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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

DIRECT TESTIMONY OF

MICHAEL HYDOCK

ON BEHALF OF THE JOINT CASE OF

AT&T COMMUNICATIONS OF THE MOUNTAIN STATES, INC.,

WORLDCOM, INC. AND

XO ARIZONA, INC.

Arizona Corporation Commission
DOCKETED

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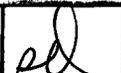
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1 **I. BACKGROUND AND PURPOSE OF TESTIMONY**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Michael Hydock. My business address is 1875 Lawrence Street, Denver,
4 Colorado 80202.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I am employed by AT&T as a district manager in the local services and access
7 management organization. My responsibilities include a variety of local telephony-
8 related duties, including the negotiation of interconnection contract agreements and the
9 analysis of the underlying issues in these agreements. I have also analyzed local
10 exchange carriers' intrastate costing and pricing methodologies and studies. As an expert
11 witness, I have submitted testimony on local issues within AT&T's western region. I
12 have previously submitted testimony in regulatory or legislative hearings in Arizona,
13 Colorado, Iowa, Minnesota, Montana, Nebraska, Oregon, Utah, and Washington on
14 behalf of AT&T, or my previous employer, MCI WorldCom.

15 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

16 A. I graduated from Rutgers University in 1975 with a Bachelor of Arts degree in
17 Economics. I received a Masters of Economics from the graduate school at Georgetown
18 University in 1977, and have completed my Ph.D. coursework and comprehensive
19 examinations. I have also completed various training seminars offered by MCI
20 WorldCom and AT&T in marketing, telecommunications, network, and costing methods
21 in the telecommunications field.

22 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE.**

23 A. I began my career with AT&T in 1981 in the Accounts and Finance department of AT&T

1 Long Lines. During that time I spent five years doing economic forecasts to support
2 network and business planning. From 1986 to 1990, I was employed by AT&T in its
3 Eastern Region working on intrastate and federal regulatory and access planning issues.
4 In 1990 I began working for MCI in its Federal Regulatory Department. In that group I
5 was responsible for developing MCI regulatory policy on a variety of issues, including
6 access and universal service. In 1994 I moved to the MCImetro start-up venture where I
7 performed regulatory and business analysis to support the development of MCI's local
8 business. In 1995 I transferred to the Western Region where I managed local competition
9 policy for MCI's Law and Public Policy group in the Western Region. During the period
10 1995 to 1999 I provided regulatory and business support for the negotiation and
11 arbitration of Interconnection Agreements ("ICAs") that MCI was developing with
12 Qwest. I became closely involved with a variety of costing dockets in the Western
13 Region, and testified at a number of hearings.
14 In 1999, I accepted my current position as District Manager, ICA Negotiations in the
15 Western Region of AT&T.

16 **II. EXECUTIVE SUMMARY, ORGANIZATION OF CASE AND SUMMARY OF**
17 **PRICING RECOMMENDATIONS**

18 **Q. PLEASE STATE THE PURPOSE OF YOUR TESTIMONY AND SUMMARIZE**
19 **YOUR MAJOR RECOMMENDATIONS.**

20 A. The purpose of my testimony is to frame the policy and pricing recommendations that
21 AT&T, WorldCom, Inc. ("WorldCom") and XO Arizona, Inc. (the "Joint Interveners")
22 urge the Arizona Corporation Commission ("ACC") to follow in this docket. These
23 recommendations are based on an analysis of the new rates and cost support filed by

1 Qwest in this docket, in conjunction with a re-assessment of the rates adopted by this
2 Commission in previous dockets. This testimony summarizes the structure of the case
3 and provides an overview of the witnesses and their subject areas; financial and
4 operational model input analysis, collocation cost and rate analysis, HAI Model results,
5 nonrecurring cost and rate analysis, and finally, the economics of UNE-P and the state of
6 competition in Arizona. Joint Intervenors put forth the following policy and pricing
7 recommendations at rate element detail. The major recommendations include:

- 8 1) Qwest must provide cost-based loop rates that reflect all current information for
9 new rate elements and updated information regarding rate elements previously
10 established by the ACC. Factors such as capacity utilization and growth, more
11 refined cost input factors, sales of exchanges, capital structure factors, Qwest/U S
12 WEST merger efficiencies, and other issues must be considered in developing
13 loop and other UNE rates.
- 14 2) True deaveraging must be implemented for Qwest's loop prices in the course of
15 this docket.
- 16 3) Qwest's switching rate needs to be reexamined to account for the productivity
17 gains in switching equipment over the last five years and it also needs to be
18 adjusted for Qwest's intent to bifurcate signaling cost recovery and feature cost
19 recovery from the switching element. For example, Qwest has lowered its
20 proposed switching port charge, but has also proposed to institute a variety of fees
21 for switching features that swamp the switching charge reduction.

- 1 4) Qwest's proposed collocation costs and price/rate structures need to be re-
2 designed and lowered. Qwest has included costs in the nonrecurring rate element
3 that are excessive, inefficient, and result in discriminatory prices for collocators.
- 4 5) Non-recurring charges must be based on forward-looking efficient practices, not
5 on unreasonable inefficient practices as assumed in the Qwest non-recurring cost
6 estimates.

7 **Q. PLEASE IDENTIFY THE WITNESSES WHO WILL TESTIFY IN THIS**
8 **PROCEEDING AND SUMMARIZE THE NATURE OF THEIR TESTIMONY.**

- 9 A. In this docket, AT&T, WorldCom and XO will present testimony from several witnesses
10 who have examined the Qwest testimony, cost support and pricing recommendations.
11 The following is a description of the structure of the testimony filed in this case by
12 witnesses representing these companies.

13 **FINANCIAL AND OPERATIONAL MODEL INPUTS:**

14 Thomas Weiss's testimony will demonstrate that significant changes need to be made to
15 current and proposed Qwest rates, based on such factors as capital structure and
16 underlying support costs. Mr. Weiss provides extensive engineering and business
17 analysis of the expense and investment cost factors employed by Qwest in their cost
18 models. Mr. Weiss also analyzes Qwest's proposed cost of capital, as well as such
19 engineering related inputs as fill factors. Mr. Weiss makes a number of
20 recommendations based on his analysis in order to bring Qwest's proposed and existing
21 recurring and non-recurring rates for specific rate elements in line with FCC
22 requirements.

1 **ENGINEERING MODEL INPUTS- QWEST'S LOOPMOD2:**

2 Thomas Weiss's LoopMod2 testimony reports the results of his analysis of Qwest's
3 LoopMod2, the model with which Qwest computes its costs of unbundled loop elements.
4 The results of his analysis conclude that Loopmod2 is unsuitable for use as a means to
5 develop the cost of UNE loops.

6 **SWITCHING AND SIGNALING:**

7 Richard Chandler's testimony provides an evaluation of the engineering basis for the
8 pricing of Unbundled Packet Switching (UPS) and a critique of the circuit switching and
9 signaling elements proposed by Qwest in Arizona. Qwest's proposed rate elements for
10 packet switching, contrary to the purpose of the Telecommunications Act of 1996, would
11 not permit a new entrant to offer competitive services, effectively impeding technological
12 innovation. In addition, Qwest has failed to support its proposed switching rate element
13 prices to any satisfactory extent and its proposals should be rejected by the ACC.

14 Qwest's signaling model cannot be used to verify the validity of the proposed signaling
15 prices because critical inputs are undocumented. As a result, the proposed signaling rate
16 element prices cannot be determined to be either reasonable or appropriate, and the rate
17 elements should be rejected.

18 **COLLOCATION COST AND RATE ANALYSIS:**

19 Roy Lathrop presents testimony that illustrates the anti-competitive pricing Qwest
20 proposes for collocation services. In his testimony, Mr. Lathrop demonstrates that
21 Qwest's proposed rates for collocation are excessive, the collocation arrangements
22 burden CLECs with avoidable inefficiencies, and some of the collocation charges
23 imposed by Qwest recover costs for elements not used by collocators.

1 In addition, Rex Knowles presents an analysis of Qwest's collocation cost model and
2 describes some of the defects in that model that inflate Qwest's proposed collocation
3 rates.

4 **HAI MODEL PRESENTATION:**

5 Douglas Denney presents testimony on pricing of unbundled network elements
6 ("UNEs"). Specifically, Mr. Denney presents the HAI model recommendations for UNE
7 prices in this docket. Mr. Denney presents the Joint Intervenors' recommendations for a
8 cost-based deaveraging of UNE loop rates to place the distribution of rates more in line
9 with actual differences in density cost structures.

10 **NONRECURRING COST AND RATE ANALYSIS:**

11 Roy Lathop presents the joint AT&T-WorldCom nonrecurring cost model. This model
12 presents a methodology for determining the costs of nonrecurring services on a forward-
13 looking, most efficient basis. This contrasts with the current NRC estimates of Qwest,
14 which are based on existing and often inefficient and non-forward looking practices. The
15 end result is that CLECs are forced to underwrite Qwest's current inefficiencies by
16 paying charges in excess of forward looking, efficient costs.

17 **ECONOMICS OF UNBUNDLED NETWORK PLATFORM:**

18 Mr. Joseph Gillan, an economic witness providing testimony on behalf of AT&T and
19 WorldCom, reviews the current state of market entry strategies using UNEs to enter the
20 local market in Arizona. Based upon pricing evidence presented by Mr. Gillan in his
21 testimony, it is apparent that Arizona consumers will never experience long-term
22 competition from market entrants using strategy based on the unbundled network element
23 platform ("UNE-P"). Mr. Gillan makes several recommendations to this Commission

1 that would remove the economic and technological/provisioning barriers to allowing
2 CLECs an economically viable and rational opportunity to use UNE-P as a strategy for
3 market entry.

4 **RESALE:**

5 It is important that this Commission set a resale discount rate that complies with the
6 Telecommunications Act and properly calculates those costs that Qwest can avoid in
7 providing services on a wholesale basis. The Joint Intervenors do not believe that
8 Qwest's proposal meets these requirements. Nevertheless, the Joint Intervenors'
9 resources in this proceeding are limited, and they are not able for this reason to present a
10 witness who will evaluate Qwest's proposal or provide an alternate proposal on behalf of
11 the Joint Intervenors.

12 **Q. PLEASE SUMMARIZE THE PRICING AND POLICY RECOMMENDATIONS**
13 **YOU ARE PRESENTING IN THIS CASE.**

14 A. A summary of the specific pricing proposals that the Joint Intervenors are making for
15 services and elements at issue in this proceeding is contained in the attached Exhibit
16 AT&T MH-1. Through testimony presented in this case, the Joint Intervenors have the
17 following general policy and pricing recommendations.

- 18 1) The ACC must require Qwest to provide cost-based loop rates that reflect all
19 current information and updated information since the ACC first reviewed these
20 rates in 1997. Factors such as capacity utilization, more refined cost input factors,
21 sales of exchanges, capital structure factors, Qwest/U S WEST merger
22 efficiencies, and other issues as described later in my testimony and in the
23 testimony of Mr. Weiss must be used to update Qwest's loop, and other UNE

1 prices. The Joint Intervenors estimate that such a reduction will fall in the 50%
2 percent range. These factors have been incorporated into the Joint Intervenors'
3 proposed loop and other UNE rates. The current statewide average loop rate of
4 \$21.98 has not and will not lead to the development of any significant competition
5 in Arizona.

6 2) True deaveraging must be implemented for Qwest's loop prices in the course of
7 this docket. Current structures for deaveraging permit Qwest to charge CLECs
8 the same rate for a loop, regardless whether that loop is in downtown Phoenix,
9 close-in suburbs, or in less densely populated areas in the Phoenix valley. Most
10 of Qwest's access lines in Arizona are in cities and suburban areas. The
11 deaveraged zones must allow for meaningful competition, by basing them on the
12 proper cost distribution.

13 3) Qwest's switching rate must be reviewed to account for the productivity gains in
14 switching equipment over the last five years. In addition, this rate needs to be
15 adjusted for Qwest's intent to bifurcate signaling cost recovery from the switching
16 element. In contrast, the Commission must reject Qwest's proposal to adopt non-
17 cost based switching rates in some areas of Arizona.

18 4) The proposed collocation costs and price/rate structures of Qwest need to be re-
19 designed and lowered. Qwest has included costs in the nonrecurring rate element
20 that are excessive, inefficient, and result in discriminatory prices for collocators.

21 5) Non-recurring charges must be based on forward-looking efficient practices, not
22 on unreasonable inefficient practices as assumed in the Qwest non-recurring cost
23 estimates.

1 [W]e conclude here that prices for interconnection and unbundled
2 elements pursuant to Sections 251(c)(2), 251(c)(3), and 252(d)(1),
3 should be set at forward-looking long-run economic cost. In
4 practice, this will mean that prices are based on the TSLRIC of the
5 network element, which we will call Total Element Long Run
6 Incremental Cost (TELRIC), and will include a reasonable
7 allocation of forward-looking joint and common costs.²

8 The courts have also supported a TELRIC-based costing methodology. As one federal
9 court has explained:

10 [A forward-looking] methodology . . . facilitates rapid entry into
11 the local telephone market and thereby serves the overriding and
12 principal goal of the Act On the other hand, basing rates on
13 historical [or embedded] costs would severely undercut new
14 entrants For all these reasons, it is apparent that the [forward-
15 looking] methodology . . . not only comports with the
16 [Telecommunication Act], it is compelled by it.³

17 The FCC's pricing rules, which had been vacated by the United States Court of Appeals
18 for the Eighth Circuit on jurisdictional grounds at the time of this Commission's last cost
19 and pricing docket, were reinstated by the January 25, 1999 decision of the United States
20 Supreme Court. These rules, therefore, are binding on this Commission when
21 determining whether Qwest's UNE prices are cost-based in compliance with the Act.⁴

22 Additionally, economists almost uniformly agree that a "cost-based" methodology means
23 one that is based on forward-looking economic cost and is the appropriate methodology
24 to lead to the development of competition in the local exchange market in Arizona.⁵

25 **Q. DOES THE REINSTATEMENT OF THE FCC PRICING RULES HAVE AN**
26 **IMPACT IN EVALUATING QWEST'S PRICES FOR UNES,**

² *Id.*, ¶ 672.

³ *Southwestern Bell Telephone Co. v. AT&T Communications, Inc.*, No. A 97-CA132 SS, slip op. at 24 (W.D. TX. Aug. 31, 1998).

⁴ *AT&T Corp. v. Iowa Utilities Board*, 119 S. Ct. 721 (1999) ("Iowa Utils. Bd. III").

⁵ *Local Competition Order*, ¶ 630.

1 **INTERCONNECTION, COLLOCATION, NRCS AND RESALE?**

2 A. Yes. The FCC rules conclusively establish that interconnection and UNE rates may not
3 be based on Qwest's embedded costs and, consequently, that the Commission erred to the
4 extent that it used embedded costs in setting certain of the inputs used to calculate loop
5 prices. The FCC expressly concluded that network element prices should be set at
6 forward-looking economic cost-based on the TELRIC of the element and that embedded
7 or historical cost must not be included in a TELRIC analysis.⁶ The FCC was "not
8 persuaded by incumbent LEC arguments that prices for interconnection and unbundled
9 network elements must or should include any difference between the embedded costs
10 they have incurred to provide those elements and their current economic costs."⁷ Thus, in
11 its regulations, the FCC specified that network element prices must be set based on
12 forward-looking economic costs, that those prices must be measured based on the use of
13 the most efficient technology currently available, the lowest cost network configuration,
14 and that embedded costs may not be considered.⁸

15 A. **Economic and Business Analysis of the Interaction Between Pricing and**
16 **Competition**

17 Q. **CAN YOU BRIEFLY EXPLAIN HOW THESE PRICING RULES IMPACT THE**
18 **LEVEL OF COMPETITION IN ARIZONA?**

19 A. While sometimes confusing in the abstract, the TELRIC pricing principles are nothing
20 more than the application of free market pricing principles to an environment where free
21 markets do not exist. Most industries in this country have significant amounts of
22 competition so that no one party can dictate pricing to consumers of the product.

⁶ *Id.*, ¶¶ 621, 672-673.

⁷ *Id.*, ¶ 705.

⁸ 47 C.F.R. §§ 51.503(b)(1), 51.505(b)(1), 51.505(d)(1).

1 Consumers, when faced with multiple sources, will search for the lowest price for a given
2 product with a set of characteristics (quality, availability, features). Producers will be
3 forced to provide pricing at or below its competitors for that product with the same vector
4 of characteristics. Most importantly, producers will attempt to utilize the latest
5 technology and latest prices from its own suppliers to keep driving its prices lower for
6 that product with a defined set of characteristics. A useful example is the market for
7 desktop computers. In that case the typical customer has a product need represented by a
8 vector of characteristics for a computer, and the customer has a variety of producers to
9 choose from. Producers attempt to court that customer by providing computers with a
10 menu of characteristics at a price that is competitive with respect to other producers'
11 prices. By providing similar quality products at prices that are lower than their
12 competitors, producers can expand market share and profits.

13 Since the producers can avail themselves of the same component supply chains,
14 manufacturing locations and processes, and labor inputs, there is a fierce drive for
15 efficiency in that industry. Once some new level of efficiency develops in the production
16 process, it allows the first producer that implements it to reduce prices and capture more
17 market share and profit. Quickly the new efficiency works through the industry and all
18 producers implement it and lower product prices to a new level. Any producer that fails
19 to do that faces loss of sales and ultimate failure in the industry. Examples of the type of
20 efficiency introduction run the gamut from input price reductions (lower cost per memory
21 chip), new manufacturing techniques or location (migration to offshore manufacturing) to
22 distribution improvements (Web-based sales sites). In the end, pricing to customers
23 reflects the most current production process and set of input process at a given point in

1 time. Older inventory is written down to reflect new prices for current products in the
2 case of the goods market. In the case of the services market, new price points are
3 established for the service.

4 With TELRIC, the Congress and FCC were attempting to provide a pricing methodology
5 that would mimic the competitive markets pricing behavior – the lack of a competitive
6 market for local exchange products and services required a “second best” pricing
7 solution. Such an external solution was required since the incumbent local exchange
8 company (ILEC) is generally the only source of supply for services required by CLECs.
9 While in the long run alternative technologies might erode the monopoly position of
10 many of the ILECs services and offerings, for the foreseeable future (especially for the
11 CLEC planning horizon) the ILEC is the only source of supply. So in developing
12 TELRIC principles, the thrust was to require ILECs to sell services to CLECs at rates that
13 reflected the current states of input prices, technology, provisioning techniques, etc. If
14 this does not occur, the ILEC essentially discriminates against its wholesale customers by
15 charging them prices that are higher than the ILEC’s own resource costs for the similar
16 service. In the long run, such a practice would damage CLEC financial performance and
17 move them into the telecommunications company graveyard.⁹

18 **Q. IS IT THE JOINT INTERVENOR’S OPINION THAT COMPETITION CAN**
19 **FLOURISH UNDER THE EXISTING DOCKET U-3021-96-448 RATES AND THE**
20 **PROPOSED NEW RATES FROM QWEST IN THIS DOCKET?**

21 A. More than likely, the existing and newly proposed rates will certainly not accelerate

⁹ A host of emerging telecommunication firms, such as ICG Communications, RhythmsNet, Jato, and NorthPoint has either gone out of business or are in severe financial situations.

1 UNE-P based competition in the Arizona market. As discussed more fully in the
2 testimony of Mr. Gillan, the level of charges any CLEC would need to pay Qwest for the
3 rental of components of its network would not allow CLECs to match, much less price
4 below, Qwest for residential retail service. Moreover, the price squeeze is even more
5 drastic than demonstrated by Mr. Gillan's analysis, as that analysis does not even include
6 nonrecurring costs and other CLEC costs, like customer acquisition and advertising,
7 customer support functions, and billing costs. Reductions in the existing UNE and
8 Qwest's proposed rates would generally improve the financial analysis of entering the
9 market for residential customers and would also favor the development of UNE-P based
10 strategies for business market entry as well.

11 **Q. HOW DO THE UNE RATES IN ARIZONA INHIBIT COMPETITION?**

12 A. UNE prices set above cost limit mass-market competition, as explained in the testimony
13 of Mr. Gillan. Since it is unlikely for a competitor to duplicate Qwest's entire network in
14 the near term, properly priced UNEs at economic cost can facilitate competitive entry.
15 Mr. Gillan demonstrates that the current UNE rates make mass entry unprofitable. A
16 reduction of these rates to properly calculated TELRIC rates, as the Joint Intervenor's
17 recommend, would increase the potential margins of UNE-P based entry beyond the
18 negative margins that exist currently. Given Qwest's current aggregate financial
19 position, it would appear reductions in the UNE rates to economic costs, or TELRIC
20 would not damage Qwest's financial health.¹⁰

21 **Q. CAN YOU SUMMARIZE WHAT COSTS CLECS FACE WHEN ATTEMPTING**

¹⁰ See Qwest press release dated 1/24/2001 at www.qwest.com/about/media/pressroom Full proforma 2000 compared to proforma 1999: EBITDA grew more than 17 percent to \$7.4 billion, Revenue grew more than 14 percent to \$19 billion, EPS increased over 50 percent to \$0.59 from \$0.39.

