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BY THE COMPTROLLER GENERAL 110861

Report To The Congress

OF THE UNITED STATES

Economic And Operational Benefits In Local Telephone Services Can Be Achieved Through Government-Wide Coordination

This report contains information on weaknesses in the Government's management of its increasingly expensive and growing telecommunications activities. This information should be of assistance to committees of the Congress and to Members in connection with their legislative and oversight responsibilities relating to telecommunications.

Essentially, GAO found that significant savings and improved operations can be achieved by consolidating and modernizing the Government's local telephone services. A few consolidations and modernizations have been made, but not on a coordinated Government-wide basis. The report includes recommendations to the Office of Management and Budget.

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COMPTROLLER GENERAL OF THE UNITED STATES
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To the President of the Senate and the
Speaker of the House of Representatives

This report describes the Government's existing local telephone services and the potential economic and operational benefits that can be achieved if consolidation and modernization of such services is properly planned and coordinated on a Government-wide basis.

We made this review because the technological advances and increased competition of recent years have increased the alternatives available to the Government for satisfying its local telephone service requirements.

We are sending this report today to the Secretaries of Agriculture; Commerce; Defense; Energy; Health, Education, and Welfare; the Interior; Labor; State; Transportation; and the Treasury. We are also sending copies to the Attorney General; the Administrators of the General Services Administration, National Aeronautics and Space Administration, National Telecommunications and Information Administration, and Veterans Administration; and the Director, Office of Management and Budget.

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

ECONOMIC AND OPERATIONAL BENEFITS IN LOCAL TELEPHONE SERVICES CAN BE ACHIEVED THROUGH GOVERNMENT-WIDE COORDINATION

D I G E S T

Significant savings and improved operations can be achieved by consolidating and modernizing the Government's local telephone services.

A few consolidations and modernizations have been made, but not on a coordinated Government-wide basis.

The Office of Management and Budget should establish policies and procedures to insure consolidation and modernization of local telephone services, where economically and operationally beneficial, on a coordinated Government-wide basis.

DETAILED FINDINGS AND CONCLUSIONS

Twelve Federal departments and agencies spend at least $219 million annually for local telephone services. (See p. 1.)

The Government has taken advantage of technological advances by consolidating and modernizing some of its local telephone services in metropolitan areas. However, further consolidation and modernization appears possible because local telephone services are still provided by various Federal organizations in the same geographic areas. (See pp. 3 and 4.)

Several studies have been made, or are now underway, of the feasibility of consolidating Government local telephone services in specific metropolitan areas. Completed studies have demonstrated potential economic and/or operational benefits; however, the studies did not include all Federal activities

in the geographic areas. Furthermore, some Federal organizations are independently planning modernizations or upgrades of existing local systems without considering the needs of other Federal organizations in the vicinity. Costs of planned modernizations can be avoided in some locations through consolidation of services on a Government-wide basis. (See p. 8.)

GAO developed configurations for consolidating local telephone services, Government-wide, in four geographic areas to illustrate potential benefits.

Three areas--San Antonio, Texas; St. Louis, Missouri; and Leavenworth, Kansas--clearly demonstrated economic and operational benefits to the Government. The fourth area--Orlando, Florida--demonstrated some operational benefits and some reductions in service at a slight increase in cost.

In total, the four consolidation plans showed that annual operating costs could be reduced by an estimated $1.4 million, after incurring one-time conversion costs of $1.5 million. Implementation of these plans would eliminate the need for planned modernizations estimated to cost $9.1 million. (See p. 13.)

GAO's review demonstrates the potential benefits of consolidating local telephone services. A more detailed study is required before any actual consolidation takes place. (See p. 13.)

Benefits from improved phone services nationwide

Consolidating and modernizing local telephone services on a Government-wide basis, throughout the Nation, will result in significant savings and increased operational benefits to the Government. (See p. 26.)

In the past, there were few alternatives for providing local telephone services. However, new technology and competition have increased significantly the opportunities for and potential benefits from consolidating and modernizing local telephone services on a Government-wide basis. Therefore, the Government now needs to establish policies, guidelines, and procedures for consolidating and modernizing local telephone services, where economically and operationally beneficial, on a coordinated Government-wide basis.

Although the General Services Administration has general responsibility for providing communications services for Federal agencies, in many cases it has delegated this responsibility to the agencies. Furthermore, lack of coordination and cooperation between the agencies and the General Services Administration has resulted in inaction, even where studies have documented economic or operational benefits of consolidating or modernizing local telephone services.

The history of inactions on interdepartmental consolidation and modernization of local telephone services makes it clear that maximum benefits from Government-wide coordination will not materialize unless the Office of Management and Budget steps in. (See pp. 26 and 27.)

RECOMMENDATIONS

The Director, Office of Management and Budget should:

--Solicit recommendations from the Department of Commerce's National Telecommunications and Information Administration on policies for coordinating, establishing, operating, procuring, and managing Government-wide consolidation and modernization of local telephone services.

--Develop a policy for a local telephone service program that (1) requires consolidation and modernization on a coordinated Government-wide basis where economically and operationally beneficial, (2) assigns organizational responsibilities, (3) directs the development of implementing guidelines, procedures, and/or standards, and (4) defines a system for reporting on progress. (See p. 27.)

AGENCY COMMENTS

GAO discussed this report with principal agencies involved, which generally agreed with the concept of consolidated local telephone services. Office of Management and Budget officials had no comments. (See pp. 27 to 30.)

GAO recognizes that not all requirements can be satisfied by consolidated systems. However, exclusions from consolidation should be the exception and should be fully documented and justified.

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ABBREVIATIONS

DOD	Department of Defense
FBI	Federal Bureau of Investigation
GAO	General Accounting Office
GSA	General Services Administration

GLOSSARY

Automatic Voice Network	A worldwide communications network for the transmission of communications for the Department of Defense (DOD) and certain non-DOD users.
Commercial business lines	Telephone instruments and individual circuits that the customer leases from the telephone company for local and access to long-distance public telephone services.
Customer service package	A telephone company offered service where the basic package includes standard service features without additional cost to the customer and, other optional service features that individually may be selected by the customer at an additional cost. The customer orders the service by the number of main stations and extensions and desired optional service features. The telephone company supplies the switching (normally a dedicated portion of a switch on the telephone company's premises). The operator's console is normally located on the customer's premises.
Extensions	An additional telephone instrument or other terminal device on a circuit connected to a main station and assigned the same telephone number as the main station.

