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July 1, 2002

Secretary
Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102-0360

Re: Case No. TR-2001-65

Dear Sir:

Enclosed please find for filing on behalf of the MITG Companies, an original and eight (8) copies of the Direct Testimony of Kent Larsen. A copy of this letter and a copy of the enclosed Testimony has been served upon all counsel of record.

Thank you for seeing this filed.

Sincerely,

Craig S. Johnson

CSJ:tr
Enc.
cc: MITG Managers
Kent Larsen
Office of Public Counsel
General Counsel
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James M. Fischer
Mary Ann (Garr) Young
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Exh. No. _____
Issue: Investigation of Exchange Access Costs
Witness: Kent Larsen
Type of Exh. Direct Testimony
Sponsoring Party: MITG
Case No. TO-2001-65
Date Prepared: July 1, 2002

BEFORE THE PUBLIC SERVICE COMMISSION

STATE OF MISSOURI

In the Matter of an Investigation of the Actual Costs Incurred in Providing Exchange Access Service and the Access Rates to be Charged by Competitive Local Telecommunications Companies in the State of Missouri.	)))))	**Case No. TR-2001-65**

DIRECT TESTIMONY

of

KENT LARSEN

on behalf of

THE MISSOURI INDEPENDENT TELEPHONE GROUP

July 1, 2002

Exh. No. _____
Issue: Investigation of Exchange Access Costs
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BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of an Investigation of the Actual Costs Incurred in Providing Exchange Access Service and the Access Rates to be Charged by Competitive Local Telecommunications Companies in the State of Missouri.	)))))	**Case No. TR-2001-65**

AFFIDAVIT OF KENT LARSEN

STATE OF OKLAHOMA)
) ss.
COUNTY OF TULSA)

Kent Larsen, of lawful age, on my oath states, that I have participated in the preparation of the foregoing testimony in question and answer form, consisting of _____ pages, to be presented in this case; that the answers in the foregoing testimony were given by me; that I have knowledge of the matters set forth in such answers; and that such matters are true to the best of my knowledge and belief.

Kent Larsen

Subscribed and sworn to before me this 25th day of June, 2002.

Teresa S. Broughton
Notary Public #00019458

My Commission Expires: 11/22/04

Q. Please state your name and your business address.

A. My name is Kent Larsen and my business address is 1000 Vermont Ave, NW, 10th Floor, Washington DC. 20005

Q. By whom are you employed and in what capacity?

A. I am a Senior Communications Consultant with Bennet & Bennet, PLLC assisting small and rural LECs in financial and regulatory matters.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Missouri Independent Telephone Company Group (MITG). The MITG consists of seven rural high cost small Incumbent Local Exchange Carriers (ILECs), being Alma Telephone Company, Chariton Valley Telephone Corp., Choctaw Telephone Company, Mid-Missouri Telephone Company, MoKan Dial Inc., Modern Telecommunications Company, and Northeast Missouri Rural Telephone Company.

Q. Have you testified before the Missouri Public Service Commission before?

A. Yes, I have testified before the Missouri Public Service Commission (Commission) in previous cases. Recent cases in which I have testified include TO-99-593 concerning the terminating traffic protocols to be utilized between former PTCs and former SCs after termination of the PTC Plan, and TO-98-329 concerning the

establishment of the Missouri Universal Service Fund. I have also testified before the Oklahoma Corporation Commission on numerous matters.

Q. Please outline your professional qualifications.

A. I have provided consulting services for over 18 years. Since June 2001 I have been employed by Bennet & Bennet, a law firm that provides legal and telecommunications consulting services to telecommunications companies. From October 1998 until March of 2001, I was a partner with Beacon Telecommunications Advisors (formerly Harris, Skrivan and Associates). Prior to that, I was employed by CHR Solutions (formerly Cathey, Hutton and Associates) from 1986 until October 1998. I was primarily involved in the provision of regulatory and financial advice, leaving as Director of Federal Regulatory Services. From 1984 until 1986, I was employed by JSI, Inc. I am 1982 graduate of the University of North Texas with a Bachelor of Business Administration degree.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to review the Commission's previous orders in this case, review the scope of the Missouri Commission's control over the results of the cost studies prepared in this case, to set forth the positions of the MITG companies relating to intrastate access costs and rates, to respond to the cost studies and report

prepared by Staff's consultant and to explain and support the cost study prepared by MITG and Small Company Telephone Group (SCTG) ILECs.

