

# PERFORMANCE AUDIT REPORT

## High-Capacity Telecommunications Services: Examining Local Telephone Companies' Compliance with the 1996 Telecommunications Act

A Report to the Legislative Post Audit Committee  
By the Legislative Division of Post Audit  
State of Kansas

April 2000



# ***Legislative Post Audit Committee***

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## ***Legislative Division of Post Audit***

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April 20, 2000

To: Members, Legislative Post Audit Committee

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This report contains the findings, conclusions, and recommendations from our completed performance audit, *High-Capacity Telecommunications Services: Examining Local Telephone Companies' Compliance with the 1996 Telecommunications Act*.

The report contains two appendices that provide information about the costs for Internet access that a sample of school districts were incurring.

The report includes several recommendations for the Commission. We would be happy to discuss these recommendations or any other items in the report with any legislative committees, individual legislators, or other State officials

Barbara J. Hinton  
Legislative Post Auditor



**EXECUTIVE SUMMARY**  
**LEGISLATIVE DIVISION OF POST AUDIT**

**Question 1: What Did the 1996 Telecommunications Act  
Require Local Phone Companies to Provide  
To School Districts, and Has the Corporation Commission  
Enforced Those Requirements?**

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**The 1996 Telecommunications Act required local phone companies to promise to provide existing and newly ordered “broadband” services at discounted rates.** . . . . page 3  
*The portion of the Act that relates to broadband services for school districts is K.S.A. 66-2005(b)(1). Other sections of the Act make the Commission responsible for enforcing phone companies’ commitment to provide broadband services.*

**The Commission’s actions haven’t been sufficient to ensure that local phone companies provide broadband services at discounted rates.** . . . . page 4  
*Commission staff determined that phone companies committed to provide discounted broadband services. However, Commission staff have chosen to rely on customer complaints and phone company filings to monitor the provision of discounted services. We identified several weaknesses in the Commission’s process for reviewing contracts and tariffs, including: staff couldn’t locate the documentation showing the original analyses they’d done to review a tariff submitted by Southwestern Bell, staff hadn’t reviewed 20 contracts to ensure the appropriate rates were being charged, and the preliminary results of a recent data request by the Commission showed that there may be additional contracts for staff to review. These problems raise questions about the effectiveness of the Commission’s monitoring efforts.*

**The Telecommunications Act didn’t require phone companies to provide uniform rates to school districts, or to build a network that would interconnect all school districts.** . . . . page 8  
*When this audit was approved, some people thought the Act required local phone companies to charge uniform prices for broadband services. It doesn’t. That requirement applies to ISDN—a different type of telephone service.*

*Some people also may have thought the Act required phone companies to build a network linking all school districts and other public entities to each other and allow high-speed access to the Internet. However, the Legislature amended the law in 1998 to require phone companies to provide broadband services only when a customer orders it.*

**Question 1 Conclusion:** . . . . page 9

**Question 1 Recommendations:** . . . . page 9

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***Question 2: Why Do the Costs That School Districts Pay For Internet Access Vary So Much?***

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**In August 1999, the Department of Education sent a survey to all school districts to help obtain information about each district’s technological capabilities.** . . . . page10  
*Information districts reported showed wide variations in their high-speed Internet connection costs. Because of inaccuracies and inconsistencies in some of the information reported by the districts, the Department’s survey results shouldn’t be used as a basis for making any policy or funding decisions.*

**In August 1999, our 13 sample districts’ monthly Internet charges varied from about \$300 to \$2,700 but those charges have dropped and become more uniform since then.** . . . page 11  
*We identified several important factors that help explain why the charges varied. For example, districts in southwest Kansas are charged an additional amount because their connections cover long distances, while two districts have arrangements that allow them to receive some services at no charge. Because of federal subsidies, many districts actually owed less for their Internet access than what they were billed.*

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### **Question 3: Would KAN-ED Be Needed if Certain Provisions of the 1996 Telecommunications Act Had Been Fully Implemented?**

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**The KAN-ED proposal and Telecommunications Act both would allow school districts to obtain broadband services, but they are very different.** *The Telecommunications Act allowed districts to acquire point-to-point broadband connections at discounted prices. KAN-ED is a program that's intended to create a State education technology network. It would do so by offering each school district one free broadband connection to the existing Statewide telecommunications network; the State would pick up that cost. KAN-ED also would provide school districts with access to the Internet, possible access to Internet2, the ability to use distance learning technologies, and free training and technical support.* . . . page 15

**Although initially all districts could have obtained high-speed Internet access under the Telecommunications Act, not many districts have it.** *We identified several reasons, including: some districts may not have been aware of the provision allowing a discounted rate; some district officials told us that such connections were too expensive or they didn't need that much capacity; and after a 1998 FCC ruling, districts could no longer get the discounted rates offered under the Act for high-speed Internet connections.* . . . page 18

**The proposed KAN-ED network is more likely to achieve the goal of getting all districts hooked up with high-speed lines to the Internet.** *Without KAN-ED, or some program like it, it could be many more years before all districts have high-speed Internet service and are able to build the infrastructure needed to take advantage of those services. Without some way of linking districts to each other through high-speed lines, distance learning availability is limited Statewide. The services offered by KAN-ED go beyond what districts can get today. Officials hope that some costs will be offset by federal E-rate subsidies and private resources. The E-rate application is based on schools getting access to Internet2. However, this access hasn't yet been approved.* . . . page 20

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# High-Capacity Telecommunications Services: Examining Local Telephone Companies' Compliance with The 1996 Telecommunications Act

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The Kansas Telecommunications Act of 1996 required each local telephone company to commit to provide existing and newly ordered "broadband" or high-speed telecommunications services to schools, hospitals, libraries, and other State and local government entities at discounted prices. This requirement is spelled out in K.S.A. 66-2005(b)(1).

During the 2000 legislative session, legislators received information showing that individual school districts appeared to pay vastly different amounts for the high-speed connections they used to access the Internet. This raised questions about whether telephone companies had complied with the requirements of the Telecommunications Act, and whether the Kansas Corporation Commission had taken the actions needed to enforce these statutory provisions.

At the same time, legislators were considering a bill to establish the KAN-ED Program, which will form a State education network that connects school districts and public libraries to the existing Statewide telecommunications network. They questioned whether this program might not be needed if local telephone companies complied with the statutory provisions.

This performance audit answers the following question:

**Has the Kansas Corporation Commission enforced the 1996 Telecommunications Act's provisions requiring local telephone companies to provide broadband services to local school districts at discounted prices, and if not, why not?**

To answer this question, we reviewed the 1996 Telecommunications Act and spoke with Corporation Commission staff, legislative staff, and telephone industry officials about the Act and other applicable parts of State law. We also reviewed certain Commission records related to local telephone companies' regulatory reform plans. In addition, we reviewed a 1999 Department of Education survey of school districts and examined a sample of district invoices for Internet access and services.

Finally, we interviewed officials from the Commission, the Department of Education, and other State agencies about the proposed KAN-ED program.

A copy of the scope statement approved by the Legislative Post Audit Committee for this audit is included in Appendix A. Because of the time frame for this audit, we had to narrow its scope to focus only on how the provisions and enforcement of K.S.A. 66-2005 (b) have affected Kansas school districts. For reporting purposes and to better address the concerns behind this audit, we've also separated the audit question into three questions.

In conducting this audit, we followed all applicable government auditing standards.

## **Question 1: What Did the 1996 Telecommunications Act Require Local Phone Companies to Provide to School Districts, and Has the Corporation Commission Enforced Those Requirements?**

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The 1996 Telecommunications Act required local telephone companies to promise to provide existing and newly ordered broadband services at discounted rates to schools and other public entities. While the Commission has ensured local phone companies have filed the required commitments, its review process for ensuring that discounted rates are contained in contracts and tariffs has several weaknesses. In addition, the Act didn't require telephone companies to provide a uniform discounted rate to school districts or to build a network that would interconnect all school districts. These and other findings are described in the sections that follow.

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### ***The Telecommunications Act Required Local Phone Companies To Promise To Provide Existing and Newly Ordered "Broadband" Services at Discounted Rates***

Before discussing what the law requires, it's important to understand what "broadband" service means, since that term is used throughout this audit. Broadband refers to the ability to transmit or carry more than one set of signals at a given time. It's defined in State law as the transmission of digital signals at speeds of at least 1.5 megabits per second. (Thus the notion of "high speed.")