1 **TO ENTER THE MARKET USING A UNE-P BASED STRATEGY?**

2 A. In the first instance, the CLEC must purchase a loop, a switch port, and shared transport
3 from Qwest. The charges for the loop, port and switch features are on a flat monthly
4 basis, but switching and the shared transport rates are based on the number of minutes the
5 CLEC subscriber uses on a monthly basis. A high volume user, for example, will require
6 a CLEC to reimburse Qwest at a higher level than a low volume user. In addition, Qwest
7 is requiring the CLEC to pay additional monthly fees for the ability to offer switch-based
8 features such as call waiting and caller ID. Although the cost of such features should be
9 part and parcel of the switching port element, Qwest is attempting to recover these
10 charges through other rate elements. Finally, Qwest will charge the CLEC nonrecurring
11 charges for UNE-P provisioning, OS/DA routing set-up, and recurring and non-recurring
12 charges for signaling and charges for billing.

13 In addition, the CLEC will need to account for its own costs associated with advertising,
14 customer acquisition and retention, billing and payments, engineering oversight, OS/DA,
15 and overall administration of customer accounts. The sum total of the direct charges the
16 CLEC pays to Qwest for element leases and set-up, and the internal costs it faces to win
17 customers and service their accounts comprise the total costs CLECs incur in rolling out
18 UNE-P based competition.

19 **B. Evaluation of Nonrecurring Charges**

20 **Q. WHY IS IT IMPORTANT TO EVALUATE THE EFFECT OF NONRECURRING**
21 **CHARGES ON THE DEVELOPMENT OF LOCAL COMPETITION?**

22 A. It is important to evaluate nonrecurring charges because, as stated by the FCC in its *Local*

1 *Competition Order*, NRCs can be an insurmountable barrier to entry if they are
2 excessive.¹¹

3 **Q. WHY IS THE PRICING FOR NRCS IMPORTANT FOR THE DEVELOPMENT**
4 **OF COMPETITIVE ALTERNATIVES TO QWEST'S TELECOMMUNICATION**
5 **SERVICES?**

6 A. Two main concerns are present in the NRC issue for pricing. First, the actual total of the
7 charges must relate directly to the efficiently incurred costs performed for the service.
8 Second, the structure of the prices to recover these costs must recognize the underlying
9 nature of the costs, as well as the marketplace realities the new entrant faces.

10 As a first condition for the proper pricing policy for NRCs, the costs¹² of these one-time
11 activities and the rates charged CLECs for these activities must be equal. If Qwest is able
12 to overcharge CLECs for these one time cost events, then it essentially costs the CLEC
13 more to provision a customer's service than it does for Qwest to service the same
14 customer. For example, if Qwest's nonrecurring charge for deploying UNE-P is 25
15 percent greater than the economic costs faced in that deployment, the CLEC either has a
16 lower margin on the service than Qwest, or the CLEC must charge a higher rate to its
17 end-user customer. The testimonies of Mr. Lathrop and Mr. Weiss will directly address
18 these issues.

19 The second condition for nonrecurring cost recovery and the proper pricing structure
20 involves the relationship between the timing of the costs and the timing of the charges.

¹¹ *Local Competition Order*, ¶ 749.

¹² "Cost" in this context includes a reasonable allocation of forward-looking joint and common costs and a reasonable profit.

1 This is most important in developing competitive alternatives to the existing services of
2 Qwest.

3 It must be remembered that today Qwest holds virtually the entire residential customer
4 base in Arizona, and a vast majority of the business base. CLECs, on the other hand,
5 must attempt to migrate customers away from Qwest, to their services. It would be
6 extremely difficult for CLECs to win over customers if those customers are faced with
7 high initial costs to transfer their services. Those customers would be faced with the
8 decision of paying nothing to stay with their incumbent provider, or paying some level of
9 nonrecurring charges to shift their services to a new entrant. Under such a structure, the
10 CLEC has very little ability to recover the nonrecurring charges Qwest is assessing
11 against them. Passing along the nonrecurring charges to new customers may minimize
12 the ability to entice customers to switch, and failure to pass along those charges leaves
13 the CLEC with lower, if any, margins. If CLECs embed those costs into the recurring
14 rates paid by end-user customers, CLECs run the risk of not recovering those charges if
15 the customer migrates back to the incumbent, or to another carrier, before full recovery
16 occurs.

17 Clearly Qwest has an incentive to maximize the level of nonrecurring charges in order to
18 hamper competition. That is why this Commission must strive to minimize the recovery
19 of costs through upfront charges. As stated above, the premise of TELRIC pricing is to
20 emulate the pricing levels and structure that would be in place if markets were fully
21 competitive. Under conditions that approach a competitive market, it is unlikely that any
22 market participant would seek to recover nonrecurring costs through one-time fees to new
23 customers. A quick examination of the wireless industry shows that although companies

1 have significant costs associated with attracting customers from other providers, the
2 charges assessed against new customers are minimal. Unfortunately, CLECs are in a
3 market where there is one provider of network elements for the bulk of the end user
4 population and that provider has the power to determine the structure and level of
5 nonrecurring charges.

6 In summary, it is the Joint Intervenor's recommendation that Qwest recover only
7 TELRIC-based costs from its nonrecurring charges, and that costs be truly nonrecurring
8 for that type of recovery. It must be remembered that many nonrecurring tasks are
9 actually performed on a regular basis and TELRIC-based cost recovery could occur from
10 recurring charges as well. Costs incurred by Qwest run in a full continuum in terms of
11 their regularity and timing. Moreover, this Commission should not forget that Qwest
12 recovers the one time costs associated with provisioning a loop to a customer's home
13 over the entire life of that loop. Likewise, the cost recovery of setting up a collocation
14 space or the set up charges for a transport circuit can be recovered through the monthly
15 recurring charges for those elements, if monthly recurring charges are structured
16 appropriately to prevent Qwest from recovering more than the forward-looking costs it
17 actually incurs to provide the elements.

18 **Q. WHAT GUIDANCE AND CAUTION HAS THE FCC PROVIDED FOR**
19 **NONRECURRING CHARGES?**

20 A. The FCC has made a number of comments on nonrecurring charges:

- 21 • The imposition of "...nonrecurring charges for recurring costs could pose a barrier
22 to entry because these charges may be excessive..."¹³

¹³ *Local Competition Order*, ¶ 747.

- 1 • The states may "...require incumbent LECs in an arbitrated agreement to recover
2 nonrecurring costs, costs that are incurred only once, through recurring charges
3 over a reasonable period of time."¹⁴
- 4 • The state commissions are required to "...take steps to ensure that incumbent
5 LECs do not recover nonrecurring costs twice and that nonrecurring charges are
6 imposed equitably among entrants."¹⁵
- 7 • The state commissions are required to "...ensure that nonrecurring charges
8 imposed by incumbent LECs are equitably allocated among entrants..."¹⁶

9 Additionally, the FCC allowed the recovery of nonrecurring charges through a recurring
10 charge. FCC Rule § 51.507(e) states:

11 State commissions may, where reasonable, require incumbent
12 LECs to recover nonrecurring costs through recurring charges over
13 a reasonable period of time. Nonrecurring charges shall be
14 allocated efficiently among requesting telecommunications
15 carriers, and shall not permit an incumbent LEC to recover more
16 than the total forward-looking economic cost of providing the
17 applicable element.¹⁷

18 With the Supreme Court decision reinstating the FCC's pricing rules, these rules and the
19 guidelines set forth in the *Local Competition Order* are binding when establishing prices
20 for interconnection and unbundled network elements, including nonrecurring charges.

21 **Q. WHAT PRICING METHODOLOGY SHOULD BE USED IN DETERMINING**
22 **THE RATES FOR NRCS?**

23 A. Nonrecurring charges should be developed using the same binding FCC costing and
24 pricing methodology applied to recurring rates. NRCs should be based on forward-
25 looking economic cost principles that are defined as the sum of TELRIC plus a
26 reasonable allocation of forward-looking common cost. TELRIC must be based on an

¹⁴ *Id.*, ¶ 749.

¹⁵ *Id.*, ¶ 750.

¹⁶ *Id.*, ¶ 751.

¹⁷ 47 C.F.R. § 51.507(e).

1 efficient network configuration and use a forward-looking cost of capital and
2 depreciation rates.¹⁸

3 State commissions in other jurisdictions have supported this. For example, in a
4 nonrecurring cost proceeding in Oregon, the Commission stated:

5 In summary, the Commission finds that the nonrecurring costs
6 adopted in this docket should be based on the same TSLRIC
7 methodology used to develop recurring building block costs
8 (UNEs) and prices. Nonrecurring costs should not be based on the
9 ILECs' historic, embedded costs.¹⁹

10 Additionally, the Oregon Commission found NRCs should be based on an automated
11 system using electronic OSS.²⁰ The Commission stated:

12 In addition to concluding that the technology to produce fully
13 automated interfaces is available, it is clear that such interfaces
14 must be implemented if new entrants are to have a meaningful
15 opportunity to compete in the local exchange markets. In our
16 estimation, it is reasonable to assume that a well-managed and
17 maintained OSS will allow unbundled element orders to flow
18 through at the 98 percent rate recommended by Ms. Petti.
19 Accordingly, we find that the revised nonrecurring cost studies
20 developed in accordance with this order should incorporate this
21 level of flow through for all electronically submitted orders.²¹

22 The prices for NRCs proposed in Qwest's SGAT do not meet these criteria. The majority
23 are based on Qwest's unverified cost estimates and these are not forward-looking
24 economic costs as required by the FCC.

25 **Q. ARE THERE SPECIFIC EXAMPLES OF NONRECURRING CHARGES THAT**
26 **APPEAR TO BE EXCESSIVE?**

27 A. While the bulk of the analysis on NRCs can be found in the testimony of Mr. Roy

¹⁸ *Id.*, § 51.505(b).

¹⁹ *Oregon Order* at 59.

²⁰ *Id.* at 69.

²¹ *Id.*, at 70-71.

1 Lathrop, the sponsor of the AT&T/WorldCom NRC model, a few charges are worth
2 highlighting in light of the previous discussion. For example, the cageless collocation
3 quote fee is \$4,380.68. This is the fee Qwest would like to charge collocators who wish
4 to place a rack of equipment in Qwest's central office. This fee is ostensibly for the costs
5 Qwest incurs in preparing the cost estimate for the collocator for using the space. Such a
6 charge appears on its face to be excessive, given that the placement of collocation
7 equipment is rather routine and has been performed hundreds of time by Qwest. One
8 would expect that such quote preparation activities would be more efficient in terms of
9 the time and labor that is devoted to such a function. After appropriate adjustments made
10 by Mr. Lathrop, the Joint Intervenor's proposal for this rate element is \$857.13.
11 Examples of other rates that would place financial constraints on the development of
12 UNE based competition include Qwest's proposed \$120.90 charge for the NRC
13 associated with subloop, and the \$144.93 charge associated with the provisioning of a
14 line side switch port. These are only meant to be selected examples. The Joint
15 Intervenors present alternative charges that are based on more efficient practices in the
16 testimony of Mr. Lathrop.

17 **C. Loop Conditioning**

18 **Q. IF ASKED TO PROVIDE AN EXAMPLE OF ONLY *ONE* NRC THAT COULD**
19 **HAVE THE EFFECT OF PREVENTING UNE-BASED COMPETITION FOR**
20 **THE PROVISION OF XDSL SERVICES, WHAT WOULD IT BE?**

21 A. Obviously any prohibitively priced NRC could have the effect of preventing competition
22 generally. Specifically, however, the extinction of xDSL competition is assured if
23 incumbents are allowed to continue to impose massive nonrecurring charges for line

1 conditioning. Qwest's current (\$114.80 per line) and proposed (\$649.98 per binder
2 group) prices are so excessive that it would take literally *years* for a CLEC to recover
3 those costs from its own customers. Furthermore, these charges are egregious not only
4 because of their sheer magnitude, but also because they constitute a naked attempt to
5 recover the cost of Qwest's network upgrades solely to the detriment of its competitors.

6 **Q. ISN'T IT TRUE THAT THE FCC HAS ALLOWED FOR ILEC LOOP**
7 **CONDITIONING COST RECOVERY?**

8 A. Yes, but the FCC's allowance is conditional and lacks clear guidance. As a result,
9 pricing across the states reflects a range of inquiry and degrees of fidelity with TELRIC
10 requirements.

11 For example, in the Line Sharing Order, the FCC stated that the ILEC may recover its
12 cost of line conditioning--where permitted presumably where permitted by state
13 commission order.²² Second, in the UNE Remand Order, the FCC stated that LECs could
14 recover the costs of conditioning, but at prices and structures that are consistent with FCC
15 pricing principles for nonrecurring costs.²³ In doing so, however, the FCC also
16 recognized that "incumbent LECs may have an incentive to inflate the charge for
17 conditioning and thereby create a barrier to [competitive LECs] offering xDSL
18 services"²⁴. Again, the inference is that state commissions will be the decision makers
19 about whether or not such charges are warranted in the first instance.

²² In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, et. al., CC Docket 98-147, et. al., Third Report and Order in CC Docket No. 98-147 Fourth Report and Order in CC Docket No. 96-98, Released December 9, 1999, at ¶ 148 ("Line Sharing Order").

²³ In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, Released November 5, 1999 at ¶ 194 ("UNE Remand Order").

²⁴ Id.

1 **Q. DO CHARGES FOR LOOP CONDITIONING INDICATE A FUNDAMENTAL**
2 **MISAPPLICATION OF TELRIC?**

3 A. Yes. Under the FCC's TELRIC rules, the relevant costs are, in pertinent part, those of the
4 "reconstructed local network [that] will employ the most efficient technology."²⁵

5 Therefore, Qwest may only recover from new entrants the costs that it would incur if it
6 had constructed the local network from the ground up using the most efficient design and
7 technology. ILECs, including Qwest, generally concede that such a network would not
8 contain *any* line disturbers (e.g., load coils, bridge taps, repeaters, etc.).²⁶

9 **Q. HAVE SOME OF STATES REJECTED THE LOOP CONDITIONING NRC FOR**
10 **THE REASONS YOU HAVE PROVIDED THE ACC?**

11 A. Yes. Minnesota, consistent with forward-looking network and cost principles, has
12 determined that loop conditioning is not appropriate in a forward-looking network, and
13 thus, has disallowed any cost recovery for loop conditioning.²⁷ Oregon found Qwest to
14 be double recovering the cost of line conditioning -- once in an NRC and again in the
15 recurring loop cost. The commission recognized that "the labor costs associated with
16 unbundling loops are currently included in the maintenance factor used to develop
17 recurring costs." As a result, the Oregon Commission also disallowed Qwest's proposed

²⁵ *Local Competition Order* ¶685.

²⁶ Public Notice, *Mpower Communications Corp., Files Petition for Expedited Declaratory Ruling on TELRIC Pricing Standards for Loop Conditioning Charges*, CCB/CPD No. 01-06 (released March 12, 2001). See comments of Bell South and Verizon

²⁷ In the Matter of a Generic Investigation of U S West Communications, Inc.'s Cost of providing Interconnection and Unbundled Network Elements, et.al., Docket No. P-442,5321,3167,466,421/CI-96-1540, et.al., Order Granting Reconsideration, Setting Prices and Ordering Compliance Filing, Proceeding, March 15, 2000, at 6.

1 NRC for loop conditioning and in doing so reduced it from \$597.61 to \$0.00.²⁸ Utah has
2 likewise disallowed line conditioning charges.²⁹

3 **Q. HAS LOOP CONDITIONING HAD A DISCERNABLE EFFECT ON THE**
4 **DEVELOPMENT OF XDSL COMPETITION?**

5 A. It appears so. The anti-competitive barrier to entry is plainly evident in the marketplace;
6 competition for xDSL service is minimal and competing providers have been financially
7 crippled. Data LECs are already quickly disappearing even as Qwest itself boldly touts
8 the risks to consumers inherent in selecting a competitor for DSL service.³⁰

9 **Q. WHAT SHOULD BE THE PRICE OF LOOP CONDITIONING?**

10 A. There should be no charge for loop conditioning. There is no justification for this rate
11 element or its rate in a forward-looking network. The only practical effect of such a
12 charge, regardless of magnitude, is to saddle CLEC customers, in the event there are any,
13 with upgrades to the ILEC network and /or to prevent competition with the ILEC in the
14 first instance. Moreover, if the charge has been "hidden" in the maintenance factor used
15 to develop recurring loop costs, as appears to be the case, the rate proposed by Qwest in
16 Arizona -- \$649.98 -- constitutes blatant double recovery.

17 **Q. ARE THERE ANY NRCS PROPOSED BY QWEST FOR THE FIRST TIME IN**
18 **THIS PROCEEDING THAT ARE SPECIFICALLY DESIGNED TO PREVENT**

²⁸ Oregon Public Utility Commission Order No. 98-444 in Dockets Nos. UT-138 and UT-139, entered November 13, 1998. An electronic copy of this decision is available at http://www.puc.state.or.us/orders/1998ords/98-444.htm#_Toc435505293.

²⁹ In the Matter of an Investigation Into Collocation and Expanded Interconnection, Docket No. 94-999-01 Phase III Part C Report and Order, June 2, 1999 at 13.

³⁰ Attached to this testimony as Exhibit AT&T MH-2 is the copy of a recent advertising campaign for QWEST's DSL service.

1 **FACILITIES-BASED COMPETITION IN ARIZONA?**

2 A. Yes. Qwest has proposed a quote preparation fee of \$1,631.67 for a Field Connection
3 Point (FCP). This rate element is specifically targeted to prevent facilities based
4 competition from reaching Arizonans currently living in multiple dwelling units (MDUs).

5 **Q. WHAT IS A FIELD CONNECTION POINT AND WHY WOULD IT PREVENT**
6 **FACILITIES-BASED COMPETITION?**

7 A. As proposed by Qwest, a FCP is simultaneously a *dictated* single point of interconnection
8 (SPOI) and an *intermediate* distribution frame to be constructed *solely for CLECs*
9 wishing to access on-premises wiring located in multiple dwelling or multi-tenant
10 buildings.³¹ As such, it is problematic on two levels. First, as a Qwest-dictated SPOI, it
11 flies in the face of the FCC's mandate that interconnection be permitted at any technically
12 feasible point.³² Second, it is entirely *unnecessary* from a network standpoint, thus it is by
13 definition, discriminatory, hence anti-competitive. Said differently, it imposes material
14 and labor costs on CLECs (and their customers) that ILECs avoid when serving their own
15 retail customers. Moreover it creates, again unnecessarily, additional points of network
16 failure.

17 **Q. WHAT WOULD BE THE IMPACT ON CONSUMER CHOICE IN ARIZONA IF**
18 **THE FCP AND ITS PROPOSED RATE WERE ADOPTED?**

19 A. Potentially, Qwest's proposal could deny approximately 30% of Arizona's residential
20 households a choice of local service provider.

³¹ On-premises wiring is that last few feet of wiring at a customer's location that is owned or controlled by Qwest. It is *not* the case that in all instances this wire is owned or controlled by Qwest. It may in fact be owned by the ILEC, the building owner, or the resident. More about this under the discussion of recurring rates proposed in this docket.

³² UNE Remand at ¶ 207.

