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ARIZONA CORPORATION COMMISSION

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chairman

JIM IRVIN
Commissioner

MARC SPITZER
Commissioner

Arizona Corporation Commission

DOCKETED

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**IN THE MATTER OF INVESTIGATION
INTO QWEST CORPORATION'S
COMPLIANCE WITH CERTAIN
WHOLESALE PRICING
REQUIREMENTS FOR UNBUNDLED
NETWORK ELEMENTS AND RESALE
DISCOUNTS.**

**DOCKET NO. T-00000A-00-0194
PHASE II**

QWEST CORPORATION'S APPLICATION FOR REHEARING

Pursuant to A.R.S. § 40-253 and A.A.C. R14-3-111, Qwest Corporation applies for rehearing of Decision No. 64922 ("Decision") entered by the Arizona Corporation Commission ("Commission") on June 12, 2002. Sections 252(b)(4)(c) and 252(c) of the Telecommunications Act of 1996 (the "Act") require the Commission as the Arbitrators to resolve open issues, including the establishment of prices for Qwest's interconnection services and unbundled network elements ("UNEs") offered to competitive local exchange carriers ("CLECs"), which fairly compensate Qwest while promoting the Act's multiple goals of competition in local exchange markets, encouraging investment in telecommunications networks, and fostering advancements in telecommunications technologies.

Qwest urges reconsideration of the Decision with respect to the rulings, in whole or in part, described in the Argument Section of this Application.

ARGUMENT

I. THE DECISION ESTABLISHES A LOOP PRICE RIDDLED WITH BASIC METHODOLOGICAL ERRORS

As the FCC recently explained, the “essential objective” of TELRIC “is to determine what it would cost, in today’s market, to replace the functions of [a network] asset that make it useful,” while simultaneously taking as given “the most basic geographical design of the existing network.” FCC 2001 S. Ct. Br. at 6, 9. The point of TELRIC is not to imagine that the *world itself* will be recreated from the void with an eye towards lowering telecommunications costs. Nor is it the point of TELRIC to imagine futuristic technological capabilities that do not currently exist in the market.

Instead, TELRIC asks what facilities would be “*currently* available,” 47 C.F.R. § 51.505(b)(1) (emphasis added), to an efficient carrier seeking to replace the existing network given the constraints of the rest of the world. The “current availability” of such facilities is integral to the basic purpose of TELRIC, which is to “replicate[], to the extent possible, the conditions of a competitive market.” *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499, 15846 ¶ 679 (1996) (“*Local Competition Order*”). By replicating those conditions, TELRIC is meant to give CLECs appropriate price signals about when it would be efficient, and when inefficient, to build their own facilities rather than leasing the incumbents’ existing capacity. *See id.* at 15813 ¶ 620, 15848-49 ¶¶ 683-85.

The Act’s objective, at the end of the day, is true facilities-based competition; Congress did not intend, in enacting the 1996 Act, to create a regime in which all carriers use exactly the same network and compete about nothing but marketing and salesmanship. As the FCC recently observed, “[t]hrough its experience over the last five years in implementing the 1996 Act, the

Commission has learned that only by encouraging competitive LECs to build their own facilities or migrate toward facilities-based entry will real and long-lasting competition take root in the local market."¹ That is why, in applying TELRIC, it is so critical to set UNE prices based on "currently available" technology and on current constraints in the rest of the world outside the network. If regulators were to move the inquiry forward or back in time in an effort to reduce estimated replacement costs, they would severely distort the price signals TELRIC is designed to send and would undermine any incentive a CLEC might have to invest in facilities of its own. No carrier would ever build facilities at today's rates, with the constraints of today's world, if it could instead lease facilities at rates reflecting the lower costs of yesterday or tomorrow.

A. The Decision's Treatment Of Customer Location And Line Count Data Is Unsupportable and Violates TELRIC.

1. The Decision Uses Inaccurate and Unreliable Data Derived From the TNS-Based Run of the HAI Model And Produces a Loop Cost that is Not Supported by Substantial Evidence.

During the April 11, 2002 Open Meeting, the Commission directed that the record in this matter be reopened, in order to put into evidence 2000 customer location and line count by location data to establish the cost of the unbundled loops. Accordingly, the Hearing Division issued a Procedural Order on May 9, 2002, requiring Qwest and AT&T/WorldCom to provide TNS with year 2000 customer location data and for TNS to process those data *in the same manner* that it processed the 1997 customer location data used in the initial AT&T/WorldCom

¹ *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Fourth Report and Order, 16 FCC Rcd 15435, 15437 ¶ 4 (2001); *see also Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Notice of Proposed Rulemaking, CC Docket No. 01-339, et al., FCC 01-361, Separate Statement of Chairman Michael K. Powell at 2 (adopted Dec. 12, 2001).

run of the HAI model in this docket. The Order further required the parties to run the HAI model with the new TNS data and to provide a joint rate schedule based on that run by May 24, 2002.

Approximately 24 hours before the required deadline, TNS provided Qwest and AT&T/WorldCom with the processed 2000 customer location data. TNS did not, and has not to this date, provided Qwest with the back-up information that would permit Qwest to evaluate the customer location data produced by TNS or conduct meaningful discovery on that methodology.

There are two significant flaws in the loop cost of \$12.12 that result from the Commission's use of the TNS data. First, because the TNS data was not admitted into evidence (or even available) at hearing and was not subject to discovery or cross-examination, it is not substantial evidence upon which the Commission can base its decision. Second, as is apparent from the brief opportunity Qwest had to review the TNS data, it is inherently unreliable and cannot provide a proper evidentiary basis for the loop cost.

Because of the late delivery by TNS of the customer location data and the failure of TNS to deliver the back-up data that would have permitted Qwest to audit the TNS results, Qwest was unable to fully analyze these defects in the TNS data. Indeed, TNS promised Qwest some of the data, but never delivered it. Qwest sought additional discovery on the basis for this TNS data and a subsequent hearing on the issue. Although the Commission offered the parties an opportunity to request a hearing concerning the TNS data on June 11, 2002, this opportunity could not be meaningful because Qwest did not have the back-up data with which to analyze the TNS data or an adequate opportunity to conduct discovery prior to such hearing date.