Broadband transmissions can be carried across copper wires, across fiber optic lines, or via wireless facilities, all of which can simultaneously transmit voices, data, and video from one point to another. According to a recent article in *State Government News*, broadband technology allows users to access the Internet up to several hundred times faster than common 56K dial-up modems.

**The portion of the 1996 Telecommunications Act that relates to broadband services for school districts is K.S.A. 66-2005 (b)(1).** This section of the Act placed certain requirements and responsibilities on local phone companies:

- ! it called for local phone companies to file a regulatory reform plan with the Corporation Commission by the end of 1997 that included "a commitment to provide existing and newly ordered point-to-point broadband services to: any hospital...; any school...; any public library; or other state and local government facilities at discounted prices close to, but not below, long-run incremental cost."

Under this section of the Act, if a school district wanted to acquire a broadband service from a local telephone company, the district had to request this service, and the company had to provide it at a discounted rate. If a district already had that service, the company should have amended the amount it charged the district for that service in July 1996 to reflect the discounted rate.

As described in the accompanying box, however, a 1998 ruling by the Federal Communications Commission (FCC) has effectively pre-empted the discount provided for in State law when the broadband service is used to access the Internet. Rates for such services are now under the FCC's jurisdiction.

**A 1998 FCC Order Significantly Limits  
K.S.A. 66-2005(b)(1)**

A 1998 Federal Communications Commission order ruled that broadband lines used to access the internet almost always fall under the FCC's jurisdiction. This ruling significantly limits when the discount for school, libraries, hospitals, and government entities called for in K.S.A. 66-2005(b)(1) can be given. That's because most "point-to-point" services contemplated by the law will likely involve at least 10% Internet usage, and thus will be regulated at the federal level, not the State. However, any point-to-point broadband service that involves strictly intrastate communications (for example video-conferencing) would be still eligible for the discount.

**The Act makes the Corporation Commission responsible for enforcing phone companies' commitment to provide discounted broadband services.** The Commission is responsible for regulating intrastate (not interstate) telecommunications. The 2 sections of the Act creating the Commission's responsibility are:

- ! K.S.A. 66-2002(e), which gives the Commission the responsibility to "review, approve, and ensure compliance with regulatory reform plans."
- ! K.S.A. 66-2005(b)(2), which gives the Commission the authority to reduce prices charged for broadband services if the commitment to provide the discounted rates is not being kept.

***The Commission's Actions Haven't Been Sufficient To Ensure That Local Phone Companies Provide Broadband Services at Discounted Rates***

As noted above, the Telecommunications Act made the Commission responsible for ensuring that local phone companies had "committed" to providing discounted broadband services, and for ensuring that those companies have kept their commitments. We looked at the Commission's actions in both areas.

**Commission staff acted to ensure that phone companies had committed to provide discounted broadband services as part of their regular review of those companies' regulatory reform plans.** When this review was completed, the Commission issued an order declaring that staff had reviewed these commitments and found them to be sufficient.

## Glossary

### Telecommunication Connections

**Broadband:** A type of high-speed data transmission in which a single wire carries several channels at once. For example, cable television uses broadband transmission to carry many channels through one cable. Kansas law defines broadband as transmissions at speeds equal to or greater than 1.5 megabits per second.

**Fiber optic:** A type of line that is made of glass or plastic threads that are bundled together. Each thread is capable of transmitting messages as light waves. Fiber optic cables allow information to be transferred digitally, and can carry much more data than metal wires.

**ISDN:** A type of telephone line that is capable of carrying one voice and one data transmission at the same time. It allows a person to be talking on the phone and using the internet simultaneously, through the same line. Basic rate ISDN does not meet the definition of broadband.

**T1 line:** A line that supports transmissions at rates up to 1.5 megabits per second. The line actually consists of 24 individual channels, each of which supports 64Kbits per second and can be configured to carry voice or data traffic. Kansas law makes a T1 line the smallest type of broadband line within Kansas.

### Types of Telecommunication Links

**Internet service provider:** A company that purchases direct access to the Internet and then resells that access to subscribers for a monthly fee. Examples include national companies like America Online and local companies like Networks Plus in Topeka. The company sometimes also performs additional services, such as providing e-mail or maintaining the subscriber's web page.

**Internet2:** A private high-speed network among higher education institutions to aid education and research activities. More than 170 universities participate in developing and testing new network technologies and applications such as digital libraries and virtual laboratories.

**KANREN:** The Kansas Research and Educational Network is made up of higher education institutions in Kansas and some school districts. KANREN uses portions of the State's main telecommunications network (KANS-A-N) to provide its members with network, training, and support services tailored to the needs of educational and research institutions.

**Point-to-point connection:** A dedicated telecommunications circuit between two computers. For example, a line connecting 2 schools that is used only for transmissions between those schools.

To verify the staff's efforts, we reviewed the documentation submitted by 40 local phone companies. We identified one instance in which a clear written promise hadn't been made. In this case the company gave staff a verbal commitment.

**Commission staff have chosen to rely on customer complaints and phone company filings to monitor those companies' provision of discounted broadband services.** Commission officials told us that State law is usually very specific about the actions they should take. However, K.S.A. 66-2005(b)(2) doesn't specify how the Commission should determine whether companies are keeping their commitments to provide discounted broadband service. In the absence of specific statutory language, they said, their normal practice was to enforce the provisions of a statute on a complaint basis, rather than to take any proactive measures.

State law also requires local phone companies to file all tariffs for rate changes and all customer contracts with the Commission. Staff told us that, when they receive contracts or tariffs to provide discounted broadband services under the Act, their normal practice is to review those documents to ensure that the price is appropriately discounted.

Commission staff told us they hadn't received any complaints about the availability or prices of broadband services since the Telecommunications Act was passed. Thus, there was nothing for us to review in this area. In examining information related to the Commission's review of tariffs and contracts, however, we identified several weaknesses.

**We identified several weaknesses in the Commission's process for reviewing contracts and tariffs for broadband services to ensure that prices have been appropriately discounted.** The problems we identified were as follows:

- ! Commission staff told us they'd received only one tariff to provide discounted broadband services to schools since the Act was passed, but they couldn't locate the documentation showing the analyses they'd done. After the Telecommunications Act was passed, Southwestern Bell filed and the Commission approved a tariff that contained the company's proposed Statewide rates for providing discounted broadband services. Commission staff told us they'd analyzed this tariff to ensure it was discounted in accordance with the Act, but they couldn't find any of the documentation relating to their analysis. As a result, we couldn't verify that Commission staff had appropriately analyzed this proposal when it came in. (During this audit, Commission staff re-

analyzed the data to ensure that the tariff was properly discounted, and concluded that it was. We reviewed the methodology they used and found it to be reasonable.)

- ! At the end of the audit, Commission staff told us they'd identified one additional contract that'd been filed in 1997 to provide discounted broadband service to a school district. No work had been done to verify the reasonableness of the proposed discounted rates. (Commission staff have since contacted the company and requested the appropriate information to conduct such a review.)
  
- ! Preliminary results of a recent data request by the Commission showed that a number of phone companies reported they were providing discounted broadband services under the Act. Some of those phone companies reported they had previously submitted contracts for the Commission's review. Staff told us they'd initiated the data request because one legislator had indicated he was aware of broadband services being provided at discounted rates, and Commission staff were unaware of those situations.

Phone company responses were due March 1. Only 28 of 40 phone companies have replied so far, so the results aren't final. Because Commission staff didn't inform us about the data request until the last week of the audit, we didn't have time to review the responses that had been submitted.

- ! Commission staff hadn't reviewed previous contracts to identify which phone companies should have applied the discounted rate retroactively for existing customers. They recently identified at least 19 contracts that had been filed before the Telecommunications Act became effective that may be subject to discounted rates for broadband services because of the retroactive nature of the law. Staff hadn't initiated any investigative work on these contracts.

Such problems raise questions about the effectiveness of the Commission's efforts to ensure that rates aren't implemented until the Commission approves them, and that the rates being charged represent an appropriately discounted rate.