1 **Q. 30% OF ARIZONA'S RESIDENTIAL HOUSEHOLDS IS SIGNIFICANT.**

2 **PLEASE EXPLAIN FURTHER.**

3 A. Certainly. It is no secret that thus far, average consumers are the "losers" in the effort to
4 open local markets to competition. There is, however, one significant group of
5 *residential* consumers that are correctly identified by the FCC as ripe for competition --
6 those inhabiting multiple dwelling units (MDUs).³³ In fact, according to the most
7 recently published U.S. Census data, 29% of households nationwide are in MDUs.
8 Currently, there are about 105 million residential households in the United States, which
9 means that more than 30 million households are located in MDUs.³⁴ In Arizona, there
10 are approximately .5 million households in MDUs.³⁵

11 **Q. WHAT IS THE DIFFERENCE BETWEEN A SPOI, AS CONTEMPLATED BY**
12 **THE FCC, AND THE FCP AS RECOMMENDED BY QWEST?**

13 A. Technically none. The distinction, however, is whether Qwest can unilaterally dictate the
14 use of an SPOI (a) whether or not a SPOI is *requested* by the CLEC or (b) need for a
15 SPOI arises because there is not currently a single point of interconnection that can
16 feasibly be accessed by a requesting carrier.³⁶ Nevertheless, the use of the SPOI or any
17 other technically feasible point of interconnection, is the choice of the competitor not the
18 dictate of the incumbent. Clearly this is embodied in the language of 47 CFR 51.319
19 (a)(2)(E), "This obligation [to provide a SPOI] is in addition to the incumbent LEC's

³³ In the Matter of Promotion of Competitive Networks in Local Telecommunications Markets, et. al., WT Docket No. 99-17, et. al., First Report and Order and Further Notice of Proposed Rulemaking in WT Docket No. 99-217, Fifth Report and Order and Memorandum Opinion and Order in CC Docket No. 96-98, and Fourth Report and Order and Memorandum Opinion and Order in CC Docket No. 88-57, Released October 25, 2000 at ¶ 12-23 ("Building Access Order").

³⁴ U.S. Census Bureau, Historical Census of Housing Tables, Units in Structure.

³⁵ Id.

³⁶ UNE Remand Order at § 226.

1 obligation to provide nondiscriminatory access to subloops at any technically feasible
2 point.³⁷

3 **Q. MAY QWEST UNILATERALLY DEPLOY A SPOI AND THEN REQUIRE**
4 **THAT A CLEC UTILIZE AND/OR PAY FOR THE ARRANGEMENT?**

5 A. No. Not unless the CLEC has agreed to use the SPOI.

6 **Q. WHY IS THE FCP AS DICTATED BY QWEST UNNECESSARY?**

7 A. As a general rule, a CLEC, for example will seek to access the on-premises wiring
8 element at the first cross-connect device on the facility after the facility crosses the
9 property line.³⁸ Generally, the cross connection device that a CLEC would access will be
10 on the exterior of the building or in the telecommunications room within the building,
11 typically the basement.

12 **IV. RE-EXAMINATION OF DOCKET NO. U-3021-96-448 ET. AL. RATES**

13 **Q. WHY SHOULD THIS COMMISSION RESET THE UNE RATES ESTABLISHED**
14 **IN DOCKET NO. U3021-96-448 ET AL?**

15 A. There are a number of reasons this Commission should reset the UNE rates established in
16 U-3021-96-448 *et al*:

- 17 1) The current unbundled network element rates are above cost and inhibit
18 competition. This issue is discussed more fully in Mr. Gillan's testimony.
- 19 2) The Decision by the Commission that established these rates is almost four years
20 old, and the underlying data contained in the Qwest models that were filed in

³⁷ 47 C.F.R. §51.319(a)(2)(E).

³⁸ The name given to the cross connection device is not really important (i.e., whether or not it is a NID or the Minimum Point of Entry (MPOE) because a cross-connection device has been declared a technically feasible point for subloop access. See UNE Remand Order, ¶ 206.

1 support of those rates are at least five years old. Dramatic changes have occurred
2 in the telecommunications industry and in the state of Arizona that would affect
3 UNE cost estimates:

- 4 • Demand on Qwest's network has increased dramatically, thereby lowering
5 per unit costs of many elements. In Arizona, it is apparent that population,
6 number of access lines, and densities have grown since the mid-1990's.
- 7 • Qwest has experienced significant cost reductions through productivity
8 gains and efficiencies. These take the form of normal technological
9 advances as well as discrete events like the sale of rural exchanges and
10 scale efficiencies from the Qwest/U S WEST merger.
- 11 • Normal economies of scale and reduced input prices stemming from
12 telecommunication product and service companies must be examined for
13 the impact they have on Qwest UNE costs.
- 14 • The inputs modified by the Commission in U-3021-96-448 resulted in an
15 overstatement of cost.
- 16 • The current deaveraged zones do not reflect the true density-related costs
17 of providing telephone services, and as such do not promote efficient
18 competition.

19 **Q. HOW DO THE ARIZONA UNE RATES FOR THESE ELEMENTS COMPARE**
20 **TO THE RATES FOR OTHER STATES IN QWEST REGION?**

21 A. The chart below compares the UNE rates for loop, switch port, switch usage, and shared
22 transport across Qwest's region. The rates in Arizona should be among the lowest in the
23 region. Arizona is the largest state in terms of customer loops.³⁹ While it may be the
24 case that Qwest does have some rural, high cost territory left in Arizona, it has sold much
25 of that territory and currently has a sale pending for an additional 38 wire centers in
26 Arizona. Moreover, the bulk of the access lines and resulting investment can be found in
27 the metropolitan areas of the Phoenix valley and Tucson. As such, Qwest's actual
28 concentration of capital investment in Arizona reflects a more urban-orientated dispersion

³⁹ FCC Statistics of Common Carriers, Table 5-1, August 2000.

1 than a rural one. In fact, according to 1992 Census figures, Arizona had 87 percent of its
 2 population residing in urban areas.⁴⁰ That concentration is one of the highest in the
 3 nation, higher than Maryland, Connecticut, Pennsylvania, Ohio, and Texas. Arizona
 4 ranks among the highest in both UNE loop and UNE switching usage costs. Arizona's
 5 switch port charges are also high when features charges are factored into the analysis.

UNE Rate Comparison – Qwest Region					
	Loop	Switch Port	Includes Features?	Switch Usage	Shared Transport
Arizona ¹	\$21.98	\$1.61	Yes	\$0.00280	N/A
Rank	3rd highest	2nd highest-most include Features		6th highest	
Colorado	\$20.65	\$1.15	No	\$0.00283	N/A
Idaho	\$25.52	\$1.34	Yes	\$0.00290	N/A
Iowa ²	\$20.15	\$1.15	No	\$0.00213	\$0.00134
Minnesota	\$17.87	\$1.08	Yes	\$0.00181	\$0.00148
Montana ³	\$27.41	\$1.45	Yes	\$0.00290	N/A
Nebraska	\$15.79	\$1.95	Yes	\$0.00300	N/A
New Mexico	\$20.50	\$1.38	Yes	\$0.00111	\$0.00034
North Dakota	\$19.75	\$1.27	Yes	\$0.00250	N/A
Oregon	\$15.00	\$1.14	No	\$0.00133	N/A
South Dakota	\$21.09	\$1.84	No	\$0.00347	N/A
Utah	\$16.45	\$0.92	No	\$0.00246	N/A
Washington	\$18.16	\$1.34	Yes	\$0.00120	\$0.00066 ⁴
Wyoming	\$25.65	\$1.53	No	\$0.00375	N/A
¹ Currently has a docket open that will revisit these rates.					
² The Courts remanded these rates back to the Commission determining that they do not comply with TELRIC.					
³ Currently has a docket open that is revisiting these rates.					
⁴ If shared transport is purchased at a DS0 capacity the rate is \$0.00217					

⁴⁰ *The Sprawling of America: In Defense of the Dynamic City*, Samuel R. Staley, Ph.D., Reason Public Policy Institute, February 1999.

1 **Q. HOW DO THE UNE RATES IN ARIZONA INHIBIT COMPETITION?**

2 A. UNE prices set above forward-looking economic cost limit mass-market competition, as
3 explained in the testimony of Mr. Gillan. Since it is unlikely for a competitor to duplicate
4 Qwest's network in the near future, properly priced UNEs can facilitate competitive
5 entry. Mr. Gillan demonstrates that the current UNE rates make mass entry unprofitable.
6 This is an indication that the current rates are set too high, since Qwest is quite profitable.

7 **Q. DON'T THE JOINT INTERVENORS SIMPLY WANT UNE RATES THAT ARE**
8 **AS LOW AS POSSIBLE?**

9 A. No. It is in the industry's interest to have UNE rates properly set based on economic
10 cost, but not below. Below cost UNEs would send the wrong pricing signals to industry
11 participants and distort investment vs. lease decisions. Cost based rates properly reflect
12 the underlying economic cost and send the appropriate signals to CLECs on the most
13 efficient method of entry. Prices that are set too high, not only inhibit mass-market
14 competition, but also can send the wrong economic signals to the market on the most
15 efficient entry strategies. It is in the interest of efficient competition to price UNEs based
16 on their underlying economic cost.

17 **Q. ARE THE RATES ESTABLISHED BY THE COMMISSION IN DOCKET NO. U-**
18 **3021-96-448 RIPE FOR REVIEW?**

19 A. Yes. The Commission Order in Docket No. U-3021-96-448 was adopted almost four
20 years ago in January of 1998, based on arbitrations held in late 1996. The cost studies
21 used by Arizona in decision U-3021-96-448 are one of the oldest setting current UNE
22 rates in the region.

1 An old decision by itself would not be a sufficient reason to review UNE rates. The
2 evidence here, however, is that much has changed over the past few years in
3 telecommunications market, and in Arizona. UNE-based competition has failed to
4 rapidly develop, in large part due to UNE rates that are priced above cost.⁴¹ Updated
5 UNE cost estimates will result in lower costs because demand has significantly increased
6 in this state. Qwest has executed sales of exchanges and has plans to complete more
7 sales of high cost exchanges. As sales are completed, Qwest's average UNE costs fall
8 due to the removal of high cost properties. Also, such sales would have impacts on any
9 TELRIC-based distribution of deaveraged rates. UNE cost estimates should decrease due
10 to productivity and efficiency gains that Qwest has experienced. All of these factors
11 combined demonstrate that the present network element prices do not comply with
12 TELRIC.

13 **A. Growth in Demand**

14 **Q. HOW DOES THE PHENOMENAL GROWTH EXPERIENCED IN ARIZONA**
15 **AFFECT UNE COST ESTIMATES?**

16 A. Costs in the telecommunications industry are largely driven by the volumes placed over
17 the network. The cost of virtually every non-usage sensitive component in the network is
18 reduced, on a per line basis, as the number of revenue producing lines increases.

19 Likewise the cost of virtually every usage sensitive component decreases, on a per minute
20 basis, as more minutes are placed on the network.

21 Arizona is one of the fastest growing states in the country and the fastest in Qwest's

⁴¹ In addition, Qwest until mid-2000 exercised every opportunity to preclude CLECs from ordering UNE-P, arguing that it was not responsible for providing combined UNEs.

1 region. Qwest's switched line counts have increased by more than a half million lines, or
2 than 23%, since the end of year 1996 -- the period on which previous cost studies were
3 based. Special access line counts have almost doubled, increasing by 78%⁴², in that time
4 period. In addition, the FCC determined that approximately 65 percent of all new
5 residential line growth is due to a customer ordering a second line.⁴³ The additional costs
6 of a second line are almost zero since the pathways and facilities are already in place.

7 Accompanied by the growth in line counts has been a growth in minutes. From 1996 to
8 2000, growth in minutes over the Qwest network has been approximately 60 percent.

9 This level of growth would decrease the per-unit costs of switching and transport costs.⁴⁴

10 **B. Sale of Exchanges**

11 **Q. WHAT IS THE COST IMPACT OF QWEST'S PENDING SALE OF**
12 **EXCHANGES TO CITIZENS?**

13 A. Qwest is in the process of selling a number of wire centers to Citizens. These wire
14 centers account for 5.7% of Qwest's total lines, but 14.7% of Qwest's total cost. When
15 this sale is complete, Qwest's loop cost should be adjusted to account for the fact that
16 Qwest no longer operates these relatively high cost exchanges.

17 **C. Productivity and Efficiency Gains**

18 **Q. WOULD YOU EXPECT TO SEE COSTS FALL OVER TIME DUE TO**
19 **INCREASES IN PRODUCTIVITY?**

20 A. Yes. Productivity is the measure of output relative to inputs. Reductions in input prices,

⁴² Line count growth data is taken from ARMIS reports 43-08.

⁴³ *In the Matter of Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Order (Adopted December 7, 2000, at ¶ 12.

⁴⁴ FCC ARMIS Reports, 1996, 1999, Estimated 2000.

1 increased productivity from inputs, and more efficient use of inputs will cause
2 productivity to increase. Input prices for fiber cable and electronic equipment, including
3 switches have been falling.

4 The FCC, under its price cap regulation of Qwest and other large local exchange carriers,
5 has recognized that LECs have become more productive over time.⁴⁵ The FCC used a
6 productivity factor, called the X-factor, to adjust the prices of baskets of access services
7 offered by incumbent carriers, such as Qwest. The most recent productivity factor
8 adopted by the FCC was 6.5% annually. This would result in total productivity gains
9 since the prior cost order of 28.6%. Adjusting this for inflation (approximately 2.5% per
10 year) as was done under the FCC's price cap regulation, the net productivity gains would
11 be 4% a year or 17.0% compounded over the last four years. While these productivity
12 measures were part of the interstate access regulatory mechanism, the productivity
13 measures relate to many items important in this docket, including switching and
14 transport/interconnection. Moreover, the X-factor was used by the FCC to deal with LEC
15 recovery of the interstate portion of the loop.

16 Some of these gains in productivity can be seen in a review of Qwest's ARMIS data.
17 Network Operations Expenses⁴⁶ across Qwest's region fell by about 30% per line from
18 1996 to 2000. Qwest's Network Expense⁴⁷ fell by approximately 8%. Network service

⁴⁵ The price cap regulation rules were replaced with the recent CALLS proposal. The CALLS proposal also recognizes that ILECs will experience significant productivity gains.

⁴⁶ This includes expenses on Engineering, Network Administration, Plant Operations Administration, Power, Provisioning, and Testing.

⁴⁷ This includes the accounts of Digital Electronic Switching, Circuit Equipment, Central Office Transmission, Public Telephone Terminal Equipment, Other Terminal Equipment, Poles, Aerial Cable, Underground Cable, Buried Cable, Intra Building Network Cable, Aerial Wire and Conduit.

1 expense⁴⁸ decreased by almost 30% and variable overhead accounts⁴⁹ fell by 7% despite
2 a 60% increase in Legal and External Relations expenses.

3 **Q. HAS QWEST PRODUCED ESTIMATES OF ITS OVERALL MERGER**
4 **EFFICIENCIES?**

5 A. Yes. In its press release announcing the merger on July 18, 1999, Qwest and U S WEST
6 made the following statement:

7 The combined company expects to realize revenue synergies of
8 \$12 billion over a five- and-one-half-year period after closing.
9 There also would be financial and operational scale and scope
10 through lower unit costs realized by serving an expanding base of
11 more than 29 million customers, including U.S. and European
12 multinational firms. It is expected that the combination will be
13 accretive to Qwest's earnings per share in the first year following
14 completion of the transaction.⁵⁰

15 Qwest's costs and resulting UNE prices should reflect the results of the efficiencies
16 gained and lower unit costs related to the merger.

17 **Q. WHAT WOULD BE THE ESTIMATED IMPACT OF THE CHANGES**
18 **EXPERIENCED IN ARIZONA ON THE COMMISSION'S PREVIOUS**
19 **DECISION FOR APPROPRIATE LOOP COSTS AND OTHER UNE COSTS?**

20 A. The combination of changes in costs due to line growth, sale of exchanges, productivity,
21 and increased efficiencies due to the merger could result in a reduction in the
22 Commission's estimated range for the appropriate loop cost of up to 40%. The Joint
23 Intervenors would expect to this Commission to find the range of loop costs to be much
24 lower than it found in 1998. Cost for other UNEs should also decrease significantly.

⁴⁸ This includes aircraft, motor vehicles, and tools and other work equipment.

⁴⁹ This includes Accounting & Finance, Executive, External Relations, Human Resources, Information Management, Legal, Other General & Administrative, Planning, Procurement and Research & Development.

⁵⁰ Qwest Press Release, Qwest Communications International, Inc., July 18, 1999.

1 **V. REBUTTAL ISSUES TO NEW QWEST RATES AND COSTS**

2 **Q. WHAT PRICING ISSUES WILL YOU ADDRESS WITH RESPECT TO THE**
3 **NEW RATES FILED BY QWEST IN THIS CASE?**

4 A. Overall I will raise questions with respect to these prices in several areas: (a) cost support
5 for these proposed new rates and rate elements; (b) the inability of CLECs to track the
6 relationship between these new rates and the underlying costs that are already recovered
7 under the existing rates; (c) and what appear to be the establishment of a precedent that
8 will enable Qwest to double-recover the effects of inflation in future UNE cost
9 proceedings

10 A. **Cost Support for Qwest's New Rates**

11 **Q. WHAT ARE THE CURRENT PRICES PROPOSED BY QWEST FOR UNES,**
12 **INTERCONNECTION AND COLLOCATION?**

13 A. That is not entirely clear. The problem is this price list is inconsistent with Qwest's
14 Exhibit A price list in the Arizona 271 proceeding, Docket No. T-00000B-97-238. The
15 inconsistencies are in the rates themselves and in rate design. To demonstrate the
16 problem, attached to my testimony is Exhibit MH-1. This exhibit provides the rates from
17 Qwest's Arizona 271 proceeding in column one and in column two, the rates attached to
18 Ms. Arnold's testimony provided in this proceeding. There are numerous inconsistencies
19 in rates and it is unclear how this will be resolved. It appears that as the Arizona 271
20 proceeding continues, this will be an ongoing issue as Qwest updates rates and rate
21 elements throughout the 271 process.

22 The purpose of this docket is to establish prices for UNEs, interconnection and
23 collocation in accordance with the requirements of Sections 251(c)(3) and 252(d)(1)

1 which require nondiscriminatory access to network elements in order to establish Qwest's
2 compliance with Section 271(c)(2)(B)(ii). It is unclear how this can be done with the
3 current and ongoing inconsistencies between Qwest's proposed rates in this docket and
4 the Arizona 271 proceeding.

5 **Q. MOST OF THE SGAT RATES QWEST PROPOSES ARE IDENTICAL TO OR**
6 **HIGHER THAN THE CORRESPONDING VALUES APPROVED IN THE**
7 **PREVIOUS COST PROCEEDING. IS IT REASONABLE TO EXPECT THAT A**
8 **CONTEMPORARY TELRIC STUDY WOULD PRODUCE COSTS IDENTICAL**
9 **TO OR HIGHER THAN THOSE IT WOULD HAVE PRODUCED FOUR YEARS**
10 **PREVIOUSLY?**

11 A. No. It is beyond reason to expect that a TELRIC study completed using current
12 investment and expense figures for a forward-looking network would produce the same
13 or higher results as a corresponding study four years ago. Over the intervening four years
14 since these rates were established, the market for telecommunications equipment has
15 expanded profoundly. As Mr. Gillan's testimony notes, nearly \$60 billion has been
16 invested in CLECs alone, and this total augments the very large continuing investments
17 the ILECs have made in network equipment.

18 Not only has a buyers' market existed for telecommunications equipment since the 1998
19 rates were approved, performance of network electronic equipment such as switches and
20 transmission devices have greatly increased. Switches, for example, benefit from the
21 same advances in processor technology that have profoundly improved the performance
22 of personal computers over the past several years. Improved performance naturally
23 results in lower operating costs and furthermore can lead to reduced investment. Qwest's

1 insistence on stagnant and inflated prices in the face of favorable equipment markets and
2 declining operating costs is at best unrealistic.

3 **Q. HAS QWEST FILED ANY DATA SUGGESTING THAT INVESTMENTS HAVE**
4 **DECLINED SINCE THE PREVIOUS ACC ORDER?**

5 A. Yes. Exhibits filed in support of the current Qwest testimony show that many
6 investments have decreased from their previous values. Digital cross connect (DCS)
7 investment, for example, has dropped by more than fifty percent. As another example,
8 underground fiber cable investment per foot has dropped about ten percent. Both of these
9 investments affect loop as well as transmission costs, yet the SGAT rates proposed by
10 Qwest in this proceeding do not reflect these decreases.

11 **Q. ARE THERE FACTORS INCLUDED IN QWEST'S EARLIER COST STUDIES**
12 **OR ITS STUDIES PURPORTING TO SUPPORT THE SGAT RATES THAT ARE**
13 **NOT FORWARD-LOOKING?**

14 A. Yes. The FCC has issued a Report and Order (the "Inputs Order") specifying the inputs
15 to be used in its Synthesis Model.⁵¹ The values specified in the Order result from an
16 extensive investigation of appropriate investments, operating expenses, and other cost-
17 related parameters to be used in the computation of forward-looking service costs. A
18 wide range of entities, including ILECs (Bell companies as well as independents),
19 CLECs, IXC, equipment vendors, and others participated in the workshops held by the
20 FCC to consider suitable input values. Among other items, the FCC considered outside
21 plant design, switching and interoffice equipment and facilities, and general support

⁵¹ *In the Matter of Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Tenth Report and Order, and *In the Matter of Forward-Looking Mechanism for High Cost Support for Non-Rural LECs*, CC Docket No. 97-160, (released November 2, 1999).

