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September 25, 2003

Ms. Blanca S. Bayo, Director
Division of Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: ~~Docket No. 981834-TP~~
Petition of Competitive Carriers for Commission Action to Support Local Competition in BellSouth Telecommunications Inc.'s Service Territory

Docket No. 990321-TP
Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for generic investigation to ensure that BellSouth Telecommunications, Inc., Sprint-Florida, Incorporated, and GTE Florida Incorporated comply with obligation to provide alternative local exchange carriers with flexible, timely, and cost-efficient physical collocation

Dear Ms. Bayo:

Please find enclosed for filing an original and 15 copies of the Surrebuttal Testimonies of Allen E. Sovereign, James H. Vander Weide and Charles Bailey/Barbara K. Ellis on behalf of Verizon Florida Inc. in the above matters. Service has been made as indicated on the Certificate of Service. If there are any questions regarding this filing, please contact me at 813-483-1256.

Sincerely,

Richard A. Chapkis

RAC:tas
Enclosures

DNs 09254-03 SOVEREIGN
09255-03 WEIDE
09256-03 BAILEY/ELLIS

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that copies of the Surrebuttal Testimonies of Allen E. Sovereign, James H. Vander Weide and Charles Bailey/Barbara K. Ellis on behalf of Verizon Florida Inc. in Docket Nos. 981834-TP/990321-TP were sent via electronic mail and U.S. mail on September 25, 2003 to the parties on the attached list.

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BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Competitive Carriers for Commission action to support local Competition in BellSouth Telecommunications Inc.'s service territory	Docket No. 981834-TP
In re: Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for generic investigation to ensure that BellSouth Telecommunications, Inc., Sprint-Florida, Incorporated, and GTE Florida Incorporated comply with obligation to provide alternative local exchange carriers with flexible, timely, and cost-efficient physical collocation.	Docket No. 990321-TP

SURREBUTTAL TESTIMONY OF

CHARLES BAILEY AND BARBARA K. ELLIS

ON BEHALF OF

VERIZON FLORIDA INC.

SEPTEMBER 25, 2003

SURREBUTTAL TESTIMONY OF CHARLES BAILEY
AND BARBARA K. ELLIS

I. INTRODUCTION

Q. MR. BAILEY, PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Charles Bailey. My business address is 600 Hidden Ridge, Irving, Texas 75038.

Q. DID YOU FILE DIRECT TESTIMONY IN THIS DOCKET?

A. Yes, I filed Direct Testimony on behalf of Verizon Florida Inc. ("Verizon FL" or the "Company") on August 5, 2003. I described my education and work experience in that testimony.

Q. MS. ELLIS, PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Barbara K. Ellis. My business address is 600 Hidden Ridge, Irving, Texas 75038.

Q. DID YOU FILE DIRECT TESTIMONY IN THIS DOCKET?

A. Yes. I filed Direct Testimony on behalf of Verizon Florida Inc. ("Verizon FL" or the "Company") on February 18, 2003. I described my education and work experience in that testimony.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. Our surrebuttal testimony responds to the Rebuttal Testimony of Rowland L. Curry and David J. Gabel on behalf of the Staff of the Florida Public Service Commission ("Staff"), and Steven E. Turner on behalf of AT&T Communications of the Southern States, LLC ("AT&T").

Q. HOW IS THIS TESTIMONY ORGANIZED?

A. First, we address the flawed premise that underlies Mr. Turner's entire testimony as it relates to Verizon FL — that it would be permissible and appropriate to ignore Verizon FL's business practices and unique collocation costs and instead force Verizon FL to adopt BellSouth's inputs and collocation provisioning, accounting, and cost recovery methods.

Second, we refute the primary theme of Dr. Gabel's testimony — that the lowest rate proposed by any ILEC for a particular cost or service should be imposed on all the ILECs, regardless of whether that rate element reflects similar practices or costs.

Third, we correct a misstatement by AT&T witness King at the August hearing: that monthly recurring charges used to recover infrastructure costs should cease at some point because the ALEC eventually would have "paid in full" for the infrastructure.

Fourth, we discuss why it would be improper to set rates in this proceeding on the basis of cost estimates from R.S. Means or similar

sources when Verizon FL has submitted company- and collocation-specific data.

Finally, we address the remaining ALEC and Staff criticisms of Verizon FL's cost study and respond to Dr. Gabel's erroneous assertion that even unchallenged ILEC-proposed costs could properly be reduced by the Commission.

Q. ARE YOU SUBMITTING AN UPDATED COST STUDY TO ACCOMPANY THIS TESTIMONY?

A. Yes. In the many months since Verizon FL initially filed its collocation cost study, Verizon FL has corrected or updated its cost study — and thus the rates it is proposing in this proceeding — in a number of respects. For example, Verizon FL produced an updated DC power cost study in response to Staff Interrogatory 229, corrected and updated its cost of capital proposal as explained in Dr. Vander Weide's Surrebuttal Testimony, and removed the cable vault space rate elements associated with caged, cageless, and virtual collocation in response to Staff Interrogatory 44(d). All of these changes are incorporated in Verizon FL Exhibit BKE-1 to this testimony.

II. THE COMMISSION SHOULD NOT FORCE BELLSOUTH'S COLLOCATION PRACTICES, COSTS, AND RATE STRUCTURE ON VERIZON FL.

A. Summary

Q. PLEASE DESCRIBE THE FULL EXTENT OF AT&T'S "UNIFIED COST MODEL" PROPOSAL, AS YOU UNDERSTAND IT.

A. Based on Mr. Turner's prefiled Rebuttal Testimony, Mr. King's live testimony at the August hearing, and AT&T's responses to Verizon FL's data requests, it is clear that AT&T's proposal is actually *much* more far reaching than just using the "BellSouth Cost Calculator" to derive Verizon FL's and Sprint's collocation rates. What AT&T is truly proposing is for the Commission to force Verizon's and Sprint's Florida operations to become carbon copies of BellSouth's.

Importantly, the "BellSouth Cost Calculator" is not a "model" the way AT&T would have the Commission believe, with algorithms and other generic assumptions designed to produce appropriate rates for any given set of inputs. Rather, it is a series of spreadsheets that use BellSouth-specific inputs to produce BellSouth-specific costs. Thus, AT&T's claim that the Commission should adopt one "unified model" and then make it ILEC-specific is misleading; AT&T is really asking the Commission to *ignore* what Verizon FL has filed and simply impose on it BellSouth's proposed costs (as modified by AT&T, of course). Indeed, AT&T admitted in its response to Verizon FL Interrogatory 25 that, except for cost of capital and the common cost factor, AT&T used *all* of

BellSouth's inputs (as reduced by Mr. Turner) as the basis for developing its schedule of recommended "Verizon FL-specific" rates. While it certainly may have been easier for AT&T to focus on only BellSouth's study and ignore Verizon FL's, the Commission must consider Verizon FL's study on the merits and set rates based on Verizon FL's costs.

Q. PLEASE SUMMARIZE THE PROBLEMS ASSOCIATED WITH STANDARDIZING ILEC "MODELS."

A. Imposing BellSouth's costs, provisioning methods, and rate structure on Verizon FL would (1) undermine the development of accurate, company- and state-specific UNE prices; (2) impose the unreasonable burden of developing and supporting a Florida-only cost model on ILECs like Verizon that provide service in multiple states; (3) *de*-standardize Florida from the rest of Verizon's footprint, which is contrary to what the ALECs have been arguing for in numerous other forums; (4) deny ILECs the flexibility they require to take advantage of advances in cost modeling and to respond to regulatory and technical change; and (5) likely not survive judicial review.[1] Verizon FL previously pointed out many of these problems in comments filed in the Standardization Workshop. *See* Verizon FL Exhibits BKE-8 and BKE-9.

Most importantly, even if the Commission could figure out a way to standardize ILEC provisioning methods, costs and rate structures, which as we discuss below is unlikely, the transition costs associated with this

approach would be significant. Indeed, the changes that would be required to Verizon FL's billing systems alone could cost over $1 million and, as discussed further below, would result in no real benefits. AT&T fails to address these costs in its proposals.

In short, no state has ever "standardized" ILEC cost models,[2] and Florida should not do so in this proceeding. As Commissioner Deason has recognized in considering the "standardization" of UNE cost models, carriers have "certain systems that are consistent . . . with the overall way they have their computer systems, information systems, and other [systems] set up . . . [and] to impose a particular model on them would be burdensome and costly."[3]

B. BellSouth Has Unique Provisioning Practices and Accounting and Billing Systems.

Q. HOW FAMILIAR ARE YOU WITH BELLSOUTH'S COLLOCATION PROVISIONING, ACCOUNTING, AND COST RECOVERY METHODS?

A. I have spent at least 50 hours studying BellSouth's collocation cost study, tariff, and testimony. I also have had two phone calls with BellSouth witness Bernard Shell of a combined duration of four or five hours, during which Mr. Shell was kind enough to answer the questions I still had following my extensive study of BellSouth's collocation practices.

Q. PLEASE SUMMARIZE THE REASONS WHY THE COMMISSION CANNOT SIMPLY IMPOSE THE BELLSOUTH "MODEL" ON VERIZON FL.

A. The Commission may not impose the BellSouth "model" on Verizon FL for at least six reasons.

First, BellSouth maintains its own accounting and cost input data, which underlie its cost study. Verizon FL does not have access to the BellSouth data, and does not maintain its own functionally equivalent data in the same formats. Rather, Verizon FL uses Verizon's standard databases to track its accounts and costs. Creating entirely new databases just for Florida so that Verizon could match its costs up to the BellSouth model obviously would be costly and inefficient.

Second, the manner in which BellSouth recovers its costs between UNEs and collocation is inconsistent with the manner in which Verizon FL recovers similar costs. Forcing Verizon FL to mirror BellSouth on the collocation side would therefore mean that Verizon FL would double-recover some costs, while not recovering others at all.

Third, even for those costs that both companies recover from collocation rate elements, Verizon FL bills for the facilities and services it provides differently than does BellSouth. And because BellSouth's charges are tracked and billed by specific BellSouth accounting and billing systems, aligning its rate structure with BellSouth's would require Verizon FL to

modify its provisioning, accounting, and billing systems to mirror BellSouth's as well. As we explain in further detail below, this would be extremely disruptive and expensive, and would produce no net benefit to the ALECs.

Fourth, the companies physically provision collocation differently, and the different activities lead to different costs, which are then often properly recovered in different rate elements.

Fifth, BellSouth offers ALECs certain facilities and services that Verizon FL does not. Requiring Verizon FL to implement these same services on BellSouth's terms would require significant and costly billing system changes, as well as changes to Verizon FL's operations.

Finally, Verizon FL provides ALECs with a number of facilities and services that BellSouth simply does not offer. Adopting AT&T's radical proposal thus would force Verizon FL to withdraw these services and change its tariffs and interconnection agreements — a result that many ALECs may oppose.

Q. PLEASE PROVIDE AN EXAMPLE OF A BELLSOUTH DATABASE THAT VERIZON FL DOES NOT HAVE.

A. The BellSouth Region Telephone Plant Indices ("TPIs"), which are used by BellSouth to estimate changes in materials prices and installed investments, were developed by BellSouth consultants specifically for

BellSouth. This BellSouth-specific cost information is used in a complex econometric model to provide the cost data required to develop appropriate collocation rates. Verizon FL's cost model, on the other hand, uses materials cost data from Verizon's own proprietary inventory tracking system, the GTE Advanced Materials System ("GTEAMS").

Thus, in this example, to conform to BellSouth's methodology, Verizon FL would have to significantly modify its existing data and databases, eliminating efficiencies and raising costs, which would have to be borne by the ALECs.

Q. ARE THERE EXAMPLES OF MORE GENERAL COLLOCATION COST DRIVERS THAT ARE DEVELOPED AND TRACKED DIFFERENTLY BY BELLSOUTH AND VERIZON?

A. Yes, there are several. First, Verizon does not maintain the type of detailed utilization data that BellSouth uses to adjust materials prices. Nor does Verizon weight materials prices based on the frequency of purchase from different vendors at different prices. Second, BellSouth relies on many different investment loadings (i.e., in-plant loadings) and factors that Verizon does not develop specifically for collocation activities. Instead, Verizon FL's EIS Cost Study generally develops discrete installation costs rather than using loadings and factors to develop installed costs.

Thus, as a practical matter, Verizon FL could not produce reports

equivalent to those BellSouth uses to determine its costs without a complete overhaul of certain Verizon accounting and cost input databases. And, of course, the modified systems would be useful only for Florida, because Verizon would have to maintain its current systems to service the rest of its footprint.

Q. PLEASE EXPLAIN WHY BELLSOUTH'S AND VERIZON FL'S DIFFERENT ASSIGNMENTS OF COSTS BETWEEN UNES AND COLLOCATION MAKE IT IMPOSSIBLE TO ADOPT AT&T'S "UNIFIED MODEL" PROPOSAL?

A. BellSouth has designed its collocation rate structure and elements to complement its own UNE and non-recurring cost models, so that BellSouth can avoid double-counting costs and ensure consistent methodology between models. Verizon FL likewise has developed its own collocation rate structure and elements so that they complement *Verizon FL's* UNE and NRC models, the rates for which already have been set in other proceedings. Thus, each ILEC recovers different costs in its collocation rate elements and UNE rate elements. For example, BellSouth includes in its collocation model all of the costs it incurs in taking and provisioning cross-connect orders, whereas Verizon FL includes such costs in its wholesale NRC model.

In light of these differences, forcing Verizon FL to abandon its own collocation model and rate elements and adopt the BellSouth model and elements would result in several internal inconsistencies among Verizon

FL's cost models and could cause Verizon FL to double-count certain costs, such as those associated with cross-connect orders, while not counting others at all. It would be extremely difficult for Verizon FL (and the Commission) to analyze and reconcile these differences, and likely would require the Commission to re-examine Verizon FL's existing UNE rates.

Q. ARE THERE OTHER PROBLEMS WITH IMPOSING BELLSOUTH'S RATE STRUCTURE ON VERIZON FL?

A. Yes. Verizon FL and BellSouth each have several collocation rate elements for which the other has no equivalent rate element, but rather recovers similar costs in various other elements. For example, while Verizon FL identifies overhead superstructure (i.e., cable racking) costs as a distinct rate element, BellSouth includes cable racking costs within its Common System Modifications rate elements H.1.42 (Cageless) and H.1.43 (Caged), which also contain additional costs such as HVAC and electrical costs.

In addition, a number of the collocation costs that Verizon FL recovers through non-recurring charges are recovered by BellSouth through monthly recurring charges. For example, Verizon FL recovers cage enclosure costs through NRCs while BellSouth recovers the same costs through MRCs.

In some cases, *both* of these scenarios are present. For example,

Verizon FL's overhead superstructure costs are recovered through an NRC, while BellSouth's H.1.42 and H.1.43 rate elements (which include equivalent cable racking costs) are recovered through MRCs.

Finally, while Verizon FL maintains only one rate for a number of NRCs, the BellSouth model appears to include "initial" and "subsequent" rates for many similar NRCs, and "first" and "additional" rates for others.

Thus, requiring Verizon FL to modify its current billing system to account for a significantly different rate structure would be difficult and costly.