Q. Please briefly review the history of this case.

A. Prior to opening this docket, the Commission was addressing a "standard stipulation" required of Competitive Local Exchange Carriers (CLECs) in their Certificate of Authority that limited CLEC access charges to the lowest rates in effect in the service area of the incumbent with whom the CLEC was competing. The Commission, concerned that this language might be a barrier to market entry and might be anticompetitive, opened a case (TO-99-596) to investigate these issues. The Commission concluded that such a stipulation may indeed constitute a barrier to entry and/or was anti-competitive. The Commission decided that additional information was necessary to address CLEC access charge issues leading it to issue an Order establishing Docket TR-2001-65 on August 8, 2000. The first paragraph of this Order states:

> "The Commission hereby establishes a case in which to investigate all of the issues affecting exchange access service, including particularly the **actual** costs incurred in providing such service, in order to establish a long-term solution which will result in just and reasonable rates for this service." (August 8, 2000 Order at 1, Emphasis added)

In response to requests for clarification on March 14, 2002, the Commission issued a Clarification of the Scope of this Proceeding in this docket and stated:

"The purpose of this proceeding is "to investigate all of the issues affecting exchange access service, including particularly the **actual** costs incurred in providing such service, in order to establish a long-term solution which will result in just and reasonable rates for this service." The Commission believes that this statement is clear. To the extent that access rates are an issue, this case includes that issue.

Note, however, that the Commission's intention is simply to investigate all issues. "Investigate" implies the gathering, compilation and analysis of data, which is exactly what the Commission has directed its Staff to do. Questions as to the Commission's authority to modify the access rates of price-cap regulated ILECs and rate-of-return regulated ILECs are thus premature. The Commission has not, so far, announced any intention to do those things.

This case derives from an earlier case which established an interim cap on CLEC access rates. An express purpose of this case is to gather the information necessary to replace the interim rate cap with a permanent solution." [Emphasis Added]

The Commission directed its Staff to prepare the necessary cost studies. It authorized Staff to hire a consultant, Ben Johnson and Associates (BJA) to assist Staff in its efforts. The Staff and its consultant issued data requests to all carriers certificated to provide local service in Missouri. MITG and SCTG ILECs responded to the data requests, providing Staff and its consultant with the data requested. The telecommunications industry including MITG and SCTG companies and their representatives were invited to discuss the issues in this case. Data requests as well as the Staff consultant's cost study approach were discussed via conference calls and correspondence. It was decided that carriers would be free to introduce their own cost studies into the record in this proceeding. Staff's consultant produced a draft cost study for comment followed by its final cost study results on June 1, 2002. I would note that I was notified on June 24, 2002 that the final

cost study was corrected and I have not been able to incorporate those changes in this testimony but will address any substantive issues in my rebuttal.

Q. Has the Staff or its consultant produced an actual cost study required by the Commission?

A. No. Staff's consultant has produced a cost study that represents costs that are hypothetical, not actual.

Q. Mr. Larsen, please elaborate the on the definition of "actual" costs that are the subject of this proceeding?

A. The Commission ordered an examination of "**actual** costs incurred in providing [exchange access] service" [emphasis added]. Webster Collegiate Dictionary, 4th Edition defines "actual" as "existing in reality or in fact; not merely possible, but real". Theoretical or statistical costs are not actual costs. Even if I agreed, which I do not, that any of the variations of "costs" produced by the BJA Model could be interpreted as an appropriate cost standard for exchange access service, they are not "actual". For example, the BJA Model identifies Total Service Long Run Incremental Cost (TSLRIC). The BJA Model defines TSLRIC as the "additional cost of producing a particular item, assuming a common production process in which all other items would be produced in any event." The BJA TSLRIC study focuses on the variable cost of providing intrastate exchange access service since the network facilities used to provide intrastate exchange access

service would be required for all other service, even if intrastate exchange access service was not provided. The BJA model applies this theoretical approach to the sub-elements of exchange access costs excluding loop costs. Even if the Commission determined that TSLRIC reflected an appropriate cost standard, TSLRIC costs produced by a model or through any other statistical technique would not qualify as "actual" TSLRIC. Only an examination of an individual carrier's costs can determine what that carrier's actual TSLRIC costs are. A model produces answers that are "merely possible", not actual.

Q. You referred to "sub-elements" of exchange access service costs. Would you please identify and describe those sub-elements for the Commission?

A. Certainly. The telephone network is comprised of sub-elements according to both their function and according to traditional pricing mechanisms that attempt to match each sub-element's function with its cost, where its cost is then matched to exchange access rates. In terms of the physical network, beginning with the customer, connectivity to the network is accomplished using loops, the physical copper or fiber optic cables running from the customer's home or business to the telephone company switch. At the switch, the loop then connects to a line termination device, the interface between loops and the switch. The switch is a device that connects loops to each other, in the case of a local call between subscribers served by the same switch, or between a loop and a trunk, in the case of a toll or interexchange call. Trunks are high capacity cables that connect switches to

each other. In some cases, specialized switches called tandem switches connect only trunks to each other in order to gain further network efficiencies.

