Bruce S. Asay
Keith S. Burron
Associated Legal Group, LLC
1807 Capitol Avenue, Suite 203
Cheyenne, WY 82001
(307) 632-2888

Stephen F. Mecham (4089)
Callister Nebeker & McCullough
10 East South Temple, Suite 900
Salt Lake City, UT 84133
(801) 530-7316

Attorneys for Union Telephone Company

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

IN THE MATTER OF THE PETITION OF QWEST CORPORATION FOR ARBITRATION OF AN INTERCONNECTION AGREEMENT WITH UNION TELEPHONE COMPANY dba UNION CELLULAR UNDER § 252 OF THE FEDERAL TELECOMMUNICATIONS ACT OF 1996	)	**Docket No. 04-049-145**

POST SURREBUTTAL TESTIMONY

OF

JASON P. HENDRICKS

FOR

UNION TELEPHONE COMPANY

October 26, 2007

Public Version

Q. Please state your name and business address.

A. My name is Jason P. Hendricks, and my business address is 2270 LaMontana Way, Colorado Springs, CO 80918.

Q. Are you the same Jason P. Hendricks who previously filed Direct Testimony on October 4, 2005, Surrebuttal Testimony on November 11, 2005, and Supplemental Surrebuttal Testimony on August 11, 2006 in this proceeding?

A. Yes, I am.

Q. What is the purpose of your post surrebuttal testimony?

A. The purpose of my post surrebuttal testimony is to respond to the post surrebuttal reply of Qwest witness Peter Copeland, dated September 28, 2007 and the Rebuttal Testimony of Staff witness Paul Anderson, dated October 12, 2007. Specifically, I disagree with the modifications made to Union's asymmetric cost study by both witnesses and recommend that the Commission accept Union's cost study.

INITIAL COMMENTS

Q. Do you have any initial comments you'd like to make?

A. Yes. In this testimony, I recommend that the Commission reject all of Mr. Copeland's and Mr. Anderson's positions on what they believe to be deficiencies with Union's cost study. But I want to point out that if the Commission were to agree with any of the positions expressed by Mr. Copeland and Mr. Anderson, any resulting changes that need to be made in Union's asymmetric rates can be made within the existing cost study

structure, whether they be explicit input changes or changes in the formulas used within the model. Specifically, none of the proposals made by Mr. Copeland and Mr. Anderson should lead the Commission to conclude that the model itself should be rejected. Union's cost study is a typical TELRIC study and as the filing party, Union should be given an opportunity to revise its study to comply with the Commission decision from the initial phase of the proceeding just as other carriers who have developed TELRIC studies have been allowed to do. In short, if the Commission were to determine that a specific assumption made within the study is inappropriate, it should allow Union to correct the problem and submit a revised study rather than simply rejecting the study in its entirety. For example, Mr. Copeland takes the position that Union has not met its burden of proof that its network is 100% traffic-sensitive and that the study should, therefore, be rejected in its entirety. My position is that if the Commission were to determine that some lesser percentage of the network is traffic-sensitive, it should issue a ruling about on the proper traffic-sensitive factor and allow Union to refile the study that uses the revised traffic-sensitive factor rather than simply rejecting the study in its entirety. My proposal is consistent with how the Commission addressed Qwest's TELRIC study and is consistent with every ILEC TELRIC proceeding I'm aware of throughout the country.

Q. Have you prepared an exhibit that summarizes each party's position on the open issues with respect to Union's proposed cost study?

A. Yes. Exhibit 17 contains a summary of the positions of Union, Qwest, and Staff on specific issues associated with Union's proposed cost study. Again, if the Commission

were to agree with any position other than Union's, Union could make those changes to the study in compliance with such Commission decision.

Q. Is there a reason why you are making such a recommendation to the Commission?

A. Yes, in addition to that fact that this recommendation is consistent with how ILEC TELRIC proceedings have been handled, I don't want the Commission to reach the same kind of decision that the Colorado Commission reached in which it simply rejected Union's entire cost study based on its position that Union did not meet its burden of proof on specific issues when the Colorado Commission could have required modifications to the study based on those specific portions of Union's cost study that the Colorado Commission believed were not supported. I will address the Colorado Commission decision in more detail later in my testimony. But for now, I simply wanted to make it clear that any decision made by the Commission on the issues of dispute in this proceeding can be accounted for in the model proposed by Union.

<u>RESPONSE TO PAUL ANDERSON</u>

Q. Mr. Anderson states that "any model used must employ the same TELRIC principles as used by HAI 5.2a." (Anderson Rebuttal, p. 10). Is Mr. Anderson's position on the types of costs that should be excluded from Union's cost study consistent with his position that a cost study must use the same TELRIC principles used by HAI 5.2a?

A. No. Mr. Anderson's position that costs for towers, buildings, power equipment, cables, and fiber/conduit should be excluded from cost study is inconsistent with how HAI 5.2a

treats the same, and similar kinds of, costs. Specifically, these facilities are support assets to traffic-sensitive facilities and HAI 5.2a includes non-traffic-sensitive support assets in the development of per-minute transport and termination rates. For example, HAI 5.2a includes land, buildings, and power investment in the development of per-minute switching rates for reciprocal compensation. Each of these facilities, in isolation, could not be considered traffic-sensitive, but they are included in the per-minute switching rates because they support the traffic-sensitive switch. Similarly, HAI 5.2a includes pole, conduit, and manhole investment in the development of per-minute transport rates for reciprocal compensation. Again, each of these facilities, in isolation, could not be considered traffic-sensitive, but they are included in the per-minute transport rates because they support the traffic-sensitive transport equipment. Union's switch and cell sites perform comparable switching and transport functionality to the switches and transport facilities in Qwest's network, as discussed in detail in Union's previous testimony. It is simply inappropriate and inconsistent for Mr. Anderson to take the position that "any model must employ the same TELRIC principles as HAI 5.2a" and yet propose that Union not be allowed to recover costs in the same manner as HAI 5.2a would allow.