Federal Telecommunications System (FTS) voice	A General Services Administration managed telephone system, which is interoperable with public telephone services, that was established to provide communication services for the Federal Government.
Local telephone services	All local telephone services acquired through commercial business lines and local telephone systems.
Local telephone system	Single or multiple switching locations, either on customer or on telephone company premises, served by a single operator location, normally on the customer's premises.
Main station	A telephone instrument or other terminal device on a circuit connected to a switch and with an assigned telephone number.
Operator's console	Desk-top equipment, which uses push button keys or flip switches for control and call connecting functions, staffed by a telephone operator.
Service feature	An operation, such as placing a call without operator assistance, offered by the telephone companies as standard and optional attractions to their customers.
Switch	Equipment used to make, break, or change connections of transmission paths.
Switchboard	Normally floormounted equipment, which uses plugs and jacks for making call connections, staffed by a telephone operator.

Switching location	Telephone company's or customer's premises where switches are installed and the customer may use all or a dedicated portion of the switch capacity. These may be either manual (physically by an operator) or automatic (programed electronic switches requiring operator assistance only for exceptions) type switches.

CHAPTER 1

INTRODUCTION

The Government uses telephone services--local and long distance--to conduct day-to-day business. Local telephone services are those used to communicate between users in a metropolitan or other limited geographic area and to interconnect with long distance telephone services. Long distance telephone services are those used when communicating with another party located in a more distant geographic area, such as another city. This report deals with local telephone service.

Local telephone services are provided to public and private organizations through two methods. Local telephone systems are generally selected to serve concentrations of users and commercial business lines are generally selected to serve dispersed small numbers of users. Each local system includes single or multiple switching locations (switch or a dedicated portion of a switch) served by a single operator location. The Government uses a conglomeration of local system arrangements and commercial business lines.

The number of local systems was not readily identifiable in 12 selected Federal departments and agencies. However, they identified 1,690 switching locations (342 Government-owned and 1,348 leased switches or dedicated portions of switches) and $219 million in annual operating costs, including basic costs (equipment, personnel, space, etc.) and other costs (long distance telephone toll charges, wide-area-telephone service, tie lines, etc.) generally billed to the local system. (See app. I.) These operating costs are understated because some organizations, such as the Army, Navy, and Air Force, could not readily furnish cost information. Also, the total number of and costs for commercial business lines are not readily available.

GOVERNMENT COMMUNICATIONS RESPONSIBILITIES

The Office of Telecommunications Policy, in the Executive Office of the President, was established during 1970. Its duties included helping to formulate policies and coordinate operations for the vast Government communications system.

The Office of Telecommunications Policy was abolished and its functions were dispersed to several organizations by an Executive order in March 1978. The Office of Management and Budget was assigned responsibility as the President's principal advisor on procurement and management of Federal communications systems and for developing and establishing policies in the same area. The National Telecommunications and Information Administration, Department of Commerce, was assigned responsibility for advising the Office of Management and Budget on the development of policies relating to procurement and management of Federal communications systems and coordinating communications activities within the executive branch. Also, other responsibilities were assigned to the National Telecommunications and Information Administration, the National Security Council, and the Office of Science and Technology Policy.

Section 201 of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 481) and section 7 of the act of June 14, 1946 (40 U.S.C. 295) gave the Administrator of General Services the basic responsibility for procuring and supplying communications services for Federal agencies. To carry out this mission, the General Services Administration (GSA) established guidelines that prescribe policies and methods governing the use of communications services by Federal organizations. These guidelines are set forth in the Federal Property Management Regulations, subchapter F, part 101-37 (formerly 101-35), and apply, with several exceptions, to all executive agencies. The specified exceptions are the following operational communications services and facilities.

--Federal Aviation Administration - facilities used for regulation and protection of air traffic

--National Aeronautics and Space Administration - missile and satellite tracking facilities

--Veterans Administration - facilities installed in a hospital complex for biomedical communications

--Bureau of Prisons - facilities installed in penal or correctional institutions to meet physical security requirements

--Tennessee Valley Authority - noncommon-use facilities peculiar to operation of its projects

GSA has delegated authority to the Department of Defense (DOD) for the procurement and operation of DOD's communications. GSA has also granted authority, on a case-by-case basis, to numerous other civil departments and agencies for the procurement and operation of their communications.

IMPACT OF TECHNOLOGY

Telecommunications technology has advanced local telephone service tremendously. These technological advances have changed equipment operation from manual connections (physically by operators) to automatic connections (programed electronic switches requiring operator assistance only for exceptions) between circuits for completing telephone calls. At the same time, some service features have been added to increase users' capabilities. Other service features have been added so management may place automatic outgoing calling restrictions on selected user circuits and obtain passively recorded information--originating telephone number, destination, duration, etc., but not the conversation--for review and billing purposes. Thus, operator productivity, user operational benefits, and management capabilities have been concurrently increased.

The Government took some advantage of the present technology as consolidated local systems are operated by GSA in many major metropolitan areas and DOD in two metropolitan areas. These consolidated local systems may differ in configuration (circuit and equipment arrangements), but each system uses multiple switching locations with centralized attendant service--staffed operator consoles installed at a single location to provide assistance requested through all switching locations. Neither individually nor combined do GSA and DOD consolidated local systems include all concentrations of Government users as other Government organizations also operate local systems in the same local geographic areas.

The Government has also extended the use of this technology beyond local geographic areas. GSA has expanded its centralized attendant service operations to serve switching locations in distant geographic areas when economical to the Government. For example, the centralized attendant service in New Orleans, Louisiana, was expanded to serve switching locations in Baton Rouge, Lafayette, and Lake Charles, Louisiana, saving the Government $66,000 annually.

As the Government has demonstrated the technical feasibility of using consolidated local systems, further consolidation appears possible because concentrations of switching locations operated by various Federal organizations are used in the same geographic areas. For example, information obtained in six such areas (Leavenworth, Kansas; Orlando, Florida; St. Louis, Missouri; San Antonio, Texas; New York, New York; San Francisco, California; and surrounding areas) identified 100 local systems, using 130 switching locations, operated by multiple Federal organizations and at least 501 commercial business lines used by the Government. The total operating costs for these local systems, including those of the military departments, and commercial business lines were $57 million annually. Details by geographic area are shown in appendix II.

SCOPE

There was no central source for readily obtaining cost and location information and operating characteristics on the Government's local telephone services, either nationwide or for local geographic areas. We obtained general information by departments and agencies from various sources. For selected geographic areas, we obtained detailed information at the local level.

We obtained resource and background information from officials in 11 civil departments and agencies headquarters in Washington, D.C., and discussed with them the philosophy of consolidating local telephone services. Similar information was obtained at various DOD locations. (See app. I.)

We performed work in six selected geographic areas to identify the magnitude of the Government's local telephone facilities and services. In four of these geographic areas scenarios for consolidating local systems and commercial business lines were structured and costed with the assistance of the local telephone companies.