Turning now to the costs and rates associated with the physical sub-elements of the network, since loops carry all traffic types, i.e., local or toll, on a common, shared facility, loops are referred to as "Common Line" costs when expressed as elements of exchange access cost and rates. In addition, since loops are necessary for any or all telephone traffic, common line costs are also sometimes referred to as "non-traffic sensitive" since a carrier does not incur additional costs due to increased use of the loop.

The next cost and rate sub-element is the "Line Termination" element, representing the device I identified earlier. Some argue that line termination costs are also non-traffic sensitive since the devices are fixed and common in the same manner the loops they attach to are fixed and common. These arguments are generally consistent with the issues associated with Local Switching costs that I will describe next.

The next sub-element is called "Local Switching". Most parties agree that Local Switching costs are partly non-traffic sensitive and partly "traffic sensitive", or variable depending upon the volume of traffic the switch handles. Since some portion of the switch is required to provide the "first" service even if additional or incremental services were not provided, some argue that an associated portion of local switching costs and

rates, including Line Termination, should be characterized as non-traffic sensitive. For example, Staff's consultant refers to this portion of Local Switching cost as the "Getting Started" cost. The difficulty in refining this argument too finely is the struggle to correctly identify and separate the non-traffic sensitive cost from the traffic sensitive cost of Local Switching.

When customers make calls destined to a switch different from the switch that serves them, use of a trunk is necessary. Trunks connect to the switch with trunk ports, physical devices conceptually similar to line termination devices. However, as traffic volumes between switches increases, more trunks and associated ports are necessary to provide reliable, unblocked service. At this point, these traffic sensitive costs and rates are referred to as "Transport" costs and rates. Since trunks can be connected to each other at a tandem switch, tandem costs and rates are also included in the transport sub-element. Transport trunks are often interconnected between carriers' networks at a physical location between the carriers' switches at a location referred to as a "meet-point". Transport is billed based upon the total miles between two interconnection points, even if more than one carrier is providing the physical facilities. The transport rates of each are applied to their respective portions of the physical network, expressed as miles or mileage bands, on a pro rata basis referred to as "meet point billing". For example, if Carrier A provides 55% of the transport network and Carrier B provides 45%, Carrier A applies its

Transport rate to 55% of the total miles between Carrier A and Carrier B while Carrier B applies its transport rate to the remaining 45% of the total miles in its billing.

Q. Mr. Larsen, is the complex arrangement you have just described necessary?

A. Yes. In some cases, interconnected carriers may choose to interconnect with each other at various interconnection points within the network. Rather than a single access rate, the system allows carriers to avoid certain of the sub-elements by providing the function on their own. Some long distance carriers have avoided some transport costs by providing their own trunks rather than using those offered by the local carrier though, even if a carrier provides its own transport sub-element and avoids transport rates, virtually all interconnected carriers rely upon local switching, line termination and common line access elements provided by LECs.

Q. You mentioned a difference between traffic sensitive and non-traffic sensitive costs and rates. Would you please describe the issues associated with the distinction between these types of costs?

A. Yes. Common line cost represents the largest class of cost a local telecommunications provider incurs for any and all services. Some carriers believe these cost should not be included in exchange access service rates since they are not traffic sensitive. Carriers that take this position advocate a pricing scheme where local ratepayers would be required to pay for the entire cost of common line facilities (loop and

line termination) and perhaps a large percentage of the local switch that is considered non-traffic sensitive as well. The theory they advance is that local access "caused" these facilities to be built, these costs do not vary with the use of these facilities when exchange access service is provided and therefore the advocating carriers should be provided access to these facilities for free.

Q. Do you agree with the position taken by carriers that local customers should pay for the entire cost of common line facilities?

A. Absolutely not. These carriers use the facilities and should be expected to pay for their use, regardless of the carriers' cost of service theories. Perhaps even more important, Congress agrees. Section 254 of the Telecommunications Act of 1996 generally addresses universal service policy. Section 254(k) specifically outlines an obligation that all services using common facilities shall contribute to those facilities' costs. Citing Section 254(k) in its entirety:

> **SUBSIDY OF COMPETITIVE SERVICES PROHIBITED**
> A telecommunications carrier may not use services that are not competitive to subsidize services that are subject to competition. The Commission, with respect to interstate services, and the States, with respect to intrastate services, shall establish any necessary cost allocation rules, accounting safeguards, and guidelines to ensure that services included in the definition of universal service bear no more than a reasonable share of the joint and common costs of facilities used to provide those services.

