

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
Petition of WorldCom, Inc. Pursuant)
To Section 252 (e)(5) of the)
Communications Act for Expedited)
Preemption of the Jurisdiction of the)
Virginia State Corporation Commission)
Regarding Interconnection Disputes)
with Verizon Virginia, Inc., and for)
Expedited Arbitration)

CC Docket No. 00-218

In the Matter of)
Petition of Cox Virginia Telecom, Inc.)
Pursuant to Section 252 (e)(5) of the)
Communications Act for Preemption)
of the Jurisdiction of the Virginia State)
Corporation Commission Regarding)
Interconnection Disputes with Verizon)
Virginia, Inc. and for Arbitration)

CC Docket No. 00-249

In the Matter of)
Petition of AT&T Communications)
Virginia Inc., Pursuant to Section 252 (e)(5))
of the Communications Act for Preemption)
of the Jurisdiction of the Virginia)
Corporate Commission Regarding)
Interconnection Disputes with Verizon)
Virginia, Inc.)

CC Docket No. 00-251

**REBUTTAL TESTIMONY OF MICHAEL R. BARANOWSKI,
TERRY L. MURRAY, CATHERINE E. PITTS, JOSEPH P. RIOLO AND
STEVEN E. TURNER
ON BEHALF OF AT&T AND WORLDCOM, INC.**

August 27, 2001

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I. INTRODUCTION AND SUMMARY

2 **Q. WHO ARE THE MEMBERS OF THE WITNESS PANEL SPONSORING**
3 **THIS TESTIMONY?**

4 A. The members of this panel are Michael R. Baranowski, Terry L. Murray,
5 Catherine E. Pitts, Joseph P. Riolo and Steven E. Turner.

6 **Q. WHAT ROLE DID EACH MEMBER OF THIS PANEL PLAY IN THE**
7 **PREPARATION OF THIS TESTIMONY AND THE ASSOCIATED**
8 **STUDIES?**

9 A. Although all members of this Panel have reviewed and support this testimony,
10 each Panel member assumed primary responsibility for specific segments of the
11 testimony. Each Panel member relies on the facts and analyses developed by the
12 other Panel members in their areas of primary responsibility. Specifically:

13 (1) Michael R. Baranowski addresses Verizon's testimony concerning the
14 recurring costs associated with loops.

15 (2) Terry L. Murray addresses Verizon's testimony concerning the costs
16 associated with Operations Support Systems.

17 (3) Catherine E. Pitts addresses Verizon's testimony concerning the recurring
18 costs associated with unbundled local switching.

19 (4) Joseph P. Riolo addresses Verizon's testimony concerning network
20 construct and technology assumptions for the recurring cost studies.

21 (5) Steven E. Turner addresses Verizon's testimony concerning the recurring
22 costs associated with transport.

1 **Q. ARE YOU THE SAME TERRY L. MURRAY, CATHERINE E. PITTS,**
2 **JOSEPH P. RIOLO AND STEVEN E. TURNER WHO SUBMITTED**
3 **DIRECT TESTIMONY IN THIS PROCEEDING ON JULY 31, 2001?**

4 A. Yes, we are.

5 **Q. DID YOUR DIRECT TESTIMONY CONTAIN A DESCRIPTION OF**
6 **YOUR BACKGROUND AND EXPERIENCE?**

7 A. Yes, it did.

8 **Q. MR. BARANOWSKI, PLEASE STATE YOUR NAME AND BUSINESS**
9 **ADDRESS.**

10 A. My name is Michael R. Baranowski. I am Managing Director of FTI Klick,
11 Kent & Allen, Inc., a subsidiary of FTI Consulting, Inc. ("FTI/KKA"). FTI/KKA
12 is an economic and financial consulting firm with offices at 66 Canal Center
13 Plaza, Suite 670, Alexandria, Virginia 22314.

