

**STATE OF SOUTH DAKOTA**  
**BEFORE THE PUBLIC UTILITIES COMMISSION**

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In the Matter of the Petition of Venture Communications )	
Cooperative for Suspension or Modification of Local Dialing )	
Parity and Reciprocal Compensation Obligations )	TC06-181

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**PUBLIC VERSION**

**DIRECT TESTIMONY OF BOB KEEGER**  
**ON BEHALF OF ALLTEL COMMUNICATIONS**

- 1   **Q:   PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**
- 2   A.   My name is Bob Keeger. I am the Staff Manager Wireless Transport for the Northwest
- 3       area of Alltel Communications, Inc. My business address is 3650 131st Avenue S.E.,
- 4       Suite 600, Bellevue, Washington 98006.
- 5   **Q:   ON WHOSE BEHALF ARE YOU TESTIFYING?**
- 6   A.   I am testifying on behalf of Alltel Communications, Inc. ("Alltel").
- 7   **Q:   WHAT IS YOUR PROFESSIONAL EXPERIENCE IN THE TELECOMMUNICATIONS FIELD?**
- 8   A:   I have 41 years of experience in telecommunications, starting in the wireline industry
- 9       with Illinois Bell in 1966 and then moving to the wireless industry in 1983 to present. I
- 10      have filled various roles in Operations and Engineering but the primary role I have filled
- 11      through my career has been in network design and deployment. I also have represented
- 12      the companies I worked for in various industry/government groups during this timeframe
- 13      including; participating on an FCC working group addressing the need for a Wireless
- 14      NPA, making a presentation to the Department of Justice staff on compliance to Equal
- 15      Access requirements, being on the TIA working group T1X1.2 responsible for

1 developing the technical reference for wireline to wireless interconnection, making  
2 wireless network presentations at APCO (Association of Public-Safety Communications  
3 Officials) state meetings and various state groups on E9-1-1.

4 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES**  
5 **COMMISSION OR OTHER STATE COMMISSIONS?**

6 A: I've not testified before the South Dakota Commission but I have before the Washington  
7 Commission. I was also the wireless representative on an ETC advisory group for the  
8 Oregon Commission and have provided wireless technical presentations to staff members  
9 of several state commissions addressing E9-1-1, numbering issues and wireless networks.

10 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A: The purpose of my testimony is to comment on the transport methods assumed in  
12 Venture's testimony for use in delivering Venture originated traffic to wireless carriers.  
13 Given Alltel's decision to support two direct points of interconnection, it must be  
14 assumed that some other wireless carrier will demand the traffic routing and delivery  
15 scenarios advanced by Venture – a scenario not likely given the reality of wireless  
16 industry.

17 **Q: PLEASE SUMMARIZE YOUR UNDERSTANDING OF THE THREE ROUTING SCENARIOS**  
18 **DESCRIBED IN MR. THOMPSON'S TESTIMONY AND WHAT IS REPRESENTED IN EXHIBIT**  
19 **LDT-D-6.**

20 A: In general, the transport choices assumed by Venture are not designed to provide a cost  
21 effective solution to meet the call delivery obligations they have identified and attempt to  
22 analyze. In fact, Venture's approach of using dedicated carrier specific one-way circuits  
23 for delivery of traffic to wireless carriers may be the most expensive solution one could  
24 assume. The Venture assumed network design is so unrealistic and impractical that I can

1 state confidently that no engineer employed by or that hoped to remain employed by a  
2 competitive carrier would propose such a design for transport.

3 As I understand the three routing scenarios analyzed by Venture, they are cumulative in  
4 that each scenario only purports to deliver a portion of traffic to a given location. In other  
5 words, in order to deliver all the traffic Venture claims, Venture claims it would need to  
6 deploy the majority of all three routing scenarios. I have summarized the scenarios as  
7 follows:

8 Scenario 1 – Aggregation of Traffic on Venture’s network.

9 Scenario 2 – Aggregation of Traffic in Sioux Falls.

10 Scenario 3 – Distribution of Subset of Traffic to Minneapolis from Sioux Falls.

11 Because Venture theorizes that it will, at a minimum, be required to deliver all wireless  
12 traffic to Sioux Falls, Venture also theorizes that Scenario 1 and Scenario 2 are necessary  
13 for the delivery of any traffic to a wireless carrier. Venture also assumes 3 wireless  
14 carriers are located in Sioux Falls and 2 elsewhere (presumably Minneapolis). Hence,  
15 Venture claims Scenario 3 is necessary but would only pertain to a subset of the traffic to  
16 be delivered to wireless carriers. These routing solution scenarios reflect inefficient and  
17 expensive design choices and should not be accepted as the basis for assessing the costs  
18 Venture would incur in transporting traffic to wireless carriers.

