September 20, 2001

Docket Control
Arizona Corporation Commission
1200 W. Washington St.
Phoenix, AZ 85007

Re: ACC Docket No. T-00000A-00-0194

Dear Docket Control:

Enclosed please find for filing the original and ten (10) copies of the *Reply Brief of AT&T Communications of the Mountain States, Inc. and XO Arizona, Inc.* in the above-referenced matter. An electronic copy of this document will be sent to you via e-mail tomorrow morning (September 21st). If you have any questions, please contact me at the phone number, or e-mail address, above.

Very truly yours,

Davis Wright Tremaine LLP

Larry J. Weathers
Paralegal

Enclosures

cc: Mary Steele
Rick Wolters
BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chairman
JAMES M. IRVIN
Commissioner
MARC SPITZER
Commissioner

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

DOCKET NO. T-00000A-00-0194

REPLY BRIEF OF AT&T COMMUNICATIONS OF THE MOUNTAIN STATES, INC. AND XO ARIZONA, INC.
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I. INTRODUCTION

Chief among the objectives of the Telecommunications Act of 1996 (the “Act”) was “to remove the outdated barriers to protect monopolies from competition and effect efficient competition.” See In the Matter of the Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, FCC 96-325 (released August 6, 1996) (“Local Competition Order”) at ¶ 1. The hope of the Act was “new packages of services, lower prices and increased innovation to American consumers.” Id. at ¶ 4. Qwest claims, and the Joint Interveners agree, that these policy objectives can be met only by establishing prices for interconnection and unbundled network elements that are based upon cost. See Qwest Post-Hearing Brief at 2. Nevertheless, the record in this proceeding and the evidence in the marketplace demonstrate that Qwest’s proposed rates do not meet this test.

Today, as was predicted at the time the Commission entered its order in the first cost proceeding, Arizona has “competition in name only.” Dec. No. 60635, Docket No. U-3021-96-448, et al. (January 30, 1998) (Jennings, dissenting) (“First Cost Order”). Nevertheless, Qwest now proposes rates in this proceeding that substantially exceed the rates that now exist and that now prevent effective competition. Qwest’s proposal should be seen in this light as an effort by Qwest to prevent competition by maximizing the rates it charges to its competitors. The Commission should reject this proposal in favor of the rates proposed by the Joint Interveners1 in this proceeding.

1 The Joint Interveners filing this memorandum are AT&T Communications of the Mountain States, Inc. and XO Arizona, Inc. WorldCom also joins in these proposals.
II. DISCUSSION

A. The Real World Demonstrates that Qwest’s Proposed Rates Cannot Be Based on Cost

Despite the considerable efforts of this Commission and substantial investment by competitive local exchange carriers ("CLECs"), local exchange competition is almost non-existent in Arizona. Qwest has sold fewer than 23,000 unbundled loops to its competitors in this state. See Ex. AT&T/Worldcom 1 (Gillan Direct) at 8. Competitors using their own facilities have achieved only three percent of Qwest’s voice market. Id. Competitive carriers are rolling back entry plans or exiting the market altogether. Id. By any measure, CLECs have made little progress in competing against Qwest’s embedded local exchange monopoly since the Act was passed more than five and a half years ago.

Both during the course of the hearing and in its 120-page opening brief, Qwest has stressed the need for the Commission to look at the real world in reviewing the cost proposals made by the parties. Nevertheless, Qwest appears to be of the opinion that the Commission should put on blinders and ignore this real world state of the market in reviewing rates. In the real world, the fact that Qwest today has sold almost no unbundled elements in more than five and a half years says a great deal about the current rates for those elements. As Qwest itself argues, rates set according to cost would further the policy objectives of the Act. Qwest Post-Hearing Brief at 2. Instead, it is clear that the current rates have impeded all forms of local exchange competition in Arizona.

Contrary to Qwest’s argument, the CLECs in this proceeding do not contend that the Commission should set rates based upon any consideration other than cost. Nevertheless, all parties have seen the effect of the current rates in the real world. In the face of this real world verification, Qwest’s proposals that the Commission should now increase those rates
substantially makes no sense. Qwest’s proposed costs do not comply with the TELRIC principles that govern this proceeding and must be rejected.

B. The Record in This Proceeding Shows That Qwest’s Proposed Rates Do Not Comply with TELRIC

Qwest’s proposed rates are damned by its own legal analysis of what is required by the FCC’s TELRIC rules. Qwest admits that the studies must identify costs based on total demand. See Qwest Post-Hearing Brief at 10. Qwest further admits that a TELRIC study must use the “most efficient, least-cost technologies that are currently available.” Id. at 9. Qwest contends that its current contract prices are the best measure of forward-looking investment and admits that a TELRIC study must also use forward-looking expense factors. Id. at 11. Qwest has the burden of proof on all these points. See 47 C.F.R. § 51.505(c). Nevertheless, Qwest’s cost studies fail to meet each of these requirements.

Most of these issues have been fully briefed in the Joint Intervenors’ opening memorandum. A few examples should demonstrate the magnitude of the problems with Qwest’s cost studies and the reasons that those studies must be rejected.

- Total Demand

Qwest admits that a TELRIC study must identify the costs associated with serving “all of Qwest’s current demand.” Qwest Post-Hearing Brief at 10. Its cost studies do not meet this requirement.

-- Qwest’s loop study does not include high capacity loops, removing economies of scale that would be associated with placing all loops at the same time. Tr., p. 235.

-- Qwest’s loop study includes only loops that existed as of 1998, removing economies of scale that would result in placing loops that meet all current demand. Tr., p. 86
Qwest's studies fail to consider demand by Qwest itself for certain elements, resulting in low utilization assumptions and increased costs. Ex. AT&T/Worldcom 9 (Weiss Direct) at 46-48.

- **Least Cost, Most Efficient Technologies**

  Qwest admits that a TELRIC study must consider “most efficient, least-cost technologies that are currently available.” Qwest Post-Hearing Brief at 9. Nevertheless, its studies repeatedly ignore this requirement.