14 **Q. MR. BARANOWSKI, PLEASE DESCRIBE YOUR EDUCATIONAL AND**
15 **PROFESSIONAL EXPERIENCE.**

16 A. After receiving a Bachelor of Science in Accounting from Fairfield University in
17 1980, I joined the consulting firm of Wyer, Dick and Company in Livingston,
18 New Jersey. Since that time, I have been continuously involved in cost analyses,
19 including analyses of short-run and long-run marginal costs, short-run and long-
20 run incremental costs, and stand-alone costs for a variety of industries. These
21 studies often employ complex, computer-driven models that rely upon detailed
22 engineering input data and sophisticated discounted-cash-flow techniques. The
23 results of many of these studies have been submitted in administrative
24 proceedings, in court, and in arbitrations. Since 1996, I have been assisting

1 AT&T, WorldCom, and other CLEC's in analyzing cost evidence submitted in
2 various proceedings arising out of the Telecommunications Act of 1996.

3 **Q. MR. BARANOWSKI, PLEASE SUMMARIZE YOUR RECENT**
4 **TELECOMMUNICATIONS EXPERIENCE THAT IS RELEVANT TO**
5 **THIS PROCEEDING.**

6 A. I have been either directly or indirectly involved in the presentation of forward-
7 looking economic costs for unbundled network elements ("UNE's") in a number
8 of jurisdictions, including Colorado, the District of Columbia, Idaho, Iowa,
9 Maryland, Minnesota, Montana, Nebraska, New Mexico, North Carolina, North
10 Dakota, Oregon, South Dakota, Texas, Washington, and Wyoming. We have
11 participated in Universal Service Fund proceedings in Alabama, Colorado,
12 Florida, Georgia, Minnesota, Montana, New Mexico, North Carolina, South
13 Carolina, and Washington. I also have been directly involved in critiques of cost
14 studies submitted by Verizon/Bell Atlantic in Delaware, the District of Columbia,
15 Maryland, Massachusetts, New York, New Jersey, Pennsylvania, Virginia, and
16 West Virginia. I also have been either directly or indirectly involved in critiques
17 of cost studies presented by GTE in California, Iowa, Minnesota, Nebraska, New
18 Mexico, Oregon, Texas, and Washington; submitted testimony in Texas on
19 Southwestern Bell's cost studies; and critiqued the Benchmark Cost Proxy Model
20 ("BCPM") in numerous states. Finally, I have assisted AT&T and
21 WorldCom/MCI in developing a methodology to be used to determine forward-
22 looking costs for collocation, which was presented in the states of Alabama,
23 Florida, Georgia, Louisiana, Maryland, Minnesota, New York, North Carolina,
24 and Tennessee. I submitted testimony on the AT&T/MCI Collocation Cost Model

1 in Pennsylvania. I also was personally involved on behalf of both AT&T and
2 WorldCom/MCI in the initial Virginia UNE proceeding (Case PUC 970005)
3 before the Virginia State Corporation Commission (“SCC”). I am intimately
4 familiar with both the cost studies submitted by BA-VA (now Verizon Virginia)
5 in that proceeding and the shortcomings of those studies identified by the SCC.

6 I also have had relevant experience in other “network industries,”
7 including the railroad, pipeline, and trucking industries.

8 **Q. WHAT IS THE PURPOSE OF THIS PANEL’S TESTIMONY?**

9 A. We have been asked by AT&T¹ and WorldCom to review the cost models
10 submitted on July 2, 2001 by Verizon Virginia (“Verizon”)² in this proceeding
11 relevant to recurring charges, to identify violations of the FCC’s TELRIC costing
12 principles, and, where practical, to correct and restate the Verizon cost study
13 results. In addition, we have been asked to review and respond to certain issues
14 raised in the Panel direct testimony of Verizon’s witnesses Donald Albert, Ralph
15 Curbelo, Joseph Gansert, Nancy Matt, Louis Minion, Carlo M. Peduto II, Gary
16 Sanford, and John White (hereinafter “Verizon Panel Direct”).

