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**

REVISED REBUTTAL TESTIMONY OF

PETER B. COPELAND

ON BEHALF OF

QWEST CORPORATION

QWEST EXHIBIT 3R

JULY 21, 2006

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I. IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.

A. I have been employed by Qwest, U S WEST, and Bellcore for the past 24 years. My experience with Qwest and Bellcore includes responsibility for the development of wholesale and retail cost studies, models of the local exchange network, universal service advocacy, jurisdictional separations, and rate development.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I have a Bachelor of Arts degree from Brown University in Urban Studies and a Master of Public Administration from the University of Colorado.

Q. WHAT ARE YOUR CURRENT JOB DUTIES?

A. My current responsibilities include the supervision and development of all wholesale and retail forward-looking cost studies for Qwest. Additionally, my group provides economic analysis for regulatory proceedings.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION OR OTHER STATE COMMISSIONS?

A. Yes. I have testified before the Utah Public Service Commission ("Commission") in unbundled network element cost proceedings and universal service proceedings. I have also testified in other states, including Arizona, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oregon, Washington, and Wyoming. I have also appeared as a panel member before the FCC concerning Universal Service costing.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address the forward-looking cost study developed by Union Cellular witness Jason P. Hendricks to support Union Cellular's claim for asymmetrical compensation for transport and termination. My testimony focuses on three major areas: (1) the federal statutes, the federal rules governing the calculation of asymmetrical compensation rates, and the "additional cost" standard; (2) the standard for Total Element Long Run Incremental Cost (TELRIC) as defined by the FCC and the Commission including evidence that Union Cellular has not met the burden of proof required by Commission rules and orders to demonstrate that the costs included in its study vary with the level of voice traffic carried on its wireless network; and (3) other

ways in which Union Cellular's cost study fails to meet the requirements set forth in the statutes, rules, and TELRIC standards associated with asymmetrical compensation.

Q. HOW MANY VERSIONS OF UNION CELLULAR'S COST STUDY HAVE BEEN FILED IN THIS CASE, AS OF THIS FILING?

A. Mr. Hendricks filed the original study in October 2005 with his direct testimony and has revised the cost study twice since that time: the April 28, 2006 version and the May 30, 2006 version.

Q. IGNORING THE CHANGES IN METHODOLOGY FROM STUDY TO STUDY, ARE THERE ANY TRENDS IN THE COST STUDY CHANGES THAT ARE NOTEWORTHY?

A. Yes. Each study filed by Union Cellular includes significant increases in Union Cellular's calculated cost of end office termination and transport. See Table 1 below. The increase in the asymmetric compensation rate from the first study to the last study is 24 percent. This is a huge increase and Union Cellular must justify it. Union Cellular has not produced any documentation that supports or explains the reasons for the huge increase, which leads to the question of whether any of the Union Cellular cost study results represent a reliable or accurate economic view of the costs allowed for local terminating traffic. This is especially true when comparing Union Cellular's cost study results with the

Commission-ordered local interconnection rates for Qwest, which range from $0.001427 per minute to $0.001798 per minute for end office switching and $0.000861 per minute for 100 miles of transport. These rates sum to $0.002659 per minute for end office call termination in a rural office and 100 miles of tandem transmission. Union Cellular's proposed rate asymmetric rate is 1709 percent higher than Qwest's rates.

Table 1

	Oct. 4, 2005	Apr. 28, 2006	May 30, 2006
Termination Rate	**$ 0.0346**	**$ 0.0397**	**$ 0.0431**
Transport Rate	**$ 0.0020**	**$ 0.0023**	**$ 0.0023**
Asymmetric Compensation Rate	**$ 0.0366**	**$ 0.0420**	**$ 0.0455**

Q. GIVEN THAT UNION CELLULAR PROPOSES TO CHARGE QWEST A TERMINATION RATE OF $0.0431 PER MINUTE, WHAT RATE DOES UNION CELLULAR CHARGE ITS OWN CUSTOMERS PER MINUTE?

A. Union Cellular has a number of rate plans on its web site, but for a conservative comparison, I chose a Union Cellular wireless regional plan with the lowest amount of usage, which results in Union Cellular's highest per minute charge to its own customers. Union Cellular charges $34.95 for 450 anytime minutes, 1500 night and weekend minutes, and 1500 mobile to mobile minutes, which adds up to a total of 3,450 minutes for $34.95. The per-minute charge is slightly over $0.01

per minute. Union Cellular appears to lose $0.03 per minute per customer. The loss per minute is even higher for the Union Cellular rate plans with larger buckets of minutes that lower the calculated rate per minute. The difference between Union Cellular's cost study result and what it charges its own customers calls the validity of the cost study into question.

III. FEDERAL STATUTES, RULES, AND THE "ADDITIONAL COST" STANDARD

Q. UNION SEEKS AN ASYMMETRICAL RECIPROCAL COMPENSATION RATE IN THIS CASE. WHAT FEDERAL STATUTES GOVERN RECIPROCAL COMPENSATION?