1 facilities (GSF) and expense issues in its input development process. In its set of outside
2 plant parameters, the Order specifies fill factors for distribution and feeder cables.

3 Cable fill factors, when used in a cost model, control the fraction of spare wire pairs or
4 fiber strands in feeder and distribution cables needed to accommodate testing and repair
5 as well as some nominal amount of growth. As the FCC notes in its Inputs Order:

6 If cable fill factors are set too high, the cable will have insufficient
7 capacity to accommodate small increases in demand or service
8 outages. In contrast, if cable fill factors are set too low, the
9 network could have considerable excess capacity. While carriers
10 may choose to build excess capacity for a variety of reasons, it is
11 necessary to determine the appropriate cable fill factors for use in
12 the federal mechanism. We also explained that, if the fill factors
13 are too low, the resulting excess capacity would increase the
14 model's cost estimates to levels higher than an efficient firm's
15 costs, potentially resulting in excessive universal service support
16 payments.⁵²

17 Loop costs are very sensitive to changes in fill factors, particularly those for distribution
18 cables, as one might expect. The distribution fill factors for copper cable used by Qwest
19 are considerably lower than the FCC's values. Qwest's failure to use appropriately
20 forward-looking fill factors, particularly those specified by a neutral agency, leads to
21 unsupportable high loop UNE prices.

22 **Q. WHAT OTHER EXAMPLES ARE THERE OF VALUES USED BY QWEST IN**
23 **THEIR COST STUDIES THAT DIFFER FROM THE FCC'S FORWARD-**
24 **LOOKING VALUES?**

25 A. There are numerous differences between the FCC's forward-looking values and those
26 advanced by Qwest in support of its SGAT rates. Aside from fill factors, however, one

⁵² Id., ¶ 186.

1 of the most important examples is structure sharing.

2 Structure sharing refers to the fact that outside plant “structures” such as poles, conduit,
3 and trenches often simultaneously support cables owned by various service providers,
4 including telephone companies (ILECs as well as CLECs), cable television system
5 operators, electric utility companies, and possibly others. The fact that multiple entities
6 share these facilities means that the cost of constructing and maintaining them should
7 properly be shared by all such entities.

8 The investment in structure typically exceeds the corresponding investment in a single
9 carrier’s cable installed on the structure. Loop costs are thus very sensitive to changes in
10 structure sharing assumptions. As is the case with cable fill factors, Qwest’s structure
11 sharing values used in the exhibits supporting its SGAT testimony are generally lower
12 than those specified by the FCC. This is particularly true in the higher density zones,
13 where structure investment per foot can be quite large. Once again, Qwest’s failure to
14 use agreed-upon forward-looking values causes them to propose unnecessarily high loop
15 UNE prices.

16 **Q. THE TELRIC DEFINITION SPECIFIES THAT THE MODELED NETWORK BE**
17 **“FORWARD-LOOKING.” IS THERE ANY EVIDENCE THAT QWEST DOES**
18 **NOT BASE ITS COST STUDIES ON FORWARD-LOOKING NETWORK**
19 **DESIGNS AND TECHNOLOGIES?**

20 A. The Qwest cost studies and models are very difficult to analyze. In particular, the cost
21 models are nearly inscrutable. Qwest’s LoopMod2, for example, is poorly documented
22 and would require an inordinate amount of time for a cost model expert to analyze and
23 understand its calculations and algorithms thoroughly. Nonetheless, the LoopMod2

1 contains inputs for non-forward-looking network components. Although it is very
2 difficult to tell how, or even whether, these inputs are used, it is clear that a truly forward-
3 looking model would not even contemplate such inputs.

4 Furthermore, there is some evidence in the LoopMod2 User Manual⁵³ that the loop
5 network addressed by the model includes characteristics of the embedded network, which
6 is not forward-looking. The Manual itself provides only a summary description of how
7 the model estimates loop plant investments and costs. The descriptions contain
8 insufficient detail for an outside analyst to determine the model's functions, and the
9 model itself is almost impossible to decipher. Despite the poor documentation, however,
10 it appears that the model uses some characteristics of the embedded network, such as
11 maximum loop length and the number and size of "entrance terminals" in existing
12 distribution areas (DAs) as bases for the calculation of plant investment.⁵⁴

13 Just the fact that existing DAs are used as a basis for modeling plant investment suggests
14 that the model attempts to reproduce, at least in part, the embedded network. A truly
15 forward-looking model would not rely on existing DA definitions and instead would
16 define its own. The use of existing maximum loop lengths and entrance terminal
17 configurations also does not comport with the definition of forward-looking plant design.
18 Again, a model that is inherently forward-looking will generally produce loop lengths
19 and terminal configurations, among other loop network features, different from those in
20 the embedded network.

⁵³ "Loop Module (LoopMod) User Manual," Version 2, July 2000.

⁵⁴ *Id.*, p 1.8.

1 Additionally, the testimony of Thomas Weiss provides considerably more detail on the
2 inherent problems identified by the Joint Intervenors with the Qwest cost studies and
3 models.

4 **B. Inconsistencies Between Qwest's Prior Cost Models and Those In This Proceeding**
5 **Q. ARE THERE ANY INCONSISTENCIES IN THE PROPOSED SGAT PRICES IN**
6 **COMPARISON WITH THE U-3021-96-448 *ET AL* ORDERED RATES?**

7 A. Qwest's proposed price for end office switch usage set forth in the SGAT exhibits only a
8 minimal decrease from the 1996 rate. This in itself is inconsistent with the changes in the
9 switching equipment market and technology that I noted earlier. Beyond that, however,
10 the SGAT rates proposed by Qwest now include a price for signaling message
11 formulation to be assessed per call. In order to set up an interoffice call, a switch
12 processor must formulate and respond to Signaling System 7 messages to communicate
13 with the destination switch to establish a trunk connection and otherwise manage the call
14 (applying call progress tones, etc.). In the past, the cost for such message processing has
15 been included in the overall switch usage cost, expressed as a per minute quantity. The
16 SGAT now includes a signaling message formulation charge to be assessed per
17 terminating call at Qwest service switching points (end office or tandem switches
18 equipped for SS7 signaling).⁵⁵

19 Because Qwest has not presented enough evidence to ascertain how the switch cost
20 model has been modified to exclude the costs of signaling, the presence of a separate
21 charge for signaling message formulation makes it possible that Qwest will double-

⁵⁵ SGAT, p. 168. The rate element specifically pertains to ISUP messages. ISUP, an abbreviation for ISDN User Part, refers to the part of the SS7 protocol structure that is concerned with "call control," or the establishment and routing of telephone calls between switches.

1 recover its costs for signaling message processing, because these costs were previously
2 included in the calculation of the usage charge.⁵⁶ The switch usage charge rate element
3 needs to be separated into corresponding prices for originating and terminating calls, with
4 the usage charge for terminating traffic adjusted to account for the explicit signaling
5 message formulation rate element. Beyond that, both the originating and terminating
6 usage charges must be recalculated using current investment and expense data for
7 forward-looking switching equipment and operating functions.

8 **C. Vertical Features**

9 **Q. WHAT IS QWEST'S POSITION ON VERTICAL FEATURES?**

10 A. Qwest contends that a CLEC must order vertical features as separate unbundled network
11 elements and is unwilling to include them with the purchase of the local switching UNE.
12 Qwest is proposing prices for over 130 separate features with rates ranging from \$0.07 to
13 \$60.34 on a recurring basis and as high as \$2.090.41 in nonrecurring charges. In the
14 previous cost docket in Arizona, the Commission rejected Qwest's proposal and
15 established that features should be included with the local switching element, setting the
16 switching port rate at \$1.61.⁵⁷

17 **Q. IS QWEST'S PRICING POSITION ON VERTICAL FEATURES IN**
18 **COMPLIANCE WITH THE LAW?**

19 A. No. Qwest's position on the pricing of vertical features is not cost-based and is not in

⁵⁶ On May 7th, 2000, in job number AZ2001-010[?], Qwest introduced new signaling elements as part of a switched access filing in Arizona. Included in this filing Qwest also filed for lower switching rates in order to make the filing revenue neutral for Qwest. Qwest has also made a similar filing in several other states (Colorado, Washington and Iowa) within its territory.

⁵⁷ *In the Matter of the Petition of AT&T Communications of the Mountain States, Inc. for Arbitration with U S WEST Communications, Inc. of Interconnection Rates, Terms and Conditions Pursuant to 47 U.S.C. § 252(b) of the Telecommunications Act et al.*, Docket No. U-2428-96-448, et al., Opinion and Order, Decision No. 60635, Appendix A, (Arizona Corp. Comm., January 30, 1998) (dis. op. Commissioner Renz D. Jennings).

1 compliance with the Act, the FCC rules, the Eighth Circuit's July 17, 1997 opinion, or
2 the Supreme Court's January 1999 decision. Qwest continues to ignore the law, orders
3 and court precedent.

4 **Q. PLEASE EXPLAIN WHY VERTICAL FEATURES PRICING IS IMPORTANT.**

5 A. Vertical features are currently among the most popular and profitable of all local services.
6 Features such as Call Waiting and Caller ID provide consumers with desired flexibility,
7 convenience and choice in the telecommunication services they receive. High demand
8 for those features, coupled with the fact that, on a "usage" basis, vertical features are
9 extremely inexpensive for an ILEC to provide, makes them at present extraordinarily
10 profitable. To compete in the local exchange markets, the Joint Intervenors and other
11 CLECs must be able to offer vertical features as cost-effectively as Qwest. Putting
12 competitors on the same footing as Qwest would tend to reduce the supernormal margins
13 presently priced into these services.

14 The best way to put Qwest and its potential local exchange competitors on an equal basis
15 is to require Qwest to make available all of the switch's functionality, including all of its
16 vertical features, at a single, cost-based price. This corresponds to the way in which
17 Qwest purchases vertical feature functionality from equipment vendors. However,
18 Qwest's position is that vertical features are not included in the price of the switching
19 UNE.

20 The local switching investment included as an input to the HAI model includes all the
21 features and functionality associated with vertical features. Therefore, the local
22 switching port rate proposed by the Joint Intervenors includes the cost associated with
23 vertical features. Mr. Denney provides further information related to the HAI model.

1 Q. WHAT IS THE FCC'S POSITION ON VERTICAL FEATURES?

2 A. Vertical features are to be incorporated into the functionality and price provided in the
3 local switching element. The Local Competition Order is very clear on this subject. The
4 Order states:

5 We define the local switching element to encompass line-side and
6 trunk-side facilities plus the features, functions, and capabilities of
7 the switch... . Thus when a requesting carrier purchases the
8 unbundled *local switching element*, it obtains all switching
9 features in a single element on a per-line basis. Therefore, we find
10 that vertical switching features are part of the unbundled local
11 switching element.⁵⁸

12 Q. HAS THE FCC POSITION BEEN REVIEWED BY THE EIGHTH CIRCUIT AND
13 THE SUPREME COURT?

14 A. Yes. The Eighth Circuit's opinion issued July 17, 1997, reinforced the appropriateness of
15 the FCC conclusions that vertical features are network elements to be unbundled, not
16 "services" which will only be available under a resale scenario. The opinion states,
17 "After reviewing the relevant provisions of the Act, we believe that the FCC reasonably
18 concluded that features qualify as network elements that are subject to these unbundling
19 requirements of the Act."⁵⁹ The Court, therefore, left standing the FCC Rule that the
20 vertical features are included in the unbundled switching element. This was again
21 reinforced by the Supreme Court which found:

22 [v]ertical features, such as caller I.D., are "functions... provided by
23 means of the switch, and thus fall squarely within the statutory
24 definition. We agree with the Eighth Circuit that the
25 Commission's application of the "network element" definition is
26 eminently reasonable.⁶⁰

⁵⁸ *Local Competition Order*, ¶¶ 412-413; 47 C.F.R. § 51.319(c) (emphasis added).

⁵⁹ *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), amended on reh'g 135 F.3d 535 (Oct. 14, 1997), at 808; *aff'd in rel. part Iowa Utils. Bd. III*, *10.

⁶⁰ *Iowa Utils Bd III* at 734.

1 **Q. HAS THE UNITED STATES DEPARTMENT OF JUSTICE ADDRESSED THE**
2 **IMPORTANCE OF NONDISCRIMINATORY PRICING AND ACCESS TO**
3 **VERTICAL FEATURES?**

4 A. Yes. In the *DOJ Evaluation of BellSouth-Louisiana's Second Section 271 Application*,
5 the DOJ found excessive charges for vertical features to be a deficiency which could
6 seriously impair the ability of CLECs to compete in the local exchange market.⁶¹ The
7 DOJ's Evaluation stated, "[A] number of other states, including states within the
8 BellSouth region, have rejected the concept of imposing a separate charge for vertical
9 features, concluding that the costs of most or all of these features are adequately
10 recovered through port charges in the range of \$2-\$3 (or lower)."⁶²

11 The port charge for an analog line side port in Qwest's SGAT is \$1.33, \$11.19 for a
12 digital line side port, \$16.98 for a DS0 trunk port and \$59.28 for a digital trunk port.
13 These rates are significantly higher than the range supported by the DOJ, and yet, the rate
14 still does not include vertical features. The DOJ also expressed concern that "competitors
15 wishing to offer services that use BellSouth's unbundled switching and vertical features
16 are being competitively disadvantaged by unreasonably high prices for those unbundled
17 elements."⁶³ The DOJ's comments on vertical features demonstrate that
18 nondiscriminatory access to, and pricing of, vertical features is a critical issue in
19 evaluating a Section 271 application.

⁶¹ *DOJ Evaluation of BellSouth's Louisiana Second Section 271 Application* at 19.

⁶² *Id.* at 24.

⁶³ *DOJ Evaluation of BellSouth's Louisiana Second Section 271 Application* at 25.

1 **D. Transport**

2 **Q. ARE THERE PROBLEMS WITH QWEST'S PROPOSALS FOR ITS**
3 **TRANSPORT ELEMENT?**

4 A. Yes. Qwest is proposing in both its SGAT and its pricing proposal in the instant docket
5 that unbundled transport be split into two mandatory elements: extended unbundled
6 dedicated interoffice transport (E-UDIT) and unbundled dedicated interoffice transport
7 (UDIT). Despite the fact that the FCC has mandated that dedicated transport is a single
8 UNE, Qwest's proposal essentially requires CLECs to purchase two distinct UNEs and to
9 pay a combined rate that is in excess of the costs of the single element.

10 For example, assume that a CLEC has a single central office and Qwest has two central
11 offices, one two miles from the CLEC office and one that is ten miles away from the
12 original Qwest office. For ease of description, assume these offices are named "A" and
13 "B" respectively. Under the proposed tariff, if a CLEC desires transport from its office to
14 Qwest office B, a total of twelve miles, it must purchase E-UDIT from the CLEC office
15 to Qwest office A (the closest Qwest office), then purchase UDIT from Qwest office A to
16 Qwest office B. The problem is not only that there are two orders to place, and two
17 circuits to identify. More importantly the CLEC is forced into a discriminatory pricing
18 arrangement. For the E-UDIT, the rate proposed by Qwest is a flat-rated charge per
19 month, while the UDIT charge is of the typical fixed and distance sensitive charge that is
20 utilized for transport services. Under the Qwest proposal, it is likely the CLEC would
21 pay more for the twelve miles of transport using the Qwest required structure than if

1 Qwest had a single fixed and distance sensitive rate for any type of transport. Essentially,
2 Qwest is proposing two distinct rates and rate structure for the same service. All transport
3 should be priced at the same structure to preclude this type of discrimination.

4 **Q. WHAT ARE SOME OF THE OTHER PROBLEMS RELATED TO PRICING**
5 **WHICH YOU HAVE IDENTIFIED IN THE QWEST ARIZONA SGAT?**

6 A. In addition to the many concerns previously stated, there are additional problems with the
7 pricing contained in the SGAT that contribute to its non-compliance with Act and the
8 FCC's pricing rules which require rejection by this Commission.

9 One of the major deficiencies in the Qwest SGAT is its incompleteness. There are
10 nineteen rates listed as individual case basis (ICB) in the SGAT price list; rates that will
11 have to be determined at some future, unknown point in time, or will be dictated by
12 Qwest to CLECs, as CLECs attempt to place orders for facilities covered by ICB pricing.
13 The prices listed as ICB include: Construction Charges for Interconnection; Central
14 Office Security Infrastructure; Construction Charges for Field Connection Point;
15 Reclassification Charge for Line Sharing; Unbundled Customer Controlled
16 Rearrangement Element for DS1 Port, DS3 Port, Dial Up Access, Attendant Access and
17 Virtual Ports, Customized Routing, Advanced Intelligent Network, Line Information
18 Database, Concentration Capability for Enhanced Extended Loop and Make Ready work
19 for Access to Poles, Ducts, Conduits and Rights of Way.

20 Both the FCC and the DOJ have rejected ICB pricing as an unacceptable pricing

1 mechanism.⁶⁴ ICB pricing essentially removes the oversight of pricing and cost
2 determination from this Commission, and places price determination in the hands of the
3 monopoly provider of services. ICB pricing also disrupts the market mechanism; as it
4 precludes CLECs from knowing what facilities will cost until they approach Qwest for
5 price quotes. Even then CLECs cannot be assured that facilities of one type will be
6 approximately the same cost.

7 One of the most critical elements that Qwest has placed in the ICB arena is customized
8 routing. Any CLEC that enters the marketplace in Arizona in Qwest territory using a
9 UNE-P strategy will have to engage Qwest in negotiations before ever knowing what the
10 total cost of providing a UNE-P based product will be. This occurs since Qwest is no
11 longer required to provide operator service or directory assistance as a UNE, and the
12 CLEC will be required to have customized routing in order to provide some other means
13 of integrating operator service and directory assistance into its UNE-P offering. The
14 Commission should reject Qwest's SGAT because it fails to set forth firm prices for
15 many important services.

⁶⁴ *Application of BellSouth Corporation, et al. Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services in South Carolina*, CC Docket No. 97-208, Memorandum Opinion and Order, FCC 97-418 (rel. Dec. 24, 1997) at ¶ 204. ("We find BellSouth's SGAT deficient because its collocation rates do not include any rates for the space preparation fee. That component of cost is left to further negotiation on an individual case basis. The absence of any space preparation rates creates uncertainty for new entrants and requires further negotiation, undermining the premise of an SGAT, which is to contain sufficiently specific terms and conditions such that checklist items are generally offered and available to all interested carriers at concrete terms, rather than left largely to future negotiation."). *Second Application of BellSouth Corporation, BellSouth Telecommunications, Inc. and BellSouth Long Distance, Inc. for Provision of In-Region, InterLATA Services in Louisiana*, CC Docket No. 98-121, Evaluation of the United States Department of Justice, (Aug. 19, 1998) at 22. (The DOJ Evaluation of BellSouth-Louisiana's Second 271 application concluded, "the absence of reasonable and predictable prices for collocation may deter or delay entry." The DOJ Evaluation also stated, "[b]oth the Department and the [FCC] specifically identified BellSouth's use of indeterminate collocation prices, to be negotiated at some future time, as a ground for rejection.")

1 **E. Potential Double-Count of Inflation**

2 **Q. WHAT ARE YOUR CONCERNS ABOUT DOUBLE-COUNTING OF**
3 **INFLATION?**

4 A. In most cost studies, inflation in prices is accounted for in the nominal cost of capital.
5 This figure includes the real cost of capital, as well as a hedge amount for inflation.
6 Double counting for inflation can occur if investments in telephone plant that serve as
7 inputs to the cost models are grown from some previous year using some sort of inflation
8 index. Apart from concerns about using an indexed investment base as a means of
9 calculating efficient forward-looking costs, it is possible that Qwest has included a
10 double-count of inflation into its TELRIC calculations in this proceeding.⁶⁵ In the event
11 that the double count is not present in this re-benchmarking of UNE rates, then it is
12 possible that future benchmarking of the UNE rates would include this double counting.

13 **Q. HOW COULD QWEST'S UNE-BASED CALCULATIONS IMPROPERLY**
14 **DOUBLE-COUNT THE EFFECTS OF INFLATION?**

15 A. The cost of capital established by the Commission in U-3021-96-448, and employed by
16 Qwest here are “nominal” costs of capital. Nominal costs of capital compensate investors
17 not only for the time value of money and business and financial risk, but also for the
18 effects of inflation. In establishing updated UNE rates, indexing the investment base
19 incorporates inflation in cost-based UNEs twice, once as a component of the nominal cost
20 of capital and once as an increase in the investment unit prices employed by the cost
21 model.