Q. ARE THERE OTHER REASONS WHY VERIZON FL CANNOT SIMPLY TRANSITION TO THE BELLSOUTH RATE STRUCTURE?

A. Yes. Forcing Verizon FL to adopt the BellSouth rate structure would result in significant practical difficulties, especially in those cases where Verizon FL currently recovers through NRCs costs that BellSouth recovers through MRCs. The mapping and conversion necessary to transition to BellSouth's rate structure would require much more than simply eliminating MRCs for those elements for which Verizon FL already has charged the ALEC in question an NRC, because the BellSouth MRC may not recover precisely the same costs. For example, Verizon FL's cage enclosure and overhead superstructure rate elements do not line up neatly with BellSouth's. In those situations, simply eliminating the MRC without making any other adjustments obviously would result in either the over-charging of the ALEC or the

underrecovery of Verizon FL's costs.

Similarly, creating the software or manual procedures necessary to transform what once was an NRC into an MRC would be a logistical nightmare. And, of course, Verizon FL (and the ALECs) would expend considerable resources to track these differences through their significantly modified billing systems.

In short, designing an entirely new billing system is an extremely time-consuming and costly process. *Transitioning* from one billing system to another is exponentially more difficult and expensive. To force Verizon FL (and, ultimately, its customers) to bear this expense in order to *de-*standardize Florida from the footprint-wide Verizon billing systems simply makes no sense.

Q. WHAT ARE SOME EXAMPLES OF HOW VERIZON FL AND BELLSOUTH PROVISION COLLOCATION DIFFERENTLY?

A. One clear example is the way in which the two companies build cage enclosures. First, Verizon FL builds each cage to order, while BellSouth often builds a number of additional cages (to meet anticipated future demand) at the same time it builds the first one for the central office. This difference in provisioning accounts, in part, for the basic rate structure discrepancies between the two companies.

Second, Verizon FL offers ALECs more cage size options than does

BellSouth, which builds cages only in the 100 square foot size and 50 square foot larger increments.

Third, Verizon FL leaves some collocation decisions to individual ALECs that BellSouth makes for itself. For example, Verizon FL lets the ALECs set their own fuse sizes, up to a maximum of 2.5 times their ordered load, while BellSouth determines the fuse sizes for ALEC power feeds based on a mathematical formula. This difference explains why BellSouth's DC Power rate is applied on a per fused amp basis, while Verizon FL's rate is applied on a per load amp ordered basis.

Fourth, Verizon FL expects ALECs to keep track of their own collocation cable records and thus does not maintain such records with the degree of precision that BellSouth does. As a result, Verizon FL cannot provide the same cable record service to the ALECs that BellSouth offers. Indeed, it would be a tremendous undertaking for Verizon FL to gather and maintain the information necessary to provide the same type of collocation cable records as BellSouth, which already has in place the systems containing historical data.

Q. WHAT ARE SOME OTHER FACILITIES AND SERVICES OFFERED IN BELLSOUTH'S TARIFF THAT VERIZON FL DOES NOT OFFER ON A TARIFFED BASIS?

A. BellSouth's tariff includes charges for copper entrance facilities and AC standby power, among others. Because Verizon FL does not offer

these services,[4] it cannot comment on whether BellSouth's costs are appropriate for Verizon FL.

In any event, if the Commission ultimately orders Verizon FL to make these services available, they should be made available on a Bona Fide Request ("BFR") basis. Verizon FL should not be bound by BellSouth's rates, terms and conditions, because, among other things, Verizon FL may have to provision the services differently from BellSouth and may have to make certain changes to its operations and/or billing systems that BellSouth was not required to make to provide the services.

Finally, AT&T's claim that the Commission should adopt BellSouth's "model" because Verizon FL studies lack of certain rate elements, *see* Turner Rebuttal at 11, is wholly without merit. In fact, as AT&T admitted in response to Staff Interrogatories 76-78, AT&T has ordered only *nine* collocation elements from BellSouth in Florida, *none* of which is an element Verizon FL is allegedly "missing." Furthermore, not one of the nine collocation elements AT&T has purchased from BellSouth was ordered from BellSouth's Florida collocation tariff — all were either ordered from BellSouth's federal tariff or negotiated on an individual basis.

Q. PLEASE PROVIDE AN EXAMPLE OF FACILITIES AND SERVICES PROVIDED BY VERIZON FL THAT BELLSOUTH DOES NOT OFFER.

A. There are a number of facilities and services that Verizon FL provides to

ALECs that BellSouth simply does not. For example, Verizon FL provides cross-connect facilities and offers power cables (the ALECs also have the option to supply their own), and installs and terminates both kinds of cables. BellSouth, on the other hand, requires collocators to provide, install, and terminate their own power cables and cross connects. Verizon FL also offers microwave collocation elements, but BellSouth does not.

If Verizon FL were forced to adopt BellSouth's cost model and rate elements, then Verizon FL would have to eliminate these facilities from its collocation offering. It makes no sense to de-standardize Florida from the rest of the Verizon West footprint, and remove options currently available to ALECs, so that AT&T can achieve its dubious goal of "standardizing" BellSouth and Verizon FL.

Q. AT&T HAS ARGUED THAT THE COMMISSION SHOULD ORDER VERIZON FL TO REQUIRE ALECS TO CONTRACT WITH VERIZON FL-CERTIFIED VENDORS FOR THE ENGINEERING, FURNISHING, AND INSTALLATION OF CROSS-CONNECT AND POWER CABLES FOR COLLOCATION ARRANGEMENTS. DO YOU AGREE?

A. No. Verizon FL is ultimately responsible for its central offices, and it should be allowed to maintain direct responsibility for any work that could put at risk the safety of workers or reliability of the network outside the walls of an ALEC's cage.

Q. HOW COULD THIS CHANGE NEGATIVELY IMPACT THE NETWORK?

A. In essence, accountability would be diffused, leaving the network vulnerable. Consider the recent blackout across the Midwest and Northeast owing to neglect of the electric grid, which everybody owned so nobody owned. Specifically, ALECs might seek to negotiate with Verizon FL-certified vendors for reduced rates in exchange for less quality control. And there no longer would be one party clearly responsible for reacting to service outages or other damage caused by vendors.

Q. ARE THERE FCC REPORTING REQUIREMENTS ASSOCIATED WITH SERVICE OUTAGES?

A. Yes. When Verizon FL or one of its certified vendors causes a service outage, it is Verizon FL (and not the vendor or any ALEC) that explains what happened to the FCC and this Commission. This requirement could become unfair and onerous if the number of FCC reportable outages were to increase significantly due to vendor activity on behalf of ALECs.

Q. ARE THERE SPECIAL CONSIDERATIONS WITH RESPECT TO THE *ENGINEERING* OF CABLES THAT THIS COMMISSION SHOULD CONSIDER?

A. Yes. Allowing ALECs to engineer their own power and cross-connect cables would be inconsistent with the FCC's collocation rules because it

would allow the ALECs to determine the assignment of cable rack space and termination locations throughout Verizon FL's central offices, potentially affecting Verizon FL's and other ALECs' operations. The FCC has made clear that "each incumbent should maintain ultimate responsibility for assigning collocation space within its premises."[5] In this context, "space" should not be construed as merely floor space, but should include cable rack and relay rack space as well.[6] Engineering ALEC cables is thus properly the responsibility of Verizon FL.

Q. WOULD VERIZON FL HAVE CONFIGURED ITS OFFICES DIFFERENTLY IF ALECS COULD ENGINEER, FURNISH, AND INSTALL THEIR OWN CROSS-CONNECT AND POWER CABLES?

A. Yes. Verizon FL has configured its central offices with the understanding that it would have direct responsibility for any cabling that could have system-wide impacts. For example, Verizon FL uses individual BDFBs to distribute power to both ALECs' equipment and its own — a practice it would not have adopted if it did not have such direct responsibility. Instead, Verizon FL would have placed ALEC-dedicated BDFBs to segregate their power from Verizon FL's own and thus protect Verizon FL's end users. Likewise, because Verizon FL has direct control over power cable provisioning, Verizon FL has mixed ALEC and Verizon FL power feeds on its power distribution boards, rather than dedicating certain panels to ALEC use.

Q. IF ALECS ARE ALLOWED TO ENGINEER AND INSTALL THEIR

OWN CABLES, WHAT RULES SHOULD APPLY TO THIS PRACTICE?

A. If the Commission were to order Verizon FL to allow ALECs to use Verizon FL-certified vendors to engineer, furnish, and install the cables for their collocation arrangements, it must at the very least impose the following guidelines to protect Verizon FL's network:

- Only vendors certified (or "approved") by Verizon to perform work outside of ALEC cages may perform cable EF&I. This is in contrast to vendors that are "authorized" to perform work within ALEC *cages*, but are not "approved" to work on the *network*. Of course, vendors may apply for this additional certification, but they will be held to the same standards to which Verizon holds its own approved vendors.
- Certified vendors hired by ALECs to perform work outside of the ALEC cages must perform the work to the same standards as Verizon insists on for the same kind of work.[7] Specifically, ALECs should not be permitted to negotiate with certified vendors for lower rates in exchange for less quality when those vendors are working on the network.
- Certified vendors hired by ALECs must consult with Verizon FL engineers before performing any work that could impact carriers beyond the contracting ALEC, and the contracting ALEC must reimburse Verizon FL for this consulting and supervision time.
- Certified vendors hired by ALECs to perform work outside of the ALEC cages must install only NEBS-approved equipment and

cable.

- Verizon FL may require the ALEC and the certified vendor hired by the ALEC to be jointly and severally liable for any damage done by the contractor while working for the ALEC.

In addition, Verizon FL's collocation intervals would have to be reconsidered to reflect the fact that Verizon FL would have limited control over the ALEC vendors' work.

Q. RETURNING SPECIFICALLY TO MR. TURNER'S RATE RECOMMENDATIONS, ARE THERE ADDITIONAL REASONS WHY THE COMMISSION SHOULD REJECT MR. TURNER'S "UNIFIED MODEL" PROPOSAL?

A. Yes. Mr. Turner proposes that BellSouth's rates be reduced because of certain alleged problems with BellSouth's costs, and that these reduced rates should then be applied to Verizon FL. For example, Mr. Turner repeatedly claims that certain rates should be reduced because BellSouth failed to provide appropriate cost support. In attacking BellSouth's rates in this manner, Mr. Turner seeks to penalize not just BellSouth, but also Verizon FL and Sprint by imposing his recommended cost reductions on them as well as BellSouth. Even if there were merit to Mr. Turner's attacks on BellSouth's cost support, Verizon FL certainly should not be punished for BellSouth's alleged failure to support its own costs.

Furthermore, as we discuss below, BellSouth apparently has

understated certain collocation costs. Verizon FL's cost support for its own proposed rates should therefore be evaluated on its own merits.

Q. PLEASE ADDRESS MR. TURNER'S CLAIM THAT BELLSOUTH'S RATES SHOULD BE IMPOSED ON VERIZON FL BECAUSE VERIZON FL'S STUDIES ARE "INCOMPLETE." (TURNER REBUTTAL AT 9).

A. To justify his complete lack of diligence in reviewing Verizon FL's studies, Mr. Turner makes the vague claim that Verizon FL's cost development is somehow "incomplete." He is incorrect. Verizon FL filed an extensive cost study with hundreds of pages of back-up support in conjunction with Barbara Ellis's Direct Testimony, and Verizon FL has filed even more back-up data in response to Staff's discovery requests. Mr. Turner does not appear to have made any attempt to understand that study or its inputs, and instead has focused solely on BellSouth's model and inputs. Indeed, AT&T has conducted virtually no discovery on Verizon FL.

Thus, the Commission should not confuse Mr. Turner's failure to evaluate Verizon FL's studies with any alleged lack of completeness of Verizon FL's cost development. Verizon FL's collocation cost studies are complete and well supported, and should be adopted.

Q. PLEASE PROVIDE AN EXAMPLE OF MR. TURNER'S RELIANCE ON BELLSOUTH'S ALLEGED LACK OF SUPPORT FOR ITS COSTS AS

A JUSTIFICATION FOR REDUCING BELLSOUTH'S RATES.

A. As discussed in more detail below, Mr. Turner claims that BellSouth failed to support its DC power study and therefore recommends that the Commission completely reject BellSouth's proposed DC power investment per amp, and instead adopt the costs BellSouth submitted in prior Florida dockets. *See* Turner Rebuttal at 19-27. Astonishingly, Mr. Turner suggests that the Commission also impose those old BellSouth costs on Verizon FL and Sprint. *See id.* Our attorneys have informed us that adopting AT&T's approach would clearly violate due process.

Q. DO YOU AGREE WITH MR. TURNER'S CLAIM THAT BELLSOUTH HAS OVERSTATED ITS POWER COSTS? (TURNER REBUTTAL AT 19-27).

A. No. Mr. Turner claims that BellSouth's examination of augments rather than complete power jobs led to an *over*statement of power costs because of the loss of economies of scale. But, as we discuss below, any alleged economies of scale missing from BellSouth's study clearly do not outweigh the significant generator costs missing from BellSouth's power study.

Q. PLEASE GENERALLY DESCRIBE YOUR UNDERSTANDING OF BELLSOUTH'S POWER STUDY.

A. BellSouth looked at 711 power augment projects across the BellSouth states that were triggered by collocated ALEC power requests from late 1998 until early 2000. Following each request, BellSouth determined

whether it would be necessary to augment the plant to meet current power demands (based on ALEC ordered amps plus the current drain of BellSouth's equipment), as well as anticipated future power demands. If BellSouth determined that the plant's capacity was not sufficient, it augmented the plant to meet anticipated future power demands. In many cases, the power plant already had sufficient capacity to supply current and anticipated future power demands, so no augment was necessary.

Q. WHAT IS THE PURPOSE OF THE EMERGENCY GENERATOR?

A. The primary purpose of the emergency generator is to provide AC power to the batteries and rectifiers in the event of a commercial power outage. A back-up generator is necessary to avoid major interruptions to telecommunications services (provided by ILEC and ALECs alike) during such an outage. An emergency generator thus is a necessary component of every central office power plant.

Q. HOW COSTLY IS PROVIDING EMERGENCY POWER?

A. Extremely costly: the generators themselves are expensive, and their considerable mass makes them very expensive to install as well. In fact, the materials and installation costs of the emergency generator and associated fuel tank typically represent the largest investment in the central office power plant. Installation costs for the generator include such items as exhaust fans, new electrical feeds and control wiring to the Automatic Transfer Switch ("ATS"), as well as the ATS itself.

Q. WHY HAS THE STRUCTURE OF BELLSOUTH'S DC POWER COST STUDY LED IT TO OMIT APPROPRIATE EMERGENCY BACK-UP GENERATOR COSTS?

A. Although emergency generators are required for all central offices, power *augments* almost never require them to be upgraded or replaced. Accordingly, in 710 of the 711 jobs, there appear to be absolutely no materials or installation costs associated with the back-up generator. Many of the jobs required the placement of additional rectifiers and batteries, and a fair number required cabling between the power board and a BDFB, but only one appears to have required upgrading or replacing the generator.

Q. CAN YOU ATTEMPT TO QUANTIFY THE IMPACT OF OVERLOOKING THESE EMERGENCY GENERATOR COSTS ON BELLSOUTH'S INVESTMENT PER AMP FIGURE?

A. Yes. In the revised power study that Verizon FL submitted in conjunction with its Supplemental Response to Staff Interrogatory 229, costs associated with the back-up generator amount to $342 of Verizon FL's $604 investment per load amp, or 131% of the non-emergency generator costs (which total $262). Increasing BellSouth's proposed investment per load amp of $429 by 131% to account for the missing back-up generator materials and installation costs would bring that figure to $991, which is higher than Verizon FL's proposed $604.

