

Approved: February 18, 1999  
Date

MINUTES OF THE SENATE COMMERCE COMMITTEE.

The meeting was called to order by Chairperson Alicia Salisbury at 8:00 a.m. on February 17, 1999 in Room 123-S of the Capitol.

All members were present except:

Committee staff present:

Lynne Holt, Legislative Research Department  
Bob Nugent, Revisor of Statutes  
Betty Bomar, Committee Secretary

Conferees appearing before the committee:

Susan Myers, P.E., J.D., Adjunct Faculty at Fort Hays State University  
Mike Reece, Government Affairs Consultant, AT&T  
Richard Lawson, State Executive, Sprint

Others attending: See attached list

A newspaper article from the Johnson County Business Times, February 10-February 16, 1999, entitled "Getting out of Dodge?" was distributed to the Committee at the request of Senator Brownlee. (Attachment 1)

**SB 290 - Telecommunications act; declaration of purpose**

Susan Myers, Professional Engineer, J.D., adjunct with Fort Hays State University and Consultant for Hays Medical Center, testified in regards to certain sections of **SB 290**, particularly on Page 6, Line 26 which deletes the deadline for implementation of enhanced universal services. Ms. Myers stated if time specific schedules are not adopted, there is no incentive for deployment of services. Presently, advanced services are overpriced or non-existent from Southwestern Bell in Western Kansas. As an example, in Topeka ISDN is \$90.57/mo; price on SWB Internet is \$51.77/mo. In Hays the ISDN cost is \$156.57/mo. DSL is not available in Hays. Rural areas do not offer the competitive market to telecommunications carriers that urban areas do, consequently, prices to rural Kansans are not only high, but there are services that are not available. **SB 290** eliminates the assurance of comparable prices, an assurance rural Kansans need. Competition is not naturally occurring in areas that are sparsely populated. (Attachment 2)

Ms. Myers stated Hays Medical Center delivers home health care and telemedicine relying on the Plain Old Telephone System. Rural Kansans need greater bandwidth to patients' homes for home health care. To fully realize the potential of telemedicine, a broadband infrastructure is needed to bring the delivery of telemedicine toward full motion video quality. Rural areas in Kansas need to have access to the latest technologies at a cost that is affordable. The Kansas Universal Service Fund (KUSF) may be the source needed to provide for the deployment of these services. **SB 290** eliminates the broadband service requirement between hospitals in the definition of enhanced universal services, and deletes the deadline that was imposed in the 1996 Act and later expanded in the 1998 amendments. The federal subsidy to help with the cost of the services once installed is of great assistance at the current time, but the assurance that the services will be installed is vital to rural Kansas.

Mike Reece, Government Affairs Consultant, AT&T, testified in support of **SB 290**, stating the two policy decisions the Legislature and the Telecommunications Strategic Planning Committee have considered in the past and which **SB 290** basically addresses are: 1) cost based rates, and 2) the role and authority of the Kansas Corporation commission in the transition to a competitive local exchange marketplace. (Attachment 3)

CONTINUATION SHEET

MINUTES OF THE SENATE COMMERCE COMMITTEE, Room 123-S of the Statehouse, at 8:00 a.m. on February 17, 1999.

**SB 290** assures a level playing field in that all companies who serve high cost areas of the state will receive the same level of support, \$36.88 per access line per year, and specifies that incumbent local exchange price cap companies should be entitled to that same level of support which should reduce the size of the KUSF. The bill establishes a mechanism for an incumbent or new competitor who needs additional support to request that support based on cost; insures that if money was spent in good faith accomplishing the goals specified in prior legislation of enhanced universal service, the money could be recovered by incumbent local exchange companies. The bill further insures that the KCC is authorized to determine the level of support required to provide universal service by conducting audits, and obtain cost and revenue information. **SB 290** brings state legislation into conformity with the federal act by providing consumers the opportunity to select the long distance carrier of their choice to carry calls within the same area code without having to dial extra digits.

AT&T supports **SB 290** which establishes a framework that insures the prices that customers pay for their telecommunication services will be based on costs; all competitors have access to the KUSF on a competitively neutral basis; and the KCC has the authority to implement the provisions of the bill.

Richard Lawson, State Executive, Sprint, testified in opposition to **SB 290**, stating that Sprint did not elect to be a price cap company until the fall of 1998, with the understanding that basic policy and legal questions had been settled and that it could enter into this new form of regulation based on certain assurances from the legislature and the courts. Sprint believed price cap regulation assured consumers of reasonable and stable prices for high quality basic local service, as Sprint cannot seek to increase local rates until the year 2000, except for unfunded mandates by the legislature or the KCC. These pricing restrictions protect consumers, and Sprint assumes all the financial risks as a price cap company. Under price cap regulation Sprint is afforded modest pricing flexibility for its more competitive services; however, if it attempted to earn more profits by cutting corners on service, the law says the price cap agreement would be terminated and Sprint's earnings would again be subject to Commission regulation.

**SB 290** casts aside this agreement. The legislation restricts changes in local service prices; prohibits taking earnings into account when setting prices; gives the KCC free reign to increase Sprint's costs or reduce its revenues and to use earnings as a reason for not allowing financial recovery. The bill further puts at risk Sprint's ability to recover more than \$10 million in annual revenue lost when access charges were reduced as required by the 1996 Act.

Before the 1996 Act, Sprint recovered its costs of doing business in Kansas from five primary sources: 31% from local telephone service revenue; 42% from access charges; 1% from intrastate long distance services; 6% from miscellaneous services; and 20% from the Federal Universal Service Fund. By reducing its intrastate access rates to interstate levels, as required by the 1996 Act, Sprint lost more than \$14 million in revenue which could be recovered by 1) increasing local rates, 2) receiving revenues from the KUSF, or 3) a combination of local rate increases and revenues from the KUSF. The KCC subsequently determined that the KUSF should be the primary source for recovery of lost revenues. **SB 290** denies Sprint recovery of most of its lost access revenues. The legislation provides that lost revenues will be restored if Sprint produces cost studies showing that the lost revenues are actually needed to cover costs, but it sets no deadline for the KCC to make such a determination or the costing standards to be used.

It is Sprint's understanding that the KCC staff authored the proposed changes contained in **SB 290** which address two problems: 1) the KUSF is inflated due to its being based on the revenue neutral concept, and 2) local exchange carriers (LECs) have no incentive to file cost information with the KCC. Sprint has participated fully in KCC cost proceedings that affect Sprint and do not feel the onus put on them by staff in its report is warranted. Sprint has never been reluctant to file data that has been requested. Sprint is concerned that the KCC staff has prejudged the outcome of the cost studies by declaring in its analysis that the current KUSF is inflated. If Sprint were to file a cost study today, the preliminary estimate is that they would ask for state local service support of \$20.5 million. Sprint's final

CONTINUATION SHEET

MINUTES OF THE SENATE COMMERCE COMMITTEE, Room 123-S of the Statehouse, at 8:00 a.m. on February 17, 1999.

concern with **SB 290** is that the severe reductions in KUSF revenues apply only to price cap companies. Sprint feels **SB 290** discriminates against them because of its election of price cap regulation, not because of its cost characteristics. **SB 290** would destabilize rates for basic local service; denies Sprint the ability to recover in a timely and predictable manner its legitimate costs of doing business; holds Sprint guilty of inflating the KUSF until they can prove their innocence; increases government regulation by returning to the days when the KCC can challenge the appropriateness of earnings; and tells business in general that Kansas is an unpredictable place to invest because of changing policies. (Attachment 4)

Mr. Lawson responded to a question from Senator Steffes that forward looking cost studies can be established without carrier earnings.