  -- Qwest admits that its nonrecurring cost studies do not include “the most efficient, least cost technologies”, but are rather based upon Qwest’s existing systems, many of which have been in place for decades. Tr., p. 653-655; Ex. AT&T/Worldcom 9 (Weiss Direct) at 86-90.

  -- Qwest makes forward-looking assumptions in its recurring studies that it ignores in its nonrecurring cost studies in order to increase costs. Tr., p. 655. For example, Qwest’s LoopMod for recurring loop costs assumes that a forward-looking network will use a substantial amount of integrated digital loop carrier (“IDLC”). Qwest’s nonrecurring cost studies assume considerably less IDLC, resulting in higher nonrecurring costs. *Id.*

  -- The assumptions of Qwest’s recurring studies are based upon Qwest’s existing technology currently used in Qwest’s network rather than the most efficient technology that might be available in the industry. Tr., p. 71.

  -- The utilization factors used in Qwest’s recurring cost studies are based upon Qwest’s current experience rather than least cost, most efficient usage of forward-looking technology. Ex. AT&T/Worldcom 9 (Weiss Direct) at 46-48.
The total installed factors ("TIFs") used in Qwest's recurring cost studies are based on 1997 and 1998 actual Qwest experience rather than evidence of forward-looking, most efficient practices. Tr., p. 628; see Ex. AT&T/XO 34.

- **Current Prices**

Qwest contends that currently available market prices should be used to determine "the cost of equipment and materials that it includes in its studies." Qwest Post-Hearing Brief at 11. Qwest's studies do not comply with this requirement.

- Qwest's LoopMod uses 1998 and 1999 contract prices. Tr., p. 119;
- Qwest's transport and high capacity loop cost studies use pricing from 1998 and 1999. Tr. 862, 870-71;
- Qwest has obtained pricing approximately 20% lower than its 1999 pricing for optical digital equipment, but has failed to reflect this lower pricing in its cost studies. Tr., p. 862.
- Qwest has done no comprehensive review of its cost studies to insure that current pricing is being used. Id.

- **Forward-Looking Operating Expenses**

Qwest admits that TELRIC-based studies must include "forward-looking operating expenses." Qwest Post-Hearing Brief at 11. Qwest's studies as presented in this proceeding fail to comply with this requirement.

- Qwest uses its 1999 actual operating expenses rather than developing operating expenses that an efficient carrier would achieve on a forward-looking basis. Tr., p. 675.
- Qwest contends that it makes embedded expenses forward-looking by inflating its 1999 expenses to the present, offsetting that inflation adjustment with an adjustment that
purports to reflect productivity increases Qwest has achieved since 1999. Qwest makes no productivity adjustment for the substantial productivity gains it concedes have occurred due to its post-1999 merger. Tr. 681.

Qwest makes no adjustment to remove expenses it incurs to provide retail services, but would not incur as a wholesale provider. Ex. AT&T/Worldcom 6 (Weiss Direct) pp. 30-31.

These substantial flaws in Qwest’s cost models serve no purpose other than to drive up the prices that Qwest proposes in this proceeding for the purpose of preserving Qwest’s monopoly position in the local exchange markets in Arizona. By accepting Qwest’s cost studies, this Commission would ensure that the rates for unbundled elements and services in this state will not comply with TELRIC and will not, in the words of Qwest, “ultimately lead to the Act’s policy objectives.” Qwest Post-Hearing Brief at 2.

C. The Rates Proposed by the Joint Interveners Comply with the FCC’s Guidance on TELRIC

In contrast to Qwest’s models, the HAI Model and the AT&T/Worldcom Nonrecurring Cost Model presented by the Joint Interveners in this proceeding comply with TELRIC. Qwest’s criticisms of those models, for the most part, center around a contention that the models should use inputs that accept Qwest’s skewed notions of TELRIC. For all of the reasons set forth above and in the Joint Interveners’ opening brief, these criticisms should be rejected.

1. The HAI Model Produces Loop Rates that Comply with the Requirements of the Act

The HAI Model 5.2a provides rates for the unbundled analog loop that comply with the FCC’s TELRIC rules. The HAI Model is nonproprietary, utilizing publicly available line counts, usage data and over 1,400 user adjustable inputs. See AT&T/Worldcom Ex. 3 (Denney Direct) at 11-14. The model has undergone intense scrutiny in both state and federal proceedings. Id.
Major portions of the model have been accepted for use by the FCC in estimating the forward-looking costs of providing universal service. *Id.*

Staff of the Commission recommends adopting HAI Model 5.2a. In addition, although Qwest has filed testimony criticizing the structure and inputs used in the model, even Qwest agrees that its own run of the HAI Model provides the “most objective” loop cost proposal filed in this proceeding. Tr. 1072-73 (Fitzsimmons).

Qwest’s criticisms of the model fall into three categories. First, Qwest claims that the model’s history undermines its usefulness in this proceeding. Second, Qwest criticizes the manner in which the model places customers, contending that this process may lead to an understatement of the amount of distribution necessary to serve Qwest’s customers in Colorado. Finally, Qwest criticizes certain inputs used in the model. Qwest has presented an alternative run of the model that essentially adopts Qwest’s input assumptions from LoopMod for use in the cost analysis.

The Joint Intervenors had limited opportunity to conduct discovery and respond to the criticisms of the HAI Model made by Qwest in its rebuttal testimony on June 27, 2001, less than three weeks before the hearing in this matter commenced. Nevertheless, evidence in the record demonstrates that Qwest’s criticisms have no basis. The HAI Model should be accepted by the Commission for establishing the appropriate rate for the unbundled analog loop.

a. **Adjustments To HAI Model Over Time Have Resulted In More Accurate Cost Calculating.**

Notwithstanding Qwest’s admission that the HAI Model provides the “most objective” measure of loop costs presented in this proceeding, Qwest contends that the history of the model shows it to be unreliable. *See* Qwest Post-Hearing Brief at 39. In light of the history surrounding Qwest’s own models, this criticism is remarkable. Qwest admits that, prior to the
Act, its loop model produced rates comparable to those proposed by the Joint Intervenors here.