⁶⁵ Based upon my review of the material filed with Qwest in the ICM model, it is unclear where the investment amounts were derived, and therefore it is impossible at this juncture to ascertain whether double counting occurred.

1 Q. WHY DO PARTIES RELY ON NOMINAL COSTS OF CAPITAL (WHICH
2 INCLUDE COMPENSATION FOR INFLATION) RATHER THAN REAL COSTS
3 OF CAPITAL (WHICH DO NOT INCLUDE COMPENSATION FOR
4 INFLATION)?

5 A. Nominal costs of capital are more easily calculated, because they can be derived directly
6 from data observable in financial markets. But if nominal costs of capital are employed
7 in establishing cost-based prices for UNEs, unit prices for material and labor used to
8 develop the total network investment must be “locked in” for future time periods at the
9 levels initially established by the Commission.

10 An alternative approach would be to calculate cost-based prices for UNEs by applying
11 the real cost of capital to investment levels that are allowed to increase periodically with
12 inflation. This is conceptually more consistent with the competitive market standard, and
13 it would have the additional advantage of facilitating the calculation of forward-looking
14 costs when future technological breakthroughs need to be reflected in TELRIC
15 calculations. On the other hand, such an approach would be somewhat unwieldy because
16 it would require the Commission to estimate a real cost of capital, and would require that
17 UNE rates increase periodically to reflect the effects of inflation on the underlying
18 investments.

19 What clearly would be inappropriate would be to apply the *nominal* cost of capital to
20 network investment levels that *are also allowed to increase* to reflect the effects of
21 inflation because, as I stated above, Qwest would thereby be compensated *twice* for the
22 effects of inflation.

1 **Q. CAN YOU PROVIDE A SIMPLE EXAMPLE OF THE TWO ALTERNATIVE**
 2 **METHODS OF CAPITAL RECOVERY YOU DESCRIBE ABOVE?**

3 A. Consider an example in which an initial investment of \$1,000,000 is required to construct
 4 a forward-looking network, employing the following assumptions:

- 5 • economic life is 10 years;
- 6 • nominal cost of capital is 10%;
- 7 • inflation rate is 4%; and
- 8 • real cost of capital is 5.77% ($1.10 / 1.04 - 1$).

9 These assumptions would result in the following two cost recovery patterns that, over the
 10 life of the network, both have a present value equal to the initial investment in the
 11 network.

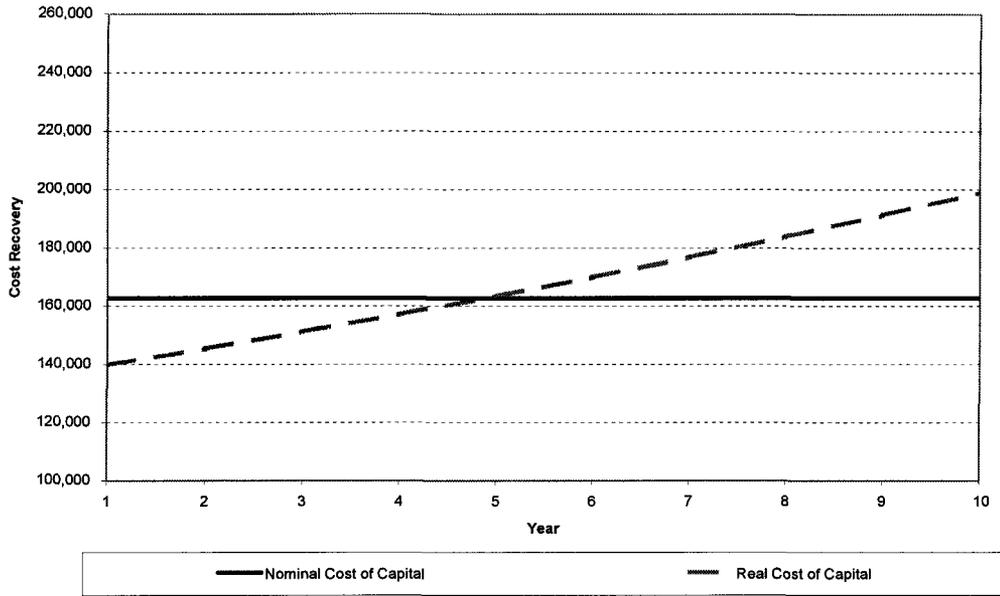
12 **Table 1**

Year	Nominal Cost of Capital					Real Cost of Capital				
	Annuity	Inflation Factor	Inflated Annuity	Present Value Factor	PV of Annuity	Annuity	Inflation Factor	Inflated Annuity	Present Value Factor	PV of Annuity
1	\$ 162,745	N/A	\$ 162,745	0.9091	\$ 147,950	\$ 134,386	1.0400	\$ 139,762	0.9091	\$ 127,056
2	162,745	N/A	162,745	0.8264	134,500	134,386	1.0916	145,352	0.8264	120,126
3	162,745	N/A	162,745	0.7513	122,273	134,386	1.1249	151,166	0.7513	113,574
4	162,745	N/A	162,745	0.6830	111,157	134,386	1.1699	157,219	0.6830	107,379
5	162,745	N/A	162,745	0.6209	101,052	134,386	1.2167	163,502	0.6209	101,522
6	162,745	N/A	162,745	0.5645	91,868	134,386	1.2653	170,042	0.5645	95,991
7	162,745	N/A	162,745	0.5132	83,514	134,386	1.3159	176,843	0.5132	90,749
8	162,745	N/A	162,745	0.4665	75,922	134,386	1.3686	183,917	0.4665	85,799
9	162,745	N/A	162,745	0.4241	69,020	134,386	1.4233	191,274	0.4241	81,119
10	162,745	N/A	162,745	0.3855	62,745	134,386	1.4802	198,925	0.3855	76,694
TOTAL					\$ 1,000,000					\$ 1,000,000

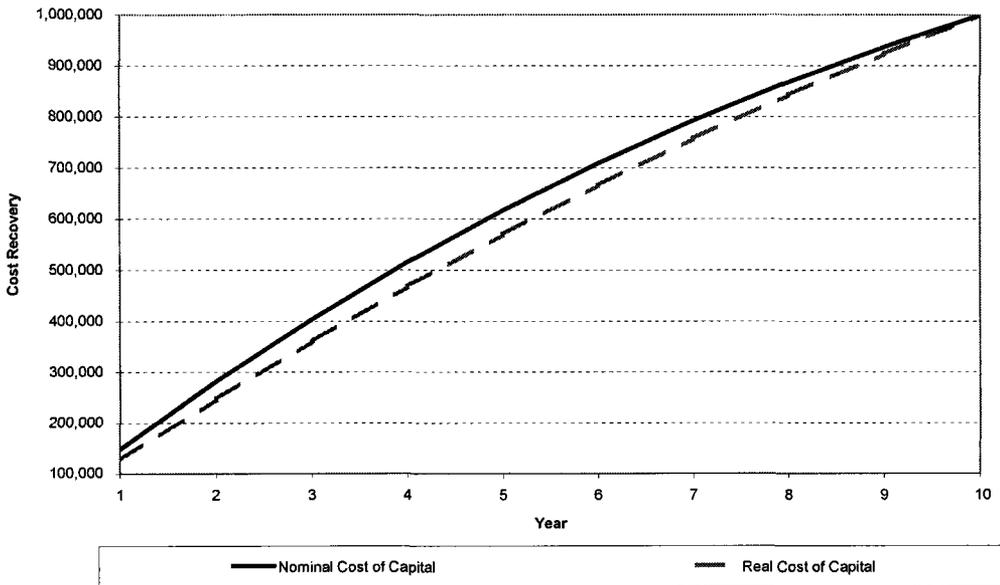
13 The above table illustrates that either (1) calculating an annuity based on the nominal cost
 14 of capital fully recovers the initial \$1,000,000 investment over the 10-year period, or (2)
 15 calculating an annuity based on the real cost of capital, and then inflating the annuity
 16

1 each year at the appropriate inflation rate fully recovers the initial \$1,000,000 investment
2 over the 10-year period.⁶⁶ The following charts illustrate these two recovery patterns:

3 **Chart 1**
Annuity



4 **Cumulative Present Value of Annuity**



5 ⁶⁶ Under either approach, the nominal discount rate is used to calculate cumulative present value because the cash flows being discounted (shown in the "Inflated Annuity" column) incorporate the effects of inflation.

1 The above charts illustrate the point that although both cost recovery patterns result in the
 2 same \$1,000,000 present value at the end of the asset's life (recover the full initial
 3 network investment), the use of the nominal cost of capital would allow the ILECs to
 4 recover more of their initial investment earlier in the network's life than would the use of
 5 the real cost of capital. As a result, if the nominal cost of capital is used and ILECs are
 6 nevertheless allowed to submit "updated" material and labor prices before year 10 (in
 7 year 5, for example), they will have over-recovered the total investment made to
 8 construct the network being used to develop TELRIC.

9 The inflation double-count implicit in Qwest's approach is illustrated in the following
 10 example, which assumes that an ILEC uses a nominal cost of capital *and* seeks new UNE
 11 rates each year to reflect the effects of inflation on asset and labor unit prices.

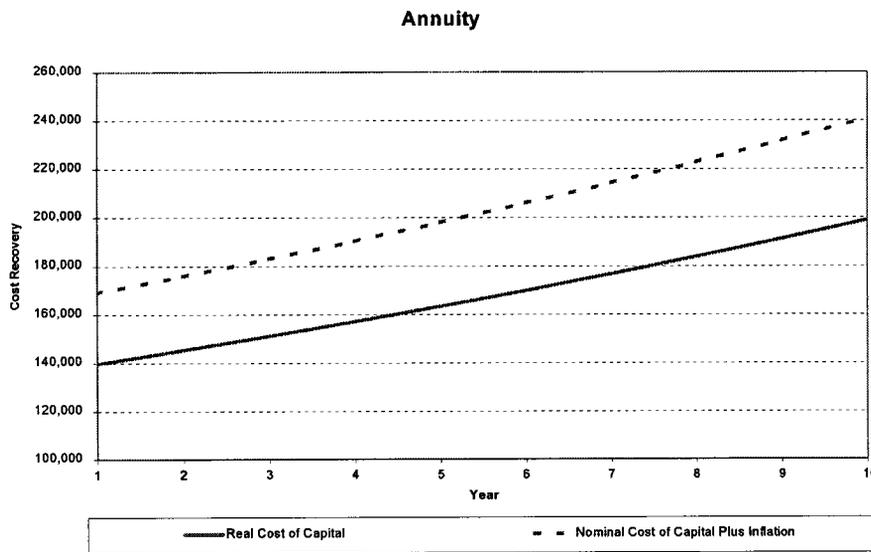
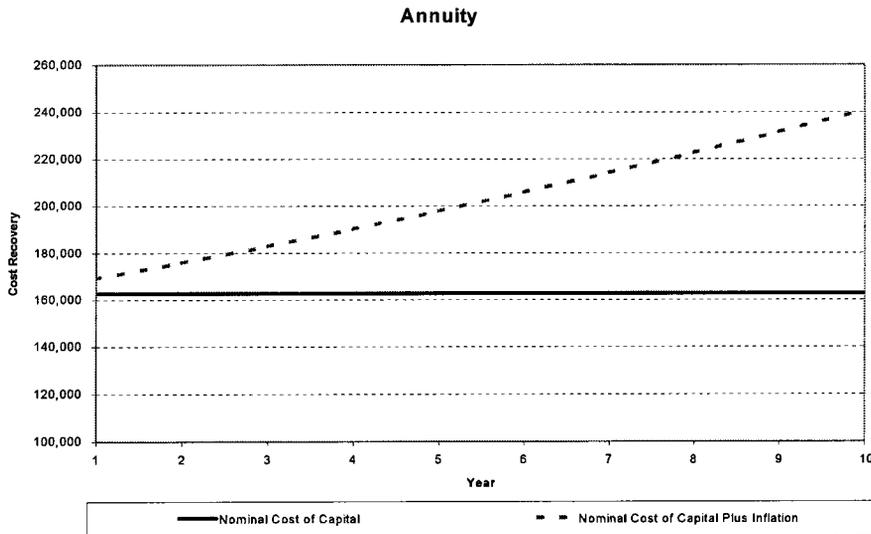
12 **Table 2**

Year	Nominal Cost of Capital (From Table 1)		Real Cost of Capital (From Table 1)		Nominal Cost of Capital Plus Inflation For Material and Labor				
	Annuity	PV of Annuity	Annuity	PV of Annuity	Annuity	Inflation Factor	Inflated Annuity	Present Value Factor	PV of Annuity
1	\$ 162,745	\$ 147,950	\$ 139,762	\$ 127,056	\$ 162,745	1.0400	\$ 169,255	0.9091	\$ 153,868
2	162,745	134,500	145,352	120,126	162,745	1.0816	176,026	0.8264	145,476
3	162,745	122,273	151,166	113,574	162,745	1.1249	183,066	0.7513	137,541
4	162,745	111,157	157,213	107,379	162,745	1.1699	190,365	0.6830	130,038
5	162,745	101,052	163,502	101,522	162,745	1.2167	198,005	0.6209	122,945
6	162,745	91,866	170,042	95,984	162,745	1.2653	205,925	0.5645	116,239
7	162,745	83,514	176,843	90,749	162,745	1.3159	214,162	0.5132	109,899
8	162,745	75,922	183,917	85,799	162,745	1.3686	222,726	0.4665	103,904
9	162,745	69,020	191,274	81,119	162,745	1.4233	231,637	0.4241	98,237
10	162,745	62,745	198,925	76,694	162,745	1.4802	240,903	0.3855	92,879
TOTAL		\$ 1,000,000		\$ 1,000,000					\$ 1,211,026

13
 14 In Table 2 Qwest would over-recover their initial investment by more than 21 percent if
 15 they were allowed to use the nominal cost of capital *and* adjust the material and labor

1 prices for the effects of inflation. The following charts also help to illustrate this point:

2 **Chart 2**



5 The solid lines on the above charts reflect the annual revenues needed to allow the ILECs
6 to fully recover their investment and to earn their cost of capital. The approach
7 apparently being proposed by Qwest, represented by the dashed lines, would allow the
8 company to recover *more* than the full economic cost of the network. The difference
9 between the two sets of lines on each of the above graphs represents the amount that
10 ILECs would over recover in each year, under the assumptions we have employed, if they

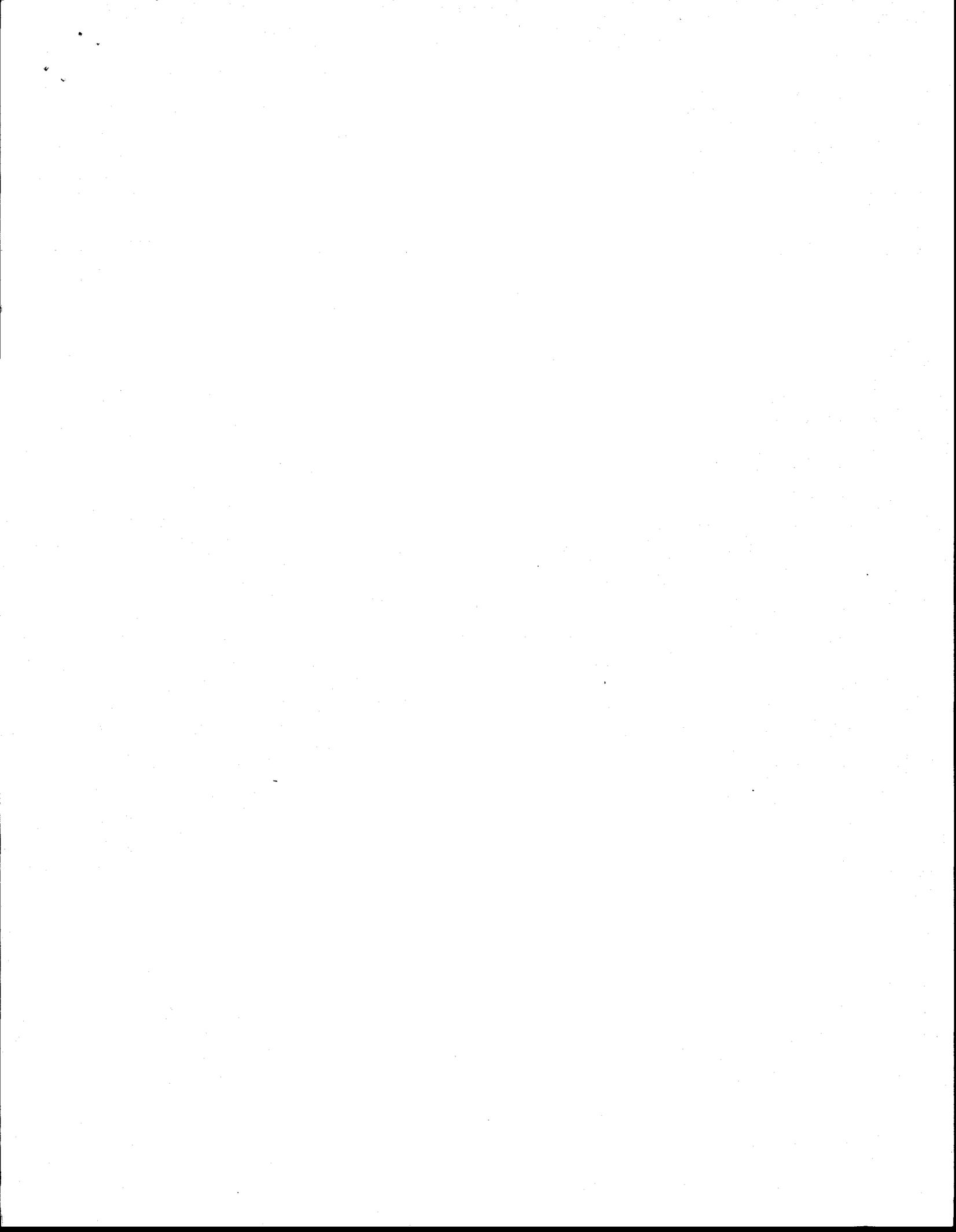
1 were allowed both to use a nominal cost of capital *and* to inflate the underlying unit
2 prices each year. Even if underlying unit prices for equipment and installation labor were
3 not updated each year, but only periodically (every third year, for example), over-
4 recovery would still occur.

5 **Q. WHAT ARE THE IMPLICATIONS OF THIS DISCUSSION FOR THE COST-**
6 **BASED UNE PRICES THAT THE COMMISSION WILL CALCULATE IN**
7 **FUTURE PROCEEDINGS?**

8 A. The Commission must calculate the capital component of recurring costs in a manner that
9 avoids compensating ILECs twice for inflation. As noted above, this can be done *either*
10 (1) by using the initially-adopted material unit prices and labor rates in establishing the
11 total network investment, and applying the appropriate nominal cost of capital, or (2) by
12 using current material unit prices and labor rates and applying the real cost of capital
13 (which would then require that UNE rates be adjusted in subsequent years to reflect the
14 effects of inflation on underlying material and labor unit prices). Thus, it is important for
15 this Commission to recognize that, once UNE rates are established, it is not appropriate to
16 adjust the investment base to account for inflation because inflation is already included in
17 the cost of capital.