Dave Dittmore, KCC, responded to a question regarding cost studies and rate of return regulation by stating he felt the cost studies should come under close scrutiny, which comes close to the definition of an audit. Cost studies reflect both costs and revenues in order to see where the subsidies are in the rates, if there are any.

The Chair asked the KCC staff to be prepared to answer specific questions posed to them:

1. Is it possible to set a time certain on cost studies?
2. Have specific deadlines for specific deployment of services been set previously by the KCC?
3. Whose role is it to determine cost studies based on the Sprint testimony, is it the role of the Legislature or the role of the KCC?
4. What portion of the KUSF is for revenue neutrality, what portion of the fund is for universal service for high cost lines?
5. How do you confirm how the KUSF is being used at this time?

A copy of a FAX from Dr. Edward H. Hammond was distributed to the Committee at the request of Senator Feleciano. (Attachment 5)

**Upon motion by Senator Steineger, seconded by Senator Ranson, the Minutes of the February 17, 1999 Meeting were unanimously approved.**

The meeting adjourned at 9:00 a.m.

The next meeting is scheduled for February 18, 1999.

# SENATE COMMERCE COMMITTEE GUEST LIST

DATE: February 17, 1999

NAME	REPRESENTING
Bob Flappan	AT&T
Mike Rescht	AT&T
Bill Roche	Sprint
R. Leonard Roesow	Sprint
Stephen Minnis	Sprint
Robert Cowdrey	Sprint
Angela Eggers	INT Dept. - FHSU
Susan Myers	Self
MIKE LURA	CURB
Nelson Kraeger	LEL
Jim Yacally	Cellular One
Charles Cleet	SWBT
Mesa Colvin	CMT Partners/Cellular One
Jim Thorne	Self
Ross Miller	KCC
Mark Hooper	Sprint
Bob Cowdrey	Sprint
Larry Kleiman	League of KS Municipalities
Michael Orsmond	Comptel-KS / CDL



# SENATE COMMERCE COMMITTEE GUEST LIST

DATE: February 17, 1999

NAME	REPRESENTING
Anne Wickliffe	KCC
Dave Dittmore	KCC
MARK CAPLINGER	SITA
Doug Smith	SITA
Jerry Lammers	KCC staff
Guy McDonald	KCC staff
Virginia Stan	Federico Consulting
TOM BISHOP	KCC
Paul Sander	SWBT
MCAVOU	SWBT
SHAWN MCKENZIE	SWBT
Guthy Dayron	SWBT
DENNY KOCH	SWB
Bill Sneed	SWBell
Mike Moffet	SWBell
Robert Traxler	KGC
John Pinegar	SITA
Roger Balen	KCPR
Doug Lawrence	SWBT

Johnson County Business Times February 10 - February 16, 1999

# Getting out of Dodge?

## Birch Telecom's \$3 million wait for rate decisions by the Kansas Corporation Commission may force it to leave the state

**D**ave Scott can't keep quiet any more. The outspoken president of Birch Telecom Inc. says what's happening with state officials and Southwestern Bell Telephone Co. is certainly not illegal — but just short of "extortion."

"We're out of pocket \$3 million because of delays," he says of his Kansas City, Mo.-based telecommunications upstart.

Scott, with his billboard ads claiming that "100 percent of our customers have fired Southwestern Bell," went out on a limb with his 2-year-old company, boasting of bringing low-cost phone services to businesses in Johnson County. But after a year, he's still waiting for the Kansas Corporation Commission in Topeka, Kan., to finalize rates so he can make good on his word.

In the meantime, Scott has to pay high interim rates that could run him out of Dodge. The fees are particularly unbrageous to Scott because, although the Commission gives the final nod, the rates were set by Southwestern Bell, which actually owns the lines.

By law, Southwestern Bell was required to make an interconnect agreement with its smaller competitors. The telecommunications giant will not be allowed to get into the long-distance market, until it can prove there is competition for local service.

Scott also questions the objectivity of the telecom staff who make recommendations to the Commission.

"We think it's disturbing that the staff person at 'CC is an ex-employee of Southwestern Bell," he says.



Attachment 1



What it all comes down to, says Scott, is the fact that for close to a year, his company has been paying \$20,000 a day in exorbitant fees — which end up in the pockets of Southwestern Bell.

Southwestern Bell generally relies upon the Kansas City, Mo., office of public relations firm Fleishman Hillard to speak for it, but for regulatory issues has hired the Topeka, Kan.-office of Public Strategies, which is based in Austin, Texas.

"I would never say the KCC was an extortionist," says Mike Moffet, spokesperson at Public Strategies.

Moffet says if the interim rates are too high, other options are available, such as reselling instead of a company having its own equipment. He says if the rates are in question, perhaps fixing the business plan is in order.

Birch has made some inroads in bringing competition to the Johnson County business community, but his losses are becoming so great, he may not have any choice but to take his company out of the state.

### SHARING HIS PAIN

"We share his frustration," says Rosemary Foreman, spokeswoman at the Kansas Corporation Commission. But the delays have nothing to do with feet dragging or biased officials, she says.

Foreman says there are so many complex pieces of the puzzle to get into place, it just takes a long time.

The Kansas Corporation Commission is made up of three people, appointed by the governor, who serve staggered four-year terms. The Commission has its own legal counsel.

Serving the Commission is a large host of staff, ranging from accountants to gas pipeline experts. These people apply for positions, are appointed by the chair of the Commission and final approval comes from the governor.

The telecom group has nine members. Of those, five are Southwestern Bell retirees, according to state officials.

Critics say this is a conflict because it means these members are making recommendations about



**OUT OF COMMISSION:** Dave Scott says Gov. Graves talked about a climate of competition at his company's ribbon-cutting ceremony. But now, he says, "There must be a large problem between Gov. Grave's office and the Commission."

PHOTO BY EDWARD GRAUNKE/JCPT STAFF

1-2

Southwestern Bell and its competitors — while drawing a pension from the same company. Officials at the Commission say every staff member must sign a loyalty oath that prevents them from being biased toward one company.

Moffet says the former Southwestern Bell employees on the Commission are not biased in favor of Bell. He says in many of the proceedings, "We find ourselves on opposite sides of the issue."

He says Southwestern Bell is not dragging its feet and is eager for the Commission to set permanent rates. Moffet says competition is already cutting into Bell's business. Last year, Bell lost 35,000 lines to rivals. This year, the figure is up to 70,000 lines — a 100-percent increase.

Eva Powers, assistant general counsel for the Commission, acknowledges the process has gone on longer than expected. But they must hold hearings and request studies and more studies, she says.

Powers says another consideration is the size of the state. In larger phone markets, the phone companies have pushed harder to get the deals in place. Kansas just isn't a prime market, she says.

