

Approved: March 23, 2007

Date

MINUTES OF THE HOUSE GOVERNMENT EFFICIENCY AND TECHNOLOGY COMMITTEE

The meeting was called to order by Chairman Jim Morrison at 3:40 P.M. on March 12, 2007, in Room 526-S of the Capitol.

All members were present except Representatives Holland, Siegfried, and Frownfelter, all of whom were excused.

Committee staff present:

Mary Galligan, Kansas Legislative Research  
Tatiana Lin, Kansas Legislative Research  
Renaë Jefferies, Office of Revisor of Statutes  
Gary Deeter, Committee Assistant

Conferees appearing before the committee:

Hal Gardner, Executive Director, KAN-Ed Network  
Scott Shoemaker, Senior Architect, Calence Consultants  
John Casebeer, Senior Architect, Calence Consultants (by telephone conference)

Others attending:

See attached list.

The Chair introduced Hal Gardner, Executive Director, KAN-Ed Network, who gave brief comments on issues currently under consideration by the legislature, noted variance among legislators regarding the mission of KAN-Ed, and introduced the Calence network design team who worked with KANWIN (Kansas Wide-Area Network), KANREN (Kansas Research and Education Network), and KAN-Ed to provide a feasibility study for a proposal to consolidate the three networks ([Attachment 1](#)). Responding to the Chairman's question, Mr. Gardner said KAN-Ed's current excess capacity was a result of initial negotiations with carriers, who provided a package of excess bandwidth for nearly the same price as a smaller package.

Scott Shoemaker and John Casebeer (the latter by conference bridge connection), both Senior Architects, Network Strategy and Infrastructure, Calence, reviewed the executive summary of the network consolidation feasibility study ([Attachment 2](#)). Mr. Shoemaker summarized the findings by saying that the three networks cannot effectively be joined into a single network, although some areas of collaboration and consolidation could provide benefits and reduce costs. He noted that funding models were not included in the study.

Giving more details, Mr. Shoemaker said the three networks have distinguishing intra-network characteristics, different governance structures, variant business models, separate funding patterns, and multiple backbone configurations, all of which preclude comprehensive consolidation, although each provides valuable service to constituents in an efficient manner. He identified areas of similarity, but commented that issues of security, availability, adaptability, and standardization create daunting problems for consolidation. He traced several recommendations regarding backbone migration, QoS (Quality of Service) design standards, and realignment, outlining phases for accomplishing the recommendations, including cost estimates.

## CONTINUATION SHEET

MINUTES OF THE House Government Efficiency and Technology Committee at 3:30 P.M. on March 12, 2007, in Room 526-S of the Capitol.

Mr. Shoemaker and Mr. Casebeer, with assistance from audience members, responded to numerous questions from members:

- KANREN has peering points with KAN-Ed.
- From an engineering standpoint, KAN-Ed has many open-ended bandwidth requirements, in part through negotiating with multiple carriers.
- Interactive video was originally envisioned for classroom use; however, other applications are now using it--hospitals and libraries--with the future possibility of town-hall meetings.
- The study did not include capacity evaluations; the present networks have no impediments for adapting to future requirements.
- The variation in standards used by KAN-Ed is necessary to accommodate various user groups. Calence recommends developing tighter standards and more uniformity. However, further analysis is needed to quantify standardization.
- The 2006 KAN-Ed Oversight Committee report ([Attachment 3](#)) was the launching point for the Calence study.
- KANREN is not mentioned as often in the study because the network is more tightly structured and the study identified fewer cost savings.
- Doug Haecock, KANREN Board Member, replied that most KANREN members are also KAN-Ed members. (Committee members were later provided with [Attachment 4](#), which lists 2006 KAN-Ed members.)
- The study at a high level recommended possible staff realignment at the operations center.
- Mr. Gardner responded to a question that 32 libraries are connected to KAN-Ed and that presently KAN-Ed is responding to school districts and hospitals as they express a need for further services.
- Jerry Huff, Business Director, KAN-Ed, said connectivity will not solve QoS; additional bandwidth will, especially for video.

A member commented that KAN-Ed appears to be wasting resources, being over-engineered with minimal results, and seems to be operating parallel to KANREN; he recommended merging KAN-Ed and KANREN networks. Another member responded that QoS is key for classroom use, and merging video and data on the same network would destroy effective interactive learning. Members requested the map provided by the 2006 report ([Attachment 5](#)).

Staff also provided for members a study of private data networks ([Attachment 6](#)) and an overview of KAN-Ed ([Attachment 7](#)).

The meeting was adjourned at 5:14 p.m. The next meeting is scheduled for Tuesday, March 13, 2007.





# KANSAS BOARD OF REGENTS

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House Government Efficiency and Technology  
March 8, 2007  
Network Consolidation and Feasibility Study

Good afternoon Mr. Chair and members of the committee. This afternoon I will introduce members of the *Calence* network design team who have worked with KanWIN, KanREN, and Kan-ed to produce an in-depth analysis of the three network's potential for consolidation, along with specific recommendations coming out of that study as requested by the Oversight Committee on December 4, 2006. Your packets include copies of the full *Calence* report. In addition, we have provided you with draft copies of recommended amendments to current statutory language that will eliminate barriers to accomplishing what is recommended in the feasibility study, again as requested by the Oversight Committee.

Other legislation pending before the Senate and the House are Senate Bill 148, and House Bill 2194. Together, the bills introduce amendments to the Kan-ed statute that would allow for connection to the Kan-ed network by the Kansas Department of Corrections and the Kansas Department of Health and Environment. Kan-ed staff agrees that these amendments bring appropriate technologies such as Interactive Distance Learning and Video Conferencing to these groups. Further, we believe they can benefit not only from the technology, but from the collaborative relationships that can be formed with our current constituents that the technology makes possible.

I have found in my discussions with legislators that there are competing versions about what Kan-ed's mission is. As a consequence, I want to re-state that mission and how Kan-ed moves the network along that path.

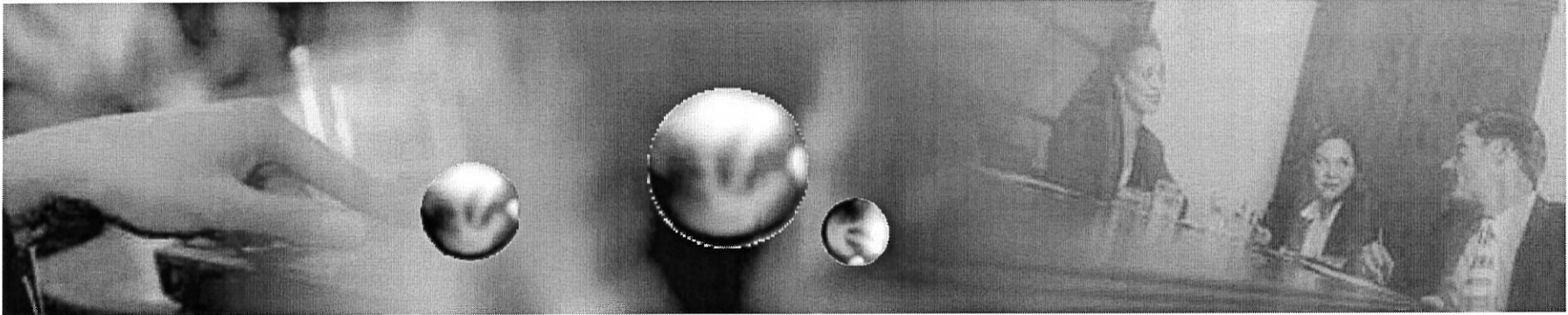
The Kan-ed mission is to *support Libraries, K-12 Schools, and Higher Education and Hospitals by assisting with access to commercial Internet resources, providing access to private network resources for distance learning and applications, and providing access to other Internet technologies and technology services.* We do that by providing or assisting with access to broadband by all members of Kan-ed; and access to the Kan-ed backbone (Intranet) by those schools, hospitals, and libraries wishing to have such access (connectivity).

At this time it is my pleasure to introduce the Calence Team. They are represented this afternoon by Scott Shoemaker. John Casebeer will join us via a conference bridge connection. We will take questions at the conclusion of the report.

Attachment 1  
GET 3-12-07

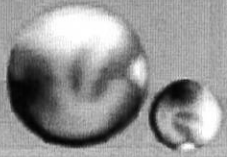
# *State of Kansas Network Consolidation Feasibility Study*

Attachment 2  
GGT 3-12-07



*March 2007*

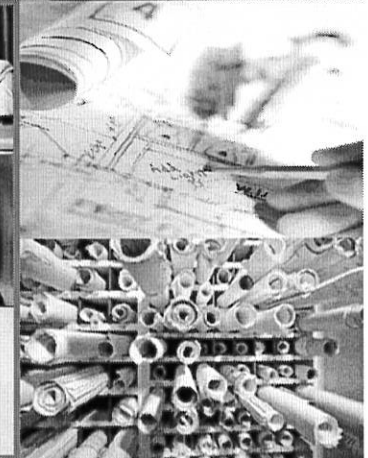
**CALENCE**<sup>SM</sup>  
Putting your network to work.<sup>SM</sup>



# Contents

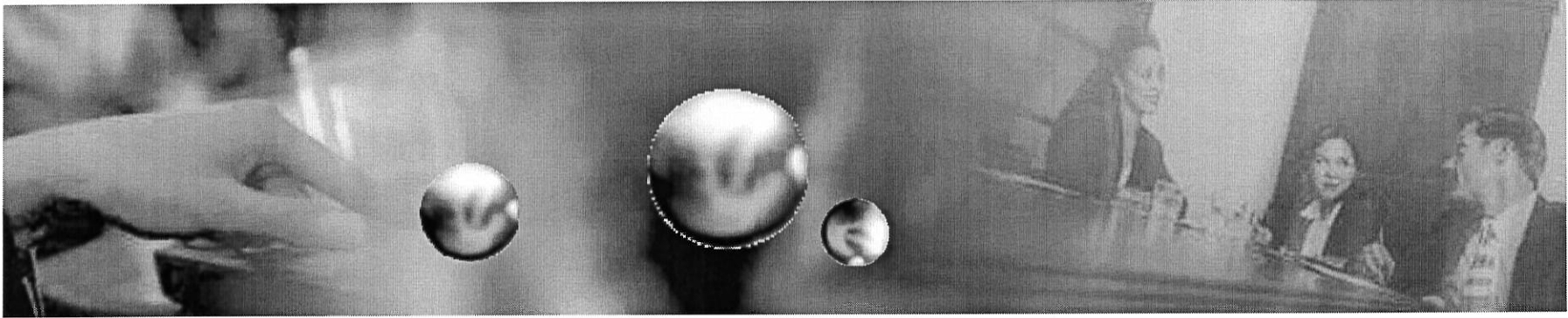
2-2

- Executive Summary
- Approach
- Current State
- Recommendations
- Next Steps
- Appendix

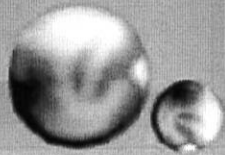


**CALENCE**<sup>SM</sup>  
Putting your network to work.<sup>SM</sup>

# *State of Kansas Executive Summary*

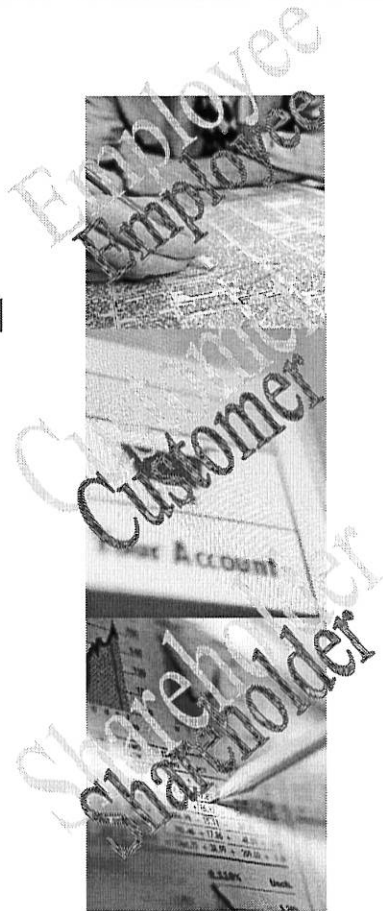


**CALENCE**<sup>SM</sup>  
Putting your network to work.<sup>SM</sup>

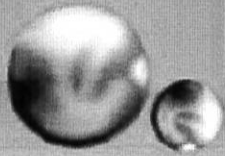


# Objectives

- Support KanREN, KanWIN and Kan-ED in meeting the Kansas State Legislature's request to determine the feasibility of consolidating the 3 state networks
- Identify potential areas for network consolidation and areas for potential cost savings
- Identify additional investigation that will be required as "next steps" to exploring network consolidation
- Funding models have been excluded from this analysis
- Savings have been identified were quantifiable without detailed design and cost analysis







# Business Drivers



## Increased **PRODUCTIVITY**

- Collaboration
- Application Integration
- Mobility Service Enablement
- Response Time/Performance



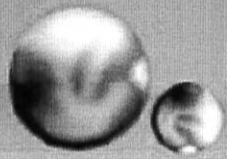
## Decreased **COST**

- Network Scale
- Simplification
- Staffing Economies
- Total Cost of Ownership (TCO)



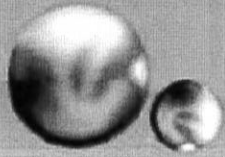
## Increased **SECURITY/Integration**

- Threats
- Loss
- First Response Support
- Public Safety



# Key Perspectives

- The three networks have distinguishing intra-network characteristics that preclude comprehensive consolidation
- All three networks have different governance structures and business models that result in varying operational considerations and regulatory requirements
- Multiple configurations of backbone networking and operation centers exist to accomplish similar purposes
- All three network have some synergies in regards to backbone configurations, network management, customer traffic aggregation and delivery of customer traffic
- KanREN, KanWIN and Kan-ED each provide valued services to their constituents in an efficient manner



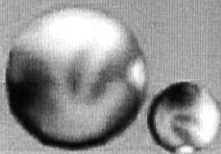
# KanREN Network Summary

## Business Environment

- **Purpose**
  - Broadband Technology-Based Network
  - Transport to Internet Access Points
  - Transport for internal applications and services
- **User Communities**
  - K-12, Higher Ed, Public Hospitals and Other Non-profit Organizations
- **Applications**
  - Interactive Distance Learning
  - Video Conferencing
  - Internet2
  - Public Internet
  - Access to State Applications
- **Governance Model**
  - 501(c)(3)
  - Board of Directors

## IT Environment

- **Backbone Speed**
  - High speed core Star Topology backbone: Scalable to 1GB
- **Network Access Points**
  - Last-Mile circuits aggregated at 6 Access Points
- **Network Scale**
  - 50 members
  - 70 connected sites



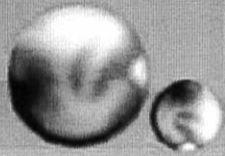
# KanWIN Network Summary

## Business Environment

- **Purpose**
  - Broadband Based Network
  - Transport to Internet Access Points
  - Transport for internal applications and services
  - Transport for public government applications
- **User Communities**
  - State agencies, Local Gov and state residents
- **Applications**
  - Video, Public Internet, State Gov apps and E-Gov services
- **Governance Model**
  - Secretary of Administration and Policy Board

## IT Environment

- **Backbone Speed**
  - Medium speed core backbone: 155MB
- **Network Access Points**
  - Last-Mile circuits aggregated at 3 Access Points
- **Network Scale**
  - 625 connected sites



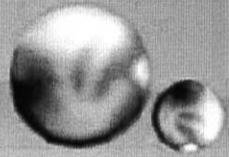
# Kan-ED Network Summary

## Business Environment

- **Purpose**
  - Broadband Technology-Based Network
  - Transport for internal applications and services
- **User Communities**
  - K-12, Higher Ed, Libraries & Hospitals
- **Applications**
  - Interactive Distance Learning
  - Video Conferencing
  - Internet2
  - Telemedicine & EMR
- **Governance Model**
  - Kansas Board of Regents
  - Advisory Council

## IT Environment

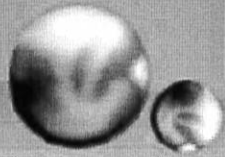
- **Backbone Speed**
  - Medium speed backbone: 155MB
- **Network Access Points**
  - Last-Mile circuits via Extended-Edge network aggregated at 19 Access Points
- **Network Scale**
  - 797 members
  - 298 connected sites (70 of which are connected via KanREN)



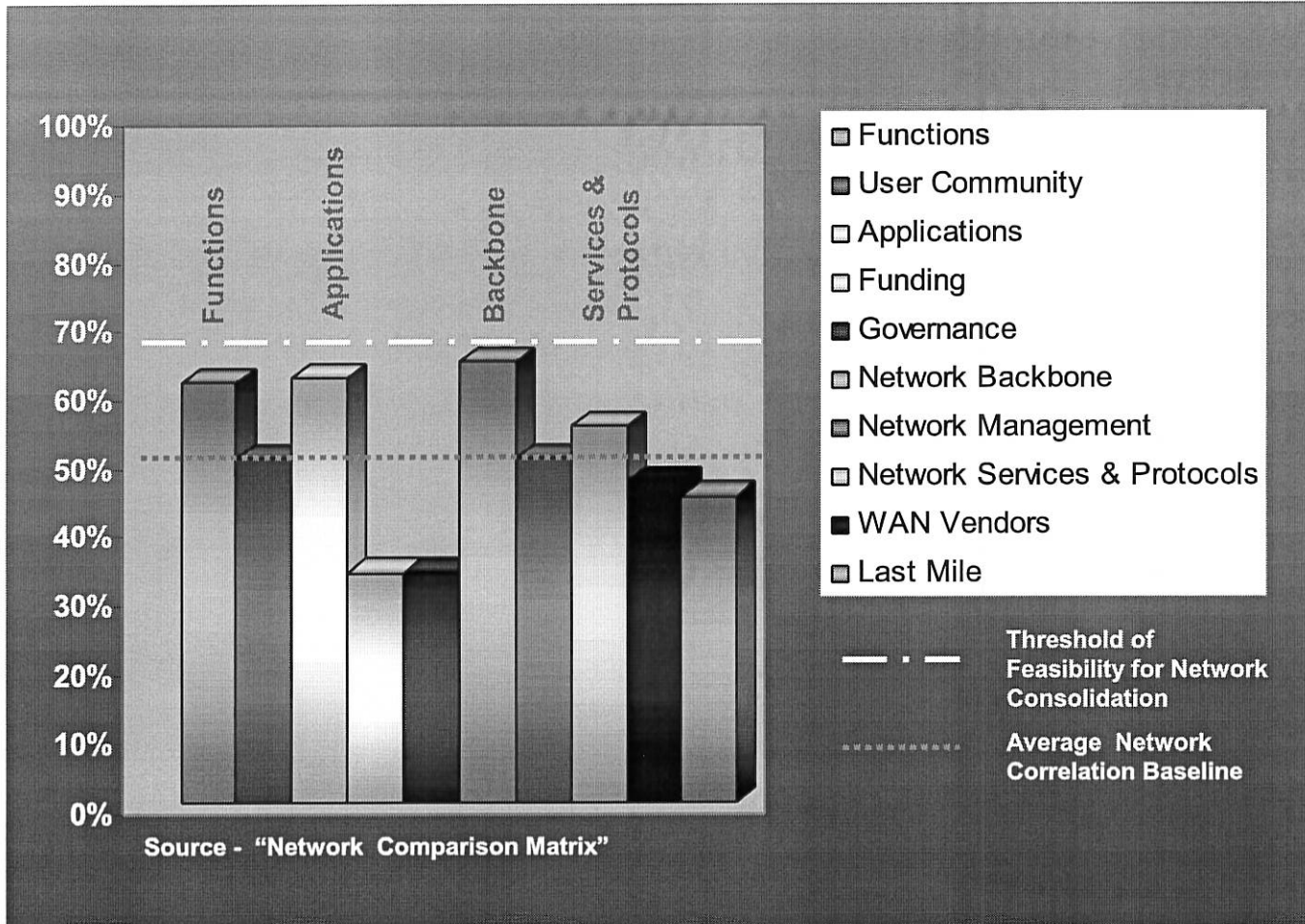
# Key Observations

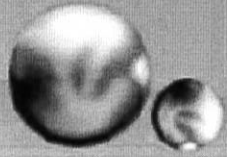
- **A comparison of the three networks yielded the following observations regarding the feasibility of their consolidation**
  - **The three networks are most similar in their function, backbone, supported applications, and network services and protocols**
  - **The three networks also exhibit significant differences in these same areas**
    - **KanWIN requires a high level of security requirements when compared to the other networks**
    - **KanREN requires a high level of adaptability when compared to the other networks**
    - **Kan-ED and KanWIN exhibit similar requirements for high availability network services \***
  - **Other obstacles for consolidation include differences in funding and governance models**

\* Segments of the KanREN user community also have high availability requirements; however, its traditional role has been to provide a technologically leading-edge, dynamic environment for research purposes; these capabilities are incompatible with one another.



# Threshold of Feasibility Illustration





## What We Found . . .

- **The three networks have distinguishing intra-network characteristics that preclude comprehensive consolidation**

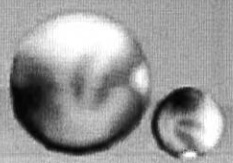
### Security

- KanREN has an inherently open security policy due to its primary mission (research) and services (Internet and Internet2)
- KanWIN has enterprise level security requirements due to federal privacy laws associated with the transported data and applications hosted on the network
- Kan-ED also has a very open security policy due to the nature of the services provided to constituents

### Availability

- KanREN has availability objectives but needs to balance them against the networks ability to adapt to user requirements
- KanWIN has enterprise level availability requirements due to hosting applications that are mission critical to state agencies
- Kan-ED has availability goals based on the nature of providing classes and telemedicine that are dependant on the network and video services being available





# What We Found . . .

- **Distinguishing characteristics (continued)**

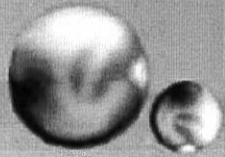
- Standardization

- KanREN adheres closely to defined network designs and standards
    - KanWIN has recently gone under a detailed analysis which highlighted a lack of adherence/definition of network standards and documentation
    - Kan-ED adheres to no specific interconnect design or standard due to speed of delivery required by legislation

- Governance

- KanREN is a private, non-profit organization whose participation would be voluntary
    - KanWIN and Kan-ED are governed by state institutions that can adapt statutory limitations to facilitate/mandate consolidation

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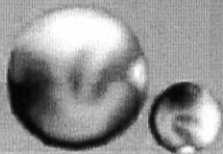


# What We Found . . .

- **Distinguishing characteristics (continued)**

- Adaptability

- KanREN needs the flexibility to be an early technology adopter that is essential to support dynamic research institution requirements
    - KanWIN and Kan-ED require a more stable environment with predictable growth



# What We Found . . .

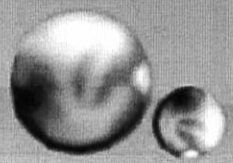
- **Kan-ED Specific Findings**

- Standardization and Complexity

- Mandated speed of deployment limited ability to define clear Service Provider connection standards
    - Lack of defined connection standards introduced many compromises with how Kan-ED integrated with Service Providers
    - Avoidance of Kan-ED provided Internet services has contributed to additional complexity in Service Provider connections

- Low Backbone Utilization

- Kan-ED data content is primarily accessed via the Internet
    - Few end users can access Kan-ED due to limited integration between Kan-ED and member's local area networks
    - Network patterns indicate significant traffic is localized within specific NAPs

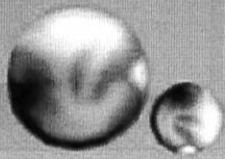


# What We Found . . .

- **Kan-ED Specific Findings**

- Video Overlay Network

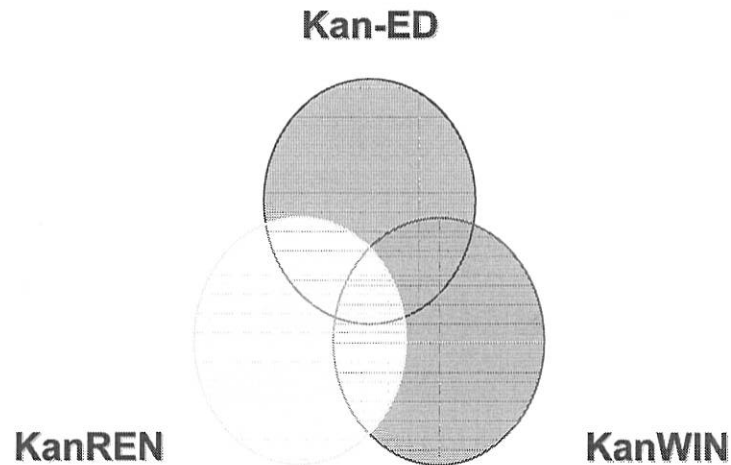
- Many Kan-ED connections terminate directly into video equipment
    - Video services are deployed at 170+ locations
    - Video classrooms are not architecturally efficient
      - 4 Video Endpoints
      - 4 Monitors
      - Multiple network connections required
      - Video endpoints are configured with a bit-rate of 768K (384K meets the industry standard for business quality)
      - Next-generation technologies are not leveraged to achieve operational economies or enhanced performance opportunities such as:
        - » H.264 video compression enables video conferencing users to experience either significantly improved video quality at the same bit rate, or current quality at approximately half the bit rate required previously (e.g. 768K video quality with a H.264 configuration that only requires 384K)
      - High cost maintenance model



