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September 27, 2001

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The Arizona Corporation Commission
Docket Control – Utilities Division
1200 W. Washington Street
Phoenix, Arizona 85007

Arizona Corporation Commission
DOCKETED

SEP 27 2001

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Re: Investigation into US West's Compliance with Certain Wholesale Pricing Requirements for Unbundled Network Elements and Resale Discounts
Docket No: T-00000A-00-0194

To: Docket Control:

Enclosed for filing are the original and ten (10) copies of the testimony of Edward J. Caputo, Timothy J. Gates and Sidney L. Morrison on behalf of WorldCom, Inc. in the above-captioned matter.

Very truly yours,

LEWIS AND ROCA LLP

Thomas H. Campbell

THC/bjg
Enclosures

cc: All Parties of Record

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL

Chairman

JAMES M. IRVIN

Commissioner

MARC SPITZER

Commissioner

**IN THE MATTER OF INVESTIGATION)
INTO QWEST CORPORATION'S)
COMPLICANCE WITH CERTAIN WHOLESLE) Docket No. T-00000-A-00-0194
PRICING REQUIREMENTS FOR UNBUNDLED) PHASE II – A
NETWORK ELEMENTS AND RESALE)
DISCOUNTS)**

**REBUTTAL TESTIMONY OF
EDWARD J. CAPUTO
ON BEHALF OF WORLDCOM**

SEPTEMBER 27, 2001

INTRODUCTION AND PROFESSIONAL EXPERIENCE

Q. Please state your name, title and business address.

A. My name is Edward J. Caputo. I am Director of Operator and Directory Services for WorldCom. My business address is 601 South 12th Street, Arlington, Virginia 22202.

Q. What is your educational background?

A. I attended the University of Maryland in College Park, Maryland, and earned a Bachelor of Science degree in Business Management. I am a candidate for a Master's degree in Telecommunications Management at George Washington University in Washington, D.C.

Q. Would you please provide a brief description of your professional experience?

A. I have held management positions in the telecommunications field for the last 11 years. Prior to that, I held management positions in the Information Technology and Finance field. I have had management responsibilities at WorldCom and its predecessor entity, MCI, since 1990 in the area of Operator and Directory Services.

PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to respond to Qwest's testimony and cost studies relating to custom routing.

Q. Have you reviewed Qwest's prefiled direct testimony and the cost study related to custom routing?

A. Yes. Specifically, I have reviewed the August 31, 2001 testimony of Ms. Malone and Mr. Brigham and Qwest cost study #5611 entitled "Custom Routing – Non-recurring Elements" (the "Cost Study").

Q. What comments do you have about the custom routing testimony and cost study?

A. I have concerns about four issues: the description of the service, the inclusion of certain marketing and sales expenses, the inclusion of certain allegedly Directly Attributable Expenses and the inclusion of certain allegedly Common Costs.

Q. What is your concern with the definition of the service?

A. On page 23 of his August 31, 2001 testimony, Mr. Brigham states that Custom Routing combines End Office (EO) switching with dedicated trunks to allow CLECs the ability to request specific traffic routing direction by class of service via a unique Line Class Code. (LCC). Mr. Brigham is mistaken in his characterization that dedicated trunks must be employed in order for Qwest to provide Custom Routing. Dedicated trunks are not required. WorldCom wishes to route its' Operator Services and Directory Assistance traffic to existing, shared access, Feature Group D trunks between the Qwest and MCI Long Distance networks. As the carrier requesting customized routing, WorldCom is entitled to designate the particular outgoing trunks associated with unbundled switching provided by the incumbent that will carry certain classes of traffic originating

from the requesting provider's customers.¹ This will allow WorldCom to provide Operator Services and Directory Assistance to its' customers using its' own operators.

In Section B, Description Of Service on page 3 of the Cost Study, Qwest again states that Custom Routing will combine End Office (EO) switching with dedicated trunks to allow Co Providers the ability to request specific traffic routing direction by class of service via a unique Line Class Code. (LCC). This definition suffers from the same defect described above relating to Mr. Brigham's testimony.

Q. Please describe your concerns about the inclusion of certain marketing and sales expenses.

A. In Section C of the Cost Study, Study Methodology on page 4 under the sub heading Expense Factors, Qwest lists "Commercial Marketing" as one of the factors included in the Cost Study. WorldCom does not believe that this factor is justifiable. WorldCom is not aware of any marketing related activities that Qwest has performed with respect to the development or sale of custom routing associated with unbundled switching. WorldCom has not been contacted by Qwest and been informed that custom routing is available, nor has Qwest provided WorldCom with any collateral marketing materials such as brochures or descriptions for this service. In fact, Qwest has made no serious effort to even

¹ Footnote 867 to paragraph 441 FCC 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, FCC 99-238, 1999.

provide custom routing. Any and all expense factors associated with Qwest's "marketing" of this service should be eliminated.

In addition, in Section G of the Cost Study, Nonrecurring Cost Detail Summary, Custom Routing – Operator, DA Development Per LCC on page 3 of 5, ENRC Version 2.14, Date 8/21/01, line 54, Qwest lists "Sales Expense" as a Directly Assigned item. Qwest also lists "Sales Expense" as a Directly Assigned item in Section G, Nonrecurring Cost Detail Summary, Custom Routing – Operator, DA Installation Per Switch on page 5 of 5, ENRC Version 2.14, Date 8/21/01, line 144. WorldCom objects to the inclusion of any and all expense factors associated with Qwest's "sales" of this service. Qwest is not performing any sales activity associated with this function.

Q. Please describe your concerns with the inclusion of certain Directly Attributed costs.

A. In Section G of the Cost Study, Nonrecurring Cost Detail Summary, Custom Routing – Operator, DA Development Per LCC on page 3 of 5, ENRC Version 2.14, Date 8/21/01, lines 63 through 70, Qwest lists Network Support Assets, General Support Assets, General Purpose Computers, Uncollectibles, Accounting and Finance Expense, Human Resource Expense, Information Management Expense and Intangibles as Directly Attributed Costs. In addition, in Section G, Nonrecurring Cost Detail Summary, Custom Routing – Operator, DA Installation Per Switch on page 5 of 5, ENRC Version 2.14, Date 8/21/01, lines 154 through 160, Qwest again lists the same items as Directly Attributable to Custom Routing. WorldCom objects to the inclusions of these costs without a further

explanation of what these costs are and demonstrable evidence of how these costs are Directly Attributable to Custom Routing.

Q. Please describe your concerns with the inclusion of certain Common Costs.

A. In Section G of the Cost Study, Nonrecurring Cost Detail Summary, Custom Routing – Operator, DA Development Per LCC on page 3 of 5, ENRC Version 2.14, Date 8/21/01, lines 76 through 82, Qwest lists Executive Expense, Planning Expense, External Relations Expense, Legal Expense, Other Procurement Expense, Research and Development Expense and Other General Administrative Expense as Common Costs. In Section G, Nonrecurring Cost Detail Summary, Custom Routing – Operator, DA Installation Per Switch on page 5 of 5, ENRC Version 2.14, Date 8/21/01, lines 166 through 172, Qwest again lists these same items as Common Costs. WorldCom objects to the inclusions of these costs without a further explanation of what these costs are and demonstrable evidence of how these costs are Common to Custom Routing.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE ARIZONA CORPORATION COMMISSION

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

IN THE MATTER OF INVESTIGATION)
INTO QWEST CORPORATION'S)
COMPLIANCE WITH CERTAIN WHOLESLE) Docket No. T-00000-A-00-0194
PRICING REQUIREMENTS FOR UNBUNDLED) PHASE II - A
NETWORK ELEMENTS AND RESALE)
DISCOUNTS)

AFFIDAVIT OF EDWARD J. CAPUTO

STATE OF VIRGINIA :
CITY : ss:
COUNTY OF ALEXANDRIA :

Edward J. Caputo, of lawful age being first duly sworn, deposes and states:

- 1. My name is Edward J. Caputo. I am the Director of Operator and Directory Services for WorldCom, Inc. I have caused to be filed written testimony and exhibits in support of WorldCom, Inc. in Docket No: T-00000A-00-0194, Phase II A.
- 2. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Further, Affiant sayeth not.


Edward J. Caputo

SWORN AND SUBSCRIBED to before me this 27th day of September, 2001.


Notary Public

My Commission expires:

Virginia J. Taylor
NOTARY PUBLIC
Commonwealth of Virginia
My Commission Expires 4/30/05

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM MUNDELL
CHAIRMAN
JIM IRVIN
COMMISSIONER
MARC SPITZER
COMMISSIONER

IN THE MATTER OF THE INVESTIGATION INTO)
QWEST CORPORATION'S COMPLIANCE) DOCKET NO. T-00000A-00-0194
WITH CERTAIN WHOLESALE PRICING) Phase II -- A
REQUIREMENTS FOR UNBUNDLED)
NETWORK ELEMENTS AND RESALE)
DISCOUNTS)

REBUTTAL TESTIMONY

OF

TIMOTHY J GATES

ON BEHALF OF WORLDCOM, INC.

September 27, 2001

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1 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS**
2 **ADDRESS.**

3 A. My name is Timothy J Gates. I am a Senior Vice President at QSI
4 Consulting, Inc., a consulting firm specializing in economics and
5 telecommunications issues. My business address is 15712 West 72nd
6 Circle, Arvada, Colorado 80007.

7
8 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
9 **WORK EXPERIENCE.**

10 A. I received a Bachelor of Science degree from Oregon State University and
11 a Master of Management degree in Finance and Quantitative Methods
12 from Willamette University's Atkinson Graduate School of Management. I
13 have also attended numerous courses and seminars specific to the
14 telecommunications industry, including the NARUC Annual and Advanced
15 Regulatory Studies Program.

16
17 Prior to joining QSI I was a Senior Executive Staff Member at MCI
18 WorldCom, Inc. ("MWCOR"). I was employed by MWCOR for 15 years
19 in various public policy positions. While at MWCOR I managed various
20 functions, including tariffing, economic and financial analysis, competitive
21 analysis, witness training and MWCOR's use of external consultants. I
22 testified on behalf of MWCOR more than 150 times in 32 states and
23 before the FCC on various public policy issues ranging from costing,

1 pricing, local entry and universal service to strategic planning, merger and
2 network issues. Prior to joining MWCOT, I was employed as a
3 Telephone Rate Analyst in the Engineering Division at the Texas Public
4 Utility Commission and earlier as an Economic Analyst at the Oregon
5 Public Utility Commission. I also worked at the Bonneville Power
6 Administration as a Financial Analyst doing total electric use forecasts
7 while I attended graduate school. Prior to doing my graduate work, I
8 worked for ten years as a forester in the Pacific Northwest for multinational
9 and government organizations. TJG Schedule 1 to this testimony is a
10 summary of my work experience and education.

11
12 **Q. HAVE YOU EVER TESTIFIED BEFORE THE ARIZONA CORPORATION**
13 **COMMISSION (“COMMISSION”)?**

14 A. Yes. I testified in the Workshop on Special Access Services in 1987 on
15 behalf of MCI. I also provided testimony or comments in CV 95-14284,
16 CV 96-03355, CV 96-03356 (Consolidated); Docket No. R-0000-97-137,
17 Docket No. T-03175A-97-0251 and Docket No. T-00000B-97-238 on
18 behalf of MCI or one of its variants. Earlier this year I testified on behalf of
19 Level 3 Communications in Docket Nos. T-03654A-00-0882 and T-
20 01051B-00-0882. A list of proceedings in which I have filed testimony is
21 attached hereto as Exhibit TJG-1.

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of this testimony is two-fold. First, in this testimony, I evaluate the merit of Qwest's proposal to charge a fee for the transfer of call record information, referred to as the daily usage file or "DUF". Second, I provide a critical review of Qwest's cost studies purportedly supporting the DUF rates for both Category 10 and Category 11 records.

Q. ON WHOSE BEHALF IS THIS TESTIMONY BEING FILED?

A. This testimony is being filed on behalf of WorldCom, Inc.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND STATE YOUR RECOMMENDATIONS.

A. This testimony focuses on Qwest's inappropriate attempt to impose charges for the recording and transfer of call information. I reach several conclusions that are outlined below:

- The daily usage record file is not unique and does not impose any additional costs on Qwest. The recording function is inherent in the switch generics and measurement devices that are paid for in the getting-started investment for the switch. Those investments are already recovered in the switch usage charges. To charge CLECs for this function would result in double recovery.

1 *in question. (¶ 690)*

2
3 Principle # 3: *Technology choices should reflect least-cost, most*
4 *efficient technologies. (¶ 685)*

5
6 Principle # 4: *Costs should be forward-looking. (¶ 679, 682, 692)*

7
8 Principle # 5: *Cost identification should follow cost causation. (¶*
9 *691)*

10
11 In addition to these TELRIC principles, the FCC also noted that ILECs
12 must prove to the state commissions the nature and magnitude of any
13 forward-looking cost they seek to recover in the prices of interconnection
14 and unbundled network elements. (Id. at ¶ 680) While this most important
15 of rules is unfortunately overlooked by some state commissions, the
16 Arizona Commission should put specific emphasis on this rule (and
17 Qwest's obligation) so as to combat assumptions and inputs that may
18 have a large influence on Qwest's ultimate cost calculations, yet are not
19 supported with any corroborating evidence (specific examples will be
20 provided later in this testimony). Finally, cost models should be
21 transparent, open and verifiable by Commissions and intervenors.²

22
23 I believe that these principles accurately summarize the FCC's TELRIC
24 methodology. In my review of the cost studies I will continuously refer to
25 these basic but essential cost principles.