18 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

19 A. Yes.



AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

		(1)		(2)		(3)		(4)	
		T-00000B-97-238	T-00000-00-0194	U-3021-96-448	U-3021-96-448	U-3021-96-448	U-3021-96-448	Joint AT&T/	Joint AT&T/
		271	Testimony of	U-3021-96-448- et. al.	U-3021-96-448- et. al.	U-3021-96-448- et. al.	U-3021-96-448- et. al.	Worldcom/XO	Worldcom/XO
		All Rates	Maureen Arnold	Current Rates	Current Rates	Current Rates	Current Rates	Joint Proposal	Joint Proposal
		Exhibit A 2/12/2001	Exhibit MA-1A 4/16/01					Recurring	Recurring
		Recurring	Recurring	Recurring	Recurring	Recurring	Recurring	NRC	NRC
		NRC	NRC	NRC	NRC	NRC	NRC		
INTERCONNECTION									
Entrance Facilities									
DS1		\$89.42	\$92.18	\$218.84	\$89.42	\$256.87	\$256.87	\$0.00	\$0.00
DS3		\$357.16	\$486.15	\$414.26	\$357.16	\$256.87	\$256.87	\$0.00	\$0.00
Direct Trunked Transport									
DS0					\$5.05				
DS0 Over 0 to 8 Miles - Fixed								\$12.40	
DS0 Over 0 to 8 Miles - per mile								\$0.06	
DS0 Over 8 to 25 Miles - Fixed								\$12.41	
DS0 Over 8 to 25 Miles - per mile								\$0.06	
DS0 Over 25 to 50 Miles - Fixed								\$12.43	
DS0 Over 25 to 50 Miles - per mile								\$0.05	
DS0 Over 50 Miles - Fixed								\$12.41	
DS0 Over 50 Miles - per mile								\$0.03	
DS1 Over 0 to 8 Miles - Fixed		\$35.98	\$33.05		\$35.98			\$21.22	
DS1 Over 0 to 8 Miles - per mile		\$0.65	\$1.56		\$0.65			\$0.86	
DS1 Over 8 to 25 Miles - Fixed		\$35.99	\$33.33		\$35.99			\$21.38	
DS1 Over 8 to 25 Miles - per mile		\$0.94	\$1.26		\$0.94			\$0.70	
DS1 Over 25 to 50 Miles - Fixed		\$36.00	\$33.81		\$36.00			\$21.66	
DS1 Over 25 to 50 Miles - per mile		\$1.75	\$2.28		\$1.75			\$1.27	
DS1 Over 50 Miles - Fixed		\$36.00	\$33.78		\$36.00			\$21.64	
DS1 Over 50 Miles - per mile		\$1.57	\$1.19		\$1.59			\$0.67	
DS3 Over 0 to 8 Miles - Fixed		\$243.17	\$210.28		\$243.17			\$142.72	
DS3 Over 0 to 8 Miles - per mile		\$13.32	\$65.55		\$13.32			\$42.03	
DS3 Over 8 to 25 Miles - Fixed		\$246.16	\$213.45		\$246.15			\$142.69	
DS3 Over 8 to 25 Miles - per mile		\$15.90	\$20.30		\$15.90			\$13.70	
DS3 Over 25 to 50 Miles - Fixed		\$250.66	\$196.74		\$250.66			\$133.59	
DS3 Over 25 to 50 Miles - per mile		\$22.91	\$25.43		\$22.91			\$16.22	
DS3 Over 50 Miles - Fixed		\$249.26	\$207.61		\$249.26			\$140.93	
DS3 Over 50 Miles - per mile		\$22.49	\$17.49		\$22.49			\$11.00	
Multiplexing									
DS3 to DS1 per system		\$196.85	\$246.64	\$267.45	\$196.85	\$164.00	\$164.00	\$172.65	\$187.22

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)	(2)	(3)	(4)
	T-00000B-97-238 271 All Rates Exhibit A 2/12/2001	T-00000-00-0194 Testimony of Maureen Arnold Exhibit MA-1A 4/16/01	U-3021-96-448 U-3021-96-448 - et. al. Current Rates	Joint AT&T/ Worldcom/XO Pricing Proposal Joint Proposal
	Recurring NRC	Recurring NRC	Recurring NRC	Recurring NRC
Local Traffic				
End office call termination, per minute of use	\$0.0028	\$0.002207		\$0.00121
Tandem Switched Transport				
Tandem switching, per minute of use	\$0.0014	\$0.001653	\$0.0014	\$0.00052
Tandem Transmission				
Over 0 to 8 Miles - Fixed, per mou	\$0.00088	\$0.000485		\$0.000340
Over 0 to 8 Miles - per mile		\$0.000045		\$0.000032
Over 8 to 25 Miles - Fixed, per mou	\$0.00088	\$0.000494		\$0.000346
Over 8 to 25 Miles - per mile		\$0.000023		\$0.000016
Over 25 to 50 Miles - Fixed, per mou	\$0.00088	\$0.000477		\$0.000334
Over 25 to 50 Miles - per mile		\$0.000012		\$0.000008
Over 50 Miles - Fixed, per mou	\$0.00088	\$0.000461		\$0.000323
Over 50 Miles - per mile		\$0.000004		\$0.000003
Trunk Nonrecurring Charges				
DS1 Interface, First Trunk		\$323.03	\$353.67	\$7.60
DS1 Interface, Each Additional Trunk		\$10.21	\$5.90	\$0.53
DS1 Disconnect				\$7.60
DS3 Interface, First Trunk		\$331.71	\$360.45	\$0.53
DS3 Interface, Each Additional Trunk		\$18.27	\$12.69	\$0.53
DS3 Disconnect				
DS1 Trunk Rearrangement				
First Trunk			\$176.84	
Each Additional Trunk			\$2.95	
DS3 Trunk Rearrangement				
First Trunk			\$180.23	
Each Additional Trunk			\$6.35	
Miscellaneous Charges				
Expedite Charge (LIS Trunks)	Qwest's AZ Sw Acc Tariff 5.2.2	Qwest's AZ Switched Access Tariff Section 5.2.2 + LIS Nonrecurring Charges		\$0.00
Cancellation Charge (LIS Trunks)	Qwest's AZ Sw Acc Tariff 5.2.3	Qwest's AZ Switched Access Tariff Section 5.2.3 + LIS Nonrecurring		\$0.00
Construction Charges	ICB	ICB - See SGAT Section 19.0		\$0.00
IntraLATA Toll Traffic	Qwest's AZ Switched Access Tariff	Qwest's AZ Switched Access Tariff		

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)	(2)	(3)	(4)
	T-00000B-97-238 271	T-00000-00-0194 Testimony of Maureen Arnold	U-3021-96-448 U-3021-96-448- et. al.	Joint AT&T/ Worldcom/XO
	All Rates	Exhibit MA-1A 4/16/01	Current Rates	Pricing Proposal
	Recurring	Recurring	Recurring	Recurring
	NRC	NRC	NRC	NRC
Transit Traffic				
Exchange Service (EAS/Local) Transit	\$0.00932			
Local Transit Assumed Mileage		9 Miles		
IntraLATA Toll		Qwest's AZ Switched Access Tariff		
IntraLATA Toll Assumed Mileage		9 Miles		
Jointly Provided Switched Access		Qwest's AZ Switched Access Tariff		
Category 11 Mechanized Record Charge, per Record	\$0.0025	\$0.001819		
Local Transit		See Tandem Switching & Tandem Transmission Rates		
LIS ECT (when used for collocation)				
DS1	\$4.28	\$10.24	\$4.28	\$0.00
DS3	\$14.98	\$47.99	\$14.98	\$0.00
Interconnection Tie Pairs (ITP) (Optional)				
Per DS1		\$1.58		\$0.00
Per DS3		\$15.92		\$0.00
Channel Regeneration (Optional)				
DS1 Regeneration		\$9.45		\$0.00
DS3 Regeneration		\$34.16		\$0.00
COLLOCATION				
ALL COLLOCATION				
Quote Preparation Fee			\$1,381.54	\$0.00
Augment QPF				\$0.00
Collocation Entrance Facility per fiber pair				
Standard per Fiber pair		\$15.17		\$8.58
Cross Connect per Fiber		\$22.75		\$12.57
Express per Cable		\$240.26		\$133.66
Element Group 1, per fiber pair	\$1.52		\$1,184.74	\$5,249.97
Entrance Facility - Element Group 2				
Manhole, per Month, per Manhole	\$13.81			
Handhold, per Month, per Handhold	\$7.61			
Conduit/Innerduct POI to vault, per foot	\$0.21			
Core drill, per occurrence			\$181.57	

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	T-00000B-97-238 271 All Rates	NRC	T-00000-00-0194 Testimony of Maureen Arnold Exhibit MA-1A 4/16/01	NRC	U-3021-96-448 U-3021-96-448- et. al. Current Rates	NRC	Joint AT&T/ Worldcom/XO Pricing Proposal	NRC
Riser, vault to equipment, per foot	\$0.24				\$0.24			
Fiber Optic cable, per 24, per foot	\$0.03				\$0.03			
Fiber placement in conduit & riser, per foot	\$0.83				\$0.83			
Copper 25 pair, per foot	\$0.006				\$0.006			
Copper placement conduit & reser, per foot	\$0.83				\$0.83			
Coax placement, per foot	\$0.10				\$0.10			
Cable Splicing								
Fiber - Per Set-Up		\$375.40		\$474.74		\$375.40		\$425.66
Per Fiber Spliced		\$15.79		\$37.95		\$15.79		\$34.03
Per Splice - Copper		\$45.64				\$45.64		
48 Volt DC Power Usage, per Amp, per Amp								
Power Plant, per amp	\$12.89		\$11.36		\$12.89			\$9.56
<60 amps								\$7.45
>60 amps								\$8.19
=60 amps								\$3.31
Power Usage Less Than 60 Amps, per Amp			\$3.69					\$6.61
Power Usage More Than 60 Amps, per Amp			\$7.37					
AC Power Feed (Backup Power)								
20 Amp Feed								\$16.85
40 Amp Feed			\$19.26					\$29.20
60 Amp Feed			\$33.38					\$50.52
100 Amp Feed			\$57.75					\$33.69
200 Amp Feed			\$38.52					\$58.29
300 Amp Feed			\$66.64					\$116.58
400 Amp Feed			\$133.28					
AC Power Feed (per Amp, per Amp)								
20 Amp Feed	\$0.21	\$ 59.14			\$0.21	\$59.14		
40 Amp Feed	\$0.29	\$ 80.69			\$0.29	\$80.69		
60 Amp Feed	\$0.35	\$ 95.34			\$0.35	\$95.34		
100 Amp Feed	\$0.22	\$ 133.28						
200 Amp Feed	\$0.35	\$ 208.78						
300 Amp Feed	\$0.48	\$ 288.33						
400 Amp Feed	\$0.62	\$ 372.89						

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
	271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO	
	All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
	Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
Central Office Clock Synchronization								
Synchronization - Composite Clock, per Port	\$8.32		\$7.70				\$6.48	
Space Availability Rate				\$333.55				
Per Office								
Space Reservation				25% of collocation charge				
Space Offer								
Under Development								
Regular Hours Rate				\$4,380.68		\$1,381.54		\$857.13
After Hours Rate								
Maintenance								
Regular Hours Rate		\$22.20		\$27.97		\$22.20		\$25.08
After Hours Rate		\$31.57		\$37.43		\$31.57		\$33.56
Training Labor								
Regular Hours Rate		\$23.95		\$27.97		\$23.95		\$25.08
Equipment Bay								
Regular Hours Rate	\$6.41		\$3.75		\$6.41		\$3.16	
Engineering Labor								
Regular Hours Rate		\$24.55		\$30.18		\$24.55		\$27.06
After Hours Rate		\$35.25		\$38.96		\$35.25		\$34.93
Installation Labor								
Regular Hours Rate		\$23.73		\$31.89		\$23.73		\$28.60
After Hours Rate		\$33.20		\$41.07		\$33.20		\$36.82

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)	(2)	(3)	(4)
	T-00000B-97-238 271 All Rates Exhibit A 2/12/2001	T-00000-00-0194 Testimony of Maureen Arnold Exhibit MA-1A 4/16/01	U-3021-96-448 Current Rates	Joint AT&T/ Worldcom/XO Pricing Proposal
	Recurring NRC	Recurring NRC	Recurring NRC	Recurring NRC
Zone 1	\$2.75	\$3.96		\$2.87
Zone 2	\$2.26			
Zone 3	\$2.06			
20A Power Feed, per feed		\$10.09	\$5,528.47	\$7.47
30A Power Feed, per feed		\$11.53	\$6,316.35	\$8.44
40A Power Feed, per feed		\$14.06	\$7,706.09	\$9.85
60A Power Feed, per feed		\$17.54	\$9,613.92	\$12.04
5 year payments (recurring for 5 yrs) on-going maintenance	ICB			\$39.80
2 Bays and 1 - 40A Power Feed	ICB			\$2.52
Adjustment for 20A Initial Power Feed		\$54.42	\$29,823.10	
Adjustment for 30A Initial Power Feed		(\$3.97)	(\$2,177.62)	
Adjustment for 40A Initial Power Feed		(\$2.54)	(\$1,389.75)	
Adjustment for 60A Initial Power Feed		Included in Space Construction		
Adjustment for Each Additional Bay		\$3.48	\$1,907.82	
Each Additional 20A Power Feed		\$5.52	\$6,024.83	
Each Additional 30A Power Feed		\$10.09	\$5,628.47	
Each Additional 40A Power Feed		\$11.53	\$6,316.35	
Each Additional 60A Power Feed		\$14.06	\$7,706.09	
Each Additional 60A Power Feed		\$17.54	\$9,613.92	
Fiber Space Lease, per Bay		\$3.96		\$2.87
Zone 1	\$2.75			
Zone 2	\$2.26			
Zone 3	\$2.06			
40A Power Feed, per feed				\$4,923.58
30A Power Feed, per feed				\$5,567.14
40A Power Feed, per feed				\$6,491.53
60A Power Feed, per feed				\$7,935.89
5 year payments (recurring for 5 yrs) on-going maintenance	ICB			\$857.13
2 Bays and 1 - 40A Power Feed	ICB			
Adjustment for 20A Initial Power Feed		\$54.42	\$29,823.10	
Adjustment for 30A Initial Power Feed		(\$3.97)	(\$2,177.62)	
Adjustment for 40A Initial Power Feed		(\$2.54)	(\$1,389.75)	
Adjustment for 60A Initial Power Feed		Included in Space Construction		
Adjustment for Each Additional Bay		\$3.48	\$1,907.82	
Each Additional 20A Power Feed		\$5.52	\$6,024.83	
Each Additional 30A Power Feed		\$10.09	\$5,628.47	
Each Additional 40A Power Feed		\$11.53	\$6,316.35	
Each Additional 60A Power Feed		\$14.06	\$7,706.09	
Each Additional 60A Power Feed		\$17.54	\$9,613.92	
Fiber Space Lease, per Bay		\$3.96		\$2.87
Zone 1	\$2.75			
Zone 2	\$2.26			
Zone 3	\$2.06			

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	T-00000B-97-238 271 All Rates	NRC	T-00000-00-0194 Testimony of Maureen Arnold	NRC	U-3021-96-448 U-3021-96-448- et. al. Current Rates	Recurring	NRC	Joint AT&T/ Worldcom/XO Pricing Proposal
DS3 (Per 1 Connection)	Exhibit A 2/12/2001 Recurring	\$12.72	Exhibit MA-1A 4/16/01 Recurring	\$8.80				\$7.89
Cable Hole (if Applicable)		\$439.32		\$425.99				\$381.95
CLEC to CLEC Cross-Connection				\$255.25				
UNBUNDLED NETWORK ELEMENTS (UNES)								
Interconnection Tie Pairs (TTP) Termination								
DS0 2-wire	ICB	ICB		\$0.51				\$0.00
DS0 4-wire	ICB	ICB		\$0.51				\$0.00
DS1 Per each Termination	ICB	ICB		\$1.58				\$0.00
DS3 Per each Termination	ICB	ICB		\$15.92				\$0.00
Unbundled Loops								
2 Wire Voice Grade		See Section 9.2.4						
Zone 1	\$18.96			\$23.07	\$21.98	\$10.10		\$0.00
Zone 2	\$34.94			\$28.64	\$18.96	\$7.34		\$0.00
Zone 3	\$56.63			\$42.14	\$34.94	\$11.23		\$0.00
4 Wire Voice Grade		See Section 9.2.4						
Zone 1	\$19.88			\$46.63	\$56.53	\$32.06		\$0.00
Zone 2	\$35.86			\$57.76	\$22.90	\$13.13		\$0.00
Zone 3	\$57.45			\$84.76		\$9.54		\$0.00
Non-loaded Loops								
2 Wire Non-loaded Loop		See Sections 9.2.4 & 9.2.2.3						
Zone 1	\$18.96			\$23.07		\$7.34		\$0.00
Zone 2	\$34.94			\$28.64		\$11.23		\$0.00
Zone 3	\$56.53			\$42.14		\$32.06		\$0.00
4 Wire Non-loaded Loop		See Sections 9.2.4 & 9.2.2.3						
Zone 1	\$19.88			\$46.63		\$9.54		\$0.00
Zone 2	\$35.86			\$57.76		\$14.60		\$0.00
Zone 3	\$57.45			\$84.76		\$41.68		\$0.00
Cable Unloading/Bridge Tap Removal		\$114.80		\$649.98		\$114.80		\$0.00

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
	271		Testimony of		U-3021-96-448 - et. al.		Worldcom/XO	
	All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
	Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
		See Sections 9.2.4 & 9.2.2.3						
Basic Rate ISDN /XDSL/ADSL Capable Loops								
Zone 1	\$18.96		\$23.07				\$7.34	
Zone 2	\$34.94		\$28.64				\$11.23	
Zone 3	\$56.53		\$42.14				\$32.06	
DS1 Capable Loop		See Sections 9.2.5 & 9.2.2.3						
Zone 1	\$106.87		\$89.89				\$43.35	
Zone 2			\$90.46				\$42.37	
Zone 3			\$100.30				\$42.62	
HDSL 4 Wire (DS1) - Equipped Loop							\$47.07	
							\$33.69	
DS3 Capable Loop		See Sections 9.2.5 & 9.2.2.3						
Zone 1	\$1,152.00		\$954.79				\$516.73	
Zone 2			\$967.83				\$479.23	
Zone 3			\$1,189.60				\$490.19	
2 Wire Extension Technology							\$648.11	
			\$5.93		\$6.75		\$0.00	
DS0 - Loop Installation Charges								
Basic Installation	See recurring charge in Sections 9.2.1 - 9.2.3 above							
Residence 2-wire		\$40.92					\$40.92	
Business - 2 wire		\$45.92					\$45.92	
POTS/ISDN BRI Migration (UNE Loop)								\$1.76
POTS/ISDN BRI Installation (UNE Loop)								\$1.70
POTS/ISDN BRI Disconnect (UNE Loop)								\$1.53
Residence 4-wire		\$41.81					\$41.82	
Business 4-wire		\$46.92					\$46.92	
4 Wire Migration (UNE Loop)								\$18.42
4 Wire Install (UNE Loop)								\$9.83
4 Wire Disconnect (UNE Loop)								\$7.85
Each Additional Loop								

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	\$15.33	\$119.19			\$15.33			
2-Wire Analog Distribution Loop								
Zone 1			\$15.85				\$3.31	
Zone 2			\$21.57				\$6.64	
Zone 3			\$35.23				\$21.40	
Each Additional		\$54.48						
2 Wire Migration at the FDI								
2 Wire Disconnect at the FDI								
4-Wire Non Loaded Distribution Loop								
Zone 1			\$31.70				\$4.30	
Zone 2			\$43.14				\$8.63	
Zone 3			\$70.46				\$27.82	
4-Wire Migration at the FDI								
4 Wire Disconnect at the FDI								
								\$56.77
								\$34.77
2-Wire Loop Feeder								
Zone 1								
Zone 2								
Zone 3								
4-Wire Loop Feeder								
Zone 1								
Zone 2								
Zone 3								
2-Wire Loop Concentration								
Zone 1								
Zone 2								
Zone 3								
4-Wire Loop Concentration								
Zone 1								
Zone 2								
Zone 3								
Building Cable								
Intrabuilding Cable Loop, Per Pair			\$1.24					
On Premises Wire								\$0.2955

AT&T/WORLDCOMXO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring
	T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/
	271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO
	All Rates		Maureen Arnold		Current Rates		Pricing Proposal
	Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal
	Recurring	NRC	Recurring	NRC	Recurring	NRC	NRC
DS1 Capable Feeder Loop	\$90.13	\$375.40		\$292.08			
DS1 Each Additional Capable Feeder Loop		\$303.66		\$218.54			
Zone 1			\$77.43				
Zone 2			\$78.01				
Zone 3			\$87.85				
Channelized DS1 Virtual Feeder to RT Install							\$17.81
Channelized DS1 Virtual Feeder to RT Disconnect							\$13.88
OSS	ICB	ICB					
Trouble Isolation Charge		Under Development					
FDI Field Connection Point		ICB					
Field Connection Point							
Feasibility Fee/Quote Preparation Fee		\$1,654.26		\$1,631.67			\$0.00
Construction Fee		ICB		ICB			\$0.00
Line Sharing							
Shared Loop, per Loop	\$5.00	\$71.80	\$5.00	\$37.54			
OSS - Per Line - Per Month			\$2.74				
OSS, per Order	Under Development						
Reclassification Charge		ICB		ICB			
Splitter Shelf Charge	\$5.92	\$584.11					
Splitter TIE Cable Connections							
Option 1A	\$6.45	\$3,894.22					
Option 1B	\$6.69	\$4,036.28					
Option 2A	\$2.14	\$1,292.66					
Option 2B	\$3.83	\$2,309.64					
Option 3A	\$2.19	\$1,322.85					
Option 3B	\$4.49	\$2,711.59					
POTS Splitter Options							
Splitter in the Common Area							
Data to 410 Block			\$8.57	\$3,175.97			\$5.25
Data Direct to CLEC			\$8.99	\$3,333.21			\$5.51
Splitter on the IDF							
Data to 410 Block			\$2.73	\$1,010.84			\$1.67
Data Direct to CLEC			\$5.11	\$1,892.62			\$3.13

