

KAN-ED Oversight Committee

2006 REPORT

CONCLUSIONS AND RECOMMENDATIONS

Regarding consolidation of state networks, the Committee concluded that:

- The Board of Regents and the Department of Administration should continue the effort that resulted in the *Network Study* prepared pursuant to K.S.A. 2006 Supp. 75-7228 and should pursue recommendations made in that report.
- The time line presented by the Board of Regents in its proposal to the Committee is adequate and should guide the effort leading up to the March 1 report to the Legislature.
- All three networks examined in the *Network Study* should participate in additional planning and study to ensure establishment and maintenance of a common focus for state networks.
- The three network organizations should create a consolidation plan that, in addition to the issues identified in the *Network Study*, addresses:
 - backbone cost analysis
 - last mile access
 - premise equipment and local area networks
 - public/private partnering
 - funding source
 - permissible traffic (Internet, voice over Internet protocol, video, data, and so on)
 - permissible constituent access (adding additional state agencies and health care institutions)
 - proposed statutory changes
 - current commodity Internet pricing

Based on these conclusions, the Committee recommends that:

- The Board of Regents, DISC, and KanREN pursue the recommendations made in the 2005 *Network Study*; as outlined in that report and in the proposal presented to the Committee.
- The Board of Regents, KanREN, and DISC conduct a feasibility study of the three consolidation models presented to the Committee and present a specific recommendation no later than March 1, 2007 to the standing committees on Utilities, Education, Health, Commerce, Ways and Means, and Appropriations; and to the Joint Committee on Information Technology.

The Committee concluded that the Legislature would have an opportunity to consider additional statutory changes necessary to facilitate implementation of KAN-ED's goals during the 2007 Session after the proposed consolidation plan is presented along with suggested statutory changes.

- The March 1, 2007 report include drafts of any legislation required to implement the recommendations.

In regard to the membership of KAN-ED, the Committee concluded that additional state agencies would benefit from membership. Specifically, the Committee concluded that the Department of Corrections and the Department of Health and Environment would benefit from KAN-ED membership.

- Based on that conclusion, the Committee recommends that the Legislature enact amendments to the KAN-ED Act that would allow the Department of Corrections and the Department of Health and Environment to become members of KAN-ED. The bill containing those amendments accompanies this report.

Proposed Legislation: One bill.

BACKGROUND

The 2006 Legislature created the KAN-ED Oversight Committee in the Omnibus appropriation bill (2006 Sen. Sub. for HB 2968). The provision required that the Committee consist of one member from each of the following standing committees: House Appropriations, House Education, House Health and Human Services and House Utilities; Senate Ways and Means, Senate Education, Senate Public Health and Welfare, Senate Commerce and Senate Utilities; and a member of the Joint Committee on Information Technology. House members were appointed by the Speaker, Senators were appointed by the President, and the member of the Joint Committee on Information Technology was appointed jointly by the Speaker and the President.

The Committee's charge includes:

- Studying the original goals and objectives of KAN-ED and whether those goals and objectives have been met;
- Making recommendations for:
 - statutory changes required to make KAN-ED a more viable program;
 - consolidation of KAN-ED with other state networks;
 - funding of KAN-ED; and

- the addition of entities to the list of potential members of KAN-ED;

The authorizing legislation required that the Committee present its report on or before January 1, 2007.

History

For nearly 20 years, the need for a network capable of transmitting voice, data, and video content has been recognized. In order to meet that need, a backbone network had to be designed and implemented to take advantage of emerging telecommunications technologies for state government and educational institutions. Studies and task forces, along with agreements between telecommunications providers and the Kansas Corporation Commission (KCC), have been combined to create the required connectivity. Over the course of the years, numerous concepts were discussed, some more elaborate than others. However, the current state expenditure for implementation of KAN-ED, approximately \$10 million per year, is within the range established by the various studies.

The 2001 Legislature enacted the KAN-ED Act (K.S.A. 75-7222, *et seq.*) to create “a broadband technology-based network to which schools, libraries, and hospitals may connect for broadband Internet access and

intranet access for distance learning” (K.S.A. 75-7223(a)) The Board of Regents was required to establish a plan to implement the Act.

The 2001 Legislature also appropriated \$345,000 from the State General Fund (SGF) to finance activities of a User Advisory Council to assist with the planning effort. In December 2001, the Advisory Council report was presented to the Board of Regents. This plan included in the report was endorsed in January 2002 by the Board of Regents and the Department of Education. The plan envisioned public funding for KAN-ED from all three levels of government: federal, state, and local. Local funding would provide for infrastructure and service provider connection. State funding would pay for the network backbone and access points to the network, information databases, network management, content development, and site subsidies. Federal funding would provide matching funds for the backbone and network access points.