As of May 1998, there were 81 phone companies certified to do business in Kansas. Of those, only about a dozen are active. Of those, most are resellers. Birch is not a reseller, and is the largest competitive local exchange carrier (CLEC) in the state.

"We want to see competition," Powers says. "We've spent endless hours to move forward so the 'Birches' of the world could be viable competitors in the state."

"We're getting pretty close," she adds, predicting possible completion as early as March.

Powers says the possibility of Birch being wedged out due to the delays would be "unfortunate."

"Kansas needs all the competition it can get," she says.

## GREAT DIVIDE

The whole situation began with the Telecommunications Act of 1996, which was intended to open the phone lines for competition. Scott left Westwood-based Sprint Corp. to form his own phone company and compete head-to-head with Southwestern Bell.

At the time, Scott says he "foolishly" believed he would be able to negotiate the interconnect agreement with Southwestern Bell like any other type of business deal.

There was some justification for his leap of faith, he says. The Kansas Commission has been known for being one of the most progressive in the country. For example, in 1995, before FiberNet became part of Teleport Communications Group Inc., which became part of MCI WorldCom Inc., the small Kansas City, Mo.-based company got approval to do business in Kansas.

Scott says the permanent rates are already set in most states. But in Kansas, interim rates are set while

the Commission goes through the state and federal regulatory hoops. The rates were set by Southwestern Bell and approved by the Commission.

For instance, the monthly charge to Birch for Kansas City, Mo., customers is around \$12 a month. In Kansas, it is more than \$20 a month.

Installation charges are another point of contention. In Texas, the charge is \$5 per customer, in

## Five of the nine telecom group staff are former Southwestern Bell employees.

Missouri, it's \$20, and in Kansas the rate is off the chart at \$80, says Scott. These are the fees Birch has to pay Southwestern Bell to be in the loop. They are, in essence, Scott's wholesale costs, as he has to base his retail prices on them.

Given the local rates, he says, "It's a little hard to make money that way."

Moffet says without more specifics, he was not able to confirm the rates Scott gives. But all rates are based on cost studies. During the process, everyone had a chance to speak their piece on the issue of rates.

Scott says he's been told of 90-day deadlines since the middle of last year. Those assurances led him to decide against appealing the interim rates.

Missouri, he argues, is not known for its speed, yet it completed the process a year ago. When Birch bought Emporia, Kan.-based Valu-Line in February 1997, Gov. Bill Graves was at the ribbon-cutting and spoke about creating a climate for competition.

"There must be a large problem between Gov. Grave's office and the Commission," says Scott.

Birch has since acquired two Leawood-based companies, the telephone equipment firm Telesource Communication Inc. and Internet service provider TFS Inc.; and Overland Park-based Boulevard Phone Co., which runs phone operations at Lighton Plaza.

Scott says he could hardly get investors in the beginning, but now they're calling him. The company is still small, but doing well, at least in Missouri and Texas.

In Kansas, the company's switch set up for Topeka was canceled in November, and its switch in Emporia may have to be moved to Texas. Scott says if he can't compete at a reasonable level, he may have to pull out of Kansas altogether.

"I don't know what else to do," he says. "We bleed money every single day."

—By Rebecca Shelton, associate editor



## Testimony from Susan Myers, P.E., J.D. regarding SB 290

Thank you for the opportunity to testify regarding SB290. The decisions of this committee will have a direct impact on the economic development, educational service availability, and delivery of health care services to patients in the rural areas of Kansas.

**1. Advanced telecommunications services for Kansans.** SB290, page 6, line 26, **SB290 deletes the deadline for implementation of enhanced universal services**, apparently to be covered in new Sec. 66-2005 (a) (SB290, page 7, line 1) with "The commission shall establish rules and regulations by June 30, 2000, to address access to enhanced telecommunications and information services that are reasonably comparable between urban and rural areas throughout the state." A concern for our rural citizens is that we were first guaranteed basic and primary rate ISDN, or a technological equivalent (which means services up to a switched broadband capacity) by July 1, 2001. Last year the legislature modified this to "by July 1, 2003." Now it is proposed to eliminate this date requirement and leave it up to the commission to establish "rules and regulations." **We need a deadline.**

**If time-specific schedules are not adopted, there is no incentive for deployment of services.** The Kansas Telecommunications Act had specified that specific services must be available by a certain date. Without that protection, these services may not be provided

In a meeting with Southwestern Bell on November 24, 1998, I was informed that digital subscriber line service from Southwestern Bell would not be coming to my region for several years. I was encouraged to use ISDN services for serving individuals at home for home health services provided by Hays Medical Center.

Currently, advanced services are overpriced or non-existent from SWB in western Kansas. For example:

	Topeka	Hays
ISDN (128kbps)	\$90.57/mo (quote via phone call-2/15/99) <b>OR</b> \$51.77/mo (price on SWB Internet site)	\$156.57/mo (quote via phone call- 2/15/99)
DSL (128kbps upstream, 384kbps downstream)	Available September 1999- \$39.00/mo (quote via phone call-2/15/99)	Not available

**2. Market Incentives, Competition — rural areas don't always offer the competitive market to telecommunications carriers that urban areas do.**

a. Comparable Pricing. Our Kansas Telecommunications Act in 66-2001(c) promotes "advanced telecommunications services that are comparable in urban and rural areas throughout the state." Having the service available is not enough. Prices to rural Kansans should be similar to those prices to Kansans in urban areas. If the service is available, but only at a high price,

rural Kansans can't afford it. **SB290 eliminates the assurance of comparable pricing.** On page 7, beginning on line 31, SB290 deletes Sec. 66-2005(b)(2) which had provided for the only advanced service to citizen's homes, ISDN, to be offered "at prices which are uniform throughout the carrier's service area." **Rural Kansans need this assurance of comparable pricing.** The Federal Telecommunications Act Sec. 254(b)(3) states that "[c]onsumers in all regions of the Nation...should have access to...advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are **available at rates that are reasonably comparable** to rates charged for similar services in urban areas."

Using any sort of requirement for a certain number of user for services would also be contradictory to the purpose of the telecommunications act and be a severe disadvantage to our rural citizens. **Our rural people may not make up enough in numbers to satisfy "demand" criteria. But, they are the rural people that our congressmen and legislators intended to help. How can competition be promoted in these areas?** These are the rural people that had to form their own electric cooperatives, years ago, under similar arguments. Telecommunications carriers do not have competitive incentives to provide the broader band technologies to serve our rural people, including our medically fragile elderly that can benefit from home health telemedicine.

### **Competition is not naturally occurring in an area that is sparsely populated.**

Some parties may feel that rural areas should rely on wireless solutions. The current cellular solutions are too low in bandwidth to be effective. The future of satellites may be a long term idea, but in the meantime it is inappropriate to expect rural areas to rely on the very expensive prices for broadband two-way satellite connections, even when they are deployed.