Tr. 77. As the evidence in the prior cost case demonstrated,

After US WEST’s testimony in the 1995 rate case of $5.96 for the business loop and $11.46 for the residential loop … three years later, US WEST hired a $375.00 per hour consultant, who after putting in enough hours to collect over a half million dollars, testified that the cost of a loop alone was $30.20.

First Cost Order (Jennings, dissenting).

Qwest is correct that HAI Model 5.2a is different from the Hatfield Model 2.2.2 considered by the Commission in the prior cost docket. HAI 5.2a has had the benefit of substantial critical review in other states and before the FCC. See Ex. AT&T/Worldcom 3 (Denney Direct) at 16-17. The model has changed and developed in response to this review.

The FCC has adopted substantial portions of the model for use in determining universal service. Id. at 18-19. In contrast, Qwest did not even propose its LoopMod for use by the FCC. In the real world, Qwest’s criticisms of how the HAI Model has developed have no basis.

b. The Model’s Distribution Design Produces A Conservative Calculation Of Necessary Plant.

Qwest’s second criticism of the HAI Model is a contention that the model’s distribution design is flawed. For the most part, the Qwest objections are based on speculation rather than any actual analysis of the way the model works. To the extent that Qwest has conducted any analysis, its criticisms reflect a misunderstanding of the manner in which the model develops the required amount of distribution plant.

The HAI Model is designed to place distribution plants where customers are actually located.\(^2\) In most cases, the actual location of customers is known, and the Model uses this

\(^2\) Qwest argues that the model does not use actual customer locations in designing distribution plant. Qwest’s argument ignores the record and appears to be based on a misunderstanding of the model. Although locations of individual customers cannot be viewed in the model, the
information. See Ex. AT&T/WorldCom 3 (Denney Direct) at 20. Where the actual customer location is not known, the Model uses the next most precise source of information available: the U.S. Census Bureau’s location of residential households by census block. Id. Surrogate customer locations obtained from census block information are distributed uniformly along the roads located within the boundaries of the census block. Id. This uniform distribution of customer locations likely overestimates the actual dispersion of customers, because households and businesses are typically clustered to some degree. Id at 21. This even dispersion, however, allows for a conservative estimate of the amount of distribution plant necessary to serve the customers. Id.

In comparison, the LoopMod proposed by Qwest makes no attempt to build plant to actual customer locations. Instead, Qwest’s existing distribution areas from October 1998 are assigned to one of five standard distribution group designs, each of which has its own standard design profile indicating the total cable footages and equipment Qwest assumes will be required to serve the design. Tr. 87-90. Rather than determining where customers are actually located, Qwest simply determines the investment that will be required to serve each standard design profile and then applies this average investment per working line to the number of lines within each of its 1998 distribution areas to develop total investment. Id. Qwest’s failure to make any effort to build plant to actual customer locations is a fatal flaw in the model. See, e.g., In the Matter of a Generic Investigation of U S WEST Communications, Inc. ’s Cost of Providing Interconnection and Unbundled Network Elements, OAH Docket No. 12-2500-10956-2, Report of the Administrative Law Judge (November 17, 1998) at ¶ 19 (“Minnesota Report”).
Qwest has leveled several criticisms regarding the manner in which the HAI Model uses customer location information to model distribution plant, attempting to raise the inference that the Model does not produce sufficient loop plant to serve existing customers. These arguments are a tempest in a teapot. The HAI Model produces an average loop length for customer loops in Arizona of 16,374 feet, almost 5000 feet longer than the average loop length generated by Qwest’s LoopMod. Compare HAI Model Results, Ex. AT&T/WorldCom 3 (Denney Direct), at Ex. DKD-1 to Ex. 18 (Million Rebuttal) at Ex. TKM02R (Loop Mod, Investment Summary).

Qwest’s arguments attempting to show that the model fails to build enough plant to reach customers are meaningless. Nevertheless, the Joint Interveners address each of Qwest’s concerns below.

First, Qwest has argued that the data used in forming the distribution areas is proprietary information not available to Qwest. This contention it incorrect. Qwest has had access to this information in the past and had every opportunity to seek access to that information in this proceeding. Tr., p. 11-15. Qwest chose to withdraw its request for the information, even after the Joint Interveners offered to pay the cost of setting up a computer system for Qwest to review the data. Id. at 1226-27. Qwest’s arguments here that the Commission should make inferences regarding what Qwest might have found had it actually analyzed the data have no basis in the record and should be given no weight in this proceeding.

Qwest also argues that the 1997 customer location information used in the model is dated and that more current information might show increased costs. However, Mr. Denney has described difficulties associated with obtaining more recent data and the steps he took to update the data for this proceeding. Tr., p. 1390. Qwest itself is relying upon 1996 and 1998 customer data in its models. Tr., pp. 82-86. Qwest’s position is that updating its own 1996 and 1998
information would have only a slight effect on costs. Tr., p. 237. The same is true of the HAI analysis.

The FCC agrees that use of more recent customer location information would have no significant cost impact. The FCC used similar 1997 data in its universal service analysis. In that proceeding, the FCC recently rejected this same argument by Qwest precisely because of the minimal cost impact that would be associated with using updated information. The FCC determined that there was no need to update the customer location information used in its model. See In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, DA 00-2629 (rel. Dec. 8, 2000) at 12 ("Line Counts Order"). This Commission should come to the same result.

Qwest has also pointed to a difference in the total distribution area calculated by HAI Model 5.0 compared with the current Model 5.2a and attempted to raise an inference from this difference that the distribution distances calculated by HAI Model 5.2a are insufficient. This differential, however, is explained entirely by a change in the methodology between the two versions of the Model that was done at the suggestion of Qwest. Tr., p. 1378. HAI 5.0a placed customers for whom no location was available on the boundaries of the census block group in which those customers were located. Ex. AT&T/WorldCom 3 (Denney Direct); Ex. DKD-B (4-5). The current version of the Model, however, places those customers on roads within the census block. Id. This is the methodology used by the FCC. Id. This methodology changes the total distribution area modeled, in some cases increasing the distance and in some cases decreasing it. Tr., p. 1385. The effect, however, is to make the calculation more accurate.

