



KANSAS BOARD OF REGENTS

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Memorandum:

To: Kathleen Sebelius, Governor
The Kansas Legislature
Andy Tompkins, Commissioner of Education

From: Reginald L. Robinson, President and CEO

Re: KAN-ED Annual Report

January 31, 2003

Per K.S.A. 75-7226, I submit this annual report to the Governor, Legislature, and Kansas Department of Education as an annual update on the status and progress of the KAN-ED Project at the Kansas Board of Regents. If you have any specific questions, please contact Hal Gardner, Director of KAN-ED, at 296-8729.

KAN-ED: A Brief Chronology of Events:

Through Senate Substitute for House Bill #2035 in 2001 the Kansas Legislature created KAN-ED with the following language:

“The purpose of this act is to provide for a broadband technology-based network to which schools, libraries and hospitals may connect for broadband Internet access and intranet access for distance learning. For that purpose, the state board of regents shall contract in accordance with this act for the creation, operation and maintenance of such network, to be known as the KAN-ED network.”

Governor Graves signed that bill into law on April 20, 2001. It is now codified as Kansas Statutes 75-7223 through 75-7227. The 2001 Legislature also appropriated \$345,000 for KAN-ED planning.

In May-June 2001, Dr. Kim Wilcox, President of the Kansas Board of Regents, created a twelve person User Advisory Council, with three members each selected from four constituencies: K-12 education, higher education, libraries, and hospitals. The Council met in Topeka on July 18, 2001.

In July 2001, Jerry Niebaum, Assistance Vice Provost, University of Kansas, was appointed by Dr. Wilcox as Planning Coordinator for KAN-ED. In October 2001, following competitive recruitment, Jolene Witkin was named Web/Database Developer for KAN-ED. In August 2002, Brad Williams, already an information technology manager for the Board of Regents, began half-time work as Operations Manager for KAN-ED. Following a national recruitment effort, Hal Gardner became Director of KAN-ED on November 1, 2002.

In the fall of 2001, the User Advisory Council prepared a plan for creating the KAN-ED consortium and the KAN-ED data network. A primary goal of that plan was to insure the continued participation of local network service providers in connectivity to schools, libraries, and hospitals. By design, the KAN-ED network would connect a diverse group of service providers through which schools, libraries, and hospitals would connect. The Board of Regents and the Board of Education endorsed the plan in January 2002. Text of that plan is available electronically at <http://www.kan-ed.org/new/report.htm>. In January 2002, a multimedia CD-ROM presentation of the vision for KAN-ED was created by the Regents Educational Communications Center at Kansas State University. The project was funded entirely by donations from vendors and a copy of that CD-ROM is attached.

On May 17, 2002, Governor Graves signed the Substitute for Senate Bill #614, which created a funding source for KAN-ED from the Kansas Universal Service Fund beginning in January 2003.

Starting in June, 2002, technical and content advisory workgroups began working on services and technical design for the KAN-ED network. A network topology and network concept has been developed, and can be downloaded at <http://www.kan-ed.org/new/news.htm> under "KAN-ED Network Description". The content advisory workgroup is also evaluating and pricing several databases to be made available on the KAN-ED network. More information on the databases can be found at <http://www.kan-ed.org/new/news.htm> under "KAN-ED Database Trial".

On January 24, 2003, KAN-ED submitted the "KAN-ED IT Project Plan" to the Kansas Information Technology Office in accordance with K.S.A. 75-7209 and ITEC Policy 2400. It is currently being reviewed for approval by the executive branch Chief Information Technology Officer.

As of 1/25/03, KAN-ED has employed a Web/Database Developer, Operations Manager, and Network Scheduling and Administrative Coordinator on staff. A Network Planning and Security Coordinator, and Research and Development Coordinator are currently being recruited for.

KAN-ED: Project Overview

A goal of KAN-ED is to improve the quality of education and health care for Kansas citizens. KAN-ED also seeks to improve the quality of life and the quality of the economy by using public libraries to help eliminate the digital divide for citizen access to information. The KAN-ED network will help reduce professional isolation experienced by education and health care professionals in rural areas of our state. It will build on successful models for interactive distance learning and telemedicine programs begun more than a decade ago. KAN-ED seeks to integrate existing distance learning and telemedicine networks into a comprehensive statewide network that will enable school-to-school, library-to-school, school-to-hospital, hospital-to-hospital connections for all schools, libraries, and hospitals in the state. Such a network will then facilitate continuing education for educators (CE), as well as continuing medical education (CME) and continuing nursing education (CNE).