Until Commission staff receive all the survey results and complete their reviews of the contracts discussed above, no one can say whether there's a problem with local phone companies not filing contracts as required, or with Commission staff not reviewing and approving those contracts. This doesn't necessarily mean that school districts haven't gotten the discounted broadband services they should have received. But again, that can't be known until the staff's review is completed.

The problems described above highlight the risk in the Commission's reactive approach to ensuring compliance with this portion of the Telecommunications Act. The Commission has chosen not to do a lot of proactive assessments. However, taking

some proactive steps to assess compliance levels, including periodic surveys of phone company practices and service levels, would provide better assurance that phone companies are following the law.

***The Telecommunications Act Didn't Require Phone Companies To Provide Uniform Rates to School Districts, or To Build a Network That Would Interconnect All School Districts***

K.S.A. 66-2005(b)(2) requires phone companies to make “a commitment to provide basic rate ISDN service or the technological equivalent at prices which are uniform through the carrier’s service area.”

When this audit was approved, it was clear some people thought that the provisions of Section (b)(2) of K.S.A. 66-2005 requiring uniform rates for services applied to high-speed broadband services. It doesn't. That's because ISDN service is a different type of service than broadband service. The profile box below

provides some information about ISDN service.

**Basic Rate ISDN Service Isn't the Equivalent of Broadband Service**

ISDN service is a type of telephone line that's capable of carrying one voice and one data transmission simultaneously. In other words, it allows a person to talk on the phone and use the Internet at the same time, through the same line. Basic rate ISDN service transmits much less data per second than a broadband connection. When the Telecommunications Act was passed originally, K.S.A. 66-2005(b)(2) contained language that indicated the uniform rates provision was “designed to stimulate the development of an extensive residential market” for basic rate ISDN services. Today, because of technological improvements, many customers would not choose to contract for ISDN service. Instead, they would likely choose a type of service known as DSL. According to Commission officials, DSL service is faster and costs less.

When the audit started, we also heard that some people thought the Act required local phone companies to build a network that would link all school districts, libraries, hospitals, and local units of government through broadband services and allow access to the Internet. This idea may have been based on K.S.A. 66-2005(a).

When the Telecommunications Act was originally passed, it contained a requirement that phone companies

had to deploy enhanced universal services, which includes broadband services, by July 1, 2001. This meant that phone companies would have had to build an infrastructure that was capable of providing broadband services to anyone. In 1998, this section of the law was amended. Instead of being required to offer broadband services to all customers, the amendment allowed local phone companies to provide broadband services only when a customer orders it. Commission staff indicated no such orders have been received.

Another law, K.S.A. 66-1,197 (TeleKansas II), passed in 1994, required the completion of a fiber optic network for public high schools in areas served by Southwestern Bell in Kansas. This law is further discussed in Question 3.

**CONCLUSION** The Telecommunications Act of 1996 provided a means for individual school districts to purchase broadband services at a discounted rate. The Act didn't require local phone companies to construct a network connecting school districts, nor did it require them to charge uniform rates for broadband services. It simply required them to promise to provide those services at a rate slightly above their long-run incremental cost. The Corporation Commission is responsible for ensuring that companies agree to provide the discount for intrastate services, and for ensuring that they do. However, given the problems we identified in the Commission's process for reviewing contracts and tariffs, there is a risk school districts and others have overpaid for broadband services. Until the Commission improves its review process there's no assurance that rates have been discounted appropriately.

**RECOMMENDATIONS**

1. To help ensure that entities eligible for discounted rates for broadband services receive those rates, the Commission should:
  - a. Examine the 20 contracts for broadband services that staff have identified, to determine whether the rates being charged for broadband are close to long-run incremental costs. For any rates that don't meet that criteria, the Commission should require the phone companies to amend those rates.
  - b. Complete its survey of phone companies about the current level of broadband services being provided. The Commission should submit a report to the Post Audit Committee by November 1, 2000 that summarizes the results of the survey analysis and the actions taken.
2. The Commission should consider implementing cost-effective ways of determining whether local phone companies are providing discounted broadband services to school districts and other entities in compliance with the Telecommunications Act.

## Question 2: Why Do the Costs That School Districts Pay For Internet Access Vary So Much?

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A Department of Education survey of school district's technological capabilities showed wide variation in costs for T1 connections to the Internet. Although we found the specific survey results were often inaccurate or inconsistent, we found that actual costs do vary greatly—for a sample of districts we verified, monthly Internet charges in August 1999 varied from \$300 to \$2,700. There were a number of reasons for this variation, including the length of the connection and the age of the contract. Since August 1999, charges have decreased and become more uniform. In addition, because of federal subsidies (known as E-rate), many districts actually pay less for their Internet access than what they're billed. These and other findings are discussed in the sections that follow.

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***In August 1999, the Department of Education Sent a Survey to All School Districts to Help Obtain Information About Each District's Technological Capabilities***

During the 1999 interim session, the Special Committee on Education studied the possibility of connecting school districts to a State telecommunications network. To help provide the Committee with relevant information, the Department of Education surveyed school districts about their Internet connectivity. The Department's survey asked districts to provide the following specific information:

- ! the number of schools connected to the Internet
- ! the type of connection each district has to the Internet
- ! how much each district pays for that Internet connection
- ! the name of the Internet service provider for each district

One type of connection the survey asked about was a "high-speed" T1 connection. Of the 286 school districts responding to the survey, 73 (26%) reported they had T1 connections to the Internet. All the remaining districts reported they were connected to the Internet, mostly through smaller connections or dial-up modems.

**Information the school districts reported showed wide variations in their high-speed Internet connection costs.** Most districts reported they leased only one T1 line, but 14 reported having 2 or more lines, and one said it had 24 lines. Districts indicated they paid between \$0 and \$4,000 a month for these lines. Although the Telecommunications Act didn't require phone companies to offer districts uniform prices on the broadband services, these reported variations raised questions.

To explore this issue further, we selected a sample of 13 school districts that reported having high-speed T1 connections to the Internet to obtain specific information about their Internet services and costs. These 13 districts were located in 4 geographic areas: Shawnee County (3), Johnson County (4), Coffey County (2), and southwest Kansas (4).

For each sample district, we obtained billing information for August 1999—the same time period districts had reported on the survey. We also spoke with district officials and service providers about these bills.

**Because of inaccuracies and inconsistencies in some of the information reported by the districts, the Department’s survey results shouldn’t be used as the basis for making any policy or funding decisions.** For example, some districts reported they had more T1 lines than they had, some over-reported or under-reported their charges, and one didn’t report both connection and access charges. Also, some districts reported costs for additional services, such as leasing space on the provider’s server for a web page name. (A comparison of reported and actual costs for our sample districts—and some of the reasons for those differences—is shown in Appendix B.)

The remainder of our analysis is based on the actual data we received and verified for the 13 school districts in our sample. To make our analyses as comparable as possible, we focused only on districts’ costs for Internet connection and access charges, and excluded any costs for optional services.

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***In August 1999, Our 13 Sample Districts’ Monthly Internet Charges Varied From About \$300 to \$2,700 but Those Charges Have Dropped and Become More Uniform Since Then***

The table on the next page summarizes pertinent information for the 13 school districts whose August 1999 billing records we examined. As the table shows, the amounts our sample districts were charged for high-speed connections and Internet service varied significantly.

In some cases, we noted that different phone companies or Internet service providers charged different amounts for what appeared to be similar services. We couldn’t identify all the factors that caused these charges to vary, but it’s likely that the providers’ actual costs and the pricing structures they used to recover those costs and make a profit played a significant role.