A. Section 251(b)(5) of the 1996 Telecommunications Act ("the Act") says, "Each local exchange carrier has the duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications." The Act, at § 252(d)(2)(A)(ii), also directs that the terms and conditions for reciprocal compensation will not be considered just and reasonable unless "such terms and conditions determine such costs on the basis of a reasonable approximation of the *additional costs* of terminating such calls" (emphasis added). The FCC rules for the pricing of the transport and termination for reciprocal compensation directly follow the statutory directives of the Act.

Q. WHAT DO THE FCC RULES SPECIFICALLY STATE CONCERNING ASYMMETRICAL RATES FOR THE TRANSPORT AND TERMINATION OF CALLS TO A CMRS PROVIDER?

A. Section 51.711(c) of Title 47 of the Code of Federal Regulations states that a wireless carrier "may assess upon other carriers for the transport and termination of telecommunications traffic based on the forward-looking costs that such licensees incur in providing such services, pursuant to Sec. Sec. 51.505 and 51.511." Further at Section 51.709, the FCC describes the rate structure for transport and termination: "(a) … a state commission shall establish rates for the transport and termination of telecommunications traffic that are structured consistently with the manner that carriers incur those costs, and consistently with the principles in Sec. Sec. 51.507 and 51.509."

Q. ARE THERE ANY FCC ORDERS THAT FURTHER EXPLAIN THE COMPONENTS OF A FORWARD-LOOKING RECIPROCAL COMPENSATION RATE FOR TERMINATION?

A. Yes. The FCC discussed "additional costs" for the "transport and termination" of local traffic at paragraphs 1056-1058 of its *Local Competition Order*, 11 FCC Rcd. 11,501. At paragraph 1057, the FCC states

> We find that, once a call has been delivered to the incumbent LEC end office serving the called party, the "additional cost" to the LEC of terminating a call that originates on a competing carrier's network primarily consists of the traffic-sensitive component of local

> switching. The network elements involved with the termination of traffic include the end-office switch and local loop. The costs of local loops and line ports associated with local switches *do not vary in proportion to the number of calls terminated* over these facilities. We conclude that such non-traffic sensitive costs should not be considered "additional costs" when a LEC terminates a call that originated on the network of a competing carrier. For the purposes of setting rates under section 252(d)(2), only that portion of the forward-looking, economic cost of end-office switching that is recovered on a usage-sensitive basis constitutes an "additional cost" to be recovered through termination charges. (Emphasis added).

While the above language is framed in terms of the ILEC, it applies to both parties to the interconnection agreement. In the above paragraph, the FCC clarifies what will be referred to throughout my testimony as the "additional cost" standard, i.e., that *only the costs that vary in proportion to the number of calls terminated* are considered "additional costs" to be recovered through termination charges.

Q. HAS THE FCC ADDRESSED THIS "ADDITIONAL COST" STANDARD SPECIFICALLY AS IT APPLIES TO WIRELESS CARRIERS?

A. Yes. In its Order in Docket No. 95-185, adopted August 27, 2003 and released September 3, 2003, the FCC further clarified that for wireless carriers to receive an asymmetrical rate the "additional cost" standard applies. This Order affirms a May 9, 2001 letter issued jointly by the Wireless Telecommunications Bureau and the Common Carrier Bureau (i.e., the "Joint Letter"). That letter states that "the determination of compensable wireless network components should be based on

whether the particular wireless network components are cost sensitive to increasing call traffic." In paragraph 10 of this Order, the FCC further states that "… a cost-based approach - one that looks at whether the particular wireless network components are *cost sensitive to increasing call traffic* - should be used to identify compensable wireless network components. Thus, *if* a CMRS carrier can demonstrate that the costs associated with spectrum, cell sites, backhaul links, base station controllers and mobile switching centers vary, to some degree, with the level of traffic that is carried on the wireless network, a CMRS carrier can submit a cost study to justify its claim to asymmetric reciprocal compensation that includes additional traffic sensitive costs associated with those network elements." Again the FCC makes clear that only *cost sensitive to increasing call traffic* is compensable with an asymmetric reciprocal compensation rate and, furthermore, that such traffic sensitivity must *be demonstrated by the CMRS carrier*.

Q. WHAT DOES THE FCC SAY SHOULD BE CONSIDERED WHEN AN INTERCONNECTING PROVIDER BELIEVES ITS TRANSPORT AND TERMINATION COST WILL BE GREATER THAN THE INCUMBENT'S?

A. The FCC addressed this question in its *Local Competition Order* at paragraph 1089:

> [S]tate commissions must give full and fair effect to the economic costing methodology we set forth in this order, and create a factual record, including the cost study, sufficient for purposes of review after notice and opportunity for the affected parties to participate. In the absence of such cost study justifying a departure from the presumption of symmetrical compensation, reciprocal compensation for the transport and termination of traffic shall be based on the incumbent local exchange carrier's cost studies.

In other words, the study must be a properly documented and constructed forward-looking study of efficiently configured and operated systems, and limited to "additional costs."