CHAPTER 2

GOVERNMENT STUDIES AND PLANS

CONCERNING LOCAL TELEPHONE SERVICES

Feasibility studies for consolidating Government local telephone services have been or are being performed by various Federal organizations in selected metropolitan areas. Completed studies have demonstrated potential economic and/or operational benefits; however, the studies did not consider all Federal activities in the study area, which could result in additional economic or operational benefits. Furthermore, various Federal organizations are independently planning modernizations and upgrades of existing local systems without consideration of local telephone services used by other Government organizations in the vicinity. Costs of planned modernizations can be avoided in some locations through consolidation of services on a Government-wide basis that achieves the desired modernization.

DOD'S CONSOLIDATION STUDIES

An ad hoc steering group, which was established within the Office of the Secretary of Defense, coordinated military departments' preliminary surveys of DOD's local telephone services for 20 metropolitan areas. Based on the survey results, the military departments were tasked to perform detailed studies on consolidating DOD's local telephone services in four metropolitan areas--New York, New York; Norfolk, Virginia; San Diego, California; and Boston, Massachusetts. These studies have been completed and show an estimated annual operating cost reduction of $2.3 million for DOD. Currently, DOD has 4 additional studies being performed and 12 studies scheduled for the future.

In addition to the above DOD efforts, the Department of the Navy has performed feasibility studies for consolidation in two geographic areas--Philadelphia, Pennsylvania, and Oakland/Alameda, California. The first consolidation was not economical and the second consolidation was estimated to result in an annual operating cost reduction of $50,000.

Subsequently, in February 1979 DOD issued a directive that established a program known as the Defense Metropolitan Area Telephone System to consolidate local DOD telephone services and to achieve improved and economical telephone

service. This directive does not require consideration of civil agency systems for consolidation with DOD systems in the same area.

The following section describes the DOD and Navy detailed studies referred to above.

Defense telephone study
for New York, New York

DOD manages seven leased and two Government-owned switches in the geographic area selected for study. In this same geographic area, some DOD organizations use GSA's switches and other DOD activities use commercial business lines.

The telephone company proposed a consolidated local system, which excludes the commercial business lines, using nine interconnected switching locations--seven leased switches located on Government premises and two customer service packages using dedicated portions of switches located on telephone company premises--with centralized attendant services located on a military installation. This proposed DOD local system was centered around a primary switching location in lower Manhattan, which is the same primary switching location being used for GSA's existing consolidated local system. Further consolidation with GSA and other civil agencies was not considered.

The study showed a potential annual operating cost reduction of $300,000--the difference between $2.75 million for the existing services and $2.45 million for the proposed local system. Also, we were advised that the proposed consolidated system would significantly improve service.

A DOD official stated that further effort on the New York consolidation has been suspended indefinitely due to potential relocations of military organizations.

Defense telephone study
for Norfolk, Virginia

DOD managed eight leased and four Government-owned switches in the geographic area selected for study. The Government-owned switches are older electromechanical switches (electrically controlled assembly of mechanical parts to perform switching between circuits) that are certified as being cost effective and are also being retained for rotational training of military personnel. The estimated annual recurring cost for the 12 switches is $7.8 million.

At the time of the study, the telephone company did not have any operational electronic switches (programed to control and perform switching between circuits) available in the Norfolk area. The company was installing an electronic switch near one military installation. It anticipated having electronic switches installed by 1982 to serve military activities included in this study.

The study recommended an interim arrangement using centralized attendant services connected by leased circuits to the existing switches. The estimated reduction in annual operating expenses would be about $650,000 a year. Further consolidation to include civil agencies was not considered. The contract award for consolidating DOD's local telephone services in Norfolk is scheduled for 1980.

Defense telephone study
for San Diego, California

DOD manages eight leased switches and uses commercial business lines in the geographic area selected for study. The study proposed a consolidated local system using four switching locations--a primary switch connected by circuits to each of three other switches located around the perimeter of the city--with centralized attendant service. All outgoing priority Automatic Voice Network calls would be routed through the attendants. The potential annual operating cost reduction amounted to almost $1 million--the difference between $7.6 million for existing services and $6.6 million for the proposed local system. There would be a one-time charge of about $1.5 million for installation of the proposed system. Further consolidation to include civil agencies was not considered.

Under the proposed consolidation configuration, all calls, including intra-installation calls, would leave the installation since switching would be performed in the telephone company's central offices. This could lead to the possibility of losing communications within the installation if the cable to the serving central office was cut. An internal communications system (intercom) or, as an alternative, dual cabling from the installation to the central office could be installed at added cost.

The contract award for consolidating DOD's local telephone services in San Diego is scheduled for 1980.

Defense telephone study
for Boston, Massachusetts

DOD obtains local service through seven switching locations, including a GSA switching location, and commercial business lines in the geographic area selected for study.

The proposed consolidated system used seven switching locations--a primary switch located on telephone company premises connected by circuits to each of six satellite switches located on Government premises--with centralized attendant services. Outgoing Automatic Voice Network and wide-area-telephone-service calls would be routed through the primary switch. This switch would provide automatic call recording. Further consolidation to include GSA and other civil agencies was not considered.

The potential annual operating cost reduction amounted to $400,000--the difference between $2.3 million for existing services and $1.9 million for the proposed local system. However, the cost reduction is understated because existing costs do not include all cost elements, such as operator costs and floor space.

The contract award for consolidating DOD's local telephone services in Boston was scheduled for June 1979; however, we were advised that this most likely will not be accomplished until late 1979.

Navy's telephone consolidation study
for Philadelphia, Pennsylvania

The Department of the Navy (Naval Facilities Engineering Command) made a study of two leased local systems and one large Government owned local system. The study showed that the Government owned and leased systems could not be economically consolidated. However, the study did not include Army and Air Force systems, other Navy systems, nor civil agency systems in the area.

Navy's telephone consolidation study
for Oakland/Alameda, California

The Department of the Navy (Naval Facilities Engineering Command) planned a two phase study for consolidating local systems in the Oakland/Alameda, California, area. The first phase was to include one Army and two Navy local systems and the second phase was to include four additional Navy local systems.

In 1974 the telephone company was requested to submit a proposal for consolidating the systems selected for the first phase. Subsequently, the scope of the first phase was revised to include an additional Navy system and to eliminate the Army system because the Army did not show any interest in changing its existing system. Thus, the study included only 3 of the 31 military and civil agency local systems in the area.

The consolidation proposal estimated a $50,000 annual cost reduction for this revised first phase. Telephone company officials stated that the Army location should have been included because it was contiguous to one of the selected Navy locations. Potential annual cost reduction would have been $70,000 higher (or a total of $120,000) had the Army system been included. At the time of our review, the second phase had not been started.