Congress' intent is clear – in order to prevent an illegal subsidy and consistent with MITG's position in this case, the States are required to establish (or maintain) intrastate cost allocation rules and associated rates to insure that intrastate services that use joint

and common facilities in the provision of competitive services bear a reasonable share of the joint and common costs. Section 254(k) is at the heart of MITG's belief that IXCs must pay for their use of common line facilities, and access charges are the most reasonable rate design to accomplish this requirement. In other words, IXCs are not permitted to get a "free ride" to use common network facilities.

Q. Regardless of the competing calculations of "costs" introduced into the record in this proceeding, what would be the practical impact of this information?

A. Although I acknowledge and understand that the Commission made plain its intent in its Clarification of the Scope in this proceeding reminding the parties that, at this time, it is only investigating exchange access service costs, in fact exchange access service rates must be discussed to some limited extent. As an initial matter, exchange access costs are most meaningfully compared when expressed as rates per comparable unit, i.e. minutes. The Commission will discover that the majority, if not all, parties in this case will describe exchange access costs in terms of rates per minute.

The record in this proceeding is also clear that the issue that generated the investigation of exchange access costs is the appropriate treatment of CLEC access rates. It also appears that the initial issues of the predecessor docket were limited to those cases where CLECs that compete with price cap ILECs had been charging exchange access rates in excess of rates of the incumbent. It is my opinion that the "standard stipulation" that CLEC rates

not exceed those of the ILEC would not be an issue in MITG and SCTG service territories where current exchange access service rates are in many cases higher than those charged by price cap ILECs. If my belief an accurate portrayal of current market dynamics, and if CLECs believed they could provide an entire basket of services to customers including exchange access at a lower cost or rate, then I believe they would be building facilities at lower costs and charging lower rates in order to accomplish just such a result. Essentially, CLECs would "compete the subsidy away" through a competitive advantage that reflected their non-subsidized lower costs. In fact, CLECs are not doing this for many reasons, not the least of which must be the conclusion that they could not duplicate the existing network in rural areas any cheaper than it has already been accomplished by the incumbents. The "subsidy" issue is nothing but an excuse to support an IXC position for reduced access rates in exchange for higher local rates. Therefore, to the extent the Commission must continue to wrestle with the issues in this case, the issues have not arisen in the case of MITG ILECs, and even if they should arise in the future, the general rule embodied in the "standard stipulation" is likely to be moot.

Nevertheless MITG understood that a primary purpose of this case was to examine on a uniform basis, the exchange access service costs of all LECs in Missouri. With a uniform "apples to apples" comparison of actual costs, the Commission may have been better able to examine the relative costs of large ILECs compared to small or rural ILECs and further, to examine an appropriate cost and rate structure for CLECs competing in any

exchange in Missouri. The Commission would also have had the opportunity to review the often-heard complaints that the exchange access service rates of the small ILECs are excessive. These complaints most often center upon the observation that carriers serving high cost areas charge higher access rates than those carriers serving primarily low cost areas with statewide averaged rates and calling such a cost differential a "subsidy". Unfortunately, Staff's consultant has not produced such a study, but instead has utilized different methods and data sources for different companies.

Even if an examination of ILEC access costs leads to an order impacting access rates, Commission authority would be limited to the rates charged by rate of return ILECs and then only in the context of a rate case where all relevant factors can be considered. It is questionable if the access rates of the price cap ILECs, serving the overwhelming majority of Missouri access lines, can be adjusted by this Commission. Furthermore, as I will demonstrate later in my testimony, the BJA cost study presents inconsistent and potentially unreliable results purported to represent the cost to provide exchange access service in Missouri. Even if the Commission were to rely upon the results presented by Staff, the information may be of no use for rate making for the vast majority of ILEC access lines served by price-cap ILECs, and of little use in an investigation of the cost to provide exchange access for rate of return ILECs.

Q. Please state the MITG position regarding access costs and rates.

A. MITG believes that should the need arise, the Commission currently has the authority to investigate MITG ILEC access rates. In that case, a consistent application of cost allocation rules should be applied to all exchange access providers subject to Commission rules. MITG believes that existing cost allocation rules as codified in CFR 47 Parts 36 and 69 provide the consistent, well-recognized cost allocation procedures suitable for such an investigation into MITG access rates. These procedures are generally accepted as the method to allocate costs and develop access charges, are based on actual, audited costs, have been used for many years and continue to be used by both the federal and state jurisdictions for MITG ILECs. The procedures were specifically designed to permit a reasonable allocation of actual costs and associated rates that support numerous public policy goals. However, in any investigation of access rates, the Commission must ensure that all intrastate rates are just and reasonable, that MITG LECs are afforded an opportunity to recover total intrastate costs, and that intrastate revenues provide a fair and reasonable return on the investment required to provide all intrastate services. Such a process would require an examination of local rates as well as access rates. In that case, the Commission would have to balance the needs of local ratepayers with the needs of exchange access ratepayers. Thus, while an examination of exchange access costs may be useful, using the findings of such an examination to determine access rates cannot be performed in a vacuum.

