



PERFORMANCE AUDIT REPORT

**Kan-ed: A K-GOAL Audit Determining Whether
It's Achieving the Intended Results**

Executive Summary ***with Conclusions and Recommendations***

**A Report to the Legislative Post Audit Committee
By the Legislative Division of Post Audit
State of Kansas
October 2007**

Legislative Post Audit Committee

Legislative Division of Post Audit

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October 30, 2007

To: Members of the Kansas Legislature

This executive summary contains the findings and conclusions, together with a summary of our recommendations and the agency responses, from our completed performance audit, *Kan-ed: A K-GOAL Audit Determining Whether It's Achieving the Intended Results*.

This report includes several recommendations for the Board of Regents to ensure they have an accurate count of Kan-ed members, to strengthen its grant programs, and to improve its marketing efforts. We would be happy to discuss these recommendations or any other items in the report with you at your convenience.

If you would like a copy of the full audit report, please call our office and we will send you one right away.

A handwritten signature in black ink that reads "Barbara J. Hinton". The signature is written in a cursive, flowing style.

Barbara J. Hinton
Legislative Post Auditor

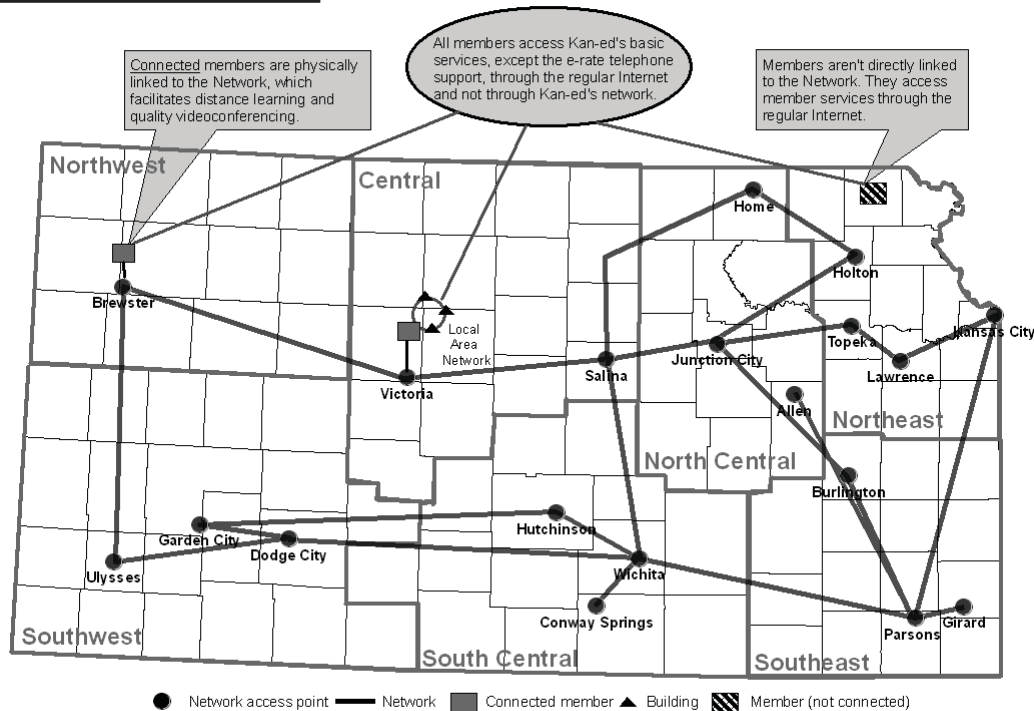
EXECUTIVE SUMMARY

LEGISLATIVE DIVISION OF POST AUDIT

Overview

Kan-ed was created to provide broadband Internet access and distance learning capabilities for schools (both K-12 and higher education institutions,) hospitals, and libraries. Kan-ed was created in 2001, and responsibility for administering the program was given to the State Board of Regents. The figure below shows the Kan-ed Network and the services it provides.