DOD'S MODERNIZATION PLANS

DOD recognized the need to modernize local telephone facilities because of their age and deteriorating condition. The Office of the Assistant Secretary of Defense for Communications, Command, Control, and Intelligence requested the military departments to develop and submit modernization plans.

The Army submitted plans for 56 modernization projects totaling an estimated $76 million, and the Navy submitted plans for 63 modernization projects totaling an estimated $21 million for the 5-year period starting in fiscal year 1979. The Air Force submitted plans for 12 modernization projects totaling an estimated $29 million for the 6-year period starting in fiscal year 1979.

Plans submitted thus total $126 million for 131 modernization projects. However, the plans are developed on an installation basis rather than on a consolidated basis of all Government installations in the area. The following chapter demonstrates that some of these costs can be avoided through Government-wide consolidation in a particular area and still achieve the desired modernization.

GSA'S CONSOLIDATION AND MODERNIZATION STUDIES

A GSA official stated that GSA performs studies of local telephone services it provides, but such a study is normally limited to a single switch and commercial business lines in the area. Such studies would not include

services provided by DOD or other civil agencies. Based on the results of their studies, GSA consolidates, modernizes, revises, and/or retains the present arrangements. At the time of our review, about 15 studies were in process.

GSA is also studying centralized attendant services 1/ to achieve cost reductions for the Government. For example, GSA plans to extend its San Francisco centralized attendant service to two locations in the San Francisco Bay area and four other California geographic areas (Fresno, Redding, Sacramento, and Stockton). GSA's estimate of the cost reduction for the two locations was not available, but it estimated a $250,000 annual cost reduction for the other four geographic areas.

Thus, GSA's efforts are generally limited to services it provides and do not include consolidation and modernization studies on a Government-wide basis in the geographic area.

OTHER CIVIL DEPARTMENTS AND AGENCIES CONSOLIDATION AND MODERNIZATION PLANS

Other civil departments and agencies contacted during our review indicated that they did not have any formal plans to consolidate their local systems either intradepartment or interdepartment or agency. However, many of these departments and agencies are modernizing or planning to modernize their local systems. These actions are not governed by specific department or agency policy, but they must obtain GSA approval before implementation. GSA has approved numerous modernization projects in recent years.

Since, as described in the previous sections, DOD and GSA do not perform consolidation studies on a Government-wide basis, and other civil agencies do not perform consolidation studies as described above, consolidation studies are not addressed on a Government-wide basis. This is also true for modernization studies.

1/Under a centralized attendant services arrangement, the operators' duties vary depending upon the type of switch and, if an electronic switch, the program used. The various duties may include telephone number assistance to users and incoming callers, dialing assistance to users for placing outgoing calls, assistance to users requesting repair service, and notification of users on a busy main station in an emergency situation.

Attempts to consolidate local telephone service on an interdepartmental basis have not been successful, as described in the following section.

INTERDEPARTMENTAL CONSOLIDATION STUDIES

We found one completed study and one proposed study for interdepartmental consolidation of local telephone services. In one instance, actions have not been taken to achieve consolidation economies identified by a study performed more than 10 years ago, and in the other instance, one party rejected the proposal for a consolidation study. The geographic areas involved were San Francisco/Oakland, California, and Oahu Island, Hawaii.

Consolidation study for San Francisco/ Oakland, California

DOD (represented by the Army), GSA, and the telephone company conducted a study in 1968 of their local telephone service requirements in the San Francisco and Oakland, California, metropolitan areas. The objective was to determine the most economical, efficient, and effective means of meeting these requirements.

The study identified $600,000 in potential annual savings to the Government. No specific actions responding to these recommendations were identified during our review.

Proposed study for Oahu Island, Hawaii

The Navy operates the Defense Administrative Telephone System serving about 30,000 main stations and GSA operates telephone facilities serving about 1,000 main stations on Oahu Island, Hawaii. Since early 1976, GSA has tried to get the Navy's (Naval Facilities Engineering Command, Pacific Division) cooperation in performing a joint telephone consolidation feasibility study for Oahu Island. At one point, GSA expressed its desire for the Navy to operate the system if the study showed that consolidation and modernization were desirable. The Navy's initial reaction was that consolidation and modernization were already planned for the Defense system so a joint Navy/GSA study group did not appear necessary. However, the Navy continued corresponding and meeting with GSA until August 1977, but retained its position that such a study did not appear necessary.

The Navy rejected the proposal for a consolidation study because GSA continues serving its users, without receiving any request from the Navy for detailed information. DOD is now conducting a study for consolidating local telephone services for its components only.

CHAPTER 3

POTENTIAL FOR CONSOLIDATION OF LOCAL GOVERNMENT TELEPHONE SERVICES

We selected four geographic areas (San Antonio, Texas; St. Louis, Missouri; Leavenworth, Kansas; and Orlando, Florida) to identify the potential economic and operational benefits of consolidating local Government telephone services in each area. These areas should provide an excellent indication of Government benefits that can be achieved in other areas because they include two large areas and two small areas, three different telephone companies, a broad cross section of Federal departments and organizations, and a mixture of commercial business lines and Government owned and leased telephone facilities.

Our scenarios--configurations of consolidated systems--for three of the areas clearly demonstrated economic and operational benefits to the Government. Our scenario for the fourth area (Orlando) demonstrated some operational benefits and some service reductions--at a slight increase in cost. In total, our four scenarios showed that annual operating costs could be reduced by an estimated $1.4 million, after incurring one-time conversion costs totaling an estimated $1.5 million. We also noted that implementation of our consolidation scenarios would preclude the necessity of planned modernizations estimated to cost $9.1 million.

We recognize that other scenarios could be developed for each area, resulting in different cost estimates and operational benefits. We also recognize that a more detailed study than we performed would be required before actual consolidation of services in a given area. However, because our less detailed studies showed economic and operational benefits without consideration of all factors, which could contribute to further economy and/or operational benefits, we believe they are conservative. Thus, detailed studies should result in even greater economies and/or operational benefits.

We further recognize that various administrative-type matters should be considered, developed, and established into policies, guidelines, and/or interagency agreements before actually consolidating local telephone services on a Government-wide basis. Of these, we consider the funding of conversion costs and methodology for equitably distributing and reimbursing operating costs of the consolidated local systems as being the most important in establishing and continuing a successful program.