Q. Was Qwest's reciprocal compensation rate based on HAI 5.2a?

A. Yes. Qwest's reciprocal compensation rate was developed as a combination of HAI and ICM results. (Copeland 3/5/2007 Surrebuttal, p. 13). Because non-traffic-sensitive support assets were included in the development of Qwest's reciprocal compensation rates, it would be inconsistent and inappropriate for the Commission to disallow such

costs in the development of Union's asymmetric compensation rates. In short, Union's cost study should not be held to a higher standard than Qwest's.

Q. Has the FCC recognized that support assets should be included in switching rates?

A. Yes, in the development of its own synthesis model, the FCC adopted the HAI switching algorithms. Specifically, the FCC stated that:

> [t]he synthesis model incorporates the HAI switching and expense modules and calculates the investment related to wire center buildings and land in the switching module. So, US West is mistaken that fifty percent of the building and land investment is eliminated, because this investment is added back in calculating switching costs.[1]

So, while Mr. Anderson is correct that the FCC never specifically stated in its TELRIC rules whether non-traffic sensitive support assets should be included as part of switching costs, the FCC allowed such non-traffic-sensitive support assets to be included in TELRIC-based switching costs as part of its adoption of the HAI switching platform.

Q. Why do you suppose that the FCC never specifically ruled on the issue of whether non-traffic-sensitive support assets should be included in per-minute rates?

A. My understanding, based on personal experience and review of FCC interconnection and pricing dockets, is that the FCC never ruled on whether non-traffic sensitive support assets should be included in per-minute switching and transport rates because it was never an issue of dispute. The earliest TELRIC models developed by CLECs (including the predecessor to HAI 5.2a) included non-traffic-sensitive support costs in the development of per-minute rates because those CLECs presumably recognized that

[1] "In the Matter of Federal-State Joint Board on Universal Service Forward-Looking Mechanism for High Cost Support for Non-Rural LECs," CC Docket Nos. 96-45 and 97-160, Tenth Report and Order, "USF Inputs Order," October 21, 1999, para. 417.

inclusion of such costs in that manner was appropriate. I've been involved in a number of TELRIC proceedings in multiple jurisdictions and I've never heard of someone taking issue with a carrier including non-traffic-sensitive support costs (e.g. land, power, buildings, poles, manholes, conduit, etc.) in the per-minute transport and termination rates. This is the first time I've seen anyone question the inclusion of such costs in that manner. And indeed, as previously stated, such a position is clearly inconsistent with the methodology used in the HAI 5.2a model that is Staff's preferred model and the one that was used in the development of Qwest's transport and termination rates.

Q. How do you propose that the Commission address this issue with respect to the cost study calculations?

A. I propose that the Commission determine the percentage of Union's primary assets that is traffic-sensitive and then require that same percentage to be applied to both the primary and support assets. That is the way it is typically done in TELRIC proceedings. For example, if 70% of an ILEC's switch is deemed traffic-sensitive, then 70% of the land, buildings, and power equipment used in support of the switch would be assigned to traffic-sensitive rate elements/services, such as transport and termination, while the remaining 30% would be assigned to non-traffic-sensitive elements/services, such as ports. Applying this example to the present case, if the Commission were to determine that 70% of Union's primary cell site asset (BTS) is traffic-sensitive, then 70% of the land, buildings, tower, and power equipment used in support of the BTS would be assigned to traffic-sensitive transport and termination services that would partially be recoverable through rates charged to Qwest, while the remaining 30% would be assigned

to non-traffic-sensitive elements/services that Union could only recover in its own retail rates. Union's model is designed to handle this type of finding through its traffic-sensitive factors.

Q. How does your recommended approach compare with the approach used by Mr. Anderson?

A. Mr. Anderson's approach results in under-recovery of legitimate costs because he removes all of the costs for assets that he deems to be non-traffic sensitive even if they are support assets for traffic-sensitive assets. So, in the case of cell site costs, Mr. Anderson does not determine which percentage of the BTS is traffic-sensitive and then apply the same factor to all of the cell site costs. Instead, he estimates which specific cell site assets are non-traffic-sensitive and then applies that percentage to the entire cell site investment. By doing so, the per-minute rate he develops doesn't allow recovery of any support assets and only a partial recovery of BTS costs. The impact of his approach is exacerbated because the annual operational costs are correspondingly reduced in the same manner. Union's approach allows for the same percentage recovery through per-minute rates for support assets that applies for the primary assets. Again, Union's approach is consistent with the HAI 5.2a methodology.

Q. Mr. Anderson states that Union's switch and cell site costs are embedded costs. (Anderson Rebuttal, p. 11). Do you agree that Union uses embedded costs in its study?

A. No. Union operates in a competitive wireless industry and has every incentive to operate in an efficient manner. Accordingly, the costs that Union incurs are the costs of an efficient, facilities-based entrant as envisioned by the FCC at the time it established its TELRIC rules. Union's cost study is completely compliant with the FCC's TELRIC pricing methodology because it uses the costs Union "would incur today if it built a … network that could provide all of the services its current network provides, to meet reasonably foreseeable demand, using the least-cost, most efficient technology currently available." [2] (Emphasis added.) With respect to cell sites, Union developed its cost study using the current prices it pays for GSM cell sites (those recently completed) as a basis for the projection of GSM cell sites costs to build and convert additional GSM cell sites. Union has specifically complied with each of the primary requirements in the FCC's TELRIC rules – 1) current costs; 2) reasonably foreseeable demand; and 3) least-cost, most efficient technology currently available.

Q. Will you please explain the time period when the costs used in the development of switching and cell site costs were incurred?