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
	271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO	
	All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
	Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
DS3 UDIT		\$302.91		\$351.39				\$7.60
DS3 Over 0 to 8 Miles - Fixed	\$243.17		\$210.28		\$243.17		\$142.72	
DS3 Over 0 to 8 Miles - per mile	\$13.32		\$65.55		\$13.32		\$42.03	
DS3 Over 8 to 25 Miles - Fixed	\$246.16		\$213.45		\$246.15		\$142.69	
DS3 Over 8 to 25 Miles - per mile	\$15.90		\$20.30		\$15.90		\$13.70	
DS3 Over 25 to 50 Miles - Fixed	\$250.66		\$196.74		\$250.66		\$133.59	
DS3 Over 25 to 50 Miles - per mile	\$22.91		\$25.43		\$22.91		\$16.22	
DS3 Over 50 Miles - Fixed	\$249.26		\$207.61		\$249.26		\$140.93	
DS3 Over 50 Miles - per mile	\$22.49		\$17.49		\$22.49		\$11.00	\$0.53
DS3 Interoffice Transport - Disconnect								
OC3 UDIT		\$331.92		\$351.39				
OC-3 Over 0 to 8 Miles - Fixed	\$868.65		\$794.64				\$582.00	
OC-3 Over 0 to 8 Miles - per mile	\$262.58		\$252.46				\$170.97	
OC-3 Over 8 to 25 Miles - Fixed	\$875.83		\$801.21				\$586.30	
OC-3 Over 8 to 25 Miles - per mile	\$75.28		\$67.90				\$47.12	
OC-3 Over 25 to 50 Miles - Fixed	\$836.86		\$765.56				\$563.07	
OC-3 Over 25 to 50 Miles - per mile	\$96.00		\$92.37				\$61.62	
OC-3 Over 50 Miles - Fixed	\$867.72		\$788.37				\$577.92	
OC-3 Over 50 Miles - per mile	\$60.02		\$57.09				\$36.76	
OC-12 UDIT		\$331.92		\$351.39				
OC-12 Over 0 to 8 Miles - Fixed	\$2,457.02		\$2,247.68				\$1,665.13	
OC-12 Over 0 to 8 Miles - per mile	\$88.38		\$87.64				\$54.45	
OC-12 Over 8 to 25 Miles - Fixed	\$2,457.02		\$2,247.68				\$1,665.13	
OC-12 Over 8 to 25 Miles - per mile	\$93.78		\$85.54				\$56.69	
OC-12 Over 25 to 50 Miles - Fixed	\$2,457.02		\$2,247.68				\$1,665.13	
OC-12 Over 25 to 50 Miles - per mile	\$100.38		\$98.38				\$61.35	
OC-12 Over 50 Miles - Fixed	\$2,457.02		\$2,247.68				\$1,665.13	
OC-12 Over 50 Miles - per mile	\$118.80		\$115.44				\$72.38	
Above OC-12 UDIT			ICB	ICB				
Common Transport per minute per leg					\$0.00088			
Extended Unbundled Dedicated Interoffice Transport								

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)	(2)	(3)	(4)
	T-00000B-97-238 271 All Rates Exhibit A 2/12/2001	T-00000-00-0194 Testimony of Maureen Arnold Exhibit MA-1A 4/16/01	U-3021-96-448 U-3021-96-448- et. al. Current Rates	Joint AT&T/ Worldcom/XO Pricing Proposal
	Recurring NRC	Recurring NRC	Recurring NRC	Recurring NRC
Termination, Fixed per Pr./Office	\$8.60			
Termination-Wire Center-2 Per Pair		\$7.57		
Fiber Transport, per Mile	\$88.75	\$88.52		
Fiber Cross-Connect Per Pr.	\$4.78	\$4.20	\$21.46	\$8.64
Fiber Disconnect				\$9.44
UDF-Loop Charges				
Order Charge per Pr./Route/Order		\$561.17		
Order Charge ea Addl. Pr./Same Route		\$270.70		
Termination, Fixed Per Pr./Office	\$7.85	\$7.84		
Termination Fixed Per Pr./Prem.	\$7.03	\$6.97		
Fiber Transport, per Route/Per Pr.	\$131.85			
UDF Loop - Per Fiber Loop		\$122.02		
Fiber Cross-Connect Per Pr.	\$4.78	\$4.20	\$21.46	\$8.64
Fiber Disconnect				\$9.44
Extended Unbundled Dark Fiber (E-UDF)				
Order Charge per Pr./Route/Order		\$561.17		
Order Charge ea Addl. Pr./Same Route		\$270.70		
Termination, Fixed Per Pr./Office	\$7.85			
Termination at Wire Center, 2 per Pair		\$7.84		
Termination Fixed Per Pr./Prem.	\$7.03	\$6.97		
Fiber Transport, per Route/Per Pr.	\$131.85			
E-UDF Fiber (Per pair)		\$122.02		
Fiber Cross-Connect Per Pr.	\$4.78	\$4.20	\$21.46	
Shared Transport				
Per Minute of Use - TELRIC Based Rate	\$0.0012008	\$0.001573		\$0.000074
Unbundled Customer Controlled Rearrangement (UCCRE)				
DS1 Port	ICB	ICB	ICB	
DS3 Port	ICB	ICB	ICB	
Dial Up Access	ICB	ICB	ICB	
Attendant Access	ICB	ICB	ICB	
Virtual Ports	ICB	ICB	ICB	
Local Tandem Switching				

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
	271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO	
	All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
	Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
DS1 Local Message Trunk Port		\$337.96	\$59.28	\$219.99			\$41.50	\$17.81
DS1 Local Message Trunk Port - Disconnect								\$13.12
Trunk Group - First Trunk		\$278.91		\$210.14				
Message Trunk Group - Each Additional Trunk		\$8.64		\$24.38				
DS1 Trunk Group-Each Additional Trunk-Per Order								
Per minute of use	\$0.0014		\$0.002453		\$0.0014		\$0.00052	
Local Switching								
Local Switching - TELRIC Based Rates								
Analog Line Side Port, First Port	\$1.61	\$42.58	\$1.33	\$144.93	\$1.61	\$42.58	\$0.90	\$1.68
Analog Line Side Port, Each Additional	\$0.00	\$0.00	\$1.33	\$95.34				\$1.57
Analog Line Side Port, Disconnect								
Local Usage, per Minute of Use	\$0.0071		\$0.002684		\$0.0028		\$0.00121	
Line Port (DS0, Analog, ISLU) Disconnect								
10XXX Direct Dialed Blocking			\$0.08				\$0.00	\$0.00
Account Codes - per system			\$7.56	\$79.66			\$0.00	\$0.00
Attendant Access Line - per station line			\$0.08	\$1.15			\$0.00	\$0.00
Audible Message Waiting			\$0.13	\$1.01			\$0.00	\$0.00
Authorization Codes - per system			\$3.25	\$238.25			\$0.00	\$0.00
Auto Call Back			\$0.08				\$0.00	\$0.00
Automatic Line			\$0.07	\$0.34			\$0.00	\$0.00
Automatic route selection - Common Equip per sys			\$2.20	\$2,090.41			\$0.00	\$0.00
Blocking of pay per call services			\$0.10				\$0.00	\$0.00
Bridging			\$0.07				\$0.00	\$0.00
Call Drop			\$0.07	\$0.34			\$0.00	\$0.00
Call Exclusion - Automatic			\$0.07	\$1.01			\$0.00	\$0.00
Call Exclusion - Manual			\$0.07	\$0.67			\$0.00	\$0.00
Call Forward Don't Answer - All Calls			\$0.13				\$0.00	\$0.00
Call Forwarding Incoming Only			\$0.08				\$0.00	\$0.00
Call Forwarding Intra Group Only			\$0.08				\$0.00	\$0.00
Call Forwarding Variable Remote			\$0.11				\$0.00	\$0.00
Call Forwarding Busy Line	\$0.1128						\$0.00	\$0.00
Call Forwarding : Busy Line (Expanded)	\$0.1386						\$0.00	\$0.00
Call Forwarding : Busy Line (External)			\$0.09				\$0.00	\$0.00

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

		(1)	(2)	(3)	(4)
		T-00000B-97-238	T-00000-00-0194	U-3021-96-448	Joint AT&T/
		271	Testimony of	U-3021-96-448- et. al.	Worldcom/XO
		All Rates	Maureen Arnold	Current Rates	Pricing Proposal
		Exhibit A 2/12/2001	Exhibit MA-1A 4/16/01		Joint Proposal
		Recurring	Recurring	Recurring	Recurring
		NRC	NRC	NRC	NRC
	CLASS - Calling Number Delivery	\$0.0808	\$0.10		\$0.00
	CLASS - Calling Number Delivery Blocking	\$0.3822	\$0.35		\$0.00
	CLASS - Continuous Redial	\$0.5008	\$0.30	\$1.26	\$0.00
	CLASS - Last Call Return	\$0.4258	\$0.10	\$1.26	\$0.00
	CLASS - Priority Calling	\$1.0829	\$0.19	\$1.20	\$0.00
	CLASS - Selective Call Forwarding	\$0.9206	\$0.17	\$1.26	\$0.00
	CLASS - Selective Call Rejection	\$1.7651	\$0.23	\$1.20	\$0.00
	Common Equipment per 1.544 mbps facility (DS1)		\$60.34		\$0.00
	Conference Calling - Meet Me		\$14.60	\$42.29	\$0.00
	Conference Calling - Preset		\$10.68	\$42.29	\$0.00
	Custom Ringing First Line (Short/Long/Short)		\$0.09		\$0.00
	Custom Ringing First Line (Short/Short)		\$0.09		\$0.00
	Custom Ringing First Line (Short/Short/Long)		\$0.09		\$0.00
	Custom Ringing Second Line (Short/Long/Short)		\$0.09		\$0.00
	Custom Ringing Second Line (Short/Short)		\$0.09		\$0.00
	Custom Ringing Second Line (Short/Short/Long)		\$0.09		\$0.00
	Custom Ringing Third Line (Short/Long/Short)		\$0.08		\$0.00
	Custom Ringing Third Line (Short/Short)		\$0.08		\$0.00
	Custom Ringing Third Line (Short/Short/Long)		\$0.08		\$0.00
	Data Call Protection (DMS 100)	\$0.0797	\$0.09		\$0.00
	Dir Sta Self/Busy Lamp Fid per arrangement		\$1.83	\$0.34	\$0.00
	Directed Call Pickup with Barge-in		\$0.18	\$20.08	\$0.00
	Directed Call Pickup without Barge-in		\$0.10	\$20.08	\$0.00
	Distinctive Ring/Distinctive Call Waiting		\$0.09	\$40.14	\$0.00
	Distinctive Ringing		\$0.09		\$0.00
	EBS - Set Interface - per station line		\$1.44		\$0.00
	Executive Busy Override		\$0.08		\$0.00
	Expensive Route Warning Tone - per system		\$0.07	\$71.60	\$0.00
	Facility Restriction Level - per system		\$0.07	\$44.05	\$0.00
	Feature Display		\$0.07		\$0.00
	Group Intercom		\$0.16	\$0.45	\$0.00
	Hot Line - per line		\$0.13	\$1.01	\$0.00
	Hunting Multiposition Circular Hunting		\$0.27		\$0.00
	Hunting Multiposition Hunt Queuing		\$0.23	\$38.42	\$0.00
	Hunting Multiposition Series Hunting		\$0.27		\$0.00
	Hunting Multiposition with Announcement in Queue		\$3.20	\$38.42	\$0.00

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
	271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO	
	All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
	Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
			Recurring	NRC	Recurring	NRC	Recurring	NRC
Hunting Multiposition with Music in Queue			\$1.14	\$40.57			\$0.00	\$0.00
Incoming Calls Barred			\$0.08				\$0.00	\$0.00
International direct Dial Blocking			\$0.09				\$0.00	\$0.00
ISDN Short Hunt			\$0.58	\$1.69			\$0.00	\$0.00
Line Side Answer Supervision			\$0.09				\$0.00	\$0.00
Loudspeaker Paging - per trunk group			\$21.96	\$175.77			\$0.00	\$0.00
Make Busy Arrangements - per group			\$0.36	\$0.67			\$0.00	\$0.00
Make Busy Arrangements - per line			\$0.15	\$0.67			\$0.00	\$0.00
Message Center - per main station line			\$0.07	\$0.34			\$0.00	\$0.00
Message Waiting Indication AV		\$0.0662	\$0.13				\$0.00	\$0.00
Message Waiting Visual			\$0.13	\$0.34			\$0.00	\$0.00
Music On Hold - per system			\$22.87	\$23.03			\$0.00	\$0.00
Network Speed Call			\$0.07				\$0.00	\$0.00
Night Service Arrangement			\$0.08				\$0.00	\$0.00
Outgoing Calls Barred			\$0.08				\$0.00	\$0.00
Outgoing Trunk Queuing			\$0.13				\$0.00	\$0.00
Privacy Release			\$0.08	\$0.47			\$0.00	\$0.00
Query Time			\$0.25	\$0.34			\$0.00	\$0.00
Speed Calling 1 Digit Controller			\$0.08				\$0.00	\$0.00
Speed Calling 1 Digit User			\$0.08				\$0.00	\$0.00
Speed Calling 1# List Individual			\$0.08				\$0.00	\$0.00
Speed Calling 2 Digit Controller			\$0.08				\$0.00	\$0.00
Speed Calling 2 Digit User			\$0.08				\$0.00	\$0.00
Speed Calling 2# List Individual			\$0.08				\$0.00	\$0.00
Speed Calling 30 Number			\$0.08				\$0.00	\$0.00
Speed Calling 8 Number			\$0.08				\$0.00	\$0.00
Speed Call Long-Customer Change		\$0.0654					\$0.00	\$0.00
Station Camp-On Service - per main station			\$8.51	\$0.34			\$0.00	\$0.00
Station Dial Conferencing (6 way)			\$1.71				\$0.00	\$0.00
Station Message Detail Recording (SMDR)			\$0.18				\$0.00	\$0.00
Three Way Calling			\$0.33				\$0.00	\$0.00
Time and Date Display			\$0.18				\$0.00	\$0.00
Time of Day Control for ARS - per system			\$0.07	\$125.28			\$0.00	\$0.00
Time of Day NCOS Update			\$0.08	\$0.54			\$0.00	\$0.00
Time of Day Routing - per line			\$0.13	\$0.51			\$0.00	\$0.00
Toll Restriction Service			\$0.08				\$0.00	\$0.00

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

		(1)		(2)		(3)		(4)	
		Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
		T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
		271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO	
		All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
		Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
		Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	Call Transfer	Under Developmnet						\$0.00	\$0.00
	Three Way Calling	Under Developmnet						\$0.00	\$0.00
	Call Pickup	Under Developmnet						\$0.00	\$0.00
	Call Waiting/Cancel Call Waiting	Under Developmnet						\$0.00	\$0.00
	Distinctive Ringing	Under Developmnet						\$0.00	\$0.00
	Speed Call Long - Customer Change	Under Developmnet						\$0.00	\$0.00
	Station Dial Conferencing (6-way)	Under Developmnet						\$0.00	\$0.00
	Call Forwarding Busy Line	Under Developmnet						\$0.00	\$0.00
	Call Forwarding Don't Answer	Under Developmnet						\$0.00	\$0.00
	Call Forwarding Variable	Under Developmnet						\$0.00	\$0.00
	Call Forwarding Variable Remote	Under Developmnet						\$0.00	\$0.00
	CLASS - Call Waiting ID	Under Developmnet						\$0.00	\$0.00
	CLASS - Calling Name & Number	Under Developmnet						\$0.00	\$0.00
	CLASS - Calling Number Delivery	Under Developmnet						\$0.00	\$0.00
	CLASS - Calling Number Delivery Blocking	Under Developmnet						\$0.00	\$0.00
	CLASS - Continuous Redial	Under Developmnet						\$0.00	\$0.00
	CLASS - Last Call Return	Under Developmnet						\$0.00	\$0.00
	CLASS - Priority Calling	Under Developmnet						\$0.00	\$0.00
	CLASS - Selective Call Forwarding	Under Developmnet						\$0.00	\$0.00
	CLASS - Selective Call Rejection	Under Developmnet						\$0.00	\$0.00
	CLASS - Anonymous Call Rejection	Under Developmnet						\$0.00	\$0.00
	Call Park (Store & Retrieve)	Under Developmnet						\$0.00	\$0.00

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

		(1)		(2)		(3)		(4)	
		Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
		T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
		271		Testimony of		U-3021-96-448 - et. al.		Worldcom/XO	
		All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
		Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
		Message Waiting Indication A/V	Under Development						\$0.00
		Subsequent Order Charge	Under Development						
		Digital Line Side Port (Supporting BRI ISDN)	Under Development						
		First Port	Under Development						
		Each Additional Port	Under Development						
		Digital Trunk Ports							
		DS1 Local Message Trunk Port	Under Development						
		DS1 Digital Trunk, Install	Under Development						
		DS1 Digital Trunk, Disconnect	Under Development						
		Message Trunk Group, First Trunk	Under Development						
		Message Trunk Group, Each Additional	Under Development						
		DS1 PRI ISDN Trunk Port	Under Development						
		Customized Routing							
		Development of Custom Line Class Code-DA or OS Routing Only	ICB						
		Installation Charge, per Switch-DA or OS Routing Only	ICB						
		All Other Custom Routing	ICB						
		Common Channel Signaling/SS7							
		Entrance Facility DS1, Electrical							
		Subsequent				\$89.42	\$560.88		
		Entrance Facility DS3, Electrical				\$357.16	\$560.88		
		Direct Link Transport							
		DS1 - over 0 to 8				\$35.98	\$0.65		
		DS1 - over 8 to 25				\$35.99	\$0.94		
		DS1 - over 25 to 50				\$36.00	\$1.75		
		DS1 - over 50				\$36.00	\$1.59		
		DS3 - over 0 to 8				\$243.17	\$13.32		

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
	T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
	271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO	
	All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
	Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
DS3 - over 8 to 25					\$246.15	\$15.90		
DS3 - over 25 to 50					\$250.66	\$22.91		
DS3 - over 50					\$249.26	\$22.49		
Multiplexing								
DS1 to DS0					\$200.08			
DS3 to DS1					\$196.85			
CCSAC STP Port	\$425.00	ICB	\$260.09	\$438.36				
CCSAC Options Activation Charge								
Basic Translations								
First Activation, per order		\$107.17		\$114.83				
Each Additional Activation, per		\$7.32		\$9.53				
CCSAC Options Database Translations								
First Activation per order		\$121.82		\$133.90				
Each additional Activation per order		\$43.95		\$57.20				
Signal Formulation, ISUP, Per Call Set-Up Requ	\$0.00198		\$0.0020817					
Signal Transport, ISUP, Per Call Set-Up Request	\$0.00145		\$0.0013398					
Signal Transport, TCAP, per Data Request	\$0.00047		\$0.0002974					
Signal Switching, ISUP, Per Call Set-Up Request	\$0.00146		\$0.0009411					
Signal Switching, TCAP, Per Data Request	\$0.00048		\$0.0005910					
STP per message					\$0.00005	\$0.00005	\$0.00005	
SCP per message					\$0.00100	\$0.00100	\$0.00020	
CCS Link - First Link						\$464.94		
CCS Link - Each Additional Link						\$147.60		
Signaling Link								
First Link, DSO								
Additional Link, DSO								
SS7 Links (DS0) Disconnect								\$22.21
SS7 Links (DS1) Install								\$6.33
SS7 Links (DS1) Disconnect								\$20.94
SS7 STP global title translations 'A Link' only Install								\$5.73
SS7 STP global title translations 'A Link' only Disconnect								\$27.69
SS7 STP message transfer part 'A Link' only Install								\$27.69
SS7 STP message transfer part 'A Link' only Disconnect								\$19.63
								\$18.82