COMPARISONS BETWEEN EXISTING AND SCENARIO LOCAL TELEPHONE SYSTEMS

Information concerning existing Government local telephone services and costs in each selected geographic area was compiled from various Government organizations and telephone companies. As this information was compiled, the geographic area boundaries were defined. For each defined area, a comparative scenario to consolidate Government local telephone services was developed with the cooperation of the telephone company(s), using the following general guidelines:

1. The existing services would remain the same in that each user would be given:

   --Service features equal to or greater than those currently provided.

   --The same current miscellaneous equipment, that is, the same number and type of telephone instruments and other equipment.

   --Access to the same local calling area and the same type of long-distance telephone services currently provided.

2. The telephone company would not include in the scenario those commercial business lines which would obviously cost more if consolidated.

3. The existing number of circuits for each long-distance telephone service (foreign exchange lines, wide-area-telephone-service lines, access lines to Government intercity systems, etc.) would remain the same.

4. The configuration would be planned:

   --As a single system for the entire geographic area; however, if this was not determined cost effective, another alternative (two or more systems or consolidation of only a portion of the local services) would be used.

   --Leasing electronic switching equipment and services, including maintenance, offered by the telephone company.

--Using centralized attendant service--required operator console(s) would be placed at the location with the greatest number of users.

5. The pricing would be at current tariff rates.

6. Operating and administrative personnel needs would be determined and costs thereof would be estimated.

7. The residual value of discontinued or displaced Government-owned systems would not be considered.

The results of comparing existing and scenario results in each selected geographic area were as follows:

Geographic area	Annual operating cost savings or losses (-)	One-time conversion costs	Operational benefits
San Antonio	$ 837,000	$ 806,000	yes
St. Louis	442,000	653,000	yes
Leavenworth	143,000	13,000	yes
Orlando	- 14,000	60,000	mixed
Total	$1,408,000	$1,532,000	

Details concerning each of these areas, are discussed below.

San Antonio

The San Antonio area, serviced by one telephone company, includes over 17,000 main stations. These were served through (1) five Government-owned local systems (using 10 switching locations) operated and maintained by the military departments (Army and Air Force), (2) two Government-leased local systems (using two switching locations) operated by civil agencies (Federal Bureau of Investigation and Veterans Administration), and (3) a Government-leased consolidated local system (using two switching locations) operated by GSA. In addition, Government activities lease over 200 commercial business lines from the telephone company.

Consolidating the Government local telephone services into a single local system for the entire area did not appear to be cost effective because of the mileage charges that would

be incurred between one Air Force base (Randolph) and the proposed location of the operator consoles (Kelly/Lackland Air Force Bases 1/). Therefore, the following two alternatives were considered:

1. Consolidating all Government telephone services, except those at Randolph Air Force Base, into a single system.

2. Consolidating all Government telephone services into two systems--one serving only Randolph Air Force Base 2/ and the other serving all other locations in the selected geographic area--interconnected by leased circuits called tie lines.

The second alternative was selected as our scenario as it offered greater potential in cost benefits to the Government.

Under our scenario, providing centralized attendant service for each system, the first system (using one switching location) would include operator consoles on Randolph Air Force Base and the second system (using seven switching locations) would include operator consoles on Kelly/Lackland Air Force Bases. All eight switches serving the scenario would be located on telephone company premises.

The estimated annual operating costs of the existing services and for our scenario are $9,743,000 and $8,906,000, respectively. Thus, our scenario would reduce Government operating costs $837,000 annually. (See app. III.) However, the Government would incur an estimated $806,200 for installing the scenario system.

The telephone company service package used in our scenario provides standard service features (without additional costs)

1/Kelly and Lackland Air Force Bases, which are contiguous, are treated as a single location for the purpose of this study.

2/Randolph Air Force Base would be served by a single switching location under either the existing or scenario local system. However, the scenario replaces the older Government-owned switch located on Government premises with a telephone company's customer service package that uses a modern switch, having a greater capability, located on the telephone company's premises. Also, there are some circuit rearrangements under the scenario.

to all Government users and optional service features (at additional costs) to those Government users having such features available on the existing systems. Certain of these standard features are not provided by some existing systems and, thus, should be considered as operational benefits to the Government. For example, the following standard service features for the scenario systems are not provided by the existing systems at Brooks, Kelly, Lackland, and Randolph Air Force Bases and Fort Sam Houston:

Add on	--Permits the called party to add another party or the operator within the same system for a three-way conference.
Automatic identified outward dialing	--Automatically records the originating main station line number on each commercial toll call.
Call intercept	--Automatically intercepts calls to vacant numbers and directs them by a prerecorded message or the operator.
Call transfer (individual)	--Permits the user to transfer an incoming call to another number within the system without operator assistance.
Consultation hold	--Permits the called party to instruct the switch to hold the incoming call and, on the same line, originate a call to another party or the operator within the same system for private consultation.
Night service	--Permits calls to the operator, when absent, to be routed to another main station (telephone) number.
Restricted outgoing calls	--Permits selected main station lines to be used for placing certain outgoing calls without operator assistance and routes outgoing calls from the denied main station lines to the operator or a busy line.

Touch-tone calling	--Offers greater speed through the use of push button dialing to transmit the numbers in an audible tone.

Our scenario would also avoid $7.7 million in planned modernizations for DOD local systems (Lackland and Randolph Air Force Bases).

St. Louis

The St. Louis area, serviced by one telephone company, includes 7,700 main stations. These were served through (1) five Government-leased local systems independently operated by the Federal Bureau of Investigation, Veterans Administration, and National Guard groups, (2) a Government-leased consolidated local system (using three switching locations on telephone company premises) operated by GSA, and (3) a Government-leased consolidated local system (using seven switching locations) operated as a Defense Telephone Service by the Department of the Army. In addition, Government activities lease 98 commercial business lines from the telephone company.

The Army was in the process of expanding and modernizing the Defense Telephone Service. These expanded and modernized services would continue to be leased, but in lieu of using switching locations only on Government premises, the modernized system will use six switching locations on telephone company premises and one switching location on Government premises. Reference to the Defense Telephone Service in this report will refer to the modernized system, including its estimated operating costs and planned service features.

Consolidation of all of the above Government local telephone services into a single system was selected as our scenario. This system, providing centralized attendant service, would use 19 switching locations on telephone company premises, with the associated operator consoles at the same Government locations as used by the Defense Telephone Service.

The estimated annual operating costs for the existing services and for our scenario are $4,898,000 and $4,456,000, respectively. Thus, our scenario would reduce Government operating costs $442,000 annually. (See app. III.) However, the Government would incur an estimated $653,000 ($610,000 for installation and $43,000 in potential liability) in one-time costs for converting to our scenario.

The telephone company service package used in our scenario provides standard and optional service features in the same manner as previously described for San Antonio. Also, like San Antonio, certain standard features were not provided on some existing systems and these should be considered as operational benefits.