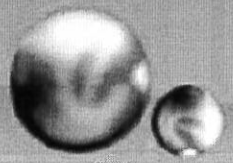
# Network Consolidation Overlay

**A statewide comprehensive network consolidation approach is not feasible--it would keep each organization from meeting the requirements of their respective constituents. Specifically, this approach would not be prudent as a result of:**

- ✓ Diverse network business model requirements and rigorous security constraints
- ✓ Exorbitant financial and resource investments required
- ✓ A parallel network infrastructure would be required, which is not practical at a statewide level
- ✓ A cost benefit analysis would indicate an extended ROI payback period beyond a reasonable level of acceptance and cost recovery

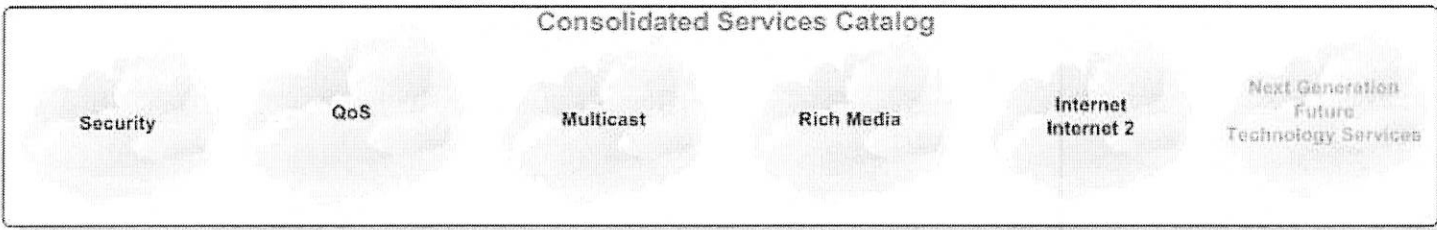
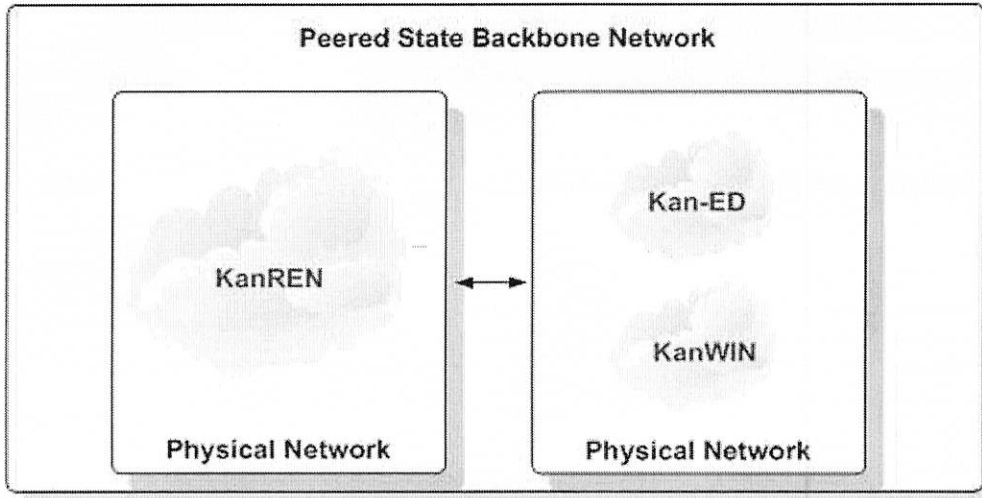


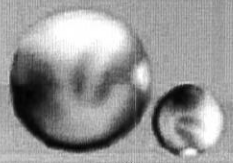
**However segments of each network's infrastructure and technology can be leveraged as cost-effective shared utility services**



# Consolidated Network Model

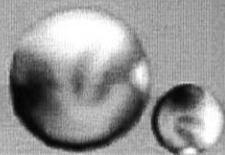
State Agencies, K-12, Universities, Hospitals, Constituents, Libraries, etc.





# Recommendations Matrix

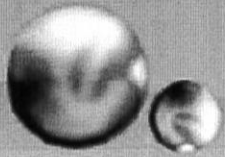
Area	Recommendation
<b><u>Standardization</u></b>	<ul style="list-style-type: none"><li>➤ Design Standards</li><li>➤ Equipment Standards</li><li>➤ Kan-ED Carrier Interconnect Standards</li></ul>
<b><u>Network Consolidation</u></b>	<ul style="list-style-type: none"><li>➤ Kan-ED NAP/Circuit Consolidation</li><li>➤ Kan-ED Backbone Migration</li><li>➤ State Network Peering Points</li></ul>
<b><u>Shared Services</u></b>	<ul style="list-style-type: none"><li>➤ Shared Service Model</li><li>➤ QoS Design Standardization</li><li>➤ Multicast Design Standardization</li><li>➤ Rich Media (Video)</li></ul>
<b><u>Operations</u></b>	<ul style="list-style-type: none"><li>➤ Documentation of Network Data Flows</li><li>➤ Realign Kan-ED NOC Services</li><li>➤ Telecom Expense Management</li></ul>



# Recommendations

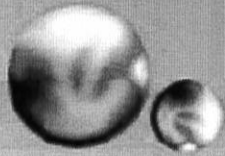
- **Design Standards - Develop consistent network specifications, standards and best practice guidelines for interconnections between the three networks**
- **Equipment Standards - Develop consistent network specifications, standards and proven technology solutions to enable consolidation of network backbones**
- **Kan-ED Carrier Interconnect Standards – Partner with Service Providers to develop clearly defined technical specifications on how they should interconnect to Kan-ED**
- **Kan-ED NAP/Circuit Consolidation - Consolidate Kan-ED backbone NAPs where traffic and service provider peering points are not cost justified**





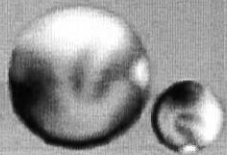
# Recommendations

- **Kan-ED Backbone Migration – Migrate Kan-ED backbone to KDOT dark fiber**
  - **Short Term: Pilot Kan-ED backbone migration onto the KDOT dark fiber in Kansas City, Topeka and Wichita as “proof of concept” to minimize risk of a large scale migration**
  - **Long Term: Develop a new design for the Kan-ED optical backbone to interconnect a new ring for the NAPs west of Topeka, e.g. Junction City, Salina and Victoria**
- **State Network Peering Points – Enhance, secure and consolidate existing peering points to facilitate ubiquitous access to the resources available on each individual network**
- **Shared Services Model - Leverage peering points to establish a utility model for shared services across the three networks**
- **QoS Design Standardization – Develop standards and best practice guidelines on QoS policies implemented across the three networks**

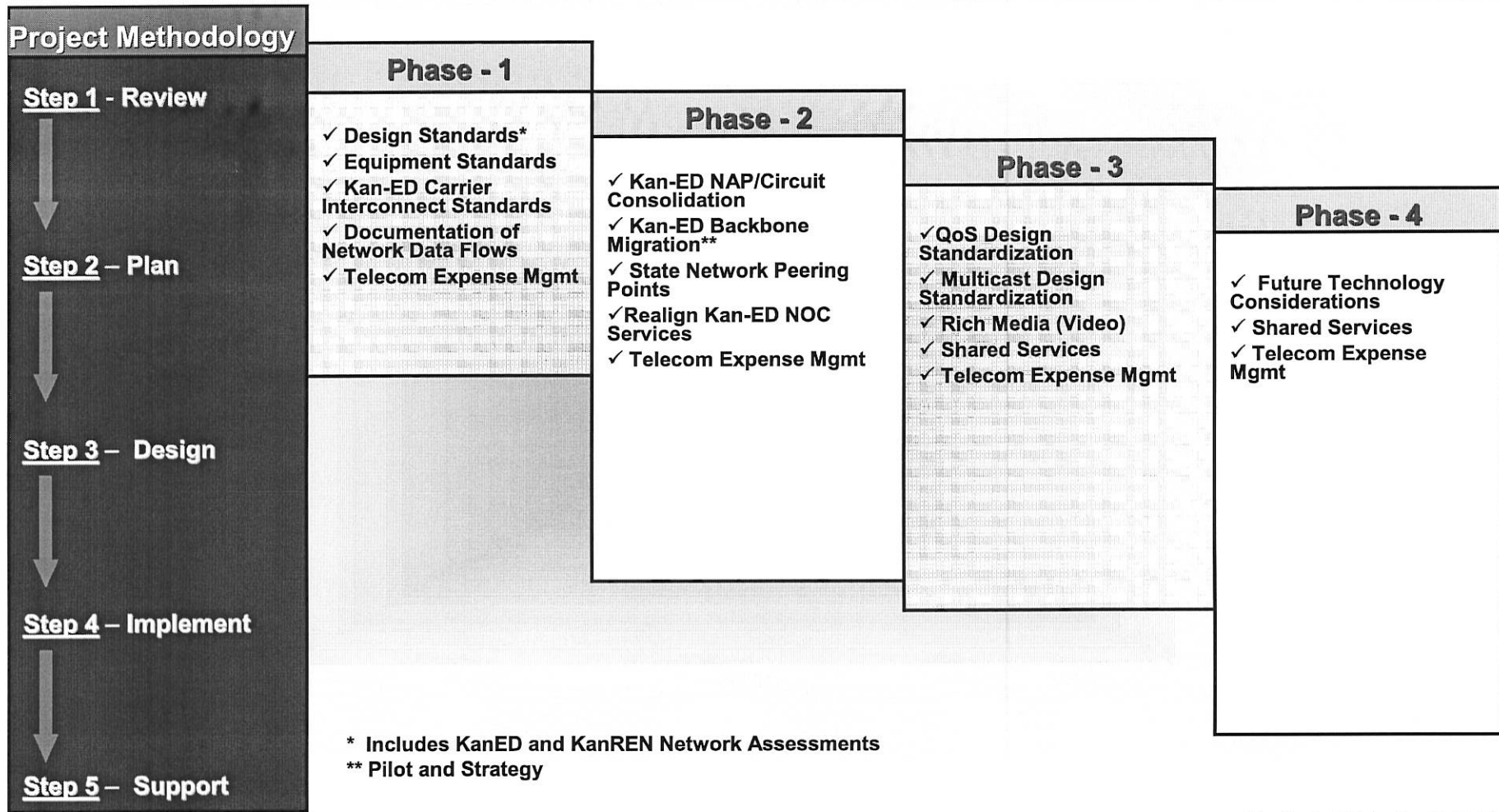


# Recommendations

- **Multicast Design Standardization – Develop standards and best practice guidelines on Multicast policies implemented across the three networks**
- **Rich Media (Video) – Enhance the enterprise strategy for delivering rich media across the three networks using cost effective, next generation technologies**
- **Documentation of Data Flows – Capture data flows at all critical network touch points to ensure changes do not impact services, applications or other portions of the network**
- **Realign Kan-ED NOC Services - Migrate Kan-ED Network Operations and Support to KanWIN to achieve operational economies**
- **Telecom Expense Management - Audit existing carrier service contracts, billing services and operational processes to achieve savings opportunities**

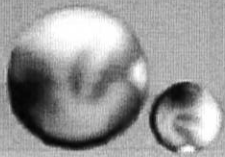


# Solutions Roadmap



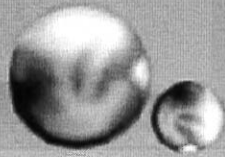
\* Includes KanED and KanREN Network Assessments  
 \*\* Pilot and Strategy

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# Project Gantt Summary

ID	Project Milestones	Start	Finish	Duration	Q2 07		Q3 07			Q4 07			Q1 08			Q2 08			Q3 08			Q4 08						
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1	<b>Kansas State Network Consolidation Project</b>	4/2/2007	9/16/2008	382d	[Gantt bar spanning from Apr 2007 to Sep 2008]																							
2	<b>Standardization</b>	4/2/2007	10/12/2007	140d	[Gantt bar spanning from Apr 2007 to Oct 2007]																							
3	Design & Equipment Standards	8/20/2007	10/12/2007	40d	[Gantt bar spanning from Aug 2007 to Oct 2007]																							
4	KanREN Network Assessment	4/2/2007	6/8/2007	50d	[Gantt bar spanning from Apr 2007 to Jun 2007]																							
5	KanED Network Assessment	6/11/2007	8/17/2007	50d	[Gantt bar spanning from Jun 2007 to Aug 2007]																							
6	Kan-ED Carrier Interconnect Standards	4/2/2007	5/25/2007	40d	[Gantt bar spanning from Apr 2007 to May 2007]																							
7	<b>Network Consolidation</b>	10/15/2007	5/23/2008	160d	[Gantt bar spanning from Oct 2007 to May 2008]																							
8	Kan-ED NAP/Circuit Consolidation	10/15/2007	11/9/2007	20d	[Gantt bar spanning from Oct 2007 to Nov 2007]																							
9	Kan-ED Backbone Migration	11/12/2007	1/18/2008	50d	[Gantt bar spanning from Nov 2007 to Jan 2008]																							
10	State Network Peering Points (Additional scope analysis required)	4/2/2007	4/6/2007	5d	[Gantt bar spanning from Apr 2007 to Apr 2007]																							
11	<b>Shared Services</b>	6/1/2007	11/29/2007	130d	[Gantt bar spanning from Jun 2007 to Nov 2007]																							
12	Shared Service Model (Additional scope analysis required)	4/2/2007	4/6/2007	5d	[Gantt bar spanning from Apr 2007 to Apr 2007]																							
13	QoS Design Standardization	10/15/2007	10/26/2007	10d	[Gantt bar spanning from Oct 2007 to Oct 2007]																							
14	Multicast Design Standardization	10/15/2007	10/26/2007	10d	[Gantt bar spanning from Oct 2007 to Oct 2007]																							
15	Rich Media (Video)	9/3/2007	9/28/2007	20d	[Gantt bar spanning from Sep 2007 to Sep 2007]																							
16	<b>Operations</b>	4/2/2007	9/16/2008	382d	[Gantt bar spanning from Apr 2007 to Sep 2008]																							
17	Documentation of Network Data Flows	8/20/2007	10/12/2007	40d	[Gantt bar spanning from Aug 2007 to Oct 2007]																							
18	Realign Kan-ED NOC Services	1/2/2008	9/16/2008	185d	[Gantt bar spanning from Jan 2008 to Sep 2008]																							
19	Telecom Expense Management (Additional scope analysis required)	4/2/2007	4/6/2007	5d	[Gantt bar spanning from Apr 2007 to Apr 2007]																							



# Project Cost Summary

Category	Recommendation	Estimated Cost Saves	Estimated Resource Hours (External)	Estimated Resource Cost (External)	Estimated Capital Cost
Standardization	Design Standards	N/A	1120 Hours (Includes Network Assessments)	\$200K	None
	Equipment Standards	N/A	- Effort rolled into Network Design Standardization estimate above	- Effort rolled into Network Design Standardization estimate above	None
	Kan-ED Carrier Interconnect Standards	N/A	320 hours	\$56K	None
Network Consolidation	Kan-ED NAP/Circuit Consolidation	\$816K per year	160 hours	\$28K	None
	Kan-ED Backbone Migration	TBD - Requires further study	400 hours (pilot and strategy)	\$70K	TBD - Requires further study
	State Network Peering Points	N/A	Additional scope analysis required	Additional scope analysis required	Additional scope analysis required
Shared Services	Shared Service Model	N/A	Additional scope analysis required	Additional scope analysis required	Additional scope analysis required
	QoS Design Standardization	N/A	80 hours	\$14K	None
	Multicast Design Standardization	N/A	80 hours	\$14K	None
	Rich Media (Video)	TBD - Requires further study	160 hours (Strategy Only)	\$28K	TBD - Requires further study
Operations	Documentation of Network Data Flows	N/A	320 hours	\$71K	None
	Realign Kan-ED NOC Services	\$475K per year	500 hours	- \$90K (implementation) - \$525K (annual to support KanWIN FTEs)	- \$50K (software licenses)
	Telecom Expense Management	TBD - Requires further study	Additional scope analysis required	Additional scope analysis required	- Additional scope analysis required
		<b>\$1,291,000</b>	<b>3140 Hours</b>	<b>\$571,000 (One Time) \$525,000 (Recurring)</b>	<b>\$50,000</b>

# 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:
  - backbone cost analysis
  - last mile access
  - premise equipment and local area networks
  - public/private partnering
  - funding source
  - permissible traffic (Internet, VOIP, video, data, and so on)
  - permissible constituent access (adding additional state agencies and health care institutions)
  - proposed statutory changes
  - current commodity Internet pricing

### **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.

## Kan-ed Members 2/27/06

Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Abilene	USD 435	K-12	North Central	Director, Curriculum & Instruction	Denise	Guy	www.usd435.k12.ks.us
Abilene Public Library	Public	Library	North Central	Director	Deb	Duckwall	www.skyways.lib.ks.us/norc/en/abilene
Allen County Community College	CC	Higher Ed	South East	VP, Academic & Student Affairs	Allene	Knedlik	www.allencc.edu
Almena City Library	Public	Library	North West	Librarian	Clara	Oman	
Altamont Public Library	Public	Library	South East	Director	Freda	Edwards	
Altoona Public Library	Public	Library	South East	Librarian	Veda	Roets	
Altoona-Midway	USD 387	K-12	South East	Superintendent	Bill	Orth	www.altoonamidway.org
Americus Township Library	Public	Library	North Central	Director	Anita	Westcott	
Andale District Library	Public	Library	South Central	Friend of the Library	Cheryl	Moore	www.wichita.lib.ks.us/summer/andale.html
Andover	USD 385	K-12	South Central	Technology Director	Rob	Dickson	www.usd385.org
Andover Public Library	Public	Library	South Central	Director	Carol	Wohlford	
Anthony Public Library	Public	Library	South Central	Director	Sandy	Trotter	www.skyways.lib.ks.us/towns/Anthony/libr ary.html
Anthony-Harper	USD 361	K-12	South Central	Asst. Superintendent	Lee	Cox	www.usd361.k12.ks.us
Argonia Public Schools	USD 359	K-12	South Central	Superintendent	Dr. Julie	Dolley	www.usd359.k12.ks.us
Arkansas City	USD 470	K-12	South Central	Director of Technology Services	Ron E.	Young	www.arkcity.com
Arkansas City Public Library	Public	Library	South Central	Director	Michelle	Swain	www.acpl.org
Arma City Library	Public	Library	South East	Director	Christie	Wilson	
Ashland	USD 220	K-12	South West	Superintendent	Jerry	Cullen	
Ashland City Library	Public	Library	South West	Director	Eldora	McMinimy	http://skyways.lib.ks.us/towns/ashland/libr ary.html
Ashland Health Center	CAH	Hospitals	South West	Administrator	Daryl	Marshall	www.phn.org/
Atchison County Community Schools	USD 377	K-12	North East	Superintendent	Steve	Wiseman	www.usd377.org
Atchison Hospital	GH	Hospitals	North East	Vice President for Patient Care Services and Marketing	Michele	Malone	
Atchison Public Library	Public	Library	North East	Director	PJ	Andrews Capps	www.atchisonlibrary.org
Atchison Public Schools	USD 409	K-12	North East	District Technology Director	Donna	Noll	www.usd409.net
Attica	USD 511	K-12	South Central	Superintendent	Troy	Piper	www.attica.net
Atwood Public Library	Public	Library	North West	Director	Pam	Luedke	
Auburn Washburn	USD 437	K-12	North East	Director of Technology	Don	Williams	www.usd437.net
Augusta	USD 402	K-12	South Central	Assistant Superintendent	Gina	Marx	www.usd402.com
Augusta Public Library	Public	Library	South Central	Director	Myrna	Hale	

Attachment 4  
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## Kan-ed Members 2/27/06

Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Axtell	USD 488	K-12	North Central	Superintendent	Bob	Bartkoski	
Axtell Public Library	Public	Library	North Central	Librarian	Diane	Tate	
B&B	USD 451	K-12	North East	Superintendent	Jerry	Turner	
Baker University	Private U	Higher Ed	North East	Associate Dean for Information Services	Bonnie	Postlethwaite	www.bakeru.edu
Baldwin City	USD 348	K-12	North East	Technology Director	Steve	Hemphill	www.usd348.com
Baldwin City Public Library	Public	Library	North East	Director	Kathy	Johnston	
Barber County North	USD 254	K-12	South Central	Superintendent	Suzanne	Germes	www.usd254.org
Barclay College	Private C	Higher Ed	South Central	Director of Library	Jeanette	Parker	www.barclaycollege.edu
Barnes	USD 223	K-12	North Central	Superintendent	Steve	Joonas	www.usd223.k12.k.s.us
Barton County Community College	CC	Higher Ed	Central	Executive Assistant to the President	Mike	Weltsch	www.bartonccc.edu
Basehor Community Library	Public	Library	North East	Director	Carla	Kaiser	www.basehorlibrary.org
Basehor-Linwood School Dist	USD 458	K-12	North East	Director, Technical Services	Michael	Kravets	www.usd458.k12.k.s.us
Baxter Springs	USD 508	K-12	South East	Technology Coordinator	Ross	Davis	www.usd508.org
Beck-Bookman Library	Public	Library	North East	Director	Candee	Jacobs	
Belle Plaine City Library	Public	Library	South Central	Director	Vicki	Bohannon	www.belleplainlibrary.com/
Belleville Public Library	Public	Library	Central	Director	Leah	Krotz	www.bellevillelibrary.org
Beloit	USD 273	K-12	Central	Superintendent	Joe	Harrison	www.usd273.k12.k.s.us
Benedictine College	Private C	Higher Ed	North East	Library Director	Corinne	Cardona	www.benedictine.edu
Bern Community Library	Public	Library	North East	Director	Kathy	Platt	http://skyways.lib.ks.us/towns/Bern/library
Bethany College	Private C	Higher Ed	South Central	Director of Library	Denise	Carson	www.bethanylib.edu
Bethel College	Private C	Higher Ed	South Central	Director of Information and Media Services	Jeff	Roberson	www.bethelks.edu
Bird City Library	Public	Library	North West	Treasurer Local Library	Stan R.	Dorsch	
Bison Community Library	Public	Library	Central	Librarian	Diane	Bott	
Blue Rapids Public Library	Public	Library	North Central	Librarian	Lynne	Turner	
Blue Valley	USD 384	K-12	North Central	Director of Technology	Kent	Unruh	www.usd384.k12.k.s.us
Blue Valley	USD 229	K-12	North East	Accounting Specialist	Teresa	Varner	www.bluevalleyk12.org
Bluestem	USD 205	K-12	South Central	Superintendent	Dennis	Engels	www.usd205.com
Bob Wilson Memorial-Grant County Hospital	GH	Hospitals	South West	Director, Operations Support	Jay	Tusten	
Bonner Springs	USD 204	K-12	North East	District Technology Coordinator	Ken	Clark	www.usd204.k12.k.s.us
Bonner Springs City Library	Public	Library	North East	Library Director	Kimberly	Beets	www.bonnerlibrary.org
Bradford Memorial Library	Public	Library	South Central	Director	Martha	Gregg	skyways.lib.ks.us/library/bradford
Brewster	USD 314	K-12	North West	Superintendent	Sherri L.	Edmundson	www.usd314.k12.k.s.us

## Kan-ed Members 2/27/06

Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Bronson Public Library	Public	Library	South East	Director	Diana	Huff	
Brookridge Day School	Z0006	K-12	North East	Principal	Barbara	Brown	
Brown County Kansas Special Education #615	I615	K-12	North East	Director	Rex	Mauck	
Bucklin	USD 459	K-12	South West	Superintendent	Terry	Marshall	www.usd459.k12.ks.us
Bucklin Public Library	Public	Library	South West	Head Librarian	Kathy	Leon	http://www.trails.net/swkls.BucklinLibrary/ht_ml
Buhler	USD 313	K-12	South Central	Superintendent	David	Brax	www.buhler.usd313.k12.ks.us
Buhler Public Library	Public	Library	South Central	Director	Pam	Fast	www.skyways.lib.ks.us/kansas/towns/Buhler/library.html
Burlingame Community Library	Public	Library	North East	Director	Donelda	Sage	skyways.lib.ks.us/towns/Burlingame/library.html
Burlingame Public School	USD 454	K-12	North East	Superintendent	Don	Blome	www.usd454.net
Burlington	USD 244	K-12	South East	Director of Educational Technology	Doug	Vander Linden	www.usd244ks.org
Bumley Memorial Library	Public	Library	North Central	Librarian	Susan	Davis	
Burns Public Library	Public	Library	North Central	Director	Rhonda	Loucks	
Burr Oak City Library	Public	Library	Central	Chairman of Board of Trustees	Becky	McNichols	
Burton	USD 369	K-12	South Central	Superintendent	Drew	Harris	www.burton.k12.ks.us
Butler County Community College	CC	Higher Ed	South Central	CIO	Tom	Erwin	www.butlercc.edu
Caldwell	USD 360	K-12	South Central	Superintendent	Jim	Reece	www.usd360.com
Caney City Library	Public	Library	South East	Director	Sandra K.	Freidline	
Caney Valley	USD 436	K-12	South East	District Technology Coordinator	David	Carey	www.caney.com
Canton Carnegie Township Library	Public	Library	South Central	Library Director	Bonnie	Stute	
Canton-Galva	USD 419	K-12	South Central	Superintendent	Bill	Seidl	www.canton-galva.k12.ks.us
Carbondale City Library	Public	Library	North East	Director	Alice	Smith	skyways.lib.ks.us/library/carbondale/library.html
Cedar Vale	USD 285	K-12	South East	Board Clerk	Josie	Jarboe	www.cvs285.net
Cedar Vale Memorial Library	Public	Library	South East	Director	Shirley	Myers	skyways.lib.ks.us/towns/CedarVale/library.html
Central	USD 462	K-12	South Central	Technology Director	Dave	Chrisman	www.usd462.org
Central Christian College of Kansas	Private C	Higher Ed	South Central	Director of Finance	Chris	Lewis	www.centralchristian.edu



