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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 UNDER § 252 OF THE FEDERAL TELECOMMUNICATIONS ACT OF 1996	**Docket No.** 04-049-145 **POST HEARING BRIEF OF UNION TELEPHONE COMPANY**

Union Telephone Company ("Union"), by and through its undersigned counsel, in accordance with the Order of the Administrative Law Judge, Steven F. Goodwill submits its Post-Hearing Brief as follows:

A. STATEMENT OF POSITION: SUMMARY

Union requests in this proceeding that it be awarded appropriate compensation for interconnecting with Qwest. As Union has provided a fully developed TELRIC Cost of Service Study for its wireless network, it is entitled to an asymmetrical rate. While Union initially requested that it be able to utilize tariffs for its wireless system, it is now requesting the use of tariffs only for non-local traffic which is consistent with Qwest's request.

Union also requests that the Commission approve an interconnection agreement that recognizes Union's network architecture in accordance with the Telecommunications Act of 1996 (47 U.S.C. 151 *et. seq*., hereinafter, the "Act") in that the request is technologically and economically feasible and appropriate.

B. PROCEDURAL HISTORY

Qwest, on or about September 30, 2004, pursuant to Section 252(b) of the Act, petitioned the Commission for arbitration of an Interconnection Agreement (ICA) with Union. In its Petition, Qwest recognized that Union provided both wireline and wireless telecommunications services but argued that Union was using Qwest's traffic exchange facilities for its wireless operations without a wireless interconnection agreement. Qwest alleged that Union had refused to enter into a wireless interconnection agreement at the time of the filing.

Union responded to Qwest's Petition for Arbitration on or about October 22, 2004. In its Response, Union indicated that it was a CMRS provider and that it provided wireless service in the states of Wyoming, Utah and Colorado. Union further stated that both Union and Qwest ("Parties") had on file with the Commission certain tariffs which governed the provision of telecommunications services, including interconnection services such that the Commission should enforce the applicable provisions of the tariffs.

Qwest responded to Union's position and argued in a responsive motion on or about November 4, 2004 that Union was not negotiating in good faith and that its reliance on tariffs was ill founded. Moreover, Qwest pointed to a decision of the Federal Communications Commission ("FCC") which arguably required reciprocal compensation for telecommunications traffic between a LEC and a CMRS provider that, originates and terminates within the same Major Trading Area ("MTA"). See 47 C.F.R. §51.701(b)(2).

The Commission referred the Petition for Arbitration to an Administrative Law Judge ("ALJ"), Steven F. Goodwill, to conduct the proceedings. Thereafter, the ALJ held a prehearing conference and issued a decision establishing a hearing date and procedural schedule for the case. As part of this, the Parties filed direct testimony and exhibits. The Parties then filed a Joint Motion

to Vacate Procedural Schedule, Waive the Statutory Deadline and Set Procedural Conference. In the Motion, the Parties asked for additional time in which to negotiate the provisions of the interconnection agreement and waived the time restrictions as provided in the Act. The Joint Motion was granted by the ALJ.

The negotiation of the interconnection agreement proved to be difficult and required the filing of additional joint motions for extension of the arbitration schedule. The ALJ, in a series of Interim Orders, issued on January 24, 2005 and March 16, 2005 extended the schedule for the Commission's arbitration and established a prehearing scheduling conference on July 12, 2005. Following the prehearing scheduling conference, a Second Scheduling Order was issued on July 12, 2005 that established new procedural deadlines, including the filing of testimony and a hearing date for December 6, 7 and 8, 2005. This Order was amended on November 18, 2005, March 13, 2006, March 27, 2006, July 31, 2006, November 9, 2006, March 6, 2006 and September 11, 2007. Finally, pursuant to the Ninth Scheduling Order dated September 11, 2007, the hearing was ultimately set and was held on November 6 and 7, 2007.

Pursuant to Notice, the hearing was held before the ALJ as last scheduled. Following the hearing, the ALJ noted in the record that simultaneous post-hearing briefs are due on December 18, 2007.

C. ISSUES FOR DETERMINATION

Pursuant to the order of the ALJ, the Parties worked together and developed a Joint Disputed Issues List which was submitted to the Commission on or about September 28, 2007. As a guide, Union will utilize the list in explaining its position on the unresolved issues. The Joint Disputed Issues List is taken from the issues matrix used in the companion Colorado arbitration proceeding. See *In the Matter of the Petition of Qwest Corporation, Init. Commission Decision,* Col PUC Doc. No. 04B-491T, Dec. No. C07-0833, Oct. 1, 2007.

ISSUE 1: TYPE OF INTERCONNECTION

The Union/Qwest connection is a tandem-to-tandem connection not a typical "Type 2" interconnection.

The first issue pertains to the use of the term "Type 2" to describe the interconnection between Qwest and Union. Qwest even wants to call the document a "Type 2" interconnection agreement. Why is it so important? It is important to Union because its connection with Qwest is not a "Type 2" connection; rather the connection is a tandem-to-tandem connection.

Qwest witness, Cederberg, explained Qwest's position and initially distinguished between a Type 1 and Type 2 interconnection. She observed that a Type 1 interconnection is typically a "line" side connection (Qwest Exhibit 1, pg. 8) but in a typical Type 2 interconnection arrangement there is direct trunking between the wireless service providers' (WSP) Mobile Telephone Switching Office ("MTSO") and the Qwest switching office.

Qwest's proposal as submitted by Ms. Cederberg is to require the utilization of a Type 2 interconnection which would provide direct trunking between Union's MTSO and Qwest's access tandems/local tandems/end offices in each LATA where Union originates or terminates traffic. This architecture increases the revenues for Qwest by requiring additional trunking and correspondingly, the costs to Union while providing no benefit to Union. At one point Qwest argued that LATA (Local Access Transport Area) restrictions required the Qwest proposal, such an argument is no longer available as the FCC has relieved Qwest of the LATA restriction in its regional states. See Section 272 Sunsets for Qwest Communications. . . in the State of Colorado . . and Wyoming by Operation of Law on December 23, 2005 pursuant to §272(f)(1). WC Docket No. 02-112. At this time, Qwest can no longer benefit from a restriction that no longer exists.

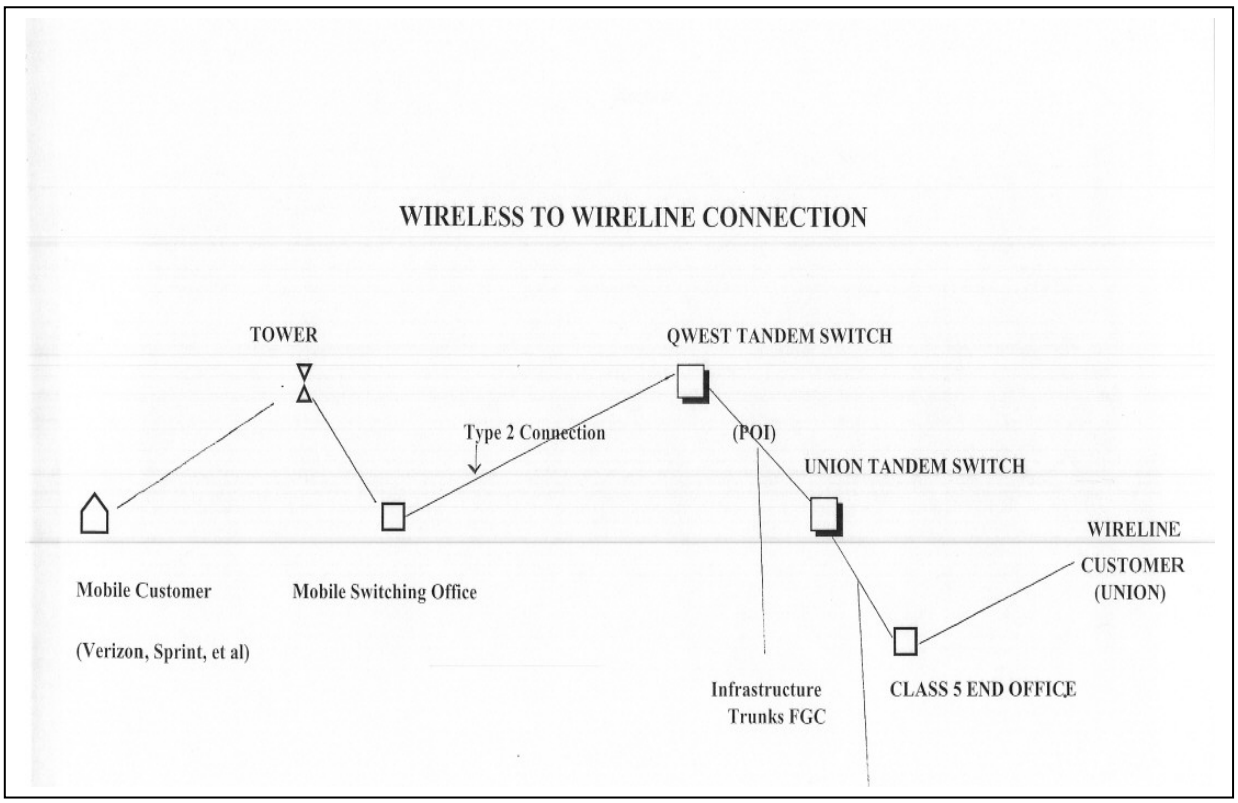
On Union's behalf, Mr. James H. Woody, a member of the Union Management Team, (Union Exhibit 3) addressed Qwest's demand for a direct connection. Mr. Woody stated that

although the Parties had been attempting to negotiate an interconnection agreement, Qwest steadfastly refused to recognize that the Qwest to Union connection was a tandem-to-tandem connection in that Qwest did not connect directly to Union's MTSO. Mr. Woody stated:

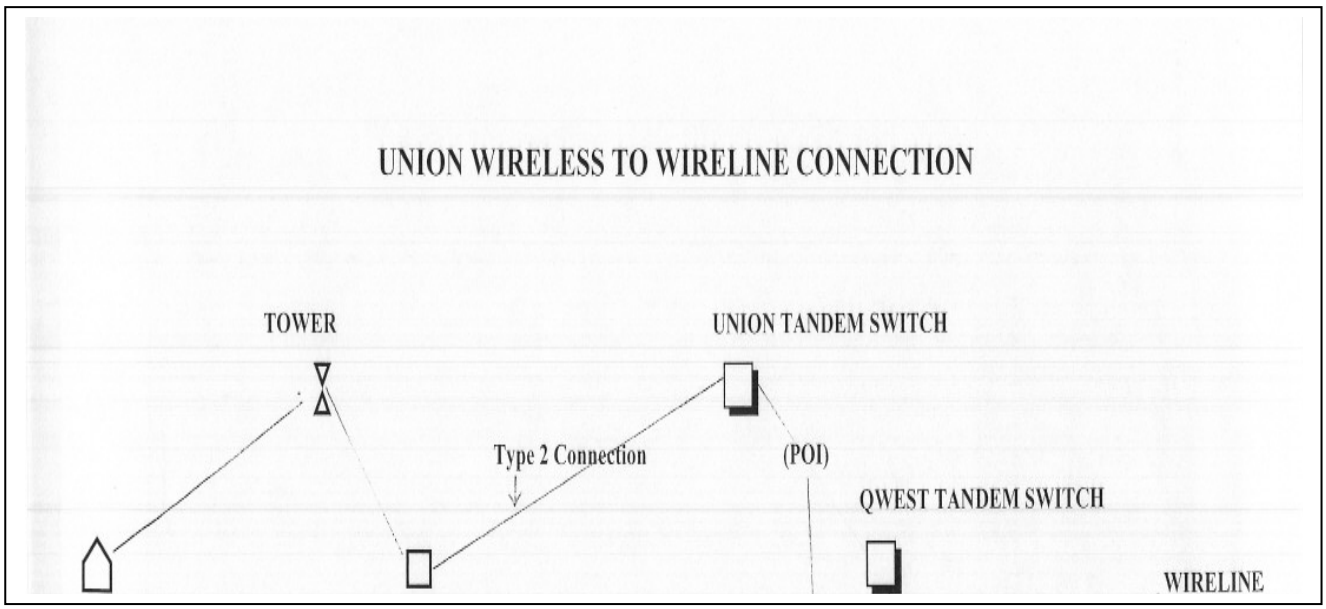
> There is no magic in the use of a term to describe a particular interconnection, but there are implications that Qwest is attempting to force on Union. The FCC, in establishing the good faith negotiation of private interconnection agreements, requires negotiating parties to reflect in any resulting agreement the peculiarities of the particular network; otherwise, Qwest's "one size fits all" system of negotiation is appropriate. In the instant case, Union, like Qwest, interconnects through its tandem switch. Qwest refuses to recognize Union's tandem switch. If Ms. Cederberg had been a party to the negotiation, she would know that Union's interconnection arrangement was compared during the negotiation to Qwest's interconnection with Verizon which has both a wireline and wireless side. Those participating in the negotiations understood that the interconnection at issue is not typical. Rather than interconnecting directly with a wireless switch, Qwest is interconnecting with Union's tandem which is more like the Verizon example. In her testimony, the witness refuses to recognize this issue.
>
> Union does not want to interconnect at the Qwest tandem; it has its own tandem. If the interconnection agreement is to be reciprocal, Union's architecture needs to be recognized. Qwest wants to have Union's switch subtend to the Qwest tandem as this is the more typical architecture with which it is familiar. As Union has its own tandem, it does not want to home to the Qwest tandem nor is it requesting that all of Qwest's numbers home to the Union tandem….

Union Exhibit 3R, pp. 5 and 6.

To better illustrate Union's position, Mr. Woody directed the Commission's attention to Exhibits 3R1 through 3R5, (Exhibits 5A through 5D) which depict Union's architecture in differing situations. Exhibit 3R1 (5A), for instance, shows a wireless customer (such as Verizon) calling to a Union wireline customer and transiting Qwest's facilities.



In this example, Exhibit 3R1, a call is routed from the mobile customer (such as Verizon) through the wireless tower (BTS), to the MTSO and from there to the Qwest tandem switch. As depicted in the Exhibit, the connection between the Qwest tandem and the wireless (Verizon) MTSO is a Type 2 connection. The call then proceeds to Union's facilities by first going through the point of interconnection and then to Union's tandem. The connection between Qwest and Union is a tandem-to-tandem connection. Once the call is routed to Union's tandem, the call is identified as one from a wireless subscriber (Verizon) terminating with a Union wireline customer. Once the call is identified, it is routed to Union's Class 5 end office and from there to the wireline customer.



The importance of this explanation in Exhibit 3R1 is illustrated in the comparison to Exhibit 3R2 (5B) which is a call from a Union wireless customer and connecting with a Qwest wireline customer. In this depiction, the Union wireless or mobile customer is calling a Qwest wireline customer. The call is initially routed from the wireless customer through the tower (BTS) and then to the MTSO and from there, to the Union tandem switch. In either example, the connection between the MTSO and the tandem is a Type 2 connection. The connection between Union and Qwest is a tandem-to-tandem connection. The Qwest tandem identifies the call as one from a Union wireless customer and destined to a Qwest wireline customer, the tandem directs the call to the appropriate end office and from there, to the Qwest wireline customer. The routing of the call is essentially the same in either Exhibit. In the same fashion, Exhibits 3R3 (5C) and 3R4 (5D) show that the connection from a third party wireless caller to a mobile Union caller is the same in requiring the tandem-to-tandem connection. In any of these examples, the calls are routed through Union's Tandem in the same manner as they flow through Qwest's system and its tandem. Just as in Qwest's architecture, Union's Tandem is an integral part of the transmission path in Union's architecture. See Union Exhibit 3.

Reduction in Costs

There are financial implications associated with Union's architecture. Qwest recognizes this and wants to increase its own revenues at Union's expense. Ms. Cederberg in her testimony (Qwest Exhibit 1 at p. 8-14 as well as AMC2), noted that Qwest recommended a direct trunk between Union's wireless MTSO and each Qwest tandem. This is a wasteful and needless expense that should not be forced upon Union as a wireless carrier.

The Act at Section 351 requires all telecommunications carriers, including both CMRS and LECs, "to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers". In like manner, FCC Rule 20.11(a) provides that "a local exchange carrier must provide the type of interconnection reasonably requested by a mobile service licensee or carrier, within a reasonable time after their request, unless such interconnection is not technically feasible or economically reasonable". Qwest's demand that Union establish a direct trunk between each of its MTSOs and each of Qwest's tandems violates this provision and is contrary to Union's request.

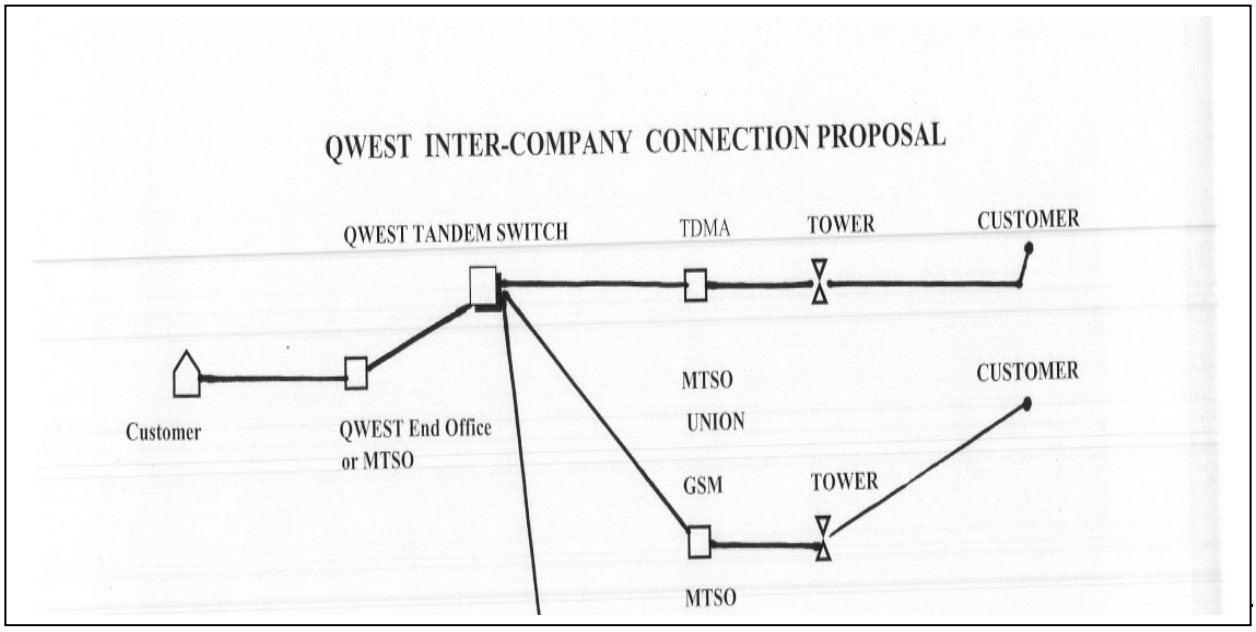
Qwest is well aware that Union has been using its tandem architecture for the better part of two decades for its wireless traffic. In his testimony, Mr. Woody recognized that Qwest has a number of different tandems in Colorado and for Union to establish trunking between its different MTSOs as well as its wireline tandem would greatly accelerate its costs. The witness stated:

> "Q. [Asay] What are the financial implications relating to this issue?
>
> A. [Woody] Obviously, in Union's opinion, Qwest is attempting to establish an asymmetrical interconnection agreement in order to "game" the system and in return, make more money.
>
> Q. What do you mean?
>
> A. Presently, Union has one tandem. It is in Mountain View, Wyoming. Qwest, for its part, has at least four tandems located in Fort Collins, Denver, Colorado Springs and Grand Junction, Colorado. While Qwest does not need

> this many tandems, it is proliferating the use of tandems to accelerate its receipts. In demanding that this Commission ignore Union's tandem, Qwest is requiring Union to establish a direct connection with all of Qwest's tandems for both its wireline and wireless traffic. While Union's traffic might justify a direct trunk for both wireless and wireline traffic to the Grand Junction tandem, there is not sufficient traffic to justify a trunk to Fort Collins or Colorado Springs.
>
> In its testimony, Qwest justified its demand by indicating that such is needed to identify and bill for the calls, yet the calls are identified by Union. There is no need for separate trunking. Not only does Qwest's proposal accelerate Union's costs, it is also internally inconsistent. In another area, when Qwest discussed transiting traffic, it insists that it be able to direct traffic to Union without cost. It insists that it has a right to "dump" unidentified traffic onto Union's system. Union's position, on the other hand, is consistent. It recognizes that it must provide appropriately identifiable traffic to Qwest if utilizing a common trunk (both wireless and wireline). It also requests that Qwest's transiting traffic be identified in order that all traffic is identified to allow rating and billing of the traffic."

Union Exhibit 3R, pp. 10, 11.

Mr. Woody in Exhibit 3R5 (5E) clearly illustrated the unreasonable nature of Qwest's demand for direct trunking to all of Qwest's tandems. As Union has not only its wireline tandem switch, but also a GSM network and a TDMA network, a direct connection to any of Qwest's tandems would require a direct connection to all three of these networks through either the TDMA MTSO, the GSM MTSO, or the Union tandem for wireline customers.



As depicted in Exhibit 3R5 (5E), Qwest's intercompany proposal would require three times the trunking as required by Union's architecture. In Union's architecture, as shown on Exhibits 3R1 (5A) through 3R4 (5D), Union has a Type 2 connection between the Tandem Switch and the GSM MTSO and the TDMA MTSO. The calls are aggregated at the tandem and then only one trunk is required to interconnect with the Qwest tandem switch. Qwest, on the other hand, would require three times the trunking to accomplish what Union can do with its architecture.1

Qwest has knowledge of Union's architecture.

Ms. Cederberg, in her testimony, intimated that Qwest had been hoodwinked by Union in the manner in which Union routed its wireless traffic to Qwest. See Qwest Exhibit 1R at p.8 . To the contrary, Union has for more than a decade aggregated its traffic to be efficient. In the case of *Union Telephone v. Public Service Commission,* 833 P.2d 473 (Wy. 1992), the Wyoming Supreme Court recognized and approved Union's system. The Court stated:

> Union Cellular proposed a unique interconnection arrangement which would allow it, by using US West's public-switched network, to avoid constructing many additional facilities to handle the cellular traffic. *Union* p. 474.
>
> US West's traditional arrangement with cellular carriers calls for a Type 1, Type 2 or Type 2A interconnection, …
>
> In a Type 2 or Type 2A interconnection, the cellular carrier's mobile telephone switching office itself takes on the characteristics of an end office switch. The cellular carrier is assigned a unique prefix and trunk groups are established directly to the public switched network local toll access tandems. Auxiliary functions are handled by separate connection with the US West end office. *Union* p 475.
>
> The interconnection Union Telephone requested on behalf of Union Cellular did not correspond exactly with either a Type 1 or Type 2 interconnection. Instead, Union Telephone's proposed arrangement allowed Union Telephone itself to provide the interconnection between the cellular and land line operation. ...Thus, Union Cellular

1 Qwest, in addition to requiring excess trunking then aggravates the expense by requiring direct trunking to its many tandems which is even more expensive.

> could avoid some of the costs of acquiring extra facilities between its mobile telephone switched end office and its cell sites in US West exchange areas.
>
> US West consented to Union Telephone's proposed interconnection plan; however, the parties could not agree on how this arrangement should be priced."

Union, at 475

The Wyoming Court recognized Union's network and approved Union's efforts to aggregate traffic. This position is consistent with the Colorado regulatory action. The Colorado Public Utilities Commission decided this issue in favor of Union, it stated in its opinion:

> 42. We first consider the *second and third sub-issues*: whether the ICA can be silent as to the type of interconnection or whether it must reference a specific type of interconnection.
>
> 43. As a preliminary observation, the Commission finds that the network architecture by which the parties exchange traffic at present has little relevance to the language at issue. The ICA will govern the interconnection of the parties *in the future* and, so, must contain language which mirrors that future interconnection. This is true for all the questions raised in Issue No. 1.
>
> 44. The FCC has described the three types of interconnection between a LEC and a wireless carrier as follows:
>
> > *Type 1 service* involves interconnection to a telephone company end office similar to that provided by a local exchange carrier to a private branch exchange (PBX). Type 1 interconnection involves an end office connection that combines features of line-side and trunk-side connections and uses trunk-side signalling protocols. Type 1 interconnections enable the CMRS provider to access any working telephone number, including all NCC codes within the LATA of the LEC providing the interconnection. The Type 1 connection also permits access to Directory Assistance, N11 codes, and service area codes. *Type 2A connections* give the CMRS carrier the ability to connect to the Public Switched Network in the same manner as any wireline carrier. The connections, which may be either solely to access tandems or to a combination of tandems and other central offices, are true trunk-side connections using trunk-side signalling protocols. Type 2A connections do not permit access to LEC operator service or N11 codes. *Type 2B connections* are trunk-side connections to an end office that operate in the same manner as high-usage trunks. Under Type 2B interconnection, the CMRS provider's primary traffic route is the Type 2B connection, with any overflow traffic routed through a Type 2A connection. Type 2B

> interconnection permits access to valid NXX codes, but cannot access operator services or N11 codes.

In the Matter of Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Services, Notice of Proposed Rulemaking and Notice of Inquiry, CC Docket No. 94-54, RM-8012, FCC 94-145, 9 FCC Rcd. 5408 (rel. July 1, 1996), at ¶ 105 (emphasis supplied).

45. The present arrangement between Union Cellular and Qwest meets none of these definitions.

46. Since at least the 1980s, the FCC has followed a consistent policy with respect to the interconnection of wireless carriers with wireline carriers:

> *telephone companies are required to provide* (a) a form of interconnection to a non-wireline carrier no less favorable than that used by the wireline carrier and (b) *a form of interconnection that is reasonable for the particular cellular system*, to be negotiated by the cellular carrier and the wireline telephone company. A non-wireline cellular carrier is specifically given the right to request interconnection that may not be the same as that used by the wireline cellular carrier, and *may not be "locked into the specific interconnection arrangements requested by a wireline carrier*." … The cellular carrier is entitled to *reasonable interconnection, the form of which depends upon the cellular system design and other factors*: in some cases the interconnection of a cellular system as an end office (Type 2) may be most appropriate, and in others, interconnection as a PBX (Type 1) may be best. A cellular system operator is a common carrier, rather than a customer or end user, and as such is entitled to interconnection arrangements that "minimize unnecessary duplication of switching facilities and the associated costs to the ultimate consumer." … Underlying these policies, the [FCC] stated, was the goal of interconnection agreements most favorable to the end user.
>
> [Two parties in the proceeding before the FCC] take the position that the cellular carrier should be permitted to choose the type of interconnection, Type 2 or Type 1. We agree. *We have not mandated a particular form of interconnection, but we have stated explicitly that a cellular carrier is entitled to a type of interconnection that is reasonable, given its system design. The system design is up to the cellular carrier, which may choose to design for either form of interconnection*. If the system is capable of functioning as an end office and there are no technical reasons for not interconnecting the system as an end office, the telephone company should not refuse to provide Type 2 interconnection. … *The terms and conditions of interconnection depend, of course, on innumerable factors peculiar to the cellular system, the local telephone network, and the local regulatory policies*; accordingly, we must leave the terms and conditions to be negotiated in good faith between the cellular operator and the telephone company.