19 **Q: WHAT ARE YOUR COMMENTS ON SCENARIO 1.**

20 **A:** The first element of Venture’s Scenario 1 that strikes me is that Venture is attributing an  
21 incremental cost of \$6 per airline mile per month to accomplish the consolidation of  
22 traffic on their network. My understanding of Venture’s network is that it consists of two  
23 separate fiber optic rings and each ring has a capacity that far exceeds demand.  
24 Secondly, Venture has proposed airline mileages of 120-141 miles to connect three

1 remote locations to its Highmore hub. Again, assuming Venture has significant excess  
2 capacity, any transport across its own fiber network would really be a very small  
3 incremental cost.

4  
5 Secondly, the distances referenced represent distances between rate centers not the  
6 distance that would be used to span the two rings. I have attached Exhibit RK1 to  
7 demonstrate what I believe to be the more reasonable incremental transport mileage to  
8 span Venture's two fiber rings. It is the leased capacity which represents the true  
9 incremental cost for Venture to consolidate its outbound traffic to wireless carriers.

10 **Q: WHAT ARE YOUR COMMENTS ON SCENARIO 2?**

11 A: As I understand Scenario 2, Venture is assuming that traffic would be shipped from four  
12 different aggregation points on the Venture network to SDN's switch building in Sioux  
13 Falls. Three aspects of this scenario appear flawed. First, using four points of traffic  
14 aggregation is probably not cost efficient since Venture has only two fiber rings. At the  
15 very least, Venture should be able to efficiently aggregate traffic at one point on each of  
16 their two fiber rings. Second, Venture assumptions include inefficient utilization of  
17 transport capacity. Venture witness Thompson has assumed traffic demand would  
18 require 19 DS1's of capacity. In a practical application, 19 DS1's of capacity would  
19 equate to about 7.6 million minutes<sup>1</sup> of usage per month or about 91 million minutes per  
20 year. This capacity is far in excess of the [CONFIDENTIAL] minutes of traffic Venture  
21 claims it needs to carry. Therefore, I can only conclude that Venture's Scenario 2 cost  
22 claims are based on a significant under utilization of transport facilities driving costs

1 much higher than necessary. Third, Venture has made transport pricing assumptions that  
2 are much higher than available rate for DS1 transport between their network and Sioux  
3 Falls. Alltel buys similar route transport at a cost of only 61% of what Venture assumes<sup>2</sup>.

4 **Q: WHAT ARE YOUR COMMENTS ON SCENARIO 3?**

5 A: As I understand Scenario 3, Venture is proposing that 9 DS1's worth of traffic need to be  
6 transported beyond Sioux Falls to an intraMTA location such as Minneapolis. At least  
7 two aspects of this scenario appear seriously flawed. Venture witness Thompson has  
8 assumed traffic demand would require 9 DS1's of capacity. In a practical application, 9  
9 DS1's of capacity would equate to about 3.6 million minutes of usage per month or about  
10 43 million minutes per year. This capacity is far in excess of the traffic volume Venture  
11 claims it needs to carry. Therefore, I can only conclude that Venture's Scenario 3 cost  
12 claims are based on a significant under utilization of transport facilities driving costs  
13 much higher than necessary. The other issue has to do with Venture's assumed lease  
14 cost for these transport facilities. In Scenario 3 Venture has shifted its pricing from the  
15 NECA tariff to reference a Qwest tariff. In reality, use of either tariff would overstate the  
16 cost that a carrier should pay for this route. Alltel obtained a quote from an independent  
17 provider of transport capacity from Sioux Falls to Minneapolis. The quoted monthly rate  
18 for a one month lease of one DS1 was [CONFIDENTIAL] per year<sup>3</sup>. Using this rate, 9  
19 DS1's would cost [CONFIDENTIAL] per year plus one time charges of  
20 [CONFIDENTIAL] for a total first year cost of [CONFIDENTIAL]. This amount is

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<sup>1</sup> Normal utilization of DS1's on high capacity routes across Alltel's network average about 400,000 minutes per month. This is quite a bit more than the FCC minimum default of 216,000 minutes per month. For comparison, Venture has assumed a utilization of [CONFIDENTIAL].

