy or practice. Through this process we were able to resolve all factual and technical matters and clarify many other points to our mutual satisfaction. As a consequence of these discussions, which we found to be most helpful, the Commission will not have any specific, written comments to the draft report.

A formal evaluation of the merits of the report's conclusions and recommendations will require more in-depth consideration. Therefore, we will reserve comment on these matters and will address them in our response to your final report.

Again, we appreciate having the opportunity to review the draft report.

Sincerely,



for Edward J. Minkel  
Managing Director

cc: Rick Hale,  
GAO Project Manager

(062301)



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