Kan-ed Network and Services



Services Available to <u>All</u> Members		Services Available Only to <u>Connected</u> Members	
Empowered Desktop	A computer application that provides access to a variety of instructional programs and educational databases. Empowered Desktop is available to all members but is geared towards a K-12 audience.	Interactive Distance Learning	Generally used by K-12 schools and higher education institutions, this service allows students and teachers to interact with others across the State. The need for this capability is one of the primary reasons members become connected.
Educational and Research Databases	Five major databases allow searches of: <ul style="list-style-type: none"> more than 26 million articles from 120 newspapers U.S. federal census records from 1790 to 1930 a variety of nursing and health journals 	Videoconferencing	A service that allows <u>connected</u> members to participate in videoconferencing sessions with others. Because videoconferencing requires constant flow of large amounts of electronic data, the quality of videoconferencing is improved greatly when conducted over the KAN-ED network.
EMS System (Hospitals Only)	A computer application that allows hospitals to communicate with each other during emergency situations about such things as the availability of hospital beds and transportation.	Renovo Scheduler	An optional tool used to automatically schedule videoconferencing and interactive distance learning sessions with others.
KanGuard Filtered Internet (Libraries Only)	A computer application libraries use to filter out potentially offensive Internet content.	Internet2	A private, high-speed, research-based Internet geared towards higher education and K-12 institutions.
E-Rate 1-800 Telephone Support (Schools, Hospitals and Libraries)	Provides telephone support for members applying for federal E-Rate funding.	Network Operations Center	This center monitors and troubleshoots the KAN-ED network and provides technical assistance to <u>connected</u> members.

Source: LPA analysis of Kan-ed network, services, and usage data.

Kan-ed has two types of membership—member and connected member. Services available to all members can be accessed through any Internet connection, whereas services for connected members require a physical connection to the Kan-ed network. Only connected members have access to videoconferencing and interactive distance learning services.

Since its inception, the Kan-ed program has provided more than \$12 million of broadband Internet connection subsidies and equipment grants for some of its members. Funding for the Kan-ed program has come primarily from the Kansas Universal Service Fund, but will be fully funded through the State General Fund beginning in 2009.

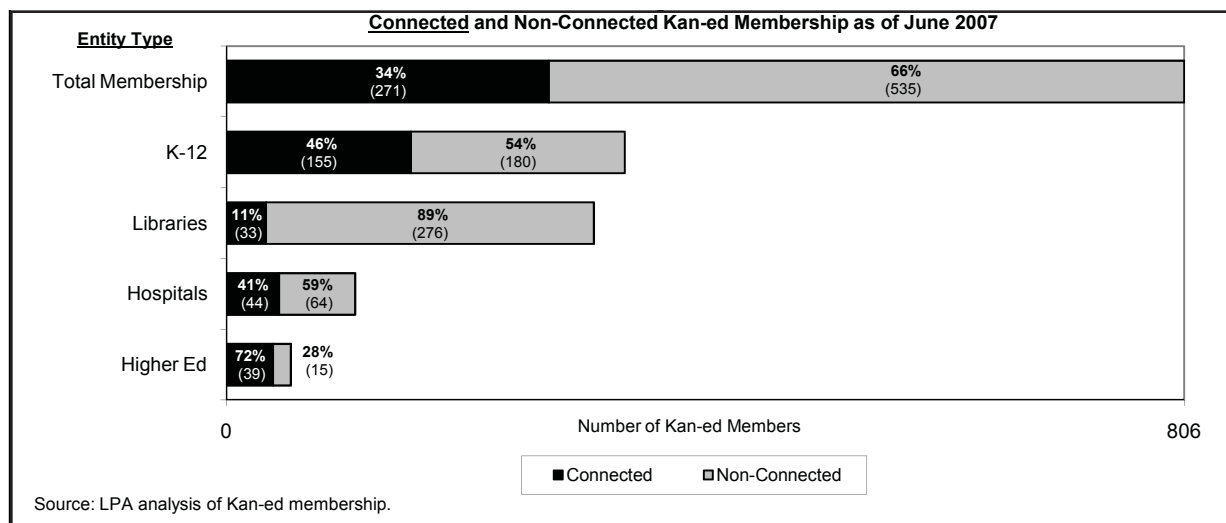
Question 1: To What Extent Are Schools, Libraries, and Hospitals Taking Full Advantage of the Capabilities of Kan-ed?