Leavenworth

The Leavenworth area, serviced by one telephone company, includes 1,950 main stations. These were served through (1) a Government-owned local system, using two switching locations which the Army operated and maintained and (2) two Government-leased local systems which civil agencies (Bureau of Prisons and Veterans Administration) operated. In addition, Government activities lease 18 commercial business lines.

Consolidation of the above into a single system was selected as our scenario. This scenario local system, providing centralized attendant service, would use one switching location on telephone company premises and one switching location on Government premises (Veterans Administration Hospital) with the associated operator consoles on the military installation.

The estimated annual operating costs of the existing services and for our scenario are $1,011,000 and $868,000, respectively. Thus, our scenario would reduce Government operating costs $143,000 annually. (See app. III.) However, the Government would incur an estimated $13,000 for installing the scenario system. No termination charges would be incurred.

The telephone company service package used in our scenario provides standard and optional features in the same manner as previously described for San Antonio. Also, like San Antonio, certain standard service features were not provided on some existing systems and these should be considered as operational benefits.

Our scenario would also avoid $1.4 million in planned modernization of a DOD local system (Fort Leavenworth).

Orlando

The Orlando selected geographic area, served by two telephone companies, includes 2,200 main stations. These are served through (1) three Government-leased local systems

operated by the Department of the Navy (two) and Defense Contract Administration Services, (2) three Government-leased local systems operated by civil agencies (Department of Agriculture, GSA, and Veterans Administration), and (3) one local system leased and operated by the U.S. Postal Service. Each system has one switching location. In addition, Government activities leased 180 commercial business lines. The GSA-operated system uses the centralized attendant service located in Jacksonville, Florida.

Consolidating the Government local telephone services for the entire area did not appear cost effective because of the high costs that would be incurred for the circuits between the two telephone companies. Therefore, the following alternatives were considered:

1. Consolidating the Government telephone services in each telephone company territory into a single system.

2. Consolidating the Government telephone services, except for the two Navy systems and the commercial business lines, with the existing GSA system.

Neither alternative was cost effective. However, we selected the second alternative as our scenario for demonstration purposes.

The scope of our scenario included the 347 main stations on the existing GSA system and the 343 main stations on the Defense Contract Administration Service's, U.S. Postal Service's, Veterans Administration's, and Department of Agriculture's systems. Under the scenario, the system would use the existing GSA system with centralized attendant services located in Jacksonville, Florida.

The estimated annual operating costs of the existing services and our scenario are $611,000 and $625,000, respectively. Thus, our scenario would increase Government operating costs $14,000 annually. (See app. III.) The Government could incur an estimated $60,000 ($6,000 for installation and $54,000 in potential termination liability) in one-time costs for converting to our scenario.

The telephone company service package used in our scenario would provide standard and optional features in the same manner as previously described for San Antonio. Also, like San Antonio, certain standard features were not provided on some existing systems and these should be considered as

operational benefits. However, unlike the three other selected geographic areas, certain service features on the existing systems were not provided on the scenario system because they were not available as standard or optional features. These exclusions would represent reduction in services to some of the users.

Although our scenario was not cost effective, other alternatives and a more detailed analysis and consideration of factors not considered in our study could result in a cost effective system(s) and overall operational benefits.

CAVEAT TO SCENARIOS

Our scenarios were developed to demonstrate the potential for cost and operational benefits from consolidation, not the actual cost and operational benefits achievable. We recognize that many other scenarios could be developed for each area, resulting in different cost estimates and operational benefits. We also recognize that a more detailed study than we performed would be required before actual consolidation of services in a given area. Our studies did not include a detailed analysis of certain factors, as described previously in the description of the guidelines for our scenarios.

Even though our scenarios did not include detailed analysis of all factors, three of the four scenarios demonstrated potential economic and operational benefits. We believe that our scenario cost and operational benefits are conservative and that detailed analysis of factors we did not consider would contribute to further economic and/or operational benefits. For example:

--Our scenarios did not consider detailed matching of user requirements and available services. Some users require unrestricted connection (making and receiving calls) both within and outside the local system without operator assistance; others may require connection only within the system (fully restricted service). In the San Antonio area, existing tariffs provided circuits for unrestricted service and for fully restricted service, but not for partially restricted service. Partially restricted service is similiar to unrestricted service, except that the user must make calls outside the local system through a telephone operator. It may be possible to establish a new, less costly tariff for this partially restricted service. Also, if the users of the 8,150 partially restricted circuits could be

limited to fully restricted service, or if the service could be reclassified as fully restricted, there would be additional savings of $313,000 ($38.40 per year per circuit) for that scenario.

--Our scenarios reflect additional costs from increased circuit mileage required for access to long-distance services resulting from the potential consolidation. However, the number of circuits and types of long-distance services in our scenarios were not changed from the existing situation. Telephone company officials advised us that consolidating local systems usually results in (1) fewer circuits required for each type of long-distance service and (2) transfer of some usage from higher cost to lower cost long-distance service. Detailed analysis could demonstrate such savings. In our earlier reviews of long-distance service, our reports ("Economies Available Through Increased Use of the Federal Telecommunications System by Military Installations," B-146864, dated August 24, 1972, and a letter report on the same subject for civil agencies to the Administrator of General Services, B-146864, dated August 17, 1973) demonstrated that, at six locations, commercial long-distance services costing $409,000 annually could be transferred to the lower cost Federal Telecommunications System at estimated savings of $241,000 annually. We believe our scenario costs could be similarly reduced through more detailed analysis because of the significant costs for long-distance services included. For example, our San Antonio scenario includes $3.4 million annually for access to long-distance telephone services, including $904,000 for commercial long-distance service.

--Our scenarios do not provide optional service features to users, unless they were furnished on the existing local system. For example, the San Antonio scenario provides some optional service features to some users, but not to other users. Also, some available optional service features were not provided to any of the users. Expanding, replacing, or adding optional service features for all users could increase the economic and/or operational benefits to the Government. For example, a test of the passive recording service feature at a military location resulted in an estimated net cost savings of $30,000 annually. Also, the recorded information could be used to generate some reports that

assist management in planning or engineering optimum telephone systems and other reports that assist using organizations in evaluating their management. Detailed studies to include evaluation of optional service features could result in further economic and/or operational benefits to the Government.

--Our scenarios provide for use of telephone company offered services at current tariff rates. Other alternatives, such as leasing with or without option to purchase or competitively leasing or purchasing from other suppliers and with either Government or contractor operation and maintenance, are available. Detailed analysis of other alternatives would be necessary and may provide additional economic and/or operational benefits.