<sup>2</sup> Alltel leases a DS1 transport facility from Venture's Britton end office to the SDN location in Sioux Falls at a rate [CONFIDENTIAL].

<sup>3</sup> The quoted five year lease would be [CONFIDENTIAL].

1 almost 90% less than what Venture has estimated for Scenario 3. If you combine the  
2 impact of Venture's flawed assumptions in Scenario 3 I would estimate that Venture has  
3 overstated the costs of Scenario 3 by about twenty fold.

4 **Q: DO VENTURE'S THREE ROUTING SCENARIOS REPRESENT A COMPLETE SET OF POSSIBLE**  
5 **SOLUTIONS FOR VENTURE TO ROUTE INTRAMTA TRAFFIC TO CMRS CARRIERS?**

6 A: No. In my experience in network transport planning it has always been standard practice  
7 to consider both direct and indirect exchange of traffic with other carriers. By indirect I  
8 mean utilizing other carriers to provide transport services to terminate traffic on my  
9 company's behalf.

10 **Q: WHAT OTHER ROUTING OPTIONS COULD BE CONSIDERED?**

11 A: At least three other options should have been analyzed by Venture given their current  
12 traffic exchange relationships and available interconnection. These options are  
13 summarized as follows:

- 14 A. Common transport to Sioux Falls
- 15 B. Qwest transit
- 16 C. IXC wholesale

17  
18 **Q: EXPLAIN WHY OPTION A MAKES SENSE TO ASSESS.**

19  
20 A: Option A is a scenario that enables efficient use of transport facilities but which would  
21 require the traffic over the common transport be switched before delivery to a terminating  
22 carrier. Venture already has common transport facilities direct to their affiliate SDN who  
23 operates a tandem switch in Sioux Falls. Venture could, by combining all its traffic  
24 destined for Sioux Falls on the same transport facilities, make much more efficient use of  
25 those facilities than the dedicated direct trunking method they have proposed in Scenarios  
26 2 and 3. There would be some minimal additional cost for SDN to switch the traffic at  
27 their tandem for delivery to wireless carriers. It is also my experience that Alltel and

1 other wireless carriers would be very interested in SDN providing such a transit tandem  
2 service.

3 **Q: EXPLAIN WHY OPTION B MAKES SENSE TO ASSESS.**

4 A: Option B makes sense because this is the method that wireless carriers use today to send  
5 traffic to many rural local exchange carriers including Venture. This option involves  
6 using Qwest to transport traffic from an originating carrier's point of interconnection with  
7 Qwest for delivery to a terminating carrier within the same LATA. This is called a transit  
8 service. Venture already has at least three direct connections with Qwest that could be  
9 configured to accommodate this routing option. The standard rate Qwest charges today  
10 for transit in South Dakota is \$.003123 per minute.

11 **Q: EXPLAIN WHY OPTION C MAKES SENSE TO ASSESS.**

12 A: Option C is a scenario that is readily available to any carrier that has a wholesale  
13 relationship with a long distance interexchange carrier ('IXC'). Since Venture retails its  
14 own long distance services I assume they already have a contract with an interexchange  
15 carrier and already have a direct connection with that carrier. My experience is that  
16 contracted wholesale rates for delivery of long distance traffic are generally less than two  
17 cents per minute and can be substantially less especially for traffic terminating to wireless  
18 carriers.<sup>4</sup> Further, since the traffic Venture is looking to transport is intraMTA traffic, it  
19 would be local and Venture would not be assessing the interexchange carrier an  
20 originating access charge. In my opinion, Venture should be able to contract with an IXC  
21 for delivery of their traffic destined for wireless carriers for no more than 1.2 cents per  
22 minute with the IXC picking up that traffic at a point of presence on Venture's network.

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<sup>4</sup> Interexchange carriers do not pay terminating access to wireless carriers so those terminating costs are not factored into the rates an interexchange carrier would charge for delivering traffic to a wireless carrier.