¹ The AT&T entities sponsoring this Direct Testimony are AT&T Communications of Virginia, Inc., TCG Virginia, Inc., ACC National Telecom Corp., MediaOne of Virginia and MediaOne Telecommunications of Virginia, Inc. (together, “AT&T”).

² Throughout this testimony, we will refer to Verizon-Virginia simply as Verizon, except where necessary to distinguish it from other Verizon entities.

1 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

2 A. Based on our detailed review of the Verizon Virginia cost studies, we conclude
3 that those studies suffer a number of violations of TELRIC principles which in
4 combination, produce grossly overstated UNE recurring rates. These TELRIC
5 violations range in scope from a blind acceptance of the embedded outside plant
6 network configuration³ to the use of utilization factors that are far too low. In
7 essence, Verizon's cost study reproduces much of Verizon's own embedded
8 network and thus depriving the network of efficiencies available under properly
9 developed forward-looking TELRIC costs. In addition, the studies suffer a
10 number of logic flaws that result in overstated UNE costs. Correcting these
11 TELRIC violations and logic flaws where possible⁴ and restating the Verizon cost
12 studies produces forward-looking rates for UNEs that are far more realistic and
13 will more likely result in robust and long overdue competition for local telephone
14 service in Virginia.

³ See Shelanski Direct at 6.

⁴ As we describe in more detail below, certain of the flaws in Verizon's study cannot be remedied because of access limitations within the cost study models and lack of sufficiently detailed data. Thus, even our restated Verizon rates are, by definition, not TELRIC.

1 To demonstrate the amount by which Verizon’s proposed rates are
2 overstated, Table 1 compares Verizon’s proposed UNE rates for a number of key
3 elements to the AT&T/WorldCom restated results supported in this panel
4 testimony and that of other AT&T/WorldCom witnesses. A complete summary of
5 all of the AT&T/WorldCom restated recurring rates is included as Attachment 1
6 to this testimony.⁵

Table 1
Summary of Restatement of Key Unbundled Network Elements

Element	Verizon	AT&T/WCOM Restated Verizon	% Verizon Overstated
2-Wire Loop Dens Cell 1	\$19.49	\$5.13	280%
2-Wire Loop Dens Cell 2	\$29.69	\$7.54	294%
2-Wire Loop Dens Cell 3	\$48.93	\$12.07	305%
2-Wire Loop Statewide	\$25.12	\$6.46	289%
Switch Usage - Originating	\$0.002703	\$0.000111	2,335%
Switch Usage – Terminating	\$0.002374	\$0.000099	2,298%
Switch Port	\$3.15	\$1.19	165%
Common Transport (Fixed)	\$0.000099	\$0.000055	80%
Common Transport (Per Mile)	\$0.000002	\$0.000001	100%

7
8 In addition to substantially exceeding properly developed TELRIC costs,
9 the UNE rates proposed by Verizon far exceed the proxy rates established by the
10 FCC in the first UNE proceeding.

⁵ Workpapers supporting our restatement of Verizon’s recurring costs are being provided
(footnote continued)

1

II. VERIZON COST MODEL OVERVIEW

2 **Q. PLEASE BRIEFLY DESCRIBE THE VERIZON COST STUDY.**

3 A. Verizon's loop cost study consists of a series of computer applications bundled
4 within an Oracle software-based interface. Loop costs are processed through a
5 loop cost analysis model ("LCAM"), which is an amalgam of multiple
6 programming modules. A brief description of each module is set forth below.⁶

7 Plant Characteristics Module: This module uses preloaded information from an
8 old survey conducted by Verizon engineers to produce average feeder and
9 distribution loop lengths and typical cable sizes for each wire center. Cable
10 material and labor cost inputs to the Plant Characteristics Module are based on a
11 separate Verizon system named the Vintage Retirement Unit Cost ("VRUC")
12 system, which Verizon asserts contains installed cable costs from projects
13 undertaken by Verizon from 1997 through 1999.

