

Approved

January 22, 1985  
Jayne Aylward  
Date

MINUTES OF THE HOUSE COMMITTEE ON COMMUNICATIONS, COMPUTERS AND TECHNOLOGY

The meeting was called to order by Representative Jayne Aylward at  
Chairperson

3:30 ~~am~~/p.m. on January 16, 1985 in room 522-S of the Capitol.

All members were present except:  
Representative Sallee (excused)

Committee staff present:  
Ray Hauke, Research Department  
Scott Rothe, Research Department  
James A. Wilson, III, Senior Assistant Revisor  
Jean Mellinger, Secretary to the Committee

Conferees appearing before the committee:  
William Abbott, Boeing Military Airplane Company

Chairman Jayne Aylward opened the meeting and welcomed the new and returning members. She then introduced the staff.

The chairman told the committee that the next week or two would be devoted to background study on the interim study proposals. Some other plans for the committee include touring the Center of Excellence at K-State, the Robotics Program, and having Phil Bradford, the High-Tech Czar at KDED, speak at a future meeting.

It was stressed that the areas where the committee could be involved are endless.

The chairman asked the members to bring any questions, suggestions, or anything they are interested in to the committee meetings.

It was mentioned that this has been a very non-partisan committee in the past and it was hoped that it would remain so.

Chairman Aylward introduced Vice-Chairman Friedeman who mentioned that the Senate does not have a committee like this. She then introduced Ranking Minority Member Dean who also stressed the non-partisan history of the committee and mentioned some of the things established by the committee such as the High Technology Commission and the Centers of Excellence at each of the major universities of the state.

There was one request for a committee bill dealing with computer theft. Copies of the draft were distributed (Attachment 1).

Mr. Abbott reviewed the history of the bill in the 1984 session; presented some of the reasons the bill is needed; mentioned that 25 major companies basically in the Kansas City, Topeka, and Wichita areas will support the bill; and gave some of the history of bills for computer thefts in other states, 26 of which already have passed legislation to combat the problem. He mentioned that eventually there will probably be some legislation passed in Congress but that takes longer. He stated that if it was the pleasure of the committee they would ask that it would consider introducing the bill again; and, when it comes up for hearings, they will make sure that there are technical people here to answer any questions.

Representative Roper asked if they had studied the Missouri bill on this. Mr. Abbott said that the other laws have been studied and it was felt that the Kansas bill was a pretty fair bill.

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON COMMUNICATIONS, COMPUTERS AND TECHNOLOGY,  
room 522-S, Statehouse, at 3:30 ~~am~~/p.m. on January 16, 1985

Representative Dean asked about the federal Computer Privacy Act recently passed in Congress and if there was any overlapping in this bill. Mr. Abbott stated there was none to his knowledge and that the computer program people had looked at that and had found nothing in it.

Representative Dean moved that the motion be introduced as a bill. Representative Chronister seconded the motion. The motion passed.

Ray Hauke of the Research Department reviewed Proposal No. 49, H.B.2027, which came out of the Interim Ways and Means Committee (Attachments 2 & 3).

The meeting was adjourned at 4:00 p.m.

The next meeting of the committee will be held at 3:30 p.m. on Tuesday, January 22, 1985.

BILL NO. \_\_\_\_\_

By \_\_\_\_\_

AN ACT relating to crimes and punishments; concerning computer crime and computer theft; classifying certain acts as misdemeanors and felonies.

Be it enacted by the Legislature of the State of Kansas:

Section 1. (1) As used in this section, the following words and phrases shall have the meanings respectively ascribed thereto:

(a) "Use" means to instruct, communicate with, store data in, retrieve data from, or otherwise make use of any resources of a computer, computer system or computer network.

(b) "Computer" means an electronic device which performs logical, arithmetic or memory functions by the manipulations of electronic or magnetic impulses and includes all input, output, processing, storage, software or communication facilities which are connected or related to such a device in a system or network.

(c) "Computer network" means the interconnection of communication lines, including microwave or other means of electronic communication, with a computer through remote terminals, or a complex consisting of two or more interconnected computers.

(d) "Computer program" means a series of instructions or statements in a form acceptable to a computer which permits the functioning of a computer system in a manner designed to provide appropriate products from such computer system.

(e) "Computer software" means computer programs, procedures and associated documentation concerned with the operation of a computer system.

(f) "Computer system" means a set of related computer equipment or devices and computer software which may be connected

(attachment 1)  
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or unconnected.

(g) "Financial instrument" means any check, draft, money order, certificate of deposit, letter of credit, bill of exchange, credit card, debit card or marketable security.

(h) "Property" includes, but is not limited to, financial instruments, information, including electronically produced data and computer software and computer programs in either machine or human readable form and any other tangible or intangible item of value.

(i) "Services" means computer time, data processing and storage functions.

(2) Computer theft is:

(a) Wrongfully obtaining or exerting unauthorized control over the property or services of another person, or the value thereof, with intent to deprive such person of such property or services;

(b) by color or aid of deception, obtaining control over the property or services of another person, or the value thereof, with intent to deprive such person of such property or services;  
or

(c) appropriating lost or misdelivered property or services of another person, or the value thereof, with intent to deprive such person of such property or services.

(3) In any prosecution for computer theft, it is a defense that the property or services was appropriated openly and avowedly under a claim of title made in good faith.

(4) Computer crime is knowingly and fraudulently or knowingly and without authorization obtaining the use of, using, altering, damaging or destroying any computer, computer system or computer network, or any computer software, program, documentation, data or property contained in such computer, computer system or computer network.

(5) Computer theft or computer crime which causes a loss of less than \$100 is a class A misdemeanor. Computer theft or computer crime which causes a loss of \$100 or more is a class D

felony.

(6) This section shall be part of and supplemental to the Kansas criminal code.

Sec. 2. This act shall take effect and be in force from and after its publication in the statute book.

COMMITTEE REPORT

TO: Legislative Coordinating Council  
FROM: Special Committee on Ways and Means  
RE: PROPOSAL NO. 49 -- STATE TELECOM-  
MUNICATIONS NETWORK\*

Proposal No. 49 directed the Special Committee on Ways and Means to:

Review the status of the state's telecommunication network, including consideration of the feasibility of a state owned telecommunication system (given AT&T divestiture) and the fiscal implications of such a system.

Background

This study was requested by the Chairman of the House Committee on Ways and Means and the Chairman of the House Committee on Communications, Computers and Technology. For several years, the Department of Administration's Office of Telecommunications has advocated a plan involving a state-owned telecommunication system for provision of telecommunications services to many state agencies. Additionally, divestiture and deregulation of the telecommunications industry will significantly alter the manner in which the state secures its telecommunications services, as well as the price it pays for those services. Consequently, Committee study was requested to focus upon the options facing the state's acquisition of telecommunication services.