Q. Mr. Larsen, should the need arise and the Commission continues its investigation of the exchange access service costs and rates of MITG ILECs consistent with your belief that accounting records are the only basis for determining "actual costs" and furthermore the Commission is bound by its obligation to examine all intrastate costs and rates, how should the Commission deal with the exchange access rates of the MITG ILECs?

A. The Commission should seek a balance between the competing interests of local and exchange access ratepayers. The first issue, should the Commission reduce access rates in general, is whether or not Missouri's end users will benefit from reduced toll rates as a result of access savings passed to IXCs. Should access rates be reduced, absent the establishment of a new rate design mechanism, the sole remaining existing rate design element to recover intrastate costs is local rates. The Commission exercises little authority over the rates charged by IXCs and IXCs have resisted committing to reducing toll rates in rural service areas should access rates be reduced. If, rather than simply reducing access rates, a new rate design element is created, generally there are two alternatives. One is to impose a separate flat-rate charge, referred to as a Subscriber Line Charge (SLC) in interstate rate design, to replace reduced access revenues. A SLC is functionally equivalent to a local rate increase and would potentially need to be very high in the case of many small, rural, high cost local telecommunications carriers. The other rate design mechanism to consider would be a high cost component of the recently created Missouri Universal Service Fund. The Commission is aware of the costs and rates

associated with this alternative. In any event, local rates would increase, no matter how they are clothed, and there would be no assurance that consumers would benefit from reduced toll rates.

Q. Besides issues associated with Commission authority over ILEC access rates, what other issues should the Commission be made aware?

A. I believe the most practical issue is one of scale – the access rates of the MITG LECs are a very small portion of an IXC's total costs to provide toll service in Missouri. Whether measured by lines, minutes of use, IXC access costs, or revenues, MITG LECs are quite insignificant in the relevant measurements of the industry's financial arrangements that are the subject of this case.

Finally, and as I will discuss later in my testimony, the methods chosen by Staff to determine exchange access costs are at best an intellectual curiosity but cannot become the basis for developing access rates in Missouri.

Q. What is your understanding of the purpose of the cost study prepared by staff consultant BJA?

A. As my testimony indicates, it is my belief that the Commission seeks an unbiased, empirical method to identify the "actual" cost to provide exchange access in Missouri. I also believe the Commission Staff, through its consultant, may have sought to prepare a

cost study separate from the costs identified through the accounting records of local telecommunications providers in Missouri. It is MITG's position that the accounting records of its members identify the actual cost incurred to provide exchange access service. As the case progressed, unfortunately it became clear that numerous biases could be introduced into the effort thus reducing or eliminating the unbiased cost analysis I believe the Commission was seeking.

Q. Please discuss your general concerns with the BJA cost study approach relative to your understanding of the Commission's objective in this case.

A. I have testified that I believe the Commission's order requires an investigation of "actual" costs. Staff and its consultant have apparently interpreted this aspect of the Order differently and have produced a cost study based upon statistical models. A cost study based upon actual costs is not being presented by BJA. As documented in BJA's May 30, 2002 report prepared on behalf of the Missouri Public Service Commission Staff (BJA Model), loop costs are developed for all ILECs using the FCC Model (also referred to as the HCPM/HAI Synthesis model) but traffic sensitive costs are not developed with this consistency. While all parties are invited to produce their own cost studies, I am concerned that several ILECs provided their own traffic sensitive costs, either in total or by providing the data used in the BJA Model. BJA accepted SWBT's SPICE model for transport costs, Sprint submitted the Sprint Service Cost Model Transport Cost Module, and Verizon / Century provided Verizon's Integrated Cost Module. Each of these ILECs

also provided their own data to calculate switching costs. If the Commission's objective was an "apples to apples", objective analysis of exchange access costs, the BJA model does not meet this objective.

Q. If you are concerned that large ILECs are providing their own cost studies in total or at the least controlling the inputs used in the BJA model, why are the MITG LECs supplying their own cost studies as well?

A. The MITG and SCTG ILEC cost studies reflect actual costs in compliance with the Commission order. The MITG LECs believe the record in this case must include MITG LECs' actual costs using current accounting records and well-established cost allocation standards. Part 36 cost allocation methods are consistent with the Commission's approach to earnings investigations as applied to various Missouri ILECs since divestiture.

Another purpose in providing the Commission with MITG ILEC costs as described above is our concern with the BJA Model development of TSLRIC for all ILECs. It is important for the Commission to understand that TSLRIC is not an appropriate standard for developing exchange access costs, the subject of this investigation. Even though TSLRIC is a cost standard for local interconnection, neither the Telecommunications Act of 1996 nor FCC rules implementing the Act require TSLRIC as the cost standard for interstate

exchange access rates. To my knowledge no state commission has used TSLRIC in the development of intrastate exchange access rates.