A. Yes. Union purchased its GSM switch in December of 2003. Union's first cost study in this proceeding was filed in October of 2005. Given that the switch was less than two years old, I believe it is reasonable to conclude that the switch costs were certainly current at that time. This proceeding is now over two years old, but I would still consider the switch costs to be current. In addition, as Mr. Anderson concedes, it is a "modern

[2] "In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers Implementation of the Local Competition Provisions of the Telecommunications Act of 1996 Deployment of Wireline Services Offering Advanced Telecommunications Capability," CC Docket Nos. 01-338, 96-98 and 98-147, *Triennial Review Order*, February 10, 2003, para. 669.

efficient switch technology that is forward-looking." (Anderson Rebuttal, p. 11.) I wouldn't consider those costs to be embedded costs as those terms were interpreted by the FCC in its *First Report and Order.*[3]

The GSM cell site costs Union used in the model were for 68 cell sites placed in Union's network between September 2003 and December 2005. Again, these are real costs for a carrier operating in a competitive industry with every incentive to be efficient. Union used these costs as a basis to develop its forward-looking costs by using the average cell site costs for these 68 GSM cell sites as the projected average costs for the 257 additional GSM cell sites Union is projected to add or convert from TDMA in the reasonably foreseeable future. As with switching, I would consider these costs to be current. If anything, the costs are understated because for the most recent 43 GSM cell sites that Union has added in 2006 and 2007, the average cost has been ** ** which is ** ** higher than the ** ** average GSM cell site used in the model. In addition, as with the GSM switch itself, the GSM cell sites represent efficient technology that is forward-looking. Mr. Anderson has certainly not presented any evidence to support a contention that the GSM technology used in Union's network is not forward-looking or efficient. Rather, he is suggesting that the costs are embedded simply because they were incurred a few years ago while failing to recognize how long this proceeding has been open.

[3] "In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 and Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers," CC Docket Nos. 96-98 and 95-185, *First Report and Order*, August 1, 1996, para. 704-707.

Q. Do you believe that Mr. Anderson's concept of embedded costs is consistent with the FCC's concept of embedded costs when it established its TELRIC rules?

A. No. At the time of its establishment of TELRIC rules, the FCC was addressing the proper pricing mechanism for ILECs whose markets were just recently opened up as a result of the passage of the Telecommunications Act of 1996. The common perception at that time among regulators and competitive carriers was that ILECs had been operating for years without competition and that their booked costs were probably higher than what a competitive carrier would incur given that the ILECs had little competitive incentive to be efficient and, according to this logic, had received a guaranteed return on their investments. As a result, the FCC established TELRIC pricing rules so that CLECs would not have to pay a higher rate for unbundled network elements and service than what an efficient facilities-based carrier would incur. The rules were designed to make the ILEC operate efficiently and allow the CLEC to make decisions on how to deploy services based on such theoretical efficiency considerations. Moreover, the types of embedded costs that the ILECs were seeking to recover were costs that they felt they incurred as a result of regulatory requirements in place prior to the Telecommunications Act of 1996 and that they believed they were precluded from recovering with the change in regulatory requirements resulting from the Telecommunications Acts of 1996.[4]

Union's costs can not be considered inefficient embedded costs because: 1) Union does not need a separate regulatory incentive to operate efficiently since the market in which it operates is vastly more competitive than the market in which ILECs operated in 1996; 2) Union has not had a set regulated return on its wireless networks like the ILECs did on

[4] *Id.* para. 706-707.

their networks prior to the passage of the Telecommunications Act of 1996; and 3) Union is not seeking recovery of costs under some previous regulatory regime as were the ILECs in 1996. Simply stated, the costs that Union incurred, slightly before and early in this proceeding, do not include the types of inefficiencies that may have been present in the ILECs' booked costs in 1996. The costs are simply a few years old because this proceeding is a few years old. Mr. Anderson has not presented any evidence to support a contention that costs have decreased since the time that Union incurred them, and as stated above, GSM cell site costs have actually increased. Therefore, I recommend the Commission reject Mr. Anderson's contention that the costs in Union's cost study are embedded costs.

Q. In his proposed modifications to Union's study, Mr. Anderson reduces the number of cell sites from the 325 assumed in Union's study to 225 in order "to consider only present costs." (Anderson Rebuttal, p. 14). Is Mr. Anderson's proposal consistent with FCC TELRIC rules?

A. No. In violation of FCC TELRIC requirements, Mr. Anderson's proposal does not model a network that could provide all of the services necessary to meet reasonably foreseeable demand. Union currently has 228 cell sites in operation. It also has 17 cell sites under construction and 134 cell sites under budget for construction in 2008. These additional cell sites are being constructed in order to meet the reasonably foreseeable demand for Union's services. So, by the end of 2008, Union may have as many as 379 cell sites in operation. At that rate of progress, Union's 325th cell site will be in operation in August of 2008, which is only ten months after the date this testimony is filed.

Union's study does not include the additional 189 cell sites Union projects to construct from August of 2008 through the end of 2011. Thus, Union has only included the short-term network investment assumptions, which I believe is fully consistent with the FCC's use of the term "reasonably foreseeable demand." In contrast, Mr. Anderson's approach understates the network investments necessary to meet reasonably foreseeable demand by 31% [(325-222)/325 = 31%]. Because, Mr. Anderson's approach violates FCC TELRIC mandates, I recommend that the Commission reject his proposed number of cell sites and instead allow Union to include all 325 projected cell sites in its cost study.

Q. Mr. Anderson proposes two modifications to Union's MOU of calculations. Can you please describe those proposed changes?

A. Yes. First, Mr. Anderson applies a 2.74% annual growth rate to the current MOU figures as an alternative to the proposal made by Union to equate the projected demand and investment in year 1. Second, Mr. Anderson eliminates the present value factors Union applied to the annual MOU. All else being equal, the first change to the MOU factor results in higher per-minute cost estimates than those proposed by Union while the second change results in lower per-minute cost estimates than those proposed by Union. The net effect of both changes (again, all else being equal) is a per-minute rate that is approximately four-tenths of a cent lower than those proposed by Union.