In other cases, we could identify important factors that help explain why the charges varied. Our findings are discussed on the next page:

**Comparison of Actual Internet Access Costs  
For 13 Sample School Districts As of August 1999**

Grouping	School District	Number of T1 Lines	Broadband Connection Costs	Internet Service Provider Costs	Total Connection and Internet Costs	Amount Owed After E-rate Subsidy
Shawnee County	437 Auburn-Washburn	1/4	\$552 (SW Bell)	\$850 (CJ Networks)	\$1,402	\$771
	450 Shawnee Heights	1	\$304 (SW Bell)	\$0 (NE KS ESC)	\$304	\$304
	501 Topeka Public Schools	2	\$1,266 (Networks Plus/ KANREN)	\$1,412 (Networks Plus/ KANREN)	\$2,678	\$2,123
Johnson County	229 Blue Valley	1	\$349 (SW Bell)	\$1,050 (Rocky Mtn Int)	\$1,399	\$1,399
	230 Spring Hill	1	\$779 (Sprint)	\$1,845 (Sprint)	\$2,624	\$1,574
	233 Olathe	1	\$985 (KANREN)	\$912 (KANREN)	\$1,897	\$1,138
	512 Shawnee Mission Public Schools	1	\$300 (Rocky Mtn Int)	\$999 (Rocky Mtn Int)	\$1,299	\$779
Southwest Kansas	215 Lakin	1	\$1,032 (Pioneer)	\$700 (Pioneer)	\$1,732	\$572
	216 Deerfield	1	\$1,162 (Pioneer)	\$700 (Pioneer)	\$1,862	\$428
	480 Liberal	2	\$0 (None)	\$850 (SW KS Online)	\$850	\$850
	494 Syracuse	1	\$1,292 (Pioneer)	\$700 (Pioneer)	\$1,992	\$677
Coffey County	244 Burlington	1/6	\$283 (Sprint)	\$284 (Sprint)	\$567	\$232
	245 LeRoy-Gridley	1/6	\$283 (Sprint)	\$284 (Sprint)	\$567	\$232

Source: Internet service invoices for each school district and LPA calculations

**! In August 1999, Sprint and Southwestern Bell charged some of their district “customers” significantly more than others. We couldn’t isolate the reasons why, but since then some of these districts have signed new contracts that significantly decrease their monthly charges and appear to make the charges more uniform among districts.** For example, Sprint charged a group in Coffey County (including the Burlington and LeRoy-Gridley school districts) \$1,699 a month for its T1 connection, while only charging Spring Hill \$779 a month for a similar connection. It charged both groups around \$1,800 a month for Internet service. Although we spoke with Sprint staff, we couldn’t determine why the connection charges were so different. However, we did find that under more recent contracts with Coffey County and Spring Hill, Sprint now charges more uniform amounts—about \$200-\$240 a month for each T1 line and about \$1,000 per month for Internet service.

Similarly, the table shows that Southwestern Bell leased high speed connections to both Auburn-Washburn and Shawnee Heights but charged Shawnee Heights significantly less for its connection. Auburn-Washburn had an older contract for a smaller, more expensive connection, but has since signed a new contract for the same service arrangement that Shawnee Heights has. Southwestern Bell now charges both districts \$304 a month.

! **Pioneer Communications charged its districts considerably more for connection charges than other phone companies, primarily because its connections cover long distances.**

Pioneer charged districts in southwest Kansas about 4 times as much for high-speed Internet connections as other companies charged districts in the State. The billings showed that in addition to fixed connection fees of \$360 per month, Pioneer also charged its customers an additional \$26 for each mile between the district's main office and Pioneer's headquarters in Ulysses.

! **Liberal and Shawnee Heights don't have to pay some charges because they either own or are given certain parts of their Internet access.**

Liberal doesn't pay for a high-speed connection because it owns the fiber optic line between its main office and its Internet provider next door. Shawnee Heights gets free Internet access from a learning center in Lecompton because the two have collaborated on grants in the past.

! **KANREN charges its customers significantly more for high speed connections than other providers.**

KANREN officials we talked with said they charge more for high-speed connections because they provide additional services to their customers, such as training, technical support and the ability to connect directly to other school districts. Officials from USD 501 (Topeka) told us they will be dropping KANREN at the end of their current contract because the services are too expensive.

**Because of federal subsidies, many districts actually owed less for their Internet access than what they were billed.**

Federal law allows schools and libraries to receive "E-rate" discounts on commercially available telecommunications services and Internet access. Through the E-rate discount, the federal government pays a portion of a district's eligible telecommunications services.

When approved, E-rate discounts range from 20% to 90% and are assigned based on the number of students enrolled in the district's free and reduced-price lunch program.

In all, 10 of the 13 districts in our sample received an E-rate discount in August 1999. As the far right-hand column in the table on page 12 shows, E-rate discounts significantly reduced the monthly Internet costs for many districts. For example, Deerfield received the largest E-rate subsidy in our sample, reducing its monthly Internet costs from \$1,862 to \$428, a savings of 77%. More information about the E-rate discounts these districts received is shown in Appendix C.

**CONCLUSION** The 1996 Telecommunications Act didn't require providers to offer school districts broadband services at uniform prices and, as long as districts continue to pay for their broadband services separately, it's unlikely that prices will ever be uniform. That's because the factors that cause these costs to vary are the same factors that influence the cost of any good or service—what you buy, who you buy it from, and when you buy it.

**RECOMMENDATION** Because part of the Department of Education's survey (relating to T1 connections to the Internet) didn't contain accurate and consistent information, the Department and the Legislature shouldn't rely on the survey results to make public policy decisions. If information on T1 connections is needed, the Department should resurvey school districts and take appropriate actions to verify that the information is accurate.

### **Question 3: Would KAN-ED Be Needed if Certain Provisions of the 1996 Telecommunications Act Had Been Fully Implemented?**

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KAN-ED would offer each school district one free broadband connection to the existing Statewide telecommunications network, plus access to all the entities and education resources available through that network—including the Internet. Any broadband connections districts got under the Telecommunications Act would have been piecemeal, and a district's access to other entities would have depended on which point-to-point connections it requested. Relatively few districts have broadband connections to the Internet, probably because of the expense involved. Because the connection offered through KAN-ED would be free to districts, such a proposal could better ensure that all have access to high-speed services. Districts still would incur additional costs to bring the Internet, video transmissions, and the like to school building and classroom levels. Finally, KAN-ED could provide benefits that districts don't have, but some program costs and benefits aren't firmed up yet. These and other findings are discussed in the sections that follow.

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***The KAN-ED Proposal and Telecommunications Act Both Would Allow School Districts to Obtain Broadband Services, But They Are Very Different***

KAN-ED refers to a program introduced in HB 2591 during the 2000 session that's intended to create a State education technology network. KAN-ED would do so by offering each school district in Kansas one free broadband connection to the existing Statewide telecommunications network (KANS-A-N). Libraries also would be connected, although many of them would have smaller capacity lines.

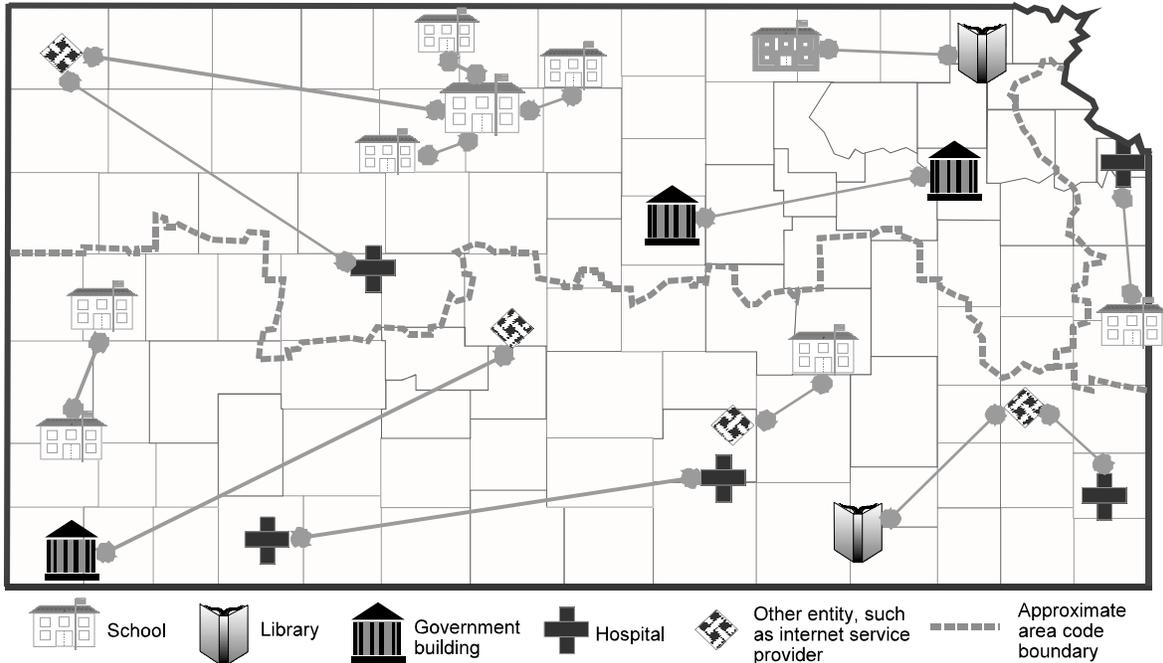
Among other services, that connection would give each district and library access to the Internet, to each other, and to other educational resources on the network. KAN-ED also would provide free training and technical support. As far as costs go, the proposed KAN-ED program would shift the cost of one high-speed Internet connection and access charges from the districts to the State.