Q. THE FCC RULES AT 47 C.F.R. §51.711(B) AND (C) STATE THAT A STATE COMMISSION MAY ADOPT AN ASYMMETRICAL RATE FOR TRANSPORT AND TERMINATION OF TELECOMMUNICATIONS TRAFFIC ONLY IF THE CARRIER OTHER THAN THE INCUMBENT *PROVES* THE NECESSITY FOR SUCH A RATE ON THE BASIS OF A COST STUDY USING THE FORWARD-LOOKING-ECONOMIC-COST-BASED-PRICING METHODOLOGY DESCRIBED IN §51.505 AND §51.511. DOES UNION CELLULAR'S COST STUDY PROVIDE SUFFICIENT PROOF OF THE "ADDITIONAL COSTS" UNDERLYING ITS PRICES AS DETAILED IN §51.505?

A. No. In plain violation of the Act's "additional cost" standard, and the FCC's interpretation thereof in the *Local Competition Order*, and its Order in Docket No. 95-185, Union Cellular has provided no evidence of the traffic sensitive nature of

its costs. Union Cellular has not provided sufficient documentation to prove its switch, transport, and cell sites experience "additional costs" due to the terminating traffic from Qwest.

Q. DOES UNION'S COST STUDY WITNESS, MR. HENDRICKS, CONTEND THAT UNION'S COST STUDY IS LIMITED TO DETERMINING THE "ADDITIONAL" (*I.E.,* TRAFFIC-SENSITIVE) COSTS INCURRED TO TRANSPORT AND TERMINATE TRAFFIC?

A. No. Mr. Hendricks does not even mention the "additional cost" standard.

Q. HAS QWEST MADE AN ATTEMPT TO DETERMINE WHETHER OR NOT THERE ARE COMPONENTS OF UNION'S NETWORK THAT MEET THE "ADDITIONAL COST" STANDARD?

A. Yes. In Data Request 4-009 of its Fourth Set of Data Requests, Qwest requested that Union Cellular identify, for each of its GSM-only cell sites, the capacity and current utilization of that capacity. Union Cellular's response was that the request was irrelevant to the proceeding. What could be more relevant given that the burden is fully upon Union Cellular to demonstrate that its costs meet the "additional cost" standard? Again, the FCC has made clear that only *costs sensitive to increasing call traffic* are compensable through an asymmetric reciprocal compensation rate. At the very heart of a demonstration of such costs is the traffic capacity of a carrier's equipment, in this case, particularly cell site

equipment. This is especially relevant in that the overwhelming majority of the costs included in Union Cellular's study are associated with its cell sites. Qwest served a similar data request on Union Cellular (01-013) concerning the capacity and current utilization of switch costs included in Union Cellular's cost study. Union Cellular's response was that critical capacity constraint data is unavailable.

Q. DOES UNION CELLULAR'S COST STUDY DEMONSTRATE THAT TRAFFIC CAPACITY IS LIMITED WITH RESPECT TO ITS EQUIPMENT AND FACILITIES SUCH THAT UNION CELLULAR'S STUDY MEETS THE "ADDITIONAL COST" STANDARD?

A. No. To meet the standard for traffic-sensitive additional costs, not only must Union Cellular show a capacity that limits traffic, but it must also prove exhaustion of that capacity before it would have to make any additional investments. The FCC has made clear that *only the costs that vary in proportion to the number of calls terminated* are considered "additional costs" that can be recovered through termination charges. Therefore, even if Union Cellular shows that there is a limited traffic capacity for some of its components at cell sites, which it does not show, Union Cellular must demonstrate that the number of calls terminated by Qwest would cause exhaustion of that capacity and thereby cause "additional costs" for Union Cellular. Yet in its response to Qwest's data requests seeking information on cell site capacities and current utilization of those capacities, Union Cellular not only states that the information is irrelevant, but

also that it is overly burdensome to produce. If Union Cellular had performed a sufficient and adequately-supported cost study, which purports to include having to make additional investments in its cell sites due to growth in traffic, it would readily know the current utilization of each of its cell sites. The fact that Union Cellular represents that this information is burdensome to produce can be interpreted in two ways: either (1) Union Cellular's cell sites have no limitations with regard to traffic capacity or (2) Union Cellular's cell sites have sufficient capacity such that forecasted growth will not exhaust the equipment capacities. Either conclusion demonstrates that Union Cellular's termination of traffic from Qwest's end users does not cause "additional costs" in Union Cellular's network.

Q. HAS UNION CELLULAR PROVIDED ANY EVIDENCE THAT THE CELL SITE COSTS VARY WITH INCREASED TRAFFIC?

A. There is no data on the record to make a positive determination that cell site costs vary with increased traffic. However, it is noteworthy that not only has Union not made a case for traffic sensitivity, it has provided evidence strongly suggesting that cell site costs do not vary with additional traffic. Again, the FCC has made it clear that the burden to demonstrate to the state commission that costs do vary with increased traffic is upon Union.

Q. HAVE ANY OTHER STATES RULED ON SIMILAR CMRS ASYMETRIC RECIPROCAL COMPENSATION CASES?

A. Yes. The New York Commission ruled in case for asymmetric compensation where Sprint was the CMRS provider and Verizon was the ILEC. In that case the New York Commission stated,

> "As the party with the burden of proof, Sprint was obligated to show the allocation of costs between traffic-sensitive and non-traffic-sensitive components. It took the view that all costs are traffic-sensitive. Verizon has gone forward with a presentation that calls that result into question, at least prima facie, and Sprint has failed to rebut it. Accordingly, Sprint has, again, not carried its burden of proving asymmetric reciprocal compensation to be warranted. … For the reasons already described, Sprint has failed to carry its burden of proving asymmetric reciprocal compensation to be warranted. Accordingly, its interconnection agreement with Verizon should provide for symmetric reciprocal compensation, consistent with the unrebutted presumption adopted in the FCC's method."

