BEFORE THE STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

In the Matter of the Review of Unbundled Network Elements Rates Terms and Conditions of BA-NJ	)))	Docket No. TO00060356

REBUTTAL TESTIMONY OF
MICHAEL R. BARANOWSKI
ON BEHALF OF
AT&T COMMUNICATIONS OF NJ, L.P.

OCTOBER 12, 2000

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Michael R. Baranowski. I am Executive Vice President of FTI/Klick, Kent & Allen, Inc., a subsidiary of FTI Consulting, Inc. ("FTI/KKA"). FTI/KKA is an economic and financial consulting firm with offices at 66 Canal Center Plaza, Suite 670, Alexandria VA, 22314.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I received a Bachelor of Science degree in Accounting from Fairfield University in 1980.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.

A. After graduation from Fairfield University, I joined the consulting firm of Wyer, Dick and Company in Livingston, New Jersey. Since that time, I have been continuously involved in cost analyses, including analyses of short-run and long-run marginal costs, short-run and long-run incremental costs, and stand-alone costs for a variety of industries. These studies often employ complex, computer-driven models that rely upon detailed engineering input data and sophisticated discounted cash flow techniques. The results of many of these studies have been submitted in administrative proceedings, in court, and in arbitrations. Since 1996, I have been assisting AT&T and other CLECs in analyzing cost evidence submitted in various proceedings arising out of the Telecommunications Act of 1996.

Q. PLEASE SUMMARIZE YOUR RECENT TELECOMMUNICATIONS EXPERIENCE THAT IS RELEVANT TO THIS PROCEEDING.

A. I have been either directly or indirectly involved in the presentation of forward-looking economic costs for unbundled network elements ("UNEs") in a number of jurisdictions, including Colorado, the District of Columbia, Idaho, Iowa, Maryland, Minnesota, Montana, Nebraska, New Mexico, North Carolina, North Dakota, Oregon, South Dakota, Texas, Washington and Wyoming. We have participated in Universal Service Fund proceedings in Alabama, Colorado, Florida, Georgia, Minnesota, Montana, New Mexico, North Carolina, South Carolina, and Washington. I also have been either directly or indirectly involved in critiques of cost studies submitted by Bell Atlantic in Delaware, the District of Columbia, Maryland, New York, New Jersey, Pennsylvania, Virginia, and West Virginia. I also have been either directly or indirectly involved in critiques of cost studies presented by GTE in California, Iowa, Minnesota, Nebraska, New Mexico, Oregon, Texas and Washington, submitted testimony in Texas on Southwestern Bell's cost studies, and critiques of the Benchmark Cost Proxy Model ("BCPM") in numerous states. Finally, I have assisted AT&T and MCI in developing a methodology to be used to determine forward-looking costs for collocation, and submitted testimony on the AT&T/MCI Collocation Cost Model in the states of Alabama, Florida, Georgia, Louisiana, Maryland, Minnesota, New York, North Carolina, Pennsylvania and Tennessee. I was also personally involved on behalf of both AT&T and MCI/Worldcom in the initial New Jersey UNE proceeding. I am intimately familiar with both the cost studies submitted by

BA-NJ in that proceeding and the changes to those studies order by the Board of Public Utiltities.

I also have had relevant experience in other "network industries," including the railroad, pipeline and trucking industries.

Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. AT&T Communications of NJ, L.P. ("AT&T") has asked me to respond to certain issues raised by Verizon–New Jersey ("VNJ") witnesses Marsha S. Prosini and Donald E. Albert. Specifically, I was instructed to review the updated Unbundled Network Element ("UNE") cost studies sponsored by Ms. Prosini and supported by Mr. Albert, to explain any significant deficiencies in the inputs and other assumptions underlying those studies, and, where possible and practical, to restate the study results by substituting more defensible input assumptions.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. VNJ has updated its cost studies in a manner that, on the surface appears reasonable. However, as the details of the update methodology emerge, it becomes clear that VNJ has selectively updated its studies by devising new techniques to cost certain elements, yielding unit costs significantly higher than those in it initial UNE submission and by continuing to base its forward-looking vision on its existing embedded network. As a result, the VNJ cost studies are internally inconsistent and, more importantly, overstate costs.