--Our scenarios, in the absence of Government-wide criteria, provided for Government personnel costs on an estimated basis as follows:

Maintenance	Not stated separately because this would be included in the telephone company tariffs (except for maintenance at the Federal prison in Leavenworth).
Operators	Numbers of operators required were estimated, with the assistance of telephone company and Government officials, in the Leavenworth and Orlando areas. For San Antonio and St. Louis, we used a factor of 50 percent of existing numbers (the factor obtained by DOD in its consolidation studies and in our discussions with telephone company officials).
Administrative	Numbers of such personnel were estimated based on discussions with cognizant Government officials in each area.

Personnel costs were developed by (1) applying the 50 percent factor where applicable and (2) determining the appropriate job classification and using average fiscal year 1978 salary, including employee benefits,

for each job classification. Although scenario personnel costs could increase as a result of more detailed studies, we believe our estimates are conservative.

--Our scenarios did not include cost offsets for use of Government-owned facilities. Also, they did not consider the residual value of discontinued or displaced Government-owned facilities. Residual value is, of course, dependent upon age, condition, cost of removal, and demand for such facilities. For example, the original cost of Government-owned facilities at five military installations included in our San Antonio scenario are estimated at $8.2 million. Although we could not readily determine the residual value and although the facilities are quite old, we believe they could have some value through salvage of material (i.e., copper reclaimed from wire can be sold) and as replacement parts for similar facilities at other locations.

DETAILED STUDIES AND OTHER MATTERS

Detailed studies must be performed and administrative-type matters should be considered, developed, and established into policies, guidelines, procedures, and/or interagency agreements before actually consolidating local telephone services on a Government-wide basis.

A detailed study must be performed in each selected area because, as shown by our scenarios, the configuration, economy, and operational benefits of Government-wide systems vary among geographic areas. These variations are due to the circumstances that may differ among geographic areas. Such circumstances include Government users (organizations and number of users), user requirements, geographic proximities between Government users, calling destinations, traffic volume, condition and capabilities of and termination charges applicable to existing equipment and facilities, distances between Government users and telephone company locations, distances between local system switching locations and Government intercity switching locations, geographic service areas of telephone companies' local exchanges, services offered by the telephone companies, and tariffs.

We believe that administrative-type matters should be considered, developed, and established into policies, guidelines, procedures, and/or interagency agreements to achieve implementation and operation of consolidated local

systems in a cooperative and effective manner. These administrative-type matters include availability of qualified staff, intra-agency and interagency coordination, funding for the one-time conversion costs, methodology for requesting and fulfilling routine and emergency or urgent maintenance and new service requirements, and methodology for equitable distribution and reimbursement of operating costs.

Of the administrative matters, we consider the funding for conversion costs and the methodology for equitably distributing and reimbursing operating costs of consolidated local systems as being the most important for establishing and continuing a successful program. They are considered important because of their potential financial impact upon participating Federal departments and agencies. However, we believe the executive branch can resolve these matters, while retaining organizational fiscal responsibility, as several alternatives are available for funding conversions and many methods are available for distributing and reimbursing operating costs among the participants. Procedures are presently employed for the reimbursement of GSA and DOD communications systems.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The Government did establish some consolidated local telephone systems; however, multiple Government organizations still operate local systems and use commercial business lines in the same local geographic areas. The Government is studying consolidation of local telephone services and is planning equipment modernization for local systems in some geographic areas, but not on a Government-wide basis.

Local geographic areas have greater potential for consolidation and benefits by pursuing consolidations of local telephone services on a Government-wide basis. Government-wide consolidations of local telephone services, as shown by our scenarios, can provide economic and operational benefits to the Government and avoid modernization costs. Therefore, we believe that Government-wide consolidations and modernizations, throughout our Nation, will result in significant savings and increases in operational benefits to the Government. We also believe that Government-wide studies of local telephone services should be performed before implementing any consolidations or modernizations.

In the past, technology and the lack of competition limited the alternatives available for providing local telephone services. However, the technological advances and increased competition in recent years have significantly increased the opportunities for and potential benefits from consolidating and modernizing local telephone services on a Government-wide basis. Therefore, the Government now needs to establish a program--policies, guidelines, and procedures--to make the best use of this technology and increased competition for consolidating and modernizing local telephone services, where economically and operationally beneficial, on a coordinated Government-wide basis.

Although GSA is generally responsible for providing communications services for Federal agencies, it has delegated such responsibility to the agencies in many cases. Furthermore, lack of coordination and cooperation between the agencies and GSA for consolidation or modernization of local telephone services has resulted in inaction, even where studies have documented economic or operational benefits.

The historical inactions on interdepartmental consolidation and modernization of local telephone services show clearly that the maximum benefits from Government-wide coordination will not materialize unless the Office of Management and Budget applies its influence and prestige in a positive and persevering manner to achieve Government-wide coordination.

RECOMMENDATIONS

We recommend that the Director, Office of Management and Budget:

--Solicit recommendations from the National Telecommunications and Information Administration, Department of Commerce, concerning policies for coordinating, establishing, operating, procuring, and managing Government-wide consolidation and modernization of local telephone services.

--Develop and promulgate a policy for a local telephone services program that (1) requires consolidation and modernization, where economically and operationally beneficial, on a coordinated Government-wide basis, (2) assigns organizational responsibilities under the program, (3) directs the development of implementing guidelines, procedures, and/or standards, and (4) defines a reporting system for monitoring the program's progress.

AGENCY COMMENTS AND OUR EVALUATION

We discussed our proposed report with officials of principal Federal agencies involved. Telephone companies who assisted in our review chose not to provide oral comments. Oral comments received are as follows:

--Office of Management and Budget officials stated that they had no comments at this time.

--GSA officials agreed with the consolidation concept and will continue to pursue consolidation of telephone services with all Government agencies throughout the country. They advised that they are preparing a memorandum of agreement with DOD which will be used for studying, installing, and managing Government-wide consolidated local telephone systems.

--DOD officials agreed with the consolidation concept. They cited the recent informal discussions with GSA officials and the current drafting of a memorandum of understanding, which will be negotiated with GSA, concerning the establishment of a Government Metropolitan Area Telephone System program. The objective of this program will be to achieve improved and economical telephone service on a Government-wide basis.

--Veterans Administration officials generally agreed with the concept described in this report and stated that the majority of their locations either have been considered for or are participating in consolidated telephone systems. They also stated that the Veterans Administration would be receptive to participating in consolidated systems at certain locations on an individual basis, provided user requirements are met. At medical centers (hospitals), onsite switching and Veterans Administration telephone operators are required for support of medical care programs/activities. They also stated that Government agencies' views should be solicited when developing any policies.

--Federal Bureau of Investigation (FBI) provided the following written comments.