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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Central Heights	USD 288	K-12	North East	Superintendent	Deanne	Alexander	<a href="http://www.kanza.net/~maierfm/~288/">www.kanza.net/~maierfm/~288/</a>
Central Kansas Library System	Regional	Library	Central	Director	James	Swan	<a href="http://skyways.lib.ks.us/kansas/central/central.html">skyways.lib.ks.us/kansas/central/central.html</a>
Centralia Community Library Centre	Public USD 397	Library K-12	North East North Central	Library Director Superintendent	Betty L. Bob	Penix Kiblinger	<a href="http://www.centreschools.com">www.centreschools.com</a>
Chanute Public Library	Public	Library	South East	Director	Susan	Willis	<a href="http://www.chanute.org/Community/Library/library.html">www.chanute.org/Community/Library/library.html</a>
Chanute Public Schools	USD 413	K-12	South East	Asst Superintendent	Destry	Brown	<a href="http://www.usd413.k12.ks.us">www.usd413.k12.ks.us</a>
Chapman	USD 473	K-12	North Central	Technology Director	Steve	Schuler	<a href="http://www.usd473.net">www.usd473.net</a>
Chapman Public Library	Public	Library	North Central	Director	Carol	Frasure	
Chase County	USD 284	K-12	North Central	Superintendent	Rick	Weiss	
Chase-Raymond	USD 401	K-12	South Central	Superintendent	David	Howard	
Chautauqua County Community	USD 286	K-12	South East	Network Administrator	Nancy	Pinard	<a href="http://www.usd286-sedan-ks.org">www.usd286-sedan-ks.org</a>
Cheney	USD 268	K-12	South Central	Curriculum and Technology Director	Richard	Soash	<a href="http://www.cheney268.com">www.cheney268.com</a>
Cheney Public Library	Public	Library	South Central	Director	Susan	Woodard	<a href="http://skyways.lib.ks.us/kansas/library/cheney/">skyways.lib.ks.us/kansas/library/cheney/</a>
Cherokee	USD 247	K-12	South East	Superintendent	Tim	Burns	
Cherryvale	USD 447	K-12	South East	Superintendent	Randy	Wagoner	
Cherryvale Public Library	Public	Library	South East	Librarian	Jessie	Lickteig	
Chetopa	USD 505	K-12	South East	Clerk	Terr	Ross	
Chetopa City Library	Public	Library	South East	Librarian	Amy	Wilkinson	<a href="http://skyways.lib.ks.us/towns/Chetopa/library.html">skyways.lib.ks.us/towns/Chetopa/library.html</a>
Cheyenne County Hospital	CAH	Hospitals	North West	Administrator	Leslie	Lacy	<a href="http://www.cheyennecountyhospital.com">www.cheyennecountyhospital.com</a>
Cheylin	USD 103	K-12	North West	Superintendent	David	Zumbahlen	
Cimarron City Library, Gray County	Public	Library	South West	Director	Sara	McFarland	<a href="http://ns.trails.net/cimarron/">http://ns.trails.net/cimarron/</a>
Cimarron-Ensign Circle	USD 102 USD 375	K-12 K-12	South West South Central	Technology Coordinator Superintendent	Wes Eliese	Johnson Holt	<a href="http://www.cimarronschools.net">www.cimarronschools.net</a> <a href="http://www.usd375.org">www.usd375.org</a>
Citizens Medical Center	CAH	Hospitals	North West	Manager of Information Services	Rod	Williams	<a href="http://www.nwkshealthcare.com/">www.nwkshealthcare.com/</a>
Claffin	USD 354	K-12	Central	Superintendent	Darrell W.	Genereux	
Clara Barton Hospital	CAH	Hospitals	Central	CFO	Jim	Blackwell	<a href="http://skyways.lib.ks.us/towns/Hoisington/hospital.html">skyways.lib.ks.us/towns/Hoisington/hospital.html</a>
Clay Center	USD 379	K-12	North Central	Superintendent	Michael	Folks	
Clay Center Carnegie Library	Public	Library	North Central	Director	Kay	Osthoff	<a href="http://skyways.lib.ks.us/norcen/claycenter/">skyways.lib.ks.us/norcen/claycenter/</a>
Clay County Medical Center	GH	Hospitals	North Central	CEO	Ron	Bender	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Clearwater	USD 264	K-12	South Central	Superintendent	Kay	Highbarger	www.usd264.org
Clearwater Public Library	Public	Library	South Central	Director	Lee	Steen	
Clifton Public Library	Public	Library	North Central	Head Librarian	Marilyn	Knox	
Clifton-Clyde	USD 224	K-12	North Central	Superintendent	David	Roberts	
Cloud County Community College	CC	Higher Ed	Central	Director of Information Technology	Delray	Capper	www.cloud.edu
Cloud County Health Center	CAH	Hospitals	Central	CFO	Patricia	Moyer	www.cchc.com
Coffey County Hospital	GH	Hospitals	South East	CEO	Dennis	George	
Coffey County Library Headquarters Office	Public	Library	South East	Administrator	Mary	Markwalter	
Coffeyville	USD 445	K-12	South East	District Tech Coordinator	James	Elliott	www.cvilleschools.com
Coffeyville Community College	CC/TS	Higher Ed	South East	Director of Technology	Bill	Strecker	www.coffeyville.edu
Coffeyville Public Library	Public	Library	South East	Library Director	Karyl L.	Buffington	skyways.lib.ks.us/library/coffeyville
Coffeyville Regional Medical Center	GH	Hospitals	South East	CEO	Jerry	Marquette	www.cmcinc.com/
Colby Community College	CC	Higher Ed	North West	Dean, Community Services	Joe	Mildrexler	www.colbycc.edu
Colby Public Schools	USD 315	K-12	North West	Technology Director	Phil	DeYoung	
Coldwater-Wilmor e Regional Library	Public	Library	South West	Library Director	Ellen	Selzer	
Colony City Library	Public	Library	South East	Librarian	Janice	Steedley	
Columbus Public Library	Public	Library	South East	Director	Cathy	VanGilder	skyways.lib.ks.us/library/columbus
Colwich Community Library	Public	Library	South Central	Director	Nancy	Maus	
Comanche County	USD 300	K-12	South West	Superintendent	Michael	Baldwin	
Comanche County Hospital	CAH	Hospitals	South West	Administrator	Nancy	Zimmerman, RN	
Combined Arms Research Library	Public	Library	North East		Edwin B.	Burgess	
Community Hospital-Onaga	CAH	Hospitals	North Central	Director of Information Systems	Mary	Matzke	
Community Memorial Healthcare	CAH	Hospitals	North Central	CEO	David	Bailey	
Concordia	USD 333	K-12	Central	Superintendent	Beverly	Mortimer	www.usd333.com
Conway Springs	USD 356	K-12	South Central	Superintendent	Clay	Murphy	www.usd356.org
Conway Springs City Library	Public	Library	South Central	Head Librarian	Danna	Fulkerson	
Copeland	USD 476	K-12	South West	Superintendent	Dr. Don	Grover	
Copeland Public Library	Public	Library	South West	Librarian	Lisa	Olfert	
Coming City Library	Public	Library	North East	Director	Mandy	Deters	
Council Grove Public Library	Public	Library	North Central	Director	Anne	Teghtmeyer	skyways.lib.ks.us/norcen/cgrove/

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Courtland Community Library	Public	Library	Central	Librarian	Dolores	Erickson	
Cowley County Community College	CC/TS	Higher Ed	South Central	Dean, Research and Technology	Charles	McKown	www.cowley.edu
Crest	USD 479	K-12	South East	Superintendent	Doug	Spillman	
Cunningham Public Library	Public	Library	South Central	Librarian	Jane	Meyers	skyways.lib.ks.us/towns/Cunningham/library.html
Cunningham: West Kingman Co.	USD 332	K-12	South Central	Superintendent	Melvin R.	Ormiston	
Cushing Memorial Hospital	GH	Hospitals	North East	CFO	Judy	Scott	
De Soto	USD 232	K-12	North East	Superintendent	Dr. Sharon	Zoellner	www.usd232.org
Decatur County Hospital	CAH	Hospitals	North West	CEO	Lynn	Doeden	
Deerfield	USD 216	K-12	South West	Technology Coordinator	Dan	Eslinger	www.usd216.org
Delaware Township Library	Public	Library	North East	Library Director	Kay	Lassiter	
Delphos Public Library	Public	Library	Central	Librarian	Sharon	Snively	
Derby	USD 260	K-12	South Central	Director of Technology	David	Milhon	www.derbyschools.com
Derby Public Library	Public	Library	South Central	Library Director	Judy	Bennett	www.derbylibrary.com/
Dexter	USD 471	K-12	South Central	Technology Coordinator	Laurie	Holmes	www.usd471.org
Dighton	USD 482	K-12	South West	Superintendent	Angela	Lawrence	www.usd482.k12.ks.us/
Diocese of Salina	Z0030	K-12	Central	Superintendent	Nick	Compagnone	
Dixon Township Library	Public	Library	South Central	Director	Gaylene	Larson	
Dodge City	USD 443	K-12	South West	Information Technologies Coordinator	Thomas	Waldron	www.usd443.org
Dodge City Catholic Diocese	Z0028	K-12	South West	Superintendent	Ann	Depperschmidt	
Dodge City Community College	CC/TS	Higher Ed	South West	Learning Resource Center Director	Cathy L.	Reeves	www.dc3.edu
Dodge City Public Library	Public	Library	South West	Director	Mary	Tuytschaevers	trails.net/dcpl/
Donnelly College	Private C	Higher Ed	North East	Academic Dean	Frances	Sanders	www.donnelly.edu
Dorothy Bramlage Public Library	Public	Library	North Central	Director	Susan	Moyer	
Douglass Public Library	Public	Library	South Central	Library Director	Janet	Whittington	
Douglass Public Schools	USD 396	K-12	South Central	Superintendent	Jim	Keller	www.usd396.net
Downs Carnegie Library	Public	Library	Central	Librarian	Jody	Marihugh	
Durham-Hillsboro -Lehigh	USD 410	K-12	North Central	Superintendent	Gordon	Mohn	
Eastern Heights	USD 324	K-12	Central	Superintendent	Randy	Lake	www.usd324.org
Edna Buschow Memorial Library	Public	Library	South Central	Director	Janice	Sharp	www.valleycenter.ks.org
Edna Public Library	Public	Library	South East	Librarian	Eva	Rexwinkle	
Education Services and Staff Development Association of Central Kansas (ESSDACK) #622	\$622	K-12	South Central	Multimedia Specialist	Kevin	Honeycutt	
Edwards County Hospital	CAH	Hospitals	South West	Adminisrator	Shaun	Keef	www.edcohospital.com

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Effingham Community Library	Public	Library	North East	Library Director	Rosie	Falk	
El Dorado	USD 490	K-12	South Central	Director of Technology	Doug	Jensen	<a href="http://www.eldoradoschools.org">www.eldoradoschools.org</a>
Elk Valley	USD 283	K-12	South East	Principal	Art	Haibon	<a href="http://www.usd283.org">www.usd283.org</a>
Elkhart	USD 218	K-12	South West	Superintendent	Scott	Myers	<a href="http://www.usd218.org">www.usd218.org</a>
Ellinwood Community Library	Public	Library	Central	Director	Sharon	Sturgis	<a href="http://www.ckis.org/members/EllinwoodLibrary.html">www.ckis.org/members/EllinwoodLibrary.html</a>
Ellinwood District Hospital	CAH	Hospitals	Central	Administrator	David	Haneke	
Ellinwood Public Schools	USD 355	K-12	Central	Superintendent	Richard	Goodschmidt	<a href="http://www.usd355.org">www.usd355.org</a>
Ellis	USD 388	K-12	Central	Technology Coordinator	Robert	Young	<a href="http://www.usd388.k12.ks.us">www.usd388.k12.ks.us</a>
Ellis Public Library	Public	Library	Central	Director	Pamela	Newton	
Elis-Saline	USD 307	K-12	Central	Superintendent	Jerry	Minneman	<a href="http://www.ellsaline.org">www.ellsaline.org</a>
Elsworth	USD 327	K-12	Central	Superintendent	Doug	Moeckel	<a href="http://www.usd327.org">www.usd327.org</a>
Elsworth County Medical Center	CAH	Hospitals	Central	Director of Radiology	Randy	Packard	
Elm Creek Township Library	Public	Library	North Central	Director	Marsha	Filkin	
Elmendorf Township Library	Public	Library	North Central	Director	Catherine	Schmidt	
Elwood	USD 486	K-12	North East	Superintendent	Mike	Newman	<a href="http://www.elwood486.k12.ks.us">www.elwood486.k12.ks.us</a>
Emporia	USD 253	K-12	North Central	Assistant Superintendent	George	Abel	<a href="http://www.usd253.org">www.usd253.org</a>
Emporia Public Library	Public	Library	North Central	Director	Sue	Blechl	<a href="http://skyways.lib.ks.us/library/emporia">skyways.lib.ks.us/library/emporia</a>
Emporia State University	U	Higher Ed	North Central	CIO	Bruce	Vieweg	<a href="http://www.emporia.edu">www.emporia.edu</a>
Emporia Surgical Hospital, LLC	SH	Hospitals	North Central	Hospital Administrator	Joe	Conroy	
Enterprise Public Library	Public	Library	North Central	Library Board Chair	Mary	Lambert	
Erie City Public Library	Public	Library	South East	Director	Kindra	Holland	
Erie-St Paul	USD 101	K-12	South East	Superintendent	Mike	Carson	
Eudora Public Library	Public	Library	North East	Director	Marlene	Evinger	
Eudora Unified School District	USD 491	K-12	North East	Technology Director	Ron	Long	<a href="http://www.eudoraschools.org">www.eudoraschools.org</a>
Eureka	USD 389	K-12	South East	Director of Technology	Leo	Davis	<a href="http://www.389ks.org">www.389ks.org</a>
Eureka Carnegie Library	Public	Library	South East	Library Director	Connie	Doeden	
F. Lee Doctor Library [Agra City Library]	Public	Library	Central	Board Member	Donna	Winchell	
Fairfield	USD 310	K-12	South Central	Board Clerk	Jody	Updegrove	<a href="http://www.usd310.k12.ks.us">www.usd310.k12.ks.us</a>
Fall River Public Library	Public	Library	South East	Librarian	Carol	Palsmeier	
Finney County Public Library	Public	Library	South West	Director	Emily	Sitz	<a href="http://fcpl.homestead.com">fcpl.homestead.com</a>
Flint Hills Technical College	TC	Higher Ed	North Central	Librarian	Janet	Anderson-Story	<a href="http://www.fhtc.kansas.net">www.fhtc.kansas.net</a>
Flinthills	USD 492	K-12	South Central	Superintendent	Phil	Mahan	
Florence Public Library	Public	Library	North Central	Library Director	Gayle	Scriven	
Ford City Library	Public	Library	South West	Board Member	Tammy	Draper	<a href="http://www.trails.net/swkls/Fordlibrary.html">www.trails.net/swkls/Fordlibrary.html</a>
Formoso Public Library	Public	Library	Central	Librarian	Barbara	Langston	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Fort Hays State University	U	Higher Ed	Central	Director, Center for Teaching Excellence and Learning Technology	Dennis	King	www.fhsu.edu
Fort Scott	USD 234	K-12	South East	Technology Coordinator	Ron	Mason	www.usd234.org
Fort Scott Community College	CC	Higher Ed	South East	Director of IS	Mitch	Garner	www.fortscott.edu
Fort Scott Public Library	Public	Library	South East	Library Director	Lisa	Walther	
Fowler	USD 225	K-12	South West	Superintendent	Sam	Seybold	www.usd255.org
Fowler Public Library	Public	Library	South West	Librarian	Shirley	Randall	www.trails.net/s/wkls/fowler.html
Frank Carlson Library	Public	Library	Central	Library Director	Denise	de Rochefort-Reynolds	
Frankfort City Library	Public	Library	North Central	Director	Alice	Jones	
Fredonia	USD 484	K-12	South East	Superintendent	Jim	Porter	www.fredoniaks.com/skyways.lib.ks.us/library/fredonia/
Fredonia Public Library	Public	Library	South East	Co-Director	Michelle	Hulse	
Fredonia Regional Hospital	GH	Hospitals	South East	Chief Nursing Officer	Pam	Harmon	
Friends University	Private U	Higher Ed	South Central	Director of Instructional Technology	Dr. Robert	Gibson	www.friends.edu
Frontenac Public Schools	USD 249	K-12	South East	Superintendent	Greg	Hafner	
Ft Larned	USD 495	K-12	Central	Superintendent	Jon	Flint	
Ft Leavenworth	USD 207	K-12	North East	Superintendent	Deborah	Baeuchle	www.ftln.com
Galena Public Library	Public	Library	South East	Library Director	Nellie	Hoskins	
Galena Unified Schools	USD 499	K-12	South East	Director of Technology	Jason	Grotheer	www.usd499.k12.ks.us
Garden City Community College	CC	Higher Ed	South West	Director, Computer Services	Mary	Wilson	www.gcccks.edu
Garden City Public Schools	USD 457	K-12	South West	Director of Technology	Steve	Karlin	www.gckschools.com
Gardner Edgerton	USD 231	K-12	North East	Director of Information Systems	Lora	Baughner	www.usd321.com
Garnett	USD 365	K-12	South East	Superintendent	Gordon	Myers	www.usd365.k12.ks.us
Garnett Public Library	Public	Library	South East	Director	Andrea	Sobba	
Geary County Schools	USD 475	K-12	North Central	Director of Technology	Jan	Pabitzky	www.usd475.org
Girard	USD 248	K-12	South East	Superintendent	Gary	Snawder	www.girard248.org/skyways.lib.ks.us/towns/Girard/library/index.html
Girard Public Library	Public	Library	South East	Director	Terri R.	Harley	
Glen Elder Library	Public	Library	Central	Librarian	Roberta	Clark	
Goddard	USD 265	K-12	South Central	Assistant Superintendent	Joan	Pritchard	www.goddardusd.com
Goddard Public Library	Public	Library	South Central	Director	Kendra	Mork	www.goddardkansass.us/library.html
Goessel	USD 411	K-12	North Central	Superintendent	John	Fast	www.usd411.org

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Goessel Public Library	Public	Library	North Central	Director	Laura Dailey		
Golden Plains	USD 316	K-12	North West	Superintendent	Dr. Roger A. Baskerville		www.usd316.k12.k.s.us/
Goodland	USD 352	K-12	North West	School Improvement Specialist	Sharon Gregory		www.usd352.k12.k.s.us
Goodland Public Library	Public	Library	North West	Library Director	Karen Gillihan		
Goodland Regional Medical Center	GH	Hospitals	North West	Administrative Assistant	Dianna Briney		
Gove City Library	Public	Library	North West	Librarian	Rayna Kopriya		
Gove County Medical Center	CAH	Hospitals	North West	Administrator	Paul Davis		
Graham County Hospital	CAH	Hospitals	North West	Administrator and CEO	Fred Meis		www.grahamcountyhospital.org/
Graham County Public Library	Public	Library	North West	Director	Mary Allen		www.geocities.com/ghcopublib/
Grainfield City Library	Public	Library	North West	Librarian	Anna Whiteman		
Grant County Library	Public	Library	South West	Director	Frances Roberts		www.trails.net/grant/
Graves Memorial Library	Public	Library	South East	Director	Angelita Gahman		
Great Bend	USD 428	K-12	Central	Director of Curriculum	Dan Brungardt		www.usd428.org
Great Bend Public Library	Public	Library	Central	Director	James Swan		
Greeley County Hospital	CAH	Hospitals	South West	HIM Director	Vickie Nolan		www.gchsnet.com
Greeley County Library	Public	Library	South West	Director	Lori Zerr		www.trails.net/greeley/
Greeley County Schools	USD 200	K-12	South West	Superintendent	Bill Wilson		
Greensburg	USD 422	K-12	South Central	Superintendent	Darin Headrick		
Greenwood County Hospital	CAH	Hospitals	South East	CEO/Administrator	Bruce Birchell		
Grenola Public Library	Public	Library	South East	Director	Dixie Conklin		
Grinnell Public Schools	USD 291	K-12	North West	Superintendent	Ken Bockwinkel		www.skyways.lib.ks.us/kansas/schools/grinnell/
Grisell Memorial Hospital District #1	CAH	Hospitals	South West	Administrator	Kris Ochs		
Gypsum Community Library	Public	Library	Central	Director	Peggy Woods		
Halstead	USD 440	K-12	South Central	Technology Coordinator	Charles Robinson		www.usd440.com
Halstead Public Library	Public	Library	South Central	Director	Elizabeth Cain		www.halsteadkans.com/library.html
Hamilton	USD 390	K-12	South East	Superintendent	Bud Slapp		www.hamilton390.net
Hamilton City Library	Public	Library	South East	Director	Leta Harrell		
Hamilton County Hospital	CAH	Hospitals	South West	Administrator	Edwin Hurysz		
Hamilton County Library	Public	Library	South West	Director	Joyce Armstrong		skyways.lib.ks.us/library/hamilton/
Hanover Public Library	Public	Library	North Central	Librarian	Judy Springer		
Hanston	USD 228	K-12	South West	Superintendent	Ray Patterson		www.usd228.net

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Hanston City Library	Public	Library	South West	Director	Karen S.	Salmans	www.trails.net.s.kwis/hanston.html
Hardtner Public Library	Public	Library	South Central	Librarian	Joy	Helmer	skyways.lib.ks.us/towns/Hardtner/harhome.htm
Harper Hospital District #5	CAH	Hospitals	South Central	CEO/Administrator	Kim	Cinelli	
Harper Public Library	Public	Library	South Central	Director	Lynn	Campbell	skyways.lib.ks.us/towns/Harper/library.html
Haskell Township Library	Public	Library	South West	Director	Jamie	Wright	
Haven Public Library	Public	Library	South Central	Director	Katherine	Regier	skyways.lib.ks.us/kansas/library/haven
Haven Public Schools	USD 312	K-12	South Central	Assistant Superintendent	Steve	Noble	www.usd312.k12.ks.us
Haviland	USD 474	K-12	South Central	Superintendent	Mike	Waters	
Hays	USD 489	K-12	Central	Technology Director	Loren	VonLintel	www.usd489.com
Hays Medical Center, Inc.	GH	Hospitals	Central		Gayla	Wichman	www.haysmed.com
Hays Public Library	Public	Library	Central	Library Director	Melanie	Miller	www.hayspublib.org
Haysville	USD 261	K-12	South Central	Technology Director	David	Herbert	www.usd261.com
Haysville Community Library	Public	Library	South Central	Director	Betty	Cattrell	www.geocities.com/Athens/Acropolis/4431
Healy Public Schools	USD 468	K-12	South West	Superintendent	John	LaFabe	
Hepler City Library	Public	Library	South East	Librarian	Jeanie	Beerbower	
Herington	USD 487	K-12	North Central	Superintendent	Scott	Carter	www.2teen.k12.ks.us
Herington Municipal Hospital	CAH	Hospitals	North Central	Administrator	Mary	Steiner	
Herington Public Library	Public	Library	North Central	Director	Susan	Carlson	
Hesston	USD 460	K-12	South Central	Superintendent	Vern	Minor	www.hesstonschools.org
Hesston College	Private C	Higher Ed	South Central	Director of IT	Linda	Slucky	www.hesston.edu
Hesston Public Library	Public	Library	South Central	Library Director	Chris	Buller	skyways.lib.ks.us/library/hesston/homepage.htm
Hiawatha	USD 415	K-12	North East	Superintendent	John	Severin	www.usd415.org
Hiawatha Community Hospital	CAH	Hospitals	North East	Administrator	John	Moore	
High Plains Educational Cooperative District #611	I611	K-12	South West	Assistant Director	Gail	Gillespie	www.highplained.com
Highland	USD 425	K-12	North East	Superintendent	Steve	Adams	www.doniphanwest.org
Highland Community College	CC	Higher Ed	North East	Director of Information Systems	Tim C.	Lucas	www.highlandcc.edu
Hill City	USD 281	K-12	North West	Superintendent	Dr. Patrick	Call	www.usd281.com
Hillcrest Public Library	Public	Library	Central	Director	Lori	Swiercinsky	www.ckis.org/members/Cuba/CubaLibrary.html
Hillcrest Rural Schools	USD 455	K-12	Central	Superintendent	Dr. Don	Wells	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Hillisboro Community Medical Center	CAH	Hospitals	North Central	CFO/IT	Marion	Regier	
Hillisboro Public Library	Public	Library	North Central	Library Director	Cathleen	Fish	skyways.lib.ks.us/towns/Hillisboro/library/
Hodgeman County Health Center	CAH	Hospitals	South West	Administrator	Phil	Lowe	
Hoisington	USD 431	K-12	Central	Superintendent	Keith	Higgins	www.usd431.net
Hoisington Public Library	Public	Library	Central	Director	Pat	Brown	
Holcomb	USD 363	K-12	South West	Superintendent	Skip	Landis	www.users.pld.com/holcomb/
Holton	USD 336	K-12	North East	Technology Coordinator	Tom	Sextro	www.holton.k12.ks.us
Hope Community Library	Public	Library	North Central	Director	Betty	Penrod	
Horton Public Library	Public	Library	North East	Library Director	Rita	Higley	www.hortonkansas.net/library.html
Hospital District #1 of Crawford County	GH	Hospitals	South East	Community Service Director	Donna	Shireman	
Hospital District #1 of Rice County	CAH	Hospitals	South Central	Administrator	Robert	Mullen	
Hospital District #6 of Harper County	CAH	Hospitals	South Central	Administrator	J. Bryant	Anderson	
Howard City Library	Public	Library	South East	Librarian	Judith	Harsh	
Hoxie Community Schools	USD 412	K-12	North West	District Technology Coordinator	Tom	Snodgrass	
Hugoton Public Schools	USD 210	K-12	South West	Technology Director	Stuart	Scott	www.usd20.org
Humboldt	USD 258	K-12	South East	Assistant Principal and Technology Director	Craig	Smith	www.usd258.net
Humboldt Public Library	Public	Library	South East	Director	Melinda	Herder	
Hutchinson Community College	CC/TS	Higher Ed	South Central	Director of Information Services	Loren L.	Morris	www.hutchcc.edu
Hutchinson Hospital Corporation	GH	Hospitals	South Central	Medical Library and Resource Coordinator	Karon	Rhor	
Hutchinson Public Library	Public	Library	South Central	Director	Leroy	Galtin	www.hutchpl.org
Hutchinson Public Schools	USD 308	K-12	South Central	Director, Technology	Larry	Frederick	usd308.com
Ida Long Goodman Memorial Library	Public	Library	South Central	Library Director	Christie	Snyder	skyways.lib.ks.us/library/stjohn/
Independence	USD 446	K-12	South East	District Curriculum Director	Jannette	Luthi	www.indyschools.com
Independence Bible School	ANP	K-12	South East	Superintendent	Matthew	Brewer	
Independence Community College	CC	Higher Ed	South East	Chief Info and Facilities Officer	Greg	Eytcheson	www.indycc.edu
Independence Public Library	Public	Library	South East	Library Director	Pete	Daniels	www.iplks.org