The 2002 Legislature enacted SB 614 (K.S.A. 66-2010), which provided that KAN-ED would be financed by the Kansas Universal Service Fund (KUSF) until 2005, with the suggestion that future funding would come from the SGF. During the 2003 Interim, the Special Committee on Utilities discussed telecommunications issues and reviewed the status of the KAN-ED network. In 2004, the KAN-ED network was deployed and during the 2004 Interim, the Legislative Educational Planning Committee recommended funding through the KUSF continue through 2008.

The 2005 Legislature extended until 2009 the length of time for KAN-ED financing from the KUSF. During this four-year extension, funding from the KUSF will be phased down to \$5.5 million. After fiscal year 2009, SGF financing is to be used for KAN-ED. Consistent with that law, the 2006 Legislature appropriated \$8 million for KAN-ED from the KUSF. An additional \$2 million was appropriated for KAN-ED from the SGF.

The same 2005 bill that changed KAN-ED financing for fiscal years 2007 through 2009 also required the State Board of Regents to study KAN-ED and two other statewide networks, Kansas Research and Education Network (KanREN) and Kansas Wide Area Network (KanWIN). The report (*Network Study*), with recommendations for eliminating duplications or inefficiencies was completed and presented to the House Utilities and Senate Commerce early in the 2006 Session.

COMMITTEE ACTIVITIES

The Committee held two one-day meetings and one half-day meeting: October 27, November 20, and December 4. During those meetings the Committee received information from staff of KAN-ED, KanREN, KanWIN, the State Board of Regents, the State Library, the Corporation Commission, the Department of Transportation, and the Kansas Hospital Association.

The following discussion of Committee activities is organized to follow the Committee's statutory charge.

KAN-ED Goals and Objectives

The KAN-ED Act established an overall goal of provision of a broadband network for schools, libraries and hospitals for Internet access and an intranet for distance learning. The Act places certain limitations on the network. The Board of Regents is specifically required to contract for operation and maintenance of the network. The network specifically cannot:

- Impair any existing contract for provision of telecommunications or Internet services to any school, library or hospital;
- Involve state ownership or construction of any network facilities other than those owned or being constructed by the state on April 26, 2001;

- Provide switched voice access, except to the extent switched access was being provided by state owned, leased or operated facilities on April 26, 2001;
- Transmit voice over Internet or voice over Internet protocol (VoIP), except as necessary to facilitate interactive two-way video; or
- Be used for purposes inconsistent with the Act.

The Committee received summary evaluations prepared by KAN-ED staff regarding fulfillment of statutory goals and objectives. Those evaluations found that KAN-ED has fulfilled its goals and objectives by:

- Providing broadband intranet connectivity for Interactive Distanced Learning (IDL) and other video conferencing formats, such as telemedicine.
- Avoiding competition with the Kansas telecommunications industry and impairment of contracts, by not providing commercial Internet access. Instead, KAN-ED subsidizes broadband Internet connections offered by local service providers.
- Offering neither circuit switched voice communication nor VoIP on the KAN-ED network.
- Developing implementation plans and network standards for operation, maintenance and monitoring of the network. Refinement of those plans and standards is ongoing. The Board of Regents contracts with KanREN for engineering and management services.

Consolidation of KAN-ED with Other Statewide Networks

During its hearings, the Committee learned that the *Network Study* identified a duplication of network infrastructure and management facilities among the statewide networks. Thus, there is an opportunity for cost savings if the duplication can be reduced or eliminated. According to the *Network Study*, "consolidation of infrastructure elements could increase efficiency and potentially reduce costs. Study participants agree the systematic, staged integration of existing networks into one shared core network could provide improved cost-benefit performance." (*Network Study*, pg.1)

"Coordinating these activities could optimize benefits and allow sharing of expense. Other potential benefits from consolidation include uniform availability of services, increased service capability, increased stability and reliability and the leveraging of expertise and manpower of the network organizations." The report also notes that consolidation should preserve the "unique interactions, agreements and service level expectations" for each network. (*Network Study*, pg.1)

The *Network Study* also found that affordable last-mile connectivity is important to achieving the goal of linking Kansas public institutions, and that access to the public Internet remains the primary application required by Kansas public institutions.

Finally, the *Network Study* described seven steps necessary to facilitate functional integration of the networks without sacrificing existing, critical applications. Those steps are:

- Integrating network planning efforts between KAN-ED and KanREN.
- Developing a detailed, optimized plan for a consolidated KAN-ED and KanREN infrastructure.