In addition, VNJ has abandoned a key forward-looking assumption from its initial UNE filing: the use of next generation digital loop carrier ("NGDLC") for all loops exceeding the copper/fiber breakpoint. VNJ now asserts that the

majority of digital loop carrier equipment in the forward-looking environment will be less efficient and more expensive universal digital loop carrier equipment.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE UPDATED VNJ COST STUDIES ARE INTERNALLY INCONSISTENT?

A. Yes. One good example is line counts. VNJ has updated the number of working lines per wire center for its calculations of switching and digital loop carrier costs, but continues to use line counts from 1995 for its loop cost calculations. This produces a mismatch between the telephone switching network and the outside plant the switches are designed to serve, thereby impeaching the integrity of the VNJ cost models.

Q. ARE THERE OTHER INCONSISTENCIES IN THE NEW VNJ STUDIES?

A. Yes. VNJ is proposing a host of new charges, recurring and non-recurring, relating to items that do not exist in the forward-looking environment. For example, VNJ is proposing non-recurring charges for the removal of load coils. As Mr. Walsh explains in his testimony, a non-recurring charge for removal of load coils turns TELRIC on its head. Investments in the forward-looking network have been increased to ensure that the facility will be capable of handling transmission without the use of load coils. The most visible of the design specifications is VNJ cap on copper distribution length of 6,000 feet. Combined with a fiber/copper breakpoint of 7,000 to 9,000 feet, these specifications provide sufficient investment to ensure that load coils will not be needed. VNJ's proposal to charge for the removal of load coils is like charging a customer the monthly cost of a new Cadillac and then charging that same customer for the removal of

the 8-track tape player and installation of a new compact disk player in the old Cadillac the customer will be forced to use.

Q. HAVE YOU CORRECTED ALL OF THE DEFICIENCIES YOU IDENTIFIED IN THE VNJ STUDIES?

A. No. Time did not permit such a thorough correction and restatement. Further, because of the internal inconsistencies in the updated VNJ studies, a complete correction is virtually impossible. I therefore focused on the major correctable deficiencies in the updated VNJ studies. In doing so, I was able to restate the VNJ costs underlying its proposed rates for two-wire loops, switch usage and ports to make them more TELRIC compliant. The results of my restatement are summarized in Table 1.

Table 1
Summary of Restated VNJ Loop and Switch Costs

UNE	VNJ Updated	VNJ Updated Restated
2-Wire Loop – Density Cell 1	$13.54	$5.41
2-Wire Loop – Density Cell 2	$16.43	$6.35
2-Wire Loop – Density Cell 3	$18.67	$7.11
2-Wire Loop – Statewide	$16.18	$6.28
Switch Usage – Originating	$0.010059	$0.002378
Switch Usage – Terminating	$0.008553	$0.002035
POTS Port	$2.79	$0.93

II. RESTATEMENT OF VNJ'S LOOP COST STUDY

Q. HAS VNJ CHANGED THE FORWARD-LOOKING DESIGN OF THE NETWORK IN ITS UPDATED STUDY?

A. Yes. VNJ has abandoned the fundamental construct of its own purported forward-looking network by repudiating its prior admission that the forward-looking loop design incorporates integrated digital loop carrier.

Q. PLEASE EXPLAIN.

A. In its UNE I cost submission in 1997, BA-NJ designed its forward-looking network using Next Generation Digital Loop Carrier ("NGDLC"), a Synchronous Optical Network ("SONET") based system using GR303. Although at the time NGDLC was not widely deployed in the BA-NJ network, BA-NJ witness Edward Wylonis acknowledged that GR303 had already become the forward-looking standard. For pricing of NGDLC, BA-NJ used costs for DLC equipment that were at the mid-point between UDLC and IDLC. As Mr. Wylonis explained:

> Integrated Digital Loop Carrier (DLC) is assumed for the long run despite the fact that no current integrated system is technically able to be unbundled. Only the Universal DLC currently is able to be unbundled. For the long run it is expected that an integrated system will be able to be unbundled and the costs assumed are to be higher than current integrated systems but lower than current universal systems, midway between the costs of the two types of systems.

In VNJ's supposedly updated cost study filed on July 28, 2000, however, its cost witness, Ms. Prosini, has jettisoned Mr. Wylonis's forward-looking assumption by assuming a network provisioned with only 10% GR303. Ms. Prosini's

rationale is that VNJ anticipates that 10 percent of its *embedded network* will be provisioned with GR303 in the near future.

Q. DOES VNJ'S DEPLOYMENT TIMETABLE FOR GR303 IN VNJ'S SERVICE TERRITORY DEFINE THE RELEVANT STANDARD FOR DESIGN OF A FORWARD-LOOKING COST STUDY?