### **3. Rural health care is a major concern.**

I am actively involved in putting together grants for telemedicine projects for Hays Medical Center. Hays Medical Center delivers services to the patients' homes in the form of home health care telemedicine. They currently must rely on Plain Old Telephone System (POTS) equipment to deliver this service. This is an unacceptable long term solution. Rural Kansans need a solution, such as xDSL, that will provide greater bandwidth to patients' homes for home health care. **Deployment dates can not be pushed back. Delaying technology services delays health care that is needed now.**

Although competition may not exist in our rural areas, the need for a state-of-the-art telecommunications network to fully implement telemedicine is as great or greater as that of an urban health care provider. Telemedicine helps to address the very real issues of physician access (including specialist consultation), support in diagnostic areas such as radiology, and availability of home health services to help rural residents maintain independence in their homes.

### **Deployment of advanced technologies is critical to telemedicine**

Our rural population is getting older. Our health care system must find innovative ways to help this growing population of older adults manage chronic health conditions and diseases. The monitoring, support, and early detection and intervention that home telemedicine can provide will be a major factor in helping the elderly maintain a higher level of independence in their own homes and help to avoid higher cost acute care interventions and associated long, expensive hospital stays.

**To fully realize the potential of telemedicine, a broadband infrastructure is needed to bring delivery of telemedicine toward full motion video quality.** Medicine and other types of health care delivered over video are by definition “visual.” And, **the quality of this video directly affects the quality of visual assessment, observation, and verification of signs, symptoms, and other information with which to diagnose and treat patients. Moreover, faster, better telecommunications will allow the provision of additional telemedicine services to patients.** For example, going beyond the current POTS application in home health may someday allow physical therapists to visit patients via tele-video and confidently assess a patient’s gait and other types of physical movement. **The technology that we need to use will need to be a technology that provides acceptable downstream and upstream bit rates.**

Telemedicine presents one way to provide access to care at less overall cost. **We need to have these technologies at a cost that we can afford. The Kansas Universal Service Fund may be the source that we need to rely on to provide for the deployment of these services. The services don’t do us any good if we can’t afford them.**

**Other advanced services such as Asynchronous Transfer Mode (ATM) need to be available to us.** These services are used to transport data, video and voice between larger facilities, such as hospitals and home health offices. SB290, page 2, line 41, eliminates the broadband service requirement between hospitals in the definition of enhanced universal services, and on page 6, line 26 of SB290, deletes the deadline that was imposed. The deadline was for the year 2001, then 2003 and now nothing. The federal subsidy to help with the cost of the services once installed is of great assistance at the current time. But, we need to be assured that the services will be installed.

I have attached a table listing telecommunication services with their advantages and disadvantages. I hope that it can be of some use.

Thank you.

Susan Myers, P.E., J.D.  
BS, Electrical Engineering, KSU, 1978  
Registered Engineer in Kansas, Missouri, and Wyoming  
J.D., University of Wyoming, 1994  
Licensed Attorney in Kansas  
Registered to practice in patent cases before the U.S. Patent and Trademark Office  
Adjunct Faculty at Fort Hays State University, Hays, KS  
Grants Consultant for Hays Medical Center, Hays, KS

With Assistance from:  
Angela Eggers  
Senior in Information Networking and Telecommunications  
Fort Hays State University

Type of Service	Speed	Advantages	Disadvantages	Notes
in Old Telephone System (POTS)	Max. 56kbps or 56,000bits/sec	Infrastructure already in place. Well known technology. Reasonable price.	Slow, quality varies	
Integrated Services Digital Network (ISDN)	128kbps for a Basic Rate Interface line	Dial up technology — can be used to “dial” to anywhere.	Not available everywhere, expensive for the speed. More expensive in western KS than eastern Kansas. Deployment is slowing down as carriers focus on newer, faster technologies.	Kansas is looking at not requiring this service as part of “enhanced universal service”. It is currently required under conditions for deployment in 2003.
Leased Lines T1 T3	T1=1.544 Mbps or 1,544,000 bits/sec T3=44.736Mbps or 28 T1s	Provides a dedicated circuit.	Expensive	Can be broken up into size needed, such as 24 channels of 64 kbps. Often transmitted using 2 sets of twisted pairs, but can be fiber, coax, etc.
Digital Subscriber Lines (xDSL is the generic, aDSL stands for asymmetric DSL)	Varies according to type, generally .5 to 6.0 Mbps	Reasonably priced. Some varieties offer “off the shelf” equipment. Deployment is starting nationwide in pockets. Uses existing telephone wiring.	Currently limited to a distance of about 3 miles from the central office. Susceptible to interference from other lines as location of actual lines is usually not controlled.	Currently used primarily for Internet access.
Cable Modems	up to about 10Mbps or more.	Reasonably priced for the bandwidth.	Limited to “islands” where cable company serves. Still rather pricey in our area. Some think that cable reliability is not generally as good as telecom reliability.	Currently used primarily for Internet access.
Asynchronous Transfer Mode (ATM)	varies, up to 44.736Mbps	Very high speed, very flexible, can vary in size. Links local area networks through other networks (such as the public telephone network).	Standards are still evolving.	Can transmit different telecom services through this standard. ATM uses packet transmission in cells of 53 bytes each.
Wireless Cellular (have analog and digital)	about 28.8 kbps	Mobile	Pricey, unreliable	Probably limited to voice applications in its current configuration.
Wireless Satellites	currently, voice. Later, high bandwidth	Mobile	Pricey. Two way video at a reasonable cost will be awhile.	May be the future.

2-4

SMM 11/11/98

One kbps=1000 bits per second

One Mbps=1,000,000 bits per second

Resources Used: Dhawan, Chander. Remote Access Networks: PSTN, ISDN, ADSL, Internet and Wireless. New York: McGraw-Hill, 1998. Bates, P Voice and Data Communications Handbook. New York: McGraw-Hill, 1996. Sprint Technology Primer. Sprint, 1994.

2-4



# MIKE REECHT

GOVERNMENT AFFAIRS CONSULTANT

SMOOT & ASSOCIATES  
800 SW JACKSON, SUITE 808  
TOPEKA, KANSAS 66612  
(785) 233-0016  
(785) 234-3687 (fax)

10200 STATE LINE ROAD  
SUITE 230  
LEAWOOD, KANSAS 66206  
(913) 649-6836

TESTIMONY OF MIKE REECHT  
ON BEHALF OF AT&T  
TO THE SENATE COMMERCE COMMITTEE  
ON SB290

FEBRUARY 17, 1999

Dear Madam Chairman and members of the committee:

My name is Mike Reecht and I appear before you today on behalf of AT&T in support of Senate Bill 290.

The issues being discussed in SB 290 have their history dating back to SCR1617 which was passed by the 1994 legislature. That resolution called for the establishment of a Telecommunications Strategic Planning Committee (TSPC) to determine telecommunications public policy for the state of Kansas.

From the onset, the TSPC committee and ultimately the 1996 legislature were faced with two overriding policy decisions: One dealt with the subject of cost based rates, and the second centered on the role and authority of the Kansas Corporation Commission in the transition to a competitive local exchange marketplace.

AT&T has consistently stressed the importance of setting prices charged to competitive local exchange carriers and long distance companies on the basis of cost. We have also maintained the importance of providing the Kansas Corporation Commission the authority to insure that access charges and KUSF assessments are also based on costs.