² The FCC recently directed that in upcoming cases to be arbitrated by the FCC, involving Verizon and three CLECs, computerized cost models "must be submitted in a form that allows the Arbitrator and the parties to alter inputs and determine the effect on cost estimates." Procedures Established for Arbitration of Interconnection Agreements Between Verizon, AT&T, Cox, and WorldCom, DA 01-270 (February 1, 2001), Paras. A.2.1.i; A.3.1.c.

IV. DAILY USAGE FILE OR “DUF”

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Q. PLEASE DEFINE DUF.

A. The daily usage file or daily usage record file, as described by Ms. Brohl on behalf of Qwest, is a set of call information records that are transferred to the competitive local exchange carrier (“CLEC”). The incumbent LEC (“ILEC”) switches record this information and it is transferred to the appropriate CLEC so that the CLEC may bill or track usage accordingly.

Q. WHAT TYPE OF INFORMATION IS INCLUDED IN THE DUF?

A. The DUF file includes all of the call related information that is recorded by the switch. For instance, the call record might include the originating number, the terminating number, the conversation time, the date, terminating city, billing telephone number, and how the call was placed.

Q. DOES QWEST RATE THE CALLS BEFORE THE INFORMATION IS TRANSFERRED TO THE CLEC?

A. No. The call record information in the DUF is not rated.³ The CLEC rates the calls based on the information provided in the DUF. For instance, Qwest sends the DUF to WorldCom’s Local Interconnection Data Exchange System (“LIDES”). LIDES then checks for proper pack sequencing and formatting and then sends the DUF to its Local Traffic

³ There are instances when the ILECs send rated traffic (category 01 calls) from information service providers, i.e., 900/976 calls.

1 System for edits and rating. Hence, Qwest performs no edits or other
2 electronic processing in order to generate the data from its switches.

3

4 **Q. DOES THE DUF FILE INCLUDE INFORMATION ON CALL ATTEMPTS**
5 **AS WELL AS COMPLETED CALLS?**

6 A. Yes. The DUF file includes information on call attempts as well as
7 completed calls. As such, the CLEC pays for information on call attempts
8 for which it cannot bill.

9

10 **Q. IS THERE A SPECIFIC FORMAT FOR THE DUF INFORMATION?**

11 A. Yes. Every switch records call information either by peg count or by
12 specific call detail. The recording capabilities are determined by the
13 generic⁴ in the switch and by the recording equipment utilized by the
14 switch. The industry Ordering and Billing Forum or "OBF" has provided
15 standard formats for the transfer of the DUF, but some switches have
16 different formats for transferring data to the CLECs. Generally speaking,
17 however, the format for the DUF is standardized. Historically, the RBOCs
18 including Qwest, endorsed using Exchange Messaging Interface ("EMI")
19 standards (as published by BellCore). The RBOCs advocated that other
20 carriers, including independents and CLECs, move to this standard to
21 allow easier interoperability and exchange of records. As a result, the

⁴ A "generic" is the software program used in analog and digital stored-program control central office switches. The generics contain the intelligence in the switch and provide it with certain capabilities, including the recording of call detail information. New functions and features are

1 CLECs and independents converted to this standard incurring a cost.
2 However, as this was a legacy system used by the RBOCs, Qwest did not
3 have to make such costly conversions.

4
5 The DUF file consists of packs of data that can hold up to 99,999 call
6 records each. It has a header and a trailer to distinguish the file and can
7 be fixed or variable in terms of its size. Some DUF files are 175 bytes and
8 some are 360 bytes. Other DUF files may incorporate or attach modules
9 of additional information. There are also different categories of calls that
10 are included in the DUF.

11

12 **Q. WHAT DO YOU MEAN BY “CATEGORIES”?**

13 A. The categories are established by the Alliance for Telecommunications
14 Industry Solutions (“ATIS”), and more specifically, by the OBF group within
15 ATIS. This is an industry group that has historically established standards
16 for the industry. As such, ILECs and CLECs use these categories to
17 exchange and manage information, including the call record detail within
18 the DUF.

19

20 **Q. WHAT CATEGORIES OF CALLS OR CALL INFORMATION IS**
21 **INCLUDED IN THE DUF?**

provided in successive issues of the generic program, so switches can be “upgraded.” Similar switches may have different versions of the generic.

1 A. Generally, DUF files are for either Category 10 or Category 11 calls.
2 Category 11 refers to calls billed through the ILEC's Carrier Access Billing
3 System ("CABS") and is generally a reference to access related calls.
4 Qwest proposes to charge \$0.001819 per record for Category 11 calls.⁵
5 Through the testimony of Ms. Million at page 60 of her Direct, Qwest
6 defines Category 11 calls as follows:

7 Category 11 Records are messages that provide mechanized
8 record formats that can be used to exchange access usage
9 information between Qwest and a CLEC. The Category 11 cost
10 study identifies the data transmission costs, assembly and editing,
11 and labor costs associated with producing each record. (See
12 Exhibit TKM-18)

13 Mr. Kennedy, also on behalf of Qwest, describes Category 11 calls at
14 pages 10 and 11 of his testimony:

15 Category 11 Mechanized Record Charge, per record - A charge to
16 recover the cost for providing a CLEC with the information
17 necessary for the CLEC to bill the originating carrier for transit
18 when technically feasible. The charge applies to each record
19 created and transmitted to the CLEC.
20
21

22 **Q. WHAT IS "TRANSIT" OR "TRANSIT TRAFFIC"?**

23 A. Mr. Kennedy defines transit traffic at page 9 of his direct testimony as
24 follows, "Transit Traffic consists of Local Transit traffic, IntraLATA Toll
25 traffic, Jointly Provided Switched Access traffic, and Category 11
26 Mechanized Record traffic. Transit traffic, when used in association with
27 LIS, is local traffic that neither originates nor terminates on Qwest's
28 network. This includes traffic transmitted between one CLEC and another

⁵ See, Qwest Arizona SGAT, Fifth Revision, June 19, 2001, Exhibit A; Section 7.8.4.

1 CLEC, or traffic that is transmitted between a CLEC and an ILEC, IXC or
2 wireless carrier other than QWEST.” I agree with this definition.

3 **Q. PLEASE DISCUSS CATEGORY 10 CALLS OR TRAFFIC.**

4 A. Category 10 refers to unrated call records only, and those calls are usually
5 delivered from the ILEC’s Customer Record Information System (“CRIS”).
6 Qwest proposes a rate of \$0.000762 per record for Category 10 calls

7
8 **Q. HOW IS THE DUF TRANSFERRED FROM QWEST TO THE CLEC?**

9 A. The DUF is transferred in the same manner as all other data transfers
10 between ILECs and CLECs. The DUF is transferred via Network Data
11 Mover (“NDM”) or what is now called “Connect Direct.”

12
13 **Q. IS THIS METHOD OF DATA TRANSFER UNIQUE TO LOCAL**
14 **COMPETITION?**

15 A. No. This is the same method that has been used for years in the transfer
16 of toll call information (Carrier Access Billing System or “CABS”) and other
17 data between the ILECs and CLECs. No additional systems were
18 required to allow this type of transfer. This type of batch data delivery is
19 done on a daily basis for DUF and access charges.

20

(Interconnection; Transit Traffic; Category 11 Mechanized Record Charge, per Record).

1 Q. DOES THE ILEC HAVE TO DO ANYTHING DIFFERENT OR UNIQUE
2 TO MEASURE AND RECORD THE TRAFFIC DATA THAT IS
3 ULTIMATELY TRANSFERRED TO THE CLEC VIA THE DUF?

4 A. No. The ILEC uses the same equipment and activities to record traffic
5 data for its own traffic as it does to record traffic for CLECs. Nothing new
6 or unique is required to measure and record traffic for the CLECs.

7

8 The switch generics provide the intelligence for all traffic monitoring and
9 measurement activities. The measurement equipment – Automatic
10 Message Accounting (“AMA”) devices, etc. – are also a part of the switch.

11 The switch generics and the measurement devices are all part of the
12 getting started investment for the switch and are recovered in switch
13 usage charges. As such, there are no incremental costs associated with
14 the DUF and to charge CLECs for such a function would result in double
15 recovery.

16

17

18 **V. QWEST COST SUPPORT FOR CATEGORY 10 DUF RATES**
19

20 Q. IS THE DUF RATE SUBJECT TO THE SAME COSTING
21 REQUIREMENTS AS OTHER INTERCONNECTION ELEMENTS AND
22 UNES UNDER THE TELECOMMUNICATIONS ACT OF 1996?

23 A. Yes. There is no dispute on this issue. The fact that Qwest has
24 proposed rates in its SGAT under Interconnection and Operational

1 Support Systems is indicative of the classification of these rates for
2 purposes of costing and ratemaking.

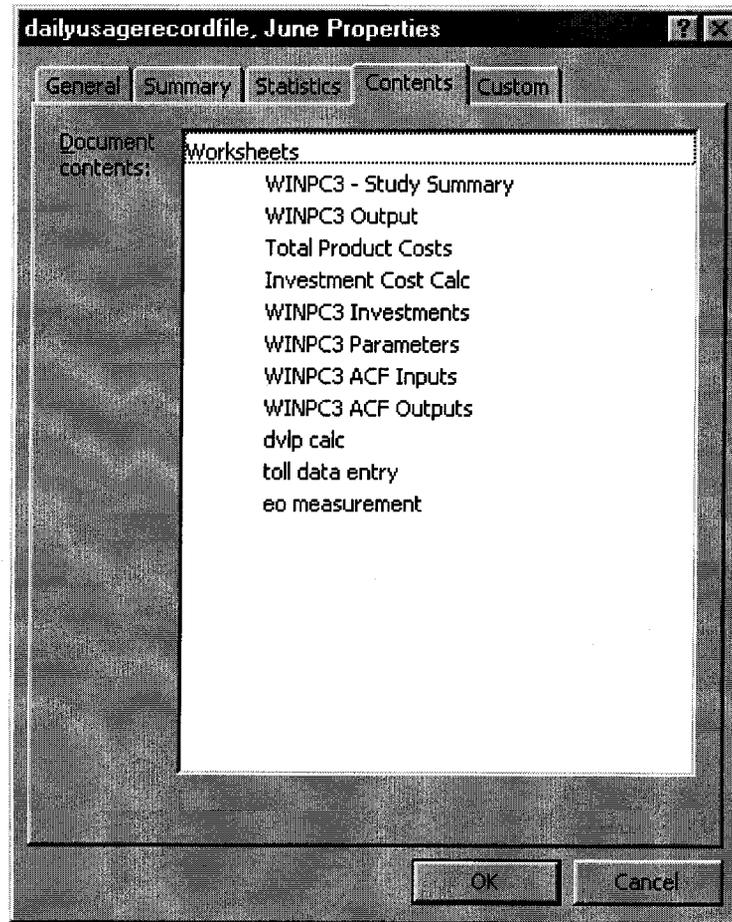
3 **R. HAVE YOU REVIEWED THE COST SUPPORT FOR THE CATEGORY**
4 **10 DUF RATES?**

5 A. Yes, I have. The CD-ROM provided by Qwest contained two files
6 respecting the DUF rates⁶. Generally I find the DUF cost study to be
7 flawed and in certain instances unsupported. An Excel workbook can
8 consist of one or more worksheets and the cost support for the DUF rate
9 is developed over eleven worksheets. The specific worksheets appear in
10 the graphic below that was extracted directly from the Qwest cost support
11 for the DUF rate.

⁶ The first file is a Microsoft Word document at the following location on the CD-ROM: \Arizona Rebuttal Testimony Exhibits\Cost Studies\5211 Daily Usage Record File\dailyusagerecordfile,June.DOC. I have included a print out of this document as an attachment to this testimony.

The second file is a Microsoft Excel workbook at the following location on the CD-ROM: \Arizona Rebuttal Testimony Exhibits\Cost Studies\5211 Daily Usage Record File\dailyusagerecordfile,June.XLS. I have included print outs of all pages of this workbook as an attachment to this testimony.

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I will briefly comment on each of the eleven worksheets in the Excel based DUF cost study.

Q. WHAT FUNCTION DOES THE FIRST WORKSHEET "WINPC3-Study Summary" PROVIDE?

A. This worksheet provides general information about the study including the date it was prepared, the analyst who prepared the study, and various other Qwest models used to develop investments or factors utilized by the

1 DUF cost study. Overall, this worksheet is purely informational and has
2 little or no bearing on the actual calculation of the DUF rate.

3

4 **Q. YOU MENTIONED THAT THERE ARE OTHER MODELS USED BY**
5 **QWEST TO DEVELOP INFORMATION FOR THE DUF COST STUDY.**
6 **WHAT ARE THOSE OTHER MODELS AND DID YOU HAVE ACCESS**
7 **TO THEM?**

8 A. According to the "WINPC3 – Study Summary" worksheet of the DUF cost
9 study, the following other Qwest models were used.