\* \_\_\_\_\_ Bill \_\_\_\_\_ accompanies this report.

(Attachment 2)  
1/16/85

## Committee Activity

The Committee received extensive testimony on Proposal No. 49 from the Director of the Division of Information Systems and Communications (DISC), vendors of telecommunications services, and the staff of the Legislative Research Department.

Background materials were presented by the staff as the Committee began its consideration of this proposal. The staff presentation focused upon present state telecommunications arrangements, including how they will be impacted by a changing regulatory environment and a changing technological environment. The Committee learned that during fiscal year 1984 the state spent \$15.2 million for telecommunications services, a total which is predicted to increase considerably in the future. The Committee was informed that of the state's telecommunications services, approximately 39 percent is for local exchange service, 36 percent is for long distance service, and 25 percent is for customer premise equipment (telephones, building wiring, PBX switches, etc.). The state owns a very limited quantity of customer premise equipment in a few specific agencies; however, the overwhelming majority of customer premise equipment is leased from American Telephone and Telegraph (AT&T) Information Services. Most state agencies acquire local exchange services from Southwestern Bell Corporation, although certain agencies are served by other vendors. Long distance services are provided to the state by AT&T Communications which operates a network designed for state government, known as KANS-A-N.

KANS-A-N consists of certain lines that are obtained on a usage sensitive billing arrangement and others which are leased on a billing arrangement that is nonusage sensitive. The nonusage sensitive billing arrangement is known as

TELPAK. TELPAK billing tariffs have already been eliminated at the interstate level and will be discontinued in Kansas on December 31, 1985. The costs of the state's long distance services are expected to increase as a result of the elimination of TELPAK.

The Committee learned that divestiture of AT&T from its operating companies has altered the manner in which those companies relate to each other and to the state as a purchaser of services. The divestiture agreement mandates certain arms length relationships between AT&T and the Bell operating companies. In certain instances AT&T and its operating companies are now competitors.

Committee attention was focused upon state purchasing statutes, which will have an increasing impact on the state's acquisition of telecommunication services. The state's competitive bidding statutes previously had relatively little impact upon acquisition of telecommunication services, as no competition existed and services were provided in accordance with regulated tariffs. As a result of divestiture and deregulation, it is likely that lease of existing customer premise equipment and acquisition of certain long distance services may be within the purview of competitive bidding statutes. The Director of DISC recommended legislation to establish a negotiating committee, which would have authority to negotiate for telecommunications services and not be subject to the provisions of competitive bidding statutes (K.S.A. 75-3738 through 75-3740a).

The Committee received information concerning changes in technology, which impact the types of services which the state may wish to secure. Most of the telecommunication service and equipment utilized by the state is of analog technology. Present equipment is capable of voice communications and slow speed data transmission. Digital technology



is now considered state of the art in much of the telecommunications industry. It is capable of high speed data and video transmissions, as well as the traditional voice communications. Given the increasing use of computer terminals and equipment, the demand for data transmission communications channels will increase. Therefore, the Committee learned that future upgrades to the state's telecommunications system should be of digital technology.

The Director of DISC told the Committee that the state has four generalized options for its telecommunications services: (1) do nothing; (2) build its own telecommunications system; (3) contract with a service vendor for operation of a telecommunication system used exclusively by the state; or (4) cooperate with private sector service vendors and secure upgraded telecommunications services.

The Director informed the Committee that the state should make decisions concerning how it secures five basic telephone services: (1) customer premise equipment; (2) switches and wiring; (3) intrastate long distance within local transport areas; (4) intrastate long distance between local transport areas; and (5) interstate long distance services. The Director also informed the Committee that the Department of Administration had circulated a request for information in which telecommunications vendors were invited to make recommendations and proposals for handling the state's telecommunication business.

At the September meeting, the Director of DISC returned with a tabulation of the proposals made by nine vendors who responded to the request for information. Seven vendors responded with proposals for a state owned telecommunications system. Two vendors, AT&T Communications and Southwestern Bell Telephone Company, responded with proposals for telecommunications services on a leased and

tariffed basis. The Director recommended that the Department of Administration investigate and pursue three strategies: (1) a state owned system; (2) a contractor owned system; and (3) continued negotiations with AT&T Communications and Southwestern Bell Telephone Company.

The Committee also received testimony from representatives of AT&T Communications; AT&T Information Systems; Southwestern Bell Telephone Company; and MCI Telecommunications Corporation.

The Committee requested and received a review from the staff of major telecommunications actions in other states. The Committee learned that many states either have or until very recently have had a configuration of telephone services provided by local Bell carriers and AT&T. Some states are installing state owned telecommunication systems, which bypass traditional vendors of telecommunications services. The Committee received summaries of four states that have installed or are installing state owned inter-city transmission systems. Additionally, the Committee learned of four states which have extensive state owned switching equipment. Finally, several states have embarked upon initiatives to acquire state owned customer premises equipment.

As the Committee concluded its review of this topic it learned that several regulatory issues are pending before the Kansas Corporation Commission, which could impact the cost of telecommunications. These issues will probably be resolved prior to the 1985 Legislative Session.

#### Committee Conclusions and Recommendations

The Committee observed no calculations or statistics indicating that a state owned telecommunications system

would be a feasible or cost effective venture. Therefore, the Committee is not endorsing such a system. The Committee was impressed with the review of telecommunications options that is occurring within DISC and wishes to commend the Division's efforts. As previously mentioned, the Director of DISC is researching several strategies. The Committee recommends that the 1985 Legislature provide careful and timely review to the recommendations which will result from that research. The Committee observes that the changing telecommunications environment will result in significant fiscal year 1986 cost increases for the state if no action is taken. It is for this reason that the Committee emphasizes the importance of the 1985 Legislature providing timely consideration to the recommendations of the DISC Director.

The Committee learned that the DISC Director is recommending state ownership of telecommunications terminal equipment, principally telephone handsets and multi-line key systems. The Director believes such acquisition to have long-term cost savings for the state. The Committee endorses the Director's decision to acquire terminal equipment as a cost effective measure.

The Committee is of the opinion that present competitive bidding statutes are not a particularly efficient method of acquiring telecommunications services. The Committee learned that the Director of DISC recommends procurement of telecommunications services by a three-person negotiating committee. The committee, consisting of the Secretary of Administration, the Director of Purchases, and the Director of DISC, would be authorized to negotiate, with firms submitting proposals, and contract for the provision of telecommunications services. The DISC Director is of the opinion that such procedures would provide a more expeditious method of acquiring services in an area where comparison of proposals is

extremely difficult. The Committee endorses the recommendation of the DISC Director and proposes \_\_\_ Bill \_\_\_ to enact those recommendations.