Q. Of what value is the TSLRIC cost data included in the BJA Model?

A. Even though TSLRIC is not an appropriate cost standard, the BJA Model includes "TSLRIC" results alongside "Stand-Alone", "Average Pro Rata" and "Average Weighted" costs. Turning to "Stand Alone" costs, it appears that this analysis is provided along with TSLRIC to demonstrate extremes in the analysis of costs. Just as TSLRIC is not useful other than as an interesting analysis, the Commission should view "Stand Alone" costs in the same manner. Neither should form the basis for future decisions in this case, if any, regarding exchange access rates.

Q. Compared to current exchange access cost elements and associated rates, are you concerned with the BJA Model's costs and associated rates by element?

A. Yes, I am. Although the BJA Model results under the two "Average" methods appear to be close to the results produced by the cost studies submitted by the MITG and SCTG ILECs, the devil is in the details. The BJA Model attempts to predict loop costs using the FCC Model. Compared to current costs and rates, the FCC Model generally appears to be predicting higher loop costs than the actual loop costs of the small ILECs. Conversely, predicted traffic sensitive costs appear to be lower than the costs submitted by the MITG and SCTG ILECs.

Q. Why should the Commission be concerned with common line costs and rates?

A. The Commission should be concerned with common line costs because these costs represent the majority of costs of a typical LEC, especially MITG ILECs. As the largest cost element in exchange access services, common line costs and rates represent the focus of much debate between interconnected carriers. IXCs argue that most, perhaps all, common line costs should be recovered from end users directly rather than through current methods that assign some common line costs to exchange access paid by IXCs. Existing requirements that the Commission must consider all intrastate costs when reviewing an ILEC's rates should lead to the conclusion that reductions in one rate, e.g. common line exchange access rates, can only result in higher direct charges to end users. These higher charges might be local rates, subscriber line charges or perhaps establishment of a Missouri Universal Service Fund that includes a High Cost Fund element with a surcharge assessed to end users. In any case, these charges assessed directly to end users will, from a consumer's perspective, likely appear to be "local" rate increases with no guarantee of equivalent reductions to toll rates.

Q. Do you have other concerns with the BJA Model's use of the FCC Model to develop loop costs?

A. Yes. The FCC Model was originally conceived as an analytical tool to determine forward-looking, economic cost to provide the services supported under the Federal

Universal Service program at an exchange level of detail. This was an issue since ILECs do not typically maintain accounting records at the exchange level. Throughout the multiple iterations of its development as an analytical tool, many parties believed it would be useful as an unbiased source of hypothetical cost data for USF purposes. After an enormous effort, the FCC ultimately determined that its usefulness was limited to an identification of the relative costs to serve differing service areas, e.g. urban, suburban or rural exchanges. Thus, the FCC Model is not applied directly to assign loop costs for interstate access charges or even Federal USF payments at an exchange level. Federal application of the FCC Model for USF purposes is limited to allocate costs determined at a study area level for distribution to the underlying exchange areas included within the study area for price cap ILECs. MITG ILECs are not price cap carriers and thus the FCC Model does not apply in the development of their USF. It is my opinion that the FCC Model has some limited usefulness to examine relative common line costs by exchange but only if compared to total actual costs. When used in this manner, the FCC found its cost model useful to distribute limited Federal USF funds to price cap ILEC exchanges based upon the theoretical relative costs of the exchanges included in the total calculation.

Q. Mr. Larsen, referring to the BJA Model's Traffic Sensitive cost results, do you believe these results are reliable enough to achieve the Commission's goals as outlined in the Orders in this case?

A. No, I do not. The lack of statistical confidence in the data suggests that the BJA Model's ability to predict exchange access service costs is limited at best. The primary limitation is the use of a single variable, access lines, to predict switch costs. Switches are complex devices with costs based upon numerous variables including government required capabilities, shorter useful lives, limitations in availability and vendor support, frequent software upgrades and changing market conditions.

The BJA Model used a linear regression technique to predict MITG ILEC Traffic Sensitive costs. When performing a linear regression analysis, the reliability of the predicted results can be demonstrated by the "R Squared" value and the value of the "Standard Error". R Squared is a value between 0 and 1.00. The higher the R Squared value, the better the predictive ability of the regression analysis thus an R Squared value of .95 (or 95%) is considered very reliable. In the case of the BJA Model, the statistical summary of the analysis, including the R Squared Values for the Rural ILEC's Traffic Sensitive costs are as follows:

SUMMARY OUTPUT			
Measure	Line Termination	Gettting Started	Traffic Sensitive
Regression Statistics			
Multiple R	97%	73%	81%
R Square	94%	53%	66%
Adjusted R Square	93%	52%	66%
Standard Error	66,052	587,824	45,131
Observations	63	63	57

As the data indicates, the BJA model appears reliable in predicting Line Termination costs, based on an R Square value of 94%, representing a very high level of confidence

that Line Termination costs are related to access lines. This appears to be a reasonable result since the Line Termination element represents the cost of the devices that attach customer loops to the main switching device.