Q. Will you please respond to Mr. Anderson's proposal to apply an annual growth rate to the current MOU?

A. Yes. Mr. Anderson's proposal results in a mismatch between costs and demand by assuming all costs are incurred in the first year but that the demand, which presumably drives that investment, doesn't occur until later years. Union's approach assumes that the projected demand and costs occur in the first year. Specifically, Union's investment assumptions are based on a reasonable projection of expected demand. The only reasonable alternative to Union's approach would be to include additional investments in subsequent years while simultaneously assuming higher demand in subsequent years. Mr. Anderson's approach only makes the latter adjustment, which leads to a mismatch between costs and revenues.

Q. Mr. Anderson claims Union's approach to determining demand is inconsistent with FCC TELRIC rules and so he proposes a fill factor growth rate to be applied to current demand. (Anderson Rebuttal, pp. 7-8 and 13). To what specific FCC rule is Mr. Anderson referring when he claims that Union's approach violates TELRIC requirements?

A. Mr. Anderson does not provide a citation for the specific FCC requirement to which he is referring. Presumably, he is referring to Section 51.511 of the FCC rules, which states:

> (a) The forward-looking economic cost per unit of an element equals the forward-looking economic cost of the element, as defined in Sec. 51.505, divided by a reasonable projection of the sum of the total number of units of the element that the incumbent LEC is likely to provide to requesting telecommunications carriers and the total number of units of the element that the incumbent LEC is likely to use in offering its own services, during a reasonable measuring period.
>
> (b)(1) With respect to elements that an incumbent LEC offers on a flat-rate basis, the number of units is defined as the discrete number of elements (e.g., local loops or local switch ports) that the incumbent LEC uses or provides.
>
> (2) With respect to elements that an incumbent LEC offers on a

> usage-sensitive basis, the number of units is defined as the unit of measurement of the usage (e.g., minutes of use or call-related database queries) of the element. (E*mphasis added.*)

Pursuant to this rule, the proper denominator for the services at issue in this proceeding is a reasonable projection of the MOU originated by Qwest as well as the MOU of Union's own services. That kind of data is exactly what Union has included in the denominator and has used in the development of rates in the model. This rule is based on the following FCC conclusion from the *First Report and Order:*

> Per-unit costs shall be derived from total costs using reasonably accurate "fill factors" (estimates of the proportion of a facility that will be filled with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with that element by a reasonable projection of the actual total usage of the element.[5]

Again, this is exactly the type of calculation performed by Union. Nothing in the FCC's rules requires current MOU to be grown on an annual basis in the manner proposed by Mr. Anderson.

Q. Will you please respond to Mr. Anderson's proposal to eliminate the present value factors from the MOU calculation?

A. Yes. Mr. Anderson's decision to eliminate the present value factors from the MOU calculation would lead to a mismatch between costs and revenues. Specifically, multiplying the rate that results from Mr. Anderson's approach to the projected demand (all else being equal) would lead to a revenue stream that would not allow Union to recover its costs. Mr. Anderson's approach might be acceptable if Union could recover

[5] *Id.* para. 682.

all its costs in year 1. But over a 14 ½ year recovery period, his approach vastly understates the amount of costs that need to be recovered.

Q. Will you please explain why Union applied the present value factors to the minutes of use calculation?

A. Yes. Union applied the present value factor to the minutes of use calculations because it recognizes: 1) that costs for the network will not be recovered all at once but will instead be recovered over the life of the network; 2) it would be administratively burdensome to change the rates each year to equate future expected revenues with future expected costs; and 3) the present value calculations are designed to develop one rate that will ensure that the sum of the discounted projected revenue streams will equal the sum of the discounted projected costs over the life of the network. The present value factors were applied to the minutes of use as a means to obtain present value of revenues. Because the revenues under the model will simply equal the rate times MOU, applying present values to MOU is the simplest means to obtain the present value of revenue. While Mr. Anderson is correct that a minute will not be 24 seconds long ten years from now, a dollar will be worth $0.39 ten years from now. In other words, a minute of conversation will generate less revenue for Union in terms of today's dollars ten years from now than will a minute of conversation today. Since the ratio of 24 seconds to one minute is the same as the ratio of $0.39 to $1.00[6], applying the present value factors to yearly MOU will result in the same expected present value of revenue as applying the present value factor to yearly revenues. But within Union's model, the former is a much simpler means to arrive at the

[6] With rounding because the actual calculation is slightly less than 24 seconds and slightly more than $0.39.

proper rate. So, Union is not really discounting time (i.e. a minute) but is discounting revenue.

Q. Has Qwest taken issue with Union's MOU calculation?

A. No.

Q. You stated that Mr. Anderson's approach vastly understates the amount of costs that Union would need to recover. Can you provide a mathematical illustration of what you mean?

A. Yes. In Union's model, Union will have ** ** of actual termination costs that it will have to recover in Year 4. These costs include costs to recover plant in service investment as well as depreciation, operational, common, and tax costs. I use the term "actual costs" because these are real costs that Union projects to incur and they are not discounted costs. The present value factors are applied in another portion of the model. Union's model also shows that Union will have ** ** in actual termination revenue in Year 4. This figure is calculated by multiplying the termination rate developed in Union's model by the projected annual MOU (non-discounted). I use the term "actual revenues" because these are the real revenues that Union projects to receive as a result of the rate it developed and the revenues are not discounted. In this analysis I'm comparing apples to apples – actual costs to actual revenues – and the present value factors are not applied to the costs, revenues, or MOU. As can be calculated, Union would under-recover its costs by ** ** (which equals ** ** - ** **) in Year 4. In fact, in Union's model, Union would under-recover its costs for over 6 of the first 14 ½