AT&T purchases access from the local exchange company. That access is used to originate and terminate our long distance calls to your local telephone. We have argued that, in the past, those access rates were not based on costs to provide access service, but rather contained significant subsidies for local exchange companies that may or may not be needed to provide universal service. We continue to believe that the Commission should have the authority to examine the costs and prices of the incumbent local exchange carrier to insure the KUSF subsidies are actually necessary.

The 1996 legislature recognized that access charges were too high and required them to be phased down to interstate parity levels. Unfortunately, it allowed the local exchange companies through the KUSF to offset those lost revenues or subsidies on a "revenue neutral" basis with no examination of whether those subsidies were actually required to provide universal service.

Senate Comm Senate Commerce Committee

Date: 2-17-99

Attachment # 3-1 thru 3-2

Of course, the KUSF does perform two very important functions: First, subsidies that were previously hidden in access charges and ultimately in the long distance rates were made explicit. And secondly, it insured that those same subsidies would become portable. That is, they would be distributed to whatever company served the customer. Both of these provisions are extremely important as we transition to a competitive environment.

It is the explicit component of the KUSF that caused customers for the first time to question the prices they were paying to subsidize universal service. It also prompted questions regarding the desirability of a cost-based approach rather than the revenue neutral approach established for the Kansas Universal Service Fund.

Senate Bill 290 addresses some of these issues. It assures a level playing field in that all companies who serve high cost areas of the state will receive the same level of support. That support level of \$36.88 per access line per year was determined by the Commission as the appropriate level of support for new competitive local exchange carriers to draw from the KUSF when they begin to serve high cost areas. Senate Bill 290 specifies that incumbent local exchange price cap companies should be entitled to that same level of support which should reduce the size of the KUSF.

In addition, the bill establishes a mechanism for an incumbent or new competitor which needs additional support to request that support based on cost. The bill further insures if money was spent in good faith accomplishing the goals of enhanced universal specified in previous legislation, that money could be recovered by incumbent local exchange companies.

The bill also insures that the Kansas Corporation Commission will be "authorized" to determine the level of support required to provide Universal Service by conducting "audits, investigations and obtain cost and revenue information." It confirms the Commission's authority to maintain ongoing parity with interstate access rates.

The bill also insures consistency with the Federal Act by providing the consumers in Kansas the opportunity to select the long distance carrier of their choice to carry calls within the same area code without having to dial extra digits.

In summary, the legislation establishes a framework that insures the prices that customers pay for their Kansas telecommunications services will be based on costs, that all competitors have access to the KUSF on a competitively neutral basis, and that the Kansas Corporation Commission clearly has the authority to implement the provisions of the bill. AT&T believes SB 290 is good for consumers and telephone competitors alike.

I would be happy to answer any questions that you might have.

Before the Senate Commerce Committee  
Senate Bill 290  
Testimony of Richard Lawson, State Executive  
Sprint

Chair Salisbury and members of the committee, my name is Richard Lawson. I manage Sprint's legislative and regulatory activities in Kansas. I have spoken with most of you before and since this legislative session began, and I will repeat what I have already told you. In Sprint's view, now is not the time to make significant revisions to the Kansas Telecommunications Action of 1996. The Kansas Corporation Commission has not completed its work to determine the costs of providing local service. As a result, we do not have sufficient information to determine if or to what extent the 1996 Act should be amended.

Sprint continues to believe that the basic decisions made less than three years ago are fundamentally sound. Sprint believes the 1996 Act encourages competition, efficiency and innovation. Sprint is just as eager as you are for its customers to realize the full benefits of the 1996 Act. But I am here to implore you not to act prematurely. Patience is called for because the issues are complicated and due process takes time.

Sprint strongly opposes SB 290 because it reverses fundamental policies contained in the 1996 Act. It dramatically changes the assumptions upon which we have made business decisions during the last two years. And, quite frankly, it is, in my our view, a step backwards in bringing the benefits of competition and less regulation to Kansas consumers.

Senate Commerce Committee

Date 2-17-99

Attachment # 4-1 thru 4-11

There are three fundamental flaws in SB 290 I want to discuss today.

First, SB 290 disregards the covenant entered into by this legislature with Kansas telephone service providers and their customers in 1996. The Act allowed Sprint to elect price regulation. Because of court challenges and continued debate in the legislature, Sprint did not ultimately elect price regulation until the fall of 1998. We thought at that time that basic policy and legal questions had been settled and that we could enter into this new form of regulation based on certain assurances from you and the courts. Here is what Sprint thought its price cap decision meant:

Price cap regulation assures consumers of reasonable and stable prices for high quality basic local service. That is because Sprint can not seek to increase local rates until the year 2000, except for unfunded mandates by the legislature or the Kansas Corporation Commission. After the year 2000, consumers are guaranteed that prices for local service will fall, remain the same or, at most, rise less than the annual rate of inflation.

These pricing restrictions protect consumers from such things as a down turn in the economy or Sprint's. In other words, Sprint assumes all the financial risks as a price cap company.

The trade off is that Sprint can return to its investors higher profits it might earn through being more efficient or generating more revenues through the introduction of new and innovative services. Under price cap regulation, Sprint is also afforded modest pricing flexibility for its



more competitive services. Another important safeguard for consumers is continued regulation of quality of service. If Sprint attempted to earn more profits by cutting corners on service, the law says the price cap agreement would be terminated and Sprint's earnings would once again be subject to Commission regulation.

Sprint fully anticipated that as long it upheld its end of this agreement, regulation would be more streamlined and certainly less contentious.

Senate Bill 290 casts aside this agreement. The proposal would continue to severely restrict changes in local service prices. And while the bill says that the Commission can not take earnings into account in setting prices, it gives the Commission free reign to increase Sprint's costs or reduce it revenues and to use earnings as a reason for not allowing Sprint financial recovery.

Sprint elected price regulation in good faith based on commitments made by the 1996 Act. In Sprint's view, a deal is a deal. For the legislature to retreat from these commitments at this stage of the game is just unfair.

The second critical flaw is that SB 290 puts at risk Sprint's ability to recover more than \$10 million in annual revenue that we lost when we were required by the 1996 Act to reduce our access charges.

There seems to be a misconception that local telephone companies are reaping a windfall of new revenue through the Kansas Universal

Service Fund and that taxes are the source of these new revenues. This is just not the case.

Access charges are what local telephone companies charge long distance companies for use of their local telephone networks. Historically, access rates – and thus long distance rates – have been set well above the costs of providing access and long distance services. These above-cost revenues have historically been used to keep local rates well below the costs of providing local services. This regulatory approach has been used to ensure that reasonably priced local telephone service is universally available to anyone who wants it.

The 1996 Act determined that long distance customers should not be the sold source of local service support. The Act required local telephone companies to reduce their intrastate access rates to more closely reflect the actual costs of providing access service. In turn, long distance companies were required to flow these reduced access costs to their customers through reductions in long distance rates.

Before the 1996 Act, Sprint recovered its costs of doing business in Kansas from primarily five sources:

- 1) About 31% of Sprint's costs were recovered from local telephone service revenue.
- 2) About 42% of Sprint's costs were recovered from access charges.