In the Matter of the Need to Promote Competition and Efficient Use of Spectrum for Radio Common Carrier Services, Memorandum Opinion and Order, FCC 86-85, 1986 FCC LEXIS 3878, 59 Rad. Reg. 2d (P&F) 1275 (rel. March 5, 1986) at Appendix B (*FCC Policy Statement on Interconnection of Cellular Systems*) at ¶¶ 2-3 (internal citations omitted) (emphasis supplied).

47. The Commission has not found a FCC decision or a FCC rule which requires that an interconnection agreement be identified as a Type 1 or a Type 2 ICA. Despite having had the opportunity to provide a citation to such a decision or rule, Qwest did not do so.

48. This Commission has not issued a decision, and it has not promulgated a rule, which requires that an interconnection agreement be identified as a Type 1 or a Type 2 ICA.

49. While Qwest has asked that Type 2 be used throughout the ICA, it appears that the reference is to Type 2A. *See*, *e.g.*, proposed § 6.2.2 (references to Type 2A interconnection). It also appears that the Qwest language would permit Union Cellular to have a Type 2B interconnection under certain circumstances. *Id.* at § 6.2.2.2.

50. In addition, Qwest identified only one reason to label the ICA a Type 2: to make it easier to know the type of interconnection being used. From the record, we cannot ascertain why this is important. As argued by Union Cellular, the responsibilities and obligations of the parties are spelled out in detail in the ICA itself. To understand those responsibilities and obligations one must read the ICA in any event. We cannot understand whether -- and, if it does, precisely how -- the label Type 2 affects ICA's terms and conditions or the parties', their employees', and/or third parties' understanding of those terms and conditions.

51. We find that the ICA does not need to identify the type of interconnection as either Type 1 or Type 2. This is based on the fact that the present arrangement between Union Cellular and Qwest meets none of the FCC definitions for type of interconnection. As stated earlier, Qwest has not provided any legal basis for the need to identify the type of interconnection as it would be confusion to the ICA to identify a type of interconnection that does not exist.

In the Matter of the Petition of Qwest Corporation for an arbitration of an Interconnection Agreement with Union Telephone Company, Docket No. 04B-491T, September 26, 2007, pp. 13-16 (hereinafter "Colorado Order").

The Utah Commission, consistent with the Act as well as the case law and prior regulatory authority should approve Union's proposed language.

ISSUE II: ACCESS TANDEM DEFINITION

Union's tandem should be recognized as it is used to aggregate calls as is Qwest's.

Qwest, with the exception of its objection to Union's request for an asymmetrical rate, repeatedly proposes that it be given an asymmetrical contract. Rather than using a generic definition

of access tandem as it has in other wireless interconnection agreements, Qwest demands that the "access tandem" be defined only as a Qwest switch. The Qwest proposal ignores Union's access tandem which performs the identical function.

Qwest proposes that the term "Access Tandem Switch" be defined as:

> "[A] switch used to connect End Office Switches to Interexchange Carrier Switches. Qwest's Access Tandem Switches are also used to connect and switch traffic between and among Central Office Switches within the same LATA and may be used for the exchange of Local Traffic."

Union proposed a more generic definition which defines "access tandem" as a telephone company switching system that offers an interexchange carrier originating and terminating access to several end offices within a LATA. Alternatively, the term has been defined in tariffs and agreements as a centralized equal access provider switching system that provides a concentration and distribution function for originating and terminating traffic between end offices and a customer designated premises.

Qwest, however, rejects these more common industry definitions in favor of an asymmetric definition that ignores Union's switch. If Qwest's definition is to be used, then an addition needs to be made which recognizes Union's tandem switch. Union simply requests that the following be added to Qwest's definition:

> Union's Access Tandem Switches are also used to connect and switch traffic between and among Central Office Switches and may be used for the exchange of Local Traffic.

Union's definition is a clear statement of fact supported by testimony that is uncontroverted. The uncontroverted testimony is that Qwest's tandem connects directly to Union's tandem which performs the concentration and distribution functions for originating and terminating traffic between and among central office switches and in fact, it may be used for the exchange of local traffic. See Union Exhibit 3R1 through 3R5.

The Colorado Commission decided this issue in Union's favor stating:

> 67. Union Cellular proposes the additional language because it reflects the network architecture by which Union Cellular and Qwest interconnect at present: all Union Cellular traffic to and from Qwest is routed through Union's wireline access tandem. According to Union Cellular, the uncontroverted testimony establishes that, at present, the Union wireline access tandem switch performs the same functions as the Qwest access tandem switch in the exchange of traffic between the two parties. Thus, Union Cellular argues, the ICA should recognize that fact and its proposed definition of Access Tandem Switch should be adopted.
>
> 68. Qwest opposes the proposed additional language. Qwest asserts that including a reference to Union's wireline access tandem switch is inappropriate in an ICA between Qwest and Union Cellular, the wireless carrier. Assuming that its position is adopted with respect to the fourth sub-issue of Issue No. 1, Qwest states that Union's access tandem switch will be irrelevant because, under the ICA which will be effective in the future, "Union's tandem [will] serve[] no function when there is direct interconnection between Qwest and Union Cellular. The traffic exchanged between Qwest and Union Cellular would not be switched at the tandem." Qwest Statement of Position at 22-23.
>
> 69. Resolution of Issue No. 2 is tied to our decision, *supra*, with respect to sub-issue 4 of Issue No. 1. There we determined to accept Union's position with the caveat of the use of Feature Group D trunking. To be consistent with that decision and for the reasons discussed above, we will adopt the language proposed by Union Cellular. We will also adopt the language that Union and Qwest have agreed to.

As argued by Union, Union's definition of "access tandem" recognizes that all Union traffic is routed through Union's tandem. The ICA should recognize this routing.

ISSUE III: LOCATIONS OF THE POINT OF INTERFACE AND POI

A point of interconnection may be at any technically feasible location on Qwest's network.

The Parties disagree on the definition of a Point Of Interconnection or Interface ("POI"). While Qwest requires that the POI be established in Qwest's service territory in the LATA, there is no such requirement in the Act. Accordingly, Union requests that the point be established at any technically feasible location selected by Union within Qwest's network.

The Act, at 47 U.S.C. §251(a)(1) indicates that it is the general duty of every telecommunications carrier to interconnect directly or indirectly with the facilities and equipment of

other telecommunications carriers. Furthermore, 47 U.S.C. §251(c)(2) provides that it is the duty of an ILEC:

> "To provide for the facilities and equipment of any requesting telecommunications carrier, interconnecting with the local exchange carrier's network:
>
> A. for the transmission and routing of telephone exchange service and exchange access;
> B. at any technically feasible point within the carrier's network;
> C. that is at least equal in quality to that provided by the local exchange carrier to itself or any subsidiary, affiliate, or any other party to which the carrier provides interconnection; and
> D. at rates, terms and conditions that are just, reasonable, and non-discriminatory. ."

While network is not specifically defined in the Act, 47 C.F.R. §51.5 defines "network element" as "any facility or equipment used in the provision of telecommunication service". Hence, the use of the word "network" by the drafters was to recognize that the interconnection point can be anywhere on the local exchange carrier's network.

While Qwest represents that the interconnection point or meet point must be within Qwest's local serving area, i.e. its state certificated territory, this is incorrect; an appropriate reading of the law indicates that the interconnection point can be at any technically feasible point within Qwest's network. Accordingly, the applicable language of the interconnection agreement should read as follows:

> "4.68 "Point of Interface", "Point of Interconnection" or "POI" is a physical demarcation between the networks of two LECs (including a LEC and Union). The POI is at that point where the exchange of traffic takes place. This point establishes the technical interface, the test points, and the points for operational division of responsibility. The POI must be established at any technically feasible location selected by Union in Qwest's network."

See Discussion at Union Exhibit 3R, pp. 11-15.