A. Not at all. Bell Atlantic's current plans for deployment of GR303 deployment in the carrier's embedded network has no bearing on the proper design of the forward-looking network. Under TELRIC, costs are based on the design and construction of the most efficient network design that could be deployed today, using the best technology available on the market. As Mr. Wylonis recognized, the appropriate technology assumption for digital loop carrier design is NGDLC. Ms. Prosini's design, which uses less efficient and significantly more costly universal digital loop carrier equipment and thus overstates costs, is clearly not forward looking in any relevant sense.

Q. HOW SHOULD THIS ASPECT OF THE VNJ COST STUDY BE CORRECTED?

A. The VNJ study should be corrected to use Mr. Wylonis's forward-looking design specifications of NGDLC and a GR303 interface.

Q. ARE THERE OTHER ASPECTS OF VNJ'S UPDATED COST STUDY THAT RELY INAPPROPRIATELY ON VNJ'S EMBEDDED NETWORK?

A. Yes. Ms. Prosini develops many of the fill factors used in her study from VNJ's embedded network. For example, her distribution fill of 40% is purportedly based on VNJ's historic or embedded ratio of working pairs to available pairs as measured at the serving area interface. As Mr. Fassett explains in his testimony, a fill of 40 percent is inconsistent with efficient forward-looking cost principles.

Distribution capacity should be sized to accommodate ultimate demand. An average of two lines per living unit has been the rule of thumb for many years; more recently, the advent of DSL technology has reduced the amount of spare capacity warranted to meet growth needs.

To properly apply the ultimate demand standard, it is important to take into account the additional lines already installed in the network. The best measure of additional line penetration is VNJ own cost study. In developing the cost for the network interface device ("NID"), VNJ assumed an average second line penetration of 0.25 lines per living unit. Hence, a reasonable forward-looking average distribution fill level is 62.5%.[1]

Q. IN HER CALCULATIONS OF DISTRIBUTION FILL, MS. PROSINI INCLUDES A 5% ADJUSTMENT FOR BREAKAGE. IS THIS ADJUSTMENT WARRANTED?

A. No. Breakage[2] is already accounted for in the UAAA model used by VNJ to generate loop lengths and average cable sizes. The UAAA model, in developing the average feeder and distribution cable sizes, uses actual standard sized cables and thus accounts for breakage. There is no need for Ms. Prosini's separate adjustment.

Q. **ARE OTHER FILL FACTORS USED BY MS. PROSINI ALSO UNREPRESENTATIVE OF FORWARD-LOOKING DESIGN STANDARDS?**

A. Yes. Ms. Prosini uses fill factors for digital loop carrier equipment ranging from 68% to 81%. As Mr. Fassett explains, because of the relative ease with which

[1] 50% x 1.25 = 62.5%.

[2] Additional spare resulting from the availability of cable in only a limited number of standard sizes.

DLC capacity can be increased, the forward-looking fill factor for this equipment should be 90%.

Q. WHAT OTHER PROBLEMS HAVE YOU IDENTIFIED WITH THE VNJ REVISED COST STUDY?

A. The revised cost study includes a repair and maintenance expense factor that exceeds a reasonable level. This produces a significant overstatement of loop costs.

Q. PLEASE EXPLAIN.

A. Expenses for repair and maintenance of aerial metallic cable are developed based on the historical relationship of actual historical expenditures to current investment. In the initial UNE proceeding, the VNJ expense to investment ratio for aerial metallic cable repair and maintenance was 8.74 percent. This percentage included an improper and arbitrary increase to repair and testing dollars proposed by VNJ and was thus overstated. In its updated study, VNJ is proposing a whopping 14.74% network operating expense factor for aerial metallic cable. Even by the overstated UNE I standard, the new expense factor proposed by VNJ is excessive.

More importantly, VNJ has made no adjustment to its historic expense to investment ratio to account for the fact that the forward-looking cost study assumes the construction of a completely new outside plant facility, including all new aerial cable perfectly sized to serve existing demand plus anticipated growth. As such, many of the maintenance and repair expenditures made by VNJ on its older embedded facility would not be needed under the forward-looking study construct. Under these circumstances, repair and maintenance expenses should be

lower than the historical costs. To correct this overstatement, I substituted the aerial metallic expense factor of 6.69% developed by the FCC and used by Dr. Mercer in the HAI Model.