The Commission's Decision to base the unbundled loop rate on evidence that was not produced at the hearing and which the parties did not have an opportunity to analyze means that the loop price was not based on substantial evidence and was not determined in a manner

consistent with due process. Particularly given the counterintuitive results of this model run, the Commission should have set an interim loop cost, as suggested by Qwest, allowed Qwest to explore the data thoroughly, and held a full evidentiary hearing on the subject as part of Phase III of this Docket. Qwest's Brief Relating to the TNS-Based Revised Run of the HAI Model. *See also, Southern Pacific Company v. Arizona Corporation Commission*, 98 Ariz. 339, 404 P.2d 692 (1965); *State ex rel. Corbin v. Arizona Corporation Commission*, 143 Ariz. 219, 693 P.2d 362 (App. 1984).

Despite insufficient time for Qwest to conduct a thorough review of the TNS data, it was clear that TNS *did not* comply with the Commission's requirement of processing the 2000 customer location data *in the same manner* as it processed the 1997 data in the initial run of the model. First, it was obvious that the TNS clusters are different from those used in the previous run of the model. For example, although an important HAI parameter limits the number of lines per serving area to 1,800, the new TNS clusters consistently exceed that limit. At least 80 of the serving areas now have more than 1,800 lines. The approach used by TNS appeared to perpetuate the basic problem that led to Commissioner Spitzer's amendment by placing unidentified customer locations directly on top of and at the locations and addresses of existing customers. It also was contrary to TNS' previous methodology; in the previous run of HAI, customers without identifiable addresses were spread throughout the service territory and were not placed on top of and at the locations and addresses of identifiable customers. As a result of these placements, the new TNS clusters still led to a network that did not reach customers who lived and worked in new developments.

These basic changes and flaws in the new TNS clustering methodology rendered any result derived from the TNS year 2000 clusters entirely unreliable. Despite the large increase in

Arizona customer locations from 1997 to 2000, the total cable mileage in the model actually *declined*, from about 33,000 miles to about 31,000 miles. This demonstrates that TNS cannot have employed the same methodology in assigning customers to locations. The geographic growth of the Phoenix and Tucson metropolitan areas between 1997 and 2000 *cannot* have resulted in fewer miles of cable to serve customers in those areas.

Under these circumstances, the Commission should grant rehearing to establish the new loop rate based on the 1997 investment data and 1997 customer location data that are already in the record. As Qwest has previously shown, dividing the 1997 investment by 1997 customers produces a base loop rate of \$13.92. Alternatively, the Commission should grant rehearing and adopt the \$12.63 rate included in the parties' previous compliance run, subject to further consideration of the appropriate use of the 2000 customer location data and the 2000 line counts during Phase III of this docket.

It does not require any significant cost expertise to recognize that adding hundreds of thousands of new locations and expanding the network to reach the many new housing and business developments that have been built since 1997 will increase cable distance and, therefore, the cost of the loop. That the run of the HAI model produced precisely the opposite effects – less cable distance and a lower loop cost – demonstrates fundamental error, given the following facts:

- (a) The purpose of using 2000 data to correspond with 2000 line counts was to accurately reflect the impact of increased plant needed to serve “increased growth” since 1997.
- (b) The FCC's Synthesis Model, while being used to establish state-by-state cost differences for universal service, assumed approximately 54,000

miles of cable is required to serve Arizona customers. The original run of the HAI model filed in this case by AT&T/WorldCom assumed approximately 33,000 miles. In contrast, the new run of HAI with the new TNS clusters assumed only 31,000 miles of cable despite adding hundreds of thousands of locations.

- (c) Using 1997 HAI investment data and adding both the new (*i.e.*, post-1997) customers and an estimate of the plant required to serve those new customers produced a rate of \$13.92.

Weighed against these facts, the rate of \$12.12 and the decrease in cable mileage produced by the new run of HAI clearly reflect flawed modeling. This rate would plainly violate the TELRIC requirement of estimating the costs of serving existing demand. Because of the method TNS has followed to create the new clusters, much of the existing demand in Arizona still is not served by the HAI model.

2. The Decision's Treatment Of Digital Lines For Line-Count Purposes Violates TELRIC.

The Commission should also reject the Decision's treatment of high capacity loops for line-count purposes. High capacity lines, such as DS1s and DS3s, use special electronics to carry many different transmission "channels" over a very small number of physical cables. The only reason to consider high-capacity loops at all *in estimating the cost of ordinary narrowband loops* is the possibility that there may be some economies of scale associated with placing the cables for DS1 and DS3 circuits at the same time as cables for narrowband loops. That impact varies with the number of *physical* DS1 and DS3 cables that cover the same routes as narrowband

loops. Including only those physical cables within the line count thus captures any economies of scale that result from placing special access lines.

Early versions of the HAI model ignored that fact and treated DS1 and DS3 lines on a “channel-equivalent” basis: *e.g.*, as though a DS1 line were composed of 24 separate loops for line count purposes. In subsequent versions of the model, the model's sponsors have partially corrected this error and treated access lines on a physical-pair basis. Tr. 1403-04 (Denney Cross). But the correction is incomplete: the CLECs’ run of the HAI model in this case still includes some digital business lines (such as those used for ISDN Primary Rate service) on a channel-equivalent basis. Ex. Qwest-29 (Fitzsimmons Reb.) at 40-41.

There is, however, no conceivable reason for treating business access lines on a channel-equivalent basis while treating all other access lines on a physical-pair basis. Indeed, *no party ever disputes this point*. As the CLEC’s own witness confirmed, the decision to correct the HAI model's treatment of access lines largely reflected the fact that the installation of a DS1, for example, involves placing only two physical pairs in the ground, not 24 pairs. Tr. 1404 (Denney Cross). The same witness agreed that treating all business access lines on a pair-equivalent basis, as Qwest proposes, “would be consistent with what [was done] with the special access lines,” and he was unable to articulate any coherent basis for distinguishing among such lines for these purposes. *Id.* at 1408 (Denney Cross). Despite this straightforward concession, nowhere in its discussion of this issue (Decision 22-23) does the Decision cite any basis for ignoring the treatment of business access lines differently from all other access lines for line-count purposes.

B. The Decision's Adopted Model Understates Loop Investment and Violates TELRIC By Assuming That Arizona Lacks Obstructions That Would Affect Network Design.

The HAI model uses a conventional “backbone-and-branch” program as its default mechanism for mapping out the architecture of the hypothetical replacement network, and the routes chosen under that mechanism determine the total distribution facilities needed to connect switches to customer locations. For example, the distribution lines created by a backbone-and-branch program follow streets, just as in the real world; they do not pass through office buildings, people’s backyards, or other obstacles that might stand in the way of what would otherwise be the most convenient route between two points. The Decision, however, declines to use the HAI model’s default backbone-and-branch mechanism. Instead, it accepts the use of an optional mapping algorithm added to the HAI model called “minimum spanning tree,” or “MST.” Decision 21. As discussed below, that exercise in abstract “graph theory” understates loop investment costs by assuming away inconvenient obstacles – such as buildings, parks, and right-of-way restrictions – that might cause additional costs to be incurred. It also flies in the face of TELRIC, which, as discussed, holds the rest of the world constant while inquiring into the costs of a replacement network.