- 10 a. Wholesale Cost Program Version 2.07
11 b. Cost Factor Databases Version 00AZ03E
12 c. Cost Factors Model (TELRIC) Version 00V2
13 d. SUM Version 8.00
14

15 The Wholesale Cost Program was included on one CD-ROM provided to
16 me; however, after running the set-up utility, this program would not run
17 and would return an error message indicating that certain cost factor
18 subfolders were missing. A file named 00AZ03E.DAT was also included
19 on the CD-ROM but I was unable to open this file as no software
20 applications were associated with the file. The Cost Factors Model and
21 the application SUM Version 8.00 were not contained on the two CD-
22 ROMS provided.

23

1 Q. IF YOU DID NOT HAVE ACCESS TO THE MODELS YOU DESCRIBE
2 ABOVE, CAN YOU EXPLAIN HOW THE DUF COST STUDY IS ABLE
3 TO MAKE USE OF THE INFORMATION FROM THESE MODELS?

4 A. Certainly. It appears that the outputs from the various models are
5 imported (most likely using a cut and paste function) into the Microsoft
6 Excel workbook containing the DUF cost study. I draw this conclusion
7 from various observations in the study. For example, on the end office
8 measurement worksheet of the DUF cost study, there are 72 investment
9 figures. Each figure is a hard input number (i.e. not the result of an Excel
10 formula) and is taken out to 18 decimal places. This is indicative of
11 importing the information from another model or application. The point to
12 be made here is that it is not possible to pass on the veracity of the inputs
13 to the DUF cost study, and thereby the resultant DUF rates proposed by
14 Qwest, without access to the underlying models that supply the DUF cost
15 study inputs. Moreover, the Qwest cost models and studies are not
16 unsophisticated, yet it is a simple task to link information developed in one
17 Excel workbook to another. Qwest should provide studies that link to all
18 other models that provide inputs to a cost study. Indeed Qwest had the
19 ability to do so. The CD-ROM containing the DUF cost study only
20 contained 70.8 megabytes of information. A CD-ROM can hold at least
21 650 megabytes of information; hence the capability to provide every model
22 used to compile the DUF cost study.

23

1 Q. PLEASE DESCRIBE THE FUNCTIONS PROVIDED BY THE SECOND
2 WORKSHEET "WINPC3 Output".

3 A. This worksheet, as well as the next worksheet I will describe, both develop
4 the DUF rate; however, the "WINPC3 Output" worksheet develops and
5 passes on certain direct expense information to other portions of the DUF
6 cost study. At first glance the "WINPC3 Output" worksheet appears to be
7 comprised of 10 columns and 20 rows of information. Upon closer
8 inspection one finds that 4 rows and 121 columns of information have
9 been hidden. The user must unhide these rows and columns to locate the
10 source of the direct expense information that is passed on to other parts of
11 the model.

12

13 Q. WHAT FUNCTION DOES THE THIRD WORKSHEET "Total Product
14 Costs" PROVIDE?

15 A. This worksheet develops the DUF rate. This development essentially
16 follows the following algorithm:

17 *Investment Based Costs (per record)*
18 + *Direct Expenses (per record)*
19 + *Directly Assigned Costs*
20 + *Directly Attributable Costs*
21 + *Common Costs*
22 = *TELRIC DUF Rate (per record)*

23

24

1 Q. DO YOU HAVE ANY CONCERNS WITH THE WAY QWEST HAS USED
2 THIS ALGORITHM TO DEVELOP THE DUF RATES?

3 A. Yes, I have five concerns. The first two pertain to the manner in which the
4 investment based cost and direct expenses were developed. Given that
5 these two items are developed on separate worksheets in the cost study, I
6 will address them later in this testimony. My third and fourth concerns
7 center on Qwest's application of factors to the investment based cost and
8 direct costs in an attempt to recover what Qwest terms Directly Assigned
9 and Directly Attributable Costs.

10

11 Q. PLEASE GIVE AN EXAMPLE OF WHAT QWEST CONSIDERS TO BE
12 DIRECTLY ASSIGNED COSTS.

13 A. Qwest includes product management and advertising expense, sales
14 expense, and business fees among its Directly Assigned Costs. The
15 Directly Assigned Cost factors applied to the investment based cost and
16 direct costs add ****confidential number**** to the cost for each DUF record.
17 Given that the DUF is a necessary UNE for CLECs, it seems strange that
18 Qwest would have to provide for much, if any, product management or
19 sales expense. Furthermore, I was not able to audit the development of
20 the factors as Version 00V2 of the Cost Factors Model was not included
21 on either CD-ROM.

22

1 Q. WHAT ARE SOME OF THE COSTS QWEST CONSIDERS TO BE
2 DIRECTLY ATTRIBUTABLE COSTS.

3 A. A few of Qwest's Directly Attributable Costs include general support
4 computers, uncollectibles, and intangibles. The Directly Assigned Cost
5 factors applied to the investment based and direct costs add
6 ****confidential number**** to the cost for each DUF record. A portion of the
7 DUF investment based cost includes general-purpose computers. Since
8 Qwest applies a cost factor for general-purpose computers to the
9 investment based cost, Qwest is essentially double recovering for general-
10 purpose computers. Once again, I was not able to audit the development
11 of the factors as Version 00V2 of the Cost Factors Model was not included
12 on either CD-ROM.

13

14 Q. HOW DOES QWEST APPLY COMMON COSTS TO THE INVESTMENT
15 BASED DUF COSTS?

16 A. Qwest applies factors for seven categories of common costs. These
17 factors add ****confidential number**** to the total cost of the investment
18 based cost and direct costs. Yet again, I was not able to audit the
19 development of the common cost factors as Version 00V2 of the Cost
20 Factors Model was not included on either CD-ROM.

21

1 Q. DO YOU BELIEVE THE APPLICATION OF THESE FACTORS FOR
2 DIRECTLY ASSIGNED AND DIRECTLY ATTRIBUTABLE COSTS
3 COMPORT WITH TELRIC PRINCIPLES?

4 A. No, I do not. FCC Rule §51.505 states that the forward looking economic
5 cost of an element equals the sum of the TELRIC cost of the element plus
6 a reasonable allocation of forward-looking common costs. Other than
7 hard coded numbers, Qwest has made no showing in this instance that
8 the factors for its directly assigned and directly attributable allocations are
9 appropriate. Hence those allocations should be removed.

10

11 Q. WHAT IS YOUR FIFTH CONCERN WITH QWEST'S ALGORITHM USED
12 TO CALCULATE THE DUF RATES?

13 A. The table below presents the amounts of the factors proposed by Qwest
14 to be applied to the DUF investment based costs.

Directly Assigned Factors	**
Directly Attributed Factors	**
Common Factors	**
TOTAL OF ALL FACTORS	**

15

****confidential numbers**

16 In its application of these factors, however, Qwest erroneously compounds
17 these factors. More specifically, after Qwest applies the directly assigned
18 factors to the investment based costs to arrive at what it calls total direct
19 costs, Qwest applies its directly attributed factors to the amount of
20 investment based costs that has been increased by the directly assigned

1 factors. Qwest then does the same yet again by compounding that
2 product by the common factors. While the total of all the factors is
3 ****confidential number****, this compounding error inflates the actual
4 application of additional costs to the investment based costs by an
5 additional ****confidential number**** for a total of ****confidential number****.
6 Said another way, for each dollar of investment calculated by Qwest, it
7 adds ****confidential number**** cents to that dollar in determining rates for
8 the DUF.

9

10 **Q. WHAT FUNCTION DOES THE FOURTH WORKSHEET CALLED**
11 **“Investment Cost Calc” PERFORM AND DO YOU HAVE ANY**
12 **CONCERNS WITH THIS SHEET?**

13 A. This worksheet takes the investment-based costs developed elsewhere in
14 the cost study and applies the annual charge factors in order to develop a
15 total capital cost. This total capital cost is then used to develop total
16 direct costs. I have one primary concern with this worksheet. In its
17 executive summary for the DUF cost study, Qwest has stated the
18 following:

19 Total Direct Costs are the forward-looking costs that are caused by
20 offering the network element in the long run. ***These costs would***
21 ***not be incurred if the network elements were not offered.***
22 (emphasis supplied)
23

24 On the “Investment Cost Calc” worksheet, Qwest applies investment for
25 land and building. Clearly if Qwest did not offer the DUF UNE, these costs

1 for land and building would not go away. Hence, they are inappropriately
2 included.

3

4 **Q. WHAT FUNCTIONS DO THE WORKSHEETS CALLED “WINPC3**
5 **Investments” and “WINPC3 Parameters” ACCOMPLISH?**

6 A. These two worksheets serve to pass information between other
7 worksheets. They provide for certain functions as telling the cost study
8 how many decimal places to use and whether the annual charge factors
9 should be presented on an annual or monthly basis. I take no issue with
10 these two sheets.

11

12 **Q. PLEASE DESCRIBE WHAT THE “WINPC3 ACF Inputs” and “WINPC3**
13 **ACF Outputs” WORKSHEETS DO.**

14 A. These sheets house the various factors that the DUF cost study calls on
15 for application to certain investments. The factors included are hard
16 coded numbers and appear to have been generated externally from the
17 DUF cost study. Given that I have not had access to Qwest's Cost Factor
18 Model Version 00V2, I cannot pass on these factors. I am concerned,
19 however, that at some point the Cost Factor Model must be closely
20 scrutinized.

21

22 **Q. WHAT DOES THE WORKSHEET “dvlp calc” DO FOR THE DUF COST**
23 **STUDY?**

1 A. This worksheet is based on a resellers competitive line loss forecast and
2 appears to calculate a per message cost. This amount is passed on as a
3 direct expense in calculating total direct costs. The worksheet develops
4 the cost amount for a two-year increment and a five-year increment.
5 Harkening back to Qwest's own description of TELRIC, its DUF cost study
6 executive summary states that total direct costs are the forward-looking
7 costs that are caused by offering the network element in the long run.
8 Though Qwest makes this statement, it selects the two-year increment for
9 message cost development, which is nearly three times higher than the
10 five-year increment. If anything, I would advocate that this type of charge
11 should be developed and applied on a one-time, non-recurring basis.

12

13 **Q. PLEASE DESCRIBE THE FUNCTION PERFORMED BY THE**
14 **WORKSHEET "toll data entry".**

15 A. This worksheet simply presents a toll data entry expense amount that is
16 passed on in order to calculate total direct costs for the DUF. The number
17 presented on this worksheet contains 12 decimal places, thus indicating
18 that it was developed externally to the DUF cost study. Beyond this
19 number no support exists for the toll data entry expense. Once again, I
20 would advocate that this type of charge should be developed and applied
21 on a one-time, non-recurring basis.

22

1 **Q. FINALLY, PLEASE DESCRIBE THE FUNCTION PERFORMED BY THE**
2 **LAST WORKSHEET CALLED “eo measurement”.**

3 A. This worksheet shows an investment amount on a per-call set up basis for
4 end office measurement. Much like the toll data entry expense listed
5 above, the investment amount is shown at 18 decimal places and must
6 have been developed externally. No other support is given for this figure.
7 Without access to the models used to determine this amount, I cannot
8 pass on this investment amount; however, I would reiterate my earlier
9 position that the switch generic software and the recording equipment
10 should be included in the getting started costs of a switch and are likely
11 recovered across other elements. Hence there is no place for this charge.

12

13 **Q. HAVE YOU MADE AN ATTEMPT TO RECALCULATE THE DUF RATE**
14 **BY CORRECTING THE PROBLEMS YOU HAVE ENCOUNTERED IN**
15 **THE DUF COST STUDY.**

16 A. Yes, I have. As previously noted, the Qwest proposed DUF charge per
17 record is \$0.000746 per record. By correcting for the deficiencies I have
18 mentioned above, I calculate the DUF rate to be \$0.000038 per record.
19 The spreadsheets supporting this recalculation can be found in TJG-
20 Schedule 2, attached to this testimony. This amount should be
21 considered a ceiling and should also be considered secondarily to my
22 earlier proposal that no charge should be imposed for the DUF.

23

1 **Q. PLEASE SUMMARIZE YOUR POSITION ON QWEST'S PROPOSED**
2 **CATEGORY 10 DUF RATES.**

3 A. Qwest should not be allowed to charge CLECs for the DUF. This function
4 is provided as part of the switch generic program and does not cause any
5 additional cost for Qwest. In the alternative, if the Commission believes a
6 charge is appropriate for the DUF, then Qwest's rates should be more
7 thoroughly scrutinized based on the flaws and omissions I have discussed
8 above. At a minimum, the DUF rate should be reduced to correct the
9 obvious flaws described in my testimony.