Q. AS PART OF ITS UPDATED COST STUDY, VNJ CHANGED THE WAY IT COMPUTES CERTAIN OF THE LOOP COSTS. HAVE YOU HAD AN OPPORTUNITY TO REVIEW VNJ'S NEW PROCEDURES?

A. Yes. VNJ has changed substantially it methodology for computing pole, conduit and drop costs. In the prior VNJ UNE study, drop costs, along with costs for terminals, NIDS and serving area interfaces were included with the cable cost information obtained from the BA-NJ Vintage Retirement Unit Cost ("VRUC") database. In this round, VNJ has abandoned the use of the VRUC unit costs and has chosen instead to build these costs from the bottom up. The case is similar for pole and conduit investment. Previously, these investments were added based on VNJ's embedded relationship of pole and conduit investment to cable investment. In its revised presentation, VNJ develops pole and conduit investments based its recent experience with pole and conduit installations.

Q. HAS VNJ CORRECTLY IMPLEMENTED ITS NEW COSTING PROCEDURES FOR POLES, CONDUIT AND DROPS?

A. No. There are a number of problems with VNJ's new approach for estimating these costs. The most obvious is that VNJ has failed to establish that the average cost per pole and the average cost per duct foot developed from data on recent installations are, in fact, representative of the average forward-looking cost of installing poles and conduit throughout the VNJ service territory.

For example, VNJ develops an average historical cost per installed pole of $1,156. The information provided by VNJ fails to reveal, however, the type of

pole installations underlying that figure. In the forward-looking scorched node TELRIC environment, poles will be efficiently installed sequentially along the feeder and distribution routes. In this way, the amount of travel time and mobilization and demobilization time of installers and equipment is minimized, and productivity is high. VNJ has not established that its proposed cost accurately captures the efficiencies inherent in a forward-looking installation.

The HAI 5.2 model, on the other hand, includes an installed cost per pole of $417. This cost incorporates the efficiencies of a forward-looking installation and, as such, is more representative of the investment cost per pole.

Q. ARE THERE PROBLEMS WITH VNJ'S CONDUIT COSTS?

A. The same question of whether the VNJ costs are representative of forward-looking TELRIC costs applies to VNJ's conduit costs. In addition, in developing its conduit investment, VNJ inappropriately applies a duct utilization factor to duct investment costs.

Q. WHY IS THE APPLICATION OF A DUCT UTILIZATION FACTOR INAPPROPRIATE?

A. The application of an additional duct utilization factor is inappropriate for a number of reasons. First, VNJ assumes only two fiber sheaths per duct. This leaves ample space for additional fiber sheaths if demand warrants. Second, the cables traversing the conduit themselves already include a substantial allowance for spare capacity. To add additional conduit capacity in the unlikely event the cable capacity is exhausted overstates properly developed TELRIC costs. For these reasons, the conduit utilization factor in the VNJ study should be one.

Q. ARE THERE PROBLEMS WITH VNJ'S DROP INVESTMENT CALCULATIONS?

A. Yes. First, VNJ's incorrectly divides its installed cost per NID by a utilization factor to determine the NID investment cost per line. This overstates costs. The correct calculation is to divide the installed investment per NID by the number of lines per NID. This calculation correctly produces the average NID investment cost per line. Second, in developing its drop investment cost, VNJ uses an average drop length of 100 feet. VNJ provides no supporting documentation for this estimate. A recent study by Bellcore concluded that the average drop length nationwide is 73 feet. Because VNJ has not provided any information suggesting that its drops in the New Jersey service territory differ materially from drops nationwide, the 73 foot average drop length should be used in place of VNJ's unsupported estimate.

Q. DOES THE REVISED VNJ COST STUDY USE AN APPROPRIATE FORWARD-LOOKING COST OF CAPITAL?

A. No. The VNJ study uses a cost of capital of 12.60%. The appropriate forward-looking cost of capital is 9.47%, as described in the testimony of John Hirshleifer.

Q. DOES THE REVISED VNJ COST STUDY USE THE CORRECT FORWARD-LOOKING ASSET LIVES AND NET SALVAGE VALUES?

A. No. The VNJ study uses what it refers to as GAAP lives. VNJ has not demonstrated why the GAAP lives should be used for a forward-looking cost study. In fact, these lives were designed to err on the side of protecting shareholders, and are inconsistent with the lives previously recommended by the BPU and the FCC. As such, the VNJ lives should be rejected and the forward-looking BPU/FCC lives used in the HAI model should be substituted.