Respectfully submitted,

*William V. Buntin*

November 27, 1984

Rep. William Buntin,  
Chairperson  
Special Committee on Ways  
and Means

Sen. Joseph C. Harder,  
Vice-Chairperson  
Sen. August Bogina, Jr.  
Sen. Frank Gaines  
Sen. Joe Warren  
Sen. Merrill Werts

Rep. Harold Guldner  
Rep. David Louis  
Rep. Ruth Luzzati  
Rep. George Teagarden

MEMORANDUM

August 20, 1984

TO: Special Committee on Ways and Means  
FROM: Kansas Legislative Research Department  
RE: Background on Proposal No. 49 — State Telecommunications Network

Introduction

The field of telecommunications is extremely complex, involving constantly changing technology and a complicated regulatory environment. Those involved in telecommunications frequently specialize in some aspect of the field and few profess to know all aspects of either telecommunications technology or regulation. This memorandum does not profess to be a state of the art summary of the telecommunications field. Rather it was prepared to highlight areas of potential legislative interest.

Three overall aspects of telecommunications are likely to cause decision makers to become interested and involved in the state's telecommunication program. Those aspects are: (1) the gross expenditures associated with a large telecommunications system; (2) an altered regulatory environment which amends the procedures by which the state purchases its telecommunications services; and (3) a rapidly changing technology, which alters both the demand for telecommunications services and the methods by which those services can be efficiently provided. The three aspects initially appear separable but are frequently commingled. For example, a given level of communications technology will obviously impact its cost and consequently the manner in which regulatory bodies apply tariffs to it. Nevertheless, legislative involvement is likely to be in reaction to changing expenditures, technologies, or regulations. Succeeding portions of this memorandum describe the present telecommunications system in relationship to those three aspects. Such an array of the present system can be useful in reviewing potential changes that may be suggested to it.

State Telecommunications Expenditures and Services

Gross expenditure data in the state accounting system reflects the following statewide expenditures for telecommunications during the last three fiscal years:

Fiscal 1982	\$13,843,815
Fiscal 1983	14,256,247
Fiscal 1984	15,150,362

Although decision makers are instantly mindful of several larger programmatic expenditures, which have increased faster, a \$15.2 million phone bill is a significant expenditure. Its significance is enhanced when various forecasts of future telecommunications costs are considered.

The Department of Administration estimated during FY 1982 that the total telecommunications budget is divided into the following categories of expenditure:

Customer Premise Equipment (Telephones, building wiring, PBX switches, etc.)	25 percent
Local Exchange Service	39 percent
Long Distance Service	36 percent

Customer Premise Equipment. The state has only recently purchased some of its customer premise equipment (CPE). Notable examples of state owned CPE are located at Osawatomie State Hospital, Kansas State Penitentiary, Kansas State Industrial Reformatory, and Pittsburg State University. Nevertheless, in the overwhelming majority of state agencies the CPE is leased. Most of the CPE is leased from American Telephone and Telegraph (AT&T) - Information Services.

Local Exchange Service. In most cases, state agencies acquire their local exchange services from Southwestern Bell Corporation, although certain agencies are served by other vendors, such as United or Continental.

Long Distance Service. The state agency system for long distance service is the KANS-A-N network. The KANS-A-N system handles a very high volume of voice communications and some slow speed data transmittal. During June 1984 there were 452,992 calls on the KANS-A-N network, of which 380,783 were intrastate and 72,209 were interstate. The KANS-A-N network is now operated by AT&T Communications. The network consists of certain lines which are leased on a rate structure which is not usage sensitive. Calls which cannot be handled by the nonusage sensitive lines are routed on Wide Area Telephone Service (WATS) lines, which are usage sensitive in rate structure. During June 1984, there were 149,264 calls routed on Band O WATS lines, or approximately 39 percent of the intrastate traffic.

The nonusage sensitive lines are known as TELPAK lines, with TELPAK being a billing arrangement rather than a technology. Attachment I shows the cities served on TELPAK lines. Those cities are the larger centers of state governmental activity. The TELPAK billing arrangement is being discontinued as of December 31, 1985. The State Telecommunications Office has estimated that elimination of TELPAK rates will increase state expenditures for long distance service by approximately \$1.6 million. This estimate is based upon utilization of the next lowest tariff, known as Interexchange. It is possible that AT&T will request some new tariff for a service not presently in existence, that is likely to be more expensive than TELPAK but less expensive than Interexchange. Nevertheless, in the absence of such a tariff, the Telecommunications Office developed their estimates based upon a known service, Interexchange.

### Regulatory Environment

Telecommunications services are regulated through an extremely complex set of federal and state procedures, involving the Federal Communications Commission (FCC) and state regulatory bodies. Generally, the FCC regulates interstate telecommunications and state bodies, such as the Kansas Corporation Commission (KCC), regulate intrastate services. Obviously, the majority of changes in the regulatory environment result from deregulation and divestiture.

### Deregulation

FCC rulings now mandate that CPE is to be deregulated and offered under free market conditions. Since January 1, 1983, all new CPE has been deregulated, with competition establishing rates, rather than regulatory tariffs. Existing CPE (also known as embedded CPE) that was present at a customer site prior to December 31, 1982, continues to be sold or leased according to regulated rate schedules. CPE located in Kansas agencies became the property of AT&T - Information Systems.

### Divestiture

The anti-trust settlement between the United States Government and AT&T, required AT&T to separate from its 22 operating companies on January 1, 1984. One of those operating companies was Southwestern Bell, which prior to divestiture was the primary vendor of telecommunication services to the state of Kansas. The divestiture settlement resulted in creation of geographic regions, known as Local Access Transport Areas (LATAs) which are an important component in regulation of telecommunication services. Kansas is divided into three LATAs, known as the Topeka LATA, the Wichita LATA, and the Kansas City LATA. Kansas LATAs are similar to the previous 913 and 316 area codes, except that the Kansas City area has been divided into an area that includes portions of Kansas and Missouri.

Additionally, divestiture further divided AT&T and the Southwestern Bell operating companies into certain corporate entities, with specific functions assigned to those entities. The result for Kansas is four corporations, with which state government must have interaction. Those corporations and their jurisdictions are discussed in paragraphs which follow. It is important for decision makers to understand that divestiture mandates certain arms length relationships between the various entities. Consequently, AT&T and the operating companies are now competitors in some cases and a harmonious relationship does not necessarily prevail. Similar conditions of competition occasionally prevail within the various entities of the operating companies.