One of the key steps in determining total loop investment (the numerator in the equation discussed in Section I (A)(1) above) is a calculation of the amount of “distribution plant” needed to reach individual customers. The degree of distribution investment depends on several key factors, one of which is the extent to which various real world obstructions get in the way of otherwise efficient network distribution paths.

By turning the MST function on, the Decision effectively eliminates that cost factor from consideration. MST uses an abstract algorithm to estimate the distances required to connect customer locations as if they were dots on a blank page. It is not a method that any

telecommunications engineer would ever use to design a distribution network. In the real world, customers are not dots on a blank page, and distribution networks must be designed around rivers, buildings, yards, highways, protected lands, and other natural and man-made obstructions. See Exhibit H to Qwest's Exceptions. By ignoring such obstructions, the HAI model's MST estimates for distribution distances in urban areas are systematically lower than the distances actually required to connect flesh-and-blood customers. Ex. Qwest-29 (Fitzsimmons Reb.) at 35-36.

C. In Determining Placement Costs And Cost Sharing Percentages, The Decision Improperly Ignores Current Conditions Outside The Network And Improperly Considers Embedded Facilities Inside The Network.

Another key factor in determining total loop investment is the forward-looking cost of physically laying the cable that constitutes the replacement network. As discussed above, TELRIC requires a calculation of what it would cost an efficient carrier to do the work necessary to replace *all* existing network facilities, while holding constant (1) "the most basic geographical design of the existing network" (FCC 2001 S. Ct. Br. at 9), and (2) the world as it exists outside of the network *today* (*id.* at 6). In addressing the costs of placing cable ("placement costs") and the savings a carrier could enjoy by sharing those costs with other utilities ("structure sharing"), the Decision violates TELRIC principles in two contradictory ways. First, the Commission's analysis *takes for granted* the continued existence of facilities a proper TELRIC inquiry would ignore: specifically, embedded Qwest facilities ("existing underground conduits") whose presumed availability would assertedly slash the costs of laying cable in the supposed "replacement" network. Decision 12-13. Second, the Commission's analysis *ignores* the continued existence of matters a proper TELRIC inquiry must take into account: the rest of the world outside of the telecommunications network as it exists today. As with the Decision's other

errors, the only common theme joining these deviations from TELRIC is that, in each case, the recommended loop rate goes down.

1. Structure Sharing.

“Cable placement costs” are the costs of placing telephone cable in the ground or on poles. These costs, along with the costs of splicing and other labor-related activities, are the largest component of outside plant costs. Ex. Qwest-1 (Buckley Dir.) at 11. One question considered in a TELRIC analysis is how much, if anything, an efficient carrier rebuilding the network today would be able to save on placement costs by sharing them with other utilities (such as electric utilities or cable companies) that might wish to dig up the ground and lay facilities of their own at the same time.

The Decision supposes that an efficient carrier in Qwest’s position would enjoy across-the-board savings of 50% by sharing 100% of the time. Decision 14. Put differently, the Commission has determined that *every time* the carrier incurs the significant costs of digging into the earth to lay its cable, some other utility will appear on the scene and agree to split those costs down the middle. Ironically, although the Decision relies on passages in the FCC’s universal service cost model, its ultimate 50% savings assumption significantly exceeds, in every density zone, the savings assumptions in that FCC model for buried and underground cable. That model assumes savings of 0% to 35%, except in the very highest density zones, where the savings assumption is 45%. *Inputs Order* ¶ 243. The savings assumptions adopted in the other Qwest states (*see* Qwest Exceptions Ex. E) are generally at or below the same levels.²

² This Application refers to “savings” percentages simply for ease of exposition. The flip side of a “savings” percentage is the percentage of costs that a carrier is assumed to cover itself. Thus, if the former figure is 20%, the latter will be 80%.

The Decision's inflated numbers arise from a misapplication of TELRIC. To begin with, the Decision did *not* analyze, as TELRIC requires, how much structure sharing a carrier could expect if it were to deploy a replacement network in the world, as it exists today. Sharing opportunities are quite limited in developed areas, because the utilities that might otherwise have an interest in finding such opportunities have already deployed most of their underground facilities in those areas. Ex. Qwest-1 (Buckley Dir.) at 24-27. Instead of recognizing this reality, the Decision focuses on how much sharing a carrier could have hoped for *years ago*, in the conditions that "existed when the [embedded] plant was built." Decision 13-14.³

TELRIC, however, is not a time machine. As the FCC recently explained, "[t]he essential objective" of TELRIC or any other forward-looking cost methodology "is to determine what it would cost, *in today's market*, to replace the functions of an asset that make it useful." FCC 2001 S. Ct. Br. at 6 (emphasis added). The Decision's approach was not forward-looking, but *backward*-looking. Indeed, if TELRIC permitted this retrospective analysis, a CLEC would never have any incentive to build its own facilities, because it could always take advantage of the lower costs incurred in the past, when the Commission incorrectly assumes that digging was easy and everyone shared.

The Decision ignores several other critical barriers to sharing as well. First, as the CLECs' own expert acknowledged, utility companies "typically" place their facilities "at totally

³ To support the proposition that such time travel is permissible, the ALJ recommendation refers indirectly (Decision 13) to a sentence in a footnote of the FCC's *Inputs Order* (14 FCC Rcd. at 20261 ¶ 244 n.504). Even if it were appropriate to rely on the FCC's universal service methodology to set UNE rates, which it is not (see Section I(B), *supra*), the cited footnote would still not support the Decision. The FCC questioned the relevance of the before-and-after issue to its inquiry, noting that, "[w]hile this [issue] may provide an interesting topic for academic debate, we do not believe it to be particularly useful or relevant in determining the structure sharing values in this proceeding." And, as noted in the text, the bottom line savings percentages the FCC ultimately adopted in the *Inputs Order* are significantly lower than those adopted by the Commission.

different times." Tr. 1623-24 (Weiss Redir.). Second, as the same witness conceded and as AT&T's engineering handbook makes clear, concerns about electromagnetic coupling make joint placement with power companies appropriate "only for distribution cables and service wire, not for feeder or trunk cables." Tr. 1554 (Weiss Cross); Ex. Qwest-33 (AT&T Handbook).⁴ Finally, and most fundamentally, certain placement techniques – such as simple plowing, the most frequently used method of laying cable – are not even amenable to the simultaneous placement of multiple cables. Ex. Qwest-23 (Overton Dir.) at 11. That fact, in and of itself, refutes the Commission's cable-sharing numbers, and also underscores a curious tension in its analysis. Plowing precludes sharing, and that has the effect of *raising* average loop costs. But, as an absolute matter, plowing is also *cheaper* than other placement methods. Although the Decision exaggerates the availability of plowing when doing so would produce lower placement costs (*see* Section I(C)(2), *infra*), it ignores this result when adopting high sharing assumptions.