For the other cost elements, Getting Started and Traffic Sensitive, the R Squared values drop to 53% and 66%. I believe these lower values indicate that predicting Getting Started and Traffic Sensitive costs is significantly more complex than a relationship based on access line counts would suggest. The low R Squared value for Getting Started cost - only 53% - means the BJA Model is only 53% "confident" that its prediction of Getting Started cost should be considered reliable by the Commission. Likewise, the BJA Model may be unreliable for estimating Traffic Sensitive costs with an R Squared value of 66%.

I also summarized another measure addressing the BJA Model's ability to predict Local Switching "Getting Started" costs. While the BJA Model's inability to predict Getting Started costs is consistent for the majority of the 63 exchanges sampled, for illustrative purposes, I chose the smallest, the largest and an average exchange from the 63 exchanges sampled by BJA and used in the regression analysis to predict MITG ILEC "Getting Started" Costs.

1	2	3	4	5
Lines	SCIS GSI	Regression GSI	Difference	% Difference
430	118,094	70,849	(47,245)	-40%
6,808	856,921	677,178	(179,743)	-21%
30,614	2,276,116	2,940,314	664,198	29%

In the table above, three exchanges with 430, 6,808 and 30,614 lines are modeled. In column 2, the SCIS statistical output predicted getting started costs as shown. In column 3, using the statistical output from the BJA model, I calculated what the model predicted for each of the exchanges. Column 4 and column 5 show the differences between columns 2 and 3 as dollars and percentages. Column 5 demonstrates that for these three sampled exchanges, the values predicted by the regression analysis (-40%, -21% and + 29%) are significantly different than the values predicted by the SCIS statistics.

Q. Besides the lack of reliability, are there other problems with the BJA Model's approach to predicting exchange access costs?

A. Yes. The switching cost data provided by Sprint, Verizon and Century used as input to Telcordia's Switch Cost Information System (SCIS) produced a statistically-derived prediction of switching costs that in turn became the basis for additional statistical analysis in developing the MITG LECs switching costs. In other words, the output of the statistical model predicted for large ILECs becomes the **input** for a new and different statistical model that attempts to predict costs for small, rural ILECs. Using

predictions to generate yet another set of predictions cannot be squared with the Commissions directive that "actual" costs are the subject of investigation in this case.

Another concern with the BJA model approach is the absence of suitable data for the development of rural ILEC costs data. Even assuming the BJA Model utilized a consistent approach for all ILEC costs in Missouri, which it does not, or assuming the BJA Model used actual costs as recorded in the books and records of the large companies was the basis for the analysis, which it does not, there is not enough data to accurately predict small ILEC costs. For example, of the sample population of 63 wire centers used to predict rural ILEC costs, the five smallest exchanges included access lines of 430, 1052, 1161, 1621 and 1653. The average of the 63 exchanges in the sample is 6,831. The average MITG exchange size measured in access lines is 506. Even assuming the Commission determined that the BJA Model produced "actual" costs, there is simply not enough statistical data in the BJA Model to provide the Commission with reliable information as related to MITG ILEC costs.

My final concern with the BJA model approach is the use of a single variable analysis to determine rural ILEC switching costs. The BJA model uses access lines as the only independent variable in its regression analysis, yet it breaks switching costs into three components – Getting Started, Line Termination and Traffic Sensitive. Although it is not well documented in the BJA Model supporting documentation, I understand "Getting

Started" costs to mean necessary and unavoidable fixed costs to provide the most elemental functions of a switch regardless of the quantity of access lines (Line Terminations) or trunks (Traffic Sensitive) attached to the basic switching machine. While it is true that smaller exchanges would require smaller "Getting Started" costs, it is my belief that these costs should have been stratified in a "stair-step" analysis since they are not "linear" costs but rather "lumpy" costs. For illustrative purposes only (amounts not necessarily representative):

Exchange Size	Getting Started
Less 1,500 access lines	$200,000
Between 1,500 and 5,000	$375,000
Between 5,000 and 15,000	$600,000

This modeled approach would better reflect the reality of switching costs but still falls short of demonstrating actual costs recorded on the books of MITG ILECs.

Q. Turning your attention to the cost study submitted by the MITG and SCTG ILECs, please describe the approach used in completing this study.