- 3) About 1% of Sprint's costs was recovered from long distance services.
- 4) About 6% of Sprint's costs were recovered from miscellaneous services.
- 5) About 20% of Sprint's costs were recovered from the Federal Universal Service Fund.

By reducing its intrastate access rates to interstate levels (which the 1996 Act required), Sprint lost more than \$14 million in revenue that was needed to cover its costs of providing local service.

The 1996 Act told the Kansas Corporation Commission to allow Sprint to recover this lost revenue in one of three ways:

- 1) By increasing local rates.
- 2) By receiving revenues from a Kansas Universal Service Fund.
- 3) Or by a combination of local rate increases and revenues from the Kansas Universal Service Fund.

Subsequently, the Commission determined that the state universal service fund should be the primary source for recovery of these lost revenues. In this way, local service rates would not be raised. All telecommunications users – not just long distance users, as had historically be the case – would support the universal availability of low

cost local service through the assessment of surcharges for the state fund.

Senate Bill 290 would deny Sprint recovery of most of its lost access revenues that resulted from the 1996 act. Granted, the legislative proposal says these lost revenues will be restored if Sprint can produce studies showing that these lost revenues are actually needed to cover costs. But this is like saying Sprint is guilty until proven innocent. In addition, the legislative proposal sets no deadline for the Commission to make such a determination or the costing standards to be used. And while the Commission deliberates, regardless of the outcome, Sprint's cash flow is disrupted. Its investors will bear the costs of short-term borrowing because the company's cash needs can not be internally generated.

Sprint does not understand why such a draconian measure is needed. The Commission is already conducting proceedings to establish the costs of providing basic local service. In fact, a schedule for concluding the proceeding was published earlier this month. It appears from the schedule that the Commission will have ample time to make its findings before the end of the year.

It is my understanding that the Commission staff authored the proposed changes to the 1996 Act. In a staff analysis of the proposal, two problems are identified:

- 1) "The KUSF is inflated because it is based on the revenue neutral concept."



- 2) "LECs (local exchange carriers) have no incentive to file cost information with the Commission."

I want to make very clear that Sprint has participated fully in Commission cost proceedings that affect us. We have never been reluctant to file data that has been requested of us. We are just as eager as you and the Commission to fully implement the policies contained in the state and federal acts. If the Commission wants a cost study for local service, we're prepared to provide it. There is no need to place "onus" on Sprint for the submission of cost study information, as the staff suggests to you in its report.

What concerns me is that the Commission staff has prejudged the outcome of the cost studies by declaring in its analysis that the current KUSF is inflated. If Sprint were to file a cost study today, our preliminary estimate is that we would ask for state local service support of \$20.5 million. This estimate was developed on a forward looking, least-cost basis adopted in other states and the methodology recommended by the Federal-State Joint Board.

The final concern I need to raise is that the severe reductions in KUSF revenues applies to only price cap companies. Sprint is one of only two price companies in this state. But on the basis of costs, we are much more like the non-price cap carriers. With the exception of Junction City, we serve rural, high-cost communities. And like most of the non-price cap companies in Kansas, we receive high cost support from the Federal Universal Service Fund. Simply put, Senate Bill 290 discriminates against Sprint simply because of its election of price cap regulation, not because of its cost characteristics.

As I have said, Sprint is just as anxious and eager as you are to bring closure to these issues. Until we do, the Kansas Universal Service Fund is going to be a political football. You have already directed the Commission to implement your telecommunications policy. I am urging you not to penalize Sprint and its customers, employees and investors just because the issues are complicated and due process takes time.

I have outline for you what we believe are the major flaws in Senate Bill 290. I would like to quickly conclude with what we think are the intended or unintended consequences if this proposal becomes law.

First, SB 290 would destabilize rates for basic local service. The proposal would so change the rules under which Sprint elected price regulation, that we believe we would have the right to rescind that decision and return to traditional rate of return regulation. General rate cases would be our recourse to recovering lost revenues and higher costs.

Second, SB 290 denies us the ability to recover in a timely and predictable manner our legitimate costs of doing business, which we believe could be interpreted as the un-Constitutional take of their property.

Third, SB 290 would hold us guilty of inflating the Kansas Universal Service Fund until we could prove our innocence, which we believe could be interpreted as a violation of our rights to due process.

Fourth, SB 290 would increase government regulation by returning us to the days when the Commission can challenge the appropriateness

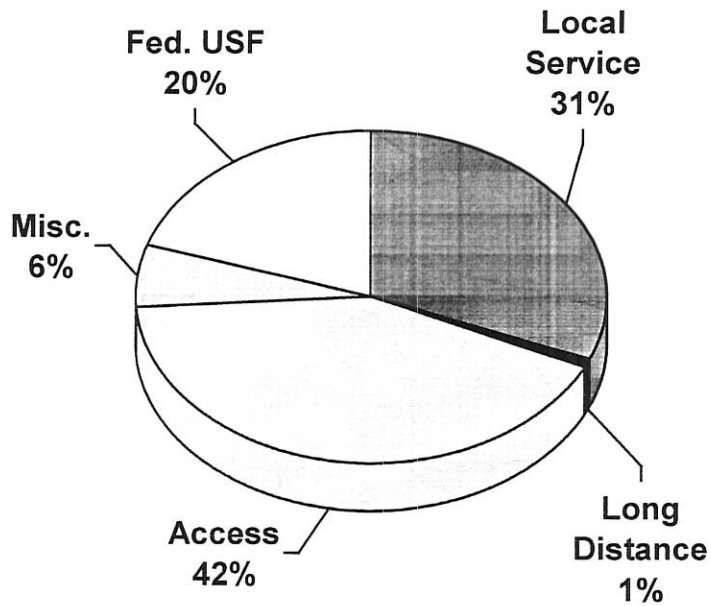
of our earnings at every turn. The result would undoubtedly be an increase in the number of costly and contentious proceedings before the Commission.

And fifth, SB 290 would tell business in general that Kansas is an unpredictable place to invest because policy upon which business decisions are made is every changing.

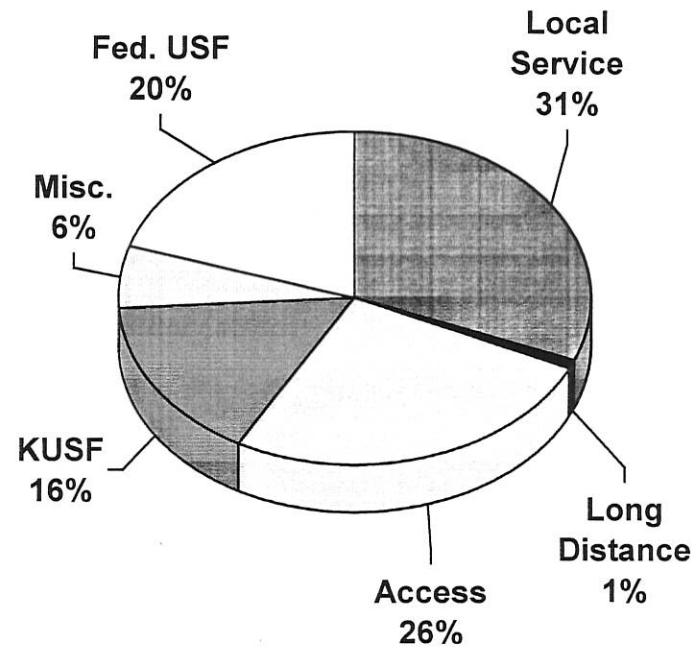
Again, I ask you not to adopted Senate Bill 290. Insist that your regulators implement your policies. But do not penalize Sprint, its customers, it employees and its investors because the issues are complicated and due process takes time.