10

11 **VI. QWEST COST SUPPORT FOR CATEGORY 11 RECORDS**

12

13 **Q. WOULD YOU PLEASE REITERATE WHAT IS MEANT BY A**
14 **CATEGORY 11 RECORD?**

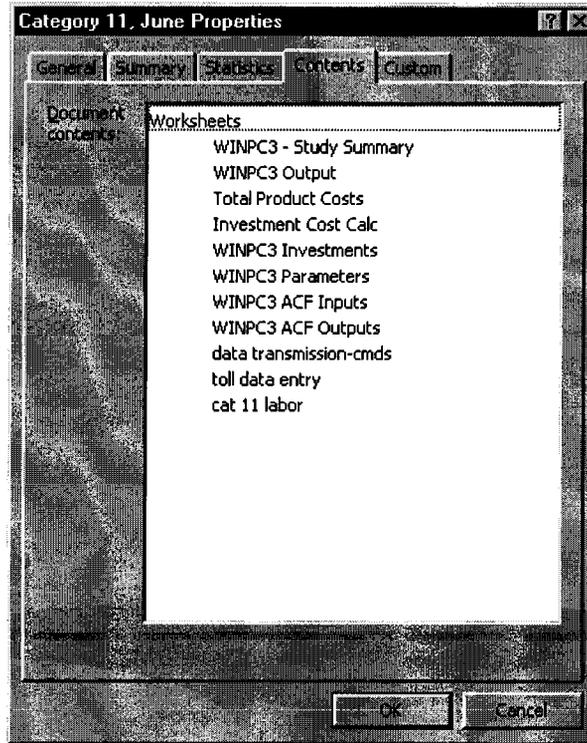
15 A. Of course. Qwest and other providers exchange access usage
16 information between each other via mechanized record formats known as
17 Exchange Message Records (EMRs) or Category 11 records. The
18 Category 11 DUFs are usually wholesale-to-wholesale transactions that
19 emanate from the ILEC CABS.

20

21 **Q. HAVE YOU REVIEWED THE CATEGORY 11 COST STUDY?**

22 A. Yes, I have. This particular cost study is much the same as the Category
23 10 DUF cost study and suffers from many of the same shortcomings as
24 that study. The overall structure of the Category 11 cost study is quite

1 similar to that of the Category 10 DUF study. The graphic that follows
2 depicts the various worksheets in the Excel workbook that comprises the
3 Category 11 study.



14

15 **Q. CAN YOU DESCRIBE ANY MAJOR DIFFERENCES BETWEEN THE**
16 **COST STUDY FOR CATEGORY 11 RECORDS AND THE COST STUDY**
17 **FOR THE DUF?**

18 **A.** Yes. The primary difference is that the preponderance of the costs for
19 Category 11 Records come from direct expenses. There are virtually no
20 investment-based costs to speak of.⁷

21

⁷ After application of the annual charge factors and in order to identify any investment based costs one must look to the 8th decimal place. Since the Category 11 cost study only shows 6 decimal places, the investment based costs initially appear to be zero.

1 **Q. WHAT COMPRISES THE DIRECT EXPENSES FOR THE CATEGORY**
2 **11 COSTS?**

3 A. There are three different expenses that make up the direct expenses in
4 the Category 11 cost study. Those expenses include:

- 5 1. Data transmission for a Centralized Message Data System
- 6 2. Toll data entry assembly and editing expense
- 7 3. Labor cost per record

8
9 **Q. PLEASE DESCRIBE THE DATA TRANSMISSION COSTS THAT ARE**
10 **DEVELOPED IN THE CATEGORY 11 COST STUDY.**

11 A. The data transmission costs are developed in the worksheet called "data
12 transmission-cmds". This cost is derived by dividing an IS-NET cost per
13 CMDS message by a total number of CMDS messages. The IS-NET cost
14 per message and the total number of CMDS messages are hard coded
15 numbers and no support has been provided in the Category 11 cost study
16 for these figures. Further, the cost study does not indicate whether other
17 groups or services make use of or benefit from the IS-NET cost per CMDS
18 message.

19

20 **Q. HOW HAS QWEST DEVELOPED THE SECOND DIRECT EXPENSE,**
21 **TOLL DATA ENTRY?**

22 A. Qwest develops this expense exactly in the same fashion as it did for the
23 Category 10 DUF cost study in a worksheet called "toll data entry". This
24 worksheet simply presents a toll data entry expense amount that is

1 passed on in order to calculate total direct costs for Category 11 records.

2 The number presented on this worksheet contains 12 decimal places, thus

3 indicating that it was developed externally to the Category 11 cost study.

4 Beyond this number no support exists for the toll data entry expense. As I

5 did for this direct expense in the DUF cost study, I would advocate that

6 this type of charge for Category 11 records should be developed and

7 applied on a one-time, non-recurring basis.

8

9 **Q. PLEASE DESCRIBE THE THIRD DIRECT EXPENSE, LABOR COST**
10 **PER CATEGORY 11 RECORD, AND HOW QWEST HAS DEVELOPED**
11 **THIS COST.**

12 **A.** This direct cost is developed by Qwest in a worksheet in the Category 11
13 cost study called "cat 11 labor". The cost is calculated by dividing an
14 annual dollar amount of managerial and occupational labor by
15 ****confidential number**** messages. The cost support provides no
16 support whatsoever for the work activities or work times of the managerial
17 and occupational personnel. Further the cost study provides no support
18 for why ****confidential number**** million messages is used in the
19 denominator of the calculation. (in developing the data transmission costs,
20 Qwest used in excess of ****confidential number**** messages in the
21 denominator).

22

1 **Q. WOULD YOU BRIEFLY RECAP THE OTHER PROBLEMS IN THE**
2 **CATEGORY 11 COST STUDY THAT ARE SIMILAR TO THE**
3 **SHORTCOMINGS FOUND IN THE CATEGORY 10 DUF COST STUDY?**

4 A. Absolutely. First, there is a general lack of support for all the factors
5 used to apply directly assigned, directly attributable, and common costs.
6 Second, Qwest assigns direct costs for product management, sales
7 expense, and business fees in developing the Category 11 costs though
8 the Category 11 records are a necessary UNE for CLECs and hence
9 Qwest should not have to incur product management or sales expense.
10 Third, in the Category 11 cost study Qwest continues to compound directly
11 attributed costs on top of total direct costs and then compounds common
12 costs on top of the total direct and directly attributable costs.

13

14 **Q. HAVE YOU RECALCULATED AN APPROPRIATE RATE FOR**
15 **CATEGORY 11 RECORDS?**

16 A. No, I have not. The general lack of support for the three major direct
17 expense items in this cost study prevent me from making any informed
18 decisions with respect to these costs at this time.

19

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

21 A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL

Chairman

JAMES M. IRVIN

Commissioner

MARC SPITZER

Commissioner

IN THE MATTER OF INVESTIGATION)
INTO QWEST CORPORATION'S)
COMPLICANCE WITH CERTAIN WHOLESLE) Docket No. T-00000-A-00-0194
PRICING REQUIREMENTS FOR UNBUNDLED) PHASE II - A
NETWORK ELEMENTS AND RESALE)
DISCOUNTS)

AFFIDAVIT OF TIMOTHY J GATES

STATE OF COLORADO

:

: ss:

COUNTY OF JEFFERSON

:

Timothy J Gates, of lawful age being first duly sworn, deposes and states:

- 1. My name is Timothy J Gates. I am a Senior Vice President of QSI Consulting. I have caused to be filed written testimony and exhibits in support of WorldCom, Inc. in Docket No: T-00000A-00-0194, Phase II A.
2. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Further, Affiant sayeth not.

Handwritten signature of Timothy J Gates
Timothy J Gates

SWORN AND SUBSCRIBED to before me this 26TH day of September, 2001.

Handwritten signature of Jeannette A. Nuyadine
Notary Public

My Commission expires:

MARCH 08, 2002

**Qualifications of Timothy J Gates
TJG Schedule 1**

Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.

- A. Prior to my current position with QSI Consulting, I was a Senior Executive Staff Member in MCI WorldCom's ("MCIW") National Public Policy Group. In this position, I was responsible for providing public policy expertise in key cases across the country and for managing external consultants for MCIW's state public policy organization. In certain situations, I also provided testimony in regulatory and legislative proceedings.

Prior to my position with MCIW in Denver, I was an Executive Staff Member II at MCI Telecommunications ("MCI") World Headquarters in Washington D.C.. In that position I managed economists, external consultants, and provided training and policy support for regional regulatory staffs. Prior to that position I was a Senior Manager in MCI's Regulatory Analysis Department, which provided support in state regulatory and legislative matters to the various operating regions of MCI. In that position I was given responsibility for assigning resources from our group for state regulatory proceedings throughout the United States. At the same time, I prepared and presented testimony on various telecommunications issues before state regulatory and legislative bodies. I was also responsible for managing federal tariff reviews and presenting MCI's position on regulatory matters to the Federal Communications Commission. Prior to my assignment in the Regulatory Analysis Department, I was the Senior Manager of Economic Analysis and Regulatory Policy in the Legal, Regulatory and Legislative Affairs Department for the Midwest Division of MCI. In that position I developed and promoted regulatory policy within what was then a five-state operating division of MCI. I promoted MCI policy positions through negotiations, testimony and participation in industry forums.

Prior to my positions in the Midwest, I was employed as Manager of Tariffs and Economic Analysis with MCI's West Division in Denver, Colorado. In that position I was responsible for managing the development and application of MCI's tariffs in the fifteen MCI West states. I was also responsible for managing regulatory dockets and for providing economic and financial expertise in the areas of discovery and issue analysis. Prior to joining the West Division, I was a Financial Analyst III and then a Senior Staff Specialist with MCI's Southwest Division in Austin, Texas. In those positions, I was responsible for the management of regulatory dockets and liaison with outside counsel. I was also responsible for discovery, issue analysis, and for the development of working relationships with consumer and business groups. Just prior to joining MCI, I was employed by the Texas Public Utility Commission as a Telephone Rate Analyst in the Engineering Division responsible for examining telecommunications cost studies and rate structures.

I was employed as an Economic Analyst with the Public Utility Commissioner of Oregon from July, 1983 to December, 1984. In that position, I examined and analyzed cost studies and rate structures in telecommunications rate cases and investigations. I also testified in rate cases and in private and public hearings regarding telecommunications services. Before joining the Oregon Commissioner's Staff, I was employed by the Bonneville Power Administration as a Financial Analyst, where I made total regional electric use forecasts and automated the Average System Cost Review Methodology. Prior to joining the Bonneville Power Administration, I held numerous positions of increasing responsibility in areas of forest management for both public and private forestry concerns.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL CREDENTIALS.

- A. I received a Bachelor of Science degree from Oregon State University and a Master of Management degree in Finance and Quantitative Methods from Willamette University's Atkinson Graduate School of Management. I have also attended numerous courses and seminars specific to the telecommunications industry, including the NARUC Annual and Advanced Regulatory

Studies Program.

Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?

A. Effective April 1, 2000, I joined QSI Consulting as Senior Vice President and Partner. In this position I provide analysis and testimony for QSI's many clients. The deliverables include written and oral testimony, analysis of rates, cost studies and policy positions, position papers, presentations on industry issues and training.

Q. PLEASE IDENTIFY THE JURISDICTIONS IN WHICH YOU HAVE TESTIFIED.

A. I have filed testimony or comments on telecommunications issues in Alabama, Arizona, California, Colorado, Delaware, Georgia, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Washington, West Virginia, Wisconsin and Wyoming. I have also filed comments with the FCC and made presentations to the Department of Justice.

I have testified or presented formal comments in the following proceedings and forums:

Alabama:

October 18, 2000; Docket No. 27867; Adelphia Business Solutions Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

January 31, 2001; Docket No. 27867; Adelphia Business Solutions Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

Arizona:

September 23, 1987; Arizona Corporation Commission Workshop on Special Access Services; Comments on Behalf of MCI.

August 21, 1996; Affidavit in Opposition to USWC Motion for Partial Summary Judgment; No. CV 95-14284, No. CV-96-03355, No. CV-96-03356, (consolidated); On Behalf of MCI.

October 24, 1997; Comments to the Universal Service Fund Working Group; Docket No. R-0000-97-137; On Behalf of MCI.

May 8, 1998; Comments to the Universal Service Fund Working Group; Docket No. R-0000-97-137; On Behalf of MCI.

November 9, 1998; Docket No. T-03175A-97-0251; Application of MCImetro Access Transmission Services, Inc. to Expand It's CCN to Provide IntraLATA Services and to Determine that Its IntraLATA Services are Competitive; Direct Testimony on Behalf of MCI WorldCom, Inc.

September 20, 1999; Docket No. T-00000B-97-238; USWC OSS Workshop; Comments on Behalf of MCI WorldCom, Inc.

January 8, 2001; Docket Nos. T-03654A-00-0882, T-01051B-00-0882; Petition of Level 3 Communications, LLC, for Arbitration with Qwest Corporation; Direct Testimony on Behalf of Level 3.

California:

August 30, 1996; Application No. 96-08-068; MCI Petition for Arbitration with Pacific Bell; Direct Testimony on Behalf of MCI.

September 10, 1996; Application No. 96-09-012; MCI Petition for Arbitration with GTE California, Inc.; Direct Testimony on Behalf of MCI.

June 5, 2000; Petition of Level 3 Communications for Arbitration of an Interconnection Agreement with Pacific Bell Telephone Company; Direct Testimony on Behalf of Level (3) Communications, LLC.

Colorado:

December 1, 1986; Investigation and Suspension Docket No. 1720; Rate Case of Mountain States Telephone and Telegraph Company; Direct Testimony on Behalf of MCI.

October 26, 1988; Investigation and Suspension Docket No. 1766; Mountain States Telephone and Telegraph Company's Local Calling Access Plan; Direct Testimony of Behalf of MCI.

September 6, 1996; MCImetro Petition for Arbitration wit U S WEST Communications, Inc.; Docket No. 96A-366T (consolidated); Direct Testimony on Behalf of MCI.