In any event, in the real world, "Qwest has been able to share trench" only "for approximately 18% of the buried sheath footage placed." Ex. Qwest-1 (Buckley Dir.) at 27. Even that figure overstates the level of sharing in a replacement network, because it typically reflects placement activities only in growth environments, where other utilities have not already placed all of their own facilities and where developer-provided trenches are often available. *See*

⁴ To the uncertain extent that the Commission based its Decision on the assumption that a carrier could share costs *with other carriers*, such reliance directly conflicts with the lynchpin of the Decision's adopted cost model. In determining loop investment costs, that model presupposes the large economies of scale enjoyed by a carrier that serves all customers within a given calling area, rather than the much smaller economies of scale that would be enjoyed by several carriers sharing those customers. If one carrier "were able to coordinate its activities with two other firms, such that there would be at least three local service providers in each trench," that carrier "would not achieve anything like the economies of scale assumed" by the cost model adopted by the ALJs. Ex. Qwest-29 (FitzSimmons Rebut.) at 46. "Even in the hypothetical world of TELRIC, you cannot have it both ways." *Id.*

id.; Tr. 888, 915-16 (Torrence Sum., Torrence Cross); *see also* Ex. Qwest-25, Qwest Response to AT&T Data Request No. 70; Tr. 944-47 (Torrence Redir.).

2. Cable Placement Costs.

The Decision also improperly distorts the input used for the cable placement costs (*i.e.*, whether or not shared with other utilities). The Commission determined that if an efficient carrier were to replace Qwest's network today, it would need to place the vast majority of cable – some 81% – beneath the ground rather than in the air on telephone poles. Decision 15. The basic dispute about cable placement costs concerns the relative frequency among the more and less expensive methods that such a carrier would use to cut through the ground to lay the cable. In finding that less expensive methods would predominate even in developed areas, the Commission essentially assumed, first, that many paved roads are unpaved and, second, that Qwest's "existing underground conduit" is somehow relevant to the TELRIC-based costs of replacing the entire network, *including that very conduit*. Each of those assumptions is a separate, fundamental violation of TELRIC.

Different placement methods are appropriate for different surfaces. In general, it is far less expensive to lay cable in undeveloped areas than in developed areas. For example, where there is no pavement, a carrier may lay cable by "trenching" or "plowing" through the earth. As the name suggests, "trenching" involves digging a trench, placing the cable directly into it, and then backfilling it; "plowing" involves placing the cable directly into the ground without digging a trench. In denser, more developed areas, by contrast, a carrier must use far more expensive methods of laying cable. "Cut & restore" involves digging up roads, yards, and other surfaces and then restoring them after the cable has been placed. "Directional boring" involves the use of

special equipment that literally bores cable through the ground in situations where, for example, cable must pass beneath a road, sidewalk, or yard. Ex. Qwest-1 (Buckley Dir.) at 11-12.

In adopting the CLECs' position on this issue, the Decision assumes that trenching and plowing, which are relatively inexpensive, could be extensively used to place cable throughout cities and suburbs. The problem with this assumption is that those areas are largely developed, and one cannot simply "plow" through asphalt. When that limitation is taken into account, the Decision's trenching and plowing assumptions, combined with the HAI model's cluster data for the Phoenix metropolitan data, imply that more than 50% of the roads in Phoenix are unpaved dirt roads. See Ex. AT&T/WorldCom-3 (Denney Dir.-Ex. 3-HAI Inputs Portfolio) at 141-42. Anyone who has driven through city centers in Arizona and elsewhere over the past several years has witnessed widespread deployment of underground cable, and such deployment typically involves the more expensive directional boring or "cut and restore" methods of placement.

To avoid this problem, the Decision appears to rely on two key premises advanced by Staff and the CLECs: (1) that, just as with structure sharing, it is appropriate to travel back in time to pre-development days; and (2) that, even in developed areas, cutting and restoring asphalt and concrete are often unnecessary "because cable is placed in existing underground conduits." Decision 12. Each of these premises is unsound and is a clear violation of TELRIC principles.

The first premise, concerning time travel, is flawed for the reasons discussed in Section I(C)(1) above. TELRIC inquires into the costs of replacing the network *today*, not at some time in the past (or future).

The second premise, which relies on "existing" conduits to slash the costs of laying cable, is likewise at war with TELRIC. As a "total element" and "long run" cost methodology, TELRIC asks how much it would cost to replace the entire network. It is not a *short-run*

incremental cost methodology that asks how much it would cost to add another increment of capacity to the existing network. See *Local Competition Order*, 11 FCC Rcd. at 15845-46 ¶¶ 677-78. But that is the very approach the CLECs and the Commission have followed here. They rely on Qwest's embedded network to cut or even eliminate the forward-looking costs that, under TELRIC, must be taken fully into account: the costs of placing not just cable itself, but also the conduits through which the cable runs. In the process, the Decision fails to compensate Qwest for either the historical or the forward-looking costs of these facilities.

In all events, whether one considers a replacement network or the embedded network, firms rarely have the automatic luxury of placing facilities in the ground before obstructions are built. For example, evidence cited by the CLECs' own witness establishes that Qwest has used directional boring in Arizona for buried placements between 20% and 30% of the time. Ex. AT&T/WorldCom-8 (Weiss Dir.) at 25; Tr. 195, 242 (Buckley Cross, Redir.). In addition, municipalities throughout the country – including, for example, Scottsdale – increasingly require the use of non-invasive placement techniques like directional boring to avoid disruption to roads and other infrastructure. See Tr. at 889-90 (Torrence Sum.).

In sum, the CLEC placement assumptions adopted by the Commission are irreconcilable with TELRIC. The Commission should reconsider its Decision and adopt Qwest's more realistic assumptions instead, which are fully consistent with TELRIC. In the alternative, if the Commission is unprepared to adopt those assumptions, it should consider adopting a compromise solution: the average of the Qwest and CLEC proposals.⁵

⁵ See generally *KS/OK 271 Order*, at ¶ 90 (“we reject the assertions that the ALJ’s decision to split the difference between the rates proposed by SBC and AT&T cannot result in rates that are based on TELRIC, and that the ALJ could not pick a rate between the two proposals unless he found that both proposals were appropriately cost based”) (footnotes omitted).