IV. TELRIC COST STANDARD

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF THE TELRIC RULES AND HOW THEY SHOULD BE IMPLEMENTED IN A MODEL?

A. The TELRIC rules call for the development of the cost of a hypothetical carrier based on "the lowest cost network configuration" using "the most efficient telecommunications technology currently available". Essentially, the TELRIC cost standard in this case represents the cost of totally replacing the Union Cellular network using the lowest cost technology currently available in the most efficient configuration to meet existing demand levels for service. In addition, unlike a cost study that supports pricing of network elements, a cost study used

for the purpose of determining the rates for asymmetrical reciprocal compensation must be limited to "additional" (i.e., "traffic-sensitive") costs. The “additional costs” must be caused by increasing call termination traffic terminated from Qwest.

The TELRIC costs should use a forward-looking cost of capital and forward-looking depreciation rates, and a reasonable allocation of common costs. The TELRIC study may not include any retail costs, opportunity costs, embedded costs, or costs associated with other telecommunications offerings such that the element for which the rate is being established ends up subsidizing the other telecommunications offerings. In this case, for purposes of asymmetrical termination, it may not include *any* non traffic-sensitive (*i.e.*, fixed) costs nor *any* costs that the carrier would incur for any facility or equipment that is used for purposes other than transport and termination of calls originated from Qwest landline subscribers to Union Cellular’s subscribers. Traffic from Qwest subscribers terminating to Union Cellular’s subscribers can only be voice traffic. Therefore, investment Union Cellular incurs to provide non-voice services may not be included. Examples of such non-permissible investments include investments for transport and routing of calls originated by Union Cellular's subscribers and data services provided to Union subscribers such as short message service (SMS) and general packet radio service (GPRS). Costs of Union

Cellular's network components that support non-voice services must not be shifted to carriers who terminate local voice traffic to Union Cellular.

Q. WHAT IS THE COMMISSION'S DEFINITION OF TELRIC COST?

A. The Commission has defined TELRIC methodology as producing an estimate of what minimum costs any single efficient forward-looking provider would incur to serve current demand.[1] The Commission further stated, "…TELRIC asks what is the lowest cost estimate for a declining cost provider to self-provision a given element, assuming optimal size and design."[2] In this same Report and Order, the Commission found that inputs must be adjusted to reflect the best practices available that result in a least-cost, most-efficient, forward-looking network cost estimate.

Q. DOES UNION'S COST STUDY MEET THE TELRIC STANDARDS AS DEFINED BY THE FCC AND THE COMMISSION?

A. No. It is clear that the Union Cellular cost study falls far short of the standards developed by the Commission and the FCC rules. The level of detail in the cost study is insufficient to prove that costs are forward-looking and supported by efficient network design and technology. There is little, if any, supporting documentation for switch, cell site, and transport investments and expenses. Many assumptions are unsupported and many have no connection to Union

[1] Docket No. 01-049-85, Report and Order, In the matter of the Determination of the Cost of the Unbundled Loop of Qwest Corporation, issued May 5, 2003 at page 4.

Cellular's current operations, such as the inclusion of cell sites not yet constructed and demand levels 50 percent higher than current demand. The costs do not always reflect least cost technology as required by TELRIC methods, such as including TDMA related expenses. Other examples of deviations from the TELRIC standard include the use of embedded costs for investments[3] and expenses, the inclusion of retail costs for data services, and developing costs for a phantom network. The phantom network is based on undisclosed forecasts of network expansion that result in the inclusion of 162 cell sites[4] not currently in the Union Cellular network. There is no supporting documentation to show that Union Cellular's study reflects a network that is the least-cost, most efficient network that the Commission requires per their orders in TELRIC dockets. Though requested, Union Cellular has failed to provide coverage maps for its existing and proposed cell sites. It is not possible to determine if the phantom network design is efficient if Union Cellular cannot even display the locations and coverage area of the 162 phantom and 163 existing cell sites. Finally, there are errors in its formulas for developing cost. I discuss these problems individually in my testimony in the section below concerning "Errors in the Union Cellular Cost Study".

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[2] *Ibid.*, page 5 (*emphasis added*).

[3] In response to Qwest Data Request 04-007, Union provided "customer property records" (CPRs) for its GSM sites. The CPRs contain the record of embedded cost, including labor, for its GSM cell sites. Union did not provide the current contracts for equipment that can verify that its equipment and installation costs are efficiently incurred.