Per K.S.A. 75-7224(i) and pursuant to authorization of the Director of Purchases provided under K.S.A. 75-3739 (h) the Division of Information Systems and Communication (DISC), with years of experience in providing broadband network access for state and local government, will be contracted to work with a small KAN-ED staff and a large number of private service providers to create a network connecting service providers. Schools, hospitals, and libraries will contract with their local service providers for connectivity and for commercial Internet access. KAN-ED will not provide commercial Internet access, but KAN-ED will provide connectivity to Internet2, the national network for education and research.

KAN-ED will provide subsidies for broadband connection for small libraries, small hospitals, and small school districts based on budget size or number of beds in the case of hospitals. The goal is to equalize education and information access across all the user communities. More information on subsidies is included in this plan.

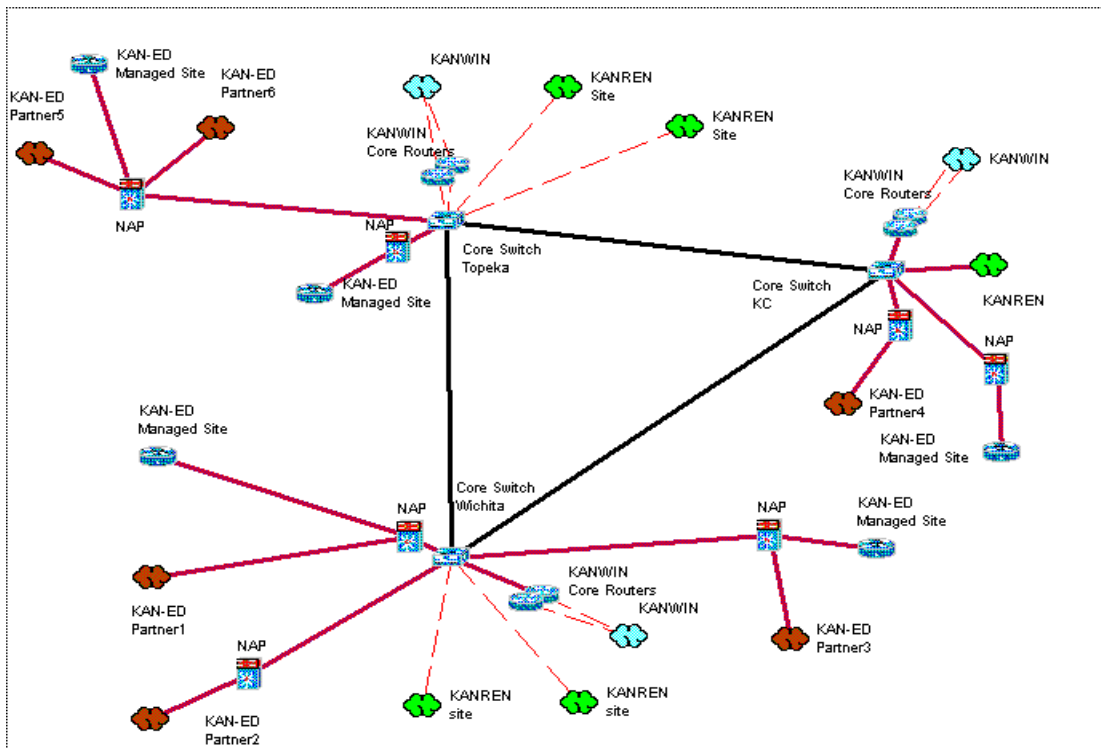
KAN-ED will contract for statewide access to information databases to be made available to all users, such as newspaper archives, a general reference electronic encyclopedia, and a medical reference service. It will build on the excellent work in database licensing and access already begun by the state library and regents universities.