As described in question one, the 1996 Telecommunications Act required local phone companies to provide a high-speed broadband connection at a discount to every Kansas school, public library, hospital, and local unit of government that requested one.

The boxes on the next 2 pages summarize the major aspects of the KAN-ED program and current law. As that information shows, both allow districts to get high-speed broadband connections, but they have many differences as well.

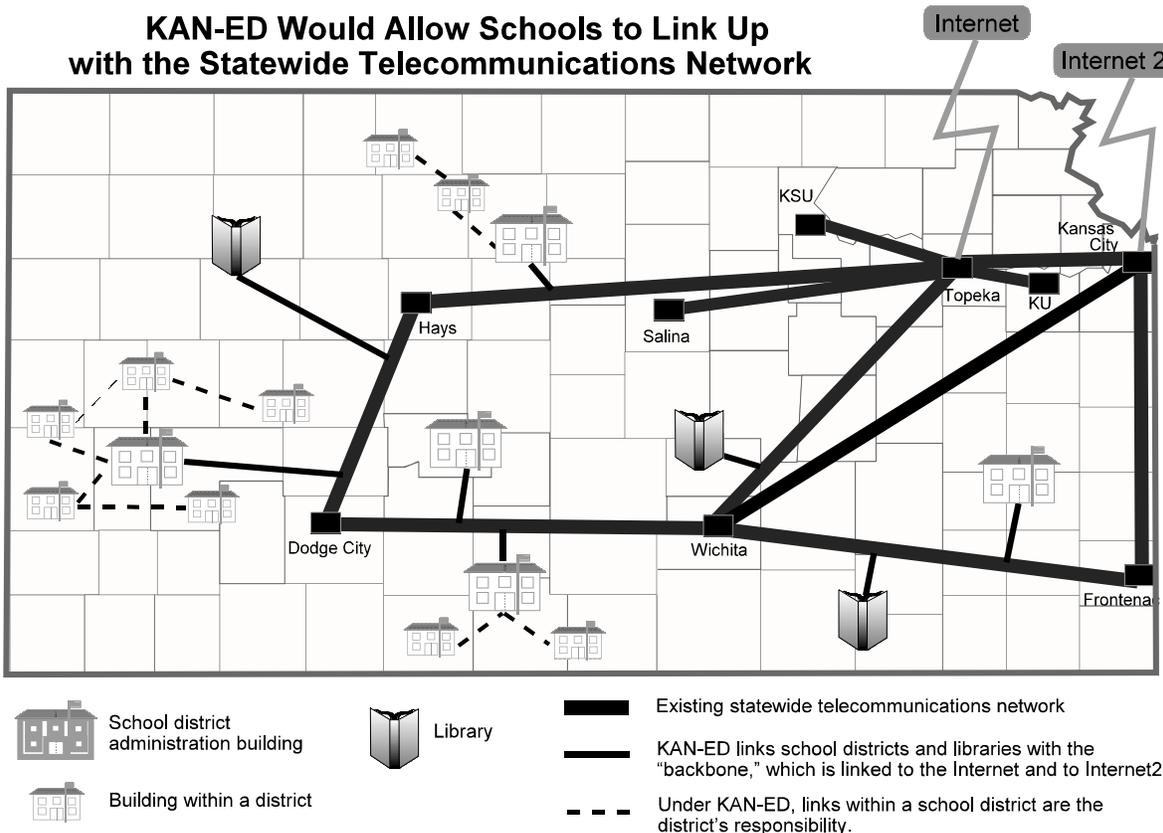
		<b>Proposed KAN-ED Program</b>	<b>Telecommunications Act of 1996, K.S.A. 66-2005(b)(1) and FCC Order #98-292</b>
<b>PURPOSE</b>	provide school districts (and others) with...	...one broadband connection from a single district location to the State's existing telecommunications network (KANS-A-N). (As proposed, KAN-ED would create a Statewide education technology network.)	...one or more broadband connections from one point to another of the district's choosing, for a discounted price. (The FCC has ruled that if the connection is to an Internet service provider, the discount doesn't apply.)
	allows districts to connect...	...to all entities and education resources on the State's network, which includes the Internet	...to any single other point, such as another district or an Internet service provider
<b>COSTS TO SCHOOL DISTRICTS</b>	for this broadband connection, the district pays...	...nothing for the one connection. However, it must pay for any other broadband connections it has.	...for each high-speed connection (i.e., Southwestern Bell charges about \$3,600 per year per line)
	to access the Internet, the district pays...	...nothing for the computers that go through this broadband connection to the State's network.	...full access charges, which could be up to \$1,000 a month per line
	districts still must pay for...	...equipment needed for distance learning and teleconferencing	...equipment needed for distance learning and teleconferencing
<b>SERVICES</b>	under this approach, districts could get...	...access to the Internet	...access to the Internet
		...the ability to use teleconferencing and other distance learning technologies with any entity on the network	...the ability to use teleconferencing and other distance learning technologies with one entity for each connection
		...possible access to Internet2, a private educational network	
		...State set-up and management of the network, including 24-hour network support, training, consulting, and conferences	

## K.S.A. 66-2005(b)(1) Allowed Point-to-Point Broadband Connections



K.S.A. 66-2005(b)(1) allows schools, public libraries, hospitals, and government facilities to get discounted rates from local exchange carriers for broadband services to one other point. That point could be a similar facility or another entity in the same LATA (which roughly corresponds to area code). Until the FCC ruling in October 1998, schools could use this discounted rate for their internet connections as well.

## KAN-ED Would Allow Schools to Link Up with the Statewide Telecommunications Network



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***Although Initially All Districts Could Have Obtained High-Speed Internet Access Under the Telecommunications Act, Not Many Districts Have It***

Information currently isn't available to show how many districts asked for or received a discount on their broadband Internet connections as a result of the Act. However, only 73 of the school districts responding to the Department of Education's August 1999 survey (about 25%) reported they had high-speed T1 connections to the Internet. Almost all the rest said they had a slower connection or a dial-up modem only.

We identified several reasons why so few school districts may have obtained broadband connections to the Internet to-date:

- ! **After the 1996 Telecommunications Act was passed, some school districts may not have been aware of the provision allowing them to get broadband connections at a discount.** During this audit, we interviewed officials from 10 school districts that reported they didn't have T1 connections to the Internet. Only one official told us he was aware districts could have gotten discounted rates for broadband services, 6 said they weren't aware, and 3 said they weren't sure.

Commission staff told us they hadn't disseminated any information to school districts because that's not part of their normal duties. The Department of Education and the Kansas Association of School Boards both provided some information on the Act to every district, but neither provided explicit information about the available discount and how to get it. It's difficult to know whether more districts would have hooked up to the Internet or to other points with high-speed lines if they'd been aware of the discount.

- ! **District officials we interviewed told us that such connections still were too expensive, or that they didn't need that much capacity.** Even though broadband connections were discounted under the Act, it can be prohibitively expensive for some districts to lease high-speed lines. For example, as the table on page 12 shows, a district could pay \$3,600 a year for one broadband connection, plus Internet access charges that could total \$8,000-\$12,000 a year.
- ! **After the 1998 FCC ruling, districts could no longer get the discounted rates offered under the Telecommunications Act for high-speed Internet connections.** Districts still can obtain a discount under the Telecommunications Act for connections that don't go outside the State, such as a point-to-point connection between two school buildings. But because districts must pay for each high-speed connection they have, it would be prohibitively expensive for most districts to have multiple connections.