# Sources of Revenue To Cover Total Costs

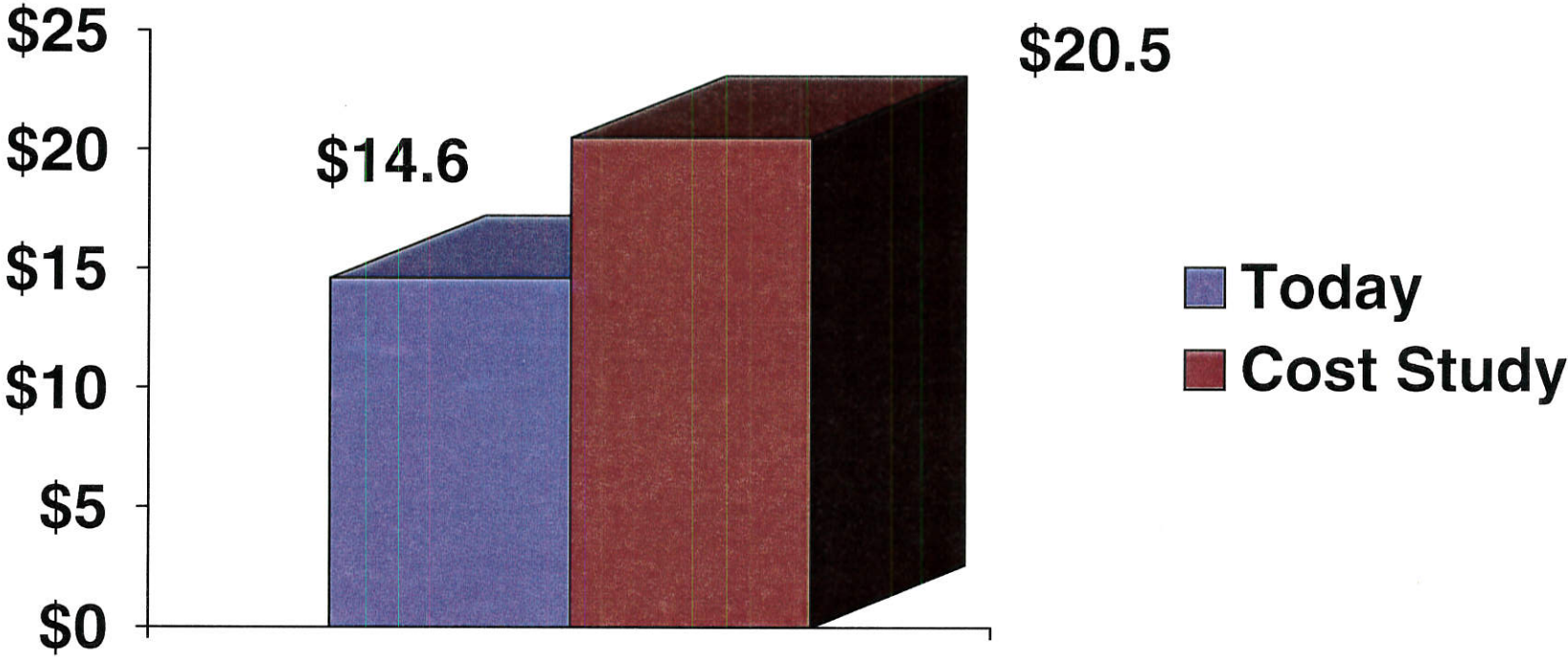
Before  
Kansas Universal Service Fund



After  
Kansas Universal Service Fund



# Sizing the Kansas Universal Service Fund (Millions of Dollars)







# FAX COVER SHEET

Date 1/29/99

The following document, including this cover sheet, consists of 7 pages.

Sent by: Dr. Edward H. Hammond (Rae)

Office of the President  
Fort Hays State University  
600 Park Street  
Hays, KS 67601-4099  
Phone Number: (785) 628-4231  
FAX Number: (785) 628-4013

Fax to: Senator Paul Feleciano  
c/o State Capitol

Fax Number: 785/296-7335

Comments: As per our phone conversations this afternoon. Ed

If you do not receive the total number of pages indicated, please telephone our office number. Otherwise, we will assume you have received this transaction in its entirety.

## CONFIDENTIALITY NOTICE

This transmission is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged and confidential. If the reader of this message is not the intended recipient, you are hereby notified that any disclosure, distribution, or copying of this information is strictly prohibited. If you have received this transmission in error, please notify us immediately by telephone, and return the original documents to us at the above address via the United States Postal Service.

Senate Commerce Committee

Date: 2-17-99

Attachment # 5-1 thru 5-6

11/5/98 Mailed copies to David Heinemann, Dave Ranney - Wichita Eagle, Re,  
Clay Aurand, Rep. Dennis McKinney, Rep. Lloyd Stone, Rep. Dixie Toelkes,  
Sen. Alicia Salisbury, Sen. Jim Barone, Sen. Karin Brownlee, & Sen.  
Paul Feleciano

a:\Kcclet.118



**FORT HAYS STATE  
UNIVERSITY**



COPY

November 4, 1998

Mr. John Wine, Chairman  
Kansas Corporation Commission  
1500 SW Arrowhead Road  
Topeka, KS 66604-4027

RE: Open Docket on Universal Service

Dear Mr. Chairman:

In 1996, Kansas passed one of the most forward looking state telecommunications acts in the United States. The act established three general levels of universal service: 1) lifeline services, 2) "universal service" access for individual users, and 3) "enhanced universal service" which assured a base level of services would be available in every community in Kansas. The Act defined "enhanced universal service" as:

telecommunications services, in addition to those included in universal service, which shall include: Signal system seven capability, with CLASS service capability; basic and primary rate ISDN capability, or the technological equivalent; full-fiber interconnectivity, or the technological equivalent, between central offices; and broadband capable facilities to: all schools accredited pursuant to K.S.A. 72-1101 *et seq.*, and amendments thereto; hospitals defined in K.S.A. 65-425, and amendments thereto; public libraries; and state and local government facilities which request broadband services.

Three years after the passage of this act, we see attempts by some portions of the telecommunications industry to substantially water down Kansas's enhanced universal service. There are three reasons articulated for lowering Kansas's standard: first, ISDN (Integrated Services Digital Network) is an old technology and it should not be required when it will likely be outdated by better technologies; secondly, the current standard requiring fiber between central offices and broadband offerings to schools is too costly; and thirdly, many small communities will never have anyone who will require broadband services, therefore installing such services is wasteful and needlessly places costs on other telephone users. I would like to address each of these arguments.

