AUSLEY & MCMULLEN

ATTORNEYS AND COUNSELORS AT LAW

227 SOUTH CALHOUN STREET
P.O. BOX 391 (ZIP 32302)
TALLAHASSEE, FLORIDA 32301
(850) 224-9115 FAX (850) 222-7560

December 13, 2000

BY HAND DELIVERY

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Docket No. 000761-TP

Dear Ms. Bayo:

Enclosed for filing in the above docket are the original and fifteen (15) copies of Sprint PCS' Rebuttal Testimony of Bridger M. Mitchell, Michael R. Hunsucker, Randy G. Farrar, and Anthony Sabatino.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning the same to this writer.

Thank you for your assistance in this matter.

Yours truly,

John P. Fons

Enclosures

cc: All parties of record

h:\data\jpf\s-pcs\000761 byo.doc

APP
CAF
CMP
COM 3
CTR
ECR
LEG 2
OPC
PAI
RGO
SEC 1
SER
OTH

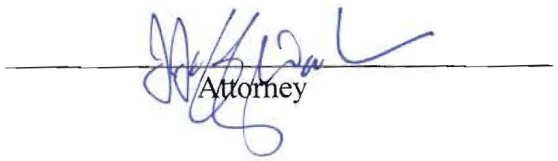
CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing has been furnished by U.S. Mail, hand delivery(*), or overnight delivery (**) this 13th day of December, 2000, to the following:

Nancy White, Esq. *
Michael Goggin, Esq.
c/o Nancy Sims
BellSouth Telecommunications, Inc.
150 S. Monroe St., Suite 400
Tallahassee, FL 32301

Diana Caldwell, Esq. *
Felicia Banks, Esq.
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Lisa S. Foshee, Esq. **
BellSouth Telecommunications, Inc.
675 W. Peachtree St., Suite 4300
Atlanta, GA 30375



Attorney

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REBUTTAL TESTIMONY

OF

BRIDGER M. MITCHELL

I. Introduction

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

A. My name is Bridger M. Mitchell. I am a vice president of Charles River Associates Incorporated, an economics, finance and business consulting firm with offices in Boston, Massachusetts and several cities in the U.S. and other countries. I am the director of the Palo Alto office, which is located at 285 Hamilton Avenue, Palo Alto, California.

Q. Did you previously file Direct Testimony in this proceeding?

A. Yes.

Q. What is the purpose of your rebuttal testimony?

A. My testimony rebuts portions of the Direct Testimony of a panel of witnesses, consisting of Jamshed K. Madan, Michael D. Dirmeier, and David C. Newton (the Panel), filed on behalf of BellSouth Telecommunications, Inc.

November 15, 2000. I begin with a brief review of the FCC's forward-looking economic cost standard for determining the additional cost of transport and termination service as detailed in the FCC's TELRIC methodology. I then discuss two related topics, first the treatment of fixed costs by the Panel, and, second, their efforts to use concepts of "coverage" and "build out" to determine the additional cost of transport and termination service.

II. TELRIC Pricing Principles

Q. The Panel, at page 6, lines 5-7, states that "the results presented by Sprint PCS in this case cannot possibly be in accord with the FCC's TELRIC pricing rules, as alleged by Sprint PCS' witnesses". Do you agree with this assertion?

A. No, I do not. The FCC has provided carriers and state commissions with a pricing methodology to be followed in calculating the total element long run incremental cost of network elements and transport and termination service. The Sprint PCS cost model applies that methodology to a wireless network.

Q. Can you briefly summarize the FCC's TELRIC pricing rules for an incumbent local exchange carrier (ILEC)?

A. Yes. The standard established by the FCC for determining the additional cost of transport and termination service is forward-looking economic cost. The FCC established a pricing methodology based on forward-looking economic cost when it laid out the principles for calculating total element long-run incremental cost (TELRIC) and instructed the state commissions to "give full and fair effect to the economic costing methodology we set forth in this Order." Local Competition Order, 11 FCC Rcd 15499, 16024-25, at 619 (1996). Henceforth, Local Competition Order.

For an incumbent local exchange carrier, the TELRIC pricing methodology first estimates the costs of constructing a new local network with wire centers placed at the ILEC's current wire center locations. All inputs are assumed to be variable. The new network is assumed to use the most efficient technology that is currently deployed in the networks of incumbent local carriers and capacity is sized to meet reasonably foreseeable capacity demands. The investment in each network facility is then converted to a monthly capital cost using a forward-looking cost of capital and depreciation schedules based on the facility's economic life. Ongoing costs of operating and maintaining the facility are added to the capital cost to obtain the forward looking cost of the

facility. Finally, a reasonable proportion of the forward-looking common costs of the network are added to the calculated cost of the facility. (47 C.F.R. § 51.505).