V. ERRORS IN THE UNION CELLULAR COST STUDY

Q. PLEASE DESCRIBE THE UNION CELLULAR COST STUDY.

A. The Union Cellular cost study develops a cost per minute of use for both "switching" and transport. The cost of the "switch" and cost of the transport are developed differently. The cost of the "switch", according to Mr. Hendricks' testimony, is based on Union Cellular's purchase price of a GSM switch in 2003. The cost study also includes the cost of currently operating cell sites as well as cell sites planned for future deployment as part of the "termination" cost. Neither the investments for the switch itself nor the cell sites are supported by vendor invoice or contract documentation. The cost study calculates the depreciation for the cell sites and switch over the life of the switch, a return on investment and income taxes, and it develops a present value for the total capital cost of the switch and cell sites. The cost study then adds operational costs based on Union Cellular's 2005 expenses attributed to GSM and TDMA operations. The study then adds common cost using a 10 percent factor. The total "termination" cost is converted to a unit cost by dividing the present value of the total "termination" cost by the present value of the minutes of use.

[4] This is nearly a 100 percent increase in the actual number of cell sites (163) in Union Cellular's current network.

The transport cost is not calculated in the same manner as the "switch and cell site" costs. The transport cost is an undocumented "annual cost per T-1" times the number of T-1 facilities required to carry Qwest traffic to Union Cellular. The present value of the total cost for the required T-1 facilities is divided by the present value of the Qwest minutes of use to Union Cellular to compute the unit cost of transport.

Q. HOW SHOULD THE TELRIC RULES APPLY TO THE UNION STUDY?

A. Union Cellular included 100 percent of its current and future cell tower costs. This is not appropriate. Union Cellular has provided no evidence that the cell site investments are "additional costs" caused by the termination of local traffic from Qwest to Union Cellular. Union Cellular has not provided any capacity constraint data that indicates that it ever requires additional investment due to increasing call traffic. Even if it had, Union Cellular would need to provide evidence that anticipated growth in calls terminating to Union Cellular from Qwest would actually cause Union Cellular to incur more cost for cell sites, switches and/or transport. Union Cellular has provided no such evidence. Nor has Union Cellular made an attempt to identify those costs that are not related to terminating voice calls from Qwest. For example, in its response to Qwest Data Request 01-013, Union Cellular states that the $4.8 million included in the study is the actual switch investment which implies that all of the switch costs are included. Union Cellular has not identified the components of the switch that are related to

services for which it charges its end users in addition to what it charges Qwest to terminate traffic to its end users. Such services include voice messaging, text messaging, call waiting, call forwarding, caller ID and three way calling. The cost of equipment to provide these services do not belong in a TELRIC study for terminating voice calls originated by Qwest end users.

Q. HAS THE COMMISSION MADE ANY FINDINGS CONCERNING THE TREATMENT OF SWITCH COSTS IN TELRIC STUDIES?

A. The Commission found in Docket No. 01-049-85 that switch costs should be billed to wholesale customers in the same manner in which they are incurred by the supplier.[5] In Qwest's case, the Commission determined that basic switching capacity and design for current demand is totally non-traffic sensitive. It therefore ordered that the MOU rate for switching be set equal to zero and all the switch costs be recovered with the per line port rate.[6] In this case, based on the information provided by Union Cellular, the switch appears to be non-traffic sensitive as well. The switch investment included in Union Cellular's cost study is for the actual switch installed in 2003. Given that Union Cellular has added cell sites and customers since that time, the MOU current demand included in rows 2-6 of the MOU tab in its study are presumably higher than in 2003. That

[5] *Ibid.*, page 16.
[6] This Utah Order pertains to the unbundled network element switching. The Commission stated at a later date that the Order was not directed to local interconnection rates for end office switching, which are $0.001427 to $0.001798.

demand is then increased by 50 percent in Union Cellular's study to derive the total MOU demand by which the switch cost is divided. Yet, even with this significantly higher demand, the 2003 switch investment is never increased in the cost study from its 2003 investment level. This leads to the conclusion that the Union Cellular switch is, in fact, not traffic sensitive and consistent with the Commission's finding should not be included in a wholesale per MOU rate.

Q. IS THERE ANY OTHER EVIDENCE THAT WOULD LEAD ONE TO CONCLUDE THAT UNION CELLULAR'S SWITCH IS NOT TRAFFIC SENSITIVE?

A. Yes. In Union Cellular's response to Qwest Data Request 01-013 asking for the capacity of Union Cellular's GSM switch, Union Cellular states that the switch capacity in terms of busy hour minutes, busy hour calls and the number of handsets is unavailable or cannot be determined. This raises the question as to whether calls from Qwest's end users to Union Cellular wireless handsets require the use of any traffic sensitive switching equipment. If Union is not aware of any traffic (i.e., MOU or call) capacity limitations of its own GSM switch, capacity limitations that it is required to know to meet its burden of proof in this case, then perhaps there are no traffic limitations. And if there are no traffic limitations, how would Qwest end users' use of that switch cause any "additional costs"? Similar to my comments earlier regarding cell sites, even if there are traffic sensitive components in the switch that could be exhausted - say in a large

metropolitan application - if these components are unlikely to exhaust in Union Cellular's network, then traffic does not cause "additional costs". In other words, if there are switch components with traffic capacity limitations but the traffic in Union Cellular's network will not exceed these limitations - which is probable given that Union Cellular is not even aware of any traffic capacity limitations - then traffic from Qwest end users could not cause Union Cellular to make additional investment in these switch components. If terminating Qwest end user originated voice calls does not cause additional switch cost, it would be a violation of the "additional cost" standard discussed above to include switch cost in a cost study submitted in support of an asymmetrical reciprocal compensation rate.