Q. DOES VNJ USE THE CAPCOST+ MODEL TO GENERATE ANNUAL COST FACTORS?

A. No. VNJ has abandoned the CAPCOST+ model used in the initial UNE proceeding in favor of an Excel based spreadsheet for the calculation of the depreciation, return and tax components of the ACF's.

Q. IS THERE A PROBLEM WITH VNJ'S USE OF THE EXCEL SPREADSHEET INSTEAD OF CAPCOST+?

A. CAPCOST+ is a sophisticated and complex financial model. While certain of the VNJ UNE I inputs to CAPCOST+, such as survivor life curves, planning period and the number of vintages analyzed, caused the initial VNJ ACF's to be overstated, CAPCOST+ also has the capability to account for projected demand growth by spreading telephone plant investment costs over all anticipated future demand. In this way, CAPCOST+ accurately computes that, as demand increases and consumes some of the spare capacity initially built into the network, average costs per line will decline because the costs are being spread over more customers. The new VNJ Excel spreadsheet does not make similar computations and thus overstates costs.

Q. DOES THE REVISED VNJ COST STUDY PROPERLY HANDLE GROWTH?

A. No. Although the VNJ cost study provides for a considerable amount of future growth through its fill factors, it does not recognize that as the anticipated future demand is realized, investment costs will be spread over more customers. Thus, this future growth causes the average cost per line to decline.

Q. HOW SHOULD GROWTH BE ACCOUNTED FOR?

A. The correct way to account for growth is to develop an adjustment factor for each asset account to spread the annual costs over the average number of lines anticipated to use that asset over its expected life. In other words, to compute the ratio of the present value of current demand plus growth lines over each projected asset life to the present value of current demand over that same time period. The calculations should be performed using the asset lives approved by the BPU and FCC, and the cost of capital proposed by Mr. Hirschleifer.

Q. HAVE YOU BEEN ABLE TO RESTATE THE VNJ LOOP COSTS?

A. Yes. I have restated the VNJ two-wire loop costs by rerunning VNJ's cost models with the following changes:

- Change DLC specification from 10% GR303 to 100% NGDLC for loops exceeding the fiber/copper breakpoint.
- Replace Ms. Prosini's embedded distribution fill factor of 40% with the forward-looking distribution fill factor of 62.5%.
- Replace Ms. Prosini's embedded loop electronics fill factors with a forward-looking loop electronics fill factor of 90%.
- Substitute for VNJ's 14.74% embedded aerial metallic expense ratio a forward-looking ratio of 6.69%.
- Replace VNJ's pole investment cost of $1,156 with $417.
- Eliminate VNJ's use of a conduit utilization factor.
- Correct VNJ's drop calculations to fix the computation error in the NID investment and to reflect an average drop length of 73 feet.
- Use a 9.47% cost of capital.
- Use the BPU/FCC approved asset lives and net salvage values.
- Properly account for future anticipated growth.

Table 2 summarizes the results of my restatement.

Table 2
Summary of Loop Cost Restatement

UNE	VNJ Updated	VNJ Updated Restated
2-Wire Loop – Density Cell 1	$13.54	$5.41
2-Wire Loop – Density Cell 2	$16.43	$6.35
2-Wire Loop – Density Cell 3	$18.67	$7.11
2-Wire Loop – Statewide	$16.18	$6.28

III. RESTATEMENT OF VNJ'S SWITCHING COST STUDY

Q. HAVE YOU REVIEWED VNJ'S SWITCH USAGE AND PORT COSTS?

A. Yes. Like the VNJ loop costs, the switching costs are overstated.

Q. HOW DOES VNJ OVERSTATE SWITCH ORIGINATING AND TERMINATING USAGE COSTS?

A. For three main reasons. First, VNJ computes its switch investment cost based on the assumption that a supplier of unbundled switching would buy its entire inventory of switching equipment at prices reflecting only the shallower discounts offered by switch vendors for piecemeal ("add-on") additions to existing switch capacity. Second, VNJ assumes that the cost of vertical features should be added to the switch usage costs. Third, VNJ uses values for the cost of capital, asset lives and net salvage values that substantially exceed efficient forward-looking cost levels.