The cost of a network element is obtained by identifying the network facilities used by the element, and attributing to that element an appropriate share of the costs of these facilities. The element cost is then expressed on a per-unit basis by dividing the cost by the entire total volume of the service, including both the amounts of the service sold to competitors and the amount that is self-supplied.

Q. Has the FCC distinguished between traffic-sensitive and non-traffic sensitive costs in establishing pricing rules for recovering the additional cost of transport and termination?

A. Yes. As I stated in my direct testimony, the FCC has determined that ILECs generally use two network elements in terminating a call: the end-office switch and local loop. The FCC has further determined that consistent with its definition of "additional costs," ILECs may recover in reciprocal compensation only the traffic sensitive portion of these network elements —specifically, the traffic-sensitive component of local switching. The FCC stated:

> "We find that, once a call has been delivered to the incumbent LEC end office serving the called party, the 'additional cost' to the LEC of terminating a call that originates on a competing carrier's network primarily consists of the traffic-sensitive component of local switching … The costs of local loops and line ports associated with local switches do not vary in proportion to the number of calls terminated over these facilities. We conclude that such non-traffic sensitive costs should not be considered 'additional costs' when a LEC terminates a call that originated on the network of a competing carrier."

Local Competition Order, at 1057. Note omitted.

The FCC therefore concluded with regard to ILECs that "[f]or the purposes of setting rates under section 252(d)(2), only that portion of the forward-looking, economic cost of end-office switching that is recovered on a usage-sensitive basis constitutes an 'additional cost' to be recovered through termination charges." Id.

Q. Is the Sprint PCS cost model consistent with these pricing

rules?

A. Yes, the Sprint PCS cost model calculates estimates of forward-looking economic costs according to the TELRIC pricing rules and obtains per-minute rates that recover the traffic-sensitive portion of those costs.

III. Fixed Costs

Q. How does the TELRIC pricing methodology account for fixed costs in a carrier's network?

A. In its Local Competition Order the FCC found that: "In a TELRIC methodology, the 'long run' used shall be a period long enough that *all* costs are treated as variable and avoidable. This 'long run' approach ensures that rates recover not only the operating costs that vary in the short run, but also fixed investment costs that, while not variable in the short term, are necessary inputs directly attributable to providing the element." At 692, emphasis added, note omitted.

In the TELRIC methodology, costs that, in the short run, would ordinarily be considered fixed are treated as variable and are included in calculating long run incremental cost. The FCC could not have said more clearly that costs cannot be excluded from a TELRIC

estimate merely because they are "fixed" in some short-run context.

Q. Is the testimony of the Panel consistent with the FCC's pricing methodology with regard to fixed costs?

A. No. The Panel asserts that wireline loop costs and some costs of a PCS network are fixed and then erroneously claims that, because some costs may be classified as fixed, they should be excluded when calculating the additional cost of terminating a call on a PCS network. This fundamental error permeates their flawed discussion of fixed costs, coverage, and build-out requirements.

Q. Can you describe specific examples where the analysis of the Panel is inconsistent with the treatment of fixed costs in the FCC's TELRIC methodology?

A. At page 13, lines 6-8, the Panel claims that "the reason that wireline carriers were not allowed to collect a reciprocal compensation charge for the use of the local loop was because that cost was determined to be fixed." This claim contradicts the FCC's statement, which I cited above, that investment costs cannot be excluded from a TELRIC estimate simply because they may be fixed in the short run.

Q. But the FCC did exclude loop costs from calculation of a wireline carrier's additional costs of transport and termination. How, then, should the FCC's exclusion of loop costs from reciprocal compensation be understood?

A. First, as I noted earlier, the FCC has stated: "The costs of local loops and line ports associated with local switches do not vary in proportion to the number of calls terminated over these facilities. We conclude that such non-traffic sensitive costs should not be considered 'additional costs' when a LEC terminates a call that originated on the network of a competing carrier." Local Competition Order at 1057, note omitted. Non-traffic sensitive costs -- those costs that "do not vary in proportion to the number of calls" -- are not the same as fixed costs.

Traffic sensitive costs are the long-run costs of those network facilities for which the amount of capacity required in an efficiently configured network varies with the expected volume of traffic, where volume of traffic is generally measured by both the number of calls and the number of minutes of use that occur during the peak hour. The FCC has used this approach in its cost proxy model of a wireline local network, the hybrid cost proxy model (HCPM). In that model, engineering rules use data on the

volume of traffic (calls and minutes of use) to ensure that the new LEC network has adequate capacity to carry the expected traffic load while providing the required quality of service. In the HCPM, traffic volumes can affect investment in several facilities, including a portion of local switching, tandem switching, interoffice transport, and signaling. The costs of these network components are expressed on a per minute basis, since they are traffic sensitive. In contrast, the costs of loops and switch ports are expressed on a per subscriber basis, because they are non-traffic sensitive – not because they are fixed.