About 90% of eligible entities have become members of the Kan-ed network. As of June 2007, Kan-ed records showed that 806 of the 899 eligible hospitals, libraries, higher education institutions, and school districts had signed up as members.

Since the inception of the Kan-ed network, about one in three members has become connected. Kan-ed began connecting members to the network in 2004. By June 2007, the total number of connected members had grown to 271 out of 806, or 34%. The figure below shows the number and percentage for each of the four membership groups.

The number of new connected members has been declining in recent years. In 2005, 119 members became connected members; by 2007, that number was down to 29. Like regular members, connected members were fairly evenly distributed across the State.

Members who aren't connected said they don't need connected services, or lacked the information, equipment, or expertise needed to get connected. We surveyed Kan-ed members and received 127 responses



from entities who weren't connected members. About one-third of those respondents told us they hadn't needed distance learning, Internet2, or videoconferencing services—the primary benefits of the being a connected member—in the past. Other reasons they cited: the lack of the equipment needed for videoconferencing and distance learning, lack of knowledge about the benefits of being connected, and lack of technical expertise to understand how to get connected. Further, some members may not become connected because they can access connected-member services through other means, such as through a wide area network hosted by an entity that is a connected member.

A high percentage of school buildings have access to Kan-ed either directly or through a local network. Kan-ed connected members can get access to the network in two different ways—either direct access or indirect access.

- In the case of **direct access**, the member's building is directly connected to the Kan-ed network by a line provided by a local Internet Service Provider. As of June 2007, the Kan-ed program provided 313 direct access points to 271 connected members.
- In the case of **indirect access**, the member's building is linked to another building that has direct access to the Kan-ed network.

Kan-ed officials told us a school district or any other entity might choose either option, depending on its set of circumstances. For a sample of 51 school districts, we determined that 94% of 329 buildings were connected to the Kan-ed network and could conduct videoconferencing or distance learning. Of those, 17% had direct access, and 77% had indirect access.

More than half the members we surveyed use the Kan-ed network's services or databases several times a week. Because the Kan-ed program maintains limited usage information we included questions in our survey of members about which services they use most and least often. We divided the responses into two groups—members and connected members. Overall we learned the following:

- More than half of all members and connected members use a service or database several times a week, and close to 80% use one of those items several times a month.
- About three out of four connected members said they are using the videoconferencing and distance learning features of Kan-ed.
- The Empowered Desktop service was used extensively by those members who are most likely to use it, such as K-12 school districts.

Question 1 Conclusion. In all, 90% of eligible entities are members of Kan-ed, and 34% of those members are fully connected members who can take advantage of videoconferencing and distance learning. A number of members told us they don't need videoconferencing and distance learning, but others cited a lack of information, equipment, or expertise as reasons for not being connected. While it may be **unrealistic**

to expect that all members will become fully connected to the network, Kan-ed staff will need to do more to ensure that members understand the true benefits of becoming connected to the network. Those members who are connected appear to be making good use of the services Kan-ed offers. For example, three out of four connected members said they use distance learning, and 45% said that they use it several times a week.

Question 1 Recommendations. We recommended the program develop procedures to identify all members who have indirect access to the network through another connected member, and to direct its marketing efforts toward groups or members who aren't connected.

Question 2: Has Kan-ed Money Been Spent To Maximize the Number of Members Connected to the Network?

Kan-ed officials have had about \$24 million available since 2002 to purchase content for the network and help meet the needs of members who want to connect. That's the amount left after covering administrative costs and the cost of leasing the lines the network uses. That money has been spent on acquiring content for the network and awarding grants and subsidies to assist members with the costs of getting connected to the network. The figure below summarizes the program's costs for the past six fiscal years.