As noted in question one, the Telecommunications Act as amended didn't require phone companies to build a network that would link all schools. However, K.S.A. 66-1,197 (TeleKansas II), passed in 1994, did require the completion of a fiber optic network for public high schools in areas served by Southwestern

Bell in Kansas. As a result of an agreement between Southwestern Bell and the Corporation Commission, 74 classrooms (predominantly in rural areas) got the connections and software needed to provide distance learning through regional “hubs.” The accompanying profile explains this law in greater detail.

### People Have Differing Opinions about TeleKansas II

Some of the questions about the need for KAN-ED may arise from the requirements in K.S.A. 66-1,197, also known as TeleKansas II. This law required Southwestern Bell to spend not less than \$64 million in a manner to be determined by agreement between Southwestern Bell and the Corporation Commission. However, the law specified that “Such additional capital expenditures shall include but not be limited to the completion of a fiber optic network for public high schools in areas served by Southwestern Bell in Kansas.”

To clarify the terms of TeleKansas II, Southwestern Bell and former Governor Finney entered a Memorandum of Understanding in 1994, under which Southwestern Bell agreed to offer a discount to schools on interactive fiber optic video systems, subject to Commission approval, and spend \$64 million on infrastructure.

In 1995, the Corporation Commission and Southwestern Bell entered into a stipulation agreement to satisfy the requirements of TeleKansas II and the Memorandum of Understanding. This agreement stated that Southwestern Bell “will construct, where necessary, a fiber optic network to provide TeleKansas Education Service (defined as broadband educational video service) to *educational institutions requesting such service...*” (italics added) The original agreement stated that institutions must order the service before October 1, 1996; that date was extended twice. The agreement also stated that software expenses would count toward meeting the \$64 million capital investment.

According to Commission officials, Southwestern Bell met the requirements listed above by installing several “hubs” throughout the State and provided 74 classrooms with a connection to the network and the necessary software. A former legislator explained that Southwestern Bell made a network available through the “hubs.” If a school requested it, Southwestern Bell hooked that school into the network. This included schools outside the Bell network.

In an order dated March 30, 1999, the Commission concluded that Southwestern Bell had met its requirements. The order stated:

“With regard to the commitment to invest \$64M in Distance Learning Technology, SWBT reports, in the present filing, that its TeleKansas Education Service has been widely deployed throughout the state, including independent telephone company territories. SWBT attests to services in 74 classroom sites, predominantly in rural high schools. The reported capital expenditures alone associated with this undertaking exceed SWBT’s \$64M commitment.”

The terms of the stipulation agreement don’t mesh exactly with the references in State law. In particular, the agreement between the Commission and Southwestern Bell refers to providing service to those institutions *that request it*, while the law refers to *completion of a network for public high schools*. To determine whether the agreement complied with State law, we spoke with a number of State officials, including Commission staff, current and former legislators, and staff in the Revisor of Statutes office. Their opinions varied. Some thought the law required Southwestern Bell to hook up ALL public high schools in Southwestern Bell territory to a network. Others thought that only connecting schools that requested the service met the intent of the law.

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***The Proposed KAN-ED Network Is More Likely To Achieve the Goal of Getting All Districts Hooked Up With High-Speed Lines to the Internet***

Based on the work we did for this audit, we concluded that KAN-ED—or some program like it—would have a much greater chance of getting all school districts linked to the Internet over high-speed lines, and of opening up other possibilities for distance learning. That’s because of the following reasons:

**!** **Without other funding sources, it may be many more years before all districts have high-speed Internet service and are able to build the infrastructure needed to take advantage of those services.** If KAN-ED were approved, each district would get one free T1 line to the Statewide telecommunications network (and through it to the Internet). For many districts, that could free up moneys to spend on other needed telecommunications services, such as interconnecting buildings or classrooms within the district, and buying more up-to-date computers and other equipment. KAN-ED won’t pay these costs, nor the cost of any additional T1 lines to the Internet (one T1 line connection only supports about 50 computers simultaneously).

Although KAN-ED doesn’t pay for many charges a district might incur, it does provide a jump-start to move the process forward.

**!** **Without some way of linking all districts to each other through high-speed lines (as KAN-ED does), distance learning availability is limited Statewide.** More and more people are talking about the possibility of “distance learning,” which could for example allow a German teacher in one district to teach students in other districts through an interactive video class. Some districts already engage in distance learning activities through local high-speed networks, but the KAN-ED proposal would give all districts this ability Statewide.

**As proposed, KAN-ED would offer other services that go beyond what districts can get today.** As noted earlier, KAN-ED would form a State education technology network that connects all school districts and public libraries to the existing Statewide telecommunications network. Division of Information Systems and Communications (DISC) officials would coordinate and aggregate demand for services and lines, solicit bids from the private sector for those lines, and lease them.

According to officials in DISC and other agencies, besides being able get one free high-speed line to the Internet through this network, KAN-ED:

- ▶ would give all districts direct access to State agencies, universities, public libraries, and other school districts
- ▶ would provide approximately 25 school districts with a connection larger than a T1 line. These higher-capacity lines can be used for full motion interactive video, or for connecting more computers to the Internet simultaneously.
- ▶ would offer districts free training on how best to use the Internet in schools, and consulting on how to interconnect their districts.

- ▶ would provide 24-hour technical support from DISC once the network is established. If a problem arose with the district's connection, the district could call a DISC help desk, which would track down and solve the problem. Districts wouldn't have to deal with private vendors.
- ▶ may give districts access to additional educational resources—such as digital libraries or databases—through Internet2, which is a separate private research network among higher education institutions.

Districts wouldn't be required to use the services provided through KAN-ED. For example, they could stay with their current Internet provider.

**Funding resources and some program capabilities for KAN-ED aren't firmed up yet.** According to the KAN-ED proposal, the first-year costs are estimated to be \$17.5 million. This figure includes:

- ! a one-time start-up cost of \$4.5 million for designing the network, conducting site visits, buying equipment that would let each district access the network, and providing training
- ! recurring costs of \$13 million for leasing the lines and circuits, paying Internet access charges, and managing the network.

DISC officials hope that much of the State's costs for KAN-ED will be offset by other sources: federal E-rate subsidies and private donations. (The proposal calls for the Kansas Technology Enterprise Corporation to establish a not-for-profit corporation to accept such donations. According to a DISC official, the Information Network of Kansas has made the first pledge of \$90,000.)

As described in question 2, E-rate is a federal program that allows schools and libraries to apply for discounts on telecommunication and Internet services. The Department of Education has filed an E-rate application with the federal government for the KAN-ED program. This E-rate discount could subsidize as much as 62% of the cost of KAN-ED, which could be about \$9 million a year. A decision on the application is expected in May 2000.

This E-rate application is based on schools getting access to Internet2. The governing body for Internet2 (which includes various members of higher education groups) will decide whether Kansas schools get access to Internet2.

At the time the E-rate applications were filed, the assumption was that the State would get a blanket approval for K-12 schools. However, the Internet2 governing body recently denied another

state's blanket request, requiring instead that such access be granted to each school on a case-by-case basis. If this holds true in Kansas, that would mean Kansas school districts would have to apply for access individually, instead of as a Statewide group. No one is sure how this might impact the E-rate discount.

***Conclusion*** If all school districts had used the Telecommunications Act in 1996 to obtain broadband services, they could have been connected to each other through the Internet. However this type of connection has significant limitations for distance learning—it's slow and subject to disruption. In addition, most districts chose not to purchase broadband services, probably because of the cost they would still incur. If the Legislature wants all districts to be interconnected by high-speed lines, and to have access to advanced educational resources, it likely will need to provide State funding for some type of program. The Legislature will need to decide whether that program is KAN-ED or some other alternative.

## **APPENDIX A**

### **Scope Statement**

This appendix contains the scope statement approved by the Legislative Post Audit Committee for this audit on March 2, 2000. For reporting purposes, we separated the audit question into three questions. The audit was requested by Representative Richard Alldritt.

## SCOPE STATEMENT

### **High-Capacity Telecommunications Services: Examining Local Telephone Companies Compliance with the 1996 Kansas Telecommunications Act**

The Kansas Telecommunications Act of 1996 requires local telephone companies to file a plan that contains each company's commitment to provide high-capacity telecommunications (broadband) services to designated hospitals, schools, public libraries, and other State and local government facilities at discounted prices close to, but not less than, long-run incremental cost. The plan also must contain each company's commitment to provide a communications network that allows simultaneous voice and data communications over a single telephone line at prices which are uniform throughout the carrier's local service area.