1 **Q: AS AN EXPERT IN MAKING TRANSPORTATION ROUTING DECISIONS, IF YOU WERE**  
2 **CONFRONTED WITH VENTURE'S CLAIMED ROUTING RESPONSIBILITY WHAT WOULD YOU**  
3 **DO?**

4 A: This situation is representative of decisions that network transport engineers make as part  
5 of their day to day routine. I would focus on two avenues to get a least cost routing  
6 solution. The first avenue would be to pursue negotiations to establish a point of  
7 interconnection at a more advantageous location. Such negotiations always involve give  
8 and take but my experience is, in general, substantial savings are available through  
9 compromise on the location of a point of interconnection and, potentially, cost sharing if  
10 parties exchange traffic over interconnection facilities on a two-way basis. Secondly, I  
11 would compare costs of transporting traffic using common or shared facilities (rather than  
12 dedicated facilities) with the costs to hire another carrier to do the transport work for me.  
13 And, when I say the cost to 'hire another carrier' I mean what it would cost me to hand  
14 the traffic to a third party carrier and have them deliver it to the terminating wireless  
15 carrier.

16 **Q: PLEASE SUMMARIZE THE POTENTIAL FINANCIAL IMPACT DIFFERENCES BETWEEN WHAT**  
17 **YOU HAVE IDENTIFIED AND WHAT VENTURE HAS ANALYZED AND ASSUMED?**

18 A: All the options that I described were not explored by Venture and are more cost efficient  
19 methods to solve for the traffic routing obligations claimed by Venture. If my team  
20 needed to accomplish this same routing for this same volume of traffic, and we failed to  
21 achieve any better negotiated interconnection result than what Venture claims, the total  
22 cost would still be no more than \$50,000 and therefore, approximately 90% less than  
23 what Venture claims.

24 **Q: IN YOUR EXPERIENCE IS IT REALISTIC THAT A CARRIER LIKE VENTURE WOULD BE**  
25 **UNABLE TO NEGOTIATE A BETTER ROUTING RESULT THAN WHAT THEY HAVE CLAIMED?**



1 A: In my experience most carrier's like Venture have successfully negotiated routing  
2 requirements that would demand much less resource than what Venture is claiming.  
3 Venture makes the erroneous representation and assumption that a wireless carrier would  
4 demand nothing less than delivery of Venture originated traffic to their switch doorstep.  
5 While that may be how Venture would like wireless carriers to deliver traffic to their  
6 switches the reality is that carriers usually compromise. These compromises result in the  
7 exchange of traffic at points where sufficient traffic volume is aggregated to make  
8 economic sense. Venture has outlined highly improbable worst case scenarios that do not  
9 result in the real world. Venture needs only to look at the neighboring geography to see  
10 that wireless carriers may have traffic aggregation points that are much closer than Sioux  
11 Falls or Minneapolis. The Venture service area is near Aberdeen, adjacent to Huron,  
12 Pierre and other areas where carriers are likely to aggregate traffic. In fact, SDN  
13 (Venture's affiliate) has fiber rings that extend from Venture's service area right through  
14 these likely traffic aggregation areas. Any failure on Venture's part to negotiate a better  
15 transport solution than they have claimed would is likely to be the result of a poor  
16 negotiating strategy rather than any rules of the Telecom Act, but even then as discussed  
17 above will not result in the scenarios and costs it has identified.

18 **Q: WHAT OTHER INFORMATION SHOULD THE COMMISSION EXAMINE TO COMPLETE THIS**  
19 **ASSESSMENT?**

20 A. To better understand where traffic is presently aggregated on Venture's network and,  
21 therefore, what optimal routing scenarios are needed, a detail of the amount of traffic  
22 originated from each Venture switch location is needed. It is highly likely that traffic is  
23 not evenly distributed to and from each end office in Venture's network. Having the  
24 actual data will allow for a more refined development of transport options and sharing

1 such information in negotiation with wireless carriers would likely help Venture achieve  
2 more attractive points of interconnection than the worst case scenarios they have chosen  
3 to reflect in their testimony.

4 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

5 **A: Yes**

# Exhibit RK1 Leased Span to Connect Venture Fiber Rings