September 17, 1996; MCImetro Petition for Arbitration wit U S WEST Communications, Inc.; Docket No. 96A-366T (consolidated); Rebuttal Testimony on Behalf of MCI.

September 26, 1996; Application of U S WEST Communications, Inc. To Modify Its Rate and Service Regulation Plan; Docket No. Docket No. 90A-665T (consolidated); Direct Testimony on Behalf of MCI.

October 7, 1996; Application of U S WEST Communications, Inc. To Modify Its Rate and Service Regulation Plan; Docket No. Docket No. 90A-665T (consolidated); Rebuttal Testimony on Behalf of MCI.

July 18, 1997; Complaint of MCI to Reduce USWC Access Charges to Economic Cost; Docket Nos. 97K-237T, 97F-175T (consolidated) and 97F-212T (consolidated); Direct Testimony on Behalf of MCI.

August 15, 1997; Complaint of MCI to Reduce USWC Access Charges to Economic Cost; Docket Nos. 97K-237T, 97F-175T (consolidated) and 97F-212T (consolidated); Rebuttal Testimony on Behalf of MCI.

March 10, 1998; Application of WorldCom, Inc. for Approval to Transfer Control of MCI to WorldCom, Inc.; Docket No. 97A-494T; Supplemental Direct Testimony on Behalf of MCI.

March 26, 1998; Application of WorldCom, Inc. for Approval to Transfer Control of MCI to WorldCom, Inc.; Docket No. 97A-494T; Rebuttal Testimony on Behalf of MCI.

May 8, 1998; Application of WorldCom, Inc. for Approval to Transfer Control of MCI to WorldCom, Inc.; Docket No. 97A-494T; Affidavit in Response to GTE.

November 4, 1998; Proposed Amendments to the Rules Prescribing IntraLATA Equal Access; Docket No. 98R-426T; Comments to the Commission on Behalf of MCI WorldCom and AT&T Communications of the Mountain States, Inc.

May 13, 1999; Proposed Amendments to the Rules on Local Calling Area Standards; Docket No. 99R-128T; Oral Comments before the Commissioners on Behalf of MCIW.

January 4, 2001; Petition of Level 3 Communications, LLC for Arbitration with Qwest Corporation; Docket No. 00B-601T; Direct Testimony on Behalf of Level 3.

January 16, 2001; Petition of Level 3 Communications, LLC for Arbitration with Qwest Corporation; Docket No. 00B-601T; Rebuttal Testimony on Behalf of Level 3.

January 29, 2001; Qwest Corporation, Inc., Plaintiff, v. IP Telephony, Inc., Defendant. District Court, City and County of Denver, State of Colorado; Case No. 99CV8252; Direct Testimony on Behalf of IP Telephony.

June 27, 2001; US WEST Statement of Generally Available Terms and Conditions; Docket No. 991-577T; Direct Testimony on Behalf of Covad Communications Company, Rhythms Links, Inc., and New Edge Networks, Inc.

Delaware:

February 12, 1993; Diamond State Telephone Company's Application for a Rate Increase; Docket No. 92-47; Direct Testimony on Behalf of MCI.

Florida:

July 1, 1994; Investigation into IntraLATA Presubscription; Docket No. 930330-TP; Direct Testimony on Behalf of MCI.

October 5, 2000; Petition of Level 3 for Arbitration with BellSouth; Docket No. 000907-TP; Direct Testimony On Behalf of Level 3.

October 13, 2000; Petition of BellSouth for Arbitration with US LEC of Florida Inc.; Docket No. 000084-TP; Direct Testimony On Behalf of US LEC.

October 27, 2000; Petition of BellSouth for Arbitration with US LEC of Florida Inc.; Docket No. 000084-TP; Rebuttal Testimony On Behalf of US LEC.

November 1, 2000; Petition of Level 3 for Arbitration with BellSouth; Docket No. 000907-TP; Rebuttal Testimony On Behalf of Level 3.

Georgia:

December 6, 2000; Docket No. 12645-U; Petition of Level 3 for Arbitration with BellSouth; Direct Testimony on Behalf of Level 3.

December 20, 2000; Docket No. 12645-U; Petition of Level 3 for Arbitration with BellSouth; Rebuttal Testimony on Behalf of Level 3.

Idaho:

November 20, 1987; Case No. U_1150_1; Petition of MCI for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

March 17, 1988; Case No. U_1500_177; Investigation of the Universal Local Access Service Tariff; Direct Testimony on Behalf of MCI.

April 26, 1988; Case No. U_1500_177; Investigation of the Universal Local Access Service Tariff;

Rebuttal Testimony on Behalf of MCI.

Illinois:

January 16, 1989; Docket No. 83_0142; Appropriate Methodology for Intrastate Access Charges; Rebuttal Testimony Regarding Toll Access Denial on Behalf of MCI.

February 16, 1989; Docket No. 83_0142; Appropriate Methodology for Intrastate Access Charges; Testimony Regarding ICTC's Access Charge Proposal on Behalf of MCI.

May 3, 1989; Docket No. 89_0033; Illinois Bell Telephone Company's Rate Restructuring; Direct Testimony on Behalf of MCI.

July 14, 1989; Docket No. 89-0033; Illinois Bell Telephone Company's Rate Restructuring; Rebuttal Testimony on Behalf of MCI.

November 22, 1989; Docket No. 88-0091; IntraMSA Dialing Arrangements; Direct Testimony on Behalf of MCI.

February 9, 1990; Docket No. 88-0091; IntraMSA Dialing Arrangements; Rebuttal Testimony on Behalf of MCI.

November 19, 1990; Docket No. 83-0142; Industry presentation to the Commission re Docket No. 83-0142 and issues for next generic access docket; Comments re the Imputation Trial and Unitary Pricing/Building Blocks on Behalf of MCI.

July 29, 1991; Case No. 90-0425; Presentation to the Industry Regarding MCI's Position on Imputation.

November 18, 1993; Docket No. 93-0044; Complaint of MCI and LDDS re Illinois Bell Additional Aggregated Discount and Growth Incentive Discount Services; Direct Testimony on Behalf of MCI and LDDS.

January 10, 1994; Docket No. 93-0044; Complaint of MCI and LDDS re Illinois Bell Additional Aggregated Discount and Growth Incentive Discount Services; Rebuttal Testimony on Behalf of MCI and LDDS.

May 30, 2000; Docket No. 00-0332; Level 3 Petition for Arbitration to Establish and Interconnection Agreement with Illinois Bell Telephone Company; Direct Testimony on Behalf of Level (3) Communications, LLC.

July 11, 2000; Docket No. 00-0332; Level 3 Petition for Arbitration to Establish and Interconnection Agreement with Illinois Bell Telephone Company; Supplemental Verified Statement on Behalf of Level (3) Communications, LLC.

Indiana:

October 28, 1988; Cause No. 38561; Deregulation of Customer Specific Offerings of Indiana Telephone Companies; Direct Testimony on Behalf of MCI.

December 16, 1988; Cause No. 38561; Deregulation of Customer Specific Offerings of Indiana Telephone Companies; Direct Testimony on Behalf of MCI Regarding GTE.

April 14, 1989; Cause No. 38561; Deregulation of Customer Specific Offerings of Indiana Telephone Companies; Direct Testimony on Behalf of MCI Regarding Staff Reports.

June 21, 1989; Cause No. 37905; Intrastate Access Tariffs -- Parity with Federal Rates; Direct Testimony on Behalf of MCI.

June 29, 1989; Cause No. 38560; Reseller Complaint Regarding 1+ IntraLATA Calling; Direct Testimony on Behalf of MCI.

October 25, 1990; Cause No. 39032; MCI Request for IntraLATA Authority; Direct Testimony on Behalf of MCI.

April 4, 1991; Rebuttal Testimony in Cause No. 39032 re MCI's Request for IntraLATA Authority on Behalf of MCI.

Iowa:

September 1, 1988; Docket No. RPU 88_6; IntraLATA Competition in Iowa; Direct Testimony on Behalf of MCI.

September 20, 1988; Docket No. RPU_88_1; Regarding the Access Charges of Northwestern Bell Telephone Company; Direct Testimony on Behalf of MCI.

September 25, 1991; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Direct Testimony on Behalf of MCI.

October 3, 1991; Docket No. NOI-90-1; Presentation on Imputation of Access Charges and the Other Costs of Providing Toll Services; On Behalf of MCI.

November 5, 1991; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Rebuttal Testimony on Behalf of MCI.

December 23, 1991; Docket No. RPU-91-4; Investigation of the Earnings of US WEST Communications; Inc.; Supplemental Testimony on Behalf of MCI.

January 10, 1992; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Rebuttal Testimony on Behalf of MCI.

January 20, 1992; Docket No. RPU-91-4; Investigation of the Earnings of U S WEST Communications, Inc.; Surrebuttal Testimony on Behalf of MCI.

June 8, 1999; Docket NOI-99-1; Universal Service Workshop; Participated on numerous panels during two day workshop; Comments on Behalf of MCIW.

October 27, 1999; Docket NOI-99-1; Universal Service Workshop; Responded to questions posed by the Staff of the Board during one day workshop; Comments on Behalf of MCIW and AT&T.

Kansas:

June 10, 1992; Docket No. 181,097-U; General Investigation into IntraLATA Competition within the State of Kansas; Direct Testimony on Behalf of MCI.

September 16, 1992; Docket No. 181,097-U; General Investigation into IntraLATA Competition within the State of Kansas; Rebuttal Testimony on Behalf of MCI.

Kentucky:

May 20, 1993; Administrative Case No. 323, Phase I; An Inquiry into IntraLATA Toll Competition, an Appropriate Compensation Scheme for Completion of IntraLATA Calls by Interexchange Carriers, and WATS Jurisdictionality; Direct Testimony on Behalf of MCI.

December 21, 2000; Case No. 2000-404; Petition of Level 3 Communications, LLC for Arbitration with BellSouth; Direct Testimony on Behalf of Level 3.

January 12, 2001; Case No. 2000-477; Petition of Adelphia Business Solutions for Arbitration with BellSouth; Direct Testimony on Behalf of Adelphia.

Louisiana:

December 28, 2000; Docket No. U-25301; Petition of Adelphia Business Solutions for Arbitration with BellSouth; Direct Testimony on Behalf of Adelphia.

January 5, 2001; Docket No. U-25301; Petition of Adelphia Business Solutions for Arbitration with BellSouth; Rebuttal Testimony on Behalf of Adelphia.

Maryland:

November 12, 1993; Case No. 8585; Competitive Safeguards Required re C&P's Centrex Extend Service; Direct Testimony on Behalf of MCI.

January 14, 1994; Case No. 8585; Competitive Safeguards Required re C&P's Centrex Extend Service; Rebuttal Testimony on Behalf of MCI.

May 19, 1994; Case No. 8585; Re Bell Atlantic Maryland, Inc.'s Transmittal No. 878; Testimony on Behalf of MCI.

June 2, 1994; Case No. 8585; Competitive Safeguards Required re C&P's Centrex Extend Service; Rebuttal Testimony on Behalf of MCI.

September 5, 2001; Case No. 8879; Rates for Unbundled Network Elements Pursuant to the Telecommunications Act of 1996; Rebuttal Testimony on behalf of the Staff of the Public Service Commission of Maryland.

Massachusetts:

April 22, 1993; D.P.U. 93-45; New England Telephone Implementation of Interchangeable NPAs; Direct Testimony on Behalf of MCI.

May 10, 1993; D.P.U. 93-45; New England Telephone Implementation of Interchangeable NPAs; Rebuttal Testimony on Behalf of MCI.

Michigan:

September 29, 1988; Case Nos. U_9004, U_9006, U_9007 (Consolidated); Industry Framework for IntraLATA Toll Competition; Direct Testimony on Behalf of MCI.

November 30, 1988; Case Nos. U_9004, U_9006, U_9007 (Consolidated); Industry Framework for IntraLATA Toll Competition; Rebuttal Testimony on Behalf of MCI.

June 30, 1989; Case No. U-8987; Michigan Bell Telephone Company Incentive Regulation Plan; Direct Testimony on Behalf of MCI.

July 31, 1992; Case No. U-10138; MCI v Michigan Bell and GTE re IntraLATA Equal Access; Direct Testimony on Behalf of MCI.

November 17, 1992; Case No. U-10138; MCI v Michigan Bell and GTE re IntraLATA Equal Access; Rebuttal Testimony on Behalf of MCI.

July 22, 1993; Case No. U-10138 (Reopener); MCI v Michigan Bell and GTE re IntraLATA Equal Access; Direct Testimony on Behalf of MCI.

February 16, 2000; Case No. U-12321; AT&T Communications of Michigan, Inc. Complainant v. GTE North Inc. and Contel of the South, Inc., d/b/a GTE Systems of Michigan; Direct Testimony on Behalf of AT&T. (Adopted Testimony of Michael Starkey)

May 11, 2000; Case No. U-12321; AT&T Communications of Michigan, Inc. Complainant v. GTE North Inc. and Contel of the South, Inc., d/b/a GTE Systems of Michigan; Rebuttal Testimony on Behalf of AT&T.

June 8, 2000; Case No. U-12460; Petition of Level 3 Communications for Arbitration to Establish an Interconnection Agreement with Ameritech Michigan; Direct Testimony on Behalf of Level (3) Communications, LLC.