According to Kansas Corporation Commission staff, local telephone companies have filed tariffs which set their billing rates for each service provided in each local service area. They told us that because some entities may be billed for more units than others, entities may not incur the same expenses.

During the 2000 legislative session, legislators have received information that individual school districts are paying vastly different amounts for broadband services. This raises questions about whether telephone companies have complied with the statutory requirements. Specific concerns relate to whether the Kansas Corporation Commission has taken the actions necessary to enforce these statutory provisions. Another concern is that school districts, and possibly other users of this service located within certain local service areas, aren't paying uniform prices for this service. Other concerns were that the proposed KAN-ED program, which may cost the State about \$10.1 million, might not be necessary if local telephone companies complied with the statutory provisions.

A performance audit in this area would address the following question:

- 1. Has the Kansas Corporation Commission enforced the 1996 Telecommunications Act's provisions requiring local telephone companies to provide broadband services to hospitals, schools, libraries, and other State and local government facilities at uniform discounted prices, and if not, why not?** To answer this question, we'd review the 1996 Telecommunications Act and talk with Corporation Commission staff and representatives of some local telephone companies about how they have interpreted the Act and what steps they have taken to comply with it. We'd review documentation of Commission actions as applicable, and evaluate whether those actions have been sufficient. We'd contact a sample of hospitals, schools, libraries, and local governments to obtain information about the amounts they pay for broadband services. We'd compare these amounts to the tariffs filed by telephone companies with the Corporation Commission, determine reasons for billing variances, if any, and investigate those differences as appropriate. We'd

also talk to Department of Education and Commission staff to determine how the costs of and the need for the KAN-ED program might be affected if the provisions of the 1996 Act were fully implemented. For any areas needing corrective action, we'd identify any actions that the Legislature could take to improve the system. We'd review other records and conduct additional work as needed.

**Estimated completion time: 8 weeks**

## APPENDIX B

### Comparison of the Department of Education's Survey Results to the School District Invoices

The following table compares the information reported by our sample of 13 school districts on the Department of Education's survey to the information found in the billing invoices that we obtained from those districts.

Grouping	School District	Number of T1 Lines		Total Connection and Internet Costs	
		Reported	Actual	Reported	Actual
Shawnee County	437 Auburn-Washburn	1	1/4	\$304	\$1,402
	450 Shawnee Heights	1	1	\$304	\$304
	501 Topeka	2	2	\$2,914	\$2,678
Johnson County	229 Blue Valley	2	1	\$3,000	\$1,399
	230 Spring Hill	1	1	\$2,724	\$2,624
	233 Olathe	1	1	\$2,000	\$1,897
	512 Shawnee Mission	1	1	\$1,350	\$1,299
Southwest Kansas	215 Lakin	1	1	\$300	\$1,732
	216 Deerfield	1	1	\$700	\$1,862
	480 Liberal	12	2	\$3,648	\$850
	494 Syracuse	1	1	\$1,950	\$1,992
Coffey County	244 Burlington	1	1/6	\$3,800	\$567
	245 LeRoy-Gridley	1	1/6	\$580	\$567

Sources: Reported—Department of Education Technology Infrastructure Survey, August 1999;  
Actual—Internet service invoices for each school district

As the table shows, some of the information reported by several school districts wasn't consistent with the information we found in their billing invoices. For example:

- ! Two districts (Burlington and Le-Roy Gridley) reported that each had one T1 line, but they actually share the same line with 4 other entities. In addition, the Burlington school district reported that its costs were \$3,800 per month, but it actually pays only one-sixth of the cost—about \$600 a month.
- ! The Liberal school district reported that it had 12 T1 connections to the Internet, but these lines are used to interconnect buildings within the district. The district is connected to the Internet with a fiber optic cable network—a different type of connection.
- ! The Lakin school district reported that its costs were \$300 per month, but they're really more than \$1,700 per month. The \$300 was a one-time introductory rate for that district's Internet access—its actual Internet costs went up to \$700 a month. The district also didn't include T1 connection charges of about \$1,000 a month.
- ! Some districts reported costs that weren't Internet connection or access costs. For example, the Auburn-Washburn and Blue Valley school districts were paying for dial-in accounts to allow their faculty to access the Internet from their homes. Also, the Spring Hill and Auburn-Washburn districts were paying for web page names on their Internet provider's system.

## APPENDIX C

### Comparison of E-rate Discounts by School District

The following table lists the E-rate discounts received by the 13 school districts in our sample. It also shows how much each district paid for Internet services, and how much money was saved through E-rate.

School District	E-Rate Discount Percent	Providers billed the district this much per month for Internet charges:	After the E-Rate was applied, the district actually owed this much:	E-Rate saved the district this much per month:
216 Deerfield	77%	\$1,862	\$428	\$1,434
494 Syracuse	66%	\$1,992	\$677	\$1,315
215 Lakin	67%	\$1,732	\$572	\$1,160
230 Spring Hill	40%	\$2,624	\$1,574	\$1,050
233 Olathe	40%	\$1,897	\$1,138	\$759
437 Auburn-Washburn	45%	\$1,402	\$771	\$631
501 Topeka	71%	\$2,678 <sup>1</sup>	\$2,123	\$555
512 Shawnee Mission	40%	\$1,299	\$779	\$520
244 Burlington	59%	\$567	\$232	\$335
245 LeRoy-Gridley	59%	\$567	\$232	\$335
229 Blue Valley	0%	\$1,399	\$1,399	\$0
480 Liberal	0%	\$850	\$850	\$0
450 Shawnee Heights	0%	\$304	\$304	\$0

(1) USD 501 was receiving Internet services through 2 providers. It applied for an E-rate discount for only one provider. Therefore, its total discount was only \$555 (\$781 x 71%).

Sources: E-rate Funding Commitment Letters; Internet service invoices for each school district

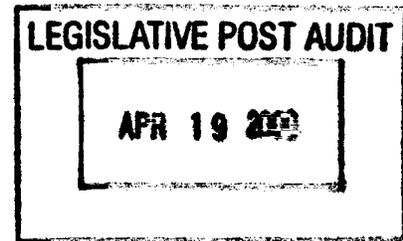


## *Kansas Corporation Commission*

*Bill Graves, Governor John Wine, Chair Cynthia L. Claus, Commissioner Brian J. Moline, Commissioner*

April 19, 2000

Barbara J. Hinton, Legislative Post Auditor  
Division of Legislative Post Audit  
Mercantile Bank Tower  
800 S.W. Jackson, Suite 1200  
Topeka, Kansas 66612-2212



Dear Ms. Hinton:

Thank you for the opportunity to respond the Legislative Post Audit's draft of the report entitled "High-Capacity Telecommunications Services: Examining Local Telephone Companies' Compliance with the 1996 Telecommunications Act." We appreciate the efforts of the audit team and its willingness to work with Commission staff in developing its report, particularly given the technical and complex nature of the subject matter and the short time frame.

Overall, the Commission concurs in the findings of the audit team. The Commission will implement the recommendations of the audit team by completing a review of the relevant contracts, submitting a report containing the results of the data request and implementing a method to determine if local companies are providing the discounted broadband services. It is possible that the most important finding of this audit is the limited role that the 1996 State Act actually plays in equipping Kansas schools with the hardware, software, access services, personnel, training and other resources necessary to effectively connect all students to the internet.

The Commission offers the following to clarify and further explain items addressed in the audit report.

As stated in the audit report, one company submitted a tariff for point-to-point broadband service. A cost study to support the proposed rates was submitted with the tariff. The normal procedure at that time was for the analyst assigned to the docket to coordinate review of the cost study with an auditor. Unless the audit revealed deficiencies in the cost study, the auditor would verbally inform the analyst of the results of the cost study review. If staff determined the cost study was sufficient and supported the proposed rate, generally the staff memorandum recommended approval of the tariff and did not specifically address the cost study. There has been a change in staff since the broadband tariff was reviewed and the auditor's file could not be located. Staff did perform another review of the tariff and confirmed that the tariff rate is appropriate and meets the statutory requirements. Our current procedures require inclusion of the results of the cost study analysis in the staff memorandum for tariffs and retention of the auditor's finding.