AT&TWORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
Maintenance of Service – Basic		\$25.97		\$27.63			\$0.00	\$0.00
Maintenance of Service – Overtime		\$34.76		\$36.90			\$0.00	\$0.00
Maintenance of Service – Premium		\$43.55		\$46.19			\$0.00	\$0.00
Additional COOP Acceptance Testing – Basic		\$27.58		\$29.35			\$0.00	\$0.00
Additional COOP Acceptance Testing – Overtime		\$36.90		\$39.21			\$0.00	\$0.00
Additional COOP Acceptance Testing – Premium		\$46.23		\$49.06			\$0.00	\$0.00
NonScheduled COOP Testing – Basic		\$27.58		\$29.35			\$0.00	\$0.00
NonScheduled COOP Testing – Overtime		\$36.90		\$39.21			\$0.00	\$0.00
NonScheduled COOP Testing – Premium		\$46.23		\$49.06			\$0.00	\$0.00
NonScheduled Manual Testing – Basic		\$27.58		\$29.35			\$0.00	\$0.00
NonScheduled Manual Testing – Overtime		\$36.90		\$39.21			\$0.00	\$0.00
NonScheduled Manual Testing – Premium		\$46.23		\$49.06			\$0.00	\$0.00
Cooperative Scheduled Testing – Loss				\$0.08			\$0.00	\$0.00
Cooperative Scheduled Testing – C-Message Noise				\$0.08			\$0.00	\$0.00
Cooperative Scheduled Testing – Balance				\$0.33			\$0.00	\$0.00
Cooperative Scheduled Testing – Gain Slope				\$0.08			\$0.00	\$0.00
Cooperative Scheduled Testing – C-Notched Noise				\$0.08			\$0.00	\$0.00
Manual Scheduled Testing – Loss				\$0.17			\$0.00	\$0.00
Manual Scheduled Testing – C-Message Noise				\$0.17			\$0.00	\$0.00
Manual Scheduled Testing – Balance				\$0.66			\$0.00	\$0.00
Manual Scheduled Testing – Gain Slope				\$0.17			\$0.00	\$0.00
Manual Scheduled Testing – C-Notched Noise				\$0.17			\$0.00	\$0.00
Additional Dispatch		\$82.17		\$84.23			\$0.00	\$0.00
Date Change		\$12.70		\$10.36			\$0.00	\$0.00
Design Change		\$58.67		\$73.78			\$0.00	\$0.00
Expedite Charge		ICB		ICB			\$0.00	\$0.00
Cancellation Charge		ICB		ICB			\$0.00	\$0.00
Channel Regeneration								
DS1 Regeneration			\$9.45	\$480.05			\$0.00	\$0.00
DS3 Regeneration			\$34.16	\$1,807.55			\$0.00	\$0.00
UNE Platform								
UNE-P Platform Pots New/Existing								
New								
Mechanized, First		\$68.72						
Mechanized, Each Additional		\$17.67						
Manual, First		\$84.78						
Manual, Each Additional		\$19.04						

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

		(1)		(2)		(3)		(4)	
		Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
		T-00000B-97-238		T-00000-00-0194		U-3021-96-448		Joint AT&T/	
		271		Testimony of		U-3021-96-448- et. al.		Worldcom/XO	
		All Rates		Maureen Arnold		Current Rates		Pricing Proposal	
		Exhibit A 2/12/2001		Exhibit MA-1A 4/16/01				Joint Proposal	
Existing								Recurring	NRC
	Mechanized, First		\$7.57						
	Mechanized, Each Additional		\$1.42						
	Manual, First		\$16.74						
	Manual, Each Additional		\$2.79						
UNE-P New Connection									
	UNE-P POTS Mechanized, First				\$55.31				
	UNE-P POTS Mechanized, Each Additional				\$15.87				
	UNE-P POTS Manual, First				\$82.11				
	UNE-P POTS Manual, Each Additional				\$18.44				
UNE-P Conversion									
	UNE-P POTS,CENTREX, PAL, PBX								
	Mechanized, First				\$0.68				\$0.28
	Mechanized, Each Additional				\$0.14				\$0.28
	Migration								\$0.28
	Disconnect								
UNE-P POTS,CENTREX, PAL, PBX									
	Manual,First				\$16.21				
	Manual, Each Additional				\$2.70				
UNE-P PBX DID									
	First				\$20.61				
	Each Additional				\$3.12				
UNE-P ISDN BRI									
	First				\$15.09				\$0.28
	Each Additional				\$3.12				\$0.28
	Migration								\$0.28
	Disconnect								
UNE-P ISDN PRI, DSS per DS1 Facility									
UNE-P ISDN PRI, DSS Trunk					\$51.00				

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

		(1)		(2)		(3)		(4)	
		T-00000B-97-238	T-00000-00-0194	U-3021-96-448	U-3021-96-448	U-3021-96-448	U-3021-96-448	Joint AT&T/	Joint AT&T/
		271	Testimony of	U-3021-96-448- et. al.	U-3021-96-448- et. al.	U-3021-96-448- et. al.	U-3021-96-448- et. al.	Worldcom/XO	Worldcom/XO
		All Rates	Maureen Arnold	Current Rates	Current Rates	Current Rates	Current Rates	Pricing Proposal	Pricing Proposal
		Exhibit A 2/12/2001	Exhibit MA-1A 4/16/01	Recurring	NRC	Recurring	NRC	Recurring	NRC
	First		Under Development		\$18.77				
	Each Additional		Under Development		\$3.12				
	UNE-Combination Private Line								
	DS0/DS1/DS3/OCN/Integrated T-1 Existing Service		Under Development		\$40.87				
	Enhanced Extended Loop (EEL)								
	EEL Link								
	DS0 2-Wire				\$305.93				
	DS0, Each Additional					\$249.10			
	Zone 1	\$18.96				\$217.86		\$7.34	
	Zone 2	\$34.94						\$11.23	
	Zone 3	\$56.53						\$32.06	
	DS0 4-Wire				\$305.93				
	Each Additional				\$213.97				
	Zone 1	\$19.88						\$9.54	
	Zone 2	\$35.86						\$14.60	
	Zone 3	\$57.45						\$41.68	
	DS1	\$106.87			\$355.72			\$43.35	
	Zone 1							\$42.37	
	Zone 2							\$42.62	
	Zone 3							\$47.07	
	Each Additional				\$246.52				
	DS3	\$1,152.00			\$380.43			\$516.73	
	Zone 1					\$261.17		\$479.23	
	Zone 2					\$331.21		\$490.19	
	Zone 3							\$648.11	
	Each Additional				\$271.22				
	EEL C				\$41.43				
	EEL Transport								
	DS0 EEL Transport								
	DS0 Over 0 to 8 Miles - Fixed	\$5.05		\$20.93	\$306.61			\$12.40	\$6.50
	DS0 Over 0 to 8 Miles - per mile	\$0.00		\$0.14				\$0.06	
	DS0 Over 8 to 25 Miles - Fixed	\$5.05		\$20.95				\$12.41	
	DS0 Over 8 to 25 Miles - per mil	\$0.00		\$0.12				\$0.06	

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

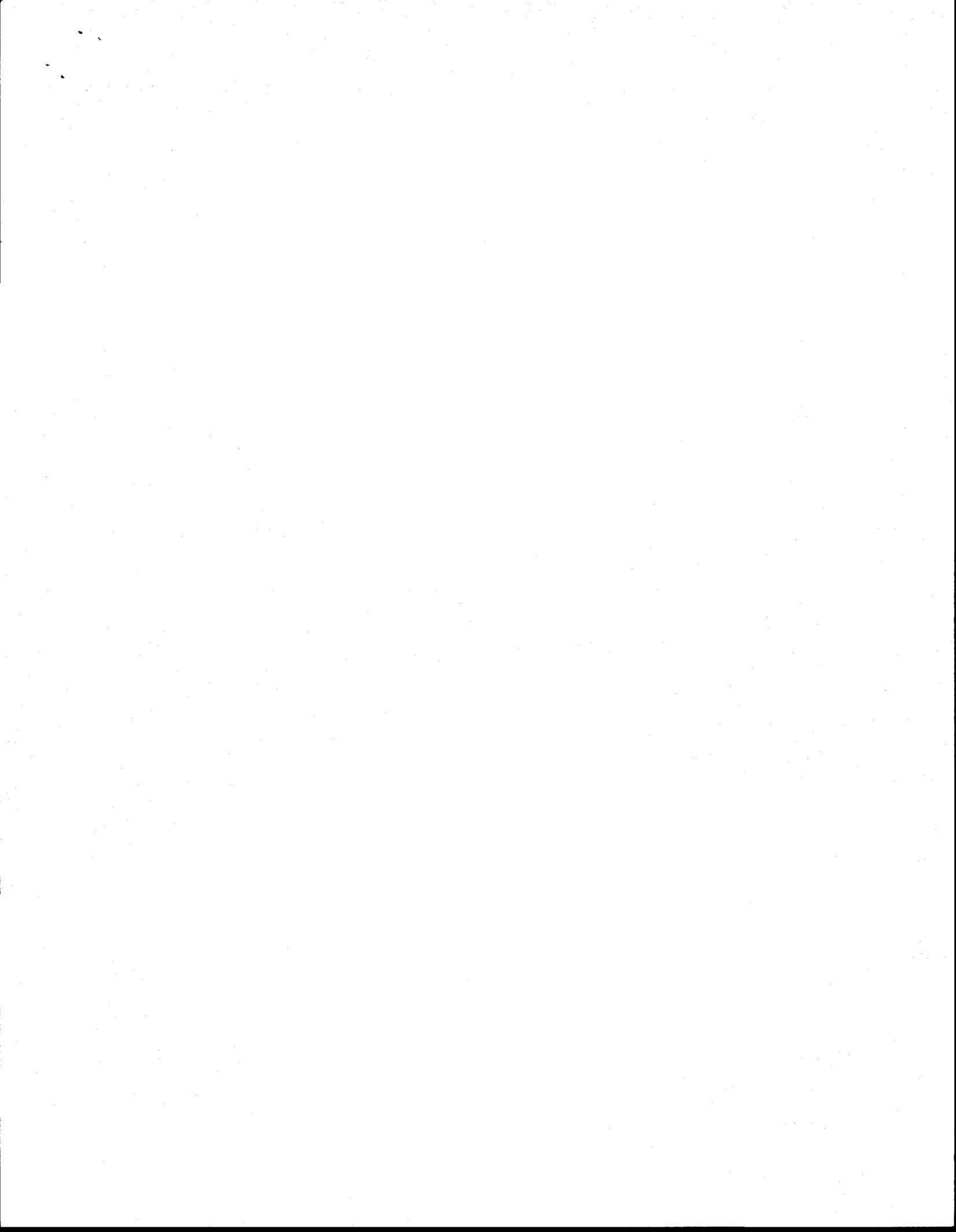
ATT Exhibit MH-1

	(1)		(2)		(3)		(4)	
	T-00000B-97-238 271 All Rates	2/12/2001	T-00000-00-0194 Testimony of Maureen Arnold	4/16/01	U-3021-96-448 Current Rates	U-3021-96-448 Current Rates	Joint AT&T/ Worldcom/XO Pricing Proposal	Joint Proposal NRC
	Recurring	NRC	Recurring	NRC	Recurring	NRC	Recurring	NRC
DS0 Over 25 to 50 Miles - Fixed	\$5.05		\$20.99				\$12.43	
DS0 Over 25 to 50 Miles - per m	\$0.00		\$0.13				\$0.05	
DS0 Over 50 Miles - Fixed	\$5.05		\$20.94				\$12.41	
DS0 Over 50 Miles - per mile	\$0.00		\$0.06				\$0.03	\$18.88
Migration								\$5.98
Disconnect								
DS1 EEL Transport				\$351.39				\$6.79
DS1 Over 0 to 8 Miles - Fixed	\$35.98		\$33.05				\$21.22	
DS1 Over 0 to 8 Miles - per mile	\$0.65		\$1.56				\$0.86	
DS1 Over 8 to 25 Miles - Fixed	\$35.99		\$33.33				\$21.38	
DS1 Over 8 to 25 Miles - per mil	\$0.94		\$1.26				\$0.70	
DS1 Over 25 to 50 Miles - Fixed	\$36.00		\$33.81				\$21.66	
DS1 Over 25 to 50 Miles - per m	\$1.75		\$2.28				\$1.27	
DS1 Over 50 Miles - Fixed	\$36.00		\$33.78				\$21.64	
DS1 Over 50 Miles - per mile	\$1.59		\$1.19				\$0.67	\$19.12
Migration								\$6.56
Disconnect								
DS3 EEL Transport				\$351.39				
DS3 Over 0 to 8 Miles - Fixed	\$243.17		\$210.28				\$142.72	
DS3 Over 0 to 8 Miles - per mile	\$13.32		\$65.55				\$42.03	
DS3 Over 8 to 25 Miles - Fixed	\$246.15		\$213.45				\$142.69	
DS3 Over 8 to 25 Miles - per mil	\$15.90		\$20.30				\$13.70	
DS3 Over 25 to 50 Miles - Fixed	\$250.66		\$196.74				\$133.59	
DS3 Over 25 to 50 Miles - per m	\$22.91		\$25.43				\$16.22	
DS3 Over 50 Miles - Fixed	\$249.26		\$207.61				\$140.93	
DS3 Over 50 Miles - per mile	\$22.49		\$17.49				\$11.00	
Multiplexing DS1 to DS0	\$200.08	\$230.93	\$229.32	\$267.45			\$160.52	\$187.22
Multiplexing DS3 to DS1	\$196.85	\$164.00	\$246.64	\$267.45			\$172.65	\$187.22
DS1 Transport Mux				\$257.04				
DS3 Transport Mux				\$257.04				
DS0 Channel Performance								
DS0 Low Side Channelization	\$14.99		\$13.90					
DS1/DS0 MUX, Low Side Channelization	\$8.55		\$8.87	\$238.79				

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL

ATT Exhibit MH-1

	(1)	(2)	(3)	(4)
	T-00000B-97-238 271 All Rates	T-00000-00-0194 Testimony of Maureen Arnold Exhibit MA-1A 4/16/01	U-3021-96-448 U-3021-96-448- et. al. Current Rates	Joint AT&T/ Worldcom/XO Pricing Proposal
	Exhibit A 2/12/2001 Recurring NRC	Recurring NRC	Recurring NRC	Recurring NRC
Primary Listing	No Charge	No Charge		
Premium/Privacy Listings	Exc Tar rates, less wholesale disc	Exc Tar rates, less wholesale disc		
Directory Assistance Fee				
Local Directory Assistance, per Call	\$0.34	\$0.34	\$0.28	
National Directory Assistance, per Call	\$0.360	\$0.385		
Call Branding, Set-Up and Recording	\$10,500.00	\$10,500.00		
Loading Brand /Per Switch	\$175.00	\$175.00		
Call Completion Link, per call	\$0.09	\$0.085		
Initial Database Load per Listing	\$0.025	\$0.025		
Reload of Database, per Listing	\$0.020	\$0.020		
Daily Updates, per Listing	\$0.500	\$0.025		
One-time Set-Up Fee, per Hour	\$75.24	\$82.22		
Media Charges for File Delivery				
Electronic Transmission	\$0.002	\$0.0010		
Tapes (charges only apply if this is selected as t	\$30.00/tape	\$30.00		
Shipping Charges (for tape delivery)	ICB	ICB		
Option A - per message				
Operator Handled Calling Card	\$1.45	\$0.36		
Machine Handled Calling Card	\$0.60	\$0.46		
Station Call	\$1.50	\$0.18		
Person Call	\$3.50	\$0.84		
Connect to Directory Assistance	\$0.75	\$2.05		
Busy Line Verify, per call	\$1.95	\$0.55	\$0.72	
Busy Line Interrupt	\$2.05	\$0.72	\$0.87	
Operator Assistance, per call	\$0.50	\$0.87		
Option B - per operator work section and computer handled calls				
Operator Handled, per Operator Work Second	\$0.028	\$0.0181		
Machine Handled, per call	\$0.25	\$0.13		
Call Branding, Set-Up & Recording	\$10,500.00	\$10,500		
Loading Brand/Per Switch	\$175.00	\$175		





SEEMS LIKE DSL PROVIDERS ARE FAILING LEFT AND RIGHT.



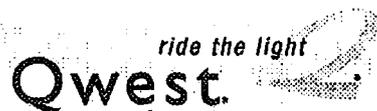
MAKE SURE YOURS ISN'T ONE OF THEM.

Qwest DSL Pro Deluxe™ \$30 <small>per month</small>	FIRST 90 DAYS FREE 1 YEAR activation 2 YEAR modem multi-line rebate
	1-877-453-6401 www.qwest.com/business

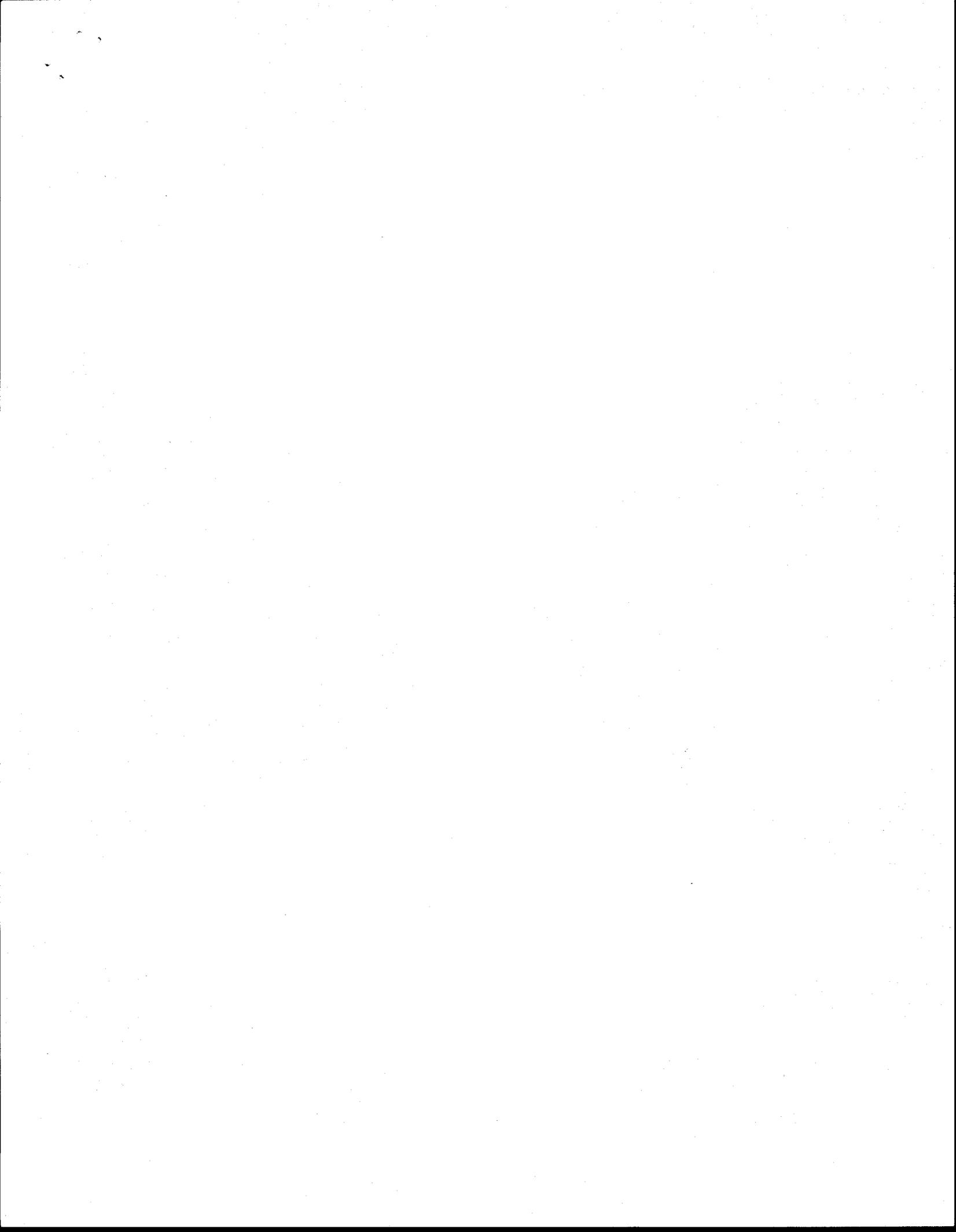
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CERTIFICATE OF SERVICE

I certify that the original and 10 copies of the Testimony of Michael Hydock on behalf of AT&T Communications of the Mountain States, Inc., WorldCom, Inc., and XO Arizona, Inc. in Docket No. T-00000A-00-0194 were sent by overnight delivery on May 17, 2001 to:

Arizona Corporation Commission
Docket Control - Utilities Division
1200 West Washington Street
Phoenix, AZ 85007

and a true and correct copy was sent by overnight delivery on May 17, 2001 to:

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