The Colorado Commission in a case of first impression found for Qwest, noting:

> 87. The FCC made one determination which, at least inferentially, may inform our review of issue. In its Order deciding a complaint proceeding, the FCC stated: "Section 51.703(b)

> [of 47 CFR], when read in conjunction with Section 51.701(b)(2) [also of 47 CFR], requires LECs to deliver, without charge, traffic to CMRS providers anywhere within the MTA in which the call originated, with the exception of the RBOCs, which are generally prohibited from delivering traffic across LATA boundaries." *TSR Wireless, LLC v. U S WEST Communications, Inc.*, Memorandum Opinion and Order, File Nos. E-98-13, E-98-15, E-98-16, E-98-17, and E-98-18, FCC 00-194, 15 FCC Rcd. 11166 (rel. June 21, 2000), at ¶ 31, *aff'd sub nom. Qwest Corporation v. Federal Communications Commission*, 252 F.3d 462 (D.C. Cir. 2001). Given that the LATA restriction has been lifted for Qwest, the cited language suggests that Qwest now has the same obligations as other LECs, including the obligation to deliver traffic to a CMRS provider anywhere within the MTA in which the call originated. We take this into consideration as we consider Union Cellular's request for a POI which is outside Qwest's ILEC service territory.
>
> 88. We recently decided POI-related issues in the *Level 3 Arbitration Decision*. First, we agreed with Qwest and Level 3 that Qwest has a duty under the Act to provide interconnection "at a single point in a LATA" (*id.* at ¶ 20), that is, within Qwest's local exchange network. Then, we determined that the Qwest-proposed ICA language in that case allowed additional flexibility should Level 3 choose to have more than one POI per LATA. Finally, we found that
>
> > the *Local Competition Order* [at ¶ 199] provides that "a requesting carrier that wishes a technically feasible but expensive interconnection would, pursuant to Section 252(d)(1), be required to bear the cost of that interconnection, including a reasonable profit."
>
> *Id.* at ¶ 21. The *Level 3 Arbitration Decision* supports our conclusion in this case that the language proposed by Union Cellular should not be adopted.

Colorado Order at pp. 28 & 29.

As the Commission might appreciate, Union is asking the Commission to ignore the reasoning of the Colorado Commission when it is not supported by cogent reasoning, In this case, the Colorado Commission ignores its own logic. It first notes that LECs (such as Qwest) are to deliver, without charge, traffic to CMRS providers anywhere within the MTA in which the call originated. As there are no LATA restrictions, Union's language would require the POI within Qwest's network within the MTA. The Colorado Order then ignores this guidance. Consistent with the governing law, the POI should be allowed within Qwest's network within the MTA. Union's language should be adopted.

ISSUE IV: TRANSIT TRAFFIC

The Parties now agree, that as Qwest is able to bill for transit traffic, the information should be provided to Union.

The Parties have resolved their issues relating to the disputed transit traffic language. Transit traffic relates to those calls that are initiated by one carrier and provided to another carrier for transmission to a terminating network or carrier. Qwest provides a transiting service for which it gets paid to carry traffic from an initiating carrier to Union or the terminating carrier. Qwest, in its testimony, Qwest Exhibit 2, p. 6, stated that it merely forwarded the calls from the initiating carrier "together with information that is sent by the carrier serving the caller" [initiating carrier]. While Union acknowledges that Qwest will provide a transiting service, Union has requested that the ICA reflect Qwest's responsibility to provide the signaling information that allows Qwest to bill for this service but which is sometimes omitted from the call stream to Union.

In the proposed agreement, Transit Traffic is identified and defined in Section 4.84 as traffic transiting another's network. The Parties then describe in Sections 6.2.4.3.1 and associated sections how the service would actually work in practice. Originally, there were three sections to be arbitrated under this Issue. Qwest and Union have resolved their dispute as follows:

Qwest and Union agreed on and adopted the following language:

> Qwest will accept traffic originated by Union for termination to a CLEC, ILEC, or another Wireless Carrier that is connected to Qwest's local and/or Access Tandems and whose switch sub-tends Qwest's network per the LERG. Qwest will also carry traffic from these other Telecommunications Carriers to Union.

Qwest and Union agreed on and adopted the following language:

> Except as noted in Section 6.2.4.3.4 below, the originating company is responsible for the provisioning of billable usage data and/or billable records and payment of appropriate rates to both the transit company and to the terminating company. In no event shall the transiting company be obligated to pay termination charges to any other carrier. Qwest shall, on a monthly basis and without charge, provide summary reports of usage data for traffic received from CLECs and CMRS Providers who purchase transiting service from

> Qwest and who signal their traffic utilizing Signaling System 7 (SS7) terminating to Union's end users. This summary data will be substantially in the format with the information provided as shown in the attached Exhibit ____. Qwest will not be required to provide summary reports after the first month in which the total reported volume of such traffic exceeds 10,000 minutes per month, and Qwest will not be responsible for usage investigation on the data provided.
>
> Reciprocal traffic exchange addresses the exchange of traffic between Union's network and Qwest's network. Reciprocal traffic exchange covered by this Agreement is for Wireless Interconnection for CMRS Carriers only in association with CMRS two-way services. Other Interconnections are covered by a separate agreement or Tariff. Wireless two-way Interconnection is intended for Wireless to Wireline or Wireline to Wireless, but not Wireline to Wireline communications. For purposes of this Agreement, Fixed Wireless is considered a Wireline architecture. The Parties each shall be responsible for the traffic that originates on their own networks and terminates on the other parties [sic] network. Where either Party interconnects and delivers traffic to the other from third parties, each Party shall bill such third parties the appropriate charges pursuant to it

ISSUE V: NON-LOCAL TRAFFIC

Compensation is due for non-local traffic.

In regard to non-local traffic, Qwest proposed that its switched access tariff rates be applied to such traffic as routed to a toll access tandem on the local tandem or directly to an end office. Applicable Qwest switched access tariffs would also apply to interMTA and roaming traffic originating or terminating to Qwest. As Qwest is correct in indicating that reciprocal compensation is not applicable to such traffic, Union's language was simply intended to make such language reciprocal. While the reference to the land to mobile traffic would need to be amended, Section 6.3.9.1 should read as follows:

> "Applicable switched Access tariff rates apply to Non-Local Traffic routed to a Toll/Access Tandem, Local Tandem or directly to an End Office. Applicable switched Access Tariff rates also apply to InterMTA and Roaming Traffic originated by or terminating to the other party. Relevant rate elements could include Direct Trunk Transport, Tandem Switching, Tandem Transmission, and Local switching as appropriate."

If reciprocal language is not applicable according to Qwest, then compensation is still necessary. The Colorado Commission found for Qwest leaving Union without compensation for

non-local interMTA traffic. Colorado Order at 40. The Colorado Order is clearly wrong as it requires Union to pay Qwest at tariffed rates but denies Union any compensation for the same service. It clearly results in a "taking". Fundamentally, any change imposed by a common carrier is to be "just and reasonable" (47 U.S.C. § 201) requiring service without compensation is unjust and unreasonable. Requiring a company to provide services without compensation is further violative of the reciprocal compensation requirements of the Act. 47 U.S.C. §251 (b)(5). Furthermore, 47 C.F.R. §20.11(b)(1) requires a LEC to pay reasonable compensation to a CMRS provider; no compensation for a service rendered is not reasonable. It is not "mutual compensation" as required by 47 C.F.C. 20.1(b).(See *U.S. West v. Wyoming Public Service Commission,* 907 P.2d 343(Wyo.1995) quoting from *Union Telephone Company v. Wyoming Public Service Commission* , 833 P.2d 473, 482(Wyo. 1992), holding that payment of mutual compensation requires payment for terminating access payments.)

ISSUE VI: ASYMMETRICAL RATES

Union's total element long run incremental costs support an asymmetrical rate.

Union has requested an asymmetrical rate. The rate is allowed as Union has provided a cost study consistent with federal law in support of the study. While telecommunications companies must make reciprocal compensation arrangements for the transport and termination of telecommunications, 47 USC § 251(b)(5), asymmetrical rates are allowed as an exception to the general rule. A reciprocal compensation arrangement between two carriers is one in which each of the two carriers receives compensation from the other carrier for the transport and termination on each carrier's network facilities of telecommunications traffic that originates on the network facilities of the other carrier. Accordingly, 47 CFR §51.711 requires that reciprocal compensation be symmetrical, unless the state commission establishes asymmetrical rates pursuant to 47 CFR 51.711(b) or (c), which in the present case means that as Union's rates are supported by an

appropriate cost study- they should be allowed. While Qwest's position is to contest the request-no matter what proof is provided, Commissions have allowed and recognized asymmetrical rates. See *MECA v. Verizon N*., 2006 WL 3847851 (Mich.P.S.C., U-15905) December 21, 2006, p. 14. Reh. Den. 2007 WL 3225342, Mich.P.S.C., Oct 25, 2007, (NO. U-14905). Also see *In the Matter of the Petition of QWEST CORPORATION (AT&T*), 2004 WL 5209240 (Utah P.S.C. 04-049-09) May 20, 2004, where the Commission indicated that a carrier may have higher asymmetrical rates, but it must first establish its higher costs to the Commission by its own forward-looking cost study before it may depart from symmetrical charges.

The Act at Section 251(b)(5) provides that LECs have the duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications traffic. Section 252(d)(2)(A)(ii) explains the requirement for compensation by providing that such is just and reasonable if the cost forms a reasonable approximation of the additional costs of terminating such calls. These additional costs were defined in the local competition order, 11 FCC Rcd. 11501 at ¶1057 wherein the FCC stated:

> We find that, once a call has been delivered to the incumbent LEC end office serving the called party, the "additional costs" to the LEC of terminating the 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.... for 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.