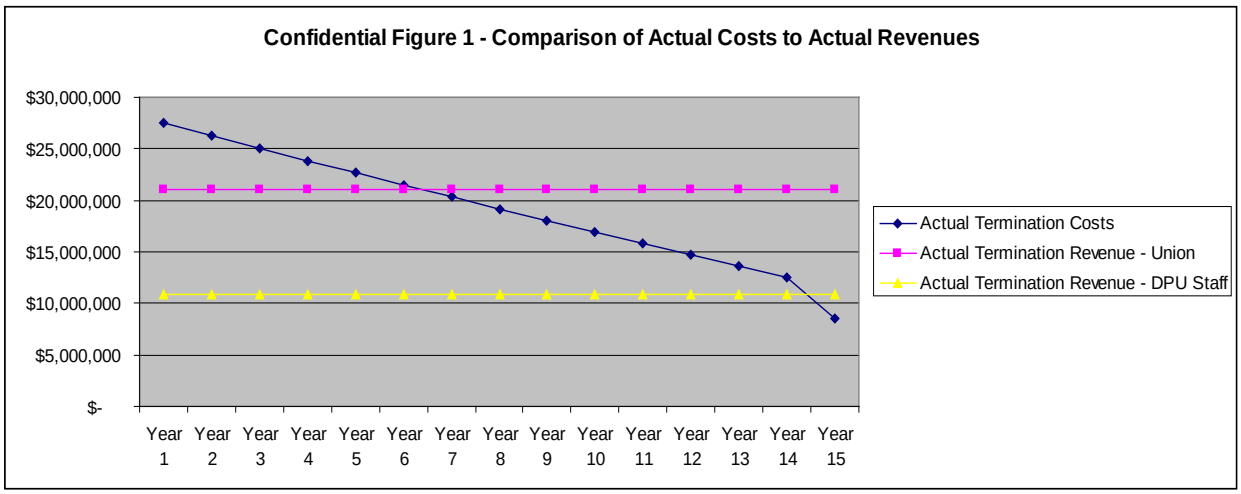
years of its network lives. However, Union's model would allow Union to compensate for this early under-recovery because beginning after Year 7, Union would begin to over-recover its costs. For example, in Year 10, Union would receive ** ** in actual termination revenue compared with ** ** in actual termination costs. Over the entire network lives, Union would receive exactly the amount of revenue necessary to recover its costs.[7]

In contrast, Mr. Anderson's calculations would result in Union under-recovering its actual costs every year through year 14. For example, all else being equal, Mr. Anderson's elimination of the present value factors in the MOU calculations would lead to Union having ** ** in actual termination revenue to recover its ** ** in actual termination costs in Year 4 and ** ** in actual revenue to recover its ** ** in actual termination costs in Year 10. Over the 14 ½ life of the facilities, Mr. Anderson's elimination of the present value factors in the MOU calculations would result in Union under-recovering its costs by ** **.[8] Mr. Anderson's approach wouldn't allow for over-recovery in later years to compensate Union for under-recovery in early years.

[7] Union's model would result in Union receiving a total of ** ** in actual termination revenue compared with ** ** in actual termination costs. But on a present value basis, the sum of the costs and revenues would each equal ** **. The reason why the sum of actual revenues must exceed the sum of actual costs and actual revenues by 10.6% is because Union doesn't begin to fully recover its costs on a yearly basis until later in 14 ½ year life of the facilities when a dollar is worth less than it is in the early years of under-recovery.

[8] Mr. Copeland's proposed elimination of the present value factors in the MOU calculation, all else being equal, would result in actual revenues being ** ** compared with ** ** in actual costs for an under-recovery of actual costs by ** **. But on a present value basis, the sum of the present value revenues would be ** ** compared with the present value costs of ** ** for an under recovery of ** **.

In Figure 1, I have displayed graphically the comparison of actual termination revenues to actual termination costs under Union's approach and Mr. Anderson's approach (all else being equal). Again, Mr. Anderson's approach would lead to significant under-recovery of Union's costs and, therefore, should be rejected.



Q. Will you please respond to Mr. Anderson's claims that the present value factors cancel each other out when they are multiplied by the costs in the numerator and the MOU in the denominator?

A. Yes. As Mr. Anderson himself acknowledges, the "present value factors don't actually cancel out since this is the summation of a series of factors divided by a series of factors." (Anderson Direct, p. 27) Since Union's calculation is performed using he series of factors in the numerator and the denominator, Mr. Anderson's initial position that the individual factors would cancel out on a yearly basis is moot and irrelevant. What matters is whether the revenues Union receives as a result of the rate determined in the model will allow it to fully recover its costs. As explained, Mr. Anderson's approach would not allow Union to fully recover its costs.

Q. Can you explain what you believe to be the error in Mr. Anderson's logic that leads to the problems with his calculation?

A. Yes. Mr. Anderson apparently believes that the sum of the actual revenues should equal the sum of the present value costs. I say that because under his approach that is exactly what happens. Specifically, under his approach (all else being equal) the sum of the actual termination revenues would equal ** **, which is the sum of the present value termination costs. But this is comparing apples to oranges because Union needs to recover actual costs with actual revenues. For example, if we could travel in time to Year 10, Union will have ** ** in actual termination costs it needs to recover. These are the real dollars for this point in time, 2018. These are not the costs as they would be valued in 2007. Yet, Mr. Anderson's approach (all else being equal) would mean that Union would receive only ** ** in actual termination revenue. Again, these are the real dollars for this point in time, 2018, and not the costs as they would be valued in the past, 2007. If Mr. Anderson's approach would allow for over-recovery in some other time periods to compensate for this under-recovery in 2018, that might be acceptable. But 2018 would be like every other year up to the final year under Mr. Anderson's approach – significant under-recovery. So, if Mr. Anderson believes that the annual termination revenue of ** ** is present value revenue, and that he is equating discounted costs with discounted revenues by maintaining the present value factors in the numerator, he is very much mistaken because those revenues are the actual revenues that Union would receive to recover its costs and they are significantly understated.

Q. You mentioned earlier that Mr. Anderson's approach may be acceptable if Union could recover all of its costs in Year 1. Will you please expand on that?