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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Independent Schools	Z0047	K-12	South Central	Head of School	Karen	Norton	www.theindependentschool.com
Independent Township Library	Public	Library	Central	Library Director	Judy	Wondra	
Ingalls	USD 477	K-12	South West	Superintendent	Dave	Novack	ingallsusd477.com
Inman	USD 448	K-12	South Central	Superintendent	Kevin E.	Case	
Inman Public Library	Public	Library	South Central	Library Director	Donna	Wade	skyways.lib.ks.us/kansas/towns/Inman/library.html
Iola	USD 257	K-12	South East	Technology Coordinator	Dewayne	Smith	www.usd257.org
Iola Free Public Library	Public	Library	South East	Director	Roger	Carswell	
J.H. Robbins Memorial Library	Public	Library	Central	Director	Linda	Homolka	
Jamestown City Library	Public	Library	Central	Director	Debbie	Kearn	
Jay Johnson Public Library/Quinter Public Library	Public	Library	North West	Library Director	Sharon	DuBois	skyways.lib.ks.us/towns/Quinter/library/
Jayhawk	USD 346	K-12	South East	Superintendent	James	Knox	www.usd346.k12.ks.us
Jefferson County Memorial Hospital, Inc. and Geriatric Center	CAH	Hospitals	North East	CEO	Joye	Huston	
Jefferson County North	USD 339	K-12	North East	Technology Coordinator	David	Chaffee	www.usd339.net
Jefferson County West	USD 340	K-12	North East	Superintendent	Rob	Little	
Jennings City Library	Public	Library	North West	Librarian	Helen	Rhodes	
Jetmore	USD 227	K-12	South West	Technology Coordinator	Carol	Sherer	
Jetmore Public Library	Public	Library	South West	Library Director	Jacque	Sherrill	http://skyways.lib.ks.us/towns/Jetmore/library.html
Jewell	USD 279	K-12	Central	Technology Coordinator	Eric	Burks	
Jewell County Hospital	CAH	Hospitals	Central	Administrator	Deanna	Freeman	
Jewell Public Library	Public	Library	Central	Librarian	Carla A.	Feigal	http://www.ckls.org/members/Jewell/JewellLibrary.html
Johnson County Community College	CC/TS	Higher Ed	North East	CIO	Wayne	Brown	www.jccc.net
Johnson County Library	Public	Library	North East	Associate Director of Operations	Tim	Rogers	
Johnston Public Library	Public	Library	South East	Director	Muriel	Burrows	
Jordaan Memorial Library	Public	Library	Central	Director	Margaret	Larson	www.jordaanlibrary.com
Kanopolis Public Library	Public	Library	Central	Director	April	Miller	
Kansas City	USD 500	K-12	North East	Director of Technology and Information Services	Joe	Fives	www.kckps.org
Kansas City Area Technical School	TS	Higher Ed	North East	ATS Director	Johnny	Stevenson	www.kckats.com
Kansas City Catholic Diocese	Z0029	K-12	North East	Associate Superintendent	Karla	Leibham	www.archkccs.org

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Kansas City Kansas Community College	CC	Higher Ed	North East	Dean, Information Services	Bill	Chennault	www.kckcc.cc.ks.us
Kansas City Kansas Public Library	Public	Library	North East	Assistant Director of Libraries	Teresa	Garrison	
Kansas State Historical Society Research Library & Archives	State	Library	North East		Patricia A.	Michaelis	
Kansas State Library	State	Library	North East	State Librarian	Christie	Brandau	skyways.lib.ks.us/KSL/
Kansas State School for the Blind	SS	K-12	North East	Superintendent	William	Daugherty	www.kssb.net/
Kansas State School for the Deaf	SS	K-12	North East	Superintendent	Robert	Maile	www.ksdeaf.org/
Kansas State University	U	Higher Ed	North Central	Director ECC	Mel	Chastain	www.ksu.edu
Kansas Wesleyan University	Private U	Higher Ed	Central	Academic Dean	Raymond	Russin	www.kwu.edu
Kaw Area Technical School	TS	Higher Ed	North East	Director	Richard	Hoffman	www.kats.tec.ks.us
Kaw Valley	USD 321	K-12	North Central	Technology Coordinator	John	Johnson	www.kawvalley.k12.ks.us/
Kearny County Hospital	CAH	Hospitals	South West	CFO	Joe	Meyer	
Kearny County Library	Public	Library	South West	Director	Richard	Brookman	trails.net/kearny/
Kensington Community-School Library	Public	Library	Central	Director	Amber	Hardacre	
Kingman Carnegie Library	Public	Library	South Central	Director	Gee Gee	Helm	skyways.lib.ks.us/kansas/library/kingman
Kingman Community Hospital (Ninnescah Valley Health Systems, Inc.)	GH	Hospitals	South Central	Information System Specialist	Helio	de Castro	
Kingman-Norwich	USD 331	K-12	South Central	Assistant Superintendent	Leon	Albert	www.knused331.com
Kinsley Public Library	Public	Library	South West	Director	Joan K.	Weaver	www.kinsleylibrary.info
Kinsley-Offerle	USD 347	K-12	South West	Superintendent	Jim	Gamer	www.usd347.org
Kiowa County Memorial Hospital	CAH	Hospitals	South Central	Administrator	Mary	Colclazier	www.kcmh.net
Kiowa District Hospital	CAH	Hospitals	South Central	CEO	Bryan	Stacy	
Kiowa Public Library	Public	Library	South Central	Librarian	Laura	Wagenbach	skyways.lib.ks.us/towns/Kiowa/library/index.html
Kirwin City Library	Public	Library	Central	Librarian	Melissa	Johnson	
Kismet Public Library	Public	Library	South West	Chairman of Library Board	Lousie	Wyrick	www.trails.net/swkls/kismet.html
Kismet-Plains	USD 483	K-12	South West	Superintendent	Larrell	Cook	www.usd483.net
Labelle Community College	CC	Higher Ed	South East	Director of Information Technology	Tony	Rabig	www.labelle.edu
Labelle County Medical Center	GH	Hospitals	South East	CFO	Tom	Macaronas	www.lcmc.com
LaCrosse	USD 395	K-12	Central	Superintendent	Bill	Keeley	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Lakin	USD 215	K-12	South West	Superintendent	Randall K.	Steinle	
Lane County Hospital	CAH	Hospitals	South West	IT Director	Lance	McGowan	lchospital.com
Lane County Library	Public	Library	South West	Director	Ruby	Martin	http://lanecolibrary.info/
Lang Memorial Library	Public	Library	Central	Director	Margaret	Stadelman	
Lansing	USD 469	K-12	North East	Technology Coordinator	Jeff	Andrews	www.usd469.net
Lansing Community Library	Public	Library	North East	Library Director	Karen	Logan	www.lansing.ks.us
Larned State Hospital: Westside School	JCF	K-12	Central	Principal	Jim	Simpson	
Lawrence	USD 497	K-12	North East	Director of Technology	Dr. Michel J.	Eltschinger	www.usd497.org
Lawrence Memorial Hospital	GH	Hospitals	North East	Library Director	Celia	Smith	www.lmh.org
Lawrence Public Library	Public	Library	North East	Library Director	Bruce	Flanders	www.lawrencepubliclibrary.org
Leavenworth City Library	Public	Library	North East	Director	Kimberly	Baker	skyways.lib.ks.us/library/leavenworth/
Leavenworth Public Schools	USD 453	K-12	North East	Director of School Improvement	Terry	McCary	www.lvksch.org
Lebanon Community Library	Public	Library	Central	Librarian	Esther	Delmont	
Lebo-Waverly	USD 243	K-12	South East	Technology Director	Doug	Piper	www.usd243ks.org
Lenora Public Library	Public	Library	North West	Librarian	Gloria	Heikes	
Leonardville City Library	Public	Library	North Central	Director	Janet	Jones	
Leoti	USD 467	K-12	South West	Technology Coordinator	Tony	Lechtenberg	www.leoti.org
LeRoy-Gridley	USD 245	K-12	South East	Counselor/Test Coordinator	Juanette	Birk	
Lewis	USD 502	K-12	South West	Superintendent	Virgil L.	Ritchie	www.skyways.lib.ks.us/schools/usd502/index.htm
Liberal	USD 480	K-12	South West	Director of Business	Jerry	Clay	www.usd480.net
Liberal Memorial Library	Public	Library	South West	Technology Supervisor	Doreen	Wright	www.lmlibrary.org
Library District #1, Doniphan County	Public	Library	North East	Director	Lois	Owens	www.librarydistrict1.org/
Library District #1, Lyon Co.	Public	Library	North Central	Director	Shirley	Williams	
Library District #2 Linn County, LaCygne	Public	Library	South East	Librarian	Christine	Waddel	
Lincoln	USD 298	K-12	Central	Superintendent	Terry	Stratman	www.usd298.com
Lincoln Carnegie Library	Public	Library	Central	Director	Nancy	Jensen	skyways.lib.ks.us/towns/Lincoln/library.html
Lincoln County Hospital	CAH	Hospitals	Central		Tawnya	Sietz	
Lincoln Library	Public	Library	South Central	Director	Rosalee	Armstrong	www.cyberlodg.com/lincoln/index.html
Lindsborg Community Hospital	CAH	Hospitals	South Central	CFO	Laraine	Gengler	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Lindsborg Community Library	Public	Library	South Central	Librarian	Karen	Olson	
Linn County Library Dist #1, Parker	Public	Library	South East	Director	Donna	Burroughs	skyways.lib.ks.us/library/linn
Linn County Library Dist #3, Blumound	Public	Library	South East	Librarian	Sharon	Brahin	
Linwood Community Library Dist #1	Public	Library	North East	Director	Hannelore	Leach	skyways.lib.ks.us/towns/Linwood/libraryinfo.htm
Little River	USD 444	K-12	South Central	Superintendent	Milt	Dougherty	www.usd444.com
Little River Community Library	Public	Library	South Central	Librarian	Carolyn	Morrison	skyways.lib.ks.us/towns/LittleRiver/library.html
Logan	USD 326	K-12	Central	Superintendent	Robert L.	Jackson	
Logan Library	Public	Library	Central	Librarian	MaryDel	Graves	
Logan County Hospital	CAH	Hospitals	North West	CEO	Kyle	Hahn	
Long Island Community Library	Public	Library	Central	Librarian	Beth	Ponstein	
Longton Library	Public	Library	South East	Librarian	Della Gilbert	Powell	
Lorraine	USD 328	K-12	Central	Superintendent	Roger	Robinson	www.usd328.org
Louisburg	USD 416	K-12	North East	Director, Administrative Services	Pam	Best	www.usd416.org
Louisburg/Librar y District #1, Miami Co	Public	Library	North East	Director	Kiersten	Allen	
Lucas Public Library	Public	Library	Central	Director	Carolyn	Ihde	
Luray City Library	Public	Library	Central	Technology Chairperson	Charma	Craven	
Lutheran Schools	Z0026	K-12	South Central	Principal	Dawn	Oidenettel	
Lyndon	USD 421	K-12	North East	Superintendent	Brian	Spencer	
Lyndon Carnegie Library	Public	Library	North East	Director	Sarah	Walker-Hitt	skyways.lib.ks.us/kansas/towns/lyndon/library.html
Lyons	USD 405	K-12	South Central	Principal	Glenn	Fortmayer	www.usd405.com
Lyons Public Library	Public	Library	South Central	Director	Becky	McBeth	skyways.lib.ks.us/towns/Lyons/library/
Macksville	USD 351	K-12	South Central	Superintendent	Robert	Minchew	
Madison Public Library	Public	Library	South East	Director	Virginia	Pedroja	
Madison-Virgil	USD 386	K-12	South East	Superintendent	Darrel	Finch	
Maize	USD 266	K-12	South Central	Director of Administrative and Student Services	Sherry	Goodvin	www.usd266.com
Manhattan	USD 383	K-12	North Central	Director of Libraries	Kay	Stith	www.usd383.org
Manhattan Area Technical College	TC	Higher Ed	North Central	Network Administrator	Bill	Clark	www.matc.net
Manhattan Christian College	Private C	Higher Ed	North Central	Vice President of Business	Lori Jo	Stanfield	www.mccks.edu

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Manhattan Public Library	Public	Library	North Central	Director	Fred	Atchison	
Mankato	USD 278	K-12	Central	Superintendent	Bill	Walker	www.usd278.org
Mankato City Library	Public	Library	Central	Head Librarian	Linda	Eaton	
Marais des Cygnes Valley	USD 456	K-12	North East	Superintendent	Ted W.	Vannocker	www.usd456.org
Marion City Library	Public	Library	North Central	Director	Janet	Marler	www.marionks.com/library.html
Marion County Special Education Cooperative #617	I617	K-12	North Central	Director	Chirs	Cezar	www.mcsec.org/feedback.htm
Marion-Florence	USD 408	K-12	North Central	Superintendent	Lee	Leiker	www.usd408.com
Marmaton Valley	USD 256	K-12	South East	Superintendent	Darrel	Kellerman	
Marquette Community Library	Public	Library	South Central	Librarian	Donna	Elvin	skyways.lib.ks.us/towns/Marquette/library.html
Mary Cotton Public Library	Public	Library	North East	Director	Kim	Priest	
Mary Somerville Library - District Library No. 4 Linn County	Public	Library	South East	Director	Lena	Dick	
Marysville	USD 364	K-12	North Central	Superintendent	Doug	Powers	www.marysvilleschools.org/~usd364
Marysville Public Library	Public	Library	North Central	Library Director	Janice	Lyhane	skyways.lib.ks.us/library/marysville/
McCracken Public Library	Public	Library	Central	President of the Board	Thayne	Jones	
McCune City Library	Public	Library	South East	Librarian	Maxine	Allen	
McLouth	USD 342	K-12	North East	Superintendent	Jean	Rush	www.mclouth.org
McLouth Public Library	Public	Library	North East	Librarian	Carolyn	Courtney	
McPherson	USD 418	K-12	South Central	Superintendent	Randy	Watson	www.mcpherson.com/418
McPherson College	Private C	Higher Ed	South Central	College Librarian	Susan	Taylor	www.mcpherson.edu
McPherson County Special Education Cooperative	SEC	K-12	South Central	Director of Special Education	Sharon	Jeffrey	
McPherson Public Library	Public	Library	South Central	Director	Steve	Read	www.macpl.org
Meade	USD 226	K-12	South West	Superintendent	Robert	Herbig	
Meade District Hospital	CAH	Hospitals	South West	Administrator	Michael	Thomas	
Meade Public Library	Public	Library	South West	Director	Linda	Kobs	http://meadelibrary.info
Meadowlark Library	Public	Library	South West	Librarian	Mary	Cross	www.skyways.org/library/meadowlark/
Medicine Lodge Memorial Hospital	CAH	Hospitals	South Central	Finance Director	Belinda	Moody	
Memorial Hospital	GH	Hospitals	South Central	Information Systems Manager	Brad	Hollingsworth	
Memorial Hospital (Hospital District #1 Dickinson)	GH	Hospitals	North Central	Network Administrator	Annie	Seymour	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Menorah Medical Center	GH	Hospitals	North East	Director of Medical Staff Service and CME Library	Julie	Iseman	www.healthmidwest.org
Mercy Regional Health Center, Inc.	GH	Hospitals	North Central	Marketing Communications Director	April	Hamilton	
Meriden Community Library	Public	Library	North East	Library Director	Jerie	Tichenor	
MidAmerica Nazarene University	Private U	Higher Ed	North East	Associate Academic Dean - Graduate and Adult Studies	Frank	Johnson	www.mnu.edu
Midway Schools	USD 433	K-12	North East	Superintendent	Steve	Adams	www.donipharwest.org
Mill Creek Valley	USD 329	K-12	North Central	Superintendent	Larry	Jackson	www.usd329.com
Minneola	USD 219	K-12	South West	Superintendent	Mark	Walker	
Minneola City Library	Public	Library	South West	Director	Marla	Dunn	
Minneola District Hospital	CAH	Hospitals	South West	Administrator	Debi	Johnson	
Mission Valley	USD 330	K-12	North Central	Superintendent	Jim	Markos	
Mitchell County Hospital	GH	Hospitals	Central	IT Director	Mark	Marihugh	
Moline Public Library	Public	Library	South East	Library Director	Cindy	Jordan	
Montezuma	USD 371	K-12	South West	Principal	Tim	Skinner	www.sghs.musd371.k12.ks.us
Montezuma Township Library	Public	Library	South West	Librarian	Sara	Powell	http://skyways.lib.ks.us/towns/Montezuma/library.html
Moore Family Library	Public	Library	North West	Computer Consultant	Les	Barnhart	
Moran Public Library	Public	Library	South East	Librarian	Audrey	Maley	skyways.lib.ks.us/towns/Moran/library.html
Morrill Public Library	Public	Library	North East	Library Director	Catherine	Newland	skyways.lib.ks.us/kansas/towns/Hiawatha/library.html
Morris County	USD 417	K-12	North Central	Technology Director	Joe	Glotzbach	www.cgrove417.org
Morris County Hospital	GH	Hospitals	North Central	CEO	Jim	Reagan	
Morton County Hospital	GH	Hospitals	South West	CEO	Leonard	Hernandez	www.mchswecare.com
Morton County Public Library	Public	Library	South West	Librarian	Virginia	Johnson	mclib.elkhart.com
Moscow Public Schools	USD 209	K-12	South West	Technology Director	Lary	Holt	mosc95.pld.com/index.html
Mound Valley Public Library	Public	Library	South East		Teresa	Coomes	
Moundridge	USD 423	K-12	South Central	Superintendent	Rustin	Clark	www.usd423.org
Mount Hope Public Library	Public	Library	South Central	Assistant Director	Annette	Grattan	
Mt. Carmel Regional Medical Center	GH	Hospitals	South East	Director Community Relations	Robert	Poole	
Mullinville	USD 424	K-12	South Central	Superintendent	John Paul	Jones	www.mullinville.org

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Mulvane	USD 263	K-12	South Central	Technology Coordinator	David	Johnson	www.usd263.k12.ks.us
Mulvane Public Library	Public	Library	South Central	Director	Kristi	McEachern	skyways.lib.ks.us/towns/Mulvane/library.html
Nemaha Valley Community Hospital	CAH	Hospitals	North East	Director of Nursing	Jane	Tanking	
Nemaha Valley Schools	USD 442	K-12	North East	Superintendent	Brian	Harris	www.nvschools.org
Neodesha	USD 461	K-12	South East	Superintendent	Daryl	Pruter	www.neodesha.com/neodesha/district.html
Neosho County Community College	CC	Higher Ed	South East	Vice President, Student Learning	Dr. Brian	Inbody	www.neosho.edu
Neosho Memorial Regional Medical Center	GH	Hospitals	South East	Communications Director	Patricia	Morris	
Ness City	USD 303	K-12	South West	Superintendent	Randall	Jansonius	www.nesscityschools.org/
Ness City Public Library	Public	Library	South West	Director	Jean	Schlegel	http://skyways.lib.ks.us/towns/NessCity/library.html
Ness County Hospital District #2	CAH	Hospitals	South West	Administrator	Richard	Bergling	
Newman Regional Health	GH	Hospitals	North Central	CEO	Terry	Lambert	www.newtonmedicalcenter.com
Newman University	Private U	Higher Ed	South Central	CIO	Jim	Jones	www.newmanu.edu
Newton	USD 373	K-12	South Central	Asst. Superintendent for Business	Gary	Jantz	www.newton.k12.ks.us
Newton Public Library	Public	Library	South Central	Director	Marianne	Eichelberger	www.newtonplks.org
Nickerson	USD 309	K-12	South Central	Superintendent	Jerry	Burch	
Nora E. Larabee Memorial Library	Public	Library	South Central	Director/Librarian	Dixie	Osborn	skyways.lib.ks.us/towns/Stafford/library.html
Norcatour Public Library	Public	Library	North West	Librarian	Chris	Dempewolf	
North Central	USD 221	K-12	North Central	Superintendent	Dr. Don	Wells	
North Central Kansas Educational Interactive Television Consortium I-CAN	IDL	K-12	Central	Director	Cynthia	Beisner	ican@ruraltel.net
North Central Kansas Libraries System	Regional	Library	North Central	Technology Consultant	Richard	Miller	www.manhattan.lib.ks.us
North Jackson	USD 335	K-12	North East	Technology Director	Vern	Andrews	www.jhcobras.net
North Lyon County	USD 251	K-12	North Central	Technology Coordinator	Diana	Wilhite	www.usd251.org
North Ottawa County	USD 239	K-12	Central	Superintendent	Larry	Combs	www.usd239.org
Northeast	USD 246	K-12	South East	Superintendent	Randy	Rivers	
Northeast Kansas Center for Health and Wellness, Inc.	CAH	Hospitals	North East	CEO	Dale	White	
Northeast Kansas Education Service Center #608	\$608	K-12	North East	Executive Director	Dr. Jim	Wheeler	www.nekesc.org