The regulations developed to interpret these provisions provide that a carrier can establish asymmetrical rates if its costs exceed that of an incumbent carrier, in this case Qwest. The regulation provides at 47 C.F.R. §51.711 as follows:

> "(a) Rates for transport and termination of telecommunications traffic shall be symmetrical, except as provided in paragraph (b) and (c) of this section.

* * *

> (b) A state commission may establish asymmetrical rates for transport and termination of telecommunications traffic only if the caller other than the incumbent LEC (or the smaller of two incumbent LECs) proves to the state commission on the basis of a cost study using the forward looking economic cost based pricing methodology described in Section 51.505 and 51.511, that the forward looking costs for a network efficiently configured and operated by the carrier other than the incumbent LEC (or the smaller of two incumbent LECs), exceed the costs incurred by the incumbent LEC (or the larger incumbent LEC), and, consequently, at such that the higher rate is justified."

As Union is a small company providing service to a very large rural area, its costs are higher than the incumbent LEC. Consequently, it is entitled to an asymmetrical rate. Union must demonstrate that its costs are higher by submitting a cost study. Mr. Jason Hendricks of GVNW Consulting, Inc. developed and provided Union's Cost Study in this proceeding. In his Direct testimony (Union Exhibit 2, pp.4-8), Mr. Hendricks defined the requirements for an asymmetric rate as provided in the FCC regulations. He stated:

> The cost methodology the FCC prescribes to support asymmetric rates is the total element long run incremental costs (TELRIC) approach commonly used by LECs to support rates for interconnection services and unbundled network elements. (C.F.R. Title 47, Sec. 51.505 and 51.511). Among the TELRIC components are requirements that the costs must be developed assuming the most efficient technology currently available and the lowest cost network configuration given the existing location of wire centers (switches). In addition, the costs must be developed assuming forward looking cost of capital and depreciation rates, and a reasonable allocation of common costs.

Union Exhibit 2 at p. 3

Mr. Hendricks introduced Union Exhibit 2.1, Union's Cost Study showing Union's costs in transporting and terminating local traffic specifically for its wireless operations. He explained that the costs were developed assuming the most efficient technology currently available and the lowest cost network configuration given the existing location of Union's wireless switches and cell sites. In his testimony, Mr. Hendricks explained the basis for the TELRIC study and the assumptions made in filing it with the Commission. He noted, for instance that Union is currently converting its wireless

network from TDMA to GSM which is the most efficient network currently available. Given this conversion, as Union had purchased a new GSM switch, the actual cost of this switch was used in developing the asymmetric rate. Union Exhibit 2 p. 4. Other than baseless overgeneralizations, there was no testimony contradicting this testimony.

In the same manner, as Union installed GSM cell sites as part of this new network, the costs for these GSM sites were used in developing the average cell site cost for the system. These costs are known to the company from actual purchases; the costs can not be more accurate than those based on actual purchases. Correspondingly, the transport component of the asymmetric rate was developed assuming that calls were transported via microwave transmission as it is the most efficient methodology for transmission over distance. Importantly, as Mr. Hendricks developed his cost model, as shown in his testimony, he factored in costs using the most efficient technology currently available. Qwest Exhibit 2, p.3-4. Initially, his model developed a cost/rate per minute of use of $0.036626.

As expected, Qwest opposed Union's proposal to utilize an asymmetric rate. Mr. Peter Copeland testified for Qwest, while acknowledging that an asymmetric rate was permissible under the statute and rules, he initially argued that Union's model violated the "additional costs" and traffic sensitivity requirement of the statute and the Local Competition Order.

In his surrebuttal, (Union Exhibit 2SR) Mr. Hendricks addressed the objection. He noted that Qwest's position eliminating cell site investment and switch costs was accomplished to remove the most cost from the study. Union Exhibit 2SR, p. 8. Mr. Hendricks indicated that Qwest, in stating its objection, did not provide any technical documentation or analysis to support an assertion that cell site costs are not traffic sensitive nor did Qwest provide any citations to FCC rulings which would support its position. Rather, all of their argument in removing $38 million of investment in this study is Mr. Copeland's representation. Union Exhibit 2SR p.8. Fundamentally, if cell site

investment is traffic sensitive, then the costs are warranted.

Mr. Hendricks noted that the FCC's First Report and Order was primarily focused on the components of an ILEC's network which should be included in an ILEC rate. The witness noted that the FCC had subsequently reviewed the components that would be eligible for consideration in a CMRS network. The witness referred to the FCC's CMRS Compensation Order (which he provided as Union Exhibit 2SR.3) which states:

> Based on the language of Section 252(d)(2)(A) of the Communications Act, CMRS carriers are entitled to the opportunity to demonstrate that their termination costs exceed those of ILECs.
>
> The "equivalent facility" language of Sections 51.701(c) and (d) of the Commission's rules does not require that wireless network components be reviewed on the basis of their relationship to wireline network components; nor does it bar a CMRS carrier from receiving compensation for the additional costs that it incurs in terminating traffic on its network if those costs exceed the ILEC's costs. Rather, the determination of compensable wireless network components should be based on whether the particular wireless network components are cost sensitive to increasing call traffic.
>
> If a CMRS carrier can demonstrate that the costs associated with spectrum, cell sites, back call links, way 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. (Union Exhibit 2SR p. 10.) (Emphasis added.)
>
> * * *
>
> Mr. Hendricks then stated:
>
> I believe it is important to note that the FCC has already considered the argument espoused by Mr. Copeland, that cell site costs are not "additional costs" since cell sites are equivalent to ILEC loop facilities and the FCC ruled that loop costs are not "additional costs". The FCC explicitly rejected that argument. Specifically, the FCC ruled:
>
> > We reaffirm that the term "equivalent facility" was not intended to preclude the recovery by CMRS carriers of the "additional costs" of wireless components that might be regarded as functionally equivalent to wireline elements whose costs are non-recoverable, such as a wireline LEC's local loop. Rather,

> the language "switch or equivalent facility" was used to "contemplate that a carrier may employ a switching mechanism other than a traditional LEC switch to terminate calls," and more generally to ensure that the costs of non-LEC facilities would be included in transport and termination rates even if such facilities did not precisely track the network facilities architecture of a LEC. Thus, while equivalence does, in part, define what facilities are involved in the function of "termination," it is simply not relevant to determining which of those terminating facilities imposes costs that can be recovered through reciprocal compensation charges. .'

Union Exhibit 2SR p. 11-12 quoting CMRS Compensation Order ¶11-12.

Mr. Hendricks continued:

I believe the *CMRS Compensation Order* is important because the FCC has already heard and rejected the arguments made by Mr. Copeland. Specifically, the FCC has already ruled that the portions of the FCC First Report and Order cited by Mr. Copeland are not determinative of whether cell site costs are traffic-sensitive costs...It is inappropriate for Mr. Copeland to cite to a portion of an FCC ruling to support his contention that cell site costs are not "additional costs" when the FCC has already determined that those portions of the rules do not support the arguments Mr. Copeland is making. Rather, the FCC stated 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.'

In short, Mr. Copeland cannot rely on FCC rules and orders to claim that cell site costs are not traffic sensitive. Instead, it is up to the Commission to determine if Union's costs are traffic-sensitive.

* * *

A cell site provides call set-up functions, call management, and a wireless interface to all handsets within a specific geographic area or cell. It includes antennas, supporting towers where necessary, and the Base Transceiver System (BTS). All three components of the cell site are needed to maintain a wireless connection to a user's handset.

Antennas are needed to transmit wireless signals from a cell sites to a subscriber handset, and to receive wireless signals from wireless handsets in the area covered by the cell site. The antennas, and other equipment, are often placed on towers or rooftops. Towers or rooftop sites help ensure

adequate signal strength between handsets across the cell and the antenna at the cell site. BTSs contain the electronics necessary to convert the signal received from the antenna into a format suitable for transport to a Base Station Receiver (BSC), which performs traffic concentration, supervision of call hand-offs between BTSs, administration of BTS resources, and aggregation of traffic for hand-off to wireless switch. In Union's case, the signals between its BTSs and BSC are transported over a microwave backhaul link. A BTS also amplifies signals for broadcast over the air interface, communicates call set-up information with handsets, provides timing information, and manages handoffs from one sector to another sector within the same cell site.

* * *

The ability of a BTS to carry traffic is limited by the capacity of its processor unit, which is used to translate formats, control power, supervise call set-up, and manage internal handoffs. When the volume of calls increases sufficiently, the installed capacity of the BTS will be exhausted, and the number of calls being blocked or dropped will increase. The quality of service can be maintained by increasing the capacity of the BTS in one of two primary ways – the addition of radio carriers or the addition of cell sites.

When the initial calling volume is still relatively low, the electronic equipment at the cell site is initially configured to use only a portion of the available radio spectrum. In this case, capacity can be expanded by adding electronic equipment to the BTS that permits additional "radio carriers" (frequencies that were previously unused) to be brought into service. Since calling volume triggers the level of investment in BTSs, the costs of BTSs are traffic sensitive.