American Telephone and Telegraph - Communications. AT&T - Communications is allowed to provide interstate and inter-LATA services, with the rates being set by the FCC in the case of interstate service and the KCC in the case of intrastate/inter-LATA services. As previously mentioned, AT&T - Communications now operates the KANS-A-N network. It is a KCC decision to discontinue the TELPAK rates, which are a part of the KANS-A-N system. Nevertheless, that KCC decision mirrors an FCC decision at the interstate level. Many of the KANS-A-N communications are intra-LATA. Consequently, AT&T must reimburse Southwestern Bell Corporation for use of its facilities in those cases. This reimbursement is controlled by KCC access tariffs.

American Telephone and Telegraph - Information Systems. AT&T - IS is primarily in the business of selling and servicing CPE. A relationship with AT&T - Communications exists only at the corporate levels. Nevertheless, the two entities are generally not in competition, with certain limited exceptions to that generalization. AT&T - IS is in competition with Southwestern Bell Telecom for sale and installation of CPE. As previously mentioned virtually all of the existing CPE at state agencies is owned by AT&T - IS. The existing CPE is leased to users at rates established by the FCC. Those rates will prevail until December 31, 1986.

Southwestern Bell Telephone Company. This entity is allowed to offer local exchange service; and intrastate/intra-LATA long distance service. Southwestern Bell Corporation is not allowed to sell CPE or to offer inter-LATA long distance services.

Southwestern Bell - Telecom. This corporation exists for the purpose of selling and servicing CPE. Its relationship with Southwestern Bell Corporation exists only at the corporate level. Southwestern Bell - Telecom cannot manufacture CPE.

Intrastate/Intra-LATA Services. Presently, competition does not exist in Kansas for Intrastate/Intra-LATA long distance services. The KCC has not approved other carriers for this type of service. Apparently, state regulatory procedures vary with respect to approval of other carriers for provision of intra-LATA service.

Intrastate/Inter-LATA Services. Competition does exist for inter-LATA services within Kansas. The following carriers have been authorized to provide inter-LATA services in Kansas: MCI, Sprint, Western Union, and AT&T.

### Impact of State Purchasing Statutes

K.S.A. 75-3739 (Attachment II) mandates that all purchases and contracts be based on competitive bids, unless exempted by certain criteria enumerated in the section. That statute applied to most state purchases; however, prior to divestiture and deregulation, it had little applicability to acquisition of telecommunications services. Given deregulation of many items of equipment and service it appears possible that the state should be competitively bidding some of its telecommunications expenditures.

K.S.A. 75-3739 Exclusions. This statute allows exemption from competitive bidding for contractual services where no competition exists (K.S.A. 75-3739(1)(A)). Prior to divestiture, this exclusion covered virtually all leases involving telecommunications services or equipment, a condition that no longer exists. Additionally, K.S.A. 75-3739(1)(C) allows a competitive bidding exclusion in cases where rates are fixed by law or ordinance; however, strict interpretation of that statute appears to limit this exclusion to purchase of certain chemicals and laboratory supplies by state educational institutions. Nevertheless, K.S.A. 75-3739(1)(C) has also been interpreted to imply that any service in which rates are controlled by law are exempt from competitive bidding. The Legislature may wish to consider modifying the state purchasing laws to clarify this area; particularly if it intends to allow state competitive bidding exclusions for FCC or KCC tariffed services.

Local Exchange and Intra-LATA Long Distance. These services would appear to have continued exemption from competitive bidding, as no competition exists. Consequently, K.S.A. 75-3739(1)(A) would continue to be applicable.

Interstate and Intrastate/Inter-LATA Long Distance. These services appear to no longer be exempt by K.S.A. 75-3739(1)(A), as competition does exist for interstate long distance and intrastate/inter-LATA services. Whether these services should be competitively bid depends upon interpretation of K.S.A. 75-3739(1)(C).

Customer Premise Equipment. Clearly acquisition of new CPE must be competitively bid, as it has been in all instances of state-owned CPE. Whether lease of existing CPE should also be competitively bid again depends upon interpretation of K.S.A. 75-3739(1)(C).



## Technological Environment

Telecommunication services have been dramatically impacted by technological improvements during recent years. These improvements have been both the result of digital technology and the need to use telecommunications services for high speed data transmission.

Digital vs. Analog Technology. Digital technology is considered state of the art in much of the telecommunications industry. Digital technology features transmission by generating pulses of electromagnetic energy in a discontinuous (i.e. on/off) pattern. Digital technology was largely preceded by analog technology in which a transmission is analogous to some other thing. Analog signals vary over a continuous range analogous to another function or activity. Everyday examples of digital vs. analog technology may be found in watches, thermometers, and gauges. As applied to telecommunications, digital technology allows much more rapid transmission of communications. Many present telecommunications systems contain both analog and digital technology, which reduces the overall communications to no faster than analog level transmissions.

This condition could be equated to a one-lane bridge on a thoroughfare. All traffic must slow and merge onto the one-lane bridge. Whether such slowing is a problem largely depends upon the speed and volume of traffic. If traffic is sparse and moves slowly, then a one-lane bridge poses no problem. Conversely, if heavy traffic conditions prevail at high speed, then a one-lane bridge becomes a considerable bottleneck.

Similarly, if a telecommunications system is being used largely for voice transmission, then the existence of analog technology is likely to be transparent to the user. Conversely, if users are attempting to conduct data transmission, then analog technology provides very slow and therefore expensive communications.

Technology of the Present System. The present state telecommunications network is largely analog technology. While some individual phones are digital, many are analog. Similarly, many of the PBX switches are analog, as is the KANS-A-N switching system located in Topeka. While parts of the AT&T transmission system are probably digital, the overall KANS-A-N system is considered to be of analog technology. Consequently, it can only be used for voice or slow speed data communications. Private lines are necessary, which bypass the KANS-A-N switch, when higher speed data transmission is desired. Presently, there are approximately 70 private lines that are data circuits. This compares to approximately 800 communication circuits on the KANS-A-N system which are voice circuits (or possible slow data circuits). Presently, it would appear that voice communications are the overwhelming majority of long distance telecommunications. Nevertheless, this may not necessarily be reflective of demand, as additional data transmission might occur, were it not necessary to acquire higher cost private lines.