Finally, Qwest has challenged the use of the "Minimum Spanning Tree" algorithm ("MST") within the Model. Dr. Fitzsimmons has proposed changing the model run presented by
the Joint Intervenors in this proceeding to "turn off" the MST function. Dr. Fitzsimmons claims that this function produces a theoretical minimum distribution distance and that this assumption understates the actual distribution required to serve customers.

Dr. Fitzsimmons' testimony reflects a failure to understand how the MST as used within the Model works. Unlike the MST shown in the example provided by Dr. Fitzsimmons with his testimony, the MST function used within the HAI Model is not a measure of the least cable distance required to join customers. Instead, the HAI MST provides for right angle routing similar to that one would expect to find in the network of local exchange carrier. See Ex. AT&T/WorldCom 3 (Denney Direct) at 24-28. Moreover, the road surrogating process used by the Model also provides a conservative measure of the actual distribution distances required. Id. In sum, therefore, the model produces more than enough distribution plant to serve customers on a forward-looking basis.

As Mr. Denney has testified, the HAI Model distribution assumptions have been tested by comparison to other models produced by incumbent carriers. Tr., p. 1395. The model has been demonstrated in those comparisons to provide a conservative analysis of necessary distribution plant. Id. For these reasons, Dr. Fitzsimmons' proposed change to the model's MST function must be rejected.

c. The HAI Model's input values comply with TELRIC.

Qwest also criticizes certain of the input values used in the HAI Model and has proposed modifying the model run provided by the Joint Intervenors to incorporate inputs similar to those used by Qwest in LoopMod. These LoopMod values do not comply with TELRIC and should be rejected for all purposes in this proceeding.
i. Placement Costs

Placement costs for buried cable comprise a substantial portion of the investment modeled for the unbundled loop in both Qwest’s LoopMod and in the HAI Model. The models both develop placement costs by determining the costs for conducting various types of placement activities, such as trenching or boring, and the frequency that each of these activities will be used in placing buried cable. As indicated in the Joint Intervenors’ opening brief, this is the only similarity between the two models. The HAI Model assumes that buried cable will be placed the way an efficient provider would place cable, by burying it whenever possible before structures such as roads and landscaping are already in place. LoopMod, in contrast, designs a plant by first assuming that all physical structures are currently in place as they are today and then choosing placement activities that would be required to place cable under and around obstacles. This assumption is directly contrary to a TELRIC methodology. Dr. Fitzsimmons’s proposal to substitute the placement costs used in the HAI Model with Qwest’s placement assumptions must be rejected.

As indicated in Joint Intervenor’s opening brief, the FCC reviewed the precise issue of how placement costs should be measured on a forward looking basis in its universal service proceeding. In the Matter of Federal-State Joint Board on Universal Service; CC Docket No. 96-45, FCC 99-304, Tenth Report and Order, (rel. Nov. 2, 1999) (“Inputs Order”). The FCC determined in that proceeding that the costs of small scale projects or costs associated with maintenance type projects would not be appropriate. Rather, the FCC determined that the costs that would “best reflect the cost that a LEC would incur today to install cable that were to construct a local telephone network using current technology” would be reflected by the costs of “growth projects for which expenditures were at least $50,000.” Inputs Order at ¶ 109. The FCC further determined that use of costs incurred for “additions to existing plant or new
construction” best represented “the cost today of building an entire new network using current technology.” Id. at ¶ 118.

Qwest has admitted that the placement costs used in LoopMod for specific activities were not derived from large projects. Instead, Qwest relied upon pricing it obtained from contracts for “numerous small jobs or routine day-to-day work activities.” See Ex. AT&T/XO 10, § 1, p. 10. As Mr. Buckley admitted, Qwest bids out larger projects, in part to seek lower pricing. Tr., p. 124-25. This means that the pricing for specific activities proposed by Qwest likely overstates the actual costs that Qwest would incur in reconstructing plant using a TELRIC analysis.

Moreover, Qwest’s assumption that the placement activities required will be those activities that would be necessary if all existing structures were already in place is directly contrary to the FCC’s requirement that placement costs should reflect the costs that would be incurred in a growth environment. It also ignores this Commission’s prior rejection of Qwest’s placement assumption in the first cost docket. Qwest claims that it models “real life placement techniques.” Qwest Post-Hearing Brief at 30. In fact, its witnesses universally agree that it does not place plant under and around obstructions in the real world. Instead, Qwest places plant before obstructions are built. Tr., p. 127-28, 889, 914. In order to capture an incumbent’s efficiencies of scale, a TELRIC model must assume efficient placement techniques actually used by the incumbent, not costs that would exist in a fantasy world where the incumbent digs up streets and gardens to place a new network.

The HAI Model used in this proceeding calculates placement costs based upon reasonable assumptions regarding the placement activities that would be required to place cable efficiently. The model relies upon detailed geologic information regarding conditions that actually exist within the State that could impact the difficulty and cost of placement. See Ex.
AT&T/Worldcom 3 (Denney Direct) at Ex. DKD-3. The placement costs developed by the model are reasonable and specific to Arizona. Qwest’s proposal to substitute its own LoopMod placement costs as inputs into the HAI Model should be rejected.