A second method of expanding capacity is cell splitting. When total minutes of use exceed the capacity of a cell site, relief can be obtained by adding an additional cell site at an adjacent location. This permits the new site to manage a portion of the traffic being transmitted in the geographic area, thus "splitting" the original cell. When all available spectrum s exhausted and carriers cannot be added, cell splitting may be the only means of expanding capacity. Also, it is frequently more efficient to split a single cell than to add additional radio carriers or frequencies to the network. Cell splitting provides an independent and alternative justification for the conclusion that cell site costs are traffic sensitive.

* * *

[T]he costs of structures, like buildings and towers, required to house BTSs and antennas are akin to the costs of the land and buildings required to house ILEC switches. The FCC has determined that these costs can be recovered by ILECs as part of the unbundled local switching element, and the model adopted by the Commission to compute the forward-looking cost of unbundled network elements includes the costs of land and buildings in its estimate of the costs of local switching. By the same logic, the costs of structures at cell sites can be considered part of the costs of BTSs."

Union Exhibit 2SR, pp.13-15.

In addition to Mr. Hendricks, Mr. Al Hinman, an engineer for Union whose expertise includes network design, network engineering and management, provided testimony in which the Union wireless system and why its components are traffic-sensitive are addressed. In his testimony, the witness explained that the network associated with a wireless system is totally different than the local loop of an ILEC as the wireless network which includes base station controllers (BSCs) and base transceiver stations (BTS) function in many respects like ILEC switches. The witness testified:

> As I attempted to illustrate in describing the routing of a wireless call, a BTS serves a very dynamic function and is very traffic sensitive. Not only is a BTS engineered for Union customers within an area, but an accounting needs to be made of transiting traffic and even customer demand for more services, features, and capacity.
>
> Q. [Asay] How do you keep a BTS current with changing needs and traffic demand?
>
> A. There are a number of ways in which a BTS is changed to meet changing demands or needs: a company can add more base station transceivers to a base station; the antennas can be added or changed; the radios can be changed; the cards and the processors or even the voice recorders can be changed. As traffic increases, the company may need to increase the channels to accommodate more traffic to the BSC. All of the software and the hardware changes can be collectively or individually in order to address changing needs and traffic demand. Again, maintaining a BTS is a very dynamic process and is constantly subject to change. The BTS hardware and software are very much dependent on the changing traffic that is processed by the facility. These dynamic changes are needed throughout the wireless system. As the BTS changes, so does the interconnecting facilities as well as the BSC and the MSE. All of these facilities, like the BTS, are subject to changes in traffic.

Union Exhibit 1SR, pp. 6, 7.

The testimony from the engineering experts is clear, cell site facilities and the related infrastructure is traffic sensitive. A cell site provides call set-up functions, call management, and a wireless interface to all handsets within a specific geographic area or cell. It includes antennas,

supporting towers where necessary, and the BTS. In turn, the ability of a BTS to carry traffic is limited by the capacity of its processor unit, which is used to translate formats, control power, supervise call set-up, and manage internal handoffs. When the volume of calls increases sufficiently, the installed capacity of the BTS is exhausted, and the number of calls being blocked or dropped will increase. The quality of service can only be maintained by increasing the capacity of the BTS.

There are a number of ways in which a BTS is changed to meet changing demands or needs: a company can add more base station transceivers to a base station; the antennas can be added or changed; the radios can be changed; the cards and the processors or even the voice recorders can be changed. As traffic increases, the company may need to increase the channels to accommodate more traffic to the BSC. All of the software and the hardware changes can be collectively or individually in order to address changing needs and traffic demand. Again, maintaining a BTS is a very dynamic process and is constantly subject to change. There can be no question but that cell site facilities and associated infrastructure are traffic sensitive. Accordingly, the costs should be allowed.

There are certain precepts which are very evident from this proceeding and others, one of these is this; Qwest will never agree with an asymmetrical rate-no matter how compelling the evidence. Union has spent the better part of four years addressing Qwest's resistance to its study. Unfortunately, addressing Qwest's objections is like beating the gopher heads at the penny arcade: no matter how many heads you hit, others will pop up.

In Qwest's Surrebuttal Testimony of Copeland (Qwest Exhibit 3SR), the witness noted that nearly 95 percent of the investment in Union's study (in excess of $85 million) is associated with cell site equipment and supporting assets. The witness notes Union's position that 100 percent of the investment is traffic sensitive and then asks: "How can Union provide justification for the "traffic sensitivity" of its cell sites if Union itself has no information on its cell site traffic capacities or utilization?" Qwest Exhibit 3SR p.5.

Given Qwest's question, Union supplied the testimony of Henry Jacobsen, the Director, Engineering and Construction. The witness had the responsibility of directing the architecture and design of Union Telephone's telephone systems, both for land-line and cellular services. For cellular services, this includes site selection, permitting, and acquisition, as well as equipment configuration, design and procurement of all network infrastructure. The witness has been in the telecommunications industry for over 35 years and holds BS and MS degrees in Electrical Engineering, with extensive post-Masters education in the area of Systems Analysis and Operations Research. Union Exhibit 3R p.2. Mr. Jacobsen testified that Union is now performing traffic monitoring in precisely the same way as Qwest. He noted that if "Copeland's position is that Union must prove that the equipment in its study is traffic is sensitive and meets the FCC's 'additional cost' standard" to justify asymmetrical compensation, then that condition is clearly met". Union Exhibit 3R p.5.

The witness further stated that there are three very great differences between land-line and cellular switches.

> First, the wireless "loop" corresponding to a land-line copper cable is a radio channel; second, it is a shared resource and therefore traffic sensitive; and third, by virtue of its extensive electronics and control, wireless access is many times more expensive to configure and maintain than passive buried copper circuits. The connection from the subscriber to the switch includes antennas, coaxial cable, radios, duplexers, combiners, splitters, amplifiers, radios transceivers, controllers, compression equipment and long back-haul facilities in the form of microwave, fiber optics or leased facilities. These channels are utilized by all cellular customers; and if they collectively double their amount of individual usage, twice as many end-to-end facilities are required. This includes the switch ports. Thus, the entire switch – the access side as well as the trunk side to other switches – becomes traffic sensitive. In summary, a cellular switch does not have a typical line-side or dedicated customer interface. The radio-connected ports are traffic shared much like inter-switch trunks, making the entire switch TS.

Union Exhibit 3R pp. 7& 8.

Because Union provided testimony from a qualified engineer directly attacking the Urban Planner's representation on behalf of Qwest, the Qwest response was not to concede the point but to return to its "fall back" position and argue that Union had failed to provide discovery responses (for which no motion had been filed) and to carry its burden of proof. Qwest Exhibit 3PSR p.2. These latest objections were addressed in Union's final filing and supported at the hearing.

In his Post Surrebuttal Testimony (Union Exhibit 2PSR) Mr. Hendricks recommended that the Commission reject all of Copeland's and the Division's positions on what they believe to be deficiencies with Union's cost study. He pointed out that if the Commission were to agree with any of the positions expressed by these witnesses, that any resulting changes to Union's asymmetric rates could be made within the existing cost study structure, whether they be explicit input changes or changes in the formulas used within the model. He reaffirmed that 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 summary, he argued that 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. In support of his position, he provided to the Commission Union Exhibit 2SSR 2. (17) which provided a summary of the Parties' positions. Mr. Hendricks suggested that if in reviewing the testimony or exhibit the Commission were to determine that some lesser percentage of the network is traffic-sensitive, it should issue a ruling on the proper traffic-sensitive factor and allow Union to re-file the study that uses the revised traffic-sensitive factor rather than simply rejecting the study in its entirety. Union Exhibit 2PSR p. 2.

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.

Key Points of Dispute

Mr. Hendricks provided a list of disputed issues with respect to asymmetric compensation in an Exhibit attached to his Post Surrebuttal Testimony. For the Commission's convenience, that Exhibit is also included as an attachment to this Brief. Union believes that this Exhibit is still an accurate summary of the Parties' positions on the open issues with respect to Union's proposed asymmetric compensation study. However, a few key issues continually arose during the course of the hearings that Union believes require further elaboration, as set forth below.

1. What percentage of Union's Cell Sites and Switch is Traffic-Sensitive?

Union has presented detailed analysis explaining that 100% of the cell site facilities included in Union's cost study is traffic sensitive. A summary of Union's position on the case is contained in the previous section. To reiterate the FCC's position on the issue, the FCC has stated that if a CMRS carrier can demonstrate that the costs associated with its facilities 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. Union Exhibit 2SR, pp.13-15. Union has repeatedly shown through its testimony and data request responses that the costs for the facilities included in its study vary "to some degree" with the level of traffic that is carried on its network. Thus, Union has appropriately included those costs in its cost study in compliance with the FCC's asymmetric compensation requirements. It should be noted that Union did not include one of the items identified

by te FCC – spectrum – in its cost but provided detailed analysis supporting the traffic sensitivity for each of the other items identified by the FCC

Qwest has attempted to confuse the record on this issue in two primary ways. First, it has argued that even if some components may theoretically be traffic sensitive, some of the facilities are underutilzed and, therefore, not cost sensitive. Qwest has also taken the position that the FCC has required that an asymmetric cost study submitted by a wireless carrier must contain a component by component analysis, within the study, thereby imposing a higher burden of proof on wireless carriers than it has imposed on wireline carriers. (TR p. 229-230).