Q. WHY IS VNJ'S USE OF THE LOWER GROWTH DISCOUNT TO DEVELOP SWITCHING INVESTMENT INAPPROPRIATE?

A. Because no efficient supplier of unbundled switching in a competitive market would pay so much for switches. VNJ begins from the unobjectionable premise that, because all of its existing switches are digital switches of recent vintage, any additional purchases it makes in the next few years are likely to be limited to add-on capacity to handle projected growth. This premise, however, does not support VNJ's conclusion that *all* switching capacity—including "new" switches that a new entrant would buy at deep discounts (and that VNJ itself bought at deep discounts)—should be priced as if they would be purchased at shallow add-on discounts. This conclusion is at odds with the behavior of any rational firm, actual or theoretical.

First, VNJ itself did not pay these inflated prices. As it has acknowledged, it bought its *existing* base-load switches at the deep discounts offered for new equipment purchases.

Nor would an efficient *new* entrant pay these inflated prices. An efficient new entrant purchasing a substantial complement of new switching equipment would obviously qualify for new equipment discounts, and would be idiotic not to demand such discounts.

Nor will VNJ pay such inflated prices in the long run. In the long run, all existing investment wears out and must be replaced. Bell Atlantic, when it reaches that point, will be in precisely the position faced by a new entrant: buying new switching equipment and therefore eligible for new equipment discounts.

VNJ's argument thus reduces to the absurd syllogism that, because the *short run* incremental unit costs of its add-on switch purchases in the next few years are likely to be high, the Board should pretend that the *long run* incremental costs of its *baseload* switching capacity are also high. The flaws in this argument are obvious. First, the relevant cost standard specified by the FCC (and purportedly embraced by VNJ) is *long run* incremental cost, not some bastardized variant of short run cost. Second, if the relevant standard were short run costs, the short run incremental costs of VNJ's baseload switching capacity are likely to be very low, because VNJ's switches have already been purchased and paid for, and much of VNJ's investment in those switches is sunk.[3]

Q. WHAT IS THE CORRECT WAY TO LOOK AT THE SWITCH DISCOUNT ISSUE?

A. The right way is to look at it not from the short run perspective of the incumbent sitting on the all digital switch network, but rather from the perspective of the truly new entrant (which is essentially the same as the perspective of the incumbent over the long run). The view of the new entrant is that of a scorched-node network where all that exists is the location of the existing wire centers. From this point, the entrant computes the *total element long run incremental cost* of serving all of the existing and anticipated demand. For switch investment, this means acquire all new switches today to serve today's demand. Arguably, as demand increases out into the future, some growth related acquisition will occur. However, the vast majority of forward-looking switch purchases will qualify for the replacement switch discount.

[3] And because those switches currently have plenty of spare capacity.

Q. WHAT DISCOUNT LEVEL SHOULD BE USED?

A. Although as I mentioned previously the vast majority of the forward-looking switch purchases would qualify for the replacement switch discount, I have calculated the mix of replacement discount to growth discount over the 17 year projected life of a switch. Using a 3 percent annual line growth rate and assuming that the initial switch purchase will have sufficient capacity to accommodate 18 months of growth, I conservatively calculate that the switch discount should be weighted 79.4% replacement and 20.6% growth.[4]

Q. WHY IS IT INCORRECT TO ADD TO THE SWITCH MINUTE OF USE COST A PER MINUTE OF USE COST FOR VERTICAL FEATURES?

A. It is inappropriate to simply add the per minute of use cost for vertical features to switch usage costs because most of the costs of vertical features are already included in the port cost. Consistent with the New York Commission's conclusion that the basic port charge already includes all features and functionalities of the switch, except for those applications requiring *specialized* hardware, it would be a double count to again add feature cost to switch usage.

Q. CONSISTENT WITH THE NEW YORK PSC'S CONCLUSION, WERE YOU ABLE TO IDENTIFY THOSE APPLICATIONS REQUIRING SPECIALIZED HARDWARE AND INCLUDE THOSE COSTS?

A. Yes. The VNJ cost study electronic workpapers include a breakdown of the cost components for vertical features. Using those workpapers, I was able to isolate the added hardware and software investment required for vertical features. I added those costs to the switch usage costs.

[4] In is important to note that the 79.4% weighting for replacement would be even more if an average switch life of less than 17 years is used.

Q. ARE THE COST OF CAPITAL, ASSET LIVES AND NET SALVAGE VALUES USED BY VNJ TO DEVELOP SWITCH USAGE AND PORT COSTS FORWARD-LOOKING?