**ii. Plant Mix**

The LoopMod used in this proceeding adopts Qwest’s default aerial placement percentage region-wide of 14%. Tr. 140. Dr. Fitzsimmons has completed a complicated adjustment to the HAI Model that purports to apply a Qwest Arizona embedded aerial percentage of 17.49%. Dr. Fitzsimmons’s analysis takes the aerial structure percentages accepted by the FCC in its *Inputs Order* and substantially reduces those inputs to match internal Qwest report of aerial sheath mileage. See Ex. Qwest 29 (Fitzsimmons Rebuttal) at WLF-2, Document 5.1. Dr. Fitzsimmons then input the reduced percentages into the HAI Model. According to Dr. Fitzsimmons, this had the effect of lowering the total aerial percentage in the HAI Model run presented by the Joint Interveners from 29.2% to 17.5%. *Id.* at 53.

There is no basis for Dr. Fitzsimmons’s adjustment. First, the aerial percentage used within the HAI Model is already well below the percentage accepted by the FCC as forward-looking in its *Inputs Order*. Moreover, the 29.2% aerial used within the HAI Model is well below the 36.5% aerial distribution cable reported by Qwest in its ARMIS reports. *See Tr., p. 1431. Fitzsimmons’s proposed aerial percentage, moreover, is based upon a measure of sheath mileage rather than on any measure of the actual aerial structure present within Qwest’s network and does not include the substantial percentage of building cable within Qwest’s Arizona network.³

³ Dr. Fitzsimmons’s analysis is also flawed in that it fails to recognize a difference between the FCC synthesis model and the HAI Model in its treatment of aerial plant. The HAI Model has a high percentage of aerial cable in high density areas because it includes inside wire as aerial plant. The Synthesis Model does not make this assumption. *See Inputs Order* at ¶ 228.
Qwest's reliance upon its embedded experience as support for its aerial structure assumptions is contrary to TELRIC. In contrast, the HAI Model develops the appropriate structure assumptions based upon a least cost analysis considering both the cost of placing plant and the costs of maintaining that plant. For all of these reasons, the HAI Model plant mix assumptions are appropriate and should be accepted in this proceeding.

iii. Structure Sharing

The FCC determined in its Inputs Order that sharing assumptions in a TELRIC model should reflect that the telephone industry will have at least the same opportunity to share the cost of building plant as existed when the plant was built. Inputs Order, ¶ 244, n.867. As with placement cost inputs, this is the only way to ensure the goal of modeling the economies of scope and scale that exist for Qwest as an incumbent provider. The possibility of sharing with cable operators, electric utilities, competitive providers and interexchange companies must be considered in developing sharing assumptions for a forward-looking cost model. Id. at ¶ 241. Qwest's criticisms that the HAI Model should not rely on these sharing opportunities ignore the FCC's express direction.

Qwest's sharing assumptions in this proceeding do not assume that Qwest will have the same sharing opportunities that would have existed when its plant was built in the first place. Instead, Qwest has argued that a TELRIC study must assume that the telecommunications plant will be rebuilt in areas where other providers such as power and cable television are already in place. See Ex. Qwest 29 (Fitzsimmons Rebuttal) at 50; Qwest Post-Hearing Brief at 33-34. This assumption that there are few other providers with whom the telecommunications company could share in a TELRIC analysis drives Qwest's sharing proposals and provides Qwest's rationale for assuming only limited sharing on a forward-looking basis. Id.
Dr. Fitzsimmons has modified the sharing assumptions presented in the HAI Model to assume even less sharing than that proposed by Qwest in its own models. See Ex. 29 (Fitzsimmons Rebuttal), Ex. WLF-2. Given that Qwest’s sharing assumption itself relies upon an improper basis, this adjustment is inappropriate. As set forth in Appendix B of the HAI Inputs Portfolio, an incumbent LEC has many opportunities to share structure with other utilities. See Ex. AT&T/Worldcom 3 (Denney Direct), at Ex. DKD-C. Many communities now require or encourage cooperation among providers in placing trench. Developers provide trench at no cost to Qwest and other utilities in residential areas. Id., pp. 913-14. Qwest also places spare conduit, creating a potential for sharing of underground facilities. Id., p. 144.

Qwest has misquoted a number of sections of the record in its attempt to bolster the sharing assumptions it has assumed in this proceeding. For example, Qwest claims that Mr. Weiss stated that utility companies typically place facilities “at totally different times.” See Qwest Post-Hearing Brief at 53. In fact, what Mr. Weiss stated is that “sometimes” feeder routes “are not shared” among electrical utilities and telephone utilities. Tr. 1623. Qwest’s attempt to generalize this statement to all plant is just one example of the ways in which Qwest has stretched and misstated the record. Qwest also contends that the HAI Model assumes that “on average, Qwest will only be responsible for a little more than one-third of the cost of placing distribution, feeder, and transport cables.” Qwest Post-Hearing Brief at 52. In fact, as Mr. Denney has testified, the actual overall cost assigned to Qwest is close to 40%. Tr. 1411. This assumption is not significantly different from this Commission’s determination in the prior cost docket and is wholly supported by the record.

iv. Drop Lengths

The drop is the portion of the outside plant that extends from a distribution terminal to the actual customer location. Dr. Fitzsimmons has used the same flawed survey information Joint
Intervenors discussed in their opening memorandum as the basis for his proposed changes to the HAI model. For several reasons, Qwest’s use of this information as the basis for adjusting the HAI drop length assumptions should be rejected.

The survey at issue excludes all multi-tenant dwellings. As Qwest witness Mr. Buckley has admitted, this failure makes the surveys inappropriate for use in conjunction with the HAI Model, since that model includes drops to multi-tenant buildings in its overall drop calculations. Tr., pp. 150-51. In addition, as indicated in the Joint Intervenors’ opening brief, the estimates themselves are questionable. As shown on Exhibit AT&T/XO 14, the technicians performing the study were not requested to actually measure drop lengths. Instead, they were asked to make a visual estimate of the drop length or to walk it off. Id. This appears to have biased the estimates. For example, a number of the drop lengths shown on Exhibit AT&T/XO 14 are long enough to extend around most of the circumference of the lot size for a given property indicated in the survey. Qwest’s purported support underlying the drop lengths by LoopMod has no basis in the real world. Dr. Fitzsimmons’s appropriation of these values for input into the HAI Model has no better basis and should be rejected.

v. Line Counts

Qwest has proposed that the publicly available line count information used by the Joint Intervenors in calculating loop costs should be replaced with confidential information from Qwest regarding the actual DS1 business circuits presently in use in Qwest’s network. Qwest contends that these DS1 facilities must be counted on a per-circuit basis rather than a per-channel basis and that use of Qwest’s confidential information is the only way to ensure that this count is accurate. See Ex. 29 (Fitzsimmons Rebuttal) at 40-41.