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Northeast Kansas Library System	Regional	Library	North East	Director	Jim	Minges	www.nekls.org
Northeast Kansas Technical College	TC	Higher Ed	North East	President	Michael	Rogg	www.nektc.net
Northern Valley	USD 212	K-12	North West	Superintendent	Bill	Lowry	www.ruraltel.net /nvalley
Northwest Kansas Educational Service Center #502	S602	K-12	North West	Assistant Special Education Director	Kurt	Brown	
Northwest Kansas Library System	Regional	Library	North West	Director	Leslie	Bell	skyways.lib.ks.us/nwklis/norwest.html
Northwest Kansas Technical College	TC	Higher Ed	North West	President	Kenneth	Clouse	www.nwktc.org
Norton Community Schools	USD 211	K-12	North West	Technology Coordinator	Keith	Hauser	www.usd211.org
Norton County Hospital	CAH	Hospitals	North West	Administrator/CE O	Richard	Miller	
Norton Public Library	Public	Library	North West	Director	Kay	LeBeau	
Nortonville Public Library	Public	Library	North East	Director	Diane	Trinkle	skyways.lib.ks.us/library/nortonville
Oakley	USD 274	K-12	North West	Superintendent	Bill	Steiner	www.myschoolonline.com/ks/oakley
Oakley Public Library	Public	Library	North West	Director	Joyce	Homm	skyways.lib.ks.us/library/oakley/
Oberlin	USD 294	K-12	North West	Technology Coordinator	Jess	Randel	www.usd294.org
Oberlin City Library	Public	Library	North West	Director	Carol	Smith	
Olathe	USD 233	K-12	North East	Director of Technology	Rita	Lyon	www.olatheschools.com
Olathe Public Library	Public	Library	North East	Director	Emily	Baker	olathe.lib.ks.us
Onaga-Havensville-Wheaton	USD 322	K-12	North Central	Superintendent	Greg	Markowitz	www.USD322.org
Osage City	USD 420	K-12	North East	Superintendent	David	Carriger	www.usd420.org
Osage City Public Library	Public	Library	North East	Director	Jeanette	Stromgren	www.osagelibrary.com
Osawatomie	USD 367	K-12	North East	Superintendent	Robert L.	Cook	
Osawatomie Public Library	Public	Library	North East	Director	Janice	Barker	
Osborne County	USD 392	K-12	Central	Superintendent	Daniel	Newman	
Osborne County Memorial Hospital	CAH	Hospitals	Central	Administrator	Kiley	Floyd	www.ocmh.org
Osborne Public Library	Public	Library	Central	Library Director	Kay	Coop	www.osbornepubliclibrary.org
Oskaloosa Public Library	Public	Library	North East	Director	Paula	Ware	www.skyways.org/towns/Oskaloosa/library.html
Oskaloosa Public Schools	USD 341	K-12	North East	Superintendent	Dr. Loren	Lutes	
Oswego	USD 504	K-12	South East	Superintendent	Terry L.	Karlin	www.usd504.org
Oswego Medical Center, LLC	CAH	Hospitals	South East	CEO	LaMont	Cook	
Oswego Public Library	Public	Library	South East	Director	Elizabeth	Turner	
Otis Community Library	Public	Library	Central	Board President	Martha	Batman	



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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Otis-Bison	USD 403	K-12	Central	Technology Coordinator	Joy	Yost	<a href="http://skyways.lib.ks.us/kansas/schools/otis/">http://skyways.lib.ks.us/kansas/schools/otis/</a>
Ottawa	USD 290	K-12	North East	Superintendent	Jan	Collins	
Ottawa County Health Center	CAH	Hospitals	Central	Administrator	Joy	Johnson	
Ottawa Library	Public	Library	North East	Library Director	Barbara	Dew	<a href="http://www.ottawa.lib.ks.us">www.ottawa.lib.ks.us</a>
Ottawa University	Private U	Higher Ed	North East	Director of Library Services	Gloria	Creed-Dikeogu	<a href="http://www.ottawa.edu">www.ottawa.edu</a>
Overbrook Public Library	Public	Library	North East	Director	Peggy	Waldman	<a href="http://skyways.lib.ks.us/towns/Overbrook/library.html">skyways.lib.ks.us/towns/Overbrook/library.html</a>
Oxford	USD 358	K-12	South Central	Superintendent	Charles	Coblentz	<a href="http://www.usd358.com/">www.usd358.com/</a>
Oxford Public Library	Public	Library	South Central	Librarian	Nyla	Sawyer	<a href="http://skyways.lib.ks.us/towns/Oxford/library.html">skyways.lib.ks.us/towns/Oxford/library.html</a>
Palco	USD 269	K-12	Central	Technology Coordinator	Jennifer	Wahrman	<a href="http://www.usd269.k12.ks.us/">www.usd269.k12.ks.us/</a>
Palco Public Library	Public	Library	Central	Director	Jane	Durr	
Paola	USD 368	K-12	North East	Director Of IT	Tom	Pfaltzgraff	<a href="http://www.usd368.org">www.usd368.org</a>
Paola Free Library	Public	Library	North East	Director	Rosy	King	<a href="http://skyways.lib.ks.us/library/paola/">skyways.lib.ks.us/library/paola/</a>
Paradise	USD 399	K-12	Central	Superintendent	Aaron	Homburg	<a href="http://www.usd399.com">www.usd399.com</a>
Parsons	USD 503	K-12	South East	Superintendent	Deborah	Perbeck	<a href="http://www.vikingnet.net/districtoffice">www.vikingnet.net/districtoffice</a>
Parsons Public Library	Public	Library	South East	Library Director	Dayna	Williams-Capone	
Pawnee Heights	USD 496	K-12	Central	Superintendent	Raymond	Patterson	<a href="http://www.usd496.net">www.usd496.net</a>
Peabody Township Library	Public	Library	North Central	Director	Mildred	Buller	
Peabody-Burns	USD 398	K-12	North Central	Superintendent	Thomas	Alstrom	
Perry Public Schools	USD 343	K-12	North East	Assistant Superintendent	Denis	Yoder	<a href="http://www.usd343.org">www.usd343.org</a>
Phillips County Hospital	CAH	Hospitals	Central	Administrator	Heather	Harper	<a href="http://www.phillipshospital.org">www.phillipshospital.org</a>
Phillipsburg	USD 325	K-12	Central	Superintendent	Kent R.	Otte	<a href="http://www.usd325.com">www.usd325.com</a>
Phillipsburg City Library	Public	Library	Central	Library Director	Kayla	Kreller	<a href="http://www.phillipsburgks.us/community/library/index.htm">www.phillipsburgks.us/community/library/index.htm</a>
Pike Valley	USD 426	K-12	Central	Superintendent	Gary	Kraus	<a href="http://www.pikevalley.com">www.pikevalley.com</a>
Pioneer Memorial Library	Public	Library	North West	Director	Jeff	Friesen	
Piper-Kansas City	USD 203	K-12	North East	Technology Coordinator	John	Yost	<a href="http://www.piperschools.com">www.piperschools.com</a>
Pittsburg	USD 250	K-12	South East	Technology Director	Rick	Duling	<a href="http://www.usd250.org">www.usd250.org</a>
Pittsburg Public Library	Public	Library	South East	Director	Pat	Clement	<a href="http://skyways.lib.ks.us/library/pittsburg/">skyways.lib.ks.us/library/pittsburg/</a>
Pittsburg State University	U	Higher Ed	South East	Director	Howard W.	Smith	<a href="http://www.pittstate.edu">www.pittstate.edu</a>
Plains Community Library	Public	Library	South West	Library Director	Cardyn	Chase	<a href="http://www.skyways.org/towns/Plains/library.html">www.skyways.org/towns/Plains/library.html</a>
Plainville	USD 270	K-12	Central	Superintendent	Harry	Austin	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Plainville Memorial Library	Public	Library	Central	Director	Margaret	Wilson	
Pleasanton	USD 344	K-12	South East	Technology Director	Travis	Laver	www.usd344.org
Pleasanton Lincoln Library	Public	Library	South East	Head Librarian	Beth A.	Kuchenbrod	
Port Library	Public	Library	Central	Director	Patricia A.	Heidrick	
Pottawatomie-Wabunsee Regional Library	Public	Library	North Central	Director	Freda J.	Dobbins	skyways.lib.ks.us/library/pottwablib/index.htm
Potwin Public Library	Public	Library	South Central	Director	Michael	Austin	skyways.lib.ks.us/towns/Potwin/library.html
Prairie Heights	USD 295	K-12	North West	Superintendent	Emery	Hart	www.usd295.k12.ks.us
Prairie View	USD 362	K-12	South East	Superintendent	Doison	Bradbury	www.pv362.org
Prairie View School	SP	K-12	South Central	Principal	Eric	Billings	
Pratt	USD 382	K-12	South Central	Superintendent	Dr. Glen	Davis	www.usd382.com
Pratt Community College	CC	Higher Ed	South Central	Director, Learning Resources and Instructional Technology	Don	Hart	www.prattcc.edu
Pratt Public Library	Public	Library	South Central	Director	Janice	Hoyt	
Pratt Regional Medical Center	GH	Hospitals	South Central	Dir. Fund Development	DeWayne	Bryan	www.prmc.org
Prescott City Library	Public	Library	South East	Librarian	Jean	Mayhugh	
Pretty Prairie	USD 311	K-12	South Central	Superintendent	A.C.	Boland	
Pretty Prairie Public Library	Public	Library	South Central	Director	Patti	Brace	www.skyways.org/towns/PrettyPrairie
Protection Township Library	Public	Library	South West	Library Director	Mary	Ehret Holler	www.skyways.org/towns/protection/library/index.html
Providence Medical Center	GH	Hospitals	North East	Medical Librarian	Sarah	Kirby	www.providence-health.org
Quinter Public Schools	USD 293	K-12	North West	Superintendent	Allaire	Homburg	www.quinterhs.org
Randall Public Library	Public	Library	Central	Librarian	Lynell	Sheahan	
Ransom Public Library	Public	Library	South West	Director	Debbie	Erb	www.trails.net/ransom/
Rawlins County	USD 105	K-12	North West	Superintendent	Mark	Wolters	
Rawlins County Health Center	CAH	Hospitals	North West	Business Office Manager	Heather	Fields	www.rchc.us
Remington-Whitewater	USD 206	K-12	South Central	Superintendent	Jim	Johnson	remington.ks.schodwebpages.com
Reno County Education Cooperative #610	I610	K-12	South Central	Assistant Director	Mike	Lang	www.rcec610.com
Renwick	USD 267	K-12	South Central	Technology Coordinator	Nancy	Bolinger	www.usd267.com
Republic County	USD 427	K-12	Central	Superintendent	Larry M.	Lysell	
Republic County Hospital	CAH	Hospitals	Central	Systems Administrator/ISO	Chris	Olsen	www.republiccountyhospital.org

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Richmond Public Library	Public	Library	North East	Director	Connie A.	Weber	skyways.lib.ks.us/library/richmond/
Riley County	USD 378	K-12	North Central	Superintendent	Brad	Stames	www.usd378.org
Riverton	USD 404	K-12	South East	Superintendent	David	Walters	www.usd404.org
Rock Creek	USD 323	K-12	North Central	Network Administrator	Laurie	Redding	www.rockcreekschools.org
Rolla	USD 217	K-12	South West	Superintendent	Gregg	Dunkelberger	www.usd217.org
Rooks County Health Center	CAH	Hospitals	Central	Administrator/CE O	J. Ben	Quinton	
Rose Hill Public Schools	USD 394	K-12	South Central	District Technology Director	Wayne	Myers	www.usd394.com
Royal Valley	USD 337	K-12	North East	Superintendent	John	Rundle	www.rv337.com
Rural Vista	USD 481	K-12	North Central	Superintendent	Chris	Kleidosty	
Rush County Memorial Hospital	CAH	Hospitals	Central	Administrator/CE O	Terri	Deuel	
Russell County	USD 407	K-12	Central	Superintendent	David	Couch	www.usd407.org
Russell Public Library	Public	Library	Central	Director	Maxine	Ganske	
Russell Regional Hospital	CAH	Hospitals	Central	Administrator/CE O	Roger	Knak	http://www.russellhospital.org/
Ruth Dole Memorial Library	Public	Library	South Central	Librarian	Rhonda	Corwin	
Sabetha	USD 441	K-12	North East	Superintendent	Dennis R.	Stones	www.sabetha441.k12.ks.us
Sabetha Community Hospital	CAH	Hospitals	North East	Administrative Assistant	Lora	Key	www.sabethahospital.com
Salina	USD 305	K-12	Central	Director of Technology	Dwight	Christie	www.usd305.com
Salina Area Technical School	TS	Higher Ed	Central	Director	Duane	Custer	www.salinatech.com
Salina Public Library	Public	Library	Central	Library Director	Joe	McKenzie	www.salpublib.org/
Salina Regional Health Center	GH	Hospitals	Central	Vice President Human Resources	David	Moody	www.srhc.com
Santa Fe Trail	USD 434	K-12	North East	Superintendent	Terry	Schmidt	www.usd434.org
Satanta	USD 507	K-12	South West	Technology Coordinator	Steven	Barker	www.usd507.org
Satanta District Hospital	CAH	Hospitals	South West	CEO	Curt	Colson	www.satantahospital.org
Savonburg Public Library	Public	Library	South East	Director	Robin	Betts	
Scandia City Library	Public	Library	Central	Director	Kathryn	Gile	
Scott County	USD 466	K-12	South West	Superintendent	Dean	Katt	www.usd466.com/
Scott County Hospital	GH	Hospitals	South West	President and CEO	Greg	Unruh	
Scott County Public Library	Public	Library	South West	Director	Julie	O'Brien	sclib@wbsnet.org
Seaman	USD 345	K-12	North East	Director of Technology	Terry	Morrow	www.usd345.com/
Sedan City Hospital	CAH	Hospitals	South East	ITV Coordinator	Tanya	Depew	sedanhospital.org
Sedan Public Library	Public	Library	South East	Director	Kathleen	McCorkle	skyways.lib.ks.us/towns/Sedan/library.html
Sedgwick Public Schools	USD 439	K-12	South Central	Dir. of Curriculum & Technology	Rae	Niles	www.usd439.k12.ks.us

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Selden Public Library	Public	Library	North West	Board Member	Judy	Rogers	skyways.lib.ks.us/library/selden/selden.htm
Seneca Free Library	Public	Library	North East	Director	Karen	Holthaus	
Seward County Community College	CC	Higher Ed	South West	Multimedia Technology Director	Doug	Browne	www.sccc.edu
Sharon Springs Public Library	Public	Library	North West	Head Librarian	Cathy	VanAllen	
Shawnee Heights	USD 450	K-12	North East	Curriculum Director	David	Bowman	www.snh450.k12.ks.us
Shawnee Mission Public Schools	USD 512	K-12	North East	Manager of Information Services	Rich	Cavallaro	www.smsd.org
Sheridan County Library	Public	Library	North West	Director	Cindy	Eller	
Sheridan County Hospital	CAH	Hospitals	North West	CFO	ReChelle	Kennedy	
Silver Lake	USD 372	K-12	North East	Superintendent	Steve	Pegram	
Silver Lake Library	Public	Library	North East	Director	Erica	Riley	skyways.lib.ks.us/library/silverlake/silver.html
Skyline Schools	USD 438	K-12	South Central	Technology Director	Jane	Bolen	www.usd438.k12.ks.us
Smith Center	USD 237	K-12	Central	Superintendent	Ron	Meitler	www.usd237.com
Smith Center Public Library	Public	Library	Central	Library Director	Joanna	Runyon	
Smith County Memorial Hospital	GH	Hospitals	Central	CFO	Jim	Wahlmeier	
Smoky Hill/ Central Kansas Education Service Center #629	\$629	K-12	Central	Central Region Director	Larry	Patrick	www.smokyhill.org
Smoky Valley	USD 400	K-12	South Central	Superintendent	Glen	Suppes	www.smokyvalley.org
Solomon	USD 393	K-12	North Central	Superintendent	Dr. Jim	Day	www.solomon393.k12.ks.us
Solomon Public Library	Public	Library	North Central	Director	Connie	Avery	www.skyways.org/library/solomon/
South Barber	USD 255	K-12	South Central	Superintendent	Bob	Hightree	
South Central Kansas Education Service Center #628	\$628	K-12	South Central	Director of Distance Learning	Ann	Lundy	www.sckesc.org/
South Central Kansas Library System	Regional	Library	South Central	Technology Coordinator	Larry	Papenfuss	www.sckls.info
South Central Kansas Regional Medical Center	GH	Hospitals	South Central	CEO	Joe	Jirinec	www.sckrnc.com
South Haven	USD 509	K-12	South Central	Superintendent	John	Showman	www.usd509.org
Southeast Kansas Education Service Center #609	\$609	K-12	South East	Director, SEKESC at Greenbush	Carol	Woolbright	www.greenbush.org/
Southeast Kansas Interlocal #637	1637	K-12	South East	Director	Bill	Perry	www.sekconnectio n.com
Southeast Kansas Library System	Regional	Library	South East	Director	Roger	Carswell	www.sekls.lib.ks.us
Southeast of Saline	USD 306	K-12	Central	Director of Technology	Andrew	Heidel	www.usd306.k12.ks.us
Southern Cloud	USD 334	K-12	Central	Principal	Roger	Perkins	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Southern Lyon County	USD 252	K-12	North Central	Superintendent	Paul	Dorathy	www.usd252.org
Southwest Kansas Educational Consortium #625	625	K-12	South West	Administrator	Paul	Conner	
Southwest Kansas Library System	Regional	Library	South West	Director	Emily	Sitz	trails.net/swkls/
Southwest Kansas Technical School	TS	Higher Ed	South West	Director	Ed	Poley	www.usd480.net/s wkts
Southwest Medical Center	GH	Hospitals	South West	Vice President	Bob	Houck	www.swmedcenter.com
Southwest Plains Regional Service Center #626	S626	K-12	South West	Director	Kelly	Gillespie	www.swprsc.org
Southwestern College	Private C	Higher Ed	South Central	Library Director	Beth	Sheppard	www.sckans.edu
Spearville	USD 381	K-12	South West	Superintendent	Mark	Littell	
Spearville Township Library	Public	Library	South West	Head Librarian	Leesa	Shafer	http://users.uco.m.net/slibrariy
Spring Hill Schools	USD 230	K-12	North East	Network Administrator Supervisor	Phil	Elliott	www.usd230.org
St Francis Community Schools	USD 297	K-12	North West	Superintendent	Carl M.	Werner	www.usd297.k12.k.s.us
St John-Hudson	USD 350	K-12	South Central	Superintendent	James	Kenworthy	www.stjohnsk.net /usd350;
St. Catherine Hospital	GH	Hospitals	South West	Director of Health Info Services	Dale	Scott	www.stcath-hosp.org
St. Francis Hospital and Medical Center	GH	Hospitals	North East	Technical Services Manager	John	Long	www.stfrancistopeka.org
St. Francis Public Library	Public	Library	North West	Head Librarian	Pat	Leibbrandt	
St. John's Military School	Z0013	K-12	Central	Academic Dean	Devon	Walter	http://www.sjms.org/
Stafford	USD 349	K-12	South Central	Superintendent	Mary Jo	Taylor	www.stafford349.com
Stafford District Hospital #4	CAH	Hospitals	South Central	Administrator	Vernon	Minnis	
Stanton County Hospital	CAH	Hospitals	South West	Administrator	Shae	Veach	
Stanton County Library	Public	Library	South West	Director	Denise	Smith	ns.trails.net/stanton/
Sterling	USD 376	K-12	South Central	Superintendent	Fred	Dierksen	www.usd376.com
Sterling College	Private C	Higher Ed	South Central		Sally	Haggerty	www.sterling.edu
Sterling Free Public Library	Public	Library	South Central	Librarian	Shirley	Kenyon	www.sfpl.us
Stevens County Hospital	CAH	Hospitals	South West	CEO	Linda	Stalcup	
Stevens County Library	Public	Library	South West	Director	Eunice M.	Schroeder	http://stevenscountylibrary.com/
Stockton	USD 271	K-12	Central	Superintendent	Jim	Hickel	
Stockton Public Library	Public	Library	Central	Director	Christine D.	Sander	
Stormont-Vail Healthcare Inc.	GH	Hospitals	North East	Director, Library Services	Lenora	Kinzie	www.stormontvail.org
Sublette	USD 374	K-12	South West	Superintendent	Rex	Bruce	
Summerfield Public Library	Public	Library	North Central	Librarian	Jeanette	McElroy	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Sumner County Educational Services Interlocal #619	I619	K-12	South Central	Director	Virginia	Swecker	
Sumner County Hospital District #1	CAH	Hospitals	South Central	Administrator	Virgil	Watson	
Sumner Regional Medical Center	GH	Hospitals	South Central	President and CEO	Dr. Robert	Bean	
Sunshine City Library	Public	Library	Central	Trustee	Carol	Short	
Susan B. Allen Memorial Hospital	GH	Hospitals	South Central	Director, Information Systems	Mark	Rooker	www.sbamh.com
Sylvan Grove Public Library	Public	Library	Central	Director	Ramie	Schulteis	skyways.lib.ks.us/towns/SylvanGrove/library.html
Sylvia Public Library	Public	Library	South Central	Librarian	Thelma	Ward	
Syracuse	USD 494	K-12	South West	Superintendent	Joan	Friend	www.syracuse.k12.ks.us
Tabor College	Private C	Higher Ed	North Central	Director of Library Services	Adam	Wathen	www.tabor.edu
Technology Excellence in Education Network (TEEN) #632	I632	K-12	North Central	Executive Director	Chris	Middelmog	www.teen.k12.ks.us
Thayer Friday Reading Club City Library	Public	Library	South East	Director	Janet	Stafford	
Thomas County Historical Society Library	Public	Library	North West		Sue	Taylor	
Three Lakes Educational Cooperative #620	I620	K-12	North East	Director of Special Education	Jennifer	Barnhart	www.three-lakes.org
Tipton Christian School	Z0065	K-12	Central	Head Teacher	Jennifer	Brummer	
Tonganoxie	USD 464	K-12	North East	Accounts Payable Clerk	Carol	Sorensen	www.tong464.k12.ks.us
Tonganoxie Public Library	Public	Library	North East	Library Director	Sharon	Moreland	www.tonganoxielibrary.org
Topeka and Shawnee County Public Library	Public	Library	North East	Deputy Director of Operations	Robert	Banks	
Topeka Public Schools	USD 501	K-12	North East	General Director Info	Wilber	Bridges	www.topeka.k12.ks.us
Toronto Public Library	Public	Library	South East	Director	Kristin	Ramshaw	
Towanda Public Library	Public	Library	South Central	Director	Julia	Koehler	www.skyways.org/towns/Towanda/library.html
Trego County Lemke Memorial Hospital	CAH	Hospitals	North West	Administrator	Dan	Bartz	
Triplains	USD 275	K-12	North West	Superintendent/Principal	David	Porter	www.usd429.k12.ks.us
Troy Public Schools	USD 429	K-12	North East	Superintendent	Dr. Doug	Huxman	www.troyusd.org
Turner-Kansas City	USD 202	K-12	North East	Assistant Superintendent	Craig	Shove	www.turnerUSD202.org
Turon Community Library	Public	Library	South Central	Librarian	Sharon	Nitzsche	
Twin Valley	USD 240	K-12	Central	Superintendent	Richard	Harlan	www.ben.usd240.k12.ks.us

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Udall	USD 463	K-12	South Central	Superintendent	Loren	Feldkamp	www.usd463.org
Udall Public Library	Public	Library	South Central	Librarian	Lorene	Dickerman	www.cityofudall.com/library.html
Ulysses	USD 214	K-12	South West	Superintendent	Bill	Hall	www.ulysses.org/
Uniontown	USD 235	K-12	South East	Superintendent	Randy	Rockhold	www.usd235.org
University of Kansas	U	Higher Ed	North East	Vice Provost, Info. Services & CIO	Denise	Stephens	www.ku.edu
University of Kansas Hospital	GH	Hospitals	North East	Chief Information Officer	James	Bingham	www.kumcd.com
University of Saint Mary	Private U	Higher Ed	North East	Director of Information Services	Kevin	Gantt	www.stmary.edu
Utica Public Library	Public	Library	South West	Librarian	Melanie	Bembeck	
Valley Center Public Schools	USD 262	K-12	South Central	Asst. Superintendent	Scott	Springston	www.usd262.net
Valley Falls	USD 338	K-12	North East	Superintendent	David	Grove	www.usd338.com
Valley Heights	USD 498	K-12	North Central	Technology Coordinator	Ron	Hardin	www.valleyheights.org
Vermillion	USD 380	K-12	North Central	Superintendent	Beth	Reust	www.usd380.com
Vermillion Public Library	Public	Library	North Central	Director	Audrey	Broxterman	
Via Christi Regional Medical Center	GH	Hospitals	South Central	VCF Grants Administration	Martha	McCabe	www.via-christi.org
Victoria	USD 432	K-12	Central	Superintendent	Linda	Kenne	
Viola Township Library	Public	Library	South Central	Library Director	Claire	Charlebois	
W. A. Rankin Memorial Library	Public	Library	South East	Director	Mary	Meckley	
WaKeeney	USD 208	K-12	North West	Superintendent	Robert	Scheib	
WaKeeney City Library	Public	Library	North West	Director	Louella	Kaiser	www.wakeeney.org/new/community/education.htm#wpl
Wakefield Public Library	Public	Library	North Central	Head Librarian	Rita J.	Braden	
Wallace County Schools	USD 241	K-12	North West	Superintendent, K-8 Principal	Susan	Scherling	www.usd241.net
Walnut Public Library	Public	Library	South East	Board Member	Peggy	Riddle	
Walton Community Library	Public	Library	South Central	Librarian	Carmen	South	
Wamego	USD 320	K-12	North Central	Technology Coordinator	Anitta	Staats	www.usd320.com
Wamego City Hospital	CAH	Hospitals	North Central	Executive Assistant	Kelly	Ingalsbe	
Wamego Public Library	Public	Library	North Central	Director	Kim	Clark	skyways.lib.ku.us/library/wamego/wamegopl.html
Washburn University	MU	Higher Ed	North East	Interim Co-Director for ITS	Susan	Jarchow	www.washburn.edu
Washington County Hospital	CAH	Hospitals	North Central	Administrator	Vernon	Minnis	
Washington Public Library	Public	Library	North Central	Library Director	Janet	Keller	
Washington Schools	USD 222	K-12	North Central	Superintendent	Michael D.	Stegman	www.usd222.org
Waterville Public Library	Public	Library	North Central	Director	Heather	Dreith	