This is not a “project” with a conventional expectation of project completion. The KAN-ED network and its related consortium will be an on-going activity of the Board of Regents. It will have continuing staff and continuing expenses. The following are some milestones that have been achieved, and other as yet anticipated:

July 2001	A.	KAN-ED User Advisory Council formed
Dec. 2001	B.	Plan presented to Kansas Board of Regents
Jan. 2002	C.	Service level agreement with DISC
June 2002	D.	Kansas Distance Learning Consortium (KDLC) implementation Begins
Aug. 2002	E.	Membership solicitation begins
Sept. 2002	F.	KDLC sites operational
Dec. 2002	G.	Project plan complete and submitted
Jan. 2003	H.	Funding begins and network design is complete
Mar. 2003	I.	KAN-ED core network operational
April 2003	J.	First Network Access Points (NAPs) operational
May 2003	K.	First user sites operational

KAN-ED: Network Overview

The KAN-ED network will operate fundamentally as a network of networks, connecting service providers throughout the state. It will consist of a core network connecting the three major population centers of the state: Kansas City, Topeka, and Wichita. Network access points will connect service providers to one or more of the three core switches. The network's basic topology is shown in the diagram below. A detailed network description can be downloaded at <http://www.kan-ed.org>.



Critical Services and Funding for KAN-ED Members:

Essentially, we see some critical applications and services for schools, libraries and hospitals. We believe that the schools are primarily interested in KAN-ED for video conferencing and increasing their ability to conform and perform under the new “No Child Left Behind” initiative. Videoconferencing and enhanced graphical content will help schools level the playing field, related to access. There are many rural communities that do not have these services, which continues to divide the “haves” from the “have nots”.

Libraries see KAN-ED as a way to help them connect to high-speed broadband connections. They are particularly interested in the subsidies that KAN-ED will provide (up to \$4500 per year, based on their previous fiscal year operating budget) to help them pay for the connections for this high-speed access. They are also interested in the aggregated buying power that KAN-ED can bring, so even more databases and news banks can be brought to libraries across Kansas. Many of our libraries are small and rural, KAN-ED will negotiate statewide licenses to provide some databases to all libraries at either no charge, or greatly reduced rates.

Hospitals see KAN-ED as a videoconferencing transport device to bring telemedicine to rural communities across the state. There is a great need for medical experts in our rural communities, and KAN-ED will help hospitals bridge that gap. Hospitals are also interested in continuing education credits across the network, which drastically reduces costs and fees of physically attending a class or seminar.

KAN-ED will also produce savings for all three groups (schools, libraries, and hospitals). Some specific examples follow:

Schools:

Four school districts, which have not previously used interactive distance learning (IDL), cannot offer high school physics because it is cost-prohibitive for the few students who would take the course. They agree to share the cost of an instructor to teach via interactive distance learning. The cost for equipping 4 new classrooms for IDL is approximately \$50,000 each for a total of \$200,000. Assume that this cost is pro-rated over 4 years. The cost for connectivity to the KAN-ED network for IDL will be about \$1,000 per month or \$12,000 per year per school. Assume further that each teacher costs \$38,562 (median salary for Kansas) per year. Thus, the cost per year for the IDL model is \$136,862 (\$50,000 equipment + \$48,000 communications + \$38,862 for one teacher). Traditional teaching would cost \$155,448 for four teachers, if they can be found. Thus, the cost difference for this single class would be \$16,586 per year total for the school districts. Suppose these schools agree to share a Spanish teacher as well. There could be savings of \$206,586 per year for instructional staff or a net savings of \$223,172 per year with this second IDL class.

Hospitals:

Healthcare workers are required to undertake continuing medical education (CME) or continuing nursing education (CNE) periodically to maintain certification. Hospitals not only pay travel and tuition expenses, but also must either pay costs for replacement staff or lose revenue normally generated by those staff. Thus, the cost for such education may be quite high, even if the tuition is low. Consider a recent conference on telemedicine held in Topeka. The tuition was \$50 for a one-day conference for which 5 CNE credits were given. Hotel and meal expenses were an additional \$100 per day. Staff time losses may amount to \$200 per person per day and travel expenses may be \$75 or more. Assuming $\frac{1}{4}$ day travel each direction and 2 overnights for the one-day conference, and the cost per person approaches \$725. The same training offered via IDL might have a total cost of \$100 per person, reflecting a cost difference of \$625. For the 50 persons attending this particular conference the savings would be more than \$30,000.

Libraries:

Librarians will also benefit from interactive continuing education through the KAN-ED network. Additional savings will be made through consolidated purchase of electronic databases. For example KAN-ED intends to purchase statewide licenses as a benefit to KAN-ED members. For example, purchasing one statewide license for a commonly used encyclopedia database will result in a savings of \$267,780 over individual libraries purchasing this resource on their own.