A. Yes. If one discounted all of the costs over the life of the facilities to present value terms and then divided the costs by the current MOU, one could fully recover the costs at a rate of ** ** per minute in the first year. But such an approach would not be desirable to Qwest nor would it be justifiable under TELRIC rules. Accordingly, Union has designed an approach that recognizes that costs for the network will not be recovered all at once but will instead be recovered over the life of the network. Because Union's approach would lead to full recovery of costs – but not over-recovery or under-recovery – and Mr. Anderson's approach would lead to significant under-recovery of costs, I recommend that the Commission reject Mr. Anderson's proposed elimination of present value factors to the MOU calculations.

Q. Are there any other alternative calculations that could be used to calculate rates?

A. One alternative approach would be to adjust rates every year to match costs and revenues. But such an approach would be administratively burdensome. Another alternative would be to simply divide total projected costs by total projected demand over the entire 14 ½ year life without use of present value factors in the numerator or the denominator. But while such an approach would result in a rate that more closely approximates the proper rate necessary to recover costs, in comparison with Mr. Anderson's approach, it would still not allow for full recovery of costs because it doesn't recognize that much of the recovery will occur in later years when the value of a dollar is

worth less than it is today.[9] Again, I recommend that the Commission adopt Union's approach because it is administratively efficient and allows for proper recovery of Union's costs.

Q. Mr. Anderson states that to be TELRIC compliant, Union's model must include a structure sharing factor to account for the sharing of facilities in its network that may occur with Union's other operations and with other carriers. As support, he states that the HAI model does include structure sharing factors that simulate the effect of sharing pole lines, conduit and trench costs with other utilities. (Anderson Rebuttal, p. 13). Will you please respond to Mr. Anderson's position on structure sharing?

A. Yes. While Mr. Anderson is correct HAI does include a structure sharing factor to account for sharing of pole, conduit, and trenching costs, HAI does not have a factor that accounts for sharing of things like cable and central office space. So, for example, when Qwest receives collocation revenue from other carriers, its central office costs aren't reduced in the HAI model to account for that revenue. In addition, the interoffice cable costs are not reduced in the HAI model to account for revenues Qwest may receive for other services, like data and ISP services, that it may provide over that cable. Only some of the structures, which I've labeled non-traffic sensitive support assets, have a sharing factor associated with them.[10] Union may be willing to accept use of a structure sharing factor in its study if such a factor is only applied to some of the structures consistent with

[9] See footnote 7.

[10] Interestingly, Mr. Anderson apparently recognizes in this portion of his testimony that non-traffic-sensitive costs are included in HAI's development of per-minute rates. Yet, his proposal here isn't consistent with his proposal to eliminate all non-traffic-sensitive costs from Union's study.

the HAI methodology. But as stated in my Supplemental Surrebuttal testimony, Union should not be held to higher standard than Qwest on this issue. (Hendricks Supplemental Surrebuttal Testimony, p. 10.) Union receives relatively very little revenue from other carriers for access Union's network as shown in Exhibit 18. If the Commission believes that use of a structure sharing factor is appropriate, Union could easily adjust its study to account for an assumed amount of structure sharing based on a then-current amount of revenue received from other entities for access to Union's network.

Q. What is your response to Mr. Anderson's position that Union "erroneously applies the same depreciation rate to all categories of plant, buildings and land?" (Anderson Rebuttal, p. 8)

A. Union originally used a 10-year depreciation life but increased it to 14.5 years in response to Mr. Copeland's position that use of a 14.5-year depreciation life would be consistent with the switch depreciation life ordered by the Commission in Qwest's TELRIC proceeding. (Copeland October 24, 2005 Rebuttal, p. 13). Since Mr. Copeland never took issue with Union's depreciation lives following the modification of the model to include the 14.5-year economic life, Union has considered this issue to be resolved between Union and Qwest. Moreover, the 14.5-year depreciation life used in Union's model is equivalent to the a composite depreciation life of 25 years for buildings and towers, which is within the range that Mr. Anderson found to be appropriate, and the 7-year economic life that Union uses for radio equipment. Specifically, applying a 25-year economic life to total investment figures in the 'GSM Site Costs' tab for buildings and towers (** **) and a 7-year economic life to the total equipment investments

contained in that tab (** **) produces a weighted average depreciation life of 14.58 years. Thus, Union's study already contains a composite rate that is consistent with the depreciation lives Union actually uses in the competitive industry in which it operates. Mr. Anderson's proposal would result in a composite depreciation life of 18.92 years when one applies his recommended 25-year depreciation life for buildings and towers and his 14.5 year life for radio and switching equipment to the above-stated investment figures. I believe that Mr. Anderson's position should be rejected because the 14.5 year life he recommends for radio and switching equipment in isolation is too long from an economic perspective for the highly competitive industry in which Union operates and because of the engineering reasons Mr. Jacobsen states in his response to Mr. Anderson on this issue.

Q. Mr. Anderson states that Union "has not shown that its switch and transport costs contained in its proposed cost model do not also include equipment that is specifically used for the provision of other retail offerings unrelated to interconnection." (Anderson Rebuttal, p. 15). What is your response to this statement?

A. Union's network is designed primarily for voice traffic, which takes precedence over data traffic, as Mr. Jacobsen states in his testimony. Accordingly, as Mr. Jacobsen also states, the data-specific costs are very minimal and the data capabilities account for less than one percent of Union's monthly wireless revenue. Moreover, as I previously stated, HAI transport costs are not reduced to account for data services that ILECs may carry over their networks. Thus, I don't believe that Union's study should be modified to reduce

data-specific costs. If, however, the Commission believes Union's study should be modified to remove data and other retail costs, I recommend that the Commission allow Union an opportunity to file a revised study that contains such modifications.

Q. Mr. Anderson criticizes modeling of "transport microwave radio costs based on what seems to be the retail prices of equivalent T-1s, as opposed to using local or tandem switch cost data, signaling data or network data" like HAI. (Anderson Rebuttal, pp. 8 and 14). What is your response to Mr. Anderson's position on this issue?

