

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Petition of QWEST CORPORATION for Arbitration of an Interconnection Agreement with UNION TELEPHONE COMPANY d/b/a UNION CELLULAR under Section 252 of the Federal Telecommunications Act

DOCKET NO. 04-049-145

SURREBUTTAL TO DIVISION

TESTIMONY OF

PETER B. COPELAND

ON BEHALF OF

QWEST CORPORATION

QWEST EXHIBIT 3SD

OCTOBER 26, 2007

TABLE OF CONTENTS

| | <u>PAGE</u> |
|--|-------------|
| I. IDENTIFICATION OF WITNESS | 1 |
| II. PURPOSE OF TESTIMONY | 1 |
| III. TELRIC ISSUES RAISED IN THE ANDERSON TESTIMONY..... | 2 |
| IV. TRAFFIC SENSITIVITY ISSUES RAISED IN THE ANDERSON TESTIMONY | 4 |
| V. DPU ADJUSTMENTS TO UNION COST STUDY | 9 |
| VI. CONCLUSION | 11 |

1 **I. IDENTIFICATION OF WITNESS**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Peter B. Copeland and my business address is 1801 California Street,
4 Denver, Colorado 80202. I am employed by Qwest Services Corporation
5 (Qwest) as Director, Cost and Economic Analysis, in the Public Policy
6 organization.

7 **Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS CASE?**

8 A. Yes. I filed Revised Rebuttal Testimony on July 21, 2006 (which completely
9 replaced my Rebuttal Testimony filed on October 24, 2005), Surrebuttal
10 Testimony on March 5, 2007, and Post Surrebuttal Reply Testimony on
11 September 28, 2007.

12 **II. PURPOSE OF TESTIMONY**

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. The purpose of my current testimony is to address the Rebuttal Testimony of Paul
15 M. Anderson (Anderson Testimony) of the Division of Public Utilities (DPU).

16 **III. TELRIC ISSUES RAISED IN THE ANDERSON TESTIMONY**

17 **Q. WHAT ARE THE MAJOR CONCLUSIONS OF THE ANDERSON**
18 **TESTIMONY?**

19 A. The Anderson Testimony finds that there are a number of flaws in the cost study
20 filed by Union Telephone Company d/b/a Union Cellular (Union) and that the
21 DPU does not see a compelling public interest or company reason for the
22 Commission to approve asymmetric transport and termination charges for Union.

23 **Q. DO YOU AGREE WITH MR. ANDERSON'S ASSESSMENT THAT**
24 **UNION HAS NOT PRESENTED EVIDENCE THAT SUPPORTS ITS**
25 **ASYMMETRIC RATE PROPOSAL?**

26 A. Yes. I completely agree with Mr. Anderson that the flaws he outlined in his
27 testimony preclude a conclusion that the Union cost study represents a TELRIC
28 study of the additional cost Union incurs from the termination of Qwest voice
29 traffic on Union's network. The DPU acknowledges that Union has the burden of
30 proof in this case and that Union has not provided sufficient detail in its cost study
31 and supporting documents to substantiate its case for an asymmetric rate.

32 **Q. WHAT MAJOR ISSUES DOES MR. ANDERSON'S TESTIMONY**
33 **DESCRIBE THAT PREVENT THE STUDY FROM BEING TELRIC**
34 **COMPLIANT?**

35 A. The Anderson Testimony focuses on TELRIC principles and requirements and
36 identifies a number of problems with Union's cost study in light of those TELRIC
37 principles and requirements. Mr. Anderson lists five issues where Union's cost
38 study does not reflect TELRIC principles: 1) the Union cost study uses embedded
39 cost rather than current forward looking costs; 2) Union's cost study includes
40 costs associated with retail offerings unrelated to interconnection; 3) Union switch
41 and cell site investments are not modeled for current demand only; 4) Union's
42 cost model does not allow the sharing of equipment and structures; and
43 5) transport costs appear to be tariff or retail rates.

44 **Q. DO YOU AGREE WITH MR. ANDERSON THAT THESE FIVE ISSUES**
45 **PREVENT THE UNION STUDY FROM CALCULATING TELRIC**
46 **COMPLIANT COSTS?**

47 A. Yes, I completely agree with Mr. Anderson's conclusion. These issues alone take
48 the Union cost study out of compliance with TELRIC. Additionally, Mr.
49 Anderson discusses other areas of Union's cost study that are equally problematic
50 when looking at TELRIC compliance. For example, TELRIC requires using

51 efficient fill factors for equipment or facility components¹ and using the
52 appropriate depreciation lives for various types of equipment and facilities instead
53 of a single depreciation life.² Given the extensive nature of the above problem
54 areas (without regard to issues I have yet to address), the Union cost study is
55 beyond rehabilitation and incapable of producing TELRIC calculations regardless
56 of any adjustments that can be made with available data.