Q. DOES UNION CELLULAR'S RESPONSE TO QWEST DATA REQUEST 01-013 STATE THAT THERE ARE ANY TRAFFIC CAPACITY LIMITATIONS OF ITS GSM SWITCH?

A. Yes. Union Cellular states in response to Qwest Data Request 01-013 that its GSM switch has capacity to serve 515 cell sites. In its most recent study, Union Cellular forecasts that it will grow to 325 cell sites by 2008. Thus, in 2008, Union Cellular will be using 63% (i.e., 325 / 515) of its switch capacity. The TELRIC standard requires the modeling of an efficient network. If components of the switch are, in fact, traffic sensitive, then Union Cellular has purchased excessive

switching capacity. The TELRIC standard does not allow Union Cellular to recover the costs associated with this additional switching capacity in asymmetric compensation rates. In Decision No. C02-636 in Docket No. 01-049-85, the Commission adopted a switching rate based on a 90 percent utilization rate. If Union Cellular's switch is operating at a lower level of utilization than 90 percent, Qwest should not be required to pay the overstated rate associated with low switch utilization.

Q. DOES UNION CELLULAR OFFER DATA SERVICES TO ITS SUBSCRIBERS OVER ITS CELL SITES AND GSM SWITCH WITH INVESTMENT IT INCLUDES IN ITS COST STUDY?

A. Yes. Union Cellular offers text messaging service (SMS) and GPRS data service that require data related switch and cell site investments. The confidential attachment that Union Cellular provided in response to Qwest Data Request 01-014[7] identifies some switch components that are used to provide SMS and GPRS services. These components are not required to terminate local voice traffic from Qwest. Union Cellular has not provided any information, despite the fact that Qwest has expressly asked for it, that permits identification of components and software[8] associated with data services; it is unknown how much of the switch

[7] Union provided this confidential document in response to a Colorado data request. Although claiming that it had, Union did not provide the document in response to the exact same request in Utah.
[8] The cell site investment also supports data services and must be adjusted, however, Union has provided no information on which to base the adjustment.

and software investment included in the Union Cellular cost study is associated with these services. To meet its burden of proof, Union Cellular must substantiate its cost study by producing vendor invoices with enough detail to confirm that it has included only the appropriate forward-looking minimum costs in the study. The inclusion of investment related to the provision of data services for Union Cellular's customers in the call termination rate violates the "additional cost" standard as well as the TELRIC standard by including costs associated with retail offerings. On these facts alone the Commission should reject Union Cellular's cost study and its claim for an asymmetrical reciprocal compensation rate.

Q. ARE THERE OTHER WAYS IN WHICH THE UNION CELLULAR COST STUDY VIOLATES TELRIC RULES?

A. Yes. In addition to including non-traffic sensitive costs and costs required only for data services in its cost study, Union Cellular has included other costs associated with services that have nothing to do with terminating voice calls from Qwest end users and for which Union Cellular has separate rates. In its response to Qwest Data Request 04-014, Union Cellular states that end users pay for operator assisted calls and that "the charges are assessed pursuant to tariff and price lists." Yet it includes its operator expenses in the operational expenses in the study. As I mentioned earlier, Union Cellular provides voice mail, call waiting, call forwarding, caller ID, and three way calling services to its end users. This requires investments in the switch that would not be necessary to terminate

only voice calls. Yet Union Cellular has included the total cost of the GSM switch in its study. Cell site investment, as best I can determine with the little documentation provided by Union Cellular, is based on the *total* cost of the 68 GSM-only cell sites. Qwest has tried to obtain information regarding the portion of Union Cellular's study investments that is associated with services other than termination of Qwest end user voice traffic (see Qwest Data Requests 01-017 and 04-008). But Union Cellular has not provided information in response to Qwest's data requests that is sufficient to quantify how much of the investment should be eliminated from the cost study because that investment is not required to terminate voice calls from Qwest end users.

Q. HAS THE UNION CELLULAR COST STUDY APPROPRIATELY ACCOUNTED FOR COMMON EXPENSES, WHICH ARE ASSOCIATED WITH CORPORATE OVERHEAD EXPENSE?

A. No. In his testimony, Mr. Hendricks addresses the appropriate level of common expense for a company the size of Union Cellular. But the revised cost study includes a level of common expense twice as high. In his October 5, 2005 Direct Testimony (p. 7 lines 150-155), Mr. Hendricks states, "The common costs are assumed to be comprised of what is commonly referred to in the regulated telecom world as corporate operations expenses, consistent with that used to calculate such costs in the HAI TELRIC model. The resulting common costs per year from this calculation range from approximately $277,000 to approximately

$361,000, which appear reasonable for a company of Union's size." In the revised study, these common costs now range from $472,000 to $835,000, clearly outside the range that Mr. Hendricks considers reasonable. In an efficiently operating corporation, common costs do not grow in proportion to company operations. Common costs are costs of operational functions that are generally fixed costs regardless of the size of the operations, such as executive planning and finance. It is not consistent with TELRIC standards in a TELRIC cost model to grow operations and have common costs increase proportionately, as Union Cellular has done in its revised cost model.