Kan-ed Program Expenditures FY 2002-2007								
Expenditure	2002	2003	2004	2005	2006	2007	Total	% of total
Non-Discretionary Spending								
Administration	\$365,000	\$436,196	\$942,237	\$1,531,920	\$1,309,168	\$981,380	\$5,565,902	12%
Network Operations	\$0	\$671,804	\$2,861,718	\$3,542,079	\$4,498,319	\$4,928,233	\$16,502,153	36%
subtotal	\$365,000	\$1,108,000	\$3,803,955	\$5,073,999	\$5,807,487	\$5,909,613	\$22,068,055	48%
Discretionary Spending								
Grants & Subsidies ^(a)	\$0	\$2,154,335	\$3,651,705	\$2,072,395	\$4,929,959	\$1,328,474	\$14,136,868	31%
Content & Services	\$0	\$157,596	\$1,340,192	\$2,390,183	\$2,843,862	\$2,979,544	\$9,711,377	21%
subtotal	\$0	\$2,311,931	\$4,991,897	\$4,462,578	\$7,773,821	\$4,308,018	\$23,848,245	52%
TOTAL	\$365,000	\$3,419,931	\$8,795,852	\$9,536,577	\$13,581,308	\$10,217,631	\$45,916,300	100%
<small>(a) Annual and overall totals differ from those in Figure 2-2 because Kan-ed officials included \$665,444 that wasn't able to be assigned to one of the defined grant or subsidy programs by K-State's Office of Educational Innovation and Evaluation (OEIE). OEIE's data is used in Figure 2-2. Source: LPA analysis of Kan-ed expenditure data.</small>								

In all, Kan-ed has given out about \$13.5 million to various members. The cumulative amounts given to each entity group are shown below:

- Higher education: \$2.8 million
- Hospitals: \$2.2 million
- K-12 schools: \$6.3 million
- Libraries: \$2.1 million

Kan-ed's grant process could be improved to help ensure that moneys are used effectively to maximize the number of connected members. *Kan-ed officials haven't enforced a provision in its equipment and technology grant contracts that requires members to connect or enhance their connection to the network. For a sample of grants, more than \$432,000 was given to members that haven't become fully connected to the network. Also, Kan-ed officials haven't closely monitored how entities are using their grant moneys. Although most moneys were spent appropriately, we identified about \$15,000 that grant recipients spent on items that weren't specified in their grant application or weren't allowed by the program guidelines. In addition, Kan-ed officials haven't required recipients who have been able to buy equipment for significantly less than the amount shown in their grant application to return the unused grant moneys. Instead, recipients used those moneys for other purposes that Kan-ed officials subsequently approved.*

Kan-ed officials may need to step-up efforts to promote the benefits of being a fully connected member. *Kan-ed's primary efforts to market the benefits of being a connected member have been through a series of e-mails and letters to members, and officials' attendance at conferences that members attend. However, one-third of the survey respondents who aren't connected members indicated they lacked knowledge about connected services or how to become a connected member. Some survey respondents also indicated the language in the program's letters and e-mails was too technical and members couldn't understand it.*

Kan-ed is paying about \$140,000 annually for excess bandwidth capacity that potentially could be used to help more members connect to the network. *When building the backbone for the network, Kan-ed officials had to choose between two levels of bandwidth. Kan-ed officials chose a larger bandwidth capacity option. They told us that leasing the smaller bandwidth would have involved substantial costs to replace existing devices used to route the Kan-ed traffic across the network, and the overall capacity needs of the system weren't known at that time. We estimate the additional net cost for the extra bandwidth is about \$140,000 per year. While that \$140,000 represents only about 3% of the annual network operations budget, it's money that could be used elsewhere if the extra bandwidth isn't needed. Recent estimates suggest that all of Kan-ed's bandwidth capacity may not be needed. Kan-ed staff have contracted with consultants to complete a more in-depth study of bandwidth usage, which is expected to be completed in December 2007.*

Kan-ed officials may need to shift future spending patterns to help members who want to become fully connected. *Based on our survey results, we project that anywhere from 163 to 191 additional members may connect to the network over the next five years. In the past, Kan-ed officials have funded equipment costs for members who want to become fully connected to the network. It also currently pays for 532 members' Internet hook-up subsidies, which total \$1.2 million a year.*

Those moneys may need to be used to fund new members' equipment costs in the future.