Subsidies:

KAN-ED intends to provide subsidies for basic broadband network connectivity to all KAN-ED member user sites eligible to receive such state subsidy. The KAN-ED budget request includes funds for subsidizing public schools, libraries, and hospitals for such basic broadband network connectivity. The amount of subsidy will be based on prior year total expenditures for the school district or library, and on number of acute licensed beds for hospital subsidies. Only KAN-ED members will be eligible to receive a subsidy. KAN-ED will make every attempt to maximize state and federal dollars provide these subsidies. It is expected that schools, libraries and hospitals will be able to apply for subsidies beginning Spring 2003.

The maximum annual subsidy for connecting any given site is expected to be about \$4,500. Total amount of subsidies for all eligible schools, libraries and hospitals is expected to be from \$1.5 to \$2.5 million per year, depending on KAN-ED membership.

Libraries and school districts:

Total user site annual expenditures (from prior fiscal year)		
< \$300,000	100%	\$4500
\$300,000 to \$2,999,999	90%	\$4050
\$3,000,000 to \$4,999,999	75%	\$3375
\$5,000,000 to \$9,999,999	50%	\$2250
>\$10,000,000	no subsidy	\$0

Hospitals:

<16 or fewer acute licensed beds	100%	\$4500
16 to 25 beds	90%	\$4050
26 to 50 beds	75%	\$3375
51 to 75 beds	50%	\$2250
>75 beds	no subsidy	\$0

User sites already connected to service providers who fall into one of the subsidy categories above will receive the corresponding subsidy when funding becomes available.

It is important to note the specific responsibilities that the Board has been charged with to implement KAN-ED. Some are in bold, as are as follows:

75-7224. Same; network standards established; provider contracts authorized; needs assessment required; advisory committee authorized; rules and regulations.

- (a) **The board shall establish a plan to ensure that all schools, libraries and hospitals have quality, affordable access to the Internet and distance learning. The board shall adopt standards for determining whether such access is available to each school, library, any hospital, the state corporation commission, any other agency of the state or any telecommunications, cable or other communications services provider to gather necessary data to implement such plan and establish such standards and priorities. The board shall develop a methodology for updating and validating any data collected for periodic revisions of the plan, standards and priorities. Not less than 75% of all schools which have applied to the board to participate in the network, 75% of all libraries which have applied to the board to participate in the network and 75% of all hospitals which have applied to the board to participate in the network shall have access to the network by July 1, 2004.**
- (b) The board shall contract with providers of telecommunications services, cable services, and other communications services for the creation, operation, and maintenance of the

network. Such contracts shall be let by competitive bids as provided by K.S.A. 75-3739, and amendments thereto.

- (c) The board shall establish: (1) Technical standards for operation and maintenance of the network; (2) the method of monitoring operations of the network; and (3) the method of methods or increasing the capacity of the network to accommodate changes in the demands of schools, libraries and hospitals.
- (d) The board shall identify and potential regulatory impediments to and other regulatory considerations in implementation of the network and shall propose measures to address such impediments and other considerations.**
- (e) The board shall assess the need of schools, libraries and hospitals for full-motion video connectivity. Based on its findings, the board may develop a plan to provide such connectivity. The plan may require users of such connectivity bear part of its cost.**
- (f) The board may appoint such advisory committees as the board determines necessary to carry out the purposes of this act. The membership of advisory committees may include both members of the board and persons who are not board members. Such advisory committees, to the extent appropriate, shall include both communications service providers and participants knowledgeable about topics such as network facilities and services, network content and user training, and such other topics as may be necessary or useful. Members of advisory committees appointed by the board shall receive amounts provided for in subsection (e) of K.S.A. 75-3223, and amendments thereto.
- (g) On or before July 1, 2002, and thereafter as the board deems appropriate, the board shall adopt rules and regulations to implement and administer the provisions of this act.
- (h) The board shall have all other powers necessary to achieve the purposes of this act, including but not limited to the power to receive any appropriations, donations, grants, bequests and devises, conditional and otherwise, or money, property, services or other things of value for the purposes of this act.
- (i) The state department of education, the division of information systems and communications of the department of administration, the state corporation commission and all other state agencies shall cooperate with the board in providing information and other assistance requested by the board for the performance of its duties pursuant to this act.**