Qwest incorrectly asserts that the FCC has endorsed the use of DS1 business circuit line counts for use in a forward-looking cost model. In fact, the FCC in its Synthesis Model has
rejected Qwest’s position and counts digital circuits on a channel basis in the same manner that AT&T has calculated them in this proceeding. See Line Counts Order at 16; Inputs Order at ¶ 393. Use of the per channel line counts permits continued reliance on public information, rather than on proprietary information that can be obtained only from Qwest. Moreover, it appears that even Qwest cannot determine with any accuracy what its actual circuit line counts are for DS-1 facilities. The line counts reported by Qwest contain significant anomalies that Dr. Fitzsimmons was unable to explain. Tr., p. 1038-41. Given Qwest’s own inability to explain information upon which it bears the burden of proof, use of publicly available information is even more important in this proceeding. Like the FCC, this Commission should reject Qwest’s proposal to use proprietary line counts.

vi. Overhead

Qwest proposes increasing the overhead factor used within the HAI Model to 13% reflecting, according to Dr. Fitzsimmons, Qwest’s average embedded overhead expenses over the last two years. See Ex. 29 (Fitzsimmons Rebuttal) at 61. In essence, Qwest is contending that its actual overhead is appropriate for use in a cost model that is estimating the expenses going forward of an efficient provider. This assumption is contrary to TELRIC. TELRIC requires that expenses be calculated based upon an assumption that a provider is using the most efficient, least cost practices and procedures. TELRIC also requires that costs associated with retail operations must not be considered. See 47 C.F.R. § 51.505(d). Qwest’s presumption that its own overhead experience is representative of a TELRIC analysis ignores these requirements.

Other regional Bell operating companies today experienced substantially lower overhead than that used by Qwest in its restatement of the HAI Model. Tr., p. 1452; see Ex. AT&T/Worldcom 4 (Denney Rebuttal). In fact, other regional Bell operating companies are actually experiencing overhead substantially less than the 10.4% assumed by the HAI Model. Id.
This demonstrates that Qwest’s imbedded experience is not reflective of the least cost, most efficient assumptions required in a TELRIC model. Given that other regional Bell operating companies have experienced overheads in the range of 6% to 9%, to the extent that any changes made in the HAI overhead assumption, that change should be made to lower the already conservative assumption used in this proceeding. See Ex. 4 (Denney Rebuttal). As this Commission’s rules reflect, Qwest has the burden to prove any markup over a TSLRIC cost exceeding 10%. See A.C.C. R14-2-1310(B). Qwest has not met its burden in this proceeding and Qwest’s proposed increase in the overhead factor used within the HAI Model should be rejected.

vii. Network Operations Factor

Qwest also contends that its actual network operations expenses should be used in the HAI Model without reduction. Apparently, Qwest’s position is that these costs would remain constant even with the forward-looking network assumptions required by a TELRIC model. This assumption that Qwest will achieve no reduction in network operations expenses on a forward-looking basis is wholly unsupported. As set forth in the Hatfield Model Inputs Portfolio, Ex. AT&T/WorldCom 3 (Denny Direct) at. Ex. DKD-C (App. D), the deployment of forward-looking technologies will necessarily lead to expense reductions. For example, the deployment of SONET-based transport lessens the likelihood of outages, which in turn lessens network administration expenses. In fact, these forward-looking technologies are often deployed for the very reason that they will produce significant operational savings. Moreover, retail expenses must also be removed from the network operations expenses Qwest presently experiences in developing appropriate TELRIC pricing. Id.

Given these factors, Qwest’s proposal that there be no network operations reduction has no basis. In fact, the per-line network operations expense developed by the HAI Model in this
proceeding is very close to the per-line expense developed by the FCC in its *Inputs Order*. See Tr., pp. 1440-1447. The network operations reduction used within the HAI Model is appropriate and should be accepted in these proceedings.

viii. **General Support Assets Expense**

The HAI Model reduces general support expenses to recognize that these expenses are largely incurred for the benefit of Qwest's retail operations. Retail expenses must be excluded from a TELRIC model. *See 47 C.F.R. § 51.505(d)._ Dr. Fitzsimmons has provided a Hatfield Model run in which all general support expenses are included, with no reduction for the furniture, office equipment, general purpose computers, and other equipment used by Qwest's retail operations. This is clearly inappropriate and should be rejected. The HAI Model uses a proper allocation of these expenses between wholesale and retail costs and should be accepted for purposes of this proceeding.

ix. **Depreciation Values for Drops, NIDs and SAIs**

Qwest has criticized the depreciation value used by the HAI Model for SAIs, NIDs and drops. The Joint Intervenors do not contest this correction proposed by Qwest.

2. **The AT&T/WorldCom Nonrecurring Cost Model is the only model presented in this proceeding that complies with TELRIC.**

Qwest's criticisms of the AT&T/WorldCom Nonrecurring Cost Model mirror those made by Qwest concerning the HAI Model. Qwest's basic concern is that the Model does not replicate Qwest's own "real world" network. Qwest contends that the model assumes more mechanization than Qwest presently achieves. Qwest further contends that the model assumes that some nonrecurring costs will be recovered through recurring rates. Finally, Qwest complains that the nonrecurring cost model does not develop costs for all of the nonrecurring activities that Qwest has agreed to provide. None of these arguments undermines the fact that
only the AT&T/WorldCom Model follows the requirements of TELRIC that costs must be based on forward-looking, most efficient technologies, practices and procedures.

a. The Joint Intervenors have proposed nonrecurring charges for all applicable rate elements.