Q. PLEASE RESPOND TO MR. TURNER'S CLAIM THAT BELLSOUTH INCLUDED TOO FEW AMPS IN ITS POWER CALCULATION. (TURNER REBUTTAL AT 19-27).

A. Mr. Turner's claim that BellSouth placed too few amps in its investment per amp formula because its denominator was comprised of amps *ordered* rather than amps *built* tells only half the story. While it is true that BellSouth sometimes built more amps than the ALEC ordered, it also is true that BellSouth sometimes built *no* amps in response to ALEC orders. In either case, it was the amps *ordered* that went into BellSouth's denominator. For example, if an ALEC ordered 50 amps and BellSouth decided to build 100 amps, 50 amps went into the cost study denominator; and if an ALEC ordered 50 amps and BellSouth built zero amps, 50 amps went into the cost study denominator.

Thus, contrary to Mr. Turner's claims, BellSouth's methodology understates, not overstates, power costs.

III. AT&T AND STAFF IMPROPERLY COMPARE ILEC RATE ELEMENTS.

Q. HOW DO YOU RESPOND TO MR. TURNER'S AND DR. GABEL'S POSITION THAT THE COMMISSION SHOULD IMPOSE THE LOWEST RATE PROPOSED BY *ANY* OF THE ILECS ON *ALL* OF THE ILECS? (TURNER REBUTTAL AT 15; GABEL REBUTTAL AT 36-37).

A. As an initial matter, TELRIC requires that the Commission adopt collocation rates that reflect each ILEC's unique costs, and that the

Commission must therefore evaluate each ILEC cost proposal on its own merits. Thus, AT&T/Staff's premise — that the Commission should simply pick the lowest rate proposed by any ILEC and assign that rate to all three ILECs — is legally flawed. Verizon FL will further address these legal issues in its post-hearing brief.

In any event, Mr. Turner's and Dr. Gabel's proposal should be rejected for a number of other reasons. First, Mr. Turner and Dr. Gabel ignore the fact that BellSouth's territories are more dense and have larger central offices and more collocation than Verizon West's, thus leading to different collocation practices and different costs. For example, BellSouth may realize economies of scale due to having larger central offices and more collocation arrangements that are simply not available to Verizon FL.

Second, Mr. Turner and Dr. Gabel ignore that it is entirely reasonable for labor and materials costs to vary among ILECs. Thus, their claim that any variation must mean that one or more parties is being inefficient is clearly wrong.

Finally, Mr. Turner and Dr. Gabel incorrectly compare individual ILEC cost elements. But as we make clear below, because the ILECs' provisioning methods, cost measurements, and recovery designs differ significantly, such element-by-element comparison is inappropriate.

Q. PLEASE DESCRIBE HOW DR. GABEL IGNORES DIFFERENT COLLOCATION PRACTICES IN HIS ELEMENT COMPARISON ANALYSES.

A. Dr. Gabel's element comparison is flawed because he improperly analyzes individual cost elements in isolation.

Consider a hypothetical situation in which there are only three central offices — one BellSouth office, one Sprint office, and one Verizon FL office — and only three locations in each central office available for collocation — next to the power plant, next to the main distribution frame, and next to the cable vault. Assume that BellSouth locates the collocation area in its CO next to the power plant, Sprint locates its collocation area next to the MDF, and Verizon FL next to the cable vault. BellSouth's decision as to where to locate its collocation area may lead to *lower* power costs (because less cabling, cable racking, and fewer BDFBs may be required), but to *higher* cross-connect and entrance facility costs due to the longer cables and additional racking necessary to provide those services. Likewise, Sprint would be expected to have relatively *lower* cross-connect costs and Verizon FL to have relatively *lower* entrance facility costs.

Viewed in their full context, it becomes clear that the cost discrepancies among individual rate elements are reasonable. In refusing to recognize that each ILEC has its own individual system for provisioning collocation — which may result in both higher *and* lower costs for individual

elements as compared to other ILECs — Dr. Gabel's analysis compares apples to oranges.

Q. HAS DR. GABEL IGNORED OTHER DIFFERENCES AMONG ILECS IN MAKING HIS "RELATIVE EFFICIENCY" COMPARISONS?

A. Yes. Dr. Gabel improperly ignores a number of fundamental differences among the ILECs and their collocation offerings in recommending that the Commission impose uniform collocation costs in this proceeding. For example:

- Dr. Gabel criticizes Verizon FL for failing to include the same work times and activities in its application processing fee that BellSouth and Sprint include in their respective application processing fees. *See* Gabel Rebuttal at 38. In making this criticism, Dr. Gabel completely ignores the fact that Verizon FL recovers the majority of its costs associated with the application process (e.g., engineering time) in other rate elements, and not in its application fees.

- Dr. Gabel's comparison of Sprint's and Verizon FL's cage enclosure costs is similarly misleading. *See id.* at 46-47. While Dr. Gabel is correct that Verizon FL's cage costs are somewhat higher than Sprint's, Dr. Gabel ignores Sprint's practice of building multiple cages at once in advance of demand (as well as the mathematical error in Sprint's cage enclosure cost

development described in Part VI of this testimony).

In light of the very real differences among the ILECs' businesses and their collocation offerings, the Commission should reject Dr. Gabel's element-by-element comparisons of proposed collocation costs in this proceeding and evaluate the costs developed by each ILEC on their own merits.

IV. THE ALECS MISUNDERSTAND THE NATURE OF RECURRING COSTS.

Q. DO YOU AGREE WITH THE SUGGESTION AT THE AUGUST HEARING THAT RECURRING CHARGES SHOULD CEASE AT THE POINT THAT THOSE CHARGES ADD UP TO THE INITIAL COST OF THE INFRASTRUCTURE? (8/11/03 TR. AT 200; 8/12/03 TR. AT 537).

A. No. Covad's counsel misunderstands the nature of recurring charges. First, a recurring charge spreads the costs of a particular asset over the life of the asset. Thus, the asset is not paid off until it is retired, at which time a new asset would be built. Second, recurring charges recover ongoing maintenance costs, taxes, and the like — costs that continue over the life of the asset.

Q. DO YOU AGREE WITH THE RELATED POINT THAT VERIZON FL WILL RECOVER ALL ITS COSTS EVEN IF ALECS DO NOT PAY FOR ALL THE CAPACITY THEY ORDER TODAY AS LONG AS THEY PAY THE PER AMP RATE SOMEDAY? (8/11/03 TR. AT 250-51).

A. No. That assertion by AT&T's counsel also fundamentally misstates how cost recovery works. An ALEC must pay the recurring charge over the entire time it has leased the asset. Otherwise, Verizon FL does not recover its costs. If I lease a car starting today, I have to start paying for it today. If I refuse to pay for a year and then start paying the monthly lease rate, the car company does not become whole at some point. It missed a whole year's payments that it was counting on to recoup the costs of paying for and maintaining the car.

V. THE COMMISSION SHOULD USE VERIZON FL'S ACTUAL DATA, NOT ESTIMATES FROM R.S. MEANS OR OTHER SOURCES, TO SET COLLOCATION COSTS.

Q. BOTH MR. TURNER AND MR. CURRY RECOMMEND USING THE R.S. MEANS ESTIMATOR TO ESTABLISH CERTAIN COST INPUTS. (TURNER REBUTTAL AT 45-49, 52-55; CURRY REBUTTAL AT 16, 21). DO YOU AGREE WITH THEIR SUGGESTIONS?

A. No. Although it may be appropriate to utilize R.S. Means or some other estimator for select data when no company-specific data are available, it is not appropriate to use R.S. Means simply because one does not like a particular company-specific input.

Q. PLEASE RESPOND TO MR. TURNER'S RECOMMENDATION TO USE R.S. MEANS TO DEVELOP FLOOR SPACE COSTS. (TURNER REBUTTAL AT 45-49).

A. The R.S. Means data Mr. Turner uses to calculate average square

footage costs are not accurate and omit significant costs. R.S. Means data provide only a basis for *estimating* construction costs, and there is no way to determine what costs are actually included in the R.S. Means telecommunications building data. Indeed, R.S. Means itself warns that its square-foot costs should be used only as a starting point for informational purposes in examining contractor bids and that its estimates should be disregarded once real data are obtained.

For example, it is impossible to determine whether the R.S. Means costs include such items as outside plant cabling and infrastructure, additional site specific costs, and building construction "soft costs" (e.g., architect, design, and engineering fees). And R.S. Means states that some site preparation costs, such as storm water management, landscaping, site surveys, environmental assessments, parking space, and site lighting *are not* included in its estimates.[8]

Finally, from Verizon's discussions with R.S. Means, we also understand that the R.S. Means data regarding telecommunications structures are extremely outdated, with the vast majority of the projects examined having been completed before 1985.

Q. HOW DID VERIZON FL DEVELOP ITS FLOOR SPACE COST?

A. Verizon FL's average floor space cost is based on the actual sizes (in square feet) of Verizon FL's existing central offices, and the actual costs incurred in building and maintaining those central offices. The central

office building investment data are not included at historical investment costs, but rather are updated to current dollars by adjusting for inflation. Land investment is included at its original investment value — despite Florida's increasing real estate values — because Verizon FL has not yet identified an appropriate index to develop current land values. Thus, in this respect, Verizon FL's cost study understates forward-looking land costs.

Q. DO YOU AGREE WITH DR. GABEL'S ANALYSIS OF THE STRENGTHS AND WEAKNESSES OF USING R.S. MEANS TO ESTABLISH COSTS? (GABEL REBUTTAL AT 27-28).

A. Yes. Although Dr. Gabel states that "R.S. Means is not a wholly unreasonable starting point" for determining cost inputs, he acknowledges that R.S. Means offers no more than "'ball park' figures" that must be adjusted based on "experience, local economic conditions, and local building codes." Gabel Rebuttal at 28. As a result, Dr. Gabel correctly concludes that using R.S. Means to develop building investment costs is inferior to "Verizon's building investment methodology." *Id.*

VI. THE COMMISSION SHOULD REJECT AT&T'S AND STAFF'S REMAINING CRITICISMS OF VERIZON FL'S STUDIES.

a. Labor Costs

Q. DID ANY PARTY CHALLENGE VERIZON FL'S LABOR RATES?

A. No. Except as noted below with respect to SME time estimates, no

witness directly challenged Verizon FL's single source provider ("SSP") rates, loaded labor rates, or assignment of labor groups to various activities.

Q. PLEASE RESPOND TO DR. GABEL'S CONCERNS REGARDING THE TIME ESTIMATES PROVIDED BY VERIZON FL'S SUBJECT MATTER EXPERTS. (GABEL REBUTTAL AT 30-38).

A. Dr. Gabel suggests that SME estimates are almost *per se* unreliable and invalid. Such a position is, to the best of our knowledge, contrary to that taken by every single state public utility commission and by the FCC, all of which have considered SME estimates to be probative evidence. In support of his position, Dr. Gabel relies on out-of-context quotations and questionable citations.

Q. DOES THE FLORIDA PSC DECISION THAT DR. GABEL CITES ON PAGE 31 OF HIS REBUTTAL TESTIMONY SUPPORT HIS ASSERTION THAT SME ESTIMATES ARE BY THEIR NATURE UNRELIABLE?

A. No. In the order cited by Dr. Gabel, the Commission raised concerns with BellSouth's cost studies, but did not find that all SME estimates are unreliable and should never be used. Indeed, even while discussing the problems it found with BellSouth's cost studies, the Commission expressly noted that "BellSouth's SMEs did what they were told to do; that is, they developed or reviewed work activities or times based on their knowledge, experience, and observations." In the end, the

Commission ordered BellSouth to "consider potential process improvements," but it did not reject the use of SME time estimates in calculating forward-looking costs.[9]

Q. HAS THE FCC EVER FOUND THAT SME ESTIMATES ARE BY THEIR NATURE "UNSUBSTANTIATED," AS DR. GABEL SUGGESTS? (GABEL REBUTTAL AT 31).

A. No. To the best of our knowledge, and contrary to Dr. Gabel's implication, the FCC has never stated SME time estimates should not be used to develop forward-looking costs. In the order cited by Dr. Gabel, the FCC refused to accept Pacific Bell's costs, not because they were derived from SME estimates, but rather because Pacific Bell "merely provide[d] a general discussion of the investments and the labor required" and failed to "provide specific information on the data, assumptions, and methodology used to develop" the costs it proposed. In addition, Pacific Bell relied on "a 1992 company study to support its annual maintenance factor," but "d[id] not provide copies of this study or the pertinent details contained in it."[10]

Q. DO THE SME ESTIMATES RELIED ON BY VERIZON FL IN THIS PROCEEDING SUFFER FROM THE SAME DEFECTS AS THOSE THAT LED THE FCC TO REJECT PACIFIC BELL'S PROPOSED COSTS IN THE ORDER CITED BY DR. GABEL?

A. No. Verizon FL — in Barbara Ellis's Direct Testimony and the exhibits thereto, and in response to countless data requests — has provided the

specific "data, assumptions, and methodology" that underlie its SME estimate inputs. *See, e.g.*, Verizon FL's Responses and Supplemental Responses to Staff Production of Document Requests 41 and 61.

Q. PLEASE RESPOND TO DR. GABEL'S CLAIM THAT THE SME ESTIMATES RELIED ON BY VERIZON FL (AS WELL AS SPRINT AND BELLSOUTH) HAVE NOT MET THE NECESSARY LEGAL STANDARD TO BE RELIABLE OR VALID. (GABEL REBUTTAL AT 32-37).

A. Dr. Gabel attempts to analyze the reliability and validity of the SME estimates relied on by Verizon FL and the other Florida ILECs under the criteria set forth in the court case *Daubert v. Merrell Dow Pharmaceuticals, Inc.* Those criteria involve an assessment of (1) whether the SME theory or technique has been tested; (2) the reliability of the procedure used by the SME and its potential rate of error; (3) whether the SME's theory or technique has been subject to peer review and/or published; and (4) whether the SME's methods and reasoning enjoy general acceptance in the relevant scientific community. It is our opinion that the SME estimates submitted by Verizon FL in support of its cost study are reliable and valid when analyzed using these criteria, and we strongly disagree with Dr. Gabel's suggestion otherwise. The types of SME estimates relied on in this proceeding have been relied on by state PUCs and the FCC in prior rate setting proceedings, and their reliability and validity have been proven repeatedly.

Q. PLEASE RESPOND TO DR. GABEL'S SUGGESTION THAT SME ESTIMATES EVENTUALLY SHOULD BE REPLACED WITH TIME AND MOTION STUDIES, WHERE PRACTICABLE. (GABEL REBUTTAL AT 36-37).

A. As Dr. Gabel himself notes, it would be impractical, if not impossible, to replace SME estimates with time and motion studies at this stage of this proceeding. Dr. Gabel also correctly recognizes that many collocation activities would not lend themselves to time and motion studies, due to their small sample sizes and/or variations in populations. We also note that time and motion studies are costly, and cannot easily be adapted when methods of provisioning collocation facilities or services change.

