

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

**IN THE MATTER OF THE PRICING)
PROCEEDING FOR INTERCONNECTION.)
UNBUNDLED ELEMENTS, TRANSPORT) **Docket Nos. UT-960369;**
AND TERMINATION, AND RESALE) **UT-960370; UT-960371**
[FOR U S WEST COMMUNICATIONS, INC.])
[FOR GTE NORTHWEST INCORPORATED])**

REBUTTAL TESTIMONY OF

MICHAEL A. CARNALL

ON BEHALF OF U S WEST COMMUNICATIONS INC.

February 7, 2000

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I. QUALIFICATIONS AND PURPOSE OF TESTIMONY

2 I. Q. PLEASE STATE YOUR NAME AND POSITION.

3 A. My name is Michael A. Carnall. I am a Senior Managing Economist at LECG, Inc.
4 My business address is 2000 Powell Street, Suite 600, Emeryville, CA 94608.

5 I. Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS
6 PROCEEDING?

7 A. Yes. On January 18, 2000, I submitted responsive direct testimony to the Staff's
8 proposal for deaveraging the rates of U S WEST unbundled loops.

9 I. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

10 A. The purpose of my testimony is to provide an assessment of Mr. William Page
11 Montgomery's proposal for deaveraging the rates of U S WEST unbundled loops.
12 Specifically I have been asked to examine and evaluate the methods used by Mr.
13 Montgomery to determine his proposed prices.

14

II. INPUT AND METHODOLOGY

15 Q. WHAT IS YOUR UNDERSTANDING OF MR. MONTGOMERY'S METHOD FOR
16 DERIVING HIS PROPOSED RATES?

17 A. Mr. Montgomery computed his rates by averaging the rates proposed by Mr. Tom Spinks on
18 December 1999. Although Mr. Montgomery endorsed Mr. Spinks' method of deriving
19 deaveraged rates, he found the structure overly complex and proposed to reduce the number
20 of density zones and distance bands used by Mr. Spinks. Specifically, he proposed to
21 combine three of Mr. Spinks' four proposed density zones to one zone, and to group Mr.
22 Spinks' one-kilofoot distance bands into three-kilofoot increments. For each density zone
23 and each distance band, Mr. Montgomery then computed his proposed rate as the line-
24 weighted average of the corresponding rates proposed by Mr. Spinks.

25 Q. WHAT IS YOUR ASSESSMENT OF THE BASIS FOR MR. MONTGOMERY'S
26 PROPOSED RATES?

27 A. The primary problem is that Mr. Montgomery used deaveraged rates that were derived by
28 Mr. Spinks' erroneous statistical methods. As I explained in my responsive direct testimony
29 the rates proposed by Mr. Spinks in his December 1999 testimony failed to reflect the true
30 costs of providing loops because of his inappropriate statistical methods and his unsuitable
31 use of average loop length in deriving distance sensitive rates. Unfortunately, Mr.
32 Montgomery did not recognize the fallacies in Mr. Spinks' deaveraging scheme and used
33 Mr. Spinks' results to derive his rates. Since a model is only as good as the input to the
34 model, Mr. Montgomery's use of unreliable input values has rendered his final results

1 meaningless.

2 **Q. ARE THERE ANY ISSUES RELATED TO THE CONSISTENCY OF MR.**
3 **MONTGOMERY'S CALCULATION OF DISTANCE SENSITIVE RATES?**

4 A. Yes, there are. As I have explained earlier Mr. Montgomery derived his rates by applying
5 his own re-averaging method to the rates produced by Mr. Spinks' mathematical model. His
6 endorsement of Mr. Spinks' methods and his use of Mr. Spinks' proposed rates demanded
7 Mr. Montgomery's approach to be consistent with Mr. Spinks' model. That is, Mr.
8 Montgomery's proposed rates were supposed to be identical to the rates produced by Mr.
9 Spinks' model using Mr. Montgomery's distance band definitions.

10 **Q. IS MR. MONTGOMERY'S APPROACH CONSISTENT WITH MR. SPINKS'**
11 **MODEL?**

12 A. No. My analysis indicates that results would have been different had Mr. Montgomery
13 applied his distance band definitions to Mr. Spinks' model instead of re-averaging Mr.
14 Spinks' proposed rates. Mr. Montgomery's re-averaging approach is inconsistent with Mr.
15 Spinks' model because Mr. Spinks' model is a logarithmic instead of a linear relationship
16 between cost and average loop length¹. The following table shows that although the
17 differences are not large, they are substantial had Mr. Montgomery calculated his distance
18 sensitive rates by applying his distance band definitions consistently to Mr. Spinks' model.

19 **Table I**

20 **Comparison of Montgomery's Rates and Rates Calculated with**
21 **Spinks' Method using Montgomery's Distance Band Definitions**

22 **III.**

¹ A linear relationship has the following functional form $Y = a + b * X$ where a and b are constants. Any other functional relationships are non-linear. Mr. Montgomery's approach would have been consistent with Mr. Spinks' model if and only if Mr. Spinks' model is linear. To demonstrate this, examine a simple non-linear function $Y = X^2$. If $X=3$, $Y=9$. If $X=5$, $Y=25$. The average of 9 and 25 is 17, but the answer will be 16 if the average of 3 and 5, i.e., 4 is entered into the function.

<i>Propose Rate</i>	<i>Rate W/ Method Z</i>	<i>% Difference</i>	<i>Propose Rate</i>	<i>Rate W/ Method Z</i>	<i>% Difference</i>
\$6.76	\$7.05	14%	\$14.40	\$15.67	8%
\$10.07	\$11.42	13%	\$25.66	\$25.28	-1%
\$13.05	\$14.28	9%	\$31.82	\$31.63	-1%
\$15.60	\$16.56	6%	\$37.30	\$36.67	-2%
\$20.49	\$19.36	-5%	\$43.92	\$42.88	-2%
\$29.82	\$25.19	-16%	\$65.15	\$64.58	-1%

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III.CONCLUSION

2 **Q. PLEASE BRIEFLY SUMMARIZE YOUR TESTIMONY.**

3 Mr. Montgomery's calculations for his proposed deaveraged rates started out on shaky
 4 ground. He chose to use rates produced by Mr. Spinks' erroneous statistical model to derive
 5 his own proposed rates. Therefore, all of the criticisms in my responsive direct testimony to
 6 Mr. Spinks' deaveraging scheme are also applicable to Mr. Montgomery's rates.
 7 Furthermore, although he endorsed Mr. Spinks' methods, his re-averaging procedure is not
 8 consistent with Mr. Spinks' non-linear mathematical model. My analysis indicates results
 9 would have been substantially different had Mr. Montgomery computed his rates by
 10 applying his zone definitions faithfully to Mr. Spinks' model.

11

12 **Q. IS IT YOUR UNDERSTANDING THAT MR. MONTGOMERY'S PROPOSAL**
 13 **WOULD BE ACCEPTABLE TO U S WEST IF HE WERE TO CORRECT THE**
 14 **ERRORS THAT YOU HAVE DETECTED?**

15 **A.** No. U S WEST has told me that they find Mr. Montgomery's proposal both impractical and
 16 unacceptable for all the reasons given in the testimonies of Mr. Thomson and Ms. Brohl.

17 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

18 **A.** Yes it does.