Q. DO YOU KNOW OF ANY OTHER TELRIC VIOLATIONS IN UNION'S STUDY?

A. The study violates a TELRIC principle that costs that support multiple network elements should be apportioned to those elements. For example, the support structure for the cell site equipment (e.g., towers, power, land and building) should not be fully attributable to terminating wireless voice calls if the towers and buildings are supporting equipment that provides other services. Examples of other services are Union Cellular's own data services and long haul microwave equipment owned or operated by other carriers but mounted on Union Cellular's towers or within Union Cellular's buildings. Often cell towers are used by multiple carriers. For example, competing wireless providers will lease space on the tower for their antenna or lease building space for their power and radio

equipment. Similarly, Union Cellular's landline network may use the tower to mount microwave links to transport landline traffic. If this is the case, the costs associated with the support structure must be apportioned among these other uses.

Q. DOES THE EMBEDDED COST DATA FOUND IN UNION CELLULAR'S CELL SITE CUSTOMER PROPERTY RECORDS (CPR) SUGGEST THAT OTHER CARRIERS MAY BE USING THE UNION CELLULAR CELL SITE TOWERS?

A. In the GSM cell site CPRs, at least 55 percent of the GSM sites have two buildings associated with them. Two buildings are not required to house the radio and power equipment for a single carrier in rural settings. One reason to construct two buildings is to provide completely separate access for a collocating company at the tower. In these cases, the cost of the second building should not be included at all and the tower costs should be allocated among the number of uses of the tower as described above in order to comply with TELRIC directives. On June 8, 2006, Qwest made a data request[9] to Union Cellular asking "whether any of Union's cell sites house, or otherwise serve or have an association with, equipment or attachments that serve or are owned by another telecommunications carrier or other type of provider." As of the filing of this testimony, over six weeks after the request was served on Union Cellular, Qwest has not received any response.

Q. ARE THERE OTHER VIOLATIONS OF TELRIC STANDARDS IN UNION CELLULAR'S STUDY?

A. Yes. First, the operational expenses do not remove the regulated expenses that are associated with Union Telephone Company's ILEC operations. In Union Cellular's original cost study that was filed in 2005, Union Cellular removed the regulated expenses associated with Union Telephone Company's ILEC operations from the maintenance expenses in the Maintenance tab. It appears that Union Cellular made no such adjustment to the expenses in the second revised cost study (i.e. the most recently filed study). Second, the operational expenses in the cost study are based on both TDMA and GSM operations. In Union Cellular's response to Qwest Data Request 04-010, Union Cellular states that the expenses are "2005 Union expenses attributed to GSM and TDMA operations." TDMA equipment is not the most efficient currently available equipment by Union Cellular's own admission, as it is replacing this equipment with GSM technology. Both FCC and Utah rules require a TELRIC study to utilize the most efficient, least cost technology It is therefore a TELRIC violation to base forward-looking operational expenses on expenses that include TDMA related expenses. Also, because maintenance and power costs are generally less with newer technology, it appears that Union has overstated these expenses in its study.[10]

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[9] Qwest Data Request 5-004.

[10] In response to Qwest Data Request 04-012, Union points out that "sub-accounts that begin with the number "3" are Cell/TDMA expenses and expenses associated with sub-accounts that begin with the

Q. WHICH OF UNION CELLULAR'S COST STUDY INPUTS HAVE NOT BEEN ADEQUATELY DOCUMENTED BY UNION CELLULAR?

A. To meet its burden of proof, Union Cellular must provide this Commission with evidence of its switching and cell site investments, as well as its transport costs. These are the main inputs for which Union Cellular has not produced adequate verification. Such documentation should have been provided by Union Cellular with its cost study. Nonetheless, Qwest, in its First and Fourth Sets of Data Requests, asked for this backup documentation. Union Cellular has not provided it. For example, Union Cellular must produce equipment contracts to demonstrate that it has used current equipment prices in its study. Customer Property Records (CPR) do not provide current pricing.

Q. WHAT DOCUMENTATION IS NECESSARY FOR UNION CELLULAR TO SUPPORT ITS SWITCHING INVESTMENT OF $4.8 MILLION?

A. Union Cellular should provide verification of its investments via contracts, or at least recent invoices.[11] Qwest asked for these records specifically in Qwest Data Request 01-015. Union Cellular responded by referring Qwest to 01-014. But Union Cellular's responses to Qwest Data Requests 01-014 through 01-017 refer

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number "8" are GSM expenses." This being the case, almost 60% of the 2005 operations costs are TDMA. Only 10 (6%) of the 163 sites with which this 2005 expense is associated are TDMA-only; 68 (42%) are GSM-only and the rest (52%) are mixed GSM and TDMA. Consequently, given that 60% of the expenses are TDMA, the costs per site for a GSM-only site are significantly less than the average developed in the cost study.

[11] TELRIC requires that costs be forward looking, not embedded. The switch and cell site costs in Union Cellular's cost study are embedded in that they are purported to be what Union Cellular has paid in the

to an "attachment which contains confidential information." As discussed above, Qwest has never received this attachment. In the first data request in Qwest's Fourth Set of Data Requests, Qwest again asked for this document that Union Cellular claimed it had previously supplied. As far as Qwest can tell, Union Cellular must be referring to a project tracking report that Union Cellular provided in a similar Colorado proceeding in which it also filed a cost study with the same $4.8 million switch investment. The report is not an invoice or contract and does not provide evidence of Union Cellular's investments.