A. The study submitted in support of MITG and SCTG costs is based upon the year 2000 cost study data. It was prepared by individual companies or their consultants and summarized by GVNW Consulting. The methods conform to CFR 47 Part 36 and Part 69

rules as applied to intrastate access costs. With two exceptions, it is consistent with the most recent cost allocation procedures approved by the Missouri Commission.

Changes in allocation procedures since the last time the Commission addressed intrastate cost allocation factors are applied consistently to all cost studies prepared by the MITG and SCTG ILECs and permit the MITG and SCTG ILECs to reflect the interplay between total costs, interstate allocated costs and intrastate allocated costs. The first change, using intrastate Subscriber Line Usage (SLU) factor rather than the frozen intrastate Subscriber Plant Factor (SPF) in the allocation of common line costs reflects a desire to choose factors reflecting actual measurement of use rather than often controversial factors that are designed for other public policy purposes. SLU is a traffic factor representing the relationship of local, intrastate toll and interstate toll use of the network. SPF is a traffic factor based on SLU that assigns relatively more common line costs to toll and access services compared to local services by the application of "weighting" factors to the measured toll SLU factors. In the early 1980s, the FCC "froze" the SPF factor at the then current levels experienced by individual ILECs, then transitioned each ILEC's interstate SPF to a uniform 25%, established as an approximation of the national average SPF at that time. Soon after establishing a frozen SPF, a transition of frozen SPF to the uniform 25% was accompanied by the introduction of the Federal Universal Service Fund to insure that high costs formerly reflected in the SPF calculation and recovered in access charges would maintain interstate revenues for high cost ILECs. These processes insured

that high costs were recovered and IXCs paid their fair share for the use of the common line facilities they used to originate or complete toll calls.

Likewise, the Dial Equipment Minutes (DEM) factor reflects the same philosophy supporting increased allocations to toll and access services DEM is traffic factor conceptually similar to the SLU factor, reflecting measured usage of the switch. Changes to the interstate allocation of local switching costs in the last 15 years has given rise to, first, an increased allocation of these costs to Interstate ("Weighted DEM") and, second, the shift of up to two-thirds of the costs so allocated into USF mechanisms. Weighted DEM multiplied the measured DEM factor by up to 3 times, depending on the total access lines in the serving territory of an ILEC. The difference between measured DEM and weighted DEM was removed from access costs and rates and shifted to another component of the Federal USF. Mathematically, a rural ILEC with less than 10,000 access lines used a multiplier of 3 applied to measured DEM to calculate its weighted DEM. The difference between measured DEM (1 x DEM) and weighted DEM (3 x DEM), or 2/3's of weighted DEM is the proportion of Local Switching costs now recovered via USF rather than interstate access rates. In the cost studies submitted by the MITG and SCTG companies, no such weighting is applied to intrastate access costs, reflecting actual usage of Local Switching facilities and consistent with interstate cost allocation processes.

Q. What are the results of the studies submitted by the MITG and SCTG ILECs?

A. As indicated in the Exhibits attached to Mr. Robert Schoonmaker's testimony, the results of the study suggest that many rural ILECs current exchange access rates are priced lower than current actual exchange access costs would support. Other ILECs current exchange access costs might allow rate decreases in exchange access service. While I am not advocating either exchange or local access rate increases or decreases at this time, the cost data supports the possibility of these results.

Q. Are you recommending to the Commission that it should accept the cost studies prepared by the MITG and SCTG companies as a more accurate estimate of actual costs incurred in the provision of exchange access service?

A. Yes, the Commission should refer to studies that meet its stated objective in this case – actual costs – in any further phases of this case and should reject the results of the BJA Model as non-compliant with the Commission's requirement that actual costs be presented.

Q. Mr. Larsen, please summarize your testimony.

A. My testimony demonstrates that the Staff consultant's cost study does not meet the Commission's stated objective in this case in that it does not develop "actual" exchange access service costs. Even of actual costs were not required, and the

Commission was requesting estimated, modeled or other predictions of the costs in question, as a statistical model, the BJA Model suffers from fatal inaccuracies rendering it nothing more than an intellectual curiosity.

My testimony also cautions the Commission to refrain from using TSLRIC cost standards in the development of exchange access costs or subsequent rates. TSLRIC is not used or useful in developing exchange access costs or rates. The Commission should also proceed with caution when relying upon FCC Model results, used to develop Federal USF support, in an investigation of exchange access costs.

In my testimony, I support the cost studies provided by the MITG and SCTG ILECs as compliant with the Commission's orders in this case, reflecting actual costs recorded on the books and records of the ILECs and assigned to the exchanges access service category using widely accepted cost allocation methods.

Q. Mr. Larsen, does this conclude your testimony at this time?

A. Yes.