Q. HOW SHOULD THE COMMISSION EVALUATE THE THREE ILECS' SME ESTIMATES?

A. The Commission should use the same method the FCC and state commissions typically use to evaluate SME estimates: For each of the three ILEC's SME estimates, the Commission should weigh the evidence proffered to support the ILEC's proposed times against any countervailing evidence, and should adjust the ILEC's proposed times only if appropriate. Where the weighing of the evidence has been, for all practical purposes, reduced to a "battle of the experts," the Commission should consider each expert's background and testimony and decide whom it finds most credible. The Commission should reject Dr. Gabel's proposal to adopt the lowest time proposed by any ILEC for the reasons discussed in Part III, above.

b. Materials Costs

Q. DO THE REBUTTAL WITNESSES CHALLENGE VERIZON FL'S PROPOSED MATERIALS COSTS?

A. Yes, but they challenge only very limited aspects of Verizon FL's proposed materials costs. For example, Mr. Curry questions Verizon FL's use of GTEAMS as a data source, and suggests that Verizon FL's proposed grounding bar costs are overstated. *See* Curry Rebuttal at 11, 20. In addition, Dr. Gabel states that Verizon FL's proposed cage costs are too high. *See* Gabel Rebuttal at 47.

Q. PLEASE RESPOND TO MR. CURRY'S CRITICISMS OF VERIZON'S GTEAMS DATABASE. (CURRY REBUTTAL AT 11, 20).

A. While Mr. Curry states that he has concerns with some of the materials cost outputs from GTEAMS, his testimony makes clear that he does not have an accurate understanding of what GTEAMS is and how it is used. For example, Mr. Curry asserts that Verizon FL's "methodology uses largely embedded investments and data to compute costs." Curry Rebuttal at 11. This is incorrect. GTEAMS reflects the costs that are available to Verizon FL now, and that Verizon FL can expect to incur on a forward-looking basis. As explained in Barbara Ellis's Direct Testimony, GTEAMS is the materials management database Verizon FL uses to perform inventory planning, accounting, purchasing, and materials management functions for its operating companies. Ellis Direct at 15. The database provides two types of materials cost

information: (1) the actual prices paid for materials that are in Verizon FL's inventory; and (2) current and effective price quotes for materials that are not or may not be in Verizon FL's inventory. GTEAMS data thus reflect the *actual prices available* to Verizon FL, based on Verizon FL's vendor discounts and purchasing power. With respect to collocation facilities, which do not depend on rapidly-changing technology, Verizon FL has determined that it likely will incur these same costs on a going-forward basis.

Q. PLEASE RESPOND TO MR. CURRY'S SUGGESTION THAT VERIZON FL'S CAGE GROUNDING BAR COSTS ARE OVERSTATED. (CURRY REBUTTAL AT 20).

A. Although Mr. Curry's assertion that Verizon FL has overstated grounding bar costs is not accompanied by any factual information, just the conclusory statement that the costs are "extremely high," Verizon FL has investigated his claim and determined that one particular change is warranted. Specifically, Verizon FL has changed the time estimate associated with pulling the 350 MCM cable (a component of the grounding bar rate element) to better reflect the placement costs for that specific cable size. The reduction in placement time reduces the total cost of the cage grounding bar from $1423.65 to $926.77. This reduction should address Mr. Curry's concerns.

Q. PLEASE RESPOND TO DR. GABEL'S ASSERTION THAT VERIZON FL'S CAGE COSTS SEEM OVERSTATED. (GABEL REBUTTAL AT

47).

A. While Dr. Gabel is correct that Verizon FL's proposed cage costs are higher than Sprint's, there are a number of legitimate reasons for this cost difference.

First, the major difference between Verizon FL's and Sprint's cost estimates is the amount of fencing assumed, which is a direct function of where the cages are located and how they are built. Sprint assumes that it will be able to build more cages along a wall and next to each other (thus minimizing the fencing — and dollars in the *numerator* — required for each) than has been Verizon FL's experience.

Second, Sprint treats some of those same cages as if they required four fenced sides when figuring the *denominator* used in calculating per cage costs — an error that improperly reduces Sprint's proposed cage costs.

Third, Sprint's study assumes that multiple cages are built simultaneously, which has the effect of lowering average cage costs and increasing the risk of stranding cage investments.

Q. HOW DOES VERIZON FL'S COST STUDY ASSUME CAGES WILL BE LAID OUT IN THE COLLOCATION AREA?

A. Verizon FL's collocation study assumes that cage layout in the future will resemble cage layout to date. Like Sprint, Verizon FL attempts to utilize existing walls in the central office as well as side walls of other cages to

minimize the need for cage fencing. However, Verizon FL has found that this is not always possible. Verizon FL's proposed cage costs are based on actual collocation configurations and reflect the average square footage of fencing required for various cage sizes. Verizon FL used these figures to develop average fencing square footages for each cage size Verizon FL offers, and used those averages to calculate the fencing costs associated with each cage size. Verizon FL has no reason to believe that those configurations will change in a forward-looking network.

Q. PLEASE EXPLAIN IN MORE DETAIL THE "DENOMINATOR" ERROR IN SPRINT'S COST STUDY THAT YOU CLAIM IMPROPERLY REDUCES SPRINT'S PROPOSED CAGE COSTS.

A. Because Sprint sometimes divides actual invoice costs by the hypothetical linear footage of a cage with four fenced sides, instead of the linear footage of the cage fencing actually placed, Sprint's method improperly understates cage costs.

This is evident from Sprint's responses to AT&T PODs 6 and 8. In response to AT&T POD 6, Sprint provided a spreadsheet showing the derivation of its proposed fencing cost per linear foot. Sprint's response to AT&T POD 8 provides the invoices or invoice details associated with the work orders included in its response to AT&T POD 6. For example, work order 3912496 indicates that a new cage was to be placed directly adjacent to an existing arrangement, and the detail in the invoice

indicates that an existing central office wall would be used as part of the cage as well. The actual dimensions of the fencing placed were one 10 foot side and one 15 foot side, a total of 25 linear feet of fencing (including the 4-foot gate). However, as shown in the spreadsheet attached to Sprint's response to AT&T POD 6, Sprint used *50* linear feet of fencing, instead of the 25 linear feet actually placed, as the denominator in its cost per foot equation, effectively (and improperly) halving its cost per linear cost.[11]

Q. WHY DOESN'T VERIZON FL BUILD CAGES IN ADVANCE OF DEMAND?

A. In Verizon FL's experience, it is more practical and cost effective to build cages as they are actually ordered, thus avoiding the risk of stranded investment.

Q. ARE THERE OTHER DIFFERENCES IN HOW SPRINT AND VERIZON FL ACCOUNT FOR CAGE COSTS?

A. Yes. Sprint includes its cage gate costs in its total fencing costs, while Verizon FL accounts for the cost of the gate separately. Likewise, Sprint includes the cage grounding bar in its general per square foot cost, while Verizon FL accounts for it separately. Verizon FL's method of separately identifying gate costs and grounding costs allows Verizon FL to develop discrete, representative costs for the various cage size configurations it offers.

Q. IS THERE FURTHER SUPPORT FOR YOUR ASSERTION THAT VERIZON FL'S CAGE COSTS ARE REASONABLE?

A. Yes. Although Verizon FL allows the ALECs to contract directly with an approved vendor to construct their cages, no ALEC has ever availed itself of this option in Florida. Thus, the market has spoken on this issue.

c. Power

Q. PLEASE COMMENT ON MR. CURRY'S CRITICISMS OF VERIZON FL'S POWER CABLE COSTS. (CURRY REBUTTAL AT 20-21).

A. Mr. Curry points out that the cost estimate for the floor ground bar element uses R.S. Means data to estimate the time to pull a 750 MCM power cable, whereas all other cost estimates involving power cable power pulls use Verizon FL's internal activity time estimate of 15 minutes per foot. Mr. Curry is correct with respect to this inconsistency in Verizon FL's cost study — R.S. Means should not have been used for the floor ground bar cable pull estimate, and has appropriately been removed from the updated cost study filed as an attachment to this testimony.

In addition, Verizon FL's updated study assumes 12 minutes per foot, rather than the 15 minutes criticized by Mr. Curry, to pull a 750 MCM power cable. This 12-minute estimate is the figure that Verizon FL uses for developing cost estimates for internal jobs. This change makes the installed cost of such a power cable $1702 in the floor ground bar

element. Use of current, Florida-specific data across cable gauges leads to a weighted average power cable pull time of 7 minutes per foot, which Verizon FL has now incorporated into its cable pull NRC.

Q. DOES MR. CURRY CRITICIZE VERIZON FL'S POWER EF&I COSTS? (CURRY REBUTTAL AT 12-14).

A. Yes. Mr. Curry raises two concerns with respect to Verizon FL's power EF&I factor. First, he notes that the installation ratio provided in Verizon FL's collocation cost study increased for larger office sizes. Second, he expresses concern that the amperage capacity figures provided in the study might not correspond to the maximum power capacity that could be produced by the associated power plant investment.

Q. IN LIGHT OF VERIZON FL'S UPDATED DC POWER STUDY, IS MR. CURRY'S CRITICISM REGARDING THE EF&I FACTOR STILL RELEVANT?

A. No. Verizon FL's updated DC power study does not use an EF&I factor for calculating installation costs, so Mr. Curry's criticism is no longer relevant.

Q. IS MR. CURRY CORRECT THAT THE AMPERAGE CAPACITY REFLECTED IN VERIZON FL'S POWER STUDY SHOULD REPRESENT THE MAXIMUM AMOUNT OF POWER THAT CAN BE PRODUCED BY THE CORRESPONDING POWER PLANT INVESTMENT FIGURES? (CURRY REBUTTAL AT 11-12).

A. No. The amperage capacity figures used in calculating the cost per amp should reflect the *usable* power plant capacity. Power equipment may not run at 100% capacity; thus Verizon FL engineers have estimated that only 80% of the plant is available to meet load requirements. Indeed, running power equipment at 100% of its rated capacity would leave Verizon FL without the surge capacity necessary to handle short-term increases in power demands.

Q. DOES SPRINT MAKE A SIMILAR ADJUSTMENT FOR THE EXPECTED OPERATING CAPACITY OF THE POWER PLANT?

A. Yes, although Sprint makes the adjustment to its costs rather than the amperage associated with the power plant.

The following illustrates Sprint's adjustment and shows that it has the same effect as Verizon FL's: Assume that the gross amperage of a $483,200 power plant is 1000 amps, of which 80% is deemed usable. Verizon FL would develop its investment per amp of $604 by dividing the $483,200 cost by 800 amps. Sprint, on the other hand, would arrive at its investment per amp of $604 by dividing the $483,200 investment by 80%, and dividing that $604,000 "investment" by 1000 amps. The two different methods thus produce identical results and serve identical functions.

Q. PLEASE RESPOND TO MR. TURNER'S ANALYSIS OF THE TEXAS PUC'S ORDER REGARDING SBC'S POWER COSTS. (TURNER

REBUTTAL AT 23-24).

A. Mr. Turner has repeatedly pointed to that Texas PUC collocation order in other collocation proceedings to support his claim that ILECs' power costs, no matter how well supported, should be lower. As far as we are aware, though, *no* state commission has *ever* followed that Texas decision.

In addition, Mr. Turner misleadingly suggests that SBC itself proposed the low power costs adopted in Texas. Following telephone conversations with an SBC collocation witness, however, it is our understanding that SBC "proposed" those costs only after it had lost several crucial cost modeling questions. Thus, SBC does not believe that the figures presented in that proceeding properly recover its power costs.

Q. PLEASE RESPOND TO MR. TURNER'S CLAIM THAT ILECS SHOULD BE CONSIDERED "INDUSTRIAL" ELECTRICITY USERS FOR PURPOSES OF ASSESSING THE AC COMPONENT OF THEIR DC POWER RATES. (TURNER REBUTTAL AT 28).

A. Mr. Turner is mistaken. No Verizon FL central office takes energy from an industrial, or even an interruptible, power tariff. This should not come as a surprise to Mr. Turner because, according to the data AT&T provided in response to Verizon FL Interrogatory 8(g), ** **Begin AT&T proprietary**

** End AT&T proprietary

Q. **HOW DO MR. TURNER'S PROPOSED AC RATES FOR THE FLORIDA ILECS COMPARE TO AT&T'S OWN ACTUAL FLORIDA POWER RATES? (TURNER REBUTTAL AT 28).**

A. There is quite a discrepancy between them. Mr. Turner argues that ILEC AC power costs should be assumed to be $0.053 per kilowatt hour, but, as shown in BKE-10, AT&T's own Florida power rates average ** **Begin AT&T proprietary** , ** **End AT&T proprietary** which is much closer to Verizon FL's proposal of $0.0717 than to Mr. Turner's proposal.

This is a prime example of why the Commission should be suspicious of AT&T's proposed figures when they come from a consultant's alleged "experience," rather than Florida-specific, hard data. Mr. Turner obviously has access to this data, but has apparently failed to use it as the basis for his recommendations.

Q. **DO YOU AGREE WITH MR. CURRY'S ASSERTION THAT VERIZON FL'S PROPOSED COST FOR A 750 MCM CONNECTOR TAP IS OVERSTATED? (CURRY REBUTTAL AT 21).**

A. No. The cost of the 750 MCM connector tap comes from Verizon's GTEAMS database, which, as explained in Barbara Ellis's Direct Testimony, contains actual prices that Verizon has paid for materials,

and current and effective price quotes for materials that Verizon has not yet purchased. See Ellis Direct at 15. Thus, Mr. Curry's recommendation that Verizon FL defend this cost by obtaining vendor price quotes already has been satisfied.

In addition, Mr. Curry's comparison of the costs of 750 MCM connector taps with the costs for 500 MCM taps is invalid for two reasons: (1) 750 MCM taps cost more than 500 MCM taps; and (2) the figure that Mr. Curry cites for a 500 MCM tap is not a price paid nor even a vendor's quote, it is only an estimate from R.S. Means. We discuss above why the Commission should reject the use of R.S. Means data when actual, company-specific data are available.

Q. PLEASE RESPOND TO MR. CURRY'S ASSERTION THAT VERIZON FL SHOULD BE REQUIRED TO PROVIDE SUBSTANTIATION FOR COSTS THAT MAY BE APPLICABLE IN A REMOTE TERMINAL SCENARIO. (CURRY REBUTTAL AT 22).

A. No ALEC has ever requested remote terminal collocation. If and when ALECs begin requesting remote terminal collocation, Verizon FL will initially provision those arrangements on an Individual Case Basis ("ICB"), using general collocation rates as appropriate, and then will file appropriate rates. Until that time, Verizon FL should not have to speculate on the costs associated with remote terminal collocation.

d. Central Office Costs

Q. PLEASE RESPOND TO DR. GABEL'S ASSERTION THAT AVERAGE FLOOR SPACE COSTS SHOULD ONLY INCLUDE COSTS ASSOCIATED WITH CENTRAL OFFICES THAT CURRENTLY HOUSE COLLOCATORS. (GABEL REBUTTAL AT 28).

A. Dr. Gabel's suggestion would have little impact on Verizon FL's investment figures. All Verizon FL central offices that currently house collocators were included in the sample Verizon FL used to determine average floor space costs. That sample also included three central offices that do not currently house collocators. Removing those three offices would *increase* Verizon FL's average building investment by 20 cents per square foot, and thus would *increase* the associated monthly recurring rates by about three cents per square foot.

Q. DOES MR. TURNER AGREE WITH DR. GABEL THAT VERIZON FL'S METHOD FOR DETERMINING AVERAGE FLOOR SPACE INVESTMENTS SHOULD BE ADOPTED BY ALL THREE ILECS? (TURNER REBUTTAL AT 45-49).

A. No. Mr. Turner argues that R.S. Means estimates should be used to determine average floor space costs instead of actual cost data. For the reasons discussed in Part V of this testimony, the Commission should reject Mr. Turner's suggestion.