September 27, 2000; Case No. U-12528; In the Matter of the Implementation of the Local Calling Area Provisions of the MTA; Rebuttal Testimony on Behalf of Focal Communications, Inc..

Minnesota:

January 30, 1987; Docket No. P_421/CI_86_88; Summary Investigation into Alternative Methods for Recovery of Non-traffic Sensitive Costs; Comments to the Commission on Behalf of MCI.

September 7, 1993; Docket No. P-999/CI-85-582, P-999/CI-87-697 and P-999/CI-87-695, In the Matter of an Investigation into IntraLATA Equal Access and Presubscription; Comments of MCI on the Report of the Equal Access and Presubscription Study Committee on Behalf of MCI.

September 20, 1996; Petition for Arbitration with U S WEST Communications, Inc.; Docket No. P-

442, 421/M-96-855; P-5321, 421/M-96-909; and P-3167, 421/M-96-729 (consolidated); Direct Testimony on Behalf of MCI.

September 30, 1996; Petition for Arbitration with U S WEST Communications, Inc.; Docket No. P-442, 421/M-96-855; P-5321, 421/M-96-909; and P-3167, 421/M-96-729 (consolidated); Rebuttal Testimony on Behalf of MCI.

September 14-16, 1999; USWC OSS Workshop; Comments on Behalf of MCI WorldCom, Inc. re OSS Issues.

September 28, 1999; Docket No. P-999/R-97-609; Universal Service Group; Comments on Behalf of MCI WorldCom, Inc. and AT&T Communications.

Mississippi:

February 2, 2001; Docket No. 2000-AD-846; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

February 16, 2001; Docket No. 2000-AD-846; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

Montana:

May 1, 1987; Docket No. 86.12.67; Rate Case of AT&T Communications of the Mountain States, Inc.; Direct Testimony on Behalf of MCI.

September 12, 1988; Docket No. 88.1.2; Rate Case of Mountain States Telephone and Telegraph Company; Direct Testimony on Behalf of MCI.

May 12, 1998; Docket No. D97.10.191; Application of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.; Rebuttal Testimony on Behalf of MCI.

June 1, 1998; Docket No. D97.10.191; Application of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.; Amended Rebuttal Testimony on Behalf of MCI.

Nebraska:

November 6, 1986; Application No. C_627; Nebraska Telephone Association Access Charge Proceeding; Direct Testimony on Behalf of MCI.

March 31, 1988; Application No. C_749; Application of United Telephone Long Distance Company of the Midwest for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

New Hampshire:

April 30, 1993; Docket DE 93-003; Investigation into New England Telephone's Proposal to Implement Seven Digit Dialing for Intrastate Toll Calls; Direct Testimony on Behalf of MCI.

January 12, 2001; Docket No. DT 00-223; Investigation Into Whether Certain Calls are Local; Direct Testimony on Behalf of BayRing Communications.

New Jersey:

September 15, 1993; Docket No. TX93060259; Notice of Pre-Proposal re IntraLATA Competition; Comments in Response to the Board of Regulatory Commissioners on Behalf of MCI.

October 1, 1993; Docket No. TX93060259; Notice of Pre-Proposal re IntraLATA Competition; Reply Comments in Response to the Board of Regulatory Commissioners on Behalf of MCI.

April 7, 1994; Docket Nos. TX90050349, TE92111047, and TE93060211; Petitions of MCI, Sprint and AT&T for Authorization of IntraLATA Competition and Elimination of Compensation; Direct Testimony on Behalf of MCI.

April 25, 1994; Docket Nos. TX90050349, TE92111047, and TE93060211; Petitions of MCI, Sprint and AT&T for Authorization of IntraLATA Competition and Elimination of Compensation; Rebuttal Testimony on Behalf of MCI.

New Mexico:

September 28, 1987; Docket No. 87_61_TC; Application of MCI for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

August 30, 1996; Docket No. 95-572-TC; Petition of AT&T for IntraLATA Equal Access; Rebuttal Testimony on Behalf of MCI.

New York:

April 30, 1992; Case 28425; Comments of MCI Telecommunications Corporation on IntraLATA Presubscription.

June 8, 1992; Case 28425; Reply Comments of MCI Telecommunications Corporation on IntraLATA Presubscription.

North Carolina:

August 4, 2000; Docket No. P779 SUB4; Petition of Level (3) Communications, LLC for Arbitration with Bell South; Direct Testimony on Behalf of Level (3) Communications, LLC.

September 18, 2000; Docket No. P779 SUB4; Petition of Level (3) Communications, LLC for

Arbitration with Bell South; Rebuttal Testimony on Behalf of Level (3) Communications, LLC.

October 18, 2000; Docket No. P-886, SUB 1; Petition of Adelphia Business Solutions or North Carolina, LP for Arbitration with BellSouth; Direct Testimony on Behalf of Adelphia.

December 8, 2000; Docket No. P-886, SUB 1; Petition of Adelphia Business Solutions or North Carolina, LP for Arbitration with BellSouth; Rebuttal Testimony on Behalf of Adelphia.

North Dakota:

June 24, 1991; Case No. PU-2320-90-183 (Implementation of SB 2320 -- Subsidy Investigation); Direct Testimony on Behalf of MCI.

October 24, 1991; Case No. PU-2320-90-183 (Implementation of SB 2320 -- Subsidy Investigation); Rebuttal Testimony on Behalf of MCI.

Oklahoma:

April 2, 1992; Cause No. 28713; Application of MCI for Additional CCN Authority to Provide IntraLATA Services; Direct Testimony on Behalf of MCI.

June 22, 1992; Cause No. 28713; Application of MCI for Additional CCN Authority to Provide IntraLATA Services; Rebuttal Testimony on Behalf of MCI.

Oregon:

October 27, 1983; Docket No. UT 9; Pacific Northwest Bell Telephone Company Business Measured Service; Direct Testimony on Behalf of the Public Utility Commissioner of Oregon.

April 23, 1984; Docket No. UT 17; Pacific Northwest Bell Telephone Company Business Measured Service; Direct Testimony on Behalf of the Public Utility Commissioner of Oregon.

May 7, 1984; Docket No. UT 17; Pacific Northwest Bell Telephone Company Business Measured Service; Rebuttal Testimony on Behalf of the Public Utility Commissioner of Oregon.

October 31, 1986; Docket No. AR 154; Administrative Rules Relating to the Universal Service Protection Plan; Rebuttal Testimony on Behalf of MCI.

September 6, 1996; Docket ARB3/ARB6; Petition of MCI for Arbitration with U S WEST Communications, Inc.; Direct Testimony on Behalf of MCI.

October 11, 1996; Docket No. ARB 9; Interconnection Contract Negotiations Between MCImetro and GTE; Direct Testimony on Behalf of MCI.

November 5, 1996; Docket No. ARB 9; Interconnection Contract Negotiations Between MCImetro and GTE; Rebuttal Testimony on Behalf of MCI.

Pennsylvania:

December 9, 1994; Docket No. I-00940034; Investigation Into IntraLATA Interconnection Arrangements (Presubscription); Direct Testimony on Behalf of MCI.

Rhode Island:

April 30, 1993; Docket No. 2089; Dialing Pattern Proposal Made by the New England Telephone

Company; Direct Testimony on Behalf of MCI.

South Carolina:

Oct. ??, 2000; Docket No. 2000-0446-C; US LEC of South Carolina Inc. Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of US LEC.

November 22, 2000; Docket No. 2000-516-C; Adelphia Business Solutions of South Carolina, Inc. Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

December 14, 2000; Docket No. 2000-516-C; Adelphia Business Solutions of South Carolina, Inc. Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

South Dakota:

November 11, 1987; Docket No. F_3652_12; Application of Northwestern Bell Telephone Company to Introduce Its Contract Toll Plan; Direct Testimony on Behalf of MCI.

Tennessee:

January 31, 2001; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Direct Testimony on Behalf of Adelphia.

February 7, 2001; Petition of Adelphia Business Solutions for Arbitration with BellSouth Telecommunications; Rebuttal Testimony on Behalf of Adelphia.

Texas:

June 5, 2000; PUC Docket No. 22441; Petition of Level 3 for Arbitration with Southwestern Bell Telephone Company; Direct Testimony on Behalf of Level (3) Communications, LLC.

June 12, 2000; PUC Docket No. 22441; Petition of Level 3 for Arbitration with Southwestern Bell Telephone Company; Rebuttal Testimony on Behalf of Level (3) Communications, LLC.

Utah:

November 16, 1987; Case No. 87_049_05; Petition of the Mountain State Telephone and Telegraph Company for Exemption from Regulation of Various Transport Services; Direct Testimony on Behalf of MCI.

July 7, 1988; Case No. 83_999_11; Investigation of Access Charges for Intrastate InterLATA and IntraLATA Telephone Services; Direct Testimony on Behalf of MCI.

November 8, 1996; Docket No. 96-095-01; MCImetro Petition for Arbitration with USWC Pursuant to 47 U.S.C. Section 252; Direct Testimony on Behalf of MCI.

November 22, 1996; Docket No. 96-095-01; MCImetro Petition for Arbitration with USWC Pursuant to 47 U.S.C. Section 252; Rebuttal Testimony on Behalf of MCI.

September 3, 1997; Docket No. 97-049-08; USWC Rate Case; Surrebuttal Testimony on Behalf of MCI.

September 29, 1997; Docket No. 97-049-08; USWC Rate Case; Revised Direct Testimony on Behalf of MCI.

February 2, 2001; Docket No. 00-999-05; In the Matter of the Investigation of Inter-Carrier Compensation for Exchanged ESP Traffic; Direct Testimony on Behalf of Level 3 Communications, LLP.

Washington:

September 27, 1988; Docket No. U_88_2052_P; Petition of Pacific Northwest Bell Telephone Company for Classification of Services as Competitive; Direct Testimony on Behalf of MCI.

October 11, 1996; Docket No. UT-960338; Petition of MCImetro for Arbitration with GTE Northwest, Inc., Pursuant to 47 U.S.C.252; Direct Testimony on Behalf of MCI.

November 20, 1996; Docket No. UT-960338; Petition of MCImetro for Arbitration with GTE Northwest, Inc., Pursuant to 47 U.S.C.252; Rebuttal Testimony on Behalf of MCI.

January 13, 1998; Docket No. UT-970325; Rulemaking Workshop re Access Charge Reform and the Cost of Universal Service; Comments and Presentation on Behalf of MCI.

West Virginia:

October 11, 1994; Case No. 94-0725-T-PC; Bell Atlantic - West Virginia Incentive Regulation Plan; Direct Testimony on Behalf of MCI.

June 18, 1998; Case No. 97-1338-T-PC; Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.; Rebuttal Testimony on Behalf of MCI.

Wisconsin:

October 31, 1988; Docket No. 05_TR_102; Investigation of Intrastate Access Costs, Settlements, and IntraLATA Access Charges; Direct Testimony on Behalf of MCI.

November 14, 1988; Docket No. 05_TR_102; Investigation of Intrastate Access Costs, Settlements, and IntraLATA Access Charges; Rebuttal Testimony on Behalf of MCI.

December 12, 1988; Docket No. 05_TI_116; In the Matter of Provision of Operator Services; Rebuttal Testimony on Behalf of MCI.

March 6, 1989; Docket No. 6720_TI_102; Review of Financial Data Filed by Wisconsin Bell, Inc.; Direct Testimony on Behalf of MCI.

May 1, 1989; Docket No. 05_NC_100; Amendment of MCI's CCN for Authority to Provide IntraLATA Dedicated Access Services; Direct Testimony on Behalf of MCI.

May 11, 1989; Docket No. 6720_TR_103; Investigation Into the Financial Data and Regulation of Wisconsin Bell, Inc.; Rebuttal Testimony on Behalf of MCI.

July 5, 1989; Docket No. 05-TI-112; Disconnection of Local and Toll Services for Nonpayment -- Part A; Direct Testimony on Behalf of MCI.

July 5, 1989; Docket No. 05-TI-112; Examination of Industry Wide Billing and Collection Practices -- Part B; Direct Testimony on Behalf of MCI.

July 12, 1989; Docket No. 05-TI-112; Rebuttal Testimony in Parts A and B on Behalf of MCI.

October 9, 1989; Docket No. 6720-TI-102; Review of the WBI Rate Moratorium; Direct Testimony on Behalf of MCI.

November 17, 1989; Docket No. 6720-TI-102; Review of the WBI Rate Moratorium; Rebuttal Testimony on Behalf of MCI.

December 1, 1989; Docket No. 05-TR-102; Investigation of Intrastate Access Costs, Settlements, and IntraLATA Access Charges; Direct Testimony on Behalf of MCI.

April 16, 1990; Docket No. 6720-TR-104; Wisconsin Bell Rate Case; Direct Testimony of Behalf of MCI.

October 1, 1990; Docket No. 2180-TR-102; GTE Rate Case and Request for Alternative Regulatory Plan; Direct Testimony on Behalf of MCI.

October 15, 1990; Docket No. 2180-TR-102; GTE Rate Case and Request for Alternative Regulatory Plan; Rebuttal Testimony on Behalf of MCI.