57 **IV. TRAFFIC SENSITIVITY ISSUES RAISED IN THE ANDERSON**
58 **TESTIMONY**

59 **Q. DOES MR. ANDERSON INVESTIGATE THE ISSUE OF TRAFFIC**
60 **SENSITIVITY AND THE ADDITIONAL COST STANDARD?**

61 A. Yes, the Anderson Testimony includes a discussion of traffic sensitivity and
62 wireless network facilities. Mr. Anderson discusses qualitative criteria for
63 determining whether wireless network components are non-traffic sensitive,
64 traffic sensitive, or a mix of both. Mr. Anderson bases his criteria on a journal
65 paper³ written by Dr. Moon-Soo Kim which examines issues related to
66 interconnection costs between public switched landline networks and wireless
67 networks. In a table in his testimony, Mr. Anderson offers the DPU's

¹ Anderson Testimony page 13, lines 217 – 221.

² Anderson Testimony page 29, lines 556 – 561.

³ Kim, Moon-Soo, *The Criteria, Procedure, and Classification of Traffic-Sensitive and Non-Traffic-Sensitive Components: A Case of CDMA Mobile System*, ETRI Journal, Vol. 28, No. 6, Dec. 2006.

68 recommendations for classifying wireless components as traffic sensitive or non-
69 traffic sensitive.

70 **Q. DOES DR. KIM'S PAPER PURPORT TO PROVIDE DEFINITIVE**
71 **CLASSIFICATIONS FOR TRAFFIC SENSITIVE AND NON-TRAFFIC**
72 **SENSITIVE WIRELESS NETWORK COMPONENTS?**

73 A. No. Dr. Kim clearly defines his paper as a pilot study.⁴ Further, he notes
74 limitations in his approach:

75 However, this study produces several limitations for further study because
76 our approach was based on a rather technical and theoretical perspective
77 based on related experts' discussions rather than economic and empirical
78 application.⁵

79 Thus, while the paper presents a conceptual classification scheme, it lacks
80 empirical/quantitative methods for classifying individual components of a
81 wireless network as traffic sensitive as required by the FCC.⁶ In some cases the
82 paper produces counter-intuitive classifications, which indicates that using
83 "expert opinions" based on the discussion of network experts can produce
84 anomalous designations of traffic sensitivity or non-traffic sensitivity.

⁴ Kim, page 777.

⁵ Ibid, page 782.

⁶ Order, *In the Matter of Cost Based Terminating Compensation for CMRS Providers*, CC Docket No. 95-185, CC Docket No. 96-98, WT Docket No. 97-207, FCC 03-215 (Sept. 3, 2003) at ¶ 10.

85 **Q. CAN YOU PROVIDE AN EXAMPLE OF SUCH A RESULT?**

86 A. Yes. Dr. Kim states, “For instance, it is appropriate for the billing function,
87 which is included in OAM⁷ functions, to be classified as TS (traffic sensitive)
88 because there is a high possibility that the cost will vary according to user traffic.”
89 As a person who has supervised the preparation of billing cost studies, I find this
90 statement to be overly simplistic and to ignore economic cost causation principles
91 related to billing services. For example, the billing system and its feeder systems
92 that gather account data, including usage data, are primarily fixed costs. The bill
93 itself must be issued monthly for each account regardless of usage and may be
94 sent via mail. Postage is the single greatest expense in billing. On the other hand,
95 minutes of use are irrelevant to the cost of billing. The only relevant usage is the
96 number of calls, which affects the printing of additional lines of data and the
97 collection of additional call detail, a relatively small expense. There could be a
98 point at which additional postage would be required due to excessive call detail,
99 however the percentage increase in postage is a fraction of the percentage increase
100 in messages. Based on the above example, it is clear that high-level theoretical
101 approaches are inadequate to determine the true traffic sensitivity of components.
102 The detailed empirical/quantitative analysis must be provided in order to
103 determine which components have costs that actually vary with usage.

⁷ Operations, administration, and maintenance.

104 **Q. DID MR. ANDERSON ATTEMPT TO COLLECT QUANTITATIVE**
105 **DATA IN ORDER TO DETERMINE IF WIRELESS NETWORK**
106 **COMPONENTS WERE TRAFFIC SENSITIVE?**

107 A. Yes. Mr. Anderson issued a data request to Union for evidence of growth jobs
108 since 2003. Mr. Anderson concludes that the data he received showed no
109 evidence of growth jobs for switch ports, HLR/VLR memory expansion, cellular
110 radio sites or backhaul microwave. He states: “This lack of growth data evidence
111 over the past four years would lead one to believe that all cellular equipment
112 components at Union Cellular are not TS.”⁸ In the absence of any evidence of
113 traffic sensitivity provided by Union, one can only conclude that these component
114 investments are made to provide coverage for Union subscribers.