"The Federal Bureau of Investigation has assigned by law a singular combination of foreign counterintelligence, criminal investigative, and law enforcement missions and associated (appropriated) resources are directed--under comprehensive Congressional oversight--to the national security of the United States. Secure and private communications are integral and vital to the FBI's mandated mission accomplishment--functional responsibilities drive stringent security and privacy requirements in a response-oriented operational communications environment. The multifaceted nature of voice, data, and message traffic results in a range of threats to the security, privacy and integrity of the content of transmissions.

"The Bureau's policy to procure, operate, administer and maintain field office telephone systems separate and apart from those of any other Government agency has been derived by executive management. This decision was determined from identification of known threats

inherent in the technical capabilities of commercially available telephone systems and assessment of the acceptable risk level associated with each threat. A recent scientifically based analysis concluded that FBI telephone requirements include: FBI operational control; separate telephone facilities in FBI locations; and implementation of known countermeasures in specific threat areas.

"The FBI recommends that projected participation in consolidated Government-wide telephone facilities be left to the discretion of each intelligence agency based on their legislated responsibilities."

--Department of Commerce's National Telecommunications and Information Administration officials generally agreed with the facts contained in our report, but stated that to develop a policy for local telephone services, other factors need to be considered. These other factors include:

1. Continued duplication of agencies' headquarters overhead. (See p. 21.)

2. Possible technological obsolesence of future procurements.

3. Plans to integrate voice and data telecommunications. (See p. 21.)

4. Improved management without consolidation. (See pp. 20 and 21.)

5. Need for increased awareness of industry offerings and competitive procurement processes. (See pp. 22 and 23.)

6. Differing agency missions. (See pp. 11, 12, 21, 22, 26, and 27.)

7. Unbundling of procurements. (See p. 23.)

8. Modernization without consolidation.

9. Procurement of other than centralized systems. (See p. 21.)

The comments received connote general agreement with the concept of consolidated local telephone services. We recognize that not all requirements can be satisfied by consolidated systems. However, we believe that exclusion of local telephone services from consolidation should be the exception and should be fully documented and justified.

We agree with the Veterans Administration that agency views should be considered when developing policy. We do not agree with the FBI's contention that participation should be at the agency's discretion; the current proliferation has resulted from just such discretion, and we believe, most requirements can be satisfied by consolidated systems. Even intelligence agencies, such as the FBI, can satisfy most of their requirements using consolidated systems and still retain operational control using current state-of-the-art technology. Other investigative agencies are presently using consolidated services.

We considered most factors outlined by the National Telecommunications and Information Administration in our report (see pages cited following each factor). We agree, but did not think it was necessary to comment on their factor 2 (technological obsolesence) because this is an obvious consideration. We do not agree that modernization without consolidation (factor 8) would be a viable alternative because it would not take advantage of the economies of scale usually available through consolidation.

APPENDIX I

LOCAL TELEPHONE SYSTEMS MANAGED BY

FEDERAL DEPARTMENTS AND AGENCIES

Federal department or agency	Number of switching locations	Annual operating costs (000 omitted)
Department of Agriculture	104	$ 5,048
Department of Defense:		
Department of the Army	276	(a)
Department of the Navy	154	(a)
Department of the Air Force	151	(a)
Defense Logistics Agency	14	12,825
Total	595	12,825
Department of Energy	54	31,913
Department of Health, Education and Welfare:		
Social Security Administration	41	4,362
Center for Disease Control	4	
Food and Drug Administration	1	
Health Service Administration	20	6,575
National Institutes of Health	2	
Public Health Service	6	
Total	74	10,937
Department of Interior	122	2,361
Department of Justice:		
Bureau of Prisons	39	1,497
Federal Bureau of Investigation	60	1,163
Total	99	2,660
Department of Labor	4	114
Department of Transportation:		
Coast Guard	44	1,156
Federal Aviation Administration	9	898
Federal Highway Administration	2	36
Federal Railroad Administration	2	75
Total	57	2,165
Department of the Treasury	20	7,993
General Services Administration	372	118,000
National Aeronautics and Space Administration	13	8,213
Veterans Administration	176	16,743
Total	1,690	$218,972

a/Not readily available.

EXAMPLES OF CONCENTRATIONS

OF EXISTING GOVERNMENT LOCAL

TELEPHONE SERVICES

Description	Selected geographic areas						Total
	Leavenworth	Orlando	St. Louis	San Antonio	New York	San Francisco	
Local telephone systems:							
Number of departments and agencies managing systems	3	5	4	4	6	11	(a)
Number of local telephone systems	3	7	7	8	44	31	100
Number of switching locations	4	7	15	14	51	39	130
Commercial business lines:							
Number of lines	13	180	98	201	(b)	(b)	501
Total costs	$1,011,576	$1,422,216	$4,898,340	c/$9,743,016	c/20,762,117	c/$18,791,076	$56,628,341

a/Information was not readily available.
b/Not applicable as some departments and agencies manage systems in multiple areas.
c/Excludes costs for commercial business lines in New York and San Francisco.

APPENDIX II

COMPARISON OF OPERATING COSTS BETWEEN EXISTING AND SCENARIO LOCAL TELEPHONE SYSTEMS

Geographic area cost category	Annual operating costs: Existing system	Annual operating costs: Estimated for scenario	Government savings or loss (-)
San Antonio, Texas:			
Local service and equipment	$ 1,548,432	$ 4,953,036	-$3,404,604
Personnel	3,930,828	557,136	3,373,692
Space	378,996	20,868	358,128
Long distance telephone services	3,193,704	3,374,736	-181,032
Government-owned systems	a/691,056	-	691,056
Total	9,743,016	8,905,776	837,240
St. Louis, Missouri:			
Local service and equipment	3,072,348	3,112,176	-39,828
Personnel	724,464	293,556	430,908
General and administrative	31,608	31,608	
Space	41,592	28,764	12,828
Commercial business lines	37,968	-	37,968
Long distance telephone services	990,360	990,360	-
Total	4,898,340	4,456,464	441,876
Leavenworth, Kansas:			
Local service and equipment	175,488	589,668	-414,180
Personnel	667,236	121,524	545,712
Space	18,984	7,236	11,748
Long distance telephone services	149,868	149,868	-
Government-owned systems	(a)	-	-
Total	1,011,576	868,296	143,280
Orlando, Florida:			
Local service and equipment	383,148	422,844	-39,696
Personnel	30,756	22,146	8,610
Space	17,508	-	17,508
Long distance telephone services	179,964	179,964	-
Total	611,376	624,954	-13,578
Total	$16,264,308	$14,855,490	$1,408,818

a/Excludes any costs for depreciation of Government-owned systems.

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