## Areas of Potential Legislative Concern

Obviously, the area of telecommunications is one that could receive considerable legislative review, particularly given potential consideration of a state-

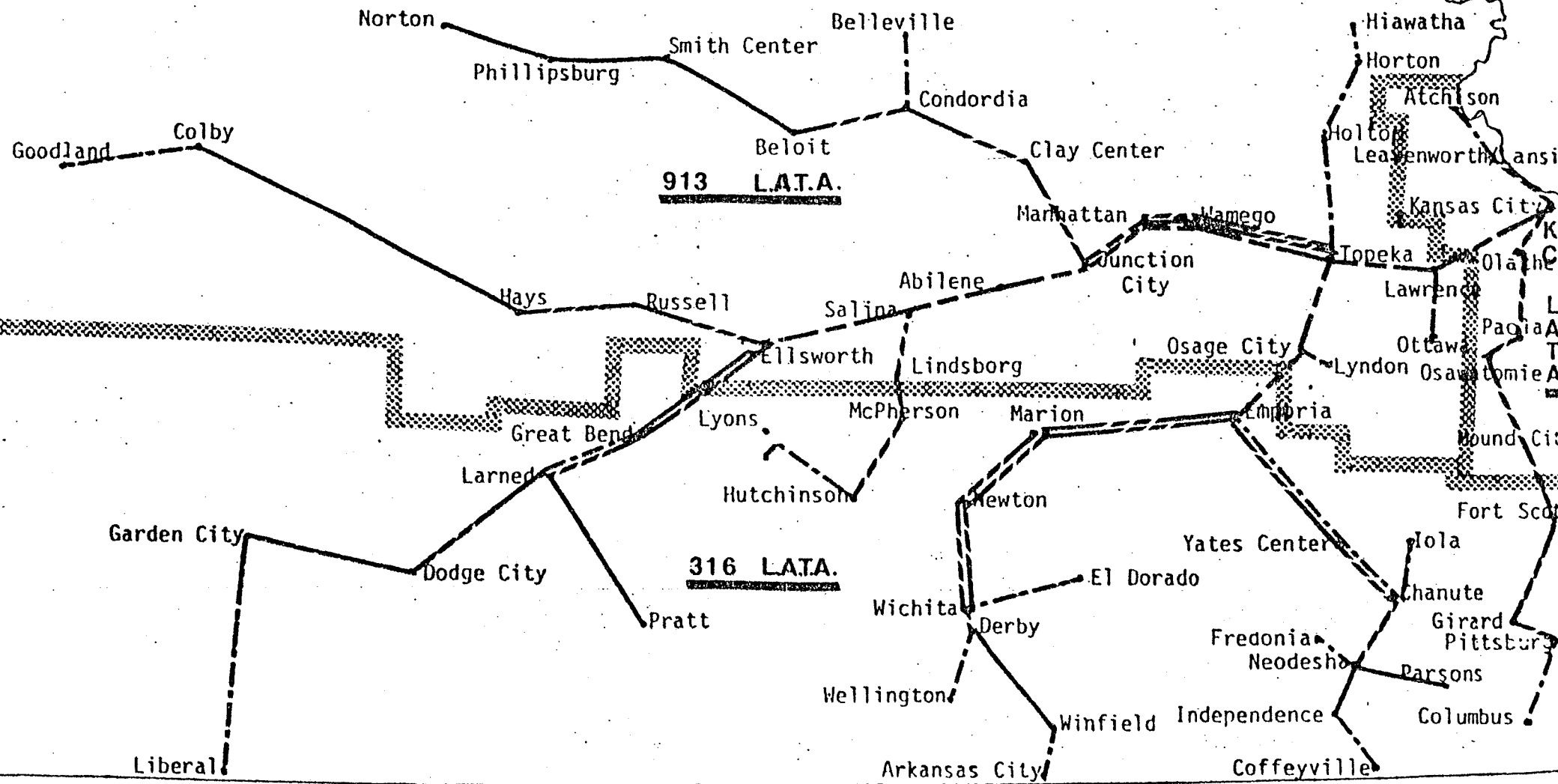
owned telecommunications system. The following areas appear to be relevant for that consideration:

1. The magnitude of a system the state wishes to acquire and the cost of that system. Should a state of the art system, capable of accommodating future expansion, be secured or should upgrades be acquired as demand dictates?
2. If upgrades are to be acquired on a gradual basis, how can a patchwork or piecemeal system be averted?
3. Conversely, if a complete state of the art system is acquired initially, how can acquisition of capacity that will not be utilized be averted?
4. Can the state gradually upgrade the capacity of its telecommunications system through phased replacement of CPE and switching gear?
5. Is enough known concerning the full impact of divestiture and deregulation to accurately predict the telecommunications costs likely to result from competition in the marketplace.
6. What are the manpower requirements of an owned system vs. a leased system, particularly given telecommunications needs following a severe storm or other natural disaster?
7. What technology would provide the most up to date system at the least cost?

KANSAS AGENCY NETWORK

KANS-A-N

achment I



240 cks	-----	D Telpak
60	—————	C Telpak
24	—————	B Telpak
12	-----	A Telpak

and reports shall make proper adjustments in the accounts of the state agency or agencies concerned.

(7) Prescribe the manner of making chemical and physical tests of samples submitted with bids and samples of deliveries to determine compliance with specifications and the manner in which state agencies shall inspect all deliveries of supplies, materials and equipment.

(8) Prescribe the amounts and form of, accounting for and disposition of any deposit or bond required to be submitted with a bid or a contract and the amount of any such deposit or bond to be given for the faithful performance of a contract.

(9) Require reports by state agencies of stocks of supplies, materials and equipment on hand and prescribe the form of such reports and deliver copies of such reports to the director of administrative services and the director of accounts and reports.

**History:** L. 1953, ch. 375, § 38; L. 1963, ch. 432, § 1; L. 1972, ch. 332, § 79; L. 1983, ch. 290, § 3; July 1.

**Cross References to Related Sections:**

Acceptance of certificate of deposit in lieu of public works bond, see 60-1112.

**75-3739.** Competitive bids, exceptions; reports of emergency purchases; specifications; rejection of foreign products authorized; certain highway contracts exempt; exemption of certain state agency contracts, guidelines; approval of state agency leasing of real property. In the manner as provided in this act and rules and regulations established thereunder:

(1) All contracts for construction and repairs, and all purchases of and contracts for supplies, materials, equipment and contractual services shall be based on competitive bids, and sales of property shall be to the highest responsible bidder, at an advertised public auction or after advertising for sealed bids in the same manner provided for purchase of property herein as may be determined by the director of purchases, except that competitive bids need not be required: (A) For contractual services where no competition exists; or (B) sales in an established market; or (C) when, in the judgment of the director of purchases, chemicals and other material for use in laboratories, shop and like experimental studies by state educational institutions may be purchased to the best advantage of the state,

or where rates are fixed by law or ordinance; or (D) for items traded in on like items; or (E) when, in the judgment of the director of purchases, an agency emergency requires immediate delivery of supplies, materials or equipment, or immediate performance of services. The director of purchases shall make a detailed report at least once in each calendar quarter to the legislative coordinating council and the chairpersons of the senate and the house of representatives committees on ways and means of all emergency purchases under subsection (1)(E).