3. Staff and AT&T Provided No Justification for the Methodological Errors Underlying the Decision's Errors for Placement Costs and Sharing for Placement Costs and Sharing

Staff and AT&T acknowledged that their approach to placement costs and sharing percentages did not ask “what it would cost, *in today's market*, to replace the functions of [a network] asset that make it useful,” even though that is the FCC’s own articulation of TELRIC.⁶ Instead, AT&T and Staff posed a different question: what it (supposedly) cost Qwest years ago to build its network back before development both (1) made cable placement more costly (because obstacles require more expensive digging methods) and (2) reduced savings from the sharing of placement costs (because sharing with developers or other utilities typically occurs, when at all, only in new developments).⁷ Again, that inquiry bears no resemblance to TELRIC. Although TELRIC entitles CLECs to many advantages Qwest lacked when it built the network, it does not entitle CLECs to wish away present-day concrete and asphalt, just as it does not entitle them to pretend that labor is as cheap today as it was decades ago when much of the trenching for today’s network was done.

Moreover, TELRIC asks what it would cost to replace the entire network, in both developed and undeveloped areas, not just what it would cost to add on to the embedded network in undeveloped areas. Indeed, the CLECs themselves seek UNEs in all areas and primarily in developed ones, where the roads are already paved and other utilities have already laid cable. To ignore this point is to chill facilities-based competition, because few CLECs would deploy facilities in developed areas at today’s costs if they could lease them at artificially deflated rates

⁶ Br. for Petitioners FCC and United States, *Verizon Communications Inc. v. FCC*, No. 00-511 and consolidated cases, at 6 (filed April 2001) (emphasis added).

designed to reflect yesterday's costs. Finally, and quite apart from these methodological errors, Staff and AT&T ignored the fact that, *even in undeveloped areas*, the savings a carrier could hope to achieve from sharing is 18% rather than 50%, and the percentage of time a carrier must engage in costly placement techniques is far higher than the CLECs suppose. See Qwest Exceptions 26, 29-30.

D. The Decision's 50% Reduction In Qwest's Recovery Of General Support Costs Rests On A Fundamental Accounting Mistake and Violates TELRIC.

"General support assets" – such as computers, buildings, motor vehicles, and office equipment – are essential to any carrier's ability to provide both wholesale and retail products. These costs are spread over the entire demand for the relevant products (*i.e.*, products that use the assets in question) and are recovered from all customers, whether wholesale customers paying UNE rates or retail customers paying retail rates, *in proportion to overall demand*. Roughly speaking, if a carrier has ten lines, and if three of them are used by wholesale customers and the other seven by retail customers, charging each of those customers a per-line amount for these general support costs (through either UNE rates or retail rates) will properly allocate recovery of these costs across wholesale and retail customers: 30% for the former, and 70% for the latter.

Nonetheless, in applying a so-called "allocator" in the HAI model, the Decision adopts a *further 50% reduction* in the portion of such assets recovered through wholesale UNE rates, reasoning that retail rates would not otherwise bear their fair share of costs. Decision 25. Without this further reduction, retail customers would still pay at least their share of these costs

⁷ Staff Response to Qwest Exceptions 1-3; Response of AT&T and XO to Qwest Exceptions 11-16.

through their retail rates.⁸ But when a retail customer chooses a CLEC as its provider, it no longer pays retail rates to Qwest, and it therefore no longer pays the portion of the retail rate designed to recover the costs of general support assets. That portion of the costs of general support assets then shifts to the purchaser of the line: the CLEC.

It therefore makes no sense to cut in half the portion of these costs recovered through UNEs on the theory that the omitted portion somehow represents “clearly retail expenses.” Decision 25. To the contrary, these remain the general support costs that *would* be recovered through retail rates if Qwest had retained the retail customer, but that are *not* recovered at all through such rates once Qwest *loses* the retail customer. Put differently, if 80% of Qwest lines are used by retail customers and the other 20% of those lines are leased as UNEs by CLECs, Qwest is still entitled to recover 100% of the general support costs that have been distributed over all those lines: 80% through retail rates, and 20% through UNE rates. Under the Commission’s approach, by contrast, Qwest would be entitled to recover only 10% through UNE rates; unless the shortfall is shifted to retail customers, Qwest is left with only 90% cost recovery.

Finally, AT&T tried to justify the HAI model’s arbitrary 50% reduction in the portion of “general support assets” recovered through wholesale UNE rates (rather than retail rates) on the theory that many of those assets are retail-specific. They are not. These assets consist of the

⁸ The premise of the 50% adjustment – a perceived need to exclude retail-related costs from the general support assets allocated to UNEs (Decision 25) – is misplaced. Retail-specific costs, such as the costs of marketing, are not included within “general support assets” in the first place. Those assets consist instead of the trucks, computers, office equipment, and so on associated with operating the network used to provide both UNEs and retail services. Moreover, quite apart from application of the “allocator,” nothing in the record suggests that the expenditure of one dollar of direct wholesale costs somehow requires less use of general support assets (*e.g.*, trucks and computers) than the expenditure of one dollar of direct retail costs. Finally, as discussed in the text, the HAI model permits recovery of

trucks, computers, office equipment, and so forth associated with operating the network *as such*, whether to provide UNEs or retail services. Quite apart from the 50% reduction, the HAI model already takes into account the extent to which the network, and thus these general network assets, happen to be used in the provision of retail services: An ILEC can recover general support costs through UNEs, rather than retail rates, *only in proportion to the number of lines actually leased as UNEs*. See Qwest Exceptions 31-32 & n.21.

E. The Decision Improperly Rejects The Use Of Qwest's TIF Factors For High Capacity Loops.

The Decision independently errs in adopting the radical reductions that AT&T has proposed for the "total installation factors" ("TIFs"). Those are the inputs that address the costs (among others) of warehousing equipment and transporting it to installation sites. The CLECs' approach, adopted by the Commission, presupposes that an efficient carrier today could replace the existing network "instantaneously," Tr. at 1599 (Weiss Cross.), and that it would therefore have no need either to warehouse any replacement facilities, *see id.*, or even to transport them from vendors to their places of installation. See AT&T/WorldCom Ex. 8 at 58 (Weiss Dir.). This is not our world: equipment does not magically show up where it is needed with no associated storage or transportation charges. The Decision's approach is thus irreconcilable with TELRIC, which asks how much it would *actually cost* an efficient carrier to replace the existing network today. Pricing UNEs at any lower figure would unlawfully skew the incentives of CLECs against investing in new facilities of their own. See Qwest Exceptions 9-11.

general support costs through UNE rates *only in proportion to the number of lines actually leased as UNEs*: *i.e.*, the rate for a loop is the same whether CLECs lease one or one million.