November 15, 1990; Docket No. 05-TR-103; Investigation of Intrastate Access Costs and Intrastate Access Charges; Direct Testimony on Behalf of MCI.

April 3, 1992; Docket No. 05-NC-102; Petition of MCI for IntraLATA 10XXX 1+ Authority; Direct Testimony on Behalf of MCI.

Wyoming:

June 17, 1987; Docket No. 9746 Sub 1; Application of MCI for a Certificate of Public Convenience and Necessity; Direct Testimony on Behalf of MCI.

May 19, 1997; Docket No. 72000-TC-97-99; In the Matter of Compliance with Federal Regulations of Payphones; Oral Testimony on Behalf of MCI.

Comments Submitted to the Federal Communications Commission and/or the Department of Justice

March 6, 1991; Ameritech Transmittal No. 518; Petition to Suspend and Investigate on Behalf of MCI re Proposed Rates for OPTINET 64 Kbps Service.

April 17, 1991; Ameritech Transmittal No. 526; Petition to Suspend and Investigate on Behalf of MCI re Proposed Flexible ANI Service.

August 30, 1991; Ameritech Transmittal No. 555; Petition to Suspend and Investigate on Behalf of MCI re Ameritech Directory Search Service.

September 30, 1991; Ameritech Transmittal No. 562; Petition to Suspend and Investigate on Behalf of MCI re Proposed Rates and Possible MFJ Violations Associated with Ameritech's OPTINET Reconfiguration Service (AORS).

October 15, 1991; CC Docket No. 91-215; Opposition to Direct Cases of Ameritech and United (Ameritech Transmittal No. 518; United Transmittal No. 273) on Behalf of MCI re the introduction of 64 Kbps Special Access Service.

November 27, 1991; Ameritech Transmittal No. 578; Petition to Suspend and Investigate on Behalf of MCI re Ameritech Directory Search Service.

September 4, 1992; Ameritech Transmittal No. 650; Petition to Suspend and Investigate on Behalf of MCI re Ameritech 64 Clear Channel Capability Service.

February 16, 1995; Presentation to FCC Staff on the Status of Intrastate Competition on Behalf of MCI.

November 9, 1999; Comments to FCC Staff of Common Carrier Bureau on the Status of OSS Testing in Arizona on Behalf of MCI WorldCom, Inc.

November 9, 1999; Comments to the Department of Justice (Task Force on Telecommunications) on the Status of OSS Testing in Arizona and the USWC Collaborative on Behalf of MCI WorldCom, Inc.

Presentations Before Legislative Bodies:

April 8, 1987; Minnesota; Senate File 677; Proposed Deregulation Legislation; Comments before the House Committee on Telecommunications.

October 30, 1989; Michigan; Presentation Before the Michigan House and Senate Staff Working Group on Telecommunications; "A First Look at Nebraska, Incentive Rates and Price Caps," Comments on Behalf of MCI.

May 16, 1990; Wisconsin; Comments Before the Wisconsin Assembly Utilities Committee Regarding the Wisconsin Bell Plan for Flexible Regulation, on Behalf of MCI.

March 20, 1991; Michigan; Presentation to the Michigan Senate Technology and Energy Committee re SB 124 on behalf of MCI.

May 15, 1991; Michigan; Presentation to the Michigan Senate Technology and Energy Commission and the House Public Utilities Committee re MCI's Building Blocks Proposal and SB 124/HB 4343.

March 8, 2000; Illinois; Presentation to the Environment & Energy Senate Committee re Emerging Technologies and Their Impact on Public Policy, on Behalf of MCI WorldCom, Inc.

Presentations Before Industry Groups -- Seminars:

May 17, 1989; Wisconsin Public Utility Institute -- Telecommunications Utilities and Regulation; May 15-18, 1989; Panel Presentation -- Interexchange Service Pricing Practices Under Price Cap Regulation; Comments on Behalf of MCI.

July 24, 1989; National Association of Regulatory Utility Commissioners -- Summer Committee Meeting, San Francisco, California. Panel Presentation -- Specific IntraLATA Market Concerns of Interexchange Carriers; Comments on Behalf of MCI.

May 16, 1990; Wisconsin Public Utility Institute -- Telecommunications Utilities and Regulation; May 14-18, 1990; Presentation on Alternative Forms of Regulation.

October 29, 1990; Illinois Telecommunications Sunset Review Forum; Two Panel Presentations: Discussion of the Illinois Commerce Commission's Decision in Docket No. 88-0091 for the Technology Working Group; and, Discussion of the Treatment of Competitive Services for the Rate of Return Regulation Working Group; Comments on Behalf of MCI.

May 16, 1991; Wisconsin Public Utility Institute -- Telecommunications Utilities and Regulation Course; May 13-16, 1991; Participated in IntraLATA Toll Competition Debate on Behalf of MCI.

November 19, 1991; TeleStrategies Conference -- "Local Exchange Competition: The \$70 Billion Opportunity." Presentation as part of a panel on "IntraLATA 1+ Presubscription" on Behalf of MCI.

July 9, 1992; North Dakota Association of Telephone Cooperatives Summer Conference, July 8-10, 1992. Panel presentations on "Equal Access in North Dakota: Implementation of PSC Mandate" and "Open Network Access in North Dakota" on Behalf of MCI.

December 2-3, 1992; TeleStrategies Conference -- "IntraLATA Toll Competition -- A Multi-Billion Dollar Market Opportunity." Presentations on the interexchange carriers' position on intraLATA dialing parity and presubscription and on technical considerations on behalf of MCI.

March 14-17, 1993; NARUC Introductory Regulatory Training Program; Panel Presentation on Competition in Telecommunications on Behalf of MCI.

May 13-14, 1993; TeleStrategies Conference -- "IntraLATA Toll Competition -- Gaining the Competitive Edge"; Presentation on Carriers and IntraLATA Toll Competition on Behalf of MCI.

May 23-26, 1994; The 12th Annual National Telecommunications Forecasting Conference; Represented IXC's in Special Town Meeting Segment Regarding the Convergence of CATV and Telecommunications and other Local Competition Issues.

March 14-15, 1995; "The LEC-IXC Conference"; Sponsored by Telecommunications Reports and Telco Competition Report; Panel on Redefining the IntraLATA Service Market -- Toll Competition, Extended Area Calling and Local Resale.

August 28-30, 1995; "Phone+ Supershow '95"; Playing Fair: An Update on IntraLATA Equal Access; Panel Presentation.

August 29, 1995; "TDS Annual Regulatory Meeting"; Panel Presentation on Local Competition Issues.

December 13-14, 1995; "NECA/Century Access Conference"; Panel Presentation on Local Exchange Competition.

October 23, 1997; "Interpreting the FCC Rules of 1997"; The Annenberg School for Communication at the University of Southern California; Panel Presentation on Universal Service and Access Reform.

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM MUNDELL
CHAIRMAN
JIM IRVIN
COMMISSIONER
MARC SPITZER
COMMISSIONER

IN THE MATTER OF THE INVESTIGATION INTO)
QWEST CORPORATION'S COMPLIANCE) DOCKET NO. T-00000A-00-0194
WITH CERTAIN WHOLESALE PRICING) Phase II -- A
REQUIREMENTS FOR UNBUNDLED)
NETWORK ELEMENTS AND RESALE)
DISCOUNTS)

REBUTTAL TESTIMONY

OF

SIDNEY L MORRISON

ON BEHALF OF WORLDCOM, INC.

September 27, 2001

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1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE**
3 **RECORD.**

4 A. My name is Sidney L Morrison. My business address is 10176 Savannah
5 Sparrow Way, Highlands Ranch, Colorado 80129.

6

7 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.**

8 A. I began my telecommunications career in 1966 in Charlotte, North
9 Carolina as a cable helper for Southern Bell Telephone and Telegraph.
10 Southern Bell was an incumbent local exchange carrier managing
11 numerous exchanges throughout North Carolina. My duties involved
12 splicing underground, buried and aerial cable. I also worked as a
13 switching technician and special services technician.

14

15 Beginning in August of 1970, I transferred to Mountain Bell in Denver,
16 Colorado as a central office technician. In 1972, I was promoted to
17 supervise main distributing frame operations. My duties included
18 supervising the installation of POTS, Special Services, Central Office area
19 cuts, main distribution frame replacements and many other projects. In
20 1980 and 1981 I performed time studies for service provisioning on
21 approximately 75 of Mountain Bell MDF operations. These time studies
22 included a component for jumper running activities on each of these
23 frames. From 1983 until 1986, I was the switching control center and

1 main distributing frame subject matter expert for US West. From 1986
2 until 1993, I was responsible for the US West AMA teleprocessing
3 organization for the fourteen state region.

4

5 In 1993, I retired from US West (Mountain Bell) and began contract
6 engineering work and consulting. In 1995 I took an assignment in Kuala
7 Lumpur, Malaysia as a contractor/consultant with a team of specialists to
8 build a CLEC network consisting of a GSM service, fixed wire service,
9 cable television service and data service integrated into the same
10 transport backbone. I had a number of responsibilities in Malaysia the
11 largest of which was organizing and implementing a field operations
12 group, responsible for the installation and maintenance of all services.

13

14 I returned from Malaysia in June of 1997 and worked for approximately
15 two years as an OSP/COE engineer, and trained new engineers for US
16 West collocation efforts.

17

18 In May 1999, I accepted a job in Switzerland building a new CLEC
19 network (diAx telecommunications). My responsibilities involved the
20 establishment of operational support systems ("OSSs") to support all
21 wireless, wireline, and data services offered by diAx. I also provided
22 consulting services in the establishment of the first diAx Internet Provider
23 Operations Center.

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In December 2000, I returned from Switzerland and began working for QSI as Senior Consultant. I provide telecommunications companies with engineering advice and counsel for direct network planning, management and cost-of-service support. My specific areas of expertise include network engineering, facility planning, project management, business system applications, incremental cost research and issues related to the provision of unbundled network elements, including local loops.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I completed two years of course work in electrical engineering at Central Piedmont Community College in Charlotte, North Carolina. I also completed four years of course work in business administration at Regis University in Denver, Colorado.

I. INTRODUCTION AND PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of this testimony is to discuss problems with remote terminal collocation (RT collocation) and show that the rates for RT collocation are improperly developed, excessive and risk excluding competitive local exchange carriers ("CLECS") from the market place.

1 **Q. ON WHOSE BEHALF IS THIS TESTIMONY BEING PRESENTED?**

2 A. This testimony is being presented on behalf of WorldCom, Inc.

3

4 **II. SUMMARY OF FINDINGS AND RECOMMENDATIONS**

5

6 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND STATE YOUR**
7 **RECOMMENDATIONS.**

8 A. Remote terminal (RT) collocation is an expensive and perhaps exclusionary
9 method of collocation. High RT collocation costs will effectively restrict the
10 choices of consumers shopping for the best values in advanced
11 communications services. Qwest's proposal for RT collocation will reduce
12 competitive alternatives. As such, alternative collocation methods for RTs
13 must be implemented. My recommendation is to unbundle additional network
14 elements. This is the most cost effective method of RT collocation and it
15 provides equal collocation capability for competitors without prohibitively high
16 investments. Unbundling network elements effectively places the CLEC on a
17 level playing field with the incumbent local exchange carrier ("ILEC").
18 Unbundling these network elements also allows the CLECs to virtually
19 collocate ADLU cards in ILEC RT located DSLAM equipment. This will allow
20 for the maximum penetration of advanced services to all consumers in
21 Arizona.

22

1 **III. REMOTE TERMINAL COLLOCATION**

2

3 **Q. PLEASE DESCRIBE REMOTE TERMINAL COLLOCATION.**

4 A. RT collocation offers space in remote cabinets thereby eliminating the
5 central office to customer facility distance constraints on Digital Subscriber
6 Line (DSL) providers.¹ Field electronics are located in the RTs for use by
7 collocators to access DSL customers. The RT collocation requires access
8 to AC/DC power, heat dissipation and terminations to the Feeder
9 Distribution Interface (FDI).

10

11 **Q. WHAT ARE THE ADVANTAGES OF REMOTE TERMINAL**
12 **COLLOCATION?**

13 A. Remote terminal collocation provides access to a layer of customers that
14 is not accessible from the central office. These DSL customers are
15 typically beyond the restrictive 18Kft. "boundary" of the central office.² By
16 having access to customers at RT locations the CLEC has access to the
17 same universe of customers available to the ILEC.

18

¹ DSL technologies are transmission technologies used on circuits that run between the central office and a customer's premises. Historically xDSL technologies have been provided on loops that are exclusively copper. New DSL network technology can be deployed on hybrid loops that are fiber optic from the central office to a field location utilizing remote terminal technology and then copper cable pairs to the customer premise.

² As discussed later in this testimony, new technologies are addressing this technological limitation – distance from the central office -- on the availability of xDSL services.

1 **Q. WHAT ARE THE DISADVANTAGES OF REMOTE TERMINAL**
2 **COLLOCATION?**

3 A. Early indications are that collocating at a Qwest RT, or adjacent to a
4 Qwest RT, will be nearly as expensive (if not more) than collocating in a
5 Qwest central office. The reason for this is that fewer customers are
6 available from the RT as compared to the central office. Also high-density
7 equipment is available for use in central office environments making this
8 the most cost effective collocation method. Central office collocated
9 equipment also has the added advantage of access to a greater universe
10 of outside plant facilities and consequently customers, making central
11 office equipment more efficient in delivering service. Additionally support
12 in the form of AC/DC power, HVAC and security for collocation are more
13 efficiently available in the central office environment. The greatest
14 disadvantage with RT collocation is the potential lack of space at the RT.