(2) If the amount of the purchase or sale is estimated to exceed approximately \$5,000, sealed bids shall be solicited by notice published once in the Kansas register not less than 10 days before the date stated therein for the opening of such bids. The director of purchases may also designate a trade journal for such publication. The director of purchases shall also solicit such bids by sending notices by mail to all active prospective bidders known to the director. All bids shall be sealed when received and shall be opened in public at the hour stated in the notice.

(3) All purchases or sales estimated to exceed approximately \$2,000 but not more than \$5,000, shall be made after receipt of sealed bids following at least three days' notice posted on a public bulletin board in the office of the director of purchases. The director of purchases may also solicit sealed bids by mail in such cases in like manner as provided in subsection (2) of this section.

(4) All purchases or sales estimated to be approximately \$2,000 or less may be made either upon competitive bids or in the open market, in the discretion of the director of purchases but, so far as practicable, shall be based on at least three competitive bids and recorded as provided in K.S.A. 1982 Supp. 75-3740, except that the director of purchases, with the approval of the secretary of administration, may delegate authority to any state agency to make small purchases or sales of less than \$2,000 either on the open market or under certain prescribed conditions and procedures.

(5) Contracts and purchases shall in all cases be based on specifications fixed by the director of purchases. When deemed applicable and feasible by the director of purchases, such specifications shall include

either energy-efficiency standards or appropriate life-cycle cost formulas, or both, for all supplies, materials, equipment and contractual services to be purchased by the state. The director of purchases may reject a contract or purchase on the basis that a product is manufactured or assembled outside the United States. No such specifications shall be fixed in a manner to effectively exclude any responsible bidder offering comparable supplies, materials, equipment or contractual services.

(6) Notwithstanding anything herein to the contrary, all contracts with independent construction concerns for the construction, improvement, reconstruction and maintenance of the state highway system and the acquisition of rights-of-way for state highway purposes shall be advertised and let as now or hereafter provided by law.

(7) Notwithstanding anything herein to the contrary and except as otherwise provided in this subsection (7), the director of purchases, with the approval of the secretary of administration, may authorize state agencies to contract for services and materials with other state agencies, or with federal agencies, political subdivisions of Kansas, agencies of other states or subdivisions thereof, or private nonprofit educational institutions, without competitive bids if: (A) The obligations and duties imposed on, and the benefits and privileges to be received by, each state agency which is a proposed party to the contract does not exceed the authority and powers delegated to such state agency by the legislature, including the authority to enter into the contract; (B) the obligations and duties imposed on the state agency required to perform services or supply materials are within the normal scope of duties of the state agency and the competence of the state agency to perform the contracted services and to deliver the prescribed materials is demonstrated to the satisfaction of the director of purchases; and (C) the director of purchases determines that materials are not available from responsible sources other than state agencies at a lower cost. In addition to the requirements of clauses (A) to (C), inclusive, of this subsection (7), if a contract for services is financed entirely from moneys derived exclusively from the state general fund, the director of purchases, with the approval of the secretary of administration, may autho-

rize state agencies to enter into such a contract for services with other state agencies, or with federal agencies, political subdivisions of Kansas, agencies of other states or subdivisions thereof, or private nonprofit educational institutions, without competitive bids only if the director of purchases determines that comparable services are not reasonably available from responsible sources other than such agencies at a lower cost.

(8) Except as otherwise specifically provided by law, no state agency shall enter into any lease of real property without the prior approval of the secretary of administration. Such state agency shall submit to the secretary of administration such information relating to any such proposed lease as the secretary may require. The secretary of administration shall either approve, modify and approve or reject any such proposed lease.

**History:** L. 1953, ch. 375, § 39; L. 1968, ch. 311, § 2; L. 1975, ch. 450, § 1; L. 1978, ch. 357, § 1; L. 1979, ch. 289, § 5; L. 1980, ch. 279, § 1; L. 1981, ch. 324, § 25; Jan. 1, 1982.

**Cross References to Related Sections:**

Purchase by state agencies of products manufactured by handicapped persons, see 75-3317 et seq.

Limitations on certain state agency contracts relating to data processing, see 75-4705, 75-4706.

Preparation of bid specifications for acquisition of data processing equipment, program and systems, see 75-4706.

Sale of highway patrol vehicles, see 74-2124.

**Law Review and Bar Journal References:**

"Survey of Kansas Law: Municipal Corporations," Richard H. Seaton, 27 K.L.R. 269, 274 (1979).

**75-3740.** Same; award of contracts and purchases; preliminary considerations on building construction contracts; records. (a) All contracts and purchases made by or under the supervision of the director of purchases or any state agency for which competitive bids are required shall be awarded to the lowest responsible bidder, taking into consideration conformity with the specifications, terms of delivery, and other conditions imposed in the call for bids.

(b) The director of purchases shall have power to decide as to the lowest responsible bidder for all purchases, but in cases where the dollar amount of the bid received from the lowest responsible bidder from within the state is identical to the dollar amount of

## MEMORANDUM

September 24, 1984

TO: Special Committee on Ways and Means  
FROM: Kansas Legislative Research Department  
RE: Proposal No. 49— Telecommunications Network —  
Telecommunications Planning by Surrounding States

### Introduction

At its August meeting, the Special Committee on Ways and Means began consideration of Proposal No. 49 — State Telecommunications Network. During consideration of this topic, the Committee inquired of telecommunications developments in other states. This memorandum was prepared in response to the Committee's inquiry. All neighboring states were contacted, as were several states that were reported to have major systems in place. A total of 13 states were reviewed either through written reports or telephone contacts. This memorandum generally omits discussion of states that are only planning major improvements in telecommunications, which includes California, Illinois, Missouri, and Utah. It focuses upon states that actually have implemented a plan involving some type of state owned telecommunications equipment.

### Commonality of Telecommunications Problems

Until very recently, most individuals and businesses depended upon their local Bell operating company for all telecommunications services. Similarly, many state governments have depended almost entirely upon Bell operating companies for their telecommunications services. During the course of the staff's review, certain patterns of commonality emerged. These patterns indicate that Kansas' telecommunications situation is not unique. In many respects Kansas situation is typical. Major items of commonality among states include:

1. Many states either have or until very recently have had a configuration of leased customer premises equipment (CPE) and long distance services provided by local Bell carriers.
2. Many states of varying sizes have utilized a long distance network that was tailored for state government (similar to our KANS-A-N), by a local Bell operating company.
3. Those long distance networks are now provided by AT&T Communications.
4. In nearly all cases those networks have been comprised of nonusage sensitive Telpak lines along high volume traffic routes and usage sensitive WATS service along lower volume routes.