Qwest is wrong on both counts. First, with respect to the underutilization argument, Union has shown through the testimony of Mr. Jacobsen (Union 4SR), that Mr. Copeland has vastly overstated any underutilization in Union's network. Mr. Jacobsen also explained during the hearing why, given the mobility and spectrum dynamics in a wireless network, that even if a given cell site is underutilized at one point in time, it may be beome overutilized in the case of one time events (e.g. rodeo) because of many people covergin on one area at one time or in the case of reallocation of spectrum when additional cell sites are added. Moreover, as Mr. Copeland admitted, many switches that were not fully utilized in Qwest's network were still included in the development of Qwest's reciprocal compensation rate. (TR p. 241). The nature of serving rural areas is that even if a carrier deploys the minimum network facilities available, some facilities will be underutilized because there simply aren't enough users in the rural areas to allow for the facilities to be fully utilized. (Tr. p. 60). However, that doesn't mean that the facilities are not traffic sensitive. Union has shown, for each component in its network, that if traffic increases beyond a certain threshold, the facilities will need to be upgraded or replaced. Since it has made such a showing, Union has appropriately included the costs for its facilities in the study consistent with the FCC's asymmetric costs requirements and

consistent with the manner in which such costs were included in the development of Qwest's reciprocal compensation rates.

Second, with respect to whether a component by component breakdown needs to be part of the study itself, Qwest's position is not supported by any FCC rule or Order. The FCC has required CMRS carriers to demonstrate that each component included in an asymmetric cost study is traffic sensitive, which Union has done through testimony and data request responses. But the FCC has not required the study itself to contain that analysis. In the HAI model preferred by Staff and the one used in the development of Qwest's rates, there is not any component by component analysis of traffic sensitivity in model. Rather there is one user-adjustable input on switch traffic sensitivity. Union's model contains two user-adjustable traffic sensitive inputs, one for the switch and one for cell. If any user disagrees with Union's use of 100% traffic sensitivity, the user need only adjust the inputs. Unions has provided extensive data upon which one can determine if 100% is appropriate and, if necessary, change the inputs to a number that that use believes is more appropriate. But again, the component by component analysis s not required in the study itself. Qwest is simply wrong in its position that the FCC's CMRS asymmetric compensation decision imposed a higher standard on CMRS carriers than it imposed on wireline carriers. The FCC simply imposed the same TELRIC requirements on wireless carriers that it imposed on wireline carriers and clarified that he 'equivalent facility' language of sections 51.701(c) and (d) of the FCC's rules does not require that wireless network components be reviewed on the basis of their relationship to wireline network components.

Since neither Qwest nor the DPU Staff has provided any evidence to support traffic sensitive factors other than 100% despite the voluminous data and testimony provided by Union on this issue, Unions recommends that the Commission adopt the 100% traffic sensitive factors proposed by Union.

2. Should the Costs in Union's Model be Considered Embedded Costs?

Union's costs are not embedded costs but instead reflect current actual prices Union pays for a forward-looking efficient network consistent with FCC TELRIC rules. 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." (Emphasis added.) As Mr. Hendricks explained in his Post Surrebuttal 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.

Neither Qwest nor the DPU Staff has presented any evidence to show that Union's network is inefficiently designed or that the technology used in the network is inefficient or outdated. As Mr. Anderson concedes about Union's switch, it is a "modern efficient switch technology that is forward-looking." (Anderson Rebuttal, p. 11). Union and DPU Staff have instead taken the position that the costs in Union's model are embedded costs simply because Union has recorded those costs in its books of accounts. The hearing revealed how extreme Mr. Anderson's position is when he stated that even if the switch was purchased within the last month, the costs of the switch would be an embedded cost. But that is clearly not the definition of embedded costs that the FCC had in mind when it established the TELRIC rules. 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.

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 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. Some of the costs are simply a few years old because this proceeding is a few years old. But as Mr. Hendricks testified the GSM cell sites cost included in the model may be understated because the average costs for the most recent GSM cell

sites included in Union's network are higher than those included in the study. (Union 2PSR, p. 9). In addition, as Mr. Hendricks and Mr. Jacobsen testified, Union's modeled switch costs are also likely understated relative to what Union would currently pay for a switch because the current switch in Union's network need to upgraded to one with larger capacity.

In short, Qwest's and the DPU Staff's positions on embedded costs are not consistent with the FCC's rulings on embedded costs and they not supported with data to suggest that the costs included in Union's study are too high relative to what Union would pay today or that the technology and network design in Union's study is inefficient or forward-looking. Accordingly, the Commission should reject any suggestion that Union's model contains embedded costs. Qwest and the Division reject Union's use of its costs to establish the most efficient forward looking costs for its network. The Division takes the position that any cost already in the network, no matter how recently incurred, is an embedded cost. (Tr. p. 303.) In point of law, agencies and courts have recognized that this is an appropriate method. The Seventh Circuit has held that a TELRIC study does not demand that every ingredient be hypothetical. In fact how could one know the long-run costs of the most efficient technology without understanding the costs of today's most efficient producers? *AT&T Communications of Illinois, Inc. v. Illinois Bell Telephone Co.* 349 F.3d 402, 411 (C.A.7, 2003). The Eighth Circuit has stated that TELRIC rates are calculated according to what it would cost today to build and operate an efficient network that can provide the same services as the ILEC's existing network. *Qwest Corporation, v. Leroy Koppendrayer*, 436 F.3d 859 (CA 8, 2006). In other words, actual costs can play a role in establishing appropriate rates. *Re Verizon New England Inc., dba Verizon Vermont*, 2005 WL 2778033 (Vt.P.S.B., Doc. No. 6882) p. 6.

3. Inclusion of Non-Traffic Sensitive Costs in the Development of Traffic Sensitive Rate - Should Union's Asymmetric Cost Study Be Held to a Higher Standard than the Studies Used in the Development of Qwest's Reciprocal Compensation Rate?

The short answer to this question is no; Union's asymmetric cost study should not be held to a higher standard than Qwest's reciprocal compensation study(ies). The FCC has required that CMRS asymmetric compensation studies comply with the same TELRIC principles with which incumbent LECs, such as Qwest, have been required to comply. Thus, certain primary assumptions and inputs that the Commission found to be appropriate for the development of Qwest's reciprocal compensation rate, the Commission should also find to be appropriate in Union's asymmetric compensation study.

Mr. Anderson of the Division has taken the position that costs for towers, buildings, power equipment, cables, and fiber/conduit should be excluded from Union's cost study.2 However, as Mr. Hendricks explained, 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. (Union 2PSR, pp.4-5 and Tr, p.336-338) 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

2 Union urges the Commission to give no weight to this testimony on grounds that it is based on hearsay evidence.

network. And since Qwest's reciprocal compensation rates, which are based partially on HAI results, contain those kinds of costs (Tr. pgs. 256-258), Union's asymmetric compensation study should, too.

During the hearing, Mr. Copeland tried to explain why those kinds of costs were appropriate to include in Qwest's study but not in Union's asymmetric study. But Mr. Copeland's explanation was disingenuous and internally inconsistent. As a specific example of Mr. Copland's flawed logic, he claimed that cell towers should not be included in the cost study because it is a direct cost, yet he admits that conduit is a direct cost and is included Qwest's reciprocal compensation rate. (Tr. p. 286,) He also admits that poles are a direct cost (Tr. p. 277) while also stating that it is included in Qwest's reciprocal compensation rate (Tr. pgs. 256-257).

Since neither Qwest nor the DPU Staff has provided any evidence or policy rationale to justify a different treatment of non-traffic sensitive support assets (or non-traffic sensitive direct costs, as Qwest defines them), the Commission should allow those costs to be included in Union's asymmetric compensation study.

4. Can Union's Cost Study be Modified to Incorporate the Commission's Ruling on Any of the Issues of Dispute?

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

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Tr. pgs. 295-296, 332-333.

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. Mr. Copeland and Mr. Anderson claim that the record does not contain the data to allow the Commission to make the changes it may find appropriate. (Tr. pgs. 237, 323.) Union disagrees and believes that there is sufficient data that would allow the Commission to make the change itself. However, if the Commission does not believe that it has the data to make the change itself, it could issue a decision about what needs to be changed and allow Union to file a compliance study. Again, Union has met its threshold burden on traffic sensitivity and should be afforded the opportunity to revise its study consistent with what is done in other TELRIC proceedings if the Commission were to find that a certain aspect of the study should be modified.

D. CONCLUSION

Union's proposed changes to the interconnection agreement are entirely appropriate. Union's wireless architecture ensures that it is connected to other carriers, including Qwest, with the most cost efficient technologically advanced methodology. Union's architecture saves Union money as well as protecting other carriers – including Qwest. At the same time, Union's proposed asymmetrical rate was based on a TELRIC study that was accomplished in accordance with FCC rules, regulations and decisions. The TELRIC study and its results should be accepted by this Commission in this case.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing Post-Hearing Brief of Union Telephone Company was served via electronic mail and U.S. Mail, postage prepaid, on the 18th day of December, 2007 addressed as follows:

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