Qwest argues that the Commission cannot adopt the AT&T/WorldCom nonrecurring cost model because it does not develop nonrecurring charges for all applicable rate elements. This argument is a red herring. The model does, in fact, develop nonrecurring charges for most network elements. See Ex. AT&T/Worldcom 15 (Hydock Direct) at Ex. MH-1R. To the extent that the model does not develop a rate that the Commission deems necessary, the Commission can adjust the Qwest model by assuming full mechanization as would be experienced in forward-looking network.

b. The Model appropriately assumes the mechanization that would be available in a forward-looking network.

Qwest contends that the AT&T/Worldcom nonrecurring cost model is flawed in assuming that mechanization would eliminate the costs associated with Qwest’s Interconnect Service Center (“ISC”). Qwest also contends that the model should not assume that facilities used for POTS type services are dedicated, permitting all companies to take advantage of the mechanization inherent in dedicated facilities in provisioning services. These assumptions are examples of Qwest’s insistence upon modeling its existing facilities rather than using the assumptions required in a forward-looking analysis.

Qwest claims that the ISC is necessary to correct errors and mistakes in CLEC orders. See Qwest Post-Hearing Brief at 77. On a forward-looking basis, there would be no need for the Qwest’s Interconnect Service Center because CLECs would have full electronic access to Qwest’s systems. See Ex. AT&T/WorldCom 6 (Weiss Direct) at 82-83. With such access,
errors by a CLEC would result in rejection of an order to the CLEC, allowing the CLEC to correct the problems for itself, just as Qwest's own service representatives do. Qwest should not be entitled to impose the cost of the ISC upon CLECs simply because Qwest has chosen this means of dealing with CLEC orders rather than putting into place efficient electronic systems that would accomplish the same result.4

The assumption of dedicated facilities also conforms to the current practices of efficient carriers. As Qwest's own recurring cost studies recognize, it is most efficient to leave connections in place for future reuse, avoiding the labor costs involved in dismantling and reconnecting facilities to the same premises. See Ex. AT&T/Worldcom 6 (Weiss Direct) at Ex. THW-14, pp. 37-38. This is a forward-looking assumption that is appropriate for use in the TELRIC analysis. Id.

Qwest's contention that the dedicated facility assumption is contrary to the HAI Model's assumptions regarding sizing and distribution cable also misses the mark. The Model as filed in this proceeding assumes less than 50% distribution fill. See Ex. AT&T/WorldCom 3 (Denney Direct) at 38. This assumption means that the cost of every loop includes more than two lines in distribution. This is more than sufficient to support an assumption of dedicated facilities to each customer premise.

c. The Model makes appropriate assumptions regarding nonrecurring activities that would be required on a forward-looking basis.

Finally, Qwest complains about the assumption in the nonrecurring cost model that the use of IDLC on a forward-looking basis will in some circumstances eliminate the necessity for

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4 To the extent that costs are imposed on Qwest by CLECs that choose to present orders by fax rather than electronically, the appropriate result is to establish a separate rate for such orders rather than imposing the costs on all CLECs. This would also have the effect of encouraging CLECs who use these means for transmitting orders to migrate to more efficient systems.
manual work. As Qwest admits, IDLC has software that enables mechanized customer connections. See Qwest Post-Hearing Brief at 79. Qwest’s own LoopMod assumes that IDLC will be used 44% of the time to provide service. In fact, Qwest relies upon this assumption to increase certain recurring costs for the unbundled loop. AT&T’s nonrecurring cost model assumes slightly more IDLC than Qwest assumes in its LoopMod. On a forward-looking basis, this is appropriate. The FCC’s rules require that nonrecurring costs be developed based upon forward-looking cost assumptions. 47 C.F.R. § 51.505(d). Qwest’s failure to do so is a deficiency in its own model that requires rejection of Qwest’s proposed costs.

D. Qwest’s Arguments That its Own Studies Comply with TELRIC Fall Short.

The Joint Interveners have presented a detailed analysis of the shortcomings of Qwest’s cost studies in their opening brief in this proceeding. Qwest’s Post-Hearing Brief attacks some of the arguments presented by the Joint Interveners, attempting to salvage the Qwest studies. Most of Qwest’s arguments are in generalities and fail to address the substance of the concerns raised with the Joint Interveners. To the extent that Qwest has presented specific responses, those responses are addressed below.

1. The Fill Factors Assumed by Qwest Cost Models Fail to Comply with this Commission’s Prior Ruling.

This Commission has previously determined that Qwest’s actual fill factors as experienced within its network are not appropriate for use in a forward-looking cost model. First Cost Order at 16-17. Nevertheless, the fill factors Qwest proposes here continue to be based upon what Qwest claims it is experiencing in its network today. The Joint Interveners have provided testimony addressing the impropriety of Qwest’s assumptions and the effect of Qwest’s assumptions on cost. Qwest has now argued that its fill factors are reasonable and should be
adopted by the Commission. This argument ignores the evidence in the record of appropriate forward-looking utilization levels.

a. Distribution Fill Factors.

Qwest admits that its LoopMod does not incorporate a “separate, identifiable fill factor” for distribution cable. See Qwest Post-hearing Brief, at 36. Instead, the model simply assumes that two to three pairs will be required for each premises. LoopMod, as described by Qwest, “develops a total investment for each distribution area and divides that by the number of working lines.” Qwest Post-Hearing Brief at 37. This means that Qwest builds a network that will provide two to three lines per site, but places the entire cost of this network on the 1.17 lines per site now being used within its network. Tr. 100-01; Ex. AT&T/XO 5.

As the Joint Interveners explained in their opening memorandum, this sizing assumption creates a mismatch between the amount of investment assumed by the model (the numerator of the analysis) and the amount of demand over which the investment is spread (the denominator of the analysis). Qwest develops the investment required to serve ultimate demand and yet spreads the cost of building to serve ultimate demand only on current demand, rather than over the future demand for which the plant is placed. The FCC has rejected this approach. See Inputs Order at ¶ 197. This Commission should reject it as well.