A. Mr. Anderson's preferred approach would be very time-consuming and costly to develop. Union developed its proposed transport costs by simply determining how many T-1s worth of capacity were needed to terminate Qwest's traffic and multiplying that number of T-1s by a very conservative cost per T-1 of $400. In comparison, the T-1 rate in Rate Band 3 of the interstate access tariff of the National Exchange Carrier Association (NECA) is $290.71 per termination[11] and $20.52 per mile.[12] So, any T-1 longer than 5.3 miles in NECA's tariff would be charged at a rate higher than the $400 assumed in Union's model. The impact on the final rate resulting from Union's proposed cost per T-1 is $0.001853 per minute, which I don't believe is unreasonably high. I would also note that even though Mr. Anderson identifies this issue as a concern with Union's study, he has not made any proposed changes to "fix" the issue. Rather, the transport costs in his proposed model are lower than those in Union's proposed model simply because of

[11] Calculated by adding the $189.55 Channel Termination rate plus $101.16 Channel Mileage Termination rate.
[12] Channel Mileage Facility rate.

the reduction in cell sites Mr. Anderson proposes. But I've already explained why Mr. Anderson's proposed cell site reduction is inappropriate.

RESPONSE TO MR. COPELAND

Q. Does Mr. Copeland raise issues similar to issues in Mr. Anderson's testimony to which you feel that you have adequately responded?

A. Yes. Mr. Copeland raises the following issues, which I believe are comparable to those raised by Mr. Anderson and to which I believe that have adequately responded: 1) whether Union's cost study includes embedded costs; 2) whether there should be a reduction in costs to account for Union's retail service offerings; 3) whether there should be a reduction in costs to account for Union's facilities shared with other entities; and 4) whether non-traffic-sensitive costs (for what I've argued should be considered support assets) should be excluded from the model. In addition, Union witness Henry Jacobsen responds to Mr. Copeland specific technical issues associated with Mr. Copeland's position on traffic-sensitivity and network utilization.

Q. Mr. Copeland proposes changes in certain calculations in Year 15 of the model to make the calculations consistent with a 14.5 year network life assumption as opposed to a 15-year network life assumption. Do you agree with Mr. Copeland that those specific changes are appropriate?

A. Yes. While most of the calculations in the "Year 15" correctly assume only a half-year's worth of data, a few of the cells had calculations that would only be appropriate for a

full-year of data. Mr. Copeland's revisions, specific to only those cells in Year 15, are appropriate.

Q. Do you agree with any of the other changes Mr. Copeland proposes be made to the model?

A. No. For the reasons stated in this testimony and in Henry Jacobsen's testimony, I recommend that Commission reject the other changes Mr. Copeland proposes be made to the Union's cost study.

COMMENTS ON COLORADO COMMISSION DECISION

Q. You previously mentioned the Colorado Commission decision on Union's proposed asymmetric cost study? Can you please summarize the Colorado Commission's findings?

A. Yes. The Colorado Commission's findings were three short paragraphs long. Specifically, the Colorado Commission issued the following ruling on Union's cost study:

> 173. We find that Union Cellular's cost study does not yield a "reasonable approximation of the additional cost of terminating" calls which originate on the network facilities of the interconnected carrier.
>
> 174. We find that Union Cellular's cost study is deficient in at least the following areas: (a) it does not distinguish between voice and data services; (b) it assumes, without analysis, that Union Cellular's entire wireless network is traffic-sensitive (that is, cost sensitive to increasing call traffic); and (c) neither the cost study nor Union Cellular provides critical detail and analysis required by law.

175. We find that Union Cellular has not met its burden of proof. We agree with Qwest that the Union Cellular's proposed changes should not be made.[13]

With respect to part (c) of paragraph 174, the Colorado Commission did not identify what it meant when it said that Union did not provide critical detail and analysis required by law. But in reviewing its summary of the positions of the parties, it appears that the Colorado Commission's concern about lack of "critical detail and analysis" was in regard to these issues:

1. Insufficient information on whether ten-year depreciation life for GSM switch is appropriate (Order, p.45);
2. Insufficient information on whether demand from Qwest customers led to Union's decision to use GSM technology (Order, pp. 45 and 52);
3. Insufficient information on whether Union will have completed the total projected cell sites operational by the end of 2006 (Order pp. 47-48);
4. Insufficient information on how 3% MOU growth rate was calculated, the source from which the growth rate was based, and which portion of MOU used in the model is for local telecommunications traffic and which portion is not (Order pp. 49 and 51);
5. Insufficient data on cost allocations pursuant to 47 CFR Parts 32, 36, and 64. (Order p. 50); and
6. Lack of audit by Mr. Hendricks of data provided to him by Union. (Order p. 50).

Q. Is there any difference between the record in this proceeding and the Colorado proceeding that you believe should cause the Commission to reach a different conclusion than the one reached by the Colorado Commission?

A. Yes. Union's current proposed cost study in this proceeding is different in a number of respects from the one ruled upon by the Colorado Commission. Some of the differences are the following:

[13] "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 0f 1996." Decision No. C07-0833, Docket No. 04B-491T, September 26, 2007, pp. 56-57.

1. Inclusion of actual GSM cell site costs as opposed to projected GSM cell site costs. At the time of development of the Colorado cost study, Union was just beginning to deploy its GSM architecture and only had projected GSM cell site costs. When Union revised its cost study in this proceeding in August 2006, it was able to include actual GSM cell sites that were recently deployed, thereby, making the study much more accurate.
2. Inclusion of user-adjustable traffic sensitive factors for cell sties and switches that allows a user of the model to test the impact of assumption changes on traffic sensitivity.
3. Use of a projected MOU factor for Year 1 that drives the investment decision in Year 1. This differs from the 3% annual growth factor used in Colorado.
4. Use of inputs for annual productivity offset, cost of equity, cost of debt, debt ratio, tax rate, and depreciation lives that match those that the Commission required of Qwest, as proposed by Mr. Copeland.
5. Use of different expense assumptions and costs based on actual wireless expenses incurred by Union.
6. Different tax calculations consistent with those proposed by Mr. Copeland.
7. Different, but actual, MOU calculations broken down by the type of MOU category.