Q. HAS UNION CELLULAR PROVIDED SUFFICIENT DOCUMENTATION TO SUPPORT ITS CELL SITE INVESTMENTS?

A. No. Qwest requested this information in Qwest Data Request 04-002. Union Cellular's response was that "As part of a later request, Union Cellular will provide the information and documentation that is appropriate for a response herein." Union Cellular has not provided any other relevant documentation, so Qwest presumes that Union Cellular meant the customer property records (CPRs) that it provided in response to Qwest Data Request 04-007. But the CPRs are not an adequate or responsive answer to Data Request 04-007. They do not support Union Cellular's cell site investments as referenced in Qwest Data Request 04-002. In a nutshell, Union Cellular has not sufficiently documented any of its investments with contracts or invoices. Again, the burden is on Union Cellular to

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past. There is no documentation on the record indicating that these are the prices Union Cellular

show that its costs are forward-looking and economically efficient. Qwest has been required by commissions to provide its contracts to support the investments included in its TELRIC cost studies and Union Cellular should be required to do the same.

As an additional point, the CPRs produced by Union Cellular indicate that Union Cellular's installation labor costs ranged from 10 percent to 34 percent of equipment costs within specific equipment types. This installation cost range is indicative of a learning curve when installing equipment. The more practice a company has with installing equipment, the more efficient it becomes in its installation practices. TELRIC requires that only the most efficient practices be used. Therefore, for TELRIC purposes, installation costs for all sites should reflect the most efficient practices. The installation labor costs listed in Union Cellular's cost study do not satisfy this requirement.

Q. WHAT DOCUMENTATION HAS UNION CELLULAR PROVIDED IN SUPPORT OF ITS COST STUDY ESTIMATE OF TRANSPORT COSTS?

A. None. When Qwest asked for this information, Union Cellular's response to Qwest Data Request 01-020 was the statement that the "figure was a conservative estimate." This is not sufficient proof.

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anticipates paying in the future.

Q. DO YOU HAVE OTHER CONCERNS REGARDING THE UNION CELLULAR COST STUDY OTHER THAN THOSE DISCUSSED ABOVE?

A. Yes. I have two additional concerns as of the writing of this testimony that I want to address. First, it appears that Union Cellular is double counting by including land and building lease expenses in its operational expenses. This is due to the fact that in estimating its cell tower investments in the GSM Site Costs tab of its study, Union Cellular has included investments in building and towers for the 67 of the 68 GSM-only sites (the exception being Logan, Utah). Then it assumes that the average per site investment for these 68 sites is the average for all 325 sites. Yet Union Cellular then includes land and building lease expense in the operational expense estimates. Land and building lease expense is over 20% of the total operational expenses. There is no justification for the lease expense to be so high if Union Cellular owns the buildings in 67 out of every 68 sites.

Second, there is a significant methodology error in the study. In its first revision of the study in April of 2006, Union Cellular changed from a 10 to a 14.5 year study period, consistent with the Commission-adopted depreciation life. So Union Cellular included the *costs* for 14.5 years, but the MOUs by which Union Cellular divided the cost to yield a per-MOU cost includes only the first 10 years of demand. Union Cellular applies this method in its second revision also; it filed

the second revision in May 2006. This error alone causes Union Cellular to overstate the unit cost by almost 25%.

VI. CONCLUSION

Q. GIVEN (1) THE FAILURE OF UNION CELLULAR TO DEMONSTRATE THAT ITS COSTS ARE TRAFFIC SENSITIVE, AS CLEARLY REQUIRED BY THE FCC'S "ADDITIONAL COST" STANDARD, (2) UNION CELLULAR'S INADEQUATE DOCUMENTATION OF SWITCH, CELL SITE AND TRANSPORT COSTS AND (3) THE OTHER VIOLATIONS OF TELRIC COSTING PRINCIPLES, WHAT IS YOUR CONCLUSION?

A. In paragraph 15 of its September 23, 2003 Order affirming the Joint Letter, the FCC writes, "we emphasize that we make no determination here as to whether any particular element of a CMRS network is actually traffic-sensitive. Rather, as the Joint Letter noted, a CMRS carrier that believes it is entitled to asymmetrical compensation *must* still submit a cost study to the appropriate State commission *justifying its claim to asymmetrical compensation for additional traffic-sensitive costs* associated with its network elements." (emphasis added). Union Cellular has not met this requirement. On this point alone the Commission should reject Union Cellular's cost study and deny its claim for an asymmetrical reciprocal compensation rate. Furthermore, however, Union Cellular's cost study does not

meet TELRIC standards required for wholesale rate elements. And, finally, even if Union Cellular had demonstrated that some of its costs are traffic sensitive and filed a TELRIC compliant study, the Commission should reject the study because Union Cellular failed to document its costs and investments -- a requirement for any cost study filed before a commission. Consequently, the Commission should reject Union Cellular's cost study and deny Union Cellular's claim for an asymmetrical reciprocal compensation rate.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.