Q. PLEASE RESPOND TO MR. TURNER'S ASSERTION THAT "APPROXIMATELY 80% OF THE SPACE WITHIN CENTRAL OFFICES IS ASSIGNABLE TO TELECOMMUNICATIONS USE."

(TURNER REBUTTAL AT 48.)

A. Mr. Turner's point is not clear. Using an 80% assignability assumption as he proposes would *increase* Verizon FL's proposed average floor space costs.

Q. DOES DR. GABEL RAISE ANY ADDITIONAL CONCERNS WITH RESPECT TO VERIZON FL'S AVERAGE FLOOR SPACE COST ELEMENT? (GABEL REBUTTAL AT 9-12).

A. Yes. Although Dr. Gabel endorses Verizon FL's approach to determining average floor space costs, he suggests that Verizon FL may be double-counting certain costs relating to floor space — once in the Average Floor Space element, and a second time in certain specific elements. Specifically, Dr. Gabel asserts that Verizon FL may not have removed from the figures used to calculate average floor space costs the costs associated with security, overhead lighting, electrical receptacles, or its proposed Building Modification charge.

Q. PLEASE RESPOND TO DR. GABEL'S DOUBLE-COUNTING CONCERNS.

A. Verizon FL clearly has not included any collocation costs in its building investment data, because the building investment data are from 1998 and earlier — before there was any collocation in Verizon FL's offices. In the future, when Verizon FL updates its building investment data, it will remove all collocation-related expenditures that are booked to the building investment account.

Q. PLEASE ADDRESS MR. TURNER'S ARGUMENT THAT ILECS SHOULD NOT BE PERMITTED TO RECOVER BOTH THEIR BUILDING INVESTMENT *AND* THE BUILDING MODIFICATION COSTS THEY INCUR? (TURNER REBUTTAL AT 45-49).

A. Mr. Turner's argument rests on the premise that building modification costs would not be incurred in a forward-looking environment because forward-looking central offices would be built with collocation in mind. Even if that were true, the costs of conditioning space for collocation still would have to be borne, they just would be incurred in large part when the central offices were first constructed rather than when they were later modified. And even then, there would be changes in space utilization through the years that would require building modifications and further space conditioning.

Q. HAVE OTHER STATE COMMISSIONS ADDRESSED MR. TURNER'S ARGUMENT?

A. Yes. Mr. Turner's argument has been flatly rejected by the Massachusetts Department of Telecommunications and Energy, which cogently explained that "the fundamental difference between the Building Expense and Space Conditioning charges is that the former recovers costs associated with investments to the central office as a whole, whereas the latter recovers investments specific to collocation space."[12] In approving Verizon's proposed rate elements, the DTE went on to "note that the FCC recognizes that ILECs may incur additional

incremental space conditioning costs as a result of collocation, and [has] established minimum requirements to ensure cost recovery and to allocate costs equitably."[13] This Commission should likewise reject Mr. Turner's argument.

Q. DO YOU AGREE WITH MR. TURNER'S CLAIM THAT A CABLE RACK SHOULD BE ASSUMED TO HOLD 74 FIBER ENTRANCE CABLES? (TURNER REBUTTAL AT 49.)

A. No. Verizon FL's engineers determined that Verizon FL's collocation cost study should assume a 24-inch cable rack, which on average can hold 48 fiber entrance cables. Mr. Turner offers no support for his proposal, and does not appear to have the engineering expertise necessary to make such a determination.

Q. WHAT CONCERNS DOES DR. GABEL RAISE WITH RESPECT TO HOW VERIZON FL PROPOSES TO RECOVER ITS SECURITY COSTS? (GABEL REBUTTAL AT 40-41).

A. In addition to his concern that Verizon FL may be recovering security costs in both its Average Floor Space element and its Building Modification element, refuted above, Dr. Gabel argues that security costs should be apportioned according to floor space usage rather than pro rata among all the carriers (including Verizon FL) who benefit from the security measures.

Q. IS DR. GABEL'S ARGUMENT THAT SECURITY COSTS SHOULD BE

APPORTIONED ON A PER SQUARE FOOT BASIS RATHER THAN ON A PER PARTY BENEFITING BASIS REASONABLE?

A. No. The Commission decision cited by Dr. Gabel in support of his position should be reconsidered. The installation of a card reader system at a central office provides the same level of security to all occupants and the cost of the system is not in any way related to the size of the central office, or any resident's share thereof. Because *each* resident in a central office receives the full benefit of the security system protecting that central office, and because there is *no* relationship between the cost of the system and the floor space protected, it makes no sense to apportion system costs according to floor space. Instead, each central office resident protected by the security system should pay a pro rata share of the system's costs, as Verizon FL has proposed.

Q. ARE THERE FURTHER REASONS IT MAKES MORE SENSE TO ALLOCATE SECURITY COSTS ON A PRO RATA BASIS THAN ON A SQUARE FOOTAGE BASIS?

A. Yes. Advanced security systems are necessary only because of the requirement that ALECs be allowed to collocate in Verizon FL's central offices. Prior to collocation, Verizon's central offices were secured with a simple lock and key system, typically at the office's front entrance. Verizon now installs card reader systems to protect its central offices to provide easy entry to the ALECs while at the same time logging the entrance and exit of employees of many different companies. Thus, to allocate the costs associated with such card reader systems on a

square footage basis would force Verizon FL to absorb a much larger percentage of the costs that it incurred only because of collocation.

Thus, in Verizon FL's cost study, Verizon FL properly assigns pro rata security costs to itself as well as to an average number of ALECs per central office, so that all companies that benefit equally from the security devices pay equally for security costs. Verizon FL respectfully requests that the Commission revisit its cost allocation requirements for security equipment and endorse Verizon FL's pro rata approach.

Q. DR. GABEL ARGUES THAT THE NUMBER OF COLLOCATORS VERIZON FL ASSUMES IN ITS STUDY IS DRAMATICALLY UNDERSTATED. (GABEL REBUTTAL AT 40-41). IS HE CORRECT?

A. No. Dr. Gabel cites old data in attacking Verizon FL's assumption that four collocators would share security costs with Verizon FL. As Verizon FL explained in response to Staff Interrogatory 32(c), the most recent data available shows an average of ** ** collocators per Verizon FL central office with at least one collocator. In any event, raising the fill factor in the Building Modification rate element from four to five would result in a 7.5% reduction of that element, from $237.96 to $220.16.

Q. IF VERIZON FL WERE ORDERED TO CHARGE FOR SECURITY ON A PER SQUARE FOOT BASIS, WOULD VERIZON FL HAVE TO MAKE OTHER CHANGES TO ITS STUDY?

A. Yes. To recover security costs on a per square foot basis, Verizon FL

would have to remove security-related costs from its building modification rate, apportion those costs on a per square foot basis, and add the costs into its basic floor space rate. Removing security costs from the building modification rate would lower that rate from $237.96 per month to $163.29 per month. Adding security costs into the floor space rate would raise that rate by $0.37 per square foot per month. In other words, an ALEC with a 100 square foot cage would pay $74.67 per month to cover its share of security costs under Verizon FL's proposal, but would pay only half that amount under Dr. Gabel's proposal.

Q. DOES IT TAKE ONLY TEN HOURS TO PRODUCE A CENTRAL OFFICE SPACE REPORT, AS DR. GABEL ALLEGES? (GABEL REBUTTAL AT 47-49).

A. No. As Verizon demonstrates in response to Staff Interrogatory 72, Dr. Gabel's recommendation that the time allowed to produce a space report be limited to ten hours would not allow for enough time to gather the information required to produce a report of such detail as Verizon offers. *See* Verizon FL Response to Staff Interrogatory 72.

In any event, no ALEC has ever ordered a space report in any Verizon West jurisdiction, primarily because Verizon provides a list of space exhausted central offices on the Internet free of charge.

e. Engineering

Q. PLEASE RESPOND TO DR. GABEL'S SUGGESTION THAT VERIZON'S ESTABLISH A "PRE-ACCEPTANCE FEE" TO RECOVER THE COSTS ASSOCIATED WITH THE INITIAL SITE AUDIT, RATHER THAN INCLUDING THESE COSTS IN THE ENGINEERING/MAJOR AUGMENT FEE. (GABEL REBUTTAL AT 39-40).

A. In Verizon FL's experience. no ALEC has decided not to go ahead with the collocation arrangement after receiving its price quote. Thus, Dr. Gabel's proposal would lead to unnecessary administrative costs.

VII. THE COMMISSION SHOULD NOT ARBITRARILY REDUCE VERIZON FL'S PROPOSED COLLOCATION RATES.

Q. SHOULD THE COMMISSION REDUCE A PARTICULAR VERIZON FL PROPOSED RATE, EVEN IF NO PARTY CHALLENGED IT? (GABEL REBUTTAL AT 52-53).

A. No. The Commission may not reduce a particular rate in the absence of any specific evidence demonstrating that it is incorrect. Indeed, such an approach is directly at odds with Dr. Gabel's own recognition that "[t]here are a number of rates that I reviewed and I found to be reasonable." Gabel Rebuttal at 53.

Thus, because Verizon FL has proposed a number of rates that even Dr. Gabel has found to be reasonable, Dr. Gabel's assertion that there could be "a systematic overstatement of costs or general methodological flaw . . . applicable to [Verizon FL's] entire cost submission," *id.* at 52-53, makes no sense. Indeed, as Dr. Gabel himself notes, "it would be

inappropriate to lower these rates because it would establish rates that are below the cost of service." *Id.* at 53.

Q. PLEASE SUMMARIZE HOW THE COMMISSION SHOULD SET COLLOCATION COSTS (AND THUS RATES) FOR VERIZON FL IN THIS PROCEEDING.

A. The Commission should reject Mr. Turner's proposals and proceed to consider the only cost study before it that purports to account for Verizon FL's company-specific business and offerings: Verizon FL's collocation cost study. In those limited instances where Verizon FL's proposed cost elements are subject to challenge, the Commission should carefully weigh the evidence submitted by Verizon FL in support of its costs against any countervailing evidence and should adjust Verizon FL's proposed cost elements only if and as appropriate. Finally, the Commission should adopt any cost elements submitted by Verizon FL that no witness has challenged in rebuttal testimony (and that remain unchallenged throughout this proceeding).

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

[1] Although we are not lawyers, we understand from our attorneys that the Federal Communications Commission ("FCC") has never wavered from its original mandate that UNE cost proceedings produce "costs that incumbents actually expect to incur in making network elements available to new entrants." First Report and Order, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Rcd 15499 ¶ 685 (1996). *See* Reply Brief for Petitioner Federal Communications Commission and the United States, *Verizon Communications, Inc. v. FCC*, at 6 (2002) ("The costs measured by TELRIC are nonetheless those *of the incumbent itself*.") (emphasis added).

[2] *See* Verizon FL Exhibit BKE-9, at 7; Verizon FL Responses to Staff Interrogatories 221-223; Sprint Responses to Staff Interrogatories 51-53.

[3] *In the Matter of Investigation into Pricing of Unbundled Network Elements* (Sprint/Verizon Track), Docket No. 990649B-TP, Transcript of Special Agenda Conference (Oct. 14, 2002) at 13 (remarks of Commissioner Deason).

[4] Indeed, the Commission is currently considering whether ILECs have the obligation to offer these services. *See* Verizon Florida Inc.'s Post-Hearing Statement and Brief, filed in Docket Nos. 981834-TP & 990321-TP on September 9, 2003, at 8-9, 20-22.

[5] Fourth Report and Order, *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability*, 16 FCC Rcd 15435 ¶ 90 (2001).

[6] *See id.* ("An incumbent is far more familiar with the design and layout of its premises than are its competitors, who neither own nor manage those premises."); *see also id.* at ¶ 91 ("Ultimately, it is the incumbent who will be responsible for planning and maintaining the premises for the benefit of all users — the incumbent, its affiliates and subsidiaries, and other collocators. Allowing requesting carriers to exercise primary decision-making authority over space assignment decisions would give those carriers the ability to usurp an incumbent LEC's right to manage its own property.").

[7] For example, Verizon requires the vendors it hires to comply with all Verizon policies and practices as issued by Verizon's Central Office Equipment Installation (COEI), National Operations, Network Engineering, and Quality Groups. These policies and practices include, but are not limited to: Information Publication (IP72202), Engineering Flashes, Field Support and Quality Bulletins, High Risk Activity, NOC/NCC 02-051, Safe Time practices, Method of Procedure (MOP), and Completion Notification/End of Job Review. Verizon also requires its vendors to comply with all Telcordia documentation, Network Equipment Building System (NEBS) requirements, and the National Electrical Code (NEC).

[8] *See, e.g., id.* at iv.

[9] Final Order on Rates for Unbundled Network Elements Provided by BellSouth, *In re Investigation into Pricing of Unbundled Network Elements*, Docket No. 990649-TP, Order No. PSC-01-1181-FOF-TP, at 392-95 (May 25, 2001).

[10] Second Report and Order, *In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection through Physical Collocation for Special Access and Switched Transport*, 12 FCC Rcd 18730 ¶ 205 (1997).

[11] While we cannot be certain how often Sprint overstates the footage in the denominator of its cost per linear foot equation, it may be as often as two-thirds of the time. *See* Sprint Response to AT&T POD 8, invoices 39130581, 39119641, 39118994, 39116580 and

39114086 (all using 40 linear feet in the denominator without indicating whether the cages actually were able to make use of existing walls).

[12] DTE 01-20 Part A, *Investigation by the Department of Telecommunications and Energy on its own Motion into the Appropriate Pricing, based upon Total Element Long-Run Incremental Costs, for Unbundled Network Elements and Combinations of Unbundled Network Elements, and the Appropriate Avoided-Cost Discount for Verizon New England, Inc. d/b/a Verizon Massachusetts' Resale Services in the Commonwealth of Massachusetts*, at 384 (July 11, 2002), *affirmed*, DTE 01-20-Part A-A, *Order on Motions by Verizon Massachusetts, AT&T Communications of New England, Inc., and CLEC Coalition for Partial Reconsideration and Clarification and on Motions by WorldCom, Inc. and Z-Tel Communications for Partial Reconsideration* (January 14, 2003).

[13] *Id.* (citing Advanced Services Order at ¶ 51).

DOCKET NOS. 981834-TP/990321-TP

EXHIBIT BKE-1 - 171 PAGES

VERIZON EXPANDED INTERCONNECTION SERVICES

FLORIDA

SUMMARY & DEVELOPMENT OF COSTS AND RATES

PROPRIETARY AND CONFIDENTIAL

SEPTEMBER 25, 2003

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Undocketed
Standardization of Unbundled
Network Element Costing

Submitted: February 28, 2003

COMMENTS OF VERIZON FLORIDA INC.

Verizon Florida Inc. ("Verizon") respectfully submits these comments on the issues identified during the Commission workshop on December 18, 2002, relating to the standardization of unbundled network element ("UNE") costing.

I. VERIZON DOES NOT SUPPORT THE STANDARDIZATION OF UNE COSTING

Any attempt to standardize the methods by which UNE cost estimates are developed for the three large incumbent local exchange carriers ("ILECs") in Florida must be approached with great caution. Standardization threatens to undermine the key objective of any UNE cost proceeding: the development of accurate, company- and state-specific UNE cost estimates. The Federal Communications Commission ("FCC") has made clear that UNE cost proceedings are intended to produce "costs that incumbents actually expect to incur in making elements available to new entrants."[1] It is only when UNE prices accurately reflect each carrier's specific costs that the appropriate signals are given regarding competitive entry into the local exchange market. None of the proposed outcomes identified in the framework for these comments—whether it be a standardized cost model, common criteria, inputs, or outputs—will necessarily produce the kind of accurate, company- and state-specific cost estimates required in UNE proceedings.