A. No. VNJ uses a 12.6% cost of capital and GAAP asset lives in its development of switch usage and port costs. As explained above and in the separate rebuttal testimony of John Hirshleifer, these costs are inappropriate for a forward looking cost study.

Q. HAVE YOU RESTATED THE VNJ SWITCH USAGE AND PORT COSTS?

A. Yes. I restated VNJ's switch usage and port costs making the following changes:

- I changed the switch discount weighting from 100% growth to a mix of 79.4% replacement and 20.6% growth.
- I corrected VNJ's inappropriate addition of vertical features cost to switch usage costs.
- I used a 9.47% forward-looking cost of capital and New Jersey BPU asset lives and net salvage values.

The results of my restatement are set forth in Table 2:

Table 2
Summary of Switch Cost Restatement

UNE	VNJ Updated	VNJ Updated Restated
Switch Usage – Originating	$0.010059	$0.002378
Switch Usage – Terminating	$0.008553	$0.002035
POTS Port	$2.79	$0.93

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

In the
UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Competitive Telecommunications Association, Inc.,	)	
Petitioner,	)	
v.	)	No. 00-1272
Federal Communications Commission and the United States of America,	)	
Respondents.	)	

MOTION FOR LEAVE TO INTERVENE OUT OF TIME

Sprint Corporation ("Sprint") respectfully moves for leave to intervene in this review proceeding out of time, pursuant to Section 402 of the Communications Act of 1934, as amended (47 U.S.C. § 402(e)), 28 U.S.C. § 2348, and Rule 15(d) of the Federal Rules of Appellate Procedure. Sprint wishes to intervene in support of the Petitioner in this case.

The Petitioner seeks review of the Federal Communications Commission's Supplemental Order Clarification, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, FCC 00-183 (released June 2, 2000) (summarized at 65 Fed. Reg. 38,214, June 20, 2000).

Sprint is one of the country's leading telecommunications companies, providing local, long distance, wireless, and advanced telecommunications services. Its business includes both incumbent local and competitive local exchange services. Sprint actively

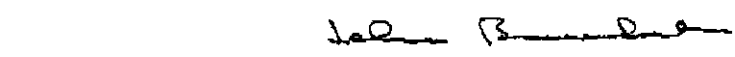
participated in the agency proceeding below, and its interests will be substantially affected by any affirmation, modification, or reversal of the order that has been brought before the Court. Sprint was entitled to intervene as a matter of right under 28 U.S.C. Section 2348 and 47 U.S.C. 402(e).

Sprint acknowledges that the deadline for intervention as a matter of right is long past. Nevertheless, Sprint's participation in this case will not delay the briefing schedule nor prejudice or inconvenience any other party. Sprint does not ask to file a separate brief, but seeks only to lend its support to the Petitioner and the opportunity to join the brief the intervenors supporting the Petitioner. Counsel for the Respondent FCC, counsel for the Petitioner, and lead counsel for the Intervenors in Support of the Petitioner have advised Sprint that they would have no objection to this motion for leave to intervene out of time.

WHEREFORE, Sprint respectfully requests that this Court grant it leave to intervene in this case.

Respectfully submitted,

SPRINT CORPORATION



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Dated: January 11, 2002

In the
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Competitive Telecommunications Association, Inc.,	)	
Petitioner,	)	
v.	)	No. 00-1272
Federal Communications Commission and the United States of America,	)	
Respondents.	)	

CORPORATE DISCLOSURE STATEMENT

Sprint Corporation ("Sprint") submits this disclosure of interests, pursuant to the Court's Circuit Rule 26.1 and Rule 26.1 of the Federal Rules of Appellate Procedure.

Sprint is a holding company organized for the purpose of engaging in telecommunications and related businesses through its subsidiaries. It is publicly traded under the names of Sprint FON and Sprint PCS. No person or corporate entity owns more than 10 percent of Sprint.

Respectfully submitted,

SPRINT CORPORATION

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Dated: January 11, 2002

IN THE
UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Competitive Telecommunications Association, Inc.,	)	
Petitioner,	)	
v.	)	Case No. 00-1272
Federal Communications Commission and the United States of America,	)	
Respondents.	)	

CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of January, 2002 a copy of the foregoing Motion for Leave to Intervene Out of Time and Corporate Disclosure Statement was served by U.S. mail, first class, postage prepaid upon the parties listed below.

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