14 Electronics Module: The electronics module develops investment costs for Next
15 Generation Digital Loop Carrier ("NGDLC") hardware and common equipment
16 for transmission of the voice grade signal over fiber facilities. Fiber feeder
17 facilities provisioned with NGDLC are placed when the feeder loop length
18 exceeds certain thresholds. For Verizon's cost study, the threshold is **[Begin**

electronically on a CD filed with this testimony.

⁶ These Verizon cost models develop certain of the UNE costs based on unit costs from Maryland instead of Virginia. Verizon provides no explanation of why Maryland unit costs are used. We have, in our restatement of Verizon's cost, changed these UNE to reflect Virginia unit costs.

1 **Verizon Proprietary] *** [End Verizon Proprietary].** The electronics module
2 sizes electronic equipment for each Verizon customer serving area based on the
3 number of working lines reported by Verizon.

4 Loop Study Module: This module reads and summarizes the results of the Plant
5 Characteristics and Electronics modules to produce the loop investment by wire
6 center. The loop study module then combines the loop investment for each wire
7 center with annual cost factor outputs that are generated by a separate Verizon
8 model named the “VCost” Model. The cost results are then weighted by working
9 lines to produce monthly recurring loop rates.

10 **Q. WHAT IS THE VCOST MODEL?**

11 A. The VCost model is a spreadsheet-based application run under the Oracle
12 interface. It was developed by Verizon to produce annual cost factors (“ACFs”)
13 that are used to convert investments to annual costs, which are in turn converted
14 to monthly costs by dividing by twelve.

15 **Q. WHAT ACFs DOES VCOST PRODUCE?**

16 A. VCost produces ACFs for depreciation, return on investment, income and
17 property taxes, network operations expenses, support expenses, and miscellaneous
18 marketing and administrative expenses.

19 **Q. PLEASE PROVIDE AN OVERVIEW OF THE ORGANIZATION OF THE**
20 **VERIZON COMPUTERIZED STUDY MODELS AND MODULES.**

21 A. The Verizon cost programs are controlled by an Oracle software interface that
22 allows analysts to modify certain of the inputs and assumptions within each of the
23 program modules. The interface is difficult and cumbersome to work with and,

1 more importantly, the interface limits the ability of the analyst to trace the impact
2 of changes to key cost model inputs.

3 **Q. CAN YOU PROVIDE AN EXAMPLE OF THE DIFFICULTIES**
4 **ASSOCIATED WITH ANALYZING THE VERIZON MODELS?**

5 A. Yes. After the models are installed and properly functioning,⁷ considerable effort
6 is required to understand how the models interact within the interface and what
7 inputs and assumptions drive the model results. Unlike a standard spreadsheet
8 application that allows a user to simply highlight a cell and observe a specific
9 formula, the Oracle interface for LCAM is not so transparent to users. It displays
10 only a list of formulas within a given module of the program, without the ability
11 to edit the formulas or to see the corresponding values that are calculated. In
12 order to review a formula, the user must first locate the program variable name
13 assigned to that component and then search for the formula. In most cases, the
14 formulas themselves also include defined variable names, making tracing through
15 the programs a time-consuming endeavor.⁸ Further, because of other limitations
16 imposed by the Oracle interface, intermediate model run results can be reviewed
17 only at certain stages of the model run process.

18 In addition, while the model allows the user to edit formulas or to create
19 new formulas in the individual modules, it has to be done through a special

⁷ Because the Verizon models are written in an older version of Oracle, a number of unorthodox procedures are necessary to get the models installed and running.

⁸ Further complicating evaluation of the models is the fact that the Oracle interface restricts the user's ability to review multiple formulas simultaneously, making it more difficult to understand the flow of information throughout the process.