CONFIDENTIAL

STATE OF SOUTH DAKOTA

PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE PETITIONS FOR ARBITRATION PURSUANT TO THE TELECOMMUNICATIONS ACT OF 1996 TO RESOLVE ISSUES RELATED TO THE INTERCONNECTION AGREEMENT WITH ALLTEL, INC.	)	Docket No. TC07-112 TC07-114 TC07-115 TC07-116 **CONFIDENTIAL TESTIMONY** **OF** **NATHAN A. WEBER**

PRE-FILED REBUTTAL TESTIMONY OF NATHAN A. WEBER ON BEHALF OF MCCOOK COOPERATIVE TELEPHONE COMPANY, KENNEBEC TELEPHONE COMPANY, INC., SANTEL COMMUNICATIONS COOPERATIVE, INC., AND WEST RIVER COOPERATIVE TELEPHONE COMPANY INC.

Q1. Please state your name, employer, business address and telephone number.

A1. My name is Nathan Weber. I am the Director of Engineering of Vantage Point Solutions, Inc. ("Vantage Point"). My business address is 2211 North Minnesota Street, Mitchell, South Dakota, 57301.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of McCook Cooperative Telephone Company ("McCook"), Kennebec Telephone Company ("Kennebec"), Santel Communications Cooperative, Inc. ("Santel"), and West River Cooperative

Telephone Company Inc. ("West River"). I will refer to them collectively as the Rural Telephone Companies (RTCs).

Q3. Have you previously filed testimony in this case?

A3. Yes. On March 24, 2008, I filed direct testimony on behalf of each of the companies (McCook, Kennebec, Santel, and West River), as well as Alliance Communications Cooperative, Inc. ("Alliance") and Beresford Municipal Telephone Company ("Beresford"), in dockets TC07-111 through TC07-116. In addition, I filed rebuttal testimony on behalf of these companies on July 7, 2008, and I testified before the South Dakota Public Utilities Commission during the hearing held July 29th through July 31st, 2008. I also filed supplemental testimony on April 24, 2009.

Q4. What is the purpose of your rebuttal testimony?

A4. To respond to technical and regulatory issues that rose in the reply testimony of W. Craig Conwell dated July 3, 2009, on behalf of Alltel Communications, LLC. ("Alltel") in these proceedings.

Q5. Have you read the pre-filed reply testimony of Mr. Conwell in these proceedings?

A5. Yes.

Q6. Mr. Conwell states that "A DS-0 special circuit costs substantially more than a voice trunk." Do you agree with Mr. Conwell's statement? Please explain.

A6 No, I feel that Mr. Conwell's statements are incorrect. Mr. Conwell indicates that circuit conditioning and multiplexing equipment is used to multiplex or demultiplex DS-0 special circuits. In addition, Mr. Conwell states that DS-0 voice trunks are combined by the switch to a DS-1 level. He implies that the

DS-0 voice trunks do not require the same circuit conditioning and multiplexing equipment that is required for a DS-0 special circuit. However, this is incorrect.

Many times, there are DS-1 circuits from other carriers such as Qwest or SDN Communications that carry a variety of traffic. For example, there may be DS-1 circuits that contain various types of traffic such as toll, SS-7 A-links, Operator circuits, and special circuits. This process combining of a variety of traffic onto a single DS-1 is typically conducted in order to maximize the fill-rate of DS-0's on a DS-1 for transport efficiencies. Since special circuits do not interface to the switch, it is necessary for these DS-1's to interface to the "circuit conditioning and multiplexing" equipment that Mr. Conwell referenced. This equipment may be a channel bank or a Digital Cross-Connect System (DCS). For the purposes of this example, we will assume that channel banks are used.

The incoming DS-1 circuit that is transported from a carrier that contains both switch traffic and special circuits is terminated to a channel bank to be demultiplexed down to DS-0 level interfaces. The special circuits are physically wired to the equipment that is used to deliver the circuit to the end customer. However, the DS-0 level switch traffic is physically wired to DS0 interfaces on another channel bank so that the traffic may be multiplexed back into a DS-1 to connect into the switch. The switch traffic requires approximately twice the "circuit conditioning and multiplexing" equipment than the special circuits in this example. Therefore, the switch traffic in this example has a greater cost than the

special circuits. This example shows how Mr. Conwell's conclusion that a DS-0 special circuit costs more than 7 times greater than a DS-0 for switch traffic is unfounded (24 / 3.4 = 7.06). Please refer to Exhibit NW-R2-1 for a diagram that depicts this scenario.