5. Telecommunications services have typically been acquired outside state purchasing statutes, due to the lack of competition in the pre-divestiture/deregulation environment.
6. States are now confronting the need to develop contracts and specifications for acquisition of telecommunications services.
7. Every state is reviewing its telecommunications acquisition plan and considering methods of reacting to divestiture and deregulation.
8. Most states implementing a bypass of Bell operating companies have done so very recently.
9. Many states have a statewide microwave system that is used for public safety, law enforcement, or emergency preparedness.

Varying Approaches to Telecommunications  
Problem

Although most states are confronted by the same problem, reactions have varied:

1. Several states are still in the planning stage relative to the decision to acquire a state owned telecommunications system, particularly state owned transmission systems.
2. Subsequent to deregulation, most states have purchased any CPE involved in telecommunications upgrades.
3. Some states have begun a program of acquiring CPE in locations where no upgrade is occurring. Procedures for doing this vary:
  - a. some states have bid certain CPE, principally telephone handsets, replacing existing CPE with new equipment; and
  - b. some states have purchased existing CPE from AT&T.
4. Several states have begun installing their own switching gear and thus eliminated dependence upon Centrex for local telephone communications.
5. Four states (South Carolina, Kentucky, Ohio, and Colorado) have implemented (or are implementing) a backbone inter-city transmission system.
6. Most states have a state telecommunications agency of some type, although their powers vary widely.
7. Financing of telecommunications acquisitions has included purchase, lease/purchase, and certificates of participation.

8. Legislative involvement has varied and in many cases has been limited to appropriations.
9. In all cases the telecommunications planning has been done within the executive branch of government.

### Various State Experiences

As previously mentioned, the Research Department reviewed several states, concerning their approach to telecommunications. Each state for which information was obtained is listed in sections which follow. The states generally have been grouped as follows: (1) those embarking on a state owned inter-city transmission system; (2) those installing major state owned switching apparatus; and (3) those whose efforts have been limited to acquisition of CPE. There is obviously some overlap between these categories, (e.g., states having a state owned transmission system are typically also heavily involved in acquisition of switches or CPE). This is only a categorization of states reviewed, as not all states were contacted.

#### State Owned Inter-City Transmission Systems

Colorado is upgrading the microwave system that was originally installed in the 1950s to serve the Highway Patrol. When upgrades are completed the system will provide a considerable portion of the inter-city communications between state agencies. The system now provides communications from Denver to Grand Junction and services to the remainder of western Colorado will occur this year. The entire upgrade will be completed within two years. This is an analog microwave system. At the time the upgrade began, digital equipment was too expensive. However, that is no longer true. Nevertheless, this system is being used for considerable data transmission. The microwave system has sufficient capacity that devoting channels to slow speed data transmission does not represent a problem for the telecommunication network. Colorado is also replacing a considerable portion of its CPE with newer equipment.

Kentucky also has a microwave transmission system, although the Kentucky equipment is of digital technology. This system was begun in 1974 in response to a natural disaster. It is largely developed around public safety and emergency preparedness functions. Additionally, inter-city communications between other state agencies are being added to the system. The microwave network has been planned and developed for several years. The elimination of Telpak in Kentucky caused excess capacity in the system to be devoted to communications for state agencies other than emergency preparedness and public safety. The system also transmits educational television to 15 regional transmitters. Use of the system for voice communication by state agencies also involves least cost switching system. This switch routes calls over the microwave system or channels secured from AT&T, depending upon which is the less costly.

Ohio is installing a microwave network, which forms a figure eight, with Columbus at the center. The northwest portion of this network is now operational. Remaining portions are under construction, with completion scheduled for May, 1985. When complete, this system will handle virtually all inter-lata communications, however much of the intra-lata communication remains with the Bell operating company. This microwave network was upgraded from that serving the state's public television system.



Ohio is also beginning to purchase some CPE. Some of the older equipment is being replaced with newer equipment. Ohio has also purchased some existing CPE (both PBX's and handsets) from AT&T. The state is of the opinion that the payback period on purchase versus lease is relatively short and therefore views purchase as cost effective, even if the state only retains the equipment for one or two years.

South Carolina is developing an extensive telecommunications system that depends upon digital microwave technology. South Carolina's efforts have been reviewed in several magazines and journals. The system is partially installed and now provides local distribution of video (public television) in most areas. Long distance video transmission is under construction and is estimated to be operational during the spring of 1985. Long distance distribution of voice and data communication is estimated to be operational by January or February, 1986. It has not been decided whether local distribution of voice and data will be a part of the system or remain with a common carrier.

The planning for South Carolina's system occurred prior to divestiture. The system developed around Southern Bell's inability to meet the state's desire for digital transmission, according to Michael Copeland, former Director of the South Carolina General Services Division. In a presentation at the 1984 annual convention of the National Conference of State Legislatures, Mr. Copeland noted the competition that now exists and questioned whether the state would embark upon its own system in the post divestiture environment.

#### State Owned Switching Systems

Iowa is presently obtaining bids for a switching system that will serve agencies in the Capitol Complex in Des Moines. This bidding procedure is designed to allow the vendor to prescribe the number of switches. Additionally, bidders are allowed to propose switches on a lease, purchase, or lease-purchase basis. Consequently, it is too early to determine whether this will become a state owned system. Nevertheless, Iowa is upgrading its switching system.

Iowa has replaced all of the telephone handsets in the Capitol Complex. The old phones were replaced with ITT units that were purchased by the state on a competitive bid basis. Iowa also utilizes a fiber optic link between Des Moines and Ames; however, this link is from Northwestern Bell and does not belong to the state.

New Mexico began a three phase plan approximately three years ago. The first phase has been installed and involves a state owned switching system for the agencies located in Santa Fe. This system was installed prior to divestiture and features equipment by GTE.

Phase two is now being installed and involves a switching system for agencies in Albuquerque. This system is being obtained through a lease purchase agreement with Mountain Bell.

Phase three is being planned and would involve a state owned microwave transmission system. Presently, inter-city transmission is largely obtained from Mountain Bell. The state has a limited microwave network that is used for data transmission.