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Member Name	Member Type	Constituent Group	Region	Title	Admin Contact		Web Page
Wathena	USD 406	K-12	North East	Superintendent	Mike	Newman	www.wathena406.k12.ks.us
Weir Public Library	Public	Library	South East	Director	Stef	Arbuckle	
Wellington	USD 353	K-12	South Central	Technology Director	Angie	Ratcliff	www.usd353.com/
Wellsville	USD 289	K-12	North East	Curriculum Director	Tammy	Thomasson	www.wellsville-usd289.org
Wellsville City Library	Public	Library	North East	Library Director	Becky	Dodd	skyways.lib.ks.us/library/wellsville
Weskan	USD 242	K-12	North West	Technology Coordinator	Greg	Robinson	www.weskanschools.org
West Elk	USD 282	K-12	South East	Superintendent	Bert	Moore	
West Franklin	USD 287	K-12	North East	Curriculum Director	Mary	Schleicher	www.usd287.k12.ks.us
West Smith County	USD 238	K-12	Central	Superintendent	Jeff	Yoxall	www.goldbugcount ry.com
West Solomon Valley Schools	USD 213	K-12	North West	Superintendent	Kenneth	Tidball	www.usd213.com
Western Plains	USD 106	K-12	South West		Marcia	Giess	
Wetmore Public Library	Public	Library	North East	Director	Sandy	Patterson	
Wheatland	USD 292	K-12	North West	Superintendent	Gena	Stanley	
White City Public Library	Public	Library	North Central	Librarian	Frank L.	Nelson	
White Rock	USD 104	K-12	Central	Superintendent	William	Walker	
Whitewater Memorial Library	Public	Library	South Central	Director	Jean	Thiessen	
Wichita	USD 259	K-12	South Central	Instructional Technology Director	Steve	Shook	www.usd259.com
Wichita Area Technical College	TC	Higher Ed	South Central	Grants Administration	Janice	Kelly	www.watc.edu
Wichita Catholic Diocese	Z0031	K-12	South Central	Assistant Superintendent - Special Services	Holly	Goodwin	www.cdowk.org
Wichita County Health Center	CAH	Hospitals	South West	Administrator	Vicki	Hahn	
Wichita Public Library	Public	Library	South Central	Director of Libraries	Cynthia	Berner Harris	www.wichita.lib.ks.us
Wichita State University	U	Higher Ed	South Central	Executive Director University Computing	Gary	Ott	www.wichita.edu
William Newton Memorial Hospital	GH	Hospitals	South Central	Director IT and Special Projects	Randy	Mayo	www.wnmh.org
Williamsburg Community Library	Public	Library	North East	Director	Eloise	Bennett	www.skyways.org/library/williamsburg/index.htm
Wilson County Hospital	CAH	Hospitals	South East	Administrator	Deanna	Pittman	wilsoncountyhospital.org
Winchester Public Library	Public	Library	North East	Director	Sue	Peavy	ww3.nekesc.org/users/wink s/winlib.htm
Winfield	USD 465	K-12	South Central	Technology Educator	Davonna	Willits	www.usd465.com
Winfield Public Library	Public	Library	South Central	Library Director	Joan	Cales	www.wpl.org
Woodson	USD 366	K-12	South East	Library Media Specialist	Mary	Knapp	
Yates Center Public Library	Public	Library	South East	Director	Shawna	Lenard	
Zenda Public Library	Public	Library	South Central	Librarian	Pam	Dick	skyways.lib.ks.us/towns/Zenda/





### A Study of Private Data Networks in Kansas

Prepared by the Kansas Board of Regents (KBOR) in association with the Secretary of Administration and the Kansas Research and Education Network (KanREN) and presented to the Senate Standing Committee on Commerce and the House Standing Committee on Utilities

January 13, 2006

*Executive summary*

House Bill 2026 requires (a) a study to identify duplication of services or inefficiencies between Kan-ed and KanREN, and a plan for eliminating any that may be found; and (b) recommendations for incorporating the Kansas Wide Area Information Network (KanWIN) into Kan-ed.

This study was conducted over a six-month period, beginning in July 2005 and concluding in December 2005. Study participants included Hal Gardner, Eldon Rightmeier and Jerry Huff (KBOR/Kan-ed); Denise Moore and Dave Timpany (Department of Information Systems and Communications (DISC/KanWIN)); and Doug Heacock and Cort Buffington (KanREN). The findings and recommendations were reviewed by Jim Honacki, an independent network consultant, as well as members of the constituent groups served by the networks.

The study finds there is duplication of network infrastructure and management facilities which can provide an opportunity for cost savings if this duplication can be reduced or eliminated. 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.

However, consolidation will require continued collaborative planning and increased operational integration while preserving the unique interactions, agreements and service level expectations developed for each of the existing networks. At present, each network organization has separate plans underway for growth and performance enhancements. 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.

This study also indicates affordable last-mile connectivity is a major hurdle in connecting Kansas public institutions, and access to the public internet remains the primary application required by Kansas public institutions. The networks approach these issues differently and a collaborative plan could improve overall service to the state.

*Attachment 6  
GET 3-12-07*

Beyond specific responses to the requirements of House Bill 2026, this study and the recommendations accompanying it provide a series of steps that will enable a coordinated approach to network services for constituent groups served by Kan-ed, KanREN and KanWIN. It is apparent collaboration and cooperation exist between the networks but to enable greater functional integration while continuing existing critical applications, a series of steps is recommended. Those steps are:

- 1) Integrate network planning efforts between Kan-ed and KanREN.
- 2) Develop a detailed, optimized, plan for a consolidated Kan-ed and KanREN infrastructure.
- 3) Study the benefits and requirements to consolidate the KanWIN infrastructure and its management with the optimized Kan-ed/KanREN network.
- 4) Provide a plan for potential KanWIN consolidation with the optimized Kan-ed/KanREN network.
- 5) To the extent integrated planning and consolidation show realizable cost benefits to Kansas, generate policy in support thereof. Changes in policy, regulatory and contract environments will be necessary to enable complete consolidation and enhanced capabilities. Without these changes significant limitations will degrade or prevent potential benefits.
- 6) Establish a funding mechanism that will reliably support combined network requirements.
- 7) Develop an organizational structure to operate the consolidated network while remaining responsive to individual constituent group requirements.

This study and the recommendations that follow it support this projected series of steps.

**Introduction**

This study is a response to the following provisions of House Bill 2026 as produced in the 2005 session of the Kansas Legislature:

*New Sec. 4. (a) The state board of regents shall study the KAN-ED network and the Kansas research and education network for the purpose of identifying duplication of services and inefficiencies existing between the two networks. If duplication of services or inefficiencies exist, the state board of regents shall develop a plan to reduce or eliminate such duplication of services or inefficiencies. The secretary of administration and the state board of regents shall develop recommendations regarding the manner in which the Kansas wide area network may be incorporated into the KAN-ED network.*

*(b) On or before January 13, 2006, the secretary of administration and the state board of regents shall submit to the senate standing committee on commerce and the house standing committee on utilities joint recommendations regarding:*

- (1) The findings of the study provided for in subsection (a);*
- (2) any plan for reducing or eliminating duplication of services and inefficiencies; and*
- (3) the manner in which the Kansas wide area information network may be incorporated into the KAN-ED network.*

As requested in the legislation, the study has two primary purposes: 1) Provide findings and recommendations regarding duplication of services and inefficiencies between Kan-ed and KanREN), and 2) Provide recommendations as to the feasibility of incorporating KanWIN into the Kan-ed network.

This study contains five sections:

- 1) Overview: Terminology and methodology
- 2) Comparisons: Network comparisons and attributes
- 3) Distinctions: Unique characteristics of the networks
- 4) Collaboration: Collaboration between the networks
- 5) Findings: Conclusions drawn from the study

**Section 1: Overview**

The terminology used to describe networks and their functions can be confusing. The following definitions are presented to help readers understand the concepts discussed throughout this study.

- Infrastructure: The physical and management components of a network such as circuits, routers, switches and operations centers.  
(Note: the term *backbone* is used throughout this study and should be considered as synonymous with the term infrastructure.)
- Network: The architecture engineered and assembled from infrastructure components to establish connectivity and provide services and applications required by users.
- Local-Loop: The link between an end-user and the place where the user is connected to a network. It is usually thought of as being between an end-user site and a company office where the user accesses a local network, a long distance network or the Internet.  
(Note: the term *last-mile* as used in this study should be considered synonymous with the term local-loop.)
- Latency: Waiting time or the time it takes to get information through a network.
- Users: The individuals or groups served by a network such as teachers, students, health care workers, law enforcement, state agencies, citizens.
- Applications: The content and services required by users such as Interactive Distance Learning (IDL), the statewide human resource and payroll system (SHaRP), Internet, Internet2 and streaming media.

The following methodology was used in this study:

First, characteristics of the networks and their supporting organizations were compared. The characteristics studied include the purpose, infrastructure, user community, applications, cost model, funding model and governance model.

Second, distinctions unique to each network were examined.

Third, collaborative efforts between the network entities were reviewed.

Fourth, findings were derived based on the first three steps.

**Section 2: Comparison of networks and organizational attributes**

In this section, the basic attributes of each of the three networks and their organizations are compared. A tabular comparison matrix is provided in Appendix A.

**(2a) Purpose**

Each of the network organizations was created in response to certain specified needs.

*(2a.1) The Kan-ed purpose*

Kan-ed was created by the Kansas Legislature in April 2001; reference K.S.A. 75-7221 through 75-7227, the Kan-ed Act. Pursuant to K.S.A. 75-7223 (a), "[t]he 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." To fulfill this purpose, Kan-ed has chosen to:

- 1) Create a "network of networks" by leasing equipment and facilities from approved equipment vendors and Kansas telecom providers.
- 2) Lower end user costs by bringing the network as close to the constituent as possible (minimize multiple supplier connections to the network).
- 3) Incorporate as many Kansas telecom providers as fiscally possible to promote local involvement in service delivery.
- 4) Promote flexibility in the local-loop by allowing local companies to connect using their chosen architecture (DSL, ATM, Ethernet, wireless etc.).
- 5) Collaborate with private industry in the commercial Internet market. Provide only niche services like video conferencing and access to Internet2 that industry is less capable of providing. *[Note: The Kan-ed Act does not preclude Kan-ed from providing Internet access. Kan-ed has chosen, as its part of the public/private partnership, not to act as an Internet Service Provider (ISP) in order to enhance collaboration and encourage affordable rates in the local-loop environment.]*
- 6) Support premise equipment purchases and local-loop access through subsidies and/or grants so that constituent institutions who cannot afford the costs of connection "may connect" to the network for Internet and distance learning.

*(2a.2) The KanREN purpose*

The KanREN network was originally established in 1992 by and for the KanREN higher education consortium. The purpose of the network was to interconnect Kansas colleges and universities (public and private) and provide consortium members with access to the Internet. As the network matured, consortium members directed KanREN to engineer and implement technology solutions not generally available through commercial vendors or the commodity Internet; i.e. multicast, Internet Protocol version 6 (IPv6), Quality of Service and Internet bandwidth redundancy.

In August 2002 KanREN became an independent not-for-profit corporation. The change was directed by the KanREN Executive Committee which became the KanREN Board of Directors. Incorporation allows KanREN autonomy and the ability to quickly respond to member needs. Member institutions retain control and are not bound by the restrictions perceived in other state networks. Control and agility are critical to universities and other member institutions who value KanREN services and the manner in which they are provided.

KanREN is the Kansas representative in regional higher education networks like the Great Plains Network (GPN) and the Abilene network. GPN and Abilene are associated with research and Internet2.

Today the KanREN network transports a variety of applications and services between KanREN-connected institutions. The KanREN mission is "...to provide leadership and innovation in networking technology, and [to provide] excellence and integrity in support of its members."

*(2a.3) The KanWIN purpose*

KanWIN was created in response to the requirements of state agencies to have access to both an intranet and connectivity to the Internet. Initially created in 1995 to support the state human resource and payroll system, KanWIN has grown to support a wide range of internal state agencies and external e-government applications.

The critical nature of many KanWIN applications (administrative, criminal justice, revenue, social services, transportation, health, legislative, etc.) has required KanWIN to become as reliable, secure, and resilient as possible at the most reasonable cost to the state agency or user community. These considerations remain core to fulfilling KanWIN's purpose today.

**(2b) Infrastructure**

Networks are built on infrastructure. Each organization has assembled its own infrastructure. Portions of those infrastructures are either shared or interconnected (see Section 4: Collaboration). This section describes the infrastructure and network technologies of each of the three network organizations. For reference, network diagrams are provided in Appendix B.

*(2b.1) The Kan-ed infrastructure*

The Kan-ed infrastructure forms a network of networks by tying local and regional Kansas networks together through a common backbone.

The network is comprised of access points, connecting circuits and aggregation circuits. Nineteen (19) access points exist throughout the state. Twenty-three (23) medium speed (155 Mbps) connecting circuits are arranged to allow alternate (or redundant) paths

between access points. Eight aggregation circuits exist to connect remote areas to one of the access points. Kan-ed refers to this architecture as an "extended-edge" network. Kan-ed is designed for regional use, statewide use and lower constituent loop costs. Equipment and connections are leased.

Kan-ed contracts with KanREN to manage its network. Last-mile connections between the constituent site and an access or aggregation point are the responsibility of the constituent and their local provider.

The Kan-ed network was designed to support up to 1,000 individual sites. Approximately 210 member sites are currently connected and 57 additional connections are pending.

*(2b.2) The KanREN infrastructure*

The KanREN network is a star topology consisting of six access points connected to a core location in Lawrence. The connecting circuits are very high speed (155 Mbps to 622 Mbps) and run over leased bandwidth and leased fiber. KanREN orders last-mile connections for member sites using local providers and whatever technology most effectively meets the needs of the member institution.

KanREN runs a Network Operations Center (NOC) in Lawrence for front-line support of its member institutions and Kan-ed (see Section 4: Collaboration). Technical support is provided by a Service Desk. KanREN also has an Applications and Systems group to support certain aspects of network operations.

The KanREN network has approximately 70 connected member sites.

*(2b.3) The KanWIN infrastructure*

KanWIN was designed for traffic primarily to-and-from Topeka. This is a natural consequence of KanWIN being the state business intranet and Topeka being the 'headquarters' for most state agencies.

The KanWIN network is comprised of three pairs of redundant access points and nine lower speed (40 Mbps) connecting circuits. The network is designed so that all applications continue full operation in the event a single access point or connecting circuit is lost. KanWIN is designed for redundancy, security and reliability. KanWIN processes the leasing of local-loop circuits for its constituents.

KanWIN is managed by a Network Control Center located in the Landon State Office Building in Topeka. The KanWIN network has approximately 625 connected sites.

KanWIN also provides and supports a local area network (LAN) infrastructure located primarily in the Capitol Complex. This infrastructure is shared by state agencies. The



LAN function of KanWIN is not included as part of this study although the costs for this are included in the budget and expense detail in Appendix C.

**(2c) User community**

Each of the three networking organizations provides connectivity and services to certain types of organizations and end users.

*(2c.1) The Kan-ed user community*

Kan-ed constituents are defined in the Kan-ed Act. Kan-ed serves schools (K-12, higher education and private schools), public libraries, and not-for-profit hospitals.

*(2c.2) The KanREN user community*

KanREN serves a consortium of higher education (the board of regents' universities including KU Medical Center, community colleges, private colleges and universities), K-12 school districts, public libraries, and other non-profit organizations with an education or research focus.

*(2c.3) The KanWIN user community*

KanWIN users are defined in statute KSA 75-4709 and include state agencies, contractors of state agencies, local units of government, K-12 schools, and not-for-profit institutions. In addition, State of Kansas residents also access e-government services hosted on KanWIN such as the Department of Transportation Road and Weather web site. The majority of customers of KanWIN are state agencies and their partners.

**(2d) Applications**

Applications are the activities end users engage in on the network. This section describes the applications provided by the three networks.

*(2d.1) Kan-ed applications*

Kan-ed provides various formats for video conferencing and access to Internet2 through KanREN. Kan-ed does not directly provide access to the Internet. The main application on the Kan-ed network is Interactive Distance Learning (IDL). Associated services include video scheduling, video conference bridging and enhanced desk top video. Kan-ed is beginning to support telemedicine and exchange of electronic medical records.

*(2d.2) KanREN applications*

KanREN provides Internet and Internet2 access. KanREN also provides video conferencing and streaming media services for its member institutions. Some duplication with Kan-ed exists. KanREN hosts certain applications like the KanGuard filtering

service provided by the Northeast Kansas Library System. For the most part, the KanREN network is made available to member institutions to use as a vehicle for applications of their choosing including research projects, web-delivered coursework and advanced computing projects.

*(2d.3) KanWIN applications*

Typically there are three types of applications operating on KanWIN:

- Applications generally associated with state government (payroll, budget, accounting, law enforcement, etc.).
- Applications providing direct and indirect services for state residents such as driver's licenses, vehicle registration, road and weather information, and access to state information like legislation and statutes (e-government).
- Access to and from the Internet for state agencies.

**(2e) Cost model**

Each network organization has costs relating to activities beyond support of the network itself. The costs below represent only those costs associated with network operations and support. Costs associated with last-mile connections are not included in any of the models because none of the networks bears that cost for its constituents. Budget and expense information for each organization is contained in Appendix C.

*(2e.1) The Kan-ed cost model*

In FY2005 the cost of Kan-ed infrastructure and network management was \$4,450,130 which includes approximately \$415,981 in start-up costs. Projections for FY2006 are \$4,235,000. It is estimated the Kan-ed network when fully deployed will cost between \$5.25 million and \$5.75 million annually.

Kan-ed applies for e-rate and receives funding which lowers annual network costs. To date, Kan-ed has received approximately \$470,000 in federal e-rate support. Total projected support from e-rate is \$1.6 million. However, because receipt of funds is unpredictable Kan-ed is not able to incorporate e-rate funds into its budget process.

*(2e.2) The KanREN cost model*

The cost of operating the KanREN network for FY2005 was \$2,088,289. The projected total cost for FY2006 is \$2,103,570. These figures include software, hardware, circuits and network management but do not include costs associated with management of the Kan-ed network or costs related to supplementary systems services provided for members.

*(2e.3) The KanWIN cost model*

The cost of operating KanWIN (less the Topeka local area network) is \$2,697,425 in FY2005 and \$2,403,879 in FY2006. These costs include software, hardware, backbone circuits and network operations costs.

**(2f) Funding model**

Each network organization is funded in a different manner although all three support public institutions and receive funds from public sources.

*(2f.1) The Kan-ed funding model*

Kan-ed is directly funded by the State of Kansas. Funding is based on an appropriation of \$10,000,000 per year from the Kansas Universal Service Fund (KUSF). Funding began in January 2003. In 2005 the legislature outlined a gradual conversion of appropriations from the KUSF to the State General Fund (SGF) as specified in HB 2026:

*Not more than the following shall be paid from the KUSF to the state treasurer...: In fiscal year 2006, \$10,000,000; in fiscal year 2007, \$8,000,000; in fiscal year 2008, \$6,000,000; and in fiscal year 2009, \$5,500,000.*

*The provisions of this subsection (f) shall expire on June 30, 2009. Thereafter, state general fund moneys shall be used to fund the Kan-ed network and such funding shall be of the highest priority along with education funding.*

*(2f.2) The KanREN funding model*

KanREN was created through a National Science Foundation (NSF) grant. Today KanREN is "self-funded". It receives no funding appropriation from the state and no grant funding. All funds come from the institutions KanREN serves in the form of membership fees, connection fees and fees for service (which include fees paid to KanREN by Kan-ed for network management and support).

Membership fees are assessed based on organization type and size. Large institutions, primarily Regents' universities, pay higher fees and generate 62% of membership fee revenue for KanREN. Connection fees are pass-through fees that reflect the actual cost of the circuit bandwidth, Internet bandwidth, and the cost associated with delivering that bandwidth to the member site (local loop and installation costs). KanREN assesses fees for other services that fall outside the scope of what is provided as a membership benefit.

*(2f.3) The KanWIN funding model*

The Division of Information Systems and Communications (DISC) operates KanWIN. KanWIN users are charged a monthly subscription rate for connectivity to the KanWIN network. DISC is authorized to establish rates for information technology services under the provisions of K.S.A. 1984 75-4703(a). The Legislature does not appropriate any SGF to DISC to fund KanWIN operations. DISC generates its operating revenues based upon the information technology services provided to customers. DISC revises its rates annually based on its approved budget for the upcoming year. Rates reflect the cost to deliver a particular service plus adequate operating reserves. DISC returns any revenues gained beyond cost recovery the next year in the form of a lower rate. The DISC rate-setting methodology must comply with stringent federal audit and cost accounting guidelines as outlined in OMB Circular A-87, Cost Principles for State, Local and Indian Tribal Governments. Approximately 24% of KanWIN revenues come from SGF and the remaining 76% from non-SGF funds like special revenue and fee funds, federal funds, construction and highway funds and other funds applied for through subscriber agencies.

**(2g) Governance model**

Each network organization is governed in a different manner.

*(2g.1) The Kan-ed governance model*

Kan-ed is governed by the Kansas Board of Regents. The User Advisory Council (UAC), the Delegate Assembly (DA) and the Technical Work Group (TWG) are the primary advisory committees created to offer input and direction in the development of the program and the network. The advisory groups are made up of members from the three constituent groups (schools, libraries and hospitals) and the telecom industry.

*(2g.2) The KanREN governance model*

KanREN is an independent not-for-profit 501(c)(3) tax-exempt organization. KanREN is governed by a 13-member Board of Directors, elected by the membership. The Board consists of two representatives from K-12 member sites, two from community college member sites, two from private college member sites, two from regents' university member sites, one from an Internet2 member university, and three at-large members.

*(2g.3) The KanWIN governance model*

KanWIN is administered through DISC in the Department of Administration. Two advisory groups consisting of representatives from the KanWIN user community assist in the governance of KanWIN. The KanWIN Policy Board advises DISC on KanWIN policies. The KanWIN Technical Advisory Board advises DISC on technical matters pertaining to KanWIN.

**Section 3: Distinctions**

This section examines those characteristics of each network organization that distinguishes it from the others. A general distinction is that while KanWIN and KanREN are more or less at steady state, Kan-ed is still growing its connections base.

*(3a) Kan-ed*

There are three distinctions between Kan-ed and its peer networks. First, it was created by statute and chartered with specific requirements and limits. Second, it operates as a constituent program in addition to a network organization. Third, it addresses last-mile concerns differently than either KanWIN or KanREN.

*(3a.1) The Kan-ed Statute*

Kan-ed was created by statute. Two sets of interests were involved in formulating the Kan-ed Act, public institutions and the Kansas telecom industry. The result of the political process was a statute containing both requirements and limitations. Kan-ed is required to address broadband internet access and intra-net access for distance learning. However, there are limitations in how Kan-ed can fulfill these requirements. Kan-ed shall not impair existing telecom service contracts, provide for ownership or construction of state facilities or provide voice services (either switched or over internet protocol) unless associated with two-way video.

Kan-ed addressed distance learning by designing its network for video transmission. A high speed, low latency network connecting Kansas distance learning consortiums was deployed. Kan-ed is addressing the internet access requirement by implementing a plan consistent with statutory restrictions.

The Act's limitations reflect private industry's concern about unfair competition from state or municipally funded entities. Industry support was crucial to Kan-ed becoming a reality, and Kan-ed concurs with the concern and pursues a path of cooperation, not competition, with industry. Kan-ed addresses broadband Internet access by working with industry to establish an "integrated" broadband environment. Integration will allow constituent institutions access to the Internet through their local provider who also gives them access to Kan-ed's network for video or Internet2 over either a single or multiple broadband connections. Although not yet statewide, the integrated environment exists and is becoming available in more companies throughout the state.

*(3a.2) The Kan-ed Program*

Kan-ed is effectively a constituent-based program. The backbone network is a key ingredient in the program but only one ingredient. Other areas addressed by the program include premise equipment support, local loop sizing and pricing, content creation and acquisition.

Many institutions do not have broadband connections to the public Internet or the Kan-ed network because they cannot afford appropriate premise equipment or broadband Internet rates. Kan-ed addresses this need by offering subsidies and grants in support of Internet access and premise equipment acquisition. Other program grants are made available for content creation. Kan-ed also acquires specific content services based on constituent input.

*(3a.3) Kan-ed and the Last-Mile*

Kan-ed last-mile connections are bandwidth intensive (1.5 Mbps/T1 or greater) and fairly expensive (\$400 to \$900 per month). This is because applications like distance learning or telemedicine require greater bandwidth to provide classroom quality video. Integrating video with Internet access increases both bandwidth requirements and cost.

Kan-ed addresses last-mile concerns by extending its infrastructure (19 access points in multiple company locations) to minimize dual supplier connections in the last-mile. Essentially, Kan-ed aggregates traffic and pays for a portion of what otherwise would be an extended local loop. Twenty three companies have direct access to the Kan-ed network and the majority of Kan-ed's connected sites have single provider last-mile connections.

Kan-ed does not order or pay for last-mile connections but treats this cost as the constituent's fee for network services. Kan-ed does, however, impact last-mile costs for its constituents. Several companies including Sprint, Cox and SBC have lowered last-mile rates since Kan-ed began its operation. Between rate reduction and single supplier last-mile access, Kan-ed connected institutions can pay between 20% and 50% less than what was experienced for connections and services prior to Kan-ed.