Second, the FCC requires "that the charges for dedicated facilities be flat-rated, including, but not limited to, charges for unbundled loops, dedicated transport, interconnection, and collocation. These charges should be assessed for fixed periods, such as a month." Local Competition Order at 744. Since the loop is a dedicated facility whose cost is recovered through flat-rate charges, the inclusion of loop costs in the charge for transport and termination could (and typically would) result in multiple recovery. The FCC has stated that "[a]ny multiple recovery would be unreasonable and thus in violation of the statutory standard." Local Competition

Order at 698.

In sum, the FCC's decision to exclude loop costs from the costs of call termination on an ILEC network is consistent with two fundamental principles: that the loop is non-traffic sensitive in the long run, and that loop costs are to be recovered entirely through flat-rated charges. Multiple recovery of loop costs would occur if loop costs were also included in usage-sensitive termination rates. The explanation offered by the Panel, that the loop is a fixed cost and therefore not an additional cost, is different from both of these justifications and violates clearly stated FCC principles. Consequently, the application of the Panel approach to either a wireline network or to the Sprint PCS network would violate the FCC's TELRIC pricing methodology.

Q. At pages 23-24 the Panel claims to have calculated a measure of the additional costs in the Sprint PCS system over the period 2001-2002. Is this calculation consistent with the FCC's forward-looking economic cost methodology?

A. No, the Panel's calculation is another instance of its failure to properly account for fixed costs in a TELRIC calculation. Using data from the Sprint PCS Model, they have calculated the ratio of the increment in cost between

2001 and 2002 to the increment in demand over the same period. But this calculation is fatally flawed and produces a hodgepodge of wrongly included and excluded costs. First, this cost estimate necessarily excludes the costs of all facilities that are used in both 2001 and 2002 - the costs of facilities that have already been constructed to provide service in 2001 are implicitly treated as fixed costs, and not part of long-run incremental costs. The exclusion of these costs is inconsistent with TELRIC principles. Second, the Panel's estimate of additional costs includes the costs of any non-traffic sensitive facilities that are first installed in 2001. However, non-traffic sensitive costs are not additional costs of transport and termination service.

The defect in the Panel's method can be readily illustrated by applying the Panel's methodology to the BellSouth network in Florida. An estimate of the additional cost of call termination that is consistent with the FCC's pricing rules can be obtained from the default output of a cost proxy model for the Bell South network. The FCC's Hybrid Cost Proxy Model (HCPM), developed to calculate TELRIC for a wireline network, is one such model. This estimate can then be compared to an estimate obtained for the same network with a higher level

of demand representing a year's growth in traffic, and the difference in total cost obtained by the two calculations can then be divided by the corresponding difference in demand to obtain a cost estimate consistent with the Panel's approach. Based on my experience with several cost proxy models, I would expect that the cost estimate based on the Panel's methodology will be significantly different, and likely much lower than the estimate of additional cost reported in the default output of the HCPM.

The FCC was aware that an estimate of incremental cost would depend critically on the size of the increment: "The costs that are considered incremental will vary greatly depending on the size of the increment. For example, the incremental cost of carrying an additional call from a residence that is already connected to the network to its end office is virtually zero." Local Competition Order at 675. For switching costs, the FCC has similarly concluded that: "Fixed costs are the largest portion of the cost of a switch." In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, Third Report and Order, Released: November 5, 1999, at 258. By choosing a small increment in output, the Panel's methodology implicitly

classifies a large proportion of the costs as fixed and excludes it from the calculation of additional cost. However, as the FCC made clear in passages cited above, an exclusion of "fixed" costs is not part of the TELRIC methodology. Indeed, the "Total" in TELRIC refers to the *total* output produced by the LEC, and the use of a smaller increment of output violates a basic TELRIC principle.

IV. Coverage and Build-Out

Q. The Panel says that "coverage" is the basic investment that a carrier must make in order to provide seamless ubiquitous service to its customers in its service areas. Do you agree with the treatment of the costs of "coverage" in that testimony?

A. No, I do not agree with that position. The Panel has invented a concept of "coverage costs" that does not appear to be grounded in FCC rules or opinions and is not consistent with basic principles of TELRIC methodology. At page 12, lines 8-9 of their testimony, the Panel states that "coverage is the basic wireless infrastructure needed to reach the boundaries of the service territory and is the counterpart to wireline subscriber access." The Panel argues that the cost of providing coverage should be excluded from the calculation of additional costs. To do

so would be inconsistent with the FCC's TELRIC pricing methodology, which requires including the costs of the total volume of the element in question, not just the portion of the element that remains once "coverage" is removed.