Pennsylvania is presently involved in upgrading its switching systems throughout the state to feature all digital switches. However, this major upgrade is being obtained on a leased basis from Bell of Pennsylvania. The state has installed several PBX units that are state owned. Pennsylvania is investigating the possibility of acquiring existing CPE through purchase from AT&T. At this point it seems likely that the state will acquire all handsets and small PBX's in which the purchase would be cost effective in less than 18-months. The state is not presently contemplating installation of state owned inter-city transmission systems.

Pennsylvania has contracted with Boeing Computer Services for development of a data processing network. The contract includes development of common data protocols with a control center in the Capitol city. This contract was initiated to coordinate a myriad of independent agency data networks, which had evolved over several years. The contract specifies development of a common network, which will initially serve seven agencies. The control center is to begin testing in January 1985. The Boeing contract involves joint network operation between Boeing and state staff. It includes Boeing training the state agency personnel. Boeing will exit from the project in June, 1986. The network has as an immediate goal a reduction in the number of data circuits, through a coordinated communications network, without a reduction in the actual number of communications.

Washington's telecommunications network continues to involve equipment and services that are leased from the Bell operating company. The state is now studying alternatives and is circulating a request for information, which allows vendors to propose alternatives to telecommunication service provision.

Washington has installed a state owned switching system for its long distance network. The switching system features equipment by Action Honeywell. This switching system includes nodes in four cities and includes a "least cost routing" of calls, utilizing those lines that are least costly to the state. This system involves employee authorization codes and access levels, which causes some calls to be "put on hold" until less costly lines are available.

#### State Owned Customer Premise Equipment

As previously mentioned, several of the states that have installed state owned transmission or switching systems are also heavily involved in acquisition of CPE. Among states reviewed, Texas is the only one that is involved only in CPE replacement at this time. Nevertheless, Texas is conducting a feasibility plan for state owned switches and transmission systems. Texas has acquired some new equipment but is also involved in purchasing some embedded CPE.

#### Conclusions and Observations

State strategies for handling the changing telecommunication environment vary. Several states have implemented some type of a state operated telecommunication program. However, several states have not yet implemented a specific plan, although every state contacted appears to either have some type of bypass plan or be

exploring the possibility of such. Coincidentally, two of the larger states (California and Illinois) have not yet embarked upon implementation of a plan. Both of those large states are still almost entirely dependent upon AT&T and local Bell operating companies for the full range of their telephone systems.

As one views the variety of implementation strategies, no single method emerges as the prevalent procedure. Several considerations do seem to emerge from the review of state reactions to divestiture.

1. Virtually every state contacted seems to express a willingness to experiment with state owned CPE.
2. Several states have viewed acquisition of existing CPE as a cost effective measure, even if that CPE is retained for only a relatively short time period.
3. Among states acquiring totally new telephone handsets, the typical procedure had involved a single bid for a very large quantity of phones.
4. Several states have invested in state owned switch gear, viewing an inter-city transmission system as a final component, which could be added later.
5. Among those states having a state owned transmission system, microwave technology seems prevalent.
6. Among states having a transmission system, all seemed to have some excess system capacity. However, none was acting as resellers of that capacity.
7. A state owned transmission system does enhance possibilities for public television. Seemingly, an option would be soliciting local participation in the cost due to this form of transmission.
8. One state has upgraded its existing law enforcement microwave system for other types of voice and data transmission. However, another state's strategic plan indicates that a careful feasibility study of such an upgrade is necessary to determine whether it would be practical.
9. Due to the changing technology, states must be careful to avoid early obsolescence in purchased equipment. For example, the Colorado microwave system, not yet totally complete, is of analog technology. Similarly, some argue that phase one of New Mexico's switching gear was obsolete at the time of installation.
10. There is the question as to whether the post divestiture environment will bring further savings, due to competition, in both leased and purchased acquisitions.

## HOUSE BILL No. 2027

By Special Committee on Ways and Means

Re Proposal No. 49

12-19

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0018 AN ACT concerning telecommunications services for state  
0019 agencies; relating to procedures for the acquisition thereof;  
0020 disposition of fees and charges collected therefor; amending  
0021 K.S.A. 75-4710 and repealing the existing section.

0022 *Be it enacted by the Legislature of the State of Kansas:*

0023 New Section 1. (a) The telecommunications negotiating  
0024 committee is a three-person committee composed of (1) the  
0025 secretary of administration, or a person designated by the secre-  
0026 tary of administration, (2) the director of purchases, or a person  
0027 designated by the director of purchases, and (3) the director of  
0028 the division of information systems and communications, or a  
0029 person appointed by the director of information systems and  
0030 communications. The telecommunications negotiating commit-  
0031 tee may negotiate contracts for telecommunications services to  
0032 be entered into by the secretary of administration for state  
0033 agencies and other entities as provided in K.S.A. 75-4709 and  
0034 amendments thereto.

0035 (b) Prior to negotiating for telecommunications services, the  
0036 committee shall advertise for sealed proposals. The committee  
0037 then may negotiate with one or more firms submitting proposals  
0038 and select from among those submitting such proposals the party  
0039 to contract with for the purpose of providing telecommunications  
0040 services.

0041 (c) Contracts entered into pursuant to this section for tele-  
0042 communications services shall not be subject to the provisions of  
0043 K.S.A. 75-3738 to 75-3740a, inclusive, and amendments thereto.

0044 New Sec. 2. Except as otherwise provided by law and sub-  
0045 ject to the provisions of appropriations acts relating thereto, all

( Attachment 3 )  
1/16/85

0046 fees and charges imposed by the secretary of administration for  
0047 telecommunications services provided or contracted for by the  
0048 secretary shall be deposited in the state treasury and credited to  
0049 the state communications services fund.

0050 Sec. 3. K.S.A. 75-4710 is hereby amended to read as follows:  
0051 *75-4710. As used in sections 1 and 2 and K.S.A. 75-4709 and*  
0052 *75-4712, and amendments to those sections, telecommunications*  
0053 *services include, but shall not be limited to, any transmission,*  
0054 *emission or reception of signals of any kind containing commu-*  
0055 *nications of any nature, by wire, radio, optical or other elec-*  
0056 *tromagnetic means, and includes all facilities, equipment, sup-*  
0057 *plies and services for such transmission, emission or reception.*  
0058 *Telecommunications services shall include data transmission*  
0059 *services and equipment but shall not include data processing*  
0060 *services otherwise provided or authorized by the division of*  
0061 *information systems and communications, or the acquisition,*  
0062 *retention or use of any data processing equipment otherwise*  
0063 *authorized by the division of information systems and commu-*  
0064 *nications.*

0065 Sec. 4. K.S.A. 75-4710 is hereby repealed.

0066 Sec. 5. This act shall take effect and be in force from and  
0067 after its publication in the Kansas register.