*(3b) KanREN*

There are three primary distinctions between KanREN and its peer networks. First, it is a membership consortium created by Kansas educational institutions to share ideas, resources and expertise. Member institutions drive the direction KanREN takes including the decision to become a not-for-profit corporation. Second, it provides advanced networking services and technical support for its member institutions. Third, it is unique in the scale and redundancy of its Internet service.

*(3b.1) Independence*

KanREN is an independent not-for-profit corporation. The KanREN Board of Directors and membership chose to incorporate KanREN for a variety of reasons, chief among them being the need for greater organizational autonomy.

*(3b.2) Advanced Networking Services and Technical Support*

KanREN provides advanced networking services and advanced technical support to its member institutions. For example, KanREN implemented the next generation of Internet protocol (IPv6) on its backbone network. Because of this KanREN is able to support member institutions in similar implementations. KanREN provides training in network principles and implementation of new protocols upon request.

KanREN also provides access to a nationwide advanced research network – Internet2 – primarily to meet the research connectivity needs of the largest university members of KanREN. Costs associated with Internet2 connectivity are largely passed through to those university members.

KanREN is researching expansion of its network through the use of optical resources.

*(3b.3) High bandwidth and Unique Internet Service Delivery*

KanREN is unique in its delivery of commodity Internet service. KanREN purchases Internet bandwidth from two providers in different locations and the bandwidth available in either location is sufficient to supply at least 75% of the total amount subscribed to by all KanREN connected members. If one provider experiences a total failure, KanREN is still able to provide at least 75% of the subscribed bandwidth. This redundant provisioning requires no manual intervention or configuration and provides high quality Internet service to KanREN members. Such service is critical for university members for whom an outage of even a few minutes' duration is unacceptable. KanREN members regard the extra cost of purchasing more Internet bandwidth than needed as worthwhile given the mission-critical nature of Internet access for educational institutions.

*(3c) KanWIN*

There are five primary distinctions between KanWIN and its peer networks. First, it must provide 24x7x365 support for state agency services to the public. Second, it is designed for high resiliency, availability and security due to the critical nature of applications that run on the network. Third, DISC authority and fiscal operations are unique. Fourth, KanWIN provides a shared local area network. Fifth, incorporation of state-owned fiber facilities in expansion planning is unique to KanWIN.

*(3c.1) Network Support*

KanWIN internally staffs a 24x7x365 Network Control Center (NCC) on a year around basis. This is necessary because multiple state agencies provide services to the public that must be available outside traditional business hours. For example, unemployment claims are busiest on Sunday mornings, the Road and Weather web site must be available during inclement weather, electronic tax submissions occur at all hours of the day or night, and the Kansas Criminal Justice Information System (KCJIS) must operate

continually. Also, many agencies perform after hours 'house keeping' including on-line backups and downloads.

*(3c.2) High Resilience, Availability and Security*

KanWIN is designed for high resiliency and availability even in the event of the loss of a core network component. Such resiliency is required by certain agency applications like access to bill tracking services during the legislative session, access to the Secretary of State's Electronic Voter Information System during elections and law enforcement's requirements to access CJIS information at all times. KanWIN is designed to be a highly secure network so the state's vital applications are protected from intrusion to comply with stringent federal guidelines for medical and financial privacy. KanWIN must retain the ability to shut down sections of the network in the event of an incursion.

*(3c.3) DISC Authority and Fiscal Operations*

Authority over state telecommunications is delegated to the Secretary of Administration by statute. Under the Secretary's authority, DISC operates like a private business within state government and charges fees for the services it sells to customers. DISC has "no-limit" funding which means additional services can be purchased to meet increased demand. DISC is not limited to an annual appropriated amount. DISC maintains a 60-day cash flow that provides up-front money for new or unforeseen projects. DISC sets information technology rates annually to recover the costs for a particular service plus an allowance for 60-day cash flow. DISC plans for reinvestment and designs rates to provide for incremental upgrades to its services. A portion of each rate goes to replenish its depreciation reserve fund used for information technology investment. For-profit customers are not allowed on KanWIN unless sponsored by a state agency.

*(3c.4) Shared Local Area Network*

KanWIN provides a local area network infrastructure in several multi-agency facilities, primarily in the Topeka Capitol Complex. The infrastructure includes building wiring, switch equipment, routing equipment and network management support.

*(3c.5) State-owned Fiber Facilities*

KanWIN is preparing to move its backbone from carrier circuits (SBC and Alltel) to state-owned fiber to reduce network cost and provide increased capacity. The contract facilitating this move contains restrictions regarding what traffic can be carried over this fiber.



**Section 4: Collaboration**

*(4.1) History*

Private networks in Kansas have a history of collaboration . KanWIN and KanREN have been in operation for approximately 10 years. Kan-ed was created in 2001.

KanWIN supported the provisioning of KanREN circuits for most of KanREN's existence. The networks have at times shared bandwidth between LATAs and currently share an aggregation circuit and equipment in Kansas City. Such arrangements allow KanREN and KanWIN to share costs.

Both KanREN and KanWIN supported efforts to establish Kan-ed beginning in 1999. Staff members from both organizations testified before various legislative committees in support of Kan-ed prior to passage of the Kan-ed Act. Both organizations provided technical support and network design services in preparation of the Kan-ed Request for Proposal (RFP) and both participate on the Kan-ed Technical Work Group (TWG).

KanWIN hosted the initial Kan-ed Interactive Distance Learning sites for two years until Kan-ed completed its design and implementation. KanWIN then assisted with equipment configuration during site transition to the Kan-ed backbone.

The Kansas Board of Regents contracts with KanREN to provide network management and engineering services to Kan-ed. KanREN provides day-to-day technical support and front-line diagnostic and restoration services for Kan-ed connected sites.

KanREN hosts Kan-ed servers that provide video conferencing services and schedule distance learning classes. KanREN shares its Network Management System software with Kan-ed and maintains a complex database of network information for Kan-ed.

KanREN is a Sponsored Education Group Participant (SEGP) in Internet2, which allows KanREN to provide Internet2 access to K-12 school districts, community colleges, private colleges and universities, and public libraries. KanREN provides access to Internet2 routes for Kan-ed while Kan-ed provides funding for KanREN SEGP fees.

The Kan-ed, KanREN and KanWIN networks are fully peered which allows KanREN member institutions and KanWIN agencies (the State Department of Education, the Board of Regents and the State Library) to connect to Kan-ed. Also, KanREN and KanWIN peering provides a secure path for transfer of state payroll and human resource data between state systems and regents universities.

*(4.2) Roadblocks*

Statutory inconsistencies, contract restrictions and concern about competition with private industry act to inhibit collaborative efforts between the networks. KanWIN is preparing to enhance its network through the use of state owned fiber facilities. KanREN

is also investigating optical resources for increased capacity and national network participation. Kan-ed, by statute, cannot participate in such endeavors and could jeopardize its efforts with Kansas industry if viewed as unduly supporting publicly funded competition with private industry.

#### **Section 5: Findings**

Three private networks exist in Kansas to support public institutions. KanWIN and KanREN are well established being in existence for approximately ten years. Kan-ed, created by the Kansas legislature in 2001, is still growing. The information presented below is a summary of significant findings by category.

##### *General:*

- 1) Each network was established by different entities under different circumstances.
  - a) Kan-ed is part of the Kansas Board of Regents. It was established by statute to provide an intranet for distance learning and broadband Internet access for schools, libraries and hospitals. Competition with private industry is an issue inherent in both the creation and operation of Kan-ed
  - b) KanREN is a not-for-profit 501(c) (3) corporation. It was established as a consortium of educational and research institutions to interconnect and provide Internet service to consortium members.
  - c) KanWIN is an arm of the Department of Administration. It was established to provide an intranet for state agencies as well as access to the Internet.
- 2) Each of the networks may serve certain of the same Kansas constituencies. Both KanREN and Kan-ed were created to serve higher education, K-12 schools and public libraries. KanREN serves other not-for-profit institutions while Kan-ed is charged to serve publicly funded Kansas hospitals. KanWIN may serve the same constituents.
- 3) This study finds no indication that any single institution receives duplicate services from more than one of the network organizations. The fact that each network may serve the same institutions appears to create confusion about who can, or should, provide service, not actual duplication of service.

##### *Funding:*

- 1) Funding mechanisms for each network vary. Kan-ed is funded directly by the state and, to date, charges no fees for connectivity or services. KanREN is funded through annual membership fees and fees for service while KanWIN is funded through monthly service fees. The majority of all funds received by the organizations, either directly or through a fee structure, are public monies from tax supported institutions.
- 2) Current methods of fee for service funding have not resulted in ubiquitous connectivity. It remains to be seen if direct state funding for Kan-ed will improve the situation.

*Network Infrastructure:*

- 1) This study finds duplication of backbone infrastructure exists. Multiple configurations of backbone networking and operation centers exist to accomplish similar purposes. Those purposes being the provisioning of Internet access, intranet services and general data transport and management.
- 2) Currently all three network infrastructures lease the transport elements (circuits) of their infrastructures. All three aggregate customer traffic at access points and carry traffic to customer designated locations. Beyond that, the infrastructure architectures vary significantly.
  - a) Kan-ed has nineteen access points, medium speed connecting circuits (155 Mbps) and 210 connected institutions including the 70 brought to Kan-ed by KanREN. It utilizes approximately 3% of its bandwidth capacity.
  - b) KanREN has six access points, very high speed connecting circuits (1000 Mbps), approximately 70 connected institutions and averages 45% to 65% utilization.
  - c) KanWIN has three access points, lower speed connecting circuits (40 Mbps) and 625 connected institutions averaging 25% to 75% utilization.
- 3) All three networks are making independent plans for the future. Kan-ed is planning to issue a second RFP in 2006 aimed at enhancing the efficiency of its backbone. KanREN, as directed by its membership, is investigating options for expanding its backbone using optical resources. KanWIN is preparing to move from vendor leased circuits to state owned fiber for infrastructure connectivity.
- 4) Consolidation of private network infrastructure may be reasonable in Kansas. However, all three networks have different governance structures and are planning independently using different prerequisites and seeking different outcomes.
- 5) To determine if infrastructure consolidation is feasible, collaboration must continue and it must produce a comprehensive business case accurately identifying service capabilities, network efficiencies and overall savings including last-mile savings.

*Premise and Last-Mile:*

- 1) KanWIN and KanREN order and provide local-loops for their constituents. Both cost average local-loop charges and pass them on to constituents. Kan-ed does not order or provide the local-loop. Kan-ed extends its network to decrease last-mile costs leaving local loop arrangements to the constituent and local provider. Kan-ed considers last-mile cost the constituent's fee for accessing the Kan-ed network.
- 2) Bandwidth requirements in the last-mile differ between the networks based on applications being served.
  - a) KanREN and Kan-ed circuits are generally higher bandwidth due to higher Internet requirements and the requirement to transport video.

- b) KanWIN local loops are generally lower bandwidth based on agency intranet requirements and lower Internet access needs.
- 3) KanWIN and KanREN provide equipment and support at the customer's location as part of the network. Costs for the equipment and support are passed on to customers in the form of fees. Kan-ed subsidizes constituent video, building and network equipment needs through grant programs. Kan-ed considers grants/subsidies critical in enabling constituents to participate in the network.
- 4) Personnel representing all three networks consider the last-mile the primary hurdle to achieving ubiquitous, equitable, broadband service for state institutions.

*Applications :*

- 1) Access to the commercial Internet is a service required by all constituents. KanWIN and KanREN aggregate customer traffic over large connections to the Internet from commercial vendors and re-sell the service to their customers. Kan-ed is working with industry to create local-loop connections that allow the local provider to offer their own Internet service and combine it with access to Kan-ed.
- 2) Beyond Internet access, applications and services required by Kansas institutions vary significantly. KanWIN supports mission critical services like KCJIS and SHaRP for the State of Kansas. KanREN provides Internet, Internet2 and advanced networking services for its membership. Kan-ed supports video applications (IDL and Telemedicine) and access to Internet2 (through KanREN's SEGP the fees for which are paid for by Kan-ed).
- 3) Some duplication of video applications exists between KanREN and Kan-ed. Both have invested in the same desk top video conferencing apparatus rather than sharing the application. Both operate H.323 multi-point conferencing units, deploy video streaming services and have IDL applications. However, costs associated with such duplication are minimal amounting to approximately \$5,000 annually.

*Collaboration :*

- 1) KanWIN, KanREN and Kan-ed have demonstrated the ability to collaborate and work with each other over a significant period of time.
- 2) It is apparent collaboration alone is not sufficient to achieve ubiquity in connecting Kansas public institutions.
- 3) Roadblocks in the form of statutory inconsistency, contract restrictions and public policy regarding competition must be addressed if progress is to be made in cost effectiveness and ubiquitous broadband service for Kansas public institutions.

*Affordability and Funding:*

- 1) Since KanREN and KanWIN existed prior to the creation of Kan-ed, it is reasonable to ask why a third network (Kan-ed) was necessary. The differences in networking approach demonstrated by Kan-ed have been noted, the primary one being the "extended-edge" concept aimed at lowering last-mile constituent access costs. It is important to note, however, that the availability of state-provided funding is what allows Kan-ed to extend its backbone, making access more affordable to public institutions.
- 2) The question above may be better stated, is there really a need for an entirely separate network or is a stable funding source the important factor in making network services more affordable and thus available? Kan-ed has demonstrated, as a proof-of-concept, that extending the edge of a network has merit. It has reduced costs to end-user institutions, provided alternate connectivity options and promoted competition in the telecommunications marketplace. It may also be compatible with other infrastructures should consolidation or incorporation of new concepts be envisioned. All this, however, is the result of adequate funding.
- 3) Finally, if ubiquitous broadband connectivity for public institutions in Kansas is a significant issue then growth is required. Growth will require investment on the part of the state. Collaborative planning can produce a highly efficient and cost-effective infrastructure but not without adequate and stable funding.

Respectfully submitted,

Mr. Hal Gardner  
 Executive Director, Kan-ed  
 Kansas Board of Regents

Ms. Denise Moore  
 Chief Information Technology Office  
 Executive Branch  
 Department of Administration

Mr. Doug Heacock  
 Executive Director  
 Kansas Research and Education Network

## Joint Recommendations Regarding Kansas Private Networks

Presented by the Secretary of Administration and the Kansas Board of Regents  
to the Senate Standing Committee on Commerce and the House Standing  
Committee on Utilities

January 13, 2006

### *Foreword*

The study and recommendations provided in this document have been prepared by the network organizations serving Kansas public institutions; Kan-ed, KanREN and KanWIN. The study (Tab A) provides lawmakers with a view of how these networks began, how they developed and how they operate today.

The recommendations that follow were derived from the study's findings as well as discussions by study participants during the process. The candor and professionalism of all participants is sincerely appreciated, without it substantive recommendations would not be possible.

The recommendations contained herein are organized in four parts. First, there are recommendations regarding "duplication of services and inefficiencies" between Kan-ed and KanREN. Second, there are recommendations regarding "the manner in which the Kansas wide area network may be incorporated into the Kan-ed network." Third, there are recommendations regarding the "consolidation of state networking." Finally, there are general recommendations in "support of efficient state networking."

### *A Few Words on Climate*

In order to understand the recommendations, it will be necessary to understand the climate in which they were derived. All participants in this endeavor know each other, respect each other and work with each other but represent different interests. Like the Kansas institutions they serve, the network organizations involved in this study differ in their missions and views on how those missions are best served.

All participants agree, however, this study is about efficiency and cost effectiveness in meeting the networking needs of Kansas public institutions. They agree technology is not the primary concern affecting networking in Kansas. Technical answers exist to meet the needs of Kansas residents and institutions. The impediments complicating the Kansas networking landscape are fiscal, organizational, and legal. Such issues exist in and between both the private networking organizations and the telecommunications industry.

The participants also agree there is no "quick fix" for optimizing overall networking costs in Kansas. Backbone infrastructures are being addressed but separately by each network. Also, providing Kansans with a local-loop of sufficient affordable bandwidth in order to access a statewide backbone is a major hurdle to getting public institutions connected.

*Recommendations Regarding Duplication of Services and Inefficiencies between Kan-ed and KanREN*

No substantial duplication of services between Kan-ed and KanREN exists. Although both networks provide desk top, bridging and video streaming services to constituents and duplicate the technology for doing so, the cost of that technology duplication is only around \$5,000 per year. Duplication to a greater extent exists in the provisioning of multiple backbone infrastructures.

Funding for Kan-ed and KanREN is associated with the Kansas Board of Regents or public universities. The Regents receive the Kan-ed appropriation and are responsible for its distribution. Regents' universities supply over 60% of KanREN's membership fee revenues. A means to effectively allocate operating funds for both enterprises may enhance funding efficiency.

KanREN and Kan-ed will address their infrastructures in FY2006 and FY2007. KanREN, by direction of its membership, desires to connect the Regents' universities through optical resources (fiber). Kan-ed desires to increase the efficiency of its extended edge network. The Secretary of Administration and the Kansas Board of Regents recommend unified planning to determine whether a single network infrastructure is, or can be, cost effective. The following items apply to this recommendation:

- 1) Any infrastructure procurement and implementation must meet the specifications contained within the Kan-ed Act or the Kan-ed Act must be modified to incorporate recommended network specifications.
- 2) A consolidated plan with statutory modifications as required and a cost analysis for funding efficiency will be prepared during the interim for the 2007 Kansas legislature.
- 3) The plan will address methods of last-mile access to the network and an approach to public/private partnering with industry. A preliminary diagram of a proposed consolidated infrastructure is contained in Appendix B.
- 4) Sufficient and stable funding must be maintained to fund a consolidated network, premise support and appropriate last-mile assistance.
- 5) KanREN and Kan-ed will review sharing Internet traffic. It is recommended the Kan-ed approach to integration be maintained allowing local constituents to choose local provider service should such service be in their best interest. If local service is not in the best interest of the constituent, the consolidated infrastructure may provide Internet access.

*Recommendations Regarding Incorporation of the Kansas wide area information network into the Kan-ed network.*

The Secretary and Kansas Board of Regents do not recommend incorporation of KanWIN into the Kan-ed network at this time. The networks' constituents are sufficiently diverse to warrant KanWIN remaining independent of Kan-ed. School video and driver's license renewal are dissimilar applications with very different requirements. A network intrusion that is acceptable to a school may not be acceptable to a state agency and it does not appear reasonable to jeopardize one function for the sake of the other.

The following information further supports maintaining separate networks:

- 1) DISC and KanREN/Kan-ed are different cultures. DISC administers critical services under well established methods of procedure. The governing authority and the rules under which DISC administers KanWIN are complex. Neither Kan-ed nor KanREN operate in such a manner.
- 2) Incorporation of the networks would require agency approval and assurance that current levels of service would be maintained or enhanced. The same type of approval would be required of Kan-ed/Kan REN constituents. Sufficient time for study and socializing of incorporation has not been provided.
- 3) KanWIN will soon operate on state-owned facilities. This arrangement is incompatible with the Kan-ed Act which requires leasing facilities. If incorporation of the networks is to occur, this situation must be addressed and more facts specific to the cost effectiveness of ownership verses leasing are required.

Essentially, the Secretary and Board believe it best to approach the issue of network efficiency in a judicious manner. KanREN and Kan-ed should consider a single "educational" infrastructure. If that is feasible, then incorporating KanWIN should be re-considered. However, the Secretary and Board recommend KanWIN be involved in the KanREN/Kan-ed planning process. That involvement will maximize opportunities for future efficiencies without network re-design. Those opportunities include:

- 1) Lower constituent last-mile costs
- 2) Sharing resources
- 3) Operational efficiencies

*Recommendations Regarding the Consolidation of State Networking*

State networking in Kansas lacks a common focus. Three networks exist and each has an individual focus and separate plans for growth and performance enhancements. A common focus is required so that planning activities can be coordinated and optimized for joint benefits and shared expense.



To reduce existing duplication of infrastructure and management facilities in all of the networks, the Secretary and Kansas Board of Regents recommend consolidation of network and network management facilities if feasible. Systematic integration of existing networks into one shared core should provide improved cost-benefit performance. The goals of consolidation should be to preserve the unique interactions, agreements and service level expectations developed by and for each of the existing networks. Consolidation should provide a highest common denominator functionality that satisfies the requirements of each collaborating entity, provides uniform availability of services, increases service capability, increases stability and reliability and leverages expertise to the benefit of constituents of all existing networks. Consolidation should also provide the required services at a minimized cost.

The Secretary and Board view the overall consolidation process as complex and time consuming, requiring each network group to do significant technical work as well as generate appropriate business procedures and policy. Each existing network was built independently for the benefit of distinct constituent groups and each will have to adapt. No single network organization independently provides the full suite of services to all constituent groups represented by the sum of the three networks. It is the infrastructure and services operated in common between the networks that represent the greatest potential while preserving the specialization provided to each constituent group (State Administrative Computing, Higher Education, and K-12 Education, along with related library and Hospital groups).

A consolidation plan with a common focus and adequate check points to assess feasibility and effectiveness is outlined below. This plan is intended to result in legislative proposals in the 2007 legislative session.

**Phase 1:** The primary participants are Kan-ed and KanREN in association with the Kansas Board of Regents. KanWIN shall participate in all discussions in preparation for Phase 2 of this plan.

Develop service and responsibility definitions and clarify communication to all constituents (schools, libraries and hospitals).

Evaluate and plan for a common Kan-ed/KanREN core network. Planning should focus on eliminating duplicated core infrastructure and providing universal service availability. The envisioned core infrastructure will provide redundancy, scalability, security and logical partitioning of network needs.

Implement a common Kan-ed/KanREN core network should the planning process produce clear and convincing evidence of cost benefits and service. Authority is provided through the Kan-ed statute and approval for implementation should be provided through the Kansas Board of Regents and the KanREN Board of Directors. If it is determined that policy precludes implementation, necessary statutory changes will be proposed in the 2007 legislative session.

{Note: KanWIN integration with the Kan-ed/KanREN core will be more difficult because of the expectations of KanWIN's constituent groups, the many facets of State Administrative Networking and because different security and application profiles exist between administrative networks and education networks. Therefore, consolidation of infrastructure on a single common network is recommended to be done as Phase 2 of the consolidation plan. It should be undertaken only after the education elements have been consolidated and after detailed study and preparation is complete.}

**Phase 2:** Primary participants are KanWIN and a joint Kan-ed/KanREN project team.

Perform a detailed study of the benefits and requirements to consolidate the KanWIN infrastructure and its management with the optimized Kan-ed/KanREN network.

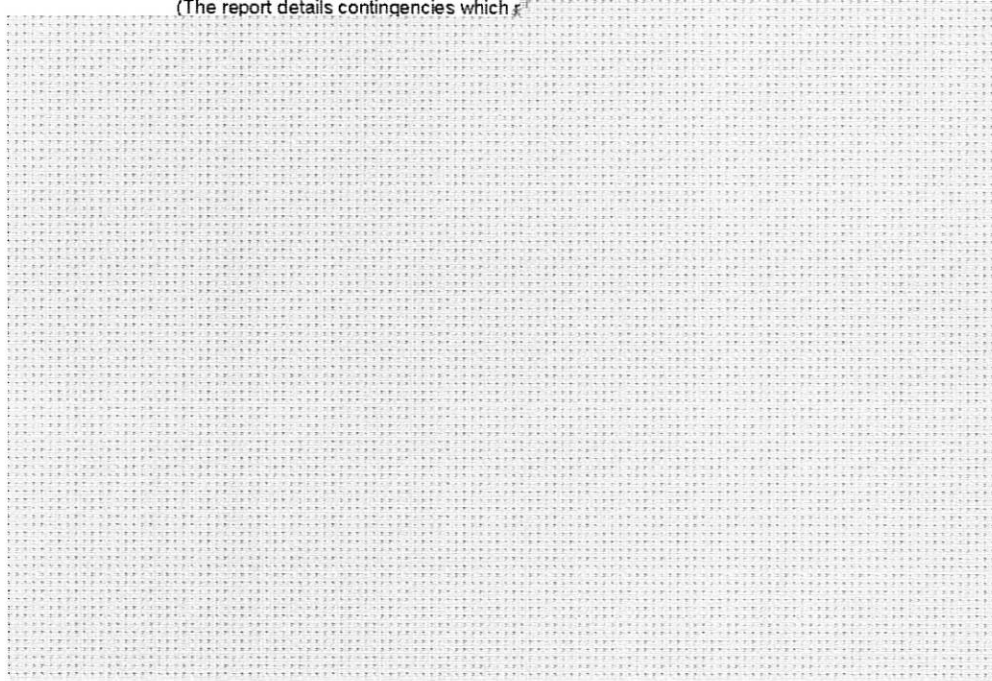
Develop a detailed plan designed to provide maximum consolidation, integration, functionality, security, stability, and economy in a network infrastructure shared and leveraged with Kan-ed/KanREN and KanWIN. It is anticipated this plan will be complete after the Kan-ed/KanREN core infrastructure consolidation, but intermediate opportunities may be identified and pursued during joint collaboration on the process.