Mr. John Wine, Chairman  
Page 2  
November 4, 1998

At the time of the 1996 Act, ISDN was one of the better digital techniques for transmitting video and data over copper lines. Today, it is the standard that is being used in two-way desktop video conferencing throughout the Kansas Regents System's Telenet 2 system and for a number of other uses. It is also the method that many Internet subscribers who need speeds faster than local dial-up access are using. ISDN is not a terribly fast or cost effective way of accessing the Internet, but in many areas of Kansas, this is the only means of obtaining speeds faster than 58.8 kbps and in some areas, this is the only option for obtaining speeds of more than 14.4 kbps. In effect, if ISDN or "technological equivalent," is not available, there are whole classes of businesses that cannot operate in rural areas. Currently, the cost of ISDN in some areas of Rural Kansas is more than three times the competitive rate offered in the Johnson County area.

The 1996 Kansas Act does not require the deployment of ISDN. If a telephone company believes that this is an outdated or soon to be obsolete technology, it can install a "technological equivalent." Some independent companies in Kansas are currently offering xDSL options that give customers substantially greater speeds and better technological service than that offered by ISDN (I have attached a summary of xDSL options for your information).

If we look back historically at Kansas telecommunications regulation, we remember that Southwestern Bell initiated TeleKansas and sought to have the Kansas Corporation Commission freeze the company's rates in return for the company's investment in the state's infrastructure. Southwestern Bell sought to extend the freeze on rates under its TeleKansas II proposal and committed to making an investment of \$64 million in the state's infrastructure above its normal investments of \$74 million. This investment was to be over a five year period running from 1994-1999. In 1994-95 era, Southwestern Bell sought first the KCC's and then the Legislature's authorization to move to a permanent price based regulatory status and to permanently leave rate of return regulation behind. The Legislature established the Kansas Telecommunications Strategic Planning Committee (TSPC) which met in 1994-95. During the TSPC process, Southwestern Bell made it clear that if it were "freed" from rate of return regulation, it would be able to invest substantial funding in Kansas, provide a high level of telecommunications service and provide services for a lesser cost. During the 1996 Legislative Session, this was the message delivered by Southwestern Bell. The level of Enhanced Universal Service was a negotiated level reached through compromise and with the support of the local service provider coalition and grassroots players. Many organizations such as educational institutions, cities, and counties supported the 1996 Act because it would give local service providers such as Southwestern Bell, the regulatory structure that the company sought and in return, the local service providers would create the telecommunications infrastructure that Kansas needs.

Mr. John Wine, Chairman

Page 3

November 4, 1998

Today, many of the Kansas independent telephone companies have already invested and installed the Enhanced Universal Service level required in the Act. To retreat from this level will be a breach of faith with these companies. The Enhanced Universal Service requirements in Southwestern Bell's service area should not be financed from the Kansas Universal Service Fund (KUSF) because Southwestern Bell assured Kansas that it could fund these infrastructure investments if released from rate of return regulation. To retreat from the 1996 promises will be a breach of faith with the Kansas people.

If Southwestern Bell is not drawing from the KUSF to fund Enhanced Universal Service, the fund's amount is not forced to grow to politically untenable levels. The argument that Enhanced Universal Service is not politically feasible in Kansas is based upon the premise that the fund would pay for Southwestern Bell's investment. To fund Southwestern Bell in this manner would in effect charge customer's twice - once for the telecommunications prices that currently exist because prices are currently NOT required to drop as they would under rate of return regulation; and secondly through the USF charge levied on customers.

I testified in 1996 that the Act should require fiber to every county seat because of the possibility of more than one lightly populated county (e.g. Scott and Logan Counties) eventually being serviced by a single central office. The Kansas Senate Commerce Committee was assured by Southwestern Bell and other local service provider representatives that this was not necessary. The companies stated that they would certainly want to have fiber to at least the county seat of every county and that this was not a controversial issue. Now, some representatives of both local service providers and Interlata providers are commenting that "there are a lot of little communities out there who will never need fiber or this capacity." It is important to note that Southwestern Bell spokespeople have stated that their company already has fiber interconnectivity between nearly all central switches. Most independent companies also state that they have this in place. The gaps are in some of Southwestern Bell's smallest communities and in Sprint's service area. If we stop now, we write-off these areas for a number of types of businesses, health care, and educational services. Fiber prices continue to drop and we should not have to turn to the Universal Service fund. This investment should be a basic cost of operation for all companies.

The argument that the 1996 Kansas Act requires telecommunications companies to provide broadband services "where they will never be needed" does not hold water. The Act does require that such services will be provided to schools - and a great many schools are using interactive video television and the Internet as teaching tools. The Federal funding of the E-Rate will allow many more schools to afford such services. Over time, very few schools will operate without broadband services if such services are available and affordable.

Mr. John Wine, Chairman  
 Page 4  
 November 4, 1998

The 1996 Kansas Act also requires broadband services to all hospitals. Telemedicine is continuing to gain acceptance. Small hospitals will almost certainly be linked to larger regional facilities for a variety of diagnostic, therapeutic, and administrative services. Arguably, some larger hospitals may not need or want broadband services because they are "stand-alone" operations. However, hospitals are increasingly linking computer systems for billing, linking with suppliers, and a variety of other operations.

Libraries and governmental entities only have to be provided broadband services when requested. It is very clear that if an organization requests services, it has a need for such service at a reasonable price. Providers are not required to build dead-end infrastructure and to leave it sitting without a use.

The final topic that I would like to address is that of Internet access. I believe that Kansas earned a reputation as a national leader when the 1996 Act established a cost-effective way for people who do not have a local Internet service provider to access the Internet for a flat fee. Last legislative session, some telecommunications providers tried to amend the 1996 Act's requirement that flat-rate dialing speeds would increase beyond 14.4 Kbps on or after July 1999. Efforts were made to keep this rate from increasing. The final 1998 Legislation specifies that the July 1999 rate will be decided by the Universal Service Working Group. In today's world, using 14.4 Kbps access to the Internet is akin to traveling a dirt road. It can be used for access, but the access is slow, clumsy, and most businesses cannot locate there. Until we have local Internet access in every telephone exchange in Kansas, we must make certain that we have a mechanism to provide flat-rate dialing at a speed that is at least competitive with contemporary standards.

I thank you for this opportunity to provide the Commission with input and comments on this very important issue.

Sincerely,



Edward H. Hammond  
 President

c: David Heineman, Executive Director

which users primarily download data—whether text, graphics or software—or are accessing city or state services. In all of these cases, the bandwidth of the upstream data flow is far less important than the downstream flow.

ADSL operates in frequencies well above regular phone service, so it does not interfere with the phones, which means no new lines need to be strung into the home. Perhaps more importantly, ADSL lines are not shared. Each household has a unique connection between it and the phone company, making ADSL lines inherently more secure than cable's shared-bandwidth scheme.

VADSL (Very High Data Rate Digital Subscriber Line) started out as ADSL with a shorter distance limitation. In fact, within 1,000 feet of the phone distribution center, it offers speeds faster than 51Mbps. Today, it is more commonly called VDSL because it is expected to eventually deliver symmetrical service. Although VDSL may provide a way for agencies to make very high-speed connections to the Internet, it is unlikely to reach into the average home any time soon. However, in the immediate future, its speed will not be needed in the home where 1.5Mbps to 6Mbps is adequate for most applications.