15

16 **Q. WHY IS THE LACK OF SPACE THE GREATEST DISADVANTAGE TO**
17 **THE CLEC IN REMOTE TERMINAL COLLOCATION?**

18 A. When space is not available in the RT cabinet, or even adjacent to it, the
19 ILEC refuses the CLEC access to the RT for collocation. The additional
20 expenses and time associated with gaining new space (or expanding an
21 existing structure) further reduces the likelihood that this type of network
22 will provide any immediate, or sustainable competitive advanced services
23 alternative for the majority of residential or small business customers. The

1 end result is that the CLEC is denied access to all of the customers
2 accessible through the RT and FDI configuration.

3

4 Refusing to allow a CLEC to collocate at the RT ultimately means the
5 CLEC is denied the ability to compete in the area served by the RT. The
6 CLEC is consequently relegated to the position of a second-class
7 competitor being denied access to customers by the ILECs, because of
8 unavailability of space at the RT with no cost effective alternative
9 available. At the same time, the ILEC and its competitive affiliates have
10 access to the loop network without competitors.

11

12 **Q. ARE THERE ANY TECHNICAL SOLUTIONS THAT WOULD MAKE THE**
13 **CLEC A VIABLE COMPETITOR IN CASES SUCH AS THE ONE YOU**
14 **DESCRIBED ABOVE?**

15 A. Yes, Qwest should be required to unbundle network transport elements.

16

17 **Q. TO WHAT NETWORK TRANSPORT ELEMENTS ARE YOU**
18 **REFERRING?**

19 A. There are no technical limitations that prevent ILECs from allowing CLECs
20 to provide advanced services over digital loop carrier ("DLC") equipment.³

³ A digital loop carrier ("DLC") system allows a company to replace the end-to-end copper circuit that historically comprised a telephone access line (or a "loop") with a combination of high-capacity fiber optic feeder cable and copper distribution cable. The DLC system itself is generally comprised of some form of electronic equipment in the central office (generally referred to as a "central office terminal" or "COT") that connects the fiber optic feeder cable to an accompanying electronic device in the field wherein the fiber optic feeder cable and copper distribution cable meet (generally referred to as a "remote digital terminal" or an "RDT").

1 Much of this equipment is designed to provide voice, data, and combined
2 voice/data products over a single network platform for use by ILEC data
3 affiliates and retail customers. This same platform should provide similar
4 functionality for CLECs.

5

6 **Q. HOW WOULD UNBUNDLING NETWORK TRANSPORT ELEMENTS**
7 **SUCH AS THE DLC BE ACCOMPLISHED?**

8 A. It is technically feasible for the ILEC to allow CLECs to virtually collocate
9 line cards within Next Generation Digital Loop Carrier (“NGDLC”) remote
10 terminals.⁴ For example, it is possible to collocate the Litespan 2000
11 ADLU⁵ card, which can provide both voice and data services over a
12 shared copper loop extending from the remote terminal to a customer’s
13 premises. The inherent DSL capabilities of the ADLU card in this respect
14 negate the need for ILEC to collocate a bulky and expensive DSLAM
15 within the RT enclosure (or in an adjacent structure). Further, the ADLU
16 card (or similar types of cards with unique service features) is in many
17 ways the intelligence focal point of the service being provided. By
18 programming the card and the RT to accommodate new, innovative
19 services, CLECs can differentiate their products from those produced by
20 the ILEC. Further, the cost savings associated with using the inherent

⁴ The use of NGDLC devices allows Qwest to push fiber optic facilities closer to its customer’s homes or businesses which should allow more customers to avail themselves of high-speed, packet switched digital services and enhance the speed and quality that customers can expect from those services.

⁵ “ADLU” stands for “ADSL Digital Line Unit.” These units can perform both the line splitting and DSLAM functionalities.

1 functionality of the ADLU card in this respect are substantial. Accessing
2 such functionality is technically feasible as evidenced by the fact that both
3 the Illinois and Texas commissions have required SBC to make such
4 access available.⁶

5

6 **Q. CAN YOU BE MORE SPECIFIC ON THE TECHNICAL FEASIBILITY OF**
7 **COLLOCATING LINE CARDS IN QWEST'S RT?**

8 A. Yes. It is technically feasible for Qwest to permit WorldCom or any other
9 CLEC to specify, at each individual remote terminal, the line card(s) to be
10 placed in the DLC equipment for use in providing service to the CLEC's
11 customers. The following line card options are all technically feasible:

- 12 1. CLEC specifies the type and quantity of the line
13 card(s) that ILEC will obtain, own, and install in the DLC
14 system located in an ILEC remote terminal;
- 15 2. CLEC obtains the desired line card(s) and transfers
16 ownership of the card(s) to the ILEC (for a nominal fee).
17 ILEC then installs the card(s) in the DLC system located in a
18 remote terminal. Upon request of CLEC, ILEC removes the
19 card(s), return the card(s) to CLEC, and transfer ownership
20 of the card(s) to CLEC for the nominal fee; or
- 21 3. CLEC obtains, owns and installs the line card(s) in the
22 DLC system located in an ILEC's remote terminal.

⁶ See (1) *Arbitration Award*, Docket Nos. 22168 & 22469, *Petition of IP Communications Corporation to Establish Expedited Public Utility Commission of Texas Oversight Concerning Line Sharing Issues*, *Petition of Covad Communications Company and Rhythms Links, Inc. against Southwestern Bell Telephone Company for Post-Interconnection Dispute Resolution and Arbitration under the Telecommunications Act of 1996 Regarding Rates, Terms, Conditions and Related Arrangements for Line Sharing* (hereafter "Texas Line Sharing Order"), (2) *Order*, Docket No. 00-0393, *Proposed Implementation of High Frequency Portion of Loop (HFPL)/Line Sharing Service (Tariffs filed April 21, 2000)*, released March 14, 2001.

1 It is also technically feasible, and advisable, for Qwest to promptly provide
2 to CLECs copies, both paper and electronic, of all technical specifications
3 and network architecture data relevant to the development by any
4 potential vendor of plug-in DLC line cards that will support the CLEC's
5 high bandwidth services. In general, this Commission should encourage
6 an open development platform wherein Qwest and CLECs alike are able
7 to design, engineer and provision multiple services using the enormous
8 capabilities of the NGDLC architecture. This type of open platform will
9 speed advanced services competition to Arizona customers and will
10 provide a wide array of advanced services innovation.

11 Finally, it is technically feasible and advisable for Qwest to provide the
12 CLECs with 6 months advance notification of software upgrades of, at a
13 minimum, Qwest's: COTs, remote terminals, ATM switch/OCD, DLC
14 equipment, and CPE. In addition, if Qwest chooses to upgrade any of the
15 above software, then it is technically feasible and advisable, indeed
16 practical, for Qwest to ensure with its vendor, backward compatibility for at
17 least 12 months after the upgrade is installed. Again, these are all
18 fundamental building blocks of an open NGDLC architecture capable of
19 providing the large benefits possible to customers and the marketplace
20 alike.

21

22 **Q. HOW WILL UNBUNDLING NETWORK ELEMENTS, BY THE USE OF**
23 **COLLOCATED LINE CARDS, BENEFIT THE CLECs?**

24 A. Allowing CLECs to collocate their own line cards will not only favorably
25 impact the economic viability of competition for advanced services by

1 reducing the barriers to entry erected by enormous stand-alone collocation
2 costs, it will also spark innovation in the provision of high-capacity
3 services. Allowing carriers to collocate line cards with different capabilities
4 than that perhaps chosen by Qwest will provide customers with real
5 choices for new and different types of service.

6

7 **Q. EARLIER IN YOUR TESTIMONY YOU STATED THAT THE QWEST**
8 **RATES FOR RT COLLOCATION ARE IMPROPERLY DEVELOPED,**
9 **AND EXCESSIVE. WOULD YOU PLEASE ELABORATE ON THIS**
10 **STATEMENT?**

11 **A.** Yes. In a review of the cost study for RT Collocation, Qwest makes the
12 following statement on the space cost element:

- 13 - **Space** (per standard mounting unit; 1.75 vertical inches)
- 14 - This non-recurring rate is associated with the cabinet space and
15 includes the cost of the cabinet and all of the work and materials
16 associated with placement of the cabinet. The recurring rate
17 associated with the Space recovers the maintenance of the
18 materials and equipment associated with the cabinet along with a
19 portion of the costs required for the power pedestal.

20 Essentially what Qwest is attempting to do is to recover its investment up
21 front in a non-recurring charge rather than through reasonable monthly
22 recurring charges. Moreover, what Qwest seeks to recover in its monthly
23 recurring rate – maintenance -- should be recovered through the
24 maintenance portion of an annual charge factor that is applied to the

1 investment and then recovered on a monthly basis with the remainder of
2 the investment.

3 **Q. CAN YOU DRAW ANY COMPARISONS BETWEEN THE RATE**
4 **STRUCTURE PROPOSAL FOR RT COLLOCATION AND ANY OTHER**
5 **UNES?**

6 A. Yes, I can. If Qwest were to apply the same methodology to switch ports,
7 loops, or a square foot of central office collocation floor space, then
8 competitors would be asked to pay up front for the entire loop, port or
9 square foot. In other words, a competitor might have to pay several
10 hundred dollars for each loop and then pay for maintenance as they go.
11 This methodology, whether applied to RT collocation space, loops, or
12 ports, has one stifling effect, that being an enormous getting started
13 financial barrier for competitors that indeed may be insurmountable. Yet
14 another drawback to the rate structure proposed by Qwest pertains to
15 customer churn. Under Qwest's proposed structure the competitor pays a
16 very large up front non-recurring charge. If after paying this charge the
17 competitor should somehow lose the customer, the competitor is stuck
18 with RT collocation space that it may no longer need, yet that competitor
19 has paid a huge up front charge that it cannot recoup.

1 **Q. DO YOU HAVE ANY RECOMMENDATIONS FOR THE COMMISSION**
2 **ON THIS ISSUE?**

3 A. Yes. The Commission should require Qwest to offer RT collocation space
4 on an unbundled basis, and the rate for that offering should be determined
5 on a monthly recurring basis, rather than predominately on a non-recurring
6 basis.

7 **Q. ALTHOUGH YOU DISAGREE WITH THE APPLICATION OF THE RT**
8 **COLLOCATION CHARGE, HAVE YOU HAD AN OPPORTUNITY TO**
9 **SCRUTINIZE THE COST DEVELOPMENT OF THIS CHARGE IN THE**
10 **QWEST COST STUDIES?**

11 A. Yes, I have and from that review I have discovered three primary
12 concerns. First, once Qwest develops its RT collocation investment, it
13 applies factors to recover directly assigned, directly attributable, and
14 common costs. Qwest directly assigns product management, sales, and
15 business fees to the RT collocation investment. Together these loadings
16 add nearly \$1,000.00 to the RT collocation investment. Mr. Tim Gates in
17 his testimony explores in depth why these loadings are inappropriate.

18 Second, in developing the RT collocation non-recurring cost, Qwest uses
19 costs from two vendors and then weights them together. One vendor is
20 substantially more expensive than the other (even after one considers that
21 the SMU capacities are different). Section 51.505 (b) (1) of the FCC rules
22 require that the TELRIC of an element should be measured based on the

1 use of the most efficient telecommunications technology currently
2 available and the lowest cost network configuration. This principle should
3 be applied to the Qwest RT collocation cost study.

4 Third, once Qwest has developed its fully loaded and weighted investment
5 for RT collocation equipment, it applies a very low utilization rate or fill
6 factor to that investment. No support exists for this utilization rate in the
7 cost study, rather it is simply a hard coded number. Qwest should be
8 required to substantiate why such an extremely low utilization level is
9 appropriate, or in the alternative a more appropriate utilization level should
10 be applied.

11 **Q. HAVE YOU RERUN THE QWEST RT COLLOCATION COST STUDY TO**
12 **REPROPOSE A NEW RATE?**

13 A. No, I have not for two reasons. First, the rate structure whereby Qwest
14 seeks to recover all of its investment up front from competitors
15 complicates the study. Hence, additional changes beyond simple inputs
16 will be necessary. Second, since many of the inputs have no
17 corresponding support (e.g. the fill factors used) there is limited basis
18 other than my personal experience to rely upon for certain input changes
19 at this time. I believe the appropriate path to follow is to first determine the
20 appropriate rate structure with respect to how RT collocation costs should
21 be recovered and then second to take that structure and appropriately
22 construct and develop costs.

1

2 **Q. HAVE YOU REVIEWED THE RT COLLOCATION COST STUDY FOR**
3 **THE FEEDER DISTRIBUTION INTERFACE (FDI) TERMINATION**
4 **COSTS?**

5 A. Yes, I have. In most respects this portion of the RT collocation cost study
6 suffers from the same shortcomings as the standard mounting unit space
7 portion of the study. As such, the Commission should require Qwest to
8 modify its rate structure as I discussed above and then provide updated
9 and complete cost support the new rates.

10

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

12 A. Yes, it does.