[1] In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, *First Report and Order*, FCC 96-325 (rel. Aug. 8, 1996) at ¶ 685 ("First Report and Order").

Standardization of UNE costing ignores the very real differences among carriers. Just as Ford does not build a car exactly like Toyota, Verizon does not build or operate its network in precisely the same manner as BellSouth or Sprint. UNE cost estimates, by definition, are designed to capture these company-specific cost variations. While there are theoretical benefits to the standardization of UNE costing, the costs and disadvantages associated with such an endeavor far outweigh any perceived gains. For the reasons discussed herein, Verizon does not support the adoption of standardized UNE costing.

II. THE BENEFITS OF STANDARDIZED UNE COSTING ARE PURELY THEORETICAL

The benefits of standardized UNE costing are theoretical and unproven. Assuming that the Commission and Florida's three large incumbents could agree on a standardized approach—a highly unlikely proposition—there are few potential benefits that may result from such an endeavor. The standardization of UNE costing may lead to an increased understanding of the manner in which UNEs are provisioned, and how the costs associated therewith are estimated.

Standardization may also benefit the Commission and Staff. For example, if a single model were adopted, the Commission and Staff may be able to leverage the time spent, and resources expended, learning and studying the standardized model, as opposed to several different, competing models. This may lead to a more thorough understanding of the model's platform and underlying assumptions.

The likelihood of these benefits being realized will vary depending on the approach adopted by the Commission. The adoption of a single model would be the most contested option, and thus any benefits to be realized would be difficult to attain. It may be easier to obtain agreement on general costing methodologies or parameters, such as technology assumptions or

standardized output reports, which give the individual carriers some flexibility in terms of implementation.

III. STANDARDIZATION OF UNE COSTING WILL NOT NECESSARILY PROMOTE FACILITIES-BASED COMPETITION IN FLORIDA

Standardization of UNE costing will not necessarily promote facilities-based competition in Florida. The notion that a standardized UNE costing approach will promote facilities-based competition seems to be based on the erroneous belief that forward-looking cost estimates resulting from standardization will necessarily result in lower UNE rates. This belief is ill-founded. The goal of any modeling approach should be to produce accurate estimates of a company's costs based on realistic assumptions and inputs. Standardization of UNE costing, in and of itself, does not guarantee this result. Competition cannot be said to occur unless rates move toward costs. In an environment where rates are set by fiat rather than the market, this can only be achieved if accurate cost information is obtained.

Moreover, when an ILEC must share its facilities with competitors, competition cannot be said to have occurred simply because multiple carriers serve a given market. When carriers are purchasing UNEs from Verizon, in lieu of investing in their own networks, any perceived increase in competition will be purely illusory.[2] As Justice Breyer stated:

> [F]irms that share existing facilities do not compete in respect to the facilities that they share, any more than several grain producers who auction their grain at a single jointly owned market compete in respect to *auction services*.[3]

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[2] *United States Telecom Ass'n v. Fed. Communications Comm'n*, 290 F.3d 415, 424 (D.C. Cir. 2002). (noting that such "synthetic competition" would not promote investment and facilities-based competition).

[3] *Verizon Communications v. Fed. Communications Comm'n*, 122 S. Ct. 1646, 1693, 1672 n.27 (2002) ("*Verizon*") (". . . .entrants may need to share some facilities that are very expensive to duplicate (say loop elements) in order to be able to compete in other, more sensibly duplicable elements (say, digital switching or signal-multiplexing technology).").

When the carriers' interests are not cooperatively aligned, as are the interests of the grain producers in Justice Breyer's example, particular attention must be paid to identifying the true economic costs of the shared facilities.

Standardization of UNE costing will only promote facilities-based competition if it produces company-specific UNE rates that: (1) discourage new entrants from using an incumbent's facilities when it is less expensive, economically speaking, for the new entrant to build its own facilities or buy them elsewhere, and (2) encourage new entrants to use an incumbent's facilities when it is less expensive, economically speaking, for the new entrant to do so.[4] Only UNE prices that accurately approximate realistic estimates of an ILEC's own forward-looking costs of providing the UNEs demanded will come close to achieving both of these results. This should be the goal of any standardized approach adopted by the Commission.

A standardized UNE costing approach that prices UNEs below the true economic costs of the shared facilities will not promote efficient competition. New entrants would never build their own facilities—indeed, it would make no sense for them to do so when UNE rates are set at a level that rarely exceeds the price of building their own facilities or buying them elsewhere. At a minimum, such a result is inconsistent with the FCC's stated objective that its UNE pricing rules will "serve as a transitional arrangement until fledgling competitors could develop a customer base and complete the construction of their own networks."[5]

IV. THE COSTS ASSOCIATED WITH THE STANDARDIZATION OF UNE COSTING FAR OUTWEIGH THE THEORETICAL BENEFITS

A. A Standardized UNE Cost Model Would Produce Less Accurate Estimates of Each Company's Costs

[4] *Verizon*, 122 S. Ct. at 1692.
[5] In re: Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, 15 FCC Rcd 3696 (1999) at ¶ 6 ("Third Report and Order").

Any uniformity that may be achieved through the adoption of a standardized UNE cost model is likely to come at the expense of accuracy and company-specificity—two essential components of any UNE costing endeavor. The cost models developed and used by the incumbents are designed to account for each carrier's specific network design, equipment and facilities deployed in the network, terrain, density, customer locations, labor costs, cost of money, tariff structure, accounting system, and cost-recovery strategies. The cost estimates produced by company-specific models necessarily reflect the operational realities and assumptions pursuant to which each carrier provides service.

UNE prices are intended to identify each incumbent carrier's forward-looking costs.[6] In its last brief to the Supreme Court in the case that upheld the FCC's UNE pricing rules, the FCC explained in definitive terms that the costs of the ILEC itself were the focus of a UNE proceeding:

> The costs measured by TELRIC are nonetheless those of *the incumbent itself.* Those costs are based, moreover, on actual prices of equipment that is commercially available today—equipment that carriers are already using to upgrade and expand their networks.[7]

The incumbents' company-specific cost models are designed with these UNE pricing principles in mind; the models estimate the company-specific costs of providing UNEs, based not only upon the company-specific prices the carriers actually pay, but also upon the information produced by their own accounting and engineering information systems, their own network characteristics, and their own tariff structures. Only by looking at the costs that

[6] First Report and Order at ¶ 685.
[7] Reply Brief for Petitioners Federal Communications Commission and the United States, *Verizon Communications, Inc. v. FCC* ("FCC Reply Brief") at p. 6 (emphasis added). The FCC gave as an example the fact that "a state commission, in setting TELRIC prices for switching elements, looked to prices of switches recently purchased by incumbent."

individual "incumbents actually expect to incur," can the Commission develop a cost model consistent with the FCC's UNE pricing standards.

A standardized cost model would forego this level of granularity and company specificity. Use of a one-size-fits-all cost model would never produce realistic and accurate company-specific UNE cost estimates—the hallmarks of UNE costing.

B. The Financial Costs that Would Be Incurred in Developing and Maintaining a Standardized UNE Cost Model Are Substantial

The costs of developing a standardized UNE cost model that is sophisticated enough to account for even a few of the differences among the carriers (as unlikely a proposition as it may be) cannot be readily identified without first knowing what the model will look like. However, it is reasonable to expect that the costs would be substantial, and would increase exponentially with the level of detail and the amount of agreement required among the parties. For example, there are a variety of different approaches to platform design and cost model development, each with different benefits. Similarly, there are hundreds (sometimes thousands) of inputs to a cost model. There will be considerable costs associated with attempting to standardize these platform assumptions and input parameters such that each carrier's data can be used. Considerable time and expense would need to be devoted to developing and correctly implementing the specifications for the agreed-upon platform, inputs categories, and input parameters.

In addition, the costs associated with maintaining and updating a standardized model would be significant. Telecommunications is a dynamic industry. The technologies underlying telecommunications networks are continually evolving to provide new services and achieve more efficient results. A cost model's development must mirror that of the network being modeled; and a model's ability to accurately estimate costs depends largely upon its ability to reflect these

developments and precisely determine the cost effects of their implementation. As such, a cost model must constantly be updated to reflect the latest, state-of-art technologies and deployment strategies.

Moreover, the three large ILECs may implement different technologies, and deploy these chosen technologies differently and at different points in time. Such complications would only increase the complexity associated with updating a standardized UNE cost model.

Setting the need to reflect real-world network and technological changes aside, there is the additional issue of changes in the regulatory framework: to the extent that unbundling requirements change, or the TELRIC standard is further refined or clarified, a standardized model would need to be modified accordingly. The costs of such an ongoing exercise are not minimal, and the likelihood of success, in any event, is not great because any changes or updates to the model would warrant an additional proceeding and call for further commenting by interested parties.

C. A Standardized UNE Cost Model Could Not Be Readily Altered

In a dynamic industry such as telecommunications, the need to account for the constant change taking place with respect to network design, new technologies and regulatory mandates is essential if UNEs costs are to be estimated accurately. The adoption of a standardized UNE cost model would necessarily limit the ability of the carriers and the Commission to respond to, and take advantage of, technological or regulatory developments. Similarly, advances in cost modeling, such as the migration from a PC-based platform to a web-based platform, would be extremely difficult, if not impossible, to incorporate into any common model adopted by the Commission. Moving forward with any required changes would create both additional financial

costs and further regulatory delay. However, not moving forward would result in a common model that is static, outdated, and incapable of producing accurate and reliable cost estimates.

In this regard, the FCC's experience developing its universal service Synthesis Model is instructive. The FCC undertook to develop a model based upon the best options submitted by the parties. This endeavor took years. All the while, telecommunications technology was advancing and the industry's understanding of how to model telecommunications costs was evolving. Carriers were able to adjust to these changing conditions by refining and modifying their own universal service and UNE cost models. However, these advancements could not be incorporated into the FCC's model quickly enough. In the end, the FCC adopted a model that was far from state-of-the-art, and produced only broad-gauge estimates of costs that were inaccurate and unreliable for directly establishing UNE prices. The FCC's expensive undertaking was met with court challenges and petitions for reconsideration upon the model's release. In the end, recognizing the model's limited capabilities, the FCC only used the model to apportion the federal fund among the states; it was never used to actually size the federal universal service fund.[8]

D. Use of a Standardized UNE Cost Model Would Have Detrimental Downstream Effects on Ordering Systems and Provisioning Processes

Non-recurring cost studies are designed to replicate a company's wholesale ordering systems and provisioning processes, taking into consideration achievable efficiency gains. Incumbent wholesale ordering systems and provisioning processes vary, often in significant ways, from carrier to carrier and, in the case of the three largest Florida incumbents, are used to provision UNE orders across multiple states. Use of a standardized non-recurring cost model

[8] The FCC adopted a hold harmless provision, which maintained funding at current levels.

cannot capture the variations in systems and processes used among companies. Consequently, the cost estimates produced by a standardized non-recurring cost model would not accurately estimate the costs incurred by each carrier. To the extent an incumbent must modify its systems and processes to better reflect the assumptions underlying the standardized cost model, the non-recurring costs borne by alternative carriers in Florida would only increase.

V. STANDARDIZATION OF UNE COSTING WILL BE DIFFICULT

A number of factors may impede the successful adoption of any standardized approach to UNE costing. Aside from threshold issue that no single model can accurately estimate the UNE costs of all three large ILECs operating in Florida, the adversarial nature of UNE proceedings is likely to impede, if not forestall completely, any effort to develop and implement a standardized approach. Because the benefits associated with standardization in UNE costing are so few, and the costs and risks so great, there is no incentive for carriers to participate in, or agree to, any standardization in UNE costing.

For example, the development of uniform inputs, or input parameters, would certainly be a difficult task. There are potentially over a thousand user-adjustable input values in any given cost model. The mere development of a menu of cost model inputs for the parties to consider would be expensive and consume considerable amounts of time. Moreover, assuming agreement could be reached on the *possible* input choices (a highly speculative assumption), getting the parties to agree on the details of the inputs' application (*i.e.*, how the data will be used within the model) would be a massive undertaking.

Even assuming that standardization in UNE costing was achievable, there is no guarantee that competing models, methodologies, or inputs would not be introduced by another party. Likewise, there is no guarantee that changes to the standardized approach would not be

proposed. In fact, given a party's due process right to put forth its case and counter any evidence presented, there is every reason to believe that parties will avail themselves of these options. Any standardization the Commission hoped to achieve may be purely illusory.

Second, it is unclear who would bear the cost of developing and implementing a standardized cost model, and who would be responsible for demonstrating, to the satisfaction of all parties, that the model is accurate and properly reflects each incumbent's specific operating realities. Regardless, such an exercise will not be accomplished quickly or inexpensively.

Third, parties may be reluctant to accept a standardized UNE cost model in Florida when those decisions can be used against them in UNE proceedings in other states. Standardization in UNE costing, to the extent achievable, would involve a great deal of compromise. Parties may be willing "give" with respect to one issue if they are able to "take" with respect to another. The platform assumptions or input values adopted, *when taken as a whole*, would reflect these negotiations; but the assumptions or inputs viewed in isolation would not. However, it is precisely these individual assumptions and inputs against which the assumptions and inputs proposed in other states will be benchmarked. Parties would be hesitant to compromise on a certain matter in Florida if that decision, taken out context, will be used against them in other states.

Fourth, regulatory developments at both the state and the federal level would complicate any attempt to achieve standardization in UNE costing. As the recent Triennial Review decision expected from the FCC makes clear, the ILEC's unbundling requirements are evolutionary in

nature.[9] As the FCC's decision demonstrates, telecommunications is a dynamic industry, and its regulation must be also. Competitive and technological advancements will continue to alter the UNE landscape—network elements that need to be unbundled today, may not need to be tomorrow. Use of a static, standardized approach in such a fluid environment would be of limited utility.

Fifth, standardization in UNE costing would be hindered by disagreement on how it should, or whether it does, adhere to the FCC's UNE pricing principles. Questions about the role of existing network characteristics continue to be litigated in Florida and other states. Likewise, different views concerning the design of the modeled network remain unresolved. Even issues that have been resolved in Florida (*e.g.*, multi-carrier hosting) are likely be raised again since parties may make claims of changes in technical capabilities. All of these uncertainties are likely to diminish a party's willingness to endorse standardization in UNE costing.

Finally, the Commission would need to determine who has ownership of, or property rights in, any intellectual property resulting from the development of a standardized cost model, methodologies, inputs or outputs. Interested parties are unlikely to contribute to the model's development (*e.g.*, write code or design input parameters) absent an assurance that any intellectual property supplied or developed will not be forfeited. Disputes over the rights to intellectual property may forestall attempts to attain standardization in UNE costing. In addition, failure to agree on the assignment of intellectual property rights may foreclose certain options that would otherwise be available.

[9] The FCC's decision is expected to: (1) give states extensive power in determining the fate of switching as a UNE—a decision that renders uncertain the future of UNE-P; (2) eliminate the need for line sharing, albeit with a three-year transition; and (3) lift the broadband unbundling requirements.