A recent study indicated it isn't feasible to fully consolidate Kan-ed with two other networks. *A report issued in March 2007 identified barriers that would hinder comprehensive consolidation of Kansas' Kan-ed, KanRen, and KanWin networks. However, the report did recommend some changes, such as eliminating some circuits and moving the Kan-ed network operations center from KanRen to KanWin. If all recommendations were followed, the study estimated net cost savings of \$145,000 in the first year, and possibly more than \$700,000 in subsequent years. Kan-ed officials currently are contracting with a company to review the recommendations.*

The Kan-ed network could be administered by another agency, but we didn't see a compelling reason to move it. *We considered the possibility of placing the Kan-ed program with four other agencies besides the Board of Regents—the Kansas Corporation Commission (KCC,) the Information Network of Kansas (INK,) the Division of Information Systems and Communications (DISC,) and the Department of Education. We eliminated INK because it lacks the staff to be able to administer the program, and the KCC because it regulates telecommunications companies and would be placed in a conflict-of-interest situation if it administered the program.*

Kan-ed could be administered by the Department of Education, but some officials expressed concern about placing the oversight of the program under the direction of an independently elected Board of Education. Arguments can be made for placing the administration of the Kan-ed program with either the Board of Regents or DISC. DISC has the advantage of operating the KanWin network, and possibly could achieve some efficiencies between the two networks. Most states place the administration of their technology network under a DISC-equivalent agency. On the other hand, leaving the program with the Board of Regents would ensure program continuity and less disruption to members. In addition, the Board of Regents is statutorily charged with the development of distance learning—a key feature of the Kan-ed network. In the end, we concluded there wasn't a compelling reason for moving the program.

Question 2 Conclusion. *A lack of equipment was a major reason Kan-ed members cited for not being fully connected to the network. Kan-ed officials have allocated significant amounts of money for equipment and connection grants since the network was established, and those grants have been effective at helping a lot of members get connected. However, they haven't been as effective as they could have been because provisions requiring members to connect as a condition for receiving a grant haven't been enforced. Also members who have been able to acquire equipment for substantially less money than their grant applications estimated haven't been required to return the money so that it could be used for additional grants. Kan-ed's marketing efforts haven't been particularly effective*

because members say the information they receive is too technical, or doesn't fully explain the benefits of being connected or how to connect to the network. It's unrealistic to expect that all members will connect to the network because everybody doesn't have a high need for distance learning or videoconferencing. A number of members said they haven't connected in the past for this reason. However, it appears that a significant number of new members may become connected over the next five years. If that happens, Kan-ed officials may need to take some of the money they currently use for broadband subsidies and apply that money to equipment grants. Although there are pros and cons to having Kan-ed administered by the Board of Regents or some other agency, we saw no significant benefit to be gained from moving Kan-ed at this time.

Question 2 Recommendations. *We recommended that the Kan-ed program strengthen the oversight of its grant program by enforcing provisions that recipients connect or enhance their connection to the network, and that it begin spot-checking how grant recipients use their grant award moneys. We also recommended that the program review certain aspects of its marketing activities, and that it develop a plan for the percentage of moneys to be allocated to Internet subsidies and grants to help members connect to the network.*

These Appendices can be found in the full report.

APPENDIX A: *Scope Statement*

APPENDIX B: *Agency Responses*

The Kansas Corporation Commission found the recommendations of the report to be reasonable, and will cooperate with Kan-ed officials to address any of the recommendations.

The Kansas Board of Regents generally agreed with the recommendations and has plans to begin implementing some recommendations.

This audit was conducted by Lisa Hoopes, Joe Lawhon, Felany Opiso-Williams, and Justin Stowe. Leo Hafner was the audit manager. If you need any additional information about the audit's findings, please contact Lisa at the Division's offices. Our address is: Legislative Division of Post Audit, 800 SW Jackson Street, Suite 1200, Topeka, Kansas 66612. You also may call us at (785) 296-3792, or contact us via the Internet at LPA@lpa.state.ks.us.