F. The Decision Improperly Sets The Four-Wire Loop Rate.

Rejecting the recommendation of Staff (*see* Staff Ex. 2), whose approach is consistent with Qwest's, the Decision sets the price for a 4-wire loop at 1.3 times the price of a 2-wire loop on the ground that "placing a four-wire loop" is not "significantly more expensive than placing a two-wire loop." Decision 64. In its response to AT&T's exceptions, Qwest explained that this logic embodies a basic statistical mistake, (Qwest Resp. to Exceptions 24), but the Commission never responded to Qwest's analysis.

A 4-wire loop is the equivalent of two 2-wire loops; in effect, it is one primary line plus one second line. As Qwest and Staff agree, the price of a 4-wire loop should therefore cover the cost of two (not 1.3) 2-wire loops, minus the cost of one network interface device (which the two loops share). It is of course true that it costs less to place second lines than first lines. But the HAI model already takes that fact into account, *without* the Decision's proposed reduction, by reflecting the lower cost of placing second lines (and thus of placing the additional 2-wire pair in a 4-wire loop) in calculating the *average* cost of *all* lines. That average cost, like the associated UNE rate, applies to both primary and second lines; the HAI model does not distinguish between the two. If a 4-wire loop were *not* treated as equivalent to two 2-wire loops for cost purposes, the *average* cost figure for *all* lines, and thus the underlying price of a primary 2-wire line, would increase accordingly. The CLECs should not have it both ways.

Finally, even apart from the logical flaws in the Decision's reasoning, there is no evidentiary basis whatsoever for the Decision's "1.3" proposal. Indeed, no costs or assumptions in the adopted HAI model support that proposal. *See* Qwest Resp. to Exceptions 24. In sum, the Commission should amend its Decision on this issue and set the cost of the 4-wire loop at double the cost of the 2-wire loop, minus the cost of one network interface device.

II. THE DECISION'S TREATMENT OF NON-RECURRING COSTS VIOLATES TELRIC AND WOULD DENY QWEST ANY MEANINGFUL COMPENSATION FOR THE SUBSTANTIAL COSTS INCURRED IN MAKING ITS NETWORK ELEMENTS AVAILABLE TO COMPETITORS.

Non-recurring costs are the one-time costs an ILEC incurs when providing a UNE to a CLEC or establishing service for a retail customer. On the wholesale side, Qwest typically incurs such costs when making various network elements available to a CLEC that wishes to use those elements to provide competing services. These are the real and unavoidable costs incurred for the processing and executing of a CLEC order (e.g., to connect a stand-alone loop (unbundled from switching) to the CLEC's collocated facilities; to provide the UNE platform to new customers over lines not currently in use, etc.). ILECs are appropriately entitled to recover the costs of such activities from CLECs up-front, through a one-time non-recurring charge at the time the activities are performed.⁹

A. The Decision Requires Clarification With Respect To Non-Recurring Charges.

The Decision concerning the non-recurring charges that apply to UNEs is inconsistent with Commissioner Spitzer's Amendment Number 3, which was adopted by the Commission and therefore requires clarification. Decision 33-34. The Decision sets NRCs at 61% of Qwest's proposed charges but only for basic installation and coordinated installation with or without testing and the provision of the UNE platform over lines currently not in use, even though Commissioner Spitzer's Amendment Number 3 applies by its terms to all the charges considered

⁹ See, e.g., Second Report and Order, *In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport*, 12 FCC Rcd. 18730 ¶ 33 (1997) ("1997 Expanded Interconnection Order"). If the ILEC were required to recover those up-front costs only over time as part of the monthly loop rate, it might well never receive full compensation, because the CLEC may lose the customer, or stop providing service, before it has paid off the costs it has caused. Ex. Qwest-18 (Million Reb.) at 49-50/

in the Supplemental Recommended Opinion and Order (“Supplemental ROO”), i.e. all non-recurring charges. In addition, the Decision does not specify which types of loops are covered.

In the Original ROO, the Administrative Law Judges (“ALJs”) decided that the Commission should use the AT&T Non-Recurring Cost Model (“NRCM”) to set all non-recurring costs. However, the parties disagreed concerning whether the AT&T NRCM provided costs for all the NRCs proposed by Qwest. As a result of the dispute, the ALJs held a second hearing and issued the Supplemental ROO, which determined that the AT&T NRCM should be used to set all the NRCs. Qwest filed exceptions to both the Original and Supplemental ROO claiming that the AT&T NRCM had improper inputs for time estimates and flow through assumptions. AT&T and Staff defended the conclusions of the ROOs. In response, Commissioner Spitzer proposed his Amendment Number 3, which sought to substitute the task times and flow through assumptions of the Qwest NRCM for the AT&T inputs. His amendment proposed specific changes to basic loop installation and coordinated installation with and without testing. It also required “conforming changes [be] made to the Supplemental ROO.” See Spitzer Amendment Number 3., attached as Exhibit 1.

During the open meeting of April 11, 2002, the Commission decided that it would use Staff's final proposal of 61 % of Qwest recommended costs for these NRCs instead of changing the task times and flow-through assumptions in the AT&T NRCM. Qwest thought that the intent of that amendment and the “conforming changes” language was to apply the 61% to all of the NRCs at issue in the docket. At the May 30, 2002 open meeting, the Commission restated that it had passed Spitzer Amendment Number 3 during its April 11 meeting. TR. at 246. Notwithstanding, the Decision refers only to “loop installation” with no specific references to any other NRCs.

Even though Commissioner Spitzer's Amendment Number 3 as written seems to apply to all the NRCs discussed in the Supplemental ROO, the Commission decision states:

While we believe that the CLEC-sponsored NRC model generally recognizes the efficiencies that will occur in a forward looking network and we will adopt the CLEC model in this proceeding, we will adopt Staff's recommended costs and charges, as stated in its rebuttal testimony, for the following: basic loop installation, coordinated loop installations with or without testing and the provision of the UNE platform over lines not currently in use.

Decision 34.