Q7 Mr. Conwell has stated that the switching network investments associated with CALEA, Centrex, and Web Self-Care that were removed from the cost study are unsubstantiated. Do you agree?

A7 There has been sufficient information provided to Alltel to allow them to adequately test the switching network cost estimates. Detail has been provided regarding the equipment vendor that was assumed, the descriptions of the individual components, and unit quantities for each component.

Q8 Are you providing additional information regarding the unit pricing associated with CALEA, Centrex, and Web Self-Care?

A8 Yes. Pursuant to the Commission's July 14, 2009, oral ruling which granted in part and denied in part Alltel's Motion to Compel, this information is being provided.

Q9 What are the unit costs associated with CALEA, Centrex, and Web Self-Care?

A9 The unit cost information for the CALEA, Centrex, and Web Self-Care components of the switching network may be found in Exhibit NW-R2-2.

Q10 What information provided the basis for these estimates?

A10 These estimates were developed based upon proposal pricing received from MetaSwitch on competitive projects for companies with a similar size and scope to the RTCs. Excerpts from a specific proposal may be found in Exhibit

NW-R2-3. Please note that MetaSwitch refers to their Web Self-Care functionality in this exhibit as the "CommPortal" system.

Q11 Does the pricing shown in Exhibit NW-R2-3 correspond to the pricing shown in NW-R2-2?

A11 Yes, with one minor difference. The FLEC engineering model assumed list price of [redacted] and a [redacted] on the unit pricing for the "Web Self-Care System – non NEBS, DC." However, the example proposal pricing received from MetaSwitch as shown in Exhibit NW-R2-3 for this item assumes an AC powered server with a list price of [redacted] and a [redacted] The result is a discounted price of [redacted] for the FLEC engineering model as shown in Exhibit NW-R2-2 and [redacted] for the MetaSwitch proposal in Exhibit NW-R2-3.

Q12 In his testimony, Mr. Conwell states that "This low utilization of cable fibers results in high transport outside plant costs per minute." Do you agree with this statement?

A12 No. The outside plant cable was sized for 48 fibers due to the fact that this considered a "standard" cable size that is used for Interexchange transport routes. Typically, it is good engineering practice to reserve spare fiber for use in the event that the fibers being actively used are damaged or degraded. The availability of spare fibers may allow for the service provider to be able to quickly restore service on a span that experiences issues due to issues with the active fibers.

Another reason why 48 fiber is commonly used is due to the fact that there is very little incremental cost to increase the size of an outside plant cable being buried from a 24 fiber cable to a 48 fiber cable. As an example, I utilized the material pricing from the town outside plant construction details provided previously to Alltel during the initial round of discovery in Exhibit NW-D-9. As shown in the table below, the unit pricing for BFO 48 (48 count buried fiber optic cable) ranges from [redacted] to [redacted] per foot, with an average cost of [redacted] per foot. The cost for BFO 24 (24 count buried fiber optic cable) ranges from [redacted] to [redacted] per foot, with an average cost of [redacted] Therefore, the average difference in material cost between a 48 fiber cable and a 24 fiber cable is [redacted] per foot.

Town	BFO 48 Material	BFO 24 Material		Difference
[redacted]	$ [redacted]	$ [redacted]		$ [redacted]
[redacted]	$ [redacted]	$ [redacted]		$ [redacted]
[redacted]	$ [redacted]	$ [redacted]		$ [redacted]
[redacted]	$ [redacted]	$ [redacted]		$ [redacted]
Average	$ [redacted]	$ [redacted]		$ [redacted]

Per Exhibit NW-D-9, the average cost per foot without overhead for town construction is [redacted] If the fiber optic cable size were to be reduced from 48 fibers to 24 fibers, a cost savings of approximately [redacted] would be achieved. Therefore, the spare fiber in the 48 fiber cable has minimal impact on the cost of constructing the interexchange outside plant cable.

Q15. Does that conclude your rebuttal testimony?

A15. Yes. However, I wish to reserve the opportunity to supplement this testimony in the future, if necessary.

NW-R2-3

BID PROPOSAL EXCERPT OBTAINED BY VANTAGE POINT SOLUTIONS, INC. FROM METASWITCH

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CO Switch Detailed Estimates

Company: McCook Cooperative Telephone Company
Location: Salem

Category	Description	Quantity	Unit Price	Discount	Total	Category Total	Loaded Category Total