- Studying the benefits and requirements to consolidate the KanWIN infrastructure and its management with the optimized KAN-ED/KanREN network.
- Providing a plan for potential KanWIN consolidation with the optimized KAN-ED/KanREN network.
- Creating policy to support integrated planning and consolidation if those efforts result in realizable cost benefits to Kansas. Changes in policy, regulatory and contract environments will be necessary to enable complete consolidation and enhance capabilities. Without these changes significant limitations will degrade or prevent potential benefits.
- Establishing a funding mechanism that will reliably support combined network requirements.
- Developing an organizational structure to operate the consolidated network while remaining responsive to individual constituent group requirements.

The Committee was informed that the Board of Regents would welcome an indication of the Legislature's desire regarding recommendations made in the *Network Study*.

The Committee learned that KanREN is a private non-profit organization supported by membership fees and fees for services. KanREN serves elementary and secondary schools, public libraries, non-profit organizations with a research or education purpose, and post-secondary educational institutions. KanREN is governed by a Board of Directors elected by the membership. The Board is composed of two representatives each from K-12 schools, community colleges, private colleges, and Regents' universities member sites. In addition, the Board includes one member from an Internet2 member university (University of

Kansas, Kansas State University and Wichita State University) and three at-large members.

KanREN has approximately 55 dues-paying members with 70 service sites. Approximately 62 percent of KanREN membership fees are paid by Regents' institutions. KanREN also provides technical support to KAN-ED on a contract for services basis. Services provided under that contract include working with telecommunication providers and member sites to support video scheduling, network management, and diagnostics and problem resolution. KanREN also works with KAN-ED to engineer connections.

KanWIN was created to serve the needs of state agencies for both intranet and Internet services. The impetus for creation of KanWIN was support for the human resource and payroll system. The network currently serves a broad range of agency and e-government needs. The nature of the business carried by KanWIN requires the network to be highly reliable, secure and resilient at the lowest cost possible for the agencies.

KanWIN users are defined by statute and include state agencies, contractors who work for state agencies, local units of government, K-12 schools, and non profit organizations. Residents of Kansas access e-government services via KanWIN. Most KanWIN users are state agencies and people doing business with those agencies.

KanWIN is operated by the Division of Information Systems and Computing as a service. Users are charged a monthly subscription fee to connect to KanWIN. No SGF moneys are appropriated directly to support KanWIN. However, approximately 24 percent of KanWIN fees are paid from SGF appropriations to agencies.

Continued Exploration of Consolidation

The Committee reviewed a proposal presented by KAN-ED describing the

preliminary steps that could lead to network consolidation. The proposal, which encompasses recommendations made in the *Network Study*, involves immediate resumption of the examination of the feasibility of consolidation of KAN-ED and KanREN to create an “education network.” Completion of that study is targeted in the proposal for March 1, 2007. The proposal indicates that specific cost savings that may be achieved from consolidation would be included in the March report.

Milestone dates for the KAN-ED/KanREN consolidation were included in the proposal. Those dates target the start of consolidation for June 1, 2007 with completion projected for the end of 2007. That phase of the project would be followed by examination of the feasibility of consolidating KanWIN with the education network. That second study would be completed by March 1, 2008. If the outcome of the study shows integration to be feasible, the proposal targets August 1, 2008 as the start date for the second round of consolidation. A completion date for that effort was not included in the proposal.

In regard to potential cost savings that might be achieved from network consolidation, the proposal presented three models:

- Model 1 would involve consolidation of the Next-Generation Optically Provisionable KanREN backbone and the existing KAN-ED Extended Edge backbone. The proposal characterizes startup costs for this model as “significant” due to one-time equipment costs. Relatively little savings are anticipated in the operation of the consolidated network. The preliminary assessment by KAN-ED staff is that Model 1 would provide for the best service flexibility and the best ability to serve all the combined networks’ various constituents now and into the future.
- Model 2 would involve modifying the KAN-ED backbone, separating the Internet/research network for institutions

of higher education and retention of current KAN-ED capabilities. The proposal projected that both start-up and annual operating costs could be covered by the current level of appropriations for KAN-ED. Some savings might be realized.

- Model 3 would involve consolidation of the education network with KanWIN. The feasibility of this model was presented as being more uncertain than the other two models. The proposal contained neither an estimate of start-up costs nor of annual costs for this model. Potential savings might be realized, according to the proposal, by combining models 2 and 3. KAN-ED staff indicated that the third model would benefit from the use of state facilities, but would not provide as much flexibility as the other two models. Model 3 would have the most stringent security requirements because of the nature of the applications that run on KanWIN.