The error in the Panel's treatment can be clearly seen by applying their argument to wireline subscriber access, the claimed counterpart of wireless coverage. Excluding the costs of coverage in a wireline network would omit from the calculation of additional costs very substantial portions of the costs of switch software, initial switching capacity, land and buildings for central offices, trenches and duct and the first cable in the interoffice network, and the fixed costs of signaling systems. However, all of these items are currently included in the cost of transport and termination calculated by the FCC's hybrid cost proxy model. The calculated additional cost of end office switching (and of most other elements) would be close to zero if the Panel's methodology were adopted, as was suggested by the FCC when it recognized that the cost of terminating a call on an already built out network was minimal.

Cost proxy models of wireline networks, including the

FCC's hybrid cost proxy model, do not, in fact, define the investment required to provide coverage or subscriber access, and do not exclude any costs from the additional costs of call termination on the grounds that they are incurred to provide coverage. In the FCC's methodology the only costs that are excluded from additional costs are the non-traffic sensitive costs associated with dedicated facilities. To exclude "coverage costs" from the additional cost of termination on a wireless network would result in a greater exclusion than is consistent with the FCC's basic TELRIC principles, and therefore in unreasonably low estimates of the additional cost of transport and termination. Just as wireline cost proxy models include the traffic sensitive portions of all switches and transport elements in an ILEC's service territory regardless of "coverage" requirements, the Sprint PCS model includes the traffic sensitive portion of all cell sites, BTSs, BSCs and other network components required in both densely and sparsely populated areas.

Q. At pages 17-18, the Panel states that investments made to satisfy a wireless licensee's "build out requirements" are not additional costs. Do you agree with this position?

A. No, I do not. The Panel states that these costs are not additional costs of termination because they are "initial

fixed cost(s)." I have explained earlier that a distinction between fixed costs and variable costs plays no role in the FCC's long run analysis of additional costs. The conclusion reached by the Panel is therefore inconsistent with the FCC's basic TELRIC principles. Furthermore, ILECs are required to offer service to all subscribers in their service areas, including subscribers for whom the incremental cost of providing service exceeds the revenue generated. This requirement is analogous to (and, in fact, stricter than) the build out requirements placed on Sprint PCS. Yet, when calculating additional costs for wireline LECs, the FCC's HCPM does not exclude the facilities required to serve these subscribers, even if some of these facilities might have very low utilization.

For example, the default output for the HCPM for Bell South shows that for one wire center in Florida, MNSNFLMA, the calculated fill for the distribution plant is only 53%. In wire centers served by other local exchange carriers the calculated fill factor in this model is even lower. Nevertheless, these wire centers are included in the HCPM when transport and termination costs are calculated for the serving local exchange carrier. Similarly, the model does not exclude other facilities,

such as switches serving remote rural areas, merely because the actual fill factors reported by the model for these facilities are low.

The Panel suggests that build out requirements and low fill factors should be used to exclude some network facilities when calculating additional cost. Specifically, at page 11, lines 22-25, they claim that: "For those cell sites with only one or two channels [sic], clearly they have considerably more capacity than is actually needed at present and the cell site itself must have been established to meet coverage requirements." The Panel thus asserts that the actual fill factor for these cell sites, as measured the ratio of by current peak demand to currently available capacity, is low. They offer no evidence that the actual fill at cell sites with one or two carriers is lower than the actual fill achieved in cell sites with three carriers. In any event, the FCC's cost proxy model of a wireline network does not exclude facilities with low actual fill factors and to do so in a wireless network would be inconsistent with the FCC's pricing methodology.

Q. At page 13, lines 6 to 17, the Panel argues that cell sites on the margins of a service area will never be used

to capacity, and are therefore fixed cost facilities that are "exactly like the wireline customer's local loop." They conclude that such cell sites should be eliminated from Sprint's cost study. Do you agree with their analysis?

A. No, I do not agree with that analysis. The FCC has clearly stated that costs are not to be excluded because they are fixed, and coverage or build-out requirements are not relevant cost concepts in the FCC's TELRIC methodology. Furthermore, the local loop is a non-traffic sensitive, dedicated facility, while a cell site's capacity is shared by all mobile customers served by the site and both the equipment in individual cell sites and the number of cell sites are traffic sensitive. The Panel's suggestion that these cell sites be excluded from the calculation of additional costs has no basis in the FCC's TELRIC methodology, which only provides for the exclusion of the costs of dedicated, non-traffic sensitive facilities when calculating the additional cost of transport and termination services.

Q. Does this conclude your testimony?

A. Yes.