The Decision does not explain whether the 61% applies only to loops or to all NRCs. No conforming changes have been made to the Supplemental ROO, applying this rate to other non-recurring rate elements. As illustrated by the pleadings filed prior to the hearing, which lead to the Supplemental ROO, the Supplemental ROO discussed all the NRCs sought by Qwest. These include a host of categories not dealt with by this order, such as the NRC for basic installation with performance testing, all the NRCs for trunks, UDIT, EUDIT, and the rest of the UNE P. Staff's Ex. WD 17, which the Commission used to select the 61% of Qwest's cost number, addressed all NRCs. Both the tenor and the specific language of Commissioner Spitzer's Amendment Number 3, as well as the discussion at the April 11, 2002 open meeting, support the conclusion that 61% figure would apply to all the NRCs in this case.

B. With Respect To Non-Recurring Charges, The Decision Is Contrary To Law And To The Record.

Assuming for the sake of argument that in establishing non-recurring charges (except those listed on Page 31 of the Decision), the Decision adopts the "CLEC-sponsored NRC model" (Decision 33), this Decision is not based on any inquiry into the costs an efficient carrier would incur today, but on speculation about the costs that carrier might incur *years from now*, if and when someone invents the technology that enables ILECs and CLECs to work out complex

network coordination problems with little or no human intervention. This mode of predictive future analysis violates TELRIC. As the FCC has explained, the forward-looking cost inquiry mandated by TELRIC is confined to the cost of “currently available” technology,” 47 C.F.R. § 51.505(b)(1), and it is designed to produce wholesale prices that “most closely represent the incremental costs that incumbents *actually expect to incur* in making network elements available to new entrants.” *Local Competition Order*, 11 FCC Rcd. at 15849 ¶ 685 (emphasis added). And, as the CLECs’ own witness conceded in this proceeding, the nearly flawless automation assumed by the ALJs’ non-recurring cost model is nowhere “currently available.” Tr. 1511 (Weiss Cross). For that and similar reasons, the Decision produces non-recurring costs dramatically below what TELRIC requires. Finally, to the extent that the Decision’s treatment of non-recurring charges rests on assumptions about the extent to which network-provisioning orders can be mechanized, Qwest incorporates by references, as if fully set forth herein, its Exceptions submitted on December 12, 2001.

III. THE DECISION CONCERNING “CAMPUS WIRE” IS OUTSIDE THE SCOPE OF THIS PROCEEDING, LACKS ANY FACTUAL BASIS IN THE RECORD, AND REQUIRES A CORRESPONDING INCREASE IN SUBLOOP RATES GENERALLY.

“Campus wire” consists of the outside distribution lines that serve multiple buildings on a single property, such as an apartment complex or a college campus. These facilities are properly treated as a category of subloop distribution plant (the “subloop UNE”). *See* Qwest Post-Hearing Reply Br. 34-35; Fleming Reb. 101-102. Indeed, the Decision-adopted HAI cost model includes campus wire within the subloop UNE, and it blends the cost of that campus wire, along with non-campus distribution facilities, into the forward-looking cost of that subloop. *See* Fleming Reb. 103-04; Tr. 495-99 (Fleming Cross).

Without any basis in the record, both the ALJs and the Commission accepted Cox's argument that campus wire should be treated not as part of the subloop UNE, but as part of a brand new, less expensive UNE called "on-premises wire." Decision 57. This new UNE would also include intrabuilding cable (*i.e.*, Qwest-owned wire in a multi-tenant building) and would be priced at the same rate as the intrabuilding cable. *Id.*

This result is unsound on both procedural and substantive levels. *First*, the purpose of this cost docket was to *price the elements currently in Qwest's SGAT*, not to create brand new UNEs that Qwest has had no opportunity to price. *Second*, because there was no notice that the Commission was contemplating the creation of this novel UNE, there is no evidence in the record for the proposition that the costs of campus wiring are at all similar to the costs of intrabuilding cable. In fact, Cox only proposed the creation of the "on-premises wire" UNE through argument made by its counsel in Cox's closing brief. Cox Post-Hearing Br. 8-9. No witness testified that Cox's proposed price for on-premises wire was an appropriate TELRIC compliant rate for campus wire. In fact, neither Cox's post-hearing brief nor the Decision includes any citation to the record (*i.e.*, witness testimony, exhibit or cost study) to support this price for campus wire. *Id.*; Decision 57-58.

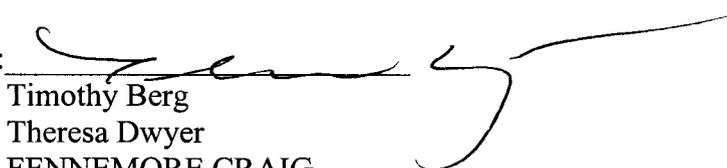
Finally, if the cost of campus wire is actually lower than the cost of the remaining portions of the subloop UNE, the cost figure for that UNE is lower than it would be if campus wire were removed from the scope of that UNE and if its supposedly low cost were therefore no longer blended into the cost of the subloop generally. For that reason, the Commission could not logically or lawfully sever campus wire from the subloop UNE without raising the rate for all *remaining* facilities within that UNE, such as those serving single-family dwellings. Similarly, if

the cost of campus wire were greater than the cost of intrabuilding cable, combining the two within a single UNE would require an increase in the rate for the latter.

CONCLUSION

The Commission should grant rehearing, amend the Decision as set forth in this Application for Rehearing, and thereby adopt a resolution to the issues discussed herein that fairly balances the interests of Qwest and its ratepayers with the interests of encouraging competition. The Decision as it now stands unfairly disadvantages Qwest and its customers, threatens the viability of the Qwest network, and creates a disincentive for CLECs to make capital investments in Arizona. Thus, for the reasons discussed in this Application for Rehearing, as well as in Qwest's testimony and other pleadings previously submitted in this docket, Qwest respectfully requests that the Commission grant rehearing and amend the Decision as set forth herein.

Respectfully submitted this 2nd day of July, 2002.