KAN-ED staff informed the Committee that an element of the feasibility analysis would be examination of any impact consolidation would have on eligibility for e-rate support in the future. According to KAN-ED staff, a number of variables in any consolidation effort may impact the amount of e-rate support for which KAN-ED is eligible.

Committee Conclusions Regarding Consolidation of Networks

Regarding consolidation of state networks, the Committee concluded that:

- The Board of Regents and the Department of Administration should continue the effort that resulted in the *Network Study* and should pursue recommendations made in that report.
- The time line presented by the Board of Regents in its proposal to the Committee

is adequate and should guide the effort leading up to the March 1 report to the Legislature.

- All three networks examined in the *Network Study* should participate in additional planning and study to ensure establishment and maintenance of a common focus for state networks.
- The three network organizations should create a consolidation plan that, in addition to the issues identified in the *Network Study*, addresses:
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KAN-ED Financing

The amount of state money available to finance KAN-ED operations is determined by the Legislature annually through an appropriation act. In each of fiscal years 2003, 2004, and 2005, \$10 million was appropriated to KAN-ED from the KUSF. That funding stream was set to expire at the end of FY 2005 when KAN-ED financing would have shifted to the SGF.

The 2005 Legislature amended the law to continue KUSF financing of KAN-ED in declining amounts until the end of FY 2009 at which time the financing statute will expire.

The Committee received communications from the Board of Regents, the Kansas Hospital Association, the State Department of Education, and the Kansas

Library Association expressing support for continued financing of KAN-ED from the KUSF.

The Committee learned from the Kansas Corporation Commission that shifting KAN-ED support from the KUSF to another source would have reduced the consumer-paid monthly KUSF fee during the current year an amount in the range of \$0.08 to \$0.55.

Addition of Other Entities to the List of Potential KAN-ED Members

Under the KAN-ED Act, hospitals, libraries, and schools are served by the network. The definition of school in the Act includes public and accredited nonpublic K-12 schools and public, and certain private, post secondary educational institutions. KAN-ED members comprise a subset of all eligible entities described in the ACT. The Committee learned that there are currently 797 KAN-ED members out of a potential membership of 898. "Connected members" comprise a subset of all members. Currently there are 257 connected members that are able to utilize the KAN-ED network for video-conferencing including Interactive Distance Learning and access to Internet2 sites. The Committee also learned that the service issue in much of the state is cost rather than the absence of connectivity.

The 2006 Legislature considered HB 2656 that would have extended KAN-ED membership eligibility to the Department of Corrections, the Juvenile Justice Authority and the state courts and their medical and education providers. The bill was introduced by the House Committee on Higher Education and was referred to the House Utilities Committee. The bill was heard but died in Committee at the end of the 2006 Session.

Committee Conclusions Regarding Expansion of KAN-ED Membership

The Committee concluded that making additional state agencies eligible for KAN-ED

membership would provide benefits to those agencies. Specifically, the Committee concluded that the Department of Corrections and the Department of Health and Environment would benefit from KAN-ED membership.

**Statutory Changes Required to
Make KAN-ED a
More Viable Program**

Board of Regents staff suggested two statutory changes that would facilitate integration of Kansas' networks. One change would permit KAN-ED to utilize state-owned network equipment. The second would make additional state agencies eligible for membership in KAN-ED.

**Committee Conclusions
Regarding Statutory Changes**

The Committee concluded that the Legislature would have an opportunity to consider additional statutory changes necessary to facilitate implementation of KAN-ED's goals during the 2007 Session after the proposed consolidation plan is presented along with suggested statutory changes.

COMMITTEE RECOMMENDATIONS

Based on information presented during its meetings and its conclusions described above, the Committee recommended that:

- The Board of Regents and the Department of Administration should continue the effort that resulted in the *Network Study* prepared pursuant to K.S.A. 2006 Supp. 75-7228 and pursue recommendations made in that report.
- The Board of Regents, KanREN, and DISC conduct a feasibility study of the three consolidation models presented to the Committee and make a specific recommendation no later than March 1, 2007 to the standing committees on Utilities, Education, Health, Commerce, Ways and Means, and Appropriations; and to the Joint Committee on Information Technology.
- The March 1, 2007 report include drafts of any legislation required to implement the recommendations.
- The Legislature enact amendments to the KAN-ED Act that will allow the Department of Corrections and the Department of Health and Environment to become members of KAN-ED.