VI. STANDARDIZATION OF UNE COSTING WILL NOT RESOLVE ALL UNE COSTING ISSUES

The possible outcomes identified in the framework for these comments could never address, let alone solve, all of the potential issues raised in UNE cost proceedings. For example, at the initial workshop meeting in Tallahassee, Florida on December 18, 2002, it became apparent that some of the alternative local exchange carriers would like to better understand the terms and conditions underlying what appear to be the same UNEs provisioned by BellSouth and Verizon. An increased understanding of each carrier's terms and conditions is not contemplated by any of the proposals included in the framework for these comments.

VII. REDUCING THE FREQUENCY WITH WHICH UNE COST PROCEEDINGS ARE CONSIDERED BY THE COMMISSION MAY ACHIEVE SOME OF THE OBJECTIVES IDENTIFIED HEREIN

The potential outcomes identified in the framework for these comments seem to share a common objective: to ease the burden on Staff and the Commission in dealing simultaneously with complex UNE proceedings for the three large ILECs in Florida. This objective may be achieved, perhaps with greater ease and less cost than any of the suggested outcomes, if the Commission considered UNE rate-setting proceedings on a staggered basis and less frequently (perhaps every three years for a given ILEC).

VIII. CONCLUSION

The standardization of UNE costing, whether by adoption of a single model to be used by all carriers, or the more modest objective of standardized cost modeling criteria, is an expensive proposition that will yield few, if any, benefits. The Commission may find that, in its desire to obtain standardization in UNE costing, it has sacrificed the accuracy and company-specificity by which any UNE costing endeavor must be measured.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Undocketed
Standardization of Unbundled
Network Element Costing

Submitted: April 4, 2003

REPLY COMMENTS OF VERIZON FLORIDA INC.

Verizon Florida Inc. ("Verizon") respectfully replies to the opening comments filed by BellSouth Telecommunications, Inc. ("BellSouth"), Sprint-Florida, Inc. ("Sprint"), and AT&T Communications of the Southern States, LLC and WorldCom, Inc. (collectively, "AT&T/WorldCom") on February 28, 2003 regarding the proposed standardization of unbundled network element ("UNE") costing.

I. THE ADOPTION OF A SINGLE COST MODEL IS IMPRACTICAL AND CONTRARY TO THE PRINCIPLES OF UNE COSTING

The incumbent local exchange carriers ("ILECs") agree that the adoption of a single model is a costly and impractical exercise that will not yield TELRIC-compliant UNE rates or simplify the regulatory process. As Verizon, BellSouth and Sprint explained in their opening comments, a single, standardized model is incapable of producing the kind of accurate, company- and state-specific cost estimates required in UNE proceedings.[1] The only commenting parties advocating the use of a single model are AT&T/WorldCom. AT&T/WorldCom claim that the Commission should choose between three separate cost models: the HAI Model, Release 5.3 ("HM 5.3"), the FCC's universal service Synthesis Model ("Synthesis Model"), or the bottom-up version of BellSouth's Telecommunications Loop Model ("BSTLM"). The

[1] Before the Florida Public Service Commission, In re: Undocketed Standardization of Unbundled Network Element Costing, *Comments of Verizon Florida Inc.* (Feb. 28, 2003) at 1-2, 5-6 ("Verizon Comments"); Before the Florida Public Service Commission, In re: Undocketed Standardization of Unbundled Network Element Costing, *Comments of BellSouth Telecommunications, Inc.* (Feb. 28, 2003) at 1-5 ("BellSouth Comments"); Before the Florida Public

Commission should reject this recommendation. HM 5.2a (HM 5.3's predecessor) and the Synthesis Model are not capable of producing accurate UNE cost estimates for a single company (let alone estimates for a group of different companies), and therefore have been soundly rejected by other state regulatory commissions.[2] Perhaps this is why AT&T/WorldCom did not sponsor either of these models in the UNE dockets below. Moreover, the other model, BSTLM, is deemed by its sponsor (BellSouth) to be ill-suited for standardized UNE costing purposes.[3]

The ILECs all agree that a single model cannot capture the numerous and significant differences among carriers providing service in Florida.[4] Sprint correctly notes, "No one model can accurately and efficiently calculate the costs which all ILECs incur to provide UNEs due to the differences in individual ILEC's network technologies, rate structures, provisioning systems, and billing systems."[5] BellSouth concurs:

> [T]he incumbent companies have expended considerable resources in the development of methods and procedures, operational support systems, billing processes, and performance measures and are held to providing elements as defined in existing contractual agreements. In order to be valid, the Commission's "standard model" would need to reflect the very real differences

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Service Commission, In re: Undocketed Standardization of Unbundled Network Element Costing, *Comments of Sprint-Florida, Inc.* (Feb. 28, 2003) at 2-8 ("Sprint Comments").

[2] Before the Massachusetts Department of Telecommunications and Energy, D.T.E. 01-20, *Final Order* (July 7, 2002); Before the Pennsylvania Public Service Commission, Docket No. R-00016683, *Final Order* (Oct. 24, 2002); Before the Maryland Public Service Commission, Case No. 8879, *Letter Order* (Oct. 8, 2002); Before the New York Public Service Commission, Case No. 98-C-1357, *Order on Unbundled Network Element Rates* (Jan. 28, 2002); Before the New Jersey Board of Public Utilities, Docket No. TO00060356, *Summary Order of Approval* (Dec. 17, 2001).

[3] BellSouth Comments at 1 ("BellSouth does *not* support the standardization of models, not even if its own models are chosen.")

[4] Sprint Comments at 4 ("No two telecommunications companies have identical UNE rate structures. There are distinct differences in the types of UNE rate elements, the number of UNE rate elements, the degree of UNE rate deaveraging, the types of features and feature packages, and the type and number of nonrecurring charges among ILECs.").

[5] Sprint Comments at 16-17.

> among the companies – a requirement that a common model would have difficulty in satisfying.[6]

Even the Commission recognizes that the operations of the three Florida ILECs are fundamentally different. With respect to operations support systems ("OSS"), the Commission stated:

> From a practical perspective, we question the feasibility of having one national system. Even within the state of Florida, we are not attempting to establish one system for all ILECs. There is variability in the operations support systems and processes used by the various ILECS, which means that, at a minimum, the business rules may need to vary between ILECs. While we believe that the wholesale service quality measurements and standards for the Florida ILECs should be similar, we do not envision that they should be identical across ILECs since there are differences between companies in how functionally similar systems measure processes.[7]

By definition, a single, standardized cost model ignores the very real differences among carriers. Yet, it is precisely these differences that UNE cost proceedings are intended to capture. The FCC has made clear that the primary purpose of a UNE cost proceeding is to produce "costs that incumbents actually expect to incur in making elements available to new entrants."[8] A standardized, one-size-fits-all model is incapable of accurately reflecting such costs, and thus necessarily violates TELRIC costing principles.[9]

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[6] BellSouth Comments at 3. *See also* BellSouth Comments at 1 ("[T]he fact that there are legitimate differences in cost among the three incumbents cannot be circumvented. The companies have different geographic serving areas, different contractual restrictions and obligations, different provisioning practices, different deployment guidelines and network initiatives, different data sources, different financial risks, and different rate structures.").

[7] Before the Federal Communications Commission, In the Matter of Performance Measurements and Standards for Unbundled Network Elements and Interconnection, Docket Nos. 01-318, 98-56, -147, -98, -141, *Comments of the Florida Public Service Commission* (Jan. 18, 2002) at 2.

[8] In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, *First Report and Order*, FCC 96-325 (rel. Aug. 8, 1996) at ¶ 685 ("First Report and Order").

[9] Verizon Comments at 1-2.

The ILECs also agree that the development, maintenance, and update of a single model will be extremely expensive and time-consuming. Among the costs identified by the incumbents are those associated with:

- Programming new code, modifying existing programs, and developing new databases
- Administering and updating the models
- Paying right-to-use fees and licensing fees for existing models
- Testing and verifying the model logic, assumptions and results
- Obtaining equipment vendor information
- Producing documents and manuals
- Training new users
- Obtaining new computer equipment
- Developing new data sources
- Geocoding/sampling
- Preparing cost studies that are unique to Florida (and useless elsewhere)
- Preparing additional studies if, as anticipated, other state regulatory commissions within the incumbents' jurisdiction desire a comparison to the "Florida model"

These and other costs will be borne by both the carriers and the taxpayers.

The incumbent carriers do not have the resources to devote to this futile exercise in Florida, while also supporting their own internal models for use in other states.[10] As BellSouth correctly notes, all three incumbents have expended considerable resources to develop and refine

[10] *See* Sprint Comments at 5 ("Sprint does not have the current resources necessary to support unique cost models in each of its 18 states, or even one cost model that is unique to the one that is used in the other 17 states. It would be costly and burdensome to require Sprint to acquire the additional resources necessary to support and operate a cost model solely for use in Florida.").

separate models that reflect each carrier's unique way of providing (and supporting the provisioning of) UNEs:

> Even though each incumbent began with the same set of FCC standards, since each incumbent company independently negotiated with [alternative local exchange carriers ("ALECs")], the unbundled offerings are not defined in exactly the same manner. Additionally, the provisioning process and supporting systems are not identical. These differences are reflected in the incumbents' cost studies.[11]

It would be costly and burdensome to require the incumbents to develop, support and operate a separate cost model solely for use in Florida.[12] As Sprint notes, "If Sprint were required to use a non-Sprint cost model solely for Florida, all of the cost efficiencies created and gained by Sprint in developing its standard cost model for use across its 18 state operations would be negated."[13] Moreover, as Sprint appropriately recognizes, adoption of a single model is likely to create confusion for those ALECs ordering UNEs in multiple states, as the incumbents' price lists for Florida will deviate from the uniform price lists used in other states in which the ILECs provide service.[14] Use of a single model will also require an ongoing commitment of capital and resources. Without such a commitment, any benefits that a single model may bring will be short-lived.

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[11] BellSouth Comments at 2.
[12] Sprint Comments at 5.
[13] Sprint Comments at 5. *See also* BellSouth Comments at 2 (noting that if a single model is adopted in Florida, the incumbents' efforts "to develop and refine a set cost models, which interface with each other and with the data sources required to populate them . . . would be scrapped").
[14] Sprint Comments at 4.

The ILECs also agree that reaching consensus on a single model will be extremely difficult (if not impossible) given the real and significant differences among the parties.[15] As BellSouth explains:

> To fulfill the FCC's requirement that the UNE rates reflect the forward-looking costs that the incumbents will actually incur, consensus would need to be reached by the parties. In other words, each company would have to "buy into" the models ordered by the Commission and find the models' assumptions, methodologies, and results accurate.[16]

However, given the extremely high costs and risks associated with the adoption of a single UNE cost model and the lack of associated benefits, it will be extremely difficult to obtain the concessions and compromises essential to the adoption of a standardized UNE cost model. Indeed, it took the FCC years to develop its less-sophisticated universal service Synthesis Model, at considerable expense to the federal government and industry, and the model has proven to be of limited utility.

The ILECs also agree that any cost model adopted would lack the necessary flexibility to take advantage of advances in cost modeling (*e.g.*, migration to a web-based platform) and respond to regulatory and technological change.[17] This is particularly problematic given that: (1) as both Sprint and Verizon note, the FCC's Triennial Review Order is likely to result in

[15] *See* BellSouth Comments at 3 ("In order to be valid, the Commission's 'standard model' would need to reflect the very real differences among the companies – a requirement that a common model would have difficulty in satisfying.").
[16] BellSouth Comments at 3. *See also* BellSouth Comments at 5 ("[I]t is imperative that the parties that would be required to use the 'standard model' buy into the process. The incumbents would need to feel comfortable with the results produced by whatever model the Commission orders – i.e., the model, with appropriate input, must produce results that are indicative of the incumbent's forward-looking costs. Additionally, to glean the most from this effort, the ALECs must support the modeling process or this point of contention would remain open.").
[17] BellSouth Comments at 5. *See also* BellSouth Comments at 6 (noting that standardization of inputs also "creates a stagnant approach to developing costs and ignores the fact that over time inputs will change").

widespread changes in the incumbents' unbundling requirements;[18] (2) advancements in technological innovations—such as the shift from a circuit-switched to a packet network—are occurring at a rapid pace; and (3) the telecommunications industry is inherently fluid and dynamic. In short, a standardized model would quickly become obsolete given the need to obtain industry and regulatory consensus on all future modifications.

Finally, the ILECs concur that any perceived benefits associated with the adoption of a single model are purely illusory. As BellSouth notes, the incumbents (and ALECs) have "the legal right to present and defend models, inputs, and methodologies [they] support and challenge any default standards set by this Commission."[19] Moreover, the incumbents and ALECs have the right to propose changes to the standardized model.[20] Given the adversarial nature of UNE cost proceedings, there is every reason to believe that the ILECs will avail themselves of these options. Thus, it is extremely unlikely that any of the perceived benefits flowing from a single model will ever materialize.[21]

For these reasons, and those identified in its opening comments, Verizon joins BellSouth and Sprint in opposing the adoption of a single model.[22]

II. AT&T/WORLDCOM DO NOT IDENTIFY A SINGLE LEGITIMATE REASON WHY THE ADOPTION OF A STANDARDIZED COST MODEL WOULD BE BENEFICIAL

[18] Sprint Comments at 8; Verizon Comments at 11.
[19] BellSouth Comments at 9.
[20] Verizon Comments at 10.
[21] AT&T/WorldCom also admit that parties are free to proffer their own cost models and propose changes to the standardized model. Before the Florida Public Service Commission, In re: Undocketed Standardization of Unbundled Network Element Costing, *Comments of AT&T Communications of the Southern States, LLC and WorldCom, Inc.* (Feb. 28, 2003) at 4 ("AT&T/WorldCom Comments").
[22] BellSouth Comments at 1; Sprint Comments at 16-17.

AT&T/WorldCom's comments are filled with unsupported allegations, inconsistencies, and half-truths. AT&T/WorldCom have not proffered a single, legitimate reason why the development of a standardized cost model would be beneficial, cost-effective, or even practical. It is precisely because the development of a standardized model cannot reasonably be supported that, in the seven years since the passage of the 1996 Telecommunications Act, not a single state regulatory commission has adopted a standardized model for purposes of developing forward-looking UNE costs.[23]

A. The Supposed Benefits Identified by AT&T/WorldCom Would Be Impossible to Attain

AT&T/WorldCom tout the potential benefits of adopting a single model, but do not offer a shred of proof to establish that these alleged benefits are realistic or attainable. In the process, AT&T/WorldCom understate (or completely ignore) the costs associated with the adoption of a single model. For example, AT&T/WorldCom would have the Commission believe that, by simply issuing an Order mandating the adoption of a single model, the adversarial nature of UNE cost proceedings would somehow disappear. It is flat wrong to presume, as AT&T/WorldCom do, that in the wake of such an order the ALECs and ILECs will no longer disagree, or that the differences characterizing each ILEC's operations and affecting each ILEC's UNE rate structure will cease to exist.

A Single Model Will Not Increase Efficiencies and Decrease Costs. AT&T/WorldCom assert that a single model will "significantly improve the administrative efficiency of the UNE

[23] *See, e.g.*, Sprint Comments at 4 ("No state commission has issued an order forcing Sprint to adopt and exclusively use any single UNE model other than its own.").

costing process,"[24] and "reduce the costs of participation in regulatory proceedings."[25] However, at the same time, AT&T/WorldCom acknowledge, "While this Commission should require each party to file UNE rates using the standardized process resulting from these workshop effort, *each party also should have the opportunity to present its own evidence using any additional alternative methodology it chooses to present.*"[26] This acknowledgment that incumbents and ALECs (like AT&T/WorldCom) remain free to proffer their own cost models or, presumably, propose changes to any standardized model that may be adopted by the Commission, belies the notion that any of the alleged benefits identified by AT&T/WorldCom would actually be realized. Given the adversarial nature of UNE proceedings, there is every reason to believe that incumbents, as well as ALECs, will sponsor their own cost studies, challenge any standardized approach that may be adopted, and propose changes to any common model adopted by the Commission, especially given that they have the legal right to do so.[27] These realities, unaccounted for by AT&T/WorldCom, render any perceived efficiency improvements or cost savings forever illusive.