By: 

Timothy Berg
Theresa Dwyer
FENNEMORE CRAIG
3003 North Central, Suite 2600
Phoenix, Arizona 85012

John Devaney
Norton Cutler
PERKINS COIE LLP
607 Fourteenth Street, N.W.
Suite 800
Washington, D.C. 20005-2011
Attorneys for Qwest Corporation

ORIGINAL plus 10 copies filed
this 2nd day of July, 2002:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, AZ

COPY of the foregoing delivered this
2nd day of July, 2002 to:

Maureen Scott
Legal Division
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, AZ

Ernest Johnson, Director
Utilities Division
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, AZ

Lyn Farmer, Chief Hearing Officer
Hearing Division
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, AZ

COPY of the foregoing mailed
this 2nd day of July, 2002, to:

Steven J. Duffy
RIDGE & ISAACSON, P.C.
3101 North Central Avenue, Ste. 1090
Phoenix, Arizona 85012-2638

Richard S. Wolters
M. Singer-Nelson
AT&T
1875 Lawrence Street, Room 1575
Denver, CO 80202-1847

Michael W. Patten
ROSHKA HEYMAN & DEWULF
400 North Fifth St., Ste. 1000
Phoenix, AZ 85004-3906

Michael Grant
Todd C. Wiley
GALLAGHER & KENNEDY
2575 E. Camelback Rd.
Phoenix, AZ 85016-9225

Thomas H. Campbell
LEWIS & ROCA
40 N. Central Avenue
Phoenix, AZ 85007

Brian S. Thomas
TIME WARNER TELECOM
520 SW Sixth Ave., Suite 300
Portland, OR 97204-1522

Thomas F. Dixon
WORLD COM
707 17th Street
Denver, CO 80202

Eric S. Heath
SPRINT COMMUNICATIONS CO.
100 Spear Street, Suite 930
San Francisco, CA 94105

Scott S. Wakefield
RUCO
2828 N. Central Avenue, Suite 1200
Phoenix, AZ 85004

Ray Heyman
ROSHKA HEYMAN & DeWULF
400 North 5th Street, Suite 1000
Phoenix, AZ 85004

Rex M. Knowles
XO Communications, Inc.
111 E. Broadway, Suite 1000
Salt Lake City, UT 84111

Megan Doberneck
COVAD COMMUNICATIONS COMPANY
7901 Lowry Boulevard
Denver, Colorado 80230

Lisa Crowley
COVAD COMMUNICATIONS COMPANY
4250 Burton Drive
Santa Clara, CA 95054

Greg Kopta
DAVIS WRIGHT TREMAINE LLP
2600 Century Square
1501 Fourth Avenue
Seattle, WA 98101-1688

Mary S. Steele
DAVIS WRIGHT TREMAINE, LLP
2600 Century Square
1501 Fourth Avenue
Seattle, WA 98101-1688

Dennis Ahlers
Senior Attorney
ESCHELON TELECOM, INC.
730 Second Avenue South, Suite 1200
Minneapolis, MN 55402

Steve Sager, Esq.
MCLEODUSA TELECOMMUNICATIONS SERVICE, INC.
215 South State Street, 10th Floor
Salt Lake City, Utah 84111

Marti Allbright, Esq., Esq.
MPOWER COMMUNICATIONS CORPORATION
5711 South Benton Circle
Littleton, CO 80123

Penny Bewick
NEW EDGE NETWORKS
PO Box 5159
3000 Columbia House Blvd.
Vancouver, Washington 98668

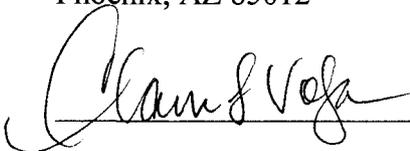
Michael B. Hazzard
KELLEY DRYE AND WARREN
1200 19th Street, NW
Washington, DC 20036

Janet Livengood
Z-TEL COMMUNICATIONS, INC.
601 South Harbour Island
Suite 220
Tampa, Florida 33602

Andrea Harris
ALLEGIANCE TELECOM
2101 Webster
Suite 1580
Oakland, CA 94612

Traci Grundon
DAVIS, WRIGHT TREMAINE, LLP
1300 S. W. Fifth Avenue
Portland, OR 97201

Joan Burke
OSBORN MALEDON
2929 N. Central Avenue
Phoenix, AZ 85012



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THIS AMENDMENT:		
<input type="checkbox"/> Passed	<input type="checkbox"/> Passed as amended by _____	
<input type="checkbox"/> Failed	<input type="checkbox"/> Not Offered	<input type="checkbox"/> Withdrawn

SPITZER PROPOSED AMENDMENT # 3

TIME/DATE PREPARED 4:00 p.m./ April 8, 2002

RECEIVED

APR 9 8 2002

LEGAL DIV.
ARIZ. CORPORATION COMMISSION

COMPANY:
IN THE MATTER OF INVESTIGATION
INTO US WEST COMMUNICATIONS,
INC.'S COMPLIANCE WITH CERTAIN
WHOLESALE PRICING
REQUIREMENTS FOR UNBUNDLED
NETWORK ELEMENTS AND RESALE
DISCOUNTS

AGENDA ITEM NO. 1

DOCKET NO. T-00000A-00-0194
(PHASE IIA)

OPEN MEETING DATE: April 11, 2002

P. 32, Line 17, after "As" DELETE the remainder of the sentence and INSERT "WorldCom, AT&T and XO's witness Lathrop testified, '[a] typical NRC study includes the specification of tasks that must be performed manually, the amount of time required to perform the tasks, the frequency with which the tasks must be performed, and the hourly labor cost of the personnel performing the task. With forward-looking OSS operating in an efficient fashion, manual activities for pre-ordering, ordering and provisioning should be very infrequent. Thus, NRCs are, as witness Lathrop described, 'the sum of, for all steps required, the time required to complete each step, multiplied by the frequency with which that step must be taken, multiplied by the labor cost of any manual activity required to complete that step.'"

P. 32, Line 21, DELETE "make assumptions that" and INSERT "show that currently"

P. 32, Line 22, DELETE "will often be" and INSERT "is often"

P. 32, Line 22, after "a CLEC UNE order", DELETE remainder of sentence

P. 32, Line 23, beginning with "Qwest's studies are", DELETE entire sentence and INSERT "Qwest witness Million testified that while recent data showed 24% of CLEC orders required manual intervention, 85 to 95% of orders in a forward-looking system would be processed without the need for manual intervention."

P. 32, Line 25, after "assumes that manual processing", DELETE "should be kept to a minimum" and INSERT "will occur less than 2% of the time"

P. 32, Line 26, after "forward-looking environment." INSERT "CLEC witness Lathrop testified that '[m]any of the major inputs to the model, such as travel time, are made user-adjustable."

P. 32, Line 26, before "We", INSERT "While"; after "NRC model" DELETE "properly" and INSERT "generally"

P. 32, Line 27, after "network and we", DELETE ", therefore" and INSERT "will"

P. 32, Line 28, after "in this proceeding." INSERT "We will direct that Qwest's data on activities and times for the following activities will be used: basic loop installation, coordinated loop installations with or without testing and the provision of the UNE platform over lines not currently in use."

WITH CONFORMING CHANGES MADE TO SUPPLEMENTAL RO&O