I believe each of these changes makes Union's cost study a more accurate predictor of costs and rates than the one ruled upon by the Colorado Commission. In addition, Union has produced much more voluminous data in this proceeding than in the Colorado proceeding in support of its cost study assumptions, both in testimony and via data request responses. As an example, Union has provided voluminous and detailed support for its actual GSM cell site costs, whereas in Colorado, there wasn't as much data to support the projected cell site costs. In addition, Union has provided voluminous and detailed traffic data to support its traffic-sensitivity proposal. Thus, the Commission can be assured that the record upon which it must make its decision will be complete and better than the Colorado record.

Q. Are there any specific comments you'd like to make about the Colorado Commission's findings?

A. Yes. As previously stated, I believe that the Colorado Commission erred by simply rejecting the study rather than requiring specific modifications to the study based on issues with which it had concern. But with regard to the specific issues, I believe that Colorado Commission overlooked the portions of the record that showed that data costs were insignificant in Union's study. I also believe that the Colorado Commission was mistaken when it stated that Union assumed without analysis that Union's entire network is traffic-sensitive. Union performed substantial analysis of that very issue but the Colorado Commission did not even address the specific portions of Union witness Al Hinman's testimony on traffic-sensitivity. The Order was also internally inconsistent when it mentioned my testimony on the issue (but failed to address any of the merits of testimony) and then simply stated that Union made its traffic-sensitivity assumptions without analysis.

My response to each of the six issues to which I believe the Commission was referring when it stated that Union "did not provide critical detail and analysis required by law" are as follows, both with respect to the Colorado proceeding and this proceeding:

1. Depreciation – The depreciation life was supported in Colorado. But Union has used a different depreciation life in this proceeding that it believes is consistent with that proposed by Qwest in this proceeding and with what the Commission ordered for Qwest in its TELRIC proceeding. To the extent it is not, Union has provided sufficient support through my testimony and Mr. Jacobsen's on why its proposed depreciation life is appropriate.
2. Impact of Qwest Demand on GSM Deployment Decision – Union chose GSM technology because it is the most efficient forward-looking technology available today. This issue is not disputed by Qwest nor Mr. Anderson. TELRIC modeling assumptions do not require proof that the competitor's demand is the determining fact in technology decisions. Thus, there is no need for Union to provide such support. In addition, as

I've explained, Union has properly divided total costs by Qwest-originated and Union retail MOU.

3. Support for completion of projected cell sites – Union's Colorado study projected that there would be 221 sites in operation. When the Colorado Commission Order was released, Union had 225 sites in operation. Thus, Union's projections were quite accurate.
4. MOU issues – The Colorado Commission overlooked information in the record that addressed those very issues. As stated, Union's MOU assumptions are different in this proceeding.
5. Lack of Part 32, 36,and 64 cost data – Contrary to the Colorado Commission's statements, Union is not required to begin a TELRIC-compliant cost study with separations and allocations studies pursuant to Parts 32, 36, and 64. In fact, the Telecommunications Act states that a cost study must be done without reference to a rate-of-return or rate based proceeding and the FCC rules prevent use of embedded costs. With specific reference to expense ratio factors, the Colorado Commission overlooked data in the record explaining how the expenses used in the development of the factors did not include Union's regulated costs since only wireless-specific sub-accounts were used. The same thing applies to this proceeding. And any concerns the Colorado Commission may have about data costs being included in Union's TELRIC study because of improper costs allocations are misplaced since any data-related costs are part of forward-looking GSM investment assumptions and not because of improper Part 32/36/64 cost allocations.
6. Lack of audit of Union-provided data – My employer, GVNW performed the Part 32/36/64 studies for Union. Therefore, any data provided by Union that was based on those studies, and any data that was used as inputs to those studies, were regularly reviewed by GVNW. Thus, I had a very strong level of comfort that the data provided by Union was correct and didn't believe a separate audit was either necessary or economical. Moreover, such a requirement is not required by TELRIC rules and would be overly burdensome to apply to all data provided by a company to a consultant for use in a TELRIC study.

Q. Has Union filed a petition for reconsideration of the Colorado Commission's decision?

A. Yes. Union filed a petition for reconsideration of the decision with the Colorado Commission on October 22, 2007.

CONCLUDING REMARKS

Q. Do you have any concluding comments you'd like to make?

A. Yes. Union has sufficiently met its burden of proof in this proceeding (through testimony and in data request responses) that its TELRIC study complies with FCC TELRIC requirements. In addition, Union has met its burden of proof that all of the inputs and data used in the model are appropriate. Accordingly, Union has demonstrated that it is entitled to the asymmetric compensation rates it has proposed.[14] If the Commission believes that any modifications are required to the data, inputs, or model logic, Union requests that the Commission not reject the study in its entirety but instead allow Union to correct and file a revised version of the study.

Q. Does that complete your post surrebuttal testimony in this docket?

A. Yes, it does.

[14] With a slight change to account for minor Year-15 calculations proposed by Mr. Copeland to reflect a half-year instead of a whole year.

Certificate of Service

I hereby certify that on the 26th day of October, 2007, I caused to be emailed a true and correct copy of the foregoing Post Surrebuttal Testimony of Jason P. Hendricks in Docket No. 04-049-145 to the following:

Greg Monson
gbmonson@stoel.com

Thomas Dethlefs
Thomas.dethlefs@qwest.com

Michael Ginsberg
mginsberg@utah.gov

Patricia Schmid
pschmid@utah.gov

s//Stephen F. Mecham