Implement Phase 2, a completely consolidated Kan-ed/KanREN/KanWIN infrastructure should the above process produce clear and convincing evidence of cost benefits and service enhancement. Authority is provided through the existing delegation of state telecommunications authority to the Secretary of Administration and any modifications to statutes resulting from the above process. It is anticipated implementation of Phase 2 will take place after the 2007 legislative session.

A potential timeline for the activities associated with Phase 1 and Phase 2 of this process is provided on the following page.

### Potential Timeline

(The report details contingencies which r



*General Recommendations in Support of Efficient State Networking*

To enable the networks to provide a unified infrastructure and the greatest potential service levels and function, the Secretary and Board recommend obstacles to execution be removed. The issues are:

- 1) Kan-ed enabling legislation requires all network circuits and equipment be leased. The initial network implementation is a leased infrastructure of circuits and equipment. A consolidated core network which leverages State owned fiber or equipment, and/or fiber and equipment acquired or leased by KanREN will yield maximum obtainable integration and will possibly be a significant cost savings. This would require a change to the Kan-ed statute.
- 2) KanWIN plans to convert its core transport from leased circuits to State owned fiber. Use of this fiber, as part of the consolidated core infrastructure would permit all state constituents to benefit if their traffic can be carried over this fiber and would be an incentive to combine the KanWIN core network with the Kan-ed/KanREN core network to yield a single central infrastructure. This should result in transport savings and enhance functionality. Removal of any traffic type restrictions originating from state constituent groups will allow the KanWIN services to be provided to users and agencies who wish to use local broad band network providers to connect to the State administrative services. This will become increasingly important as the number of applications that require broad band bandwidth increase in use by state agencies and if access from citizen and employee residences to state administrative applications that require broad band becomes prevalent. The connectivity options to the present Kan-ed network permit this today, but will be prohibited, for agency and administrative use, if the contract governing the use of state owned fiber, to be used as core transport, prohibits the transport of traffic, aggregated from points on the Kan-ed access points, to state offices in Topeka.
- 3) Prohibitions against traffic types or applications on one network that will prevent that traffic from being used on a consolidated core network should be removed. Plans for voice over IP (VoIP) on KanREN and KanWIN will prevent consolidation with Kan-ed unless this provision is relaxed for shared infrastructure.
- 4) Consistent public policy to encourage collaboration with private sector providers for network services, the peering of networks and extended loop service to constituents having functional requirements that dictate it. It is desirable that public policy promotes clear communication with private industry and that open connectivity and collaboration be enabled between any consolidated state infrastructure and the various segments of the private telecommunications industry in Kansas.

The Secretary and Board recommend establishment of a funding mechanism that will reliably support combined network requirements. In order for the separate network teams to confidently strive for efficiency and maximize integration and functional and operational consolidation, there must be a committed and dependable funding mechanism. Each entity, responsible for services to a specialized group of constituents, will have to be confident in the funding commitment and stability of the consolidated, shared infrastructure in order to consider changing the status quo.

Finally, it does not appear to be optimally efficient to have three separate autonomous networks and organizations. For plan success, some coordinating authority is required. The Secretary and Board recommend the legislature develop an organizational structure to operate the consolidated network while remaining responsive to individual constituent group requirements. Management of the infrastructure is related to the funding mechanisms and the budgeting process. There is a need for a management and responsibility process to evolve that will be able to collaborate with and to collect the requirements of each constituent group (Administration, Higher Education and K-12 and others). This functional entity will have to communicate funding need and arbitrate competing requirements. It will have to determine policy relevant to the core infrastructure and negotiate connectivity by state constituents and private network enterprises in order to increase efficiency in the provisioning of networking for State of Kansas institutions.

Historically, DISC, KanREN, and Kan-ed have focused on specific constituent groups and each provides specialists which plan, develop, implement and maintain the network and applications. The new organizational structure must effectively integrate these resources as well as operate the core infrastructure, implement network and security policy and business management.

The new organizational entity should pursue public/private partnerships to address broadband and last-mile issues. The organization could align Kansas policy with emerging Federal legislation establishing Universal Service and Telecom Policy. Many states are working toward such partnerships. Creation of a broadband authority, commission or council with department level influence and both public and private sector appointments is becoming more prominent in state government thinking. Such an organization may be appropriate for Kansas.

Respectfully Submitted,

Reginald Robinson  
President and Chief Executive Officer  
Kansas Board of Regents

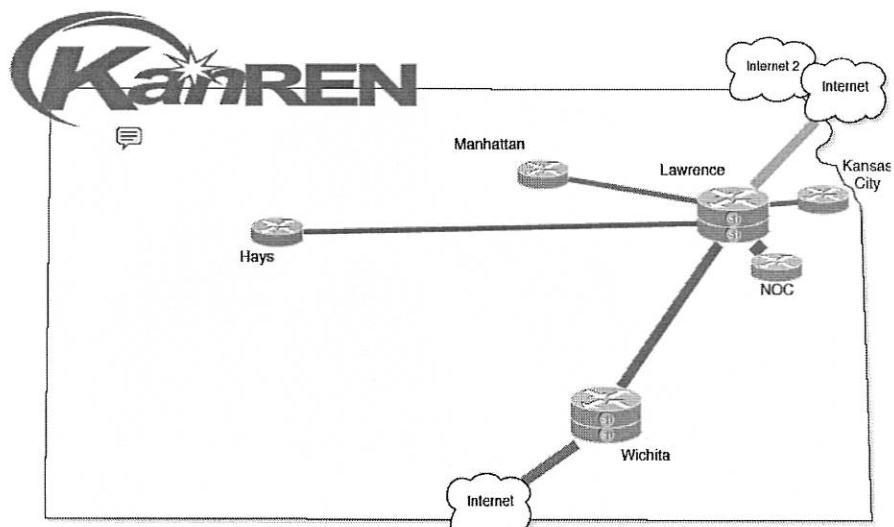
Duane Goossen  
Secretary of Administration  
Department of Administration

**Appendix A: Network Comparison matrix**

	<b>Kan-ed</b>	<b>KanREN</b>	<b>KanWIN</b>
Purpose	Provide a broadband technology-based network for schools, libraries and hospitals.	Provide internet access to member sites and transport for a variety of applications and services.	Provide for state government network needs, both agency internal applications and public e-gov applications.
Infrastructure	Medium speed extended-edge backbone. Last-mile connections aggregated at 19 access points. 210 sites.	High speed star topology backbone. Last-mile connections aggregated at six access points. Extended local loops, 70 member sites.	Lower speed core backbone. Last-mile circuits aggregated at three access points. Extended local loops, 625 connections.
User Community	Schools (K-12 and Higher Ed) libraries and hospitals.	Higher-ed, K-12, public libraries, other not-for-profit organizations.	State agencies, local government, K-12, other not-for-profit organizations, state residents.
Applications	IDL and desktop video. Access to Internet2. Telemedicine and Electronic Medical Record (EMR) transfer are pending.	Access to the public Internet and Internet2. Network available to member institutions to use as required.	State government applications (payroll, budget, accounting etc.) and access to the Internet. E-government services for state residents.
Cost Model	Total operating costs FY05 \$4,450,130. Projected FY06 is \$4,235,000. E-rate lowers cost but is unpredictable.	Total operating cost for FY05 was \$2,088,289. FY 06 is projected at \$2,103,570.	Total cost in FY05 was \$2,697,425. FY06 projected at \$2,403,879. 24% of revenues from SGF and 76% from fees and other funds.
Funding Model	State funded through KUSF. Transitioning to SGF.	Fee based. Types of fees are membership, connection, and other services.	Rate based. DISC establishes rates for services, revises rates annually.
Governance Model	Governed by the Kansas Board of Regents. Advisory Council, Delegate Assembly and Technical Work Group offer advice.	A 501(c)(3) tax-exempt organization. Governed by a 13 member Board of Directors elected by the membership.	Under Secretary of Administration. Policy Board & Technical Advisory Board advise DISC on policy and technical matters.

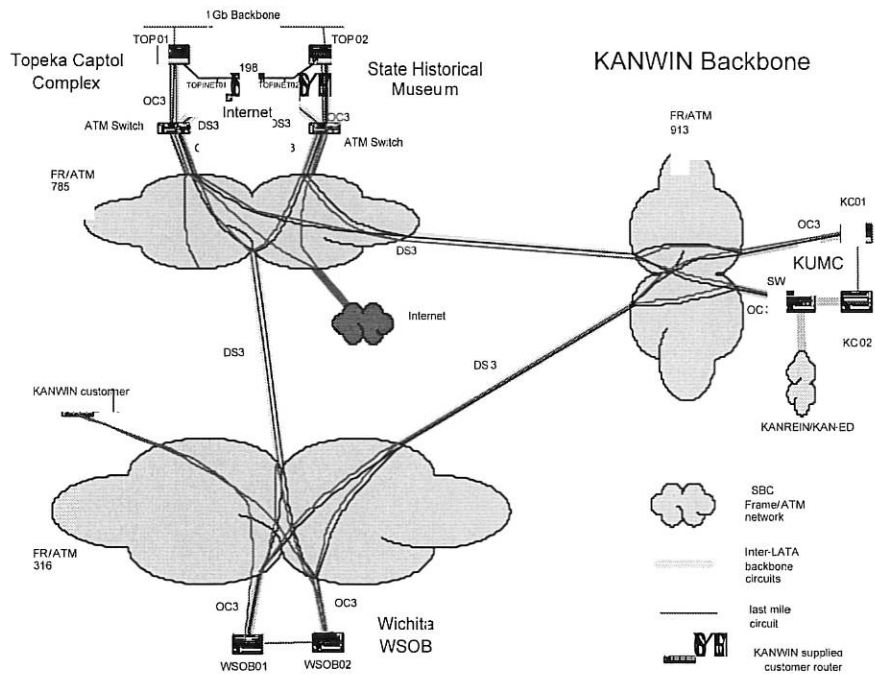


*The KanREN Infrastructure  
(Current View)*

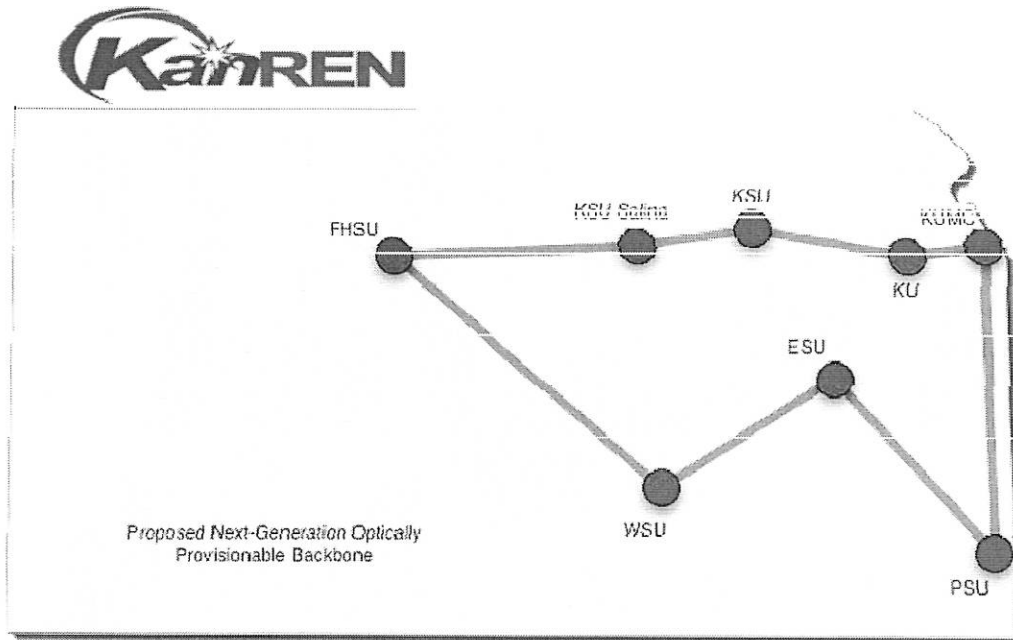




### The KanWIN Infrastructure



### A Proposed KanREN Infrastructure (Future)



**A Proposed View of a Consolidated KanREN/Kan-ed Network**  
*(Future)*



## Appendix C: Budget and Expense Information

Kan-ed Budget	FY2005 - Actual	FY2006 - Estimated
<b>TOTAL SALARIES AND WAGES (9 FTE plus KBOR Assessment)</b>	<b>\$663,291</b>	<b>\$694,950</b>
Office Administration (Postage, Freight & Express Delivery, Printing, Rents, Travel)	196,359	184,800
Fees-Other Services (Content)		x
State Library - Research and Education Databases	812,772	817,000
KHA - EM Systems	248,454	248,454
LearningStation - Kan-ed Empowered Desktop	360,738	1,217,000
Teleconnect Chronically III Kids Telemedicine	50,759	100,000
Marratech	12,760	200,000
Higher Education Strategic Connectivity and Planning	4,223	750,000
Technical Services		
Ntwk Management, Technology Rich Classrooms, General	115,840	1,000,000
Professional & Technical Consulting		x
Technical Implementation and Project Planning Consulting	415,981	225,000
KAN-ED Live! Web Broadcasts, Renovo Annual Maintenance	902,313	300,000
E-Rate consultant	(included)	75,000
Evaluation & Research / Survey Team	(included)	425,000
Leased Equipment/Connectivity and Services	3,781,753	3,000,000
Membership Fees & Subscriptions (Statenets, net@edu, KanREN, Arin)	91,464	20,500
Conference & Conference Sponsorship	37,870	75,000
Kan-ed Regional Chair Development (7 x \$2500 & 7 x 2000)	10,338	14,000
<b>TOTAL CONTRACTUAL SERVICES</b>	<b>\$7,041,624</b>	<b>\$8,651,754</b>
<b>TOTAL COMMODITIES (Food &amp; Forage, Professional Supplies, Office Supplies)</b>	<b>\$22,724</b>	<b>\$30,000</b>
Network Equipment & Microcomputers	136,556	10,000
Computer Hardware & Office Furniture	25,181	15,000
MCU Bridge	0	130,000
Computer Software	1,855	10,000
<b>TOTAL CAPITAL OUTLAY</b>	<b>\$163,592</b>	<b>\$165,000</b>
Content and Services Mini-Grants, General Grants	311,995	100,000
Access Parity Program (I1 and I2)	805,622	2,250,000
Enhancing Technology Equipment Grant Program	839,715	1,300,000
<b>TOTAL GRANTS/SUBSIDIES</b>	<b>\$1,957,332</b>	<b>\$3,650,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$9,848,563</b>	<b>\$13,191,704</b>
Carryover FY05		(\$1,500,000)
<b>TOTAL EXPENDITURES</b>		<b>\$11,691,704</b>
E-RATE DISCOUNT (65%) on Network Connectivity/Leases		(\$1,700,000)
<b>TOTAL EXPENDITURES AFTER E-RATE</b>		<b>\$9,991,704</b>

Figures shaded in green count toward network expenditures.

Network Expenditures: FY2005 = \$4,450,130    FY2006 = \$4,235,000

KanREN Budget	FY2005 - Actual	FY2006 - Estimated
<b>Revenue:</b>		
A la carte Services	35,273	35,000
Fees (Circuit, Conference, GFN, Hardware, UNL)	335,290	1,307,417
Internet Fees (including connection fees in '05)	1,495,932	528,100
Kan-ed Fees (NOC, Management)	1,135,658	910,500
Membership Fees	609,329	614,500
SEGP Management & Misc. (includes interest, e-rate in '05)	64,728	38,000
<b>Total Revenue</b>	<b>\$3,676,210</b>	<b>\$3,433,517</b>
<b>Expenses:</b>		
Personal (Salaries, Benefits, Travel, Training, Tools)	439,889	421,000
Office (Marketing, Maintenance)	1,600	5,500
Administrative (Accounting, Fees, Dues & Subscriptions)	49,988	31,000
- Consulting	0	25,000
Consortium (Conference, Training, Meetings, Postage/Delivery, MCJ, Reserve)	25,794	99,000
- GFN Infrastructure Fees	183,500	176,000
- SEGP Membership	38,000	38,000
- Depreciation Equipment	80,038	85,000
- Depreciation Site Equipment	87,471	130,000
- Depreciation Furniture	2,917	3,000
- Site Equipment	3,228	0
- E-rate expense	52,426	0
- Depreciation Capital Lease	-1,710	0
Backbone & Server Expense (Backbone Hardware, Servers, Router Maintenance)	31,455	35,000
Connectivity Expense (Backbone Ckts, Internet Charges)	1,523,832	1,496,850
- Miscellaneous Connectivity & UNL Cross Connect	3,950	0
NOC Expenses	1,003,246	835,500
<b>Total Expenses</b>	<b>\$3,525,624</b>	<b>\$3,380,850</b>
<b>Revenue:</b>	<b>\$3,676,210</b>	<b>\$3,433,517</b>
<b>Expenses:</b>	<b>\$3,525,624</b>	<b>\$3,380,850</b>
<b>Balance for Reserves:</b>	<b>\$150,586</b>	<b>\$52,667</b>

Figures in Blue count 100% and figures in red count 32% toward network expenses.

Network Expenditures: FY2005 = \$2,088,289    FY2006 = \$2,103,570

**KanWIN Budget Information:**

Expense Category	FY 2005	FY 2006
<b>KANWIN WAN Direct Costs</b>		
Salaries and Wages	\$324,397	\$248,297
FTE Assigned	9.74	6.94
Space	28,680	19,163
Operating Cost		
Network Diagnostic Maintenance	\$8,405	\$20,760
Internet Access	79,905	78,995
Bandwidth & Collector Circuits	392,724	354,766
Router Maintenance	202,140	174,587
Other	103,326	13,501
Depreciation		
Existing Router Infrastructure	\$301,899	\$99,182
Router Infrastructure Upgrades	0	147,982
Wiring	350,079	346,239
Subtotal WAN Direct Costs	<u>\$1,791,555</u>	<u>\$1,503,472</u>
<b>KANWIN WAN Indirect Costs</b>		
Director's Office	\$44,490	\$14,388
Fiscal Management Services	35,000	30,770
Network Management	157,025	147,486
Network Operations	194,564	140,443
Internal WAN Support Costs		
Security	\$0	\$299,063
Technical Labor	474,791	160,797
Network Recovery	0	107,459
Subtotal WAN Indirect Costs	<u>\$905,869</u>	<u>\$900,408</u>
<b>Total KANWIN WAN Costs</b>	<b><u>\$2,697,425</u></b>	<b><u>\$2,403,879</u></b>
<b>KANWIN LAN Costs</b>	<b>\$2,440,183</b>	<b>\$2,013,181</b>
<b>Other Indirect Costs in the KANWIN Rate</b>	<b>715,642</b>	<b>509,314</b>
<b>Total KANWIN Costs to Recover</b>	<b><u>\$5,853,250</u></b>	<b><u>\$4,926,374</u></b>

Shaded figures count toward network expenditures.

Network Expenditures: FY2005 = \$2,697,425    FY2006 = \$2,403,879

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## KAN-ED in Brief

**Summary:** KAN-ED was created by enactment of the 2001 KAN-ED Act which required the Board of Regents 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." Public and private schools (including postsecondary institutions), libraries and hospitals are eligible for services provided under the Act. Today KAN-ED:

- Operates a physical network over which constituents (or their Internet Service Providers) conduct video collaboration and share data.
- Provides monetary support to members for Interactive Distance Learning (IDL) and to subsidize use of the network.
- Provides content to members such as the Empowered Desktop and through access to "Internet2."

Graphs and statistics in this memorandum are from KAN-ED publications.

## Membership

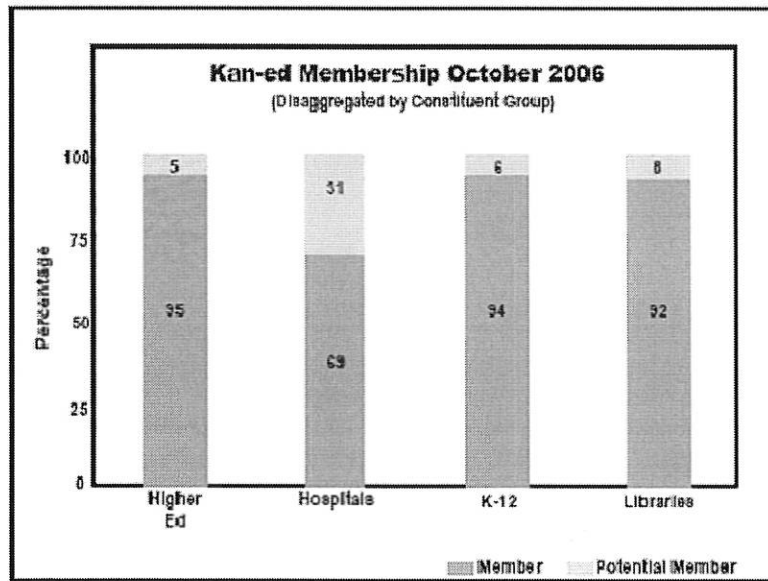
KAN-ED membership is composed of four groups defined in the Act:

- Elementary and secondary schools and postsecondary education institutions (schools);
- Hospitals; and
- Libraries.

Both the 2006 and 2007 Legislatures have considered bills that would expand KAN-ED membership, but those proposals have not been acted upon favorably.

As of October 15, 2006, 89 percent of eligible entities were members of KAN-ED (797 members from a total of 898 eligible entities).

Attachment 7  
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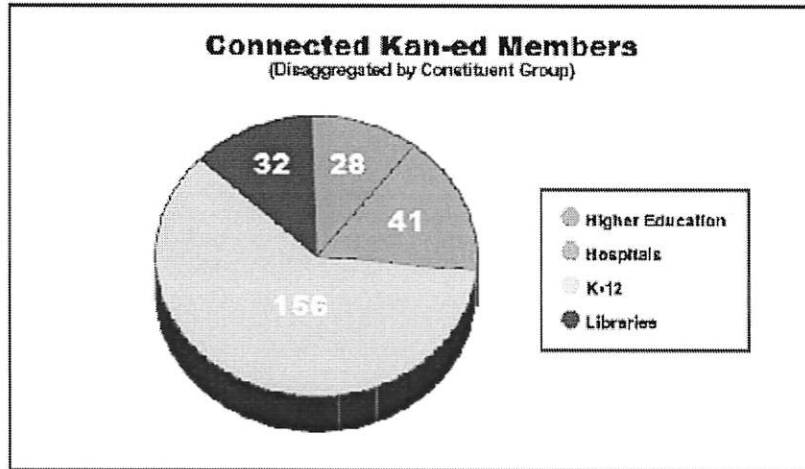


### KAN-ED Services

The Act imposes certain restrictions on how KAN-ED is to fulfill its responsibilities. The Act prohibits KAN-ED from:

- Impairing existing contracts for telecommunication or internet services;
- Constructing or owning new facilities;
- Providing new switched voice access; and
- Providing voice over internet protocol (VoIP) service except for interactive video.





The Kansas Board of Regents was charged in the Act with providing a “broadband technology-based network to which schools, libraries, and hospitals may connect for broadband internet access and intranet access for distance learning.” To fulfill that requirement, KAN-ED constructed and operates a private network consisting of a “backbone,” that connects 19 Network Access Points (NAP) via high-speed communications lines. The KAN-ED network began operation in August 2004. On that network, approximately 295 KAN-ED member sites are connected (“connected members”) to the network via the NAPs.<sup>1</sup> The chart above displays the 257 connected members by type of member.

In accordance with the Act, network components are leased, and member sites contract with commercial communications providers, such as telephone and cable companies, to be connected to a NAP. Thus, traffic between connected KAN-ED members traverses the KAN-ED network rather than the commercial Internet. Connected members utilize the network in a number of ways, for instance, for IDL courses, telemedicine, and videoconferencing.

KAN-ED implements three annual funding programs designed to help members take advantage of the KAN-ED services. These programs are designed to improve member connectivity to the statewide backbone, develop infrastructure at member sites, and support innovation. In addition to these annual funding programs, in 2006 KAN-ED instituted two new programs, the Hospital Initiative and Higher Education “Connect” program in order to increase the number of connected members in those two categories.

The Higher Education “Connect” program was designed to provide funding to higher education institutions to enable them to connect to the KAN-ED network. Forty-three members participated in this program. As of October 2006, 28 Higher Education members were connected to the KAN-ED backbone.

The Hospital Initiative was designed to integrate in a single connection the commercial Internet and access to the KAN-ED backbone. Participating hospitals received equipment and a connection to KAN-ED for one year. Thirty-nine hospitals statewide received funding under this initiative. As of October 2006, 41 hospitals were connected members of KAN-ED.

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<sup>1</sup> **“Connected Members”** There are currently 295 connections to the KAN-ED network. Some members have more than one site connected to the network. Therefore, these 295 connections represent 257 “connected” KAN-ED members.

A grant program for libraries was initiated in August 2006 when KAN-ED allocated \$225,000 to the State Library to provide grants to 15 libraries to equip meeting rooms with interactive video capabilities. Libraries will use the rooms to connect to events and meetings across the state. Libraries have identified potential uses of those video conference rooms for town meetings with legislators, educational programs, and training events. Grants are expected to be awarded to all 15 libraries by May 2007.

Examples of content provided by KAN-ED include video conferencing management, education and research databases, the Empowered Desktop, and the Emergency Management System (EMSystem).

I hope this information is useful to you. If you have additional questions, please feel free to contact me.