Joint Interveners’ witness, Mr. Weiss, has recommended a fill factor of 0.6667 as an appropriate design fill based up on forward-looking technologies, such as Fiber in the Loop. See Ex. AT&T/WorldCom 8 (Weiss Rebuttal). Qwest contends that this distribution fill would violate engineering standards. In fact, this distribution fill would permit substantially more usage of additional lines than presently exists within Qwest’s network.

Qwest implies that the distribution fill proposed by Mr. Weiss is used in the HAI Model. This is incorrect. As indicated above, the HAI Model is more conservative than the forward-
looking assumptions presented by Mr. Weiss and assumes a distribution fill of approximately 48 percent in Arizona. See Ex. AT&T/WorldCom 3 (Denney Direct) at 38. This assumption, which is even lower than that approved by the Commission in the prior cost docket, is based upon principles approved by the FCC for distribution fill and should be accepted in this proceeding.

b. Fill Factors for Optical Digital Equipment.

Because optical-digital equipment can be installed much more quickly and easily than distribution and feeder plant (for which Qwest proposes an 80% fill factor), the Joint Intervenors have proposed use of an 85% fill factor for this equipment in Qwest’s high capacity loop and transport cost models. In contrast, Qwest has proposed fill factors ranging as low as 37% for this equipment. Qwest’s principal argument that the Joint Intervenors’ fill rates should be rejected is a claim that “Mr. Weiss could not provide a single example of a competitive market in which an 85% fill was experienced.” Qwest’s Post-hearing Brief at 20. In yet another example of Qwest’s twisting of the record, what Qwest fails to state is that Mr. Weiss provided evidence of other competitors who have achieved an 80% fill in the real world. Tr., p. 1576. Qwest itself has recommended fill rates of up to 100% for some of the equipment at issue. See Ex. Qwest 18 (Million Rebuttal) at 29. In the face of this evidence, Qwest’s contention that it would experience 37% fill in any electronic equipment must be rejected.

2. Qwest’s Total Installed Factors Demonstrate Qwest’s Inefficiencies.

Qwest has also attempted to support the TIFs used to inflate equipment and materials costs in its high capacity loop and transport cost studies. As indicated in the Joint Intervenors’ initial memorandum, Qwest calculates these factors based upon embedded costs. The Joint Intervenors have presented evidence that Qwest’s embedded costs reflect substantial inefficiencies and include costs not properly used in a TELRIC analysis.
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Qwest first contends that Mr. Weiss’s experience with other carriers is unsupported. In fact, Joint Intervenors provided substantial experience of actual TIFs experience by other carriers in the discovery responses in this proceeding. See Supplemental Response of AT&T to Qwest Data Request 164. Mr. Weiss also provided evidence of his own decades of experience in the telecommunications industry and identified the basis for his opinions regarding Qwest’s TIFs. See Ex. AT&T/WorldCom 6 (Weiss Direct) at 55-59.

In addition, Qwest argues that its inclusion of substantial warehousing expenses in the TIFs is justified by the fact that TELRIC assumes construction of a replacement network. In fact, as Qwest admits, warehousing becomes less necessary on a forward-looking basis because of just-in-time inventory practices. See Ex. Qwest 18 (Million Rebuttal) at 22-23. Moreover, as with other TELRIC assumptions, Qwest must be assumed to have available to it all of the warehousing efficiencies that would be available to it in the ordinary course in conducting a TELRIC analysis. See, e.g., Inputs Order at ¶ 244. Qwest’s assumption that more warehousing would be required for a replacement network flies in the face of the purpose of TELRIC -- to provide to CLECs the network efficiencies available to Qwest.

3. **Qwest’s Expense Factors Assumptions Ignore the FCC’s TELRIC Requirements.**

Qwest has also attempted to justify its expense factors even though these factors are based upon Qwest’s embedded books with no adjustment to take into account the FCC’s requirement that TELRIC cost studies may not include embedded costs, retail costs or revenues to subsidize other services. See 47 C.F.R. § 51.505(d).

Mr. Weiss has presented an analysis of costs within the Qwest expense factors for which Qwest has not met its burden to show that these are properly included within a TELRIC analysis. In response, Qwest essentially argues that it incurs these expenses today and that it, therefore,
should be entitled to recover them from the CLECs. See Qwest Post-Hearing Brief at 22. Qwest misses the point. Its burden is to show that these expenses are appropriate in a TELRIC analysis – that is, that these are expenses that would be incurred by an efficient provider using least-cost practices and procedures in providing unbundled network elements and other services on a wholesale basis. The fact that Qwest may have chosen to incur particular costs does not mean that these costs are appropriately recovered from CLECs.

Qwest implies that the Joint Interveners have excluded network operations, product management and other costs from the HAI Model presented in this proceeding. In actuality, the model is conservative in that it includes costs for these activities. Unlike the Qwest models which include all expenses incurred by Qwest with no analysis as to whether these expenses are appropriate incurred, the HAI Model provides appropriate reductions as indicated in Sections II.C.1.c above.

III. CONCLUSION

Qwest’s proposed rates in this proceeding fail in innumerable ways to comply with the FCC’s TELRIC requirements. In contrast, the rates proposed by the Joint Interveners in this proceeding are based on a proper TELRIC analysis and should be adopted by the Commission.

Dated this 9th day of September, 2001.

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CERTIFICATE OF SERVICE
ACC Docket No. T-00000A-00-0194

I hereby certify that on the 20th day of September 2001, the original and ten (10) copies of the Reply Brief of AT&T Communications of the Mountain States, Inc. and XO Arizona, Inc., in the above-referenced docket, were sent for filing via FedEx, next business morning delivery, to:

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1200 West Washington Street
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And, I further certify that on the 20th day of September 2001, a true and correct copy of the above was sent via FedEx, next business morning delivery, to:

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Dated this **20th Sept. 2001**  

by **Larry Weather**