115 **Q. GIVEN THAT MR. ANDERSON WAS UNABLE TO OBTAIN ANY**
116 **QUANTITATIVE DATA ON GROWTH JOBS, HOW WAS THE DPU**
117 **ABLE TO MAKE RECOMMENDATIONS OF TRAFFIC SENSITIVITY**
118 **AND NON-TRAFFIC SENSITIVITY OF WIRELESS NETWORK**
119 **COMPONENTS?**

120 A. The DPU made its recommendations based on its qualitative understanding of the
121 wireless network components. The recommendation seems to be out-of-place
122 given the lack of substantiating data in this case.

⁸ Anderson Testimony page 25, lines 477-484.

123 **Q. DO YOU AGREE WITH THE DPU'S RECOMMENDATIONS?**

124 A. No. Given the lack of evidence presented by Union, I do not think it is possible in
125 this case to definitively categorize any particular component or group of
126 components as traffic sensitive.

127 **Q. DO THE DPU RECOMMENDATIONS FOR TRAFFIC SENSITIVITY**
128 **AGREE WITH THE PILOT RECOMMENDATIONS OF DR. KIM?**

129 A. No. Dr. Kim found that the radio frequency units were strongly non-traffic
130 sensitive⁹ since they are related to coverage, while the DPU recommendation is
131 that this equipment is traffic sensitive. Both assessments are based on the
132 opinions of persons making theoretical assessments. The only manner in which
133 the issue of traffic sensitivity can be truly assessed is using an
134 empirical/quantitative approach to determine the initial cost causation, the
135 determination of equipment utilization and exhaust, and the exhaust drivers using
136 actual usage data.

⁹ Kim, page 783.

137 **V. DPU ADJUSTMENTS TO UNION COST STUDY**

138 **Q. HAS THE ANDERSON TESTIMONY ATTEMPTED TO ADJUST THE**
139 **TRAFFIC SENSITIVITY INPUT OF THE UNION COST STUDY AS A**
140 **MEANS OF CREATING A TELRIC COMPLIANT STUDY?**

141 A. No, I don't believe so. Mr. Anderson's use of the study appears to be a "what if"
142 study to determine the effect on interconnection cost if certain aggregate
143 percentages of the embedded costs are assumed traffic sensitive. However, the
144 FCC Orders in this area are quite clear that traffic sensitivity must be determined
145 by component. Additionally, the study continues to utilize embedded cost, not the
146 costs of an efficient forward-looking network utilizing efficient fill factors.

147 Therefore, the Anderson Testimony study is not TELRIC compliant.

148 Mr. Anderson's conclusion confirms that the study presented in his testimony
149 does not purport to be a recommended TELRIC-compliant cost study. He states:

150 The DPU does not see a compelling public interest or Company
151 reason for the Commission to approve asymmetric transport and
152 termination charges based on Union Cellular's present cost model.
153 There are flaws as outlined above that need to be corrected in the
154 model before it can be considered to represent a TELRIC cost
155 model using only traffic sensitive additional costs. The DPU
156 believes that some TS additional costs exist, (as shown in Table 1),
157 but cannot separate those costs into TS factor percentages to
158 determine their significance for calculating termination and
159 transport rates that are much different than rates already in effect.
160 And once again, Union Cellular must move away from using
161 embedded costs to model switching and cell site costs and

162 incorporate those costs that are consistent with what a least-cost,
163 most-efficient, forward-looking cellular network would be.¹⁰

164 **Q. DOES MR. ANDERSON HAVE A METHOD TO DETERMINE THE**
165 **PERCENTAGE OF MIXED COMPONENTS THAT ARE TRAFFIC**
166 **SENSITIVE VERSUS NON-TRAFFIC SENSITIVE?**

167 A. No. Mr. Anderson states, “The DPU has no way to sort out the cost of equipment
168 it believes is TS which is included in Union Cellular’s total equipment cost.”¹¹

169 Given that Mr. Anderson cannot determine the level of traffic sensitivity in each
170 wireless network component as required by the FCC, it is clear the DPU exhibit is
171 calculating an interconnection cost *assuming* a level of traffic sensitivity in
172 different investments. Obviously, the results of such a sensitivity study fail to
173 provide TELRIC results because traffic sensitive components of the wireless
174 network are not accurately identified, but only estimated by the application of
175 gross percentages without detailed analysis of the components themselves.

176 Additionally, the DPU exhibit does nothing to correct the deficiencies discussed
177 above. Clearly, the DPU analysis points to the fact that Union has not met its
178 burden of proof of providing the necessary data to determine traffic sensitivity of
179 its wireless network components.

¹⁰ Anderson Testimony, lines 639-649.

¹¹ Anderson Testimony, lines 548-550.

180 **VI. CONCLUSION**

181 **Q. WHAT DO YOU CONCLUDE?**

182 A. I agree with Mr. Anderson's conclusion that Union has provided inadequate
183 documentation of switch, cell site and transport costs and has violated TELRIC
184 costing principles in its cost study.

185 **Q. WHAT DO YOU RECOMMEND?**

186 A. I agree with Mr. Anderson that the Commission should reject Union's cost study
187 and deny Union's claim for an asymmetrical compensation rate.

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

189 A. Yes.