Since the enactment of the 1996 State Act, one contract for broadband service for a school district was submitted to the Commission. A cost study was not provided with the contract to support the proposed rate. Staff has initiated a review of the contract and requested a cost study with supporting documentation. The Commission will include the results of the review in its report to the to the Post Audit Committee as recommended in the Post Audit Report.

In addition, the Commission will include in its Post Audit report the results of the responses to Staff's data request regarding broadband deployment. Staff will follow up on the responses received and obtain further information if necessary to assure that the intrastate broadband services currently being provided by the local exchange companies are priced in compliance with the State Act. However, an initial review of responses indicate that the majority of such services are interstate, not intrastate, and are being provided out of the NECA interstate tariff and would not be subject to K.S.A. 66-2005(b)(1).

The Post Audit Report references contracts that were in existence when the 1996 Act was passed. These contracts were filed with the Commission prior to 1996, and were initially reviewed at the time they were filed. Due, at least in part, to the numerous requirements in both the Federal and State Acts that required Commission action by specific deadlines, review of these contracts was not repeated subsequent to the passage of the State Act. These contracts will be reviewed again to determine if the prices contained in those contracts are consistent with K.S.A. 66-2005(b)(1), which requires local exchange companies to commit to providing existing broadband services at discounted rates. The Commission will include in its Post Audit report the results of this additional review.

As the report points out on page 4, the Federal Communications Commission has determined that broadband service used to access the internet is subject to federal jurisdiction and not state jurisdiction. In an appeal of a FCC decision regarding reciprocal compensation, the DC Circuit Court of Appeals questioned the application of the FCC's analysis for purposes of determining whether reciprocal compensation is required for internet traffic. The DC Circuit Court of Appeals remanded the issue to the FCC for further consideration. This could possibly impact the FCC's determination of the jurisdiction of broadband services used to access the internet.

The Commission and Staff will implement methods to determine whether local telephone companies are providing broadband service in compliance with the State Act. One method will be to clarify that information requested in the annual report that companies are already required to file, includes such information.

The Commission will implement the recommendations contained in the Post Audit Report and submit a report to the Post Audit Committee by November 1, 2000.

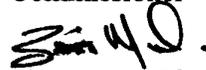
Sincerely,



John Wine  
Chair



Cynthia Claus  
Commissioner



Brian Moline  
Commissioner

STATE OF KANSAS



DEPARTMENT OF ADMINISTRATION

State Capitol  
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DAN STANLEY, Secretary

April 19, 2000

BILL GRAVES, Governor



Barbara Hinton  
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Topeka, Kansas 66612-2212

Dear Ms. Hinton:

Thank you for the opportunity to review the draft audit "Examining Local Telephone Companies Compliance with the 1996 Kansas Telecommunications Act." In your April 13<sup>th</sup> cover letter, you asked that we respond to the audit recommendations.

The first set of recommendations is made to the Kansas Corporation Commission. The audit recommends the Commission review Local Exchange carrier broadband rates to ensure entities benefit from the Kansas Telecommunications Act of 1996 requirement to provide discounted broadband services. We agree that the KCC review 19 contracts for broadband services to ensure these contracts are close to long run incremental costs. Also, we agree that the KCC complete its survey of phone companies on their current level for providing broadband services to school districts and other entities in compliance with the Kansas Telecommunications Act. This information will be valuable to DISC as they prepare a bid for KAN-ED broadband services to connect school districts to the State backbone.

The audit also recommends that the Department of Education re-survey school districts about their T1 (1.5 megabits per second) connections to the Internet. Again, we agree that this information is valuable to the implementation of KAN-ED initiatives.

The audit contains many important insights about industry compliance to the Kansas Telecommunications Act of 1996. Also, the audit provides important conclusions about the KAN-ED proposal. The audit, for example, points out that many school districts have not taken advantage of high speed Internet broadband connections. KAN-ED would help alleviate this problem. The audit also states that "the proposed KAN-ED Network is more likely to achieve the goal of getting all school districts hooked up with high speed lines to the internet." Again, KAN-ED is designed to achieve this important goal. In addition, the audit notes that without other

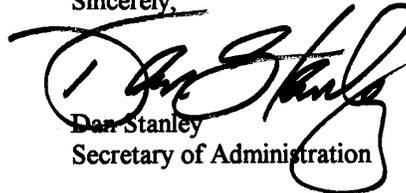
Barbara Hinton  
April 19, 2000  
Page 2

funding sources... "it may be many more years before all districts have high speed Internet service and are able to build the infrastructure necessary to take advantage of those services." Finally, as the audit states, "...without some way of linking all districts to each other through high speed lines (as KAN-ED does), distance learning availability is limited statewide."

In closing, KAN-ED focuses on important educational goals for sharing content among school districts and libraries as well as making higher Ed resources available to K-12 schools and adults through the Kansas Library network. KAN-ED will take advantage of existing telecommunications infrastructure adding to, but not replacing, existing broadband services used by schools and libraries.

Thank you for the opportunity to respond to the audit. Your staff did an excellent job explaining KAN-ED and the Kansas Telecommunications Act of 1996.

Sincerely,



Dan Stanley  
Secretary of Administration



## Kansas State Department of Education

120 S.E. 10th Avenue  
Topeka, Kansas 66612-1182

April 15, 2000

Barbara J. Hinton  
Legislative Post Audit  
Mercantile Bank Tower  
800 Southwest Jackson Street, Suite 1200  
Topeka, Kansas 66612-2212

LEGISLATIVE POST AUDIT

April 18 2000

Dear Ms. Hinton,

I would like to thank you for the opportunity to respond to performance audit, *High Capacity Telecommunications Services: Examining Local Telephone Companies Compliance with the 1996 Kansas Telecommunications Act*. Your team should be commended for an excellent summary of a very complex issue. We were impressed with their professionalism and objective review of the issues. Listed below are the recommendations concerning the Department of Education survey and our response.

*"Because part of the Department of Education's survey we looked at relating to T1 connections to the Internet didn't contain accurate and consistent information, the Department and the Legislature shouldn't rely on the survey results to make public policy decisions. If information on T1 connections is needed, the Department should resurvey school districts and take appropriate actions to verify that the information is accurate."*

The audit contained reference to a survey conducted by KSDE in the fall of 1999. In an attempt to provide the Special Committee on Education with current information, we surveyed our school districts in August of 1999. The recommendations indicate that the Post Audit found inconsistencies between their findings and the survey. We understand how this could happen. It is a very complex issue. To obtain detailed and specific numbers, a highly structured survey would have been necessary. Several reasons for the inconsistencies include:

- ❑ Some over reported by adding service fees like Web Page hosting and support as part of their connection charge.
- ❑ Some reported a total cost for their networks even though those networks were shared with a library or other community agency thus lowering the actual cost to the district.
- ❑ Some Internet fees are lumped together with phone service fees when provided by the same company. It is not easy to identify which fees were for Internet only.
- ❑ Some under reported because they sent us their cost after E-Rate discounts.

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The survey was never intended to be a scientific study but only an instrument by which we could obtain general information about our schools. KSDE and many legislators had the impression that there was inequity in both access and cost across the state, but we did not have any information to support that impression. We hoped the survey would help to address that issue and to answer the following questions.

1. Do all Kansas school districts have equitable access to telecommunications services?
2. What type of connections do our districts have?
3. In general, how much were districts paying for those connections?
4. Who is providing the connections?
5. How many computers are connected to the Internet?
6. If a statewide network is implemented, will our districts be prepared to utilize the higher bandwidth?

The survey was conducted on a tight timeline so we were pleased to have 286 school districts respond. We believe the audit supports the general findings and intent of the survey. To quote from the audit, "*Although we found the specific survey results were often inaccurate or inconsistent, we found that actual costs do vary greatly – for a sample of districts we verified, monthly Internet charges in August 1999 varied from \$300 to \$2,700.*" Again, because of the timeline and complexity of the issue, the survey was never intended to be an instrument for setting specific policy. It was only intended to provide us with a snapshot of our schools' technology capacity and costs. We hoped it would give the Special Committee on Education a basis from which to begin their deliberations.

Again, I appreciate the opportunity to respond to the audit and hope this letter helps to clarify KSDE's concern.

Sincerely,



Andy Tompkins  
Commissioner of Education