A Single Cost Model Will Not Produce Comparable and Consistent Results.

AT&T/WorldCom claim that UNE prices for the three ILECs should be comparable and consistent because "the characteristics of the territories served by the three Florida [ILEC's] are similar."[28] This unsupported statement is erroneous. The service territories of the three incumbents are actually quite different. Verizon's service territory in the Tampa/St. Petersburg

[24] AT&T/WorldCom Comments at 3.
[25] AT&T/WorldCom Comments at 3.
[26] AT&T/WorldCom Comments at 4 (emphasis added).

area is densely populated, whereas BellSouth and Sprint's service territories are more widely dispersed, both geographically and by density. For the state overall, BellSouth serves 3.5 times as many lines per local switch than does Verizon, and presumably, the ratio is even larger for Sprint.[29] The incumbents' costs necessarily reflect their divergent operational realities and unique network design. Given the vastly different service territories of the three incumbents, their UNE rates naturally exhibit significant variation. Moreover, even assuming the incumbents' service territories were similar, a carrier's costs are dependent upon a multitude of other factors beyond the mere geography of a particular serving area (*e.g.*, economies of scope and scale, cost of money, labor costs, network design, equipment and facilities deployed in the network, density, customer locations, tariff structure, accounting system, and cost-recovery strategies).

For example, due to differences in the size of the incumbents' operations both nationally and in Florida, it is reasonable to expect that BellSouth, Verizon, and Sprint pay different amounts for network components such as poles, cables and switches, as well as for the labor needed to install these items. Similarly, Verizon has adopted the cost-recovery strategy of excluding common costs in its non-recurring rates, whereas BellSouth includes them. Even if all other things were equal (which they are not) this fact alone would mean that Verizon's recurring rates would be higher than BellSouth's recurring rates. Moreover, Verizon's costing system is designed to allow Verizon to identify the costs of all of its offerings (i.e., retail, access, and

[27] Indeed, AT&T/WorldCom have crafted a convenient escape route for themselves, arguing that a single model is the only choice available to the Commission while at the same time legitimizing the introduction of new models, methodologies, or inputs should AT&T/WorldCom not be satisfied with the Commission's ultimate decision.
[28] AT&T/WorldCom Comments at 2.
[29] 2002 ARMIS Data, Report No. 4307. Sprint does not report ARMIS data.

wholesale). A standardized UNE model would not only be deficient in identifying Verizon-specific UNE costs, it would be useless for costing Verizon's other services and products.

A Single Model Will Not Decrease Litigation Expenses. AT&T/WorldCom claim that a single model will make "the discovery process that occurs in UNE costing much more efficient."[30] As a threshold matter, the existing process is not inefficient. To the contrary, the United States Supreme Court observed that:

> TELRIC rate proceedings are surprisingly smooth-running affairs, with incumbents and competitors typically presenting two conflicting economic models supported by expert testimony, and state commissioners customarily assigning rates based on some predictions from one model and others from its counterpart.[31]

Moreover, the adoption of a single model will only complicate matters. With carriers free to introduce cost studies of their own, the discovery process will become *more* burdensome and costly. Parties will have to take discovery on a greater number of proposed cost studies than they have in the past, and undoubtedly will request information, and demand alternative model runs, to better understand the differences between the standardized model and any independent cost studies introduced. Moreover, other state regulatory commissions within the incumbents' national footprints may also to require that comparisons be made to the "Florida model," thereby increasing the carriers' costs outside of Florida.

B. AT&T/WorldCom Understate the Significant Costs Associated with the Adoption of a Single Model

AT&T/WorldCom attempt to downplay the significant costs associated with the adoption of a standardized cost model. However, AT&T/WorldCom's arguments cannot withstand

[30] AT&T/WorldCom Comments at 11.
[31] *Verizon v. Federal Communications Comm'n*, 122 S.Ct. 1646, 1651 (2002).

scrutiny. AT&T/WorldCom understate, and in many instances completely ignore, the considerable expenditure of Commission and industry resources that will necessarily accompany any endeavor to develop a standardized cost model. Contrary to AT&T/WorldCom's assertions, the costs incurred, resources expended, and time wasted will be substantial.

Costs Will Not Be Short-Term. AT&T/WorldCom are mistaken in claiming that the costs associated with adopting a single model will only be "short-run."[32] AT&T/WorldCom themselves acknowledge that a potential cost of adopting a single model is the need "to modify an existing cost model or to purchase licenses to use a cost model developed and maintained by a third party."[33] While this is certainly a legitimate cost, it is not going to be short-term, and it is not going to be minimal. Indeed, in the past, AT&T/WorldCom have stated that the cost to review remotely (via PCAnywhere) the customer location data compiled and manipulated by TNS Telecoms ("TNS") (the owner of HM 5.3's proprietary customer location data) was $1,500 to $2,000 per day. Likewise, additional ongoing expenses will also include the cost of purchasing licenses for models maintained by a third party (*e.g.*, Telcordia's SCIS model), and the cost of employing a third-party to develop inputs or maintain the model if, as AT&T/WorldCom suggest, the model is too complicated to be maintained by the parties themselves.[34]

[32] AT&T/WorldCom Comments at 12.
[33] AT&T/WorldCom Comments at 11.
[34] AT&T/WorldCom Comments at 12.

Costs Will Not Be Avoided. AT&T/WorldCom recognize that "[a]dditional cost will be incurred to develop the underlying data that will be used in the model,"[35] but go on to proclaim that:

> ....certain costs will also be avoided because the parties will no longer need to develop separate data sets for three different models. In fact, the pooling and sharing of resources should make the data development process more efficient than would be achieved individually.[36]

This is incorrect. Incumbents do not create data sets to be run in the cost models of the other ILECs. Moreover, the "pooling and sharing" of resources would only be possible if the underlying source data were the same across all three ILECs, which is clearly not the case. AT&T/WorldCom claim, "Further costs savings can be achieved by using a single third-party vendor to process all of the input data."[37] While this may be true, any such cost savings would be minimal because the bulk of the work in developing model inputs is incurred in extracting data from each company's own information systems—a process that cannot be made uniform for all three ILECs, and is not amenable to the use of third-party vendors. Moreover, even assuming such savings were possible, they would come at the expense of adopting a cost model that is too complicated and costly for the individual parties to run. Finally, AT&T/WorldCom's alleged cost savings ignore the fact that the adoption of a standardized model will not obviate the filing of separate cost studies by the individual carriers.

Costs Will Not Be Reduced in the Long Run. AT&T/WorldCom contend that, in the long run, it will be "much more efficient for three parties to contribute in developing one cost model

[35] AT&T/WorldCom Comments at 12.
[36] AT&T/WorldCom Comments at 12.
[37] AT&T/WorldCom Comments at 12.

than for three parties to each develop a cost model of their own."[38] This contention is flatly wrong. All three incumbents strenuously oppose any attempt to develop a standardized cost model. The ILECs will not willingly abandon the company-specific cost models that they have spent years developing and refining, and will continue to use in other jurisdictions, for a single Florida model that lacks accuracy and company-specificity. Given that a standardized model will be unable to capture the specific costs incurred by each ILEC, in violation of TELRIC principles and the FCC's UNE pricing rules, court challenges are certain to follow immediately upon its adoption. As a result, the outcome the Commission had hoped to achieve would be delayed and, very possibly, invalidated by a subsequent court ruling.

The Adoption of a Single Model Is Not in the Public Interest. AT&T/WorldCom's claim that "standardization is always in the public interest"[39] completely disregards the objective of a UNE cost proceeding: to obtain accurate company and state-specific UNE cost estimates. The FCC has stated in no uncertain terms that the costs of the ILEC itself are the focus of a UNE proceeding:

> The costs measured by TELRIC are nonetheless those of *the incumbent itself.* Those costs are based, moreover, on actual prices of equipment that is commercially available today – equipment that carriers are already using to upgrade and expand their networks.[40]

The incumbents' company-specific cost models are consistent with the FCC's UNE pricing standards—each company's model estimates UNE costs based upon the company-specific prices the carrier actually pays, the specific manner in which the carrier provides and bills its services,

[38] AT&T/WorldCom Comments at 12-13.
[39] AT&T/WorldCom Comments at 13.
[40] Reply Brief for Petitioners Federal Communications Commission and the United States, *Verizon Communications, Inc. v. Federal Communications Comm'n* ("FCC Reply Brief") at p. 6 (emphasis added).

the characteristics of the network over which the carrier provides service, and the specific tariff structure according to which the carrier's services are priced. A cost model should be designed to capture the network, operational, and data realities of a particular carrier. A carrier's operations are not organized or structured to conform to a specific cost model design; therefore, no standardized model could ever properly comprehend the sundry nuances between carriers—the resulting costs would be relevant only by chance. The public interest is served when, in accordance with TELRIC principles, UNE costs are based upon the costs that the incumbents "actually expect to incur."[41] This result is impossible to achieve with a standardized, one-size-fits-all cost model.

The Adoption of a Single Model Will Be an Incredibly Complex Endeavor.

AT&T/WorldCom proclaim, "There is a *single factor* that is essential to successfully implementing a single, standardized cost model – a Commission order requiring one."[42] AT&T/WorldCom recognize the need for workshops, comments and a compliance filing, but conclude that there are *no other factors* that "stand in the way of successful implementation of a single loop cost model."[43] AT&T/WorldCom are wrong. A standardized model will not be implemented successfully simply because the Commission orders its adoption. Rather, the viability of the underlying premise (*i.e.*, whether the standardized model can accurately estimate each carrier's unique costs of providing UNEs) will determine whether the endeavor succeeds or fails. As Verizon and the other incumbents have demonstrated, this premise is fundamentally flawed, and thus any attempt to standardize UNE costing will be futile.

[41] First Report and Order at ¶ 685.
[42] AT&T/WorldCom Comments at 13 (emphasis added).
[43] AT&T/WorldCom Comments at 13-14.

AT&T/WorldCom ignore completely the complexities inherent in any UNE costing endeavor, let alone one where each and every aspect of the cost model must be approved by multiple parties with divergent interests. The initial outline of issues to be addressed in this workshop prepared by AT&T/WorldCom's own consultant, Mr. Brian F. Pitkin, demonstrates just how complex the process leading up the adoption of a standardized model will be. Charged with crafting an outline for the workshop's comments to follow, Mr. Pitkin submitted for the parties' consideration a framework with approximately *178 separate issues* on which the parties were to comment. While Mr. Pitkin's outline was rejected in favor of a more simplified approach, it does highlight the vast array of issues that must be addressed, debated, and ultimately agreed upon if the Commission attempts to develop a single model. At bottom, the development of a single "Florida model" will be difficult, protracted, and costly.

AT&T/WorldCom implicitly acknowledge the complexities involved in adopting a standardized model by suggesting that "the Commission should first concentrate its standardization efforts on recurring UNE loop rates...."[44] However, they ignore the fact that the modeled network must be consistent for loops, switching and transport. It is erroneous to suggest that loops can be modeled and costed in isolation. The development of the modeled expenses and common costs are contingent upon, and directly related to, the modeled network. It is not possible to develop a standardized loop model without also considering expenses, common costs, and the rest of the modeled network.

C. AT&T/WorldCom Take Positions that Are Internally Inconsistent or Only Divulge Half the Facts

[44] AT&T/WorldCom Comments at 3.

AT&T/WorldCom's comments are riddled with internal inconsistencies and filled with half-truths. Rather than support the adoption of a standardized cost model, AT&T/WorldCom's arguments provide ample basis for rejecting such an approach.

The Current Process Does Not Discriminate Against ALECs. Contrary to AT&T/WorldCom's claims, the current UNE costing process does not discriminate against ALECs. AT&T/WorldCom claim, "Today, the UNE costs ALECs incur to provide service to Florida consumers often depend on nothing more than the particular cost model that was used to establish the UNE rates."[45] AT&T/WorldCom cite to a fifteen-mile stretch of US 301 north of Tampa (allegedly served by BellSouth, Sprint and Verizon), and contend that "there is no logical or valid reason" why the UNE charges between the three incumbents should differ. First, AT&T/WorldCom have their facts wrong. AT&T/WorldCom's Attachment 1, which allegedly details the differences among the loop rates charged by the three ILECs, erroneously states that Verizon's loop rate along US 301 for Dade City, Florida (central office Zephyrhills) is $26.15. Verizon does not have customers in Dade City; that is Sprint's territory. Verizon does have a central office in Zephyrhills, but the loop rate for that office in Zone 2 is $16.18, not $26.15 as AT&T/WorldCom allege.[46]

Even if AT&T/WorldCom had their facts straight, however, this example only tells half the story. AT&T/WorldCom fail to mention that the rates charged along this stretch of highway reflect not only the costs of serving those particular end users, but also the costs of serving *all other customers* in each wire center in the relevant deaveraged zone for each ILEC. Thus, even

[45] AT&T/WorldCom Comments at 10-11.
[46] AT&T/WorldCom also neglected to reduce the UNE-P rate by $1.39 to account for the use of integrated digital loop carrier ("IDLC").

if the costs in each of the three wire centers were identical, there is no reason why the rates charged by the three ILECs should be the same, since the average costs in each wire center's deaveraged zone are rarely (if ever) identical.

Moreover, AT&T/WorldCom's claim that the three incumbents have similar purchasing power, economies of scale, engineering standards, and facilities investments is unsupported and omits a number of significant details. The three incumbents' operational realities and costs of doing business are not the same, and AT&T/WorldCom have not presented any evidence to the contrary. For example, the ILECs' placement costs in Florida reflect the different local labor market conditions, as well as differences in terrain and density characteristics. Contrary to AT&T/WorldCom's claims, the divergence among the three ILEC's rates is not caused by the use of different cost models. Rather, it is caused by the very different operational realities and assumptions pursuant to which each carrier provides service.

The ILECs Do Not Have "Complete Control" Over the Cost Modeling Process.

AT&T/WorldCom claim that the ILECs have complete control over the form and type of inputs into the costing process.[47] Not so. First, Verizon does not develop cost models "to achieve a particular result." Rather, Verizon, and presumably other ILECs, design their cost models to produce accurate estimates of their costs of providing UNEs. Second, the UNE costing dockets, which were recently completed for Verizon, BellSouth and Sprint, afforded the parties much longer than "weeks" to analyze and evaluate the incumbents' UNE models and associated cost estimates. In many instances, these proceedings have been ongoing for years. Third, even if the Commission were to accept AT&T/WorldCom's argument, which it should not, it counsels in

[47] AT&T/WorldCom Comments at 7.

favor of more time to evaluate the various cost models, not the adoption of an entirely new cost model that will take years to develop and implement, and thereby further extend the UNE costing process. Fourth, the ILECs do not have complete control over the cost modeling process because, as AT&T/WorldCom acknowledge, the ALECs are free to introduce their own cost studies and thereby exert "control over the form and type of inputs into the costing process." Finally, if AT&T/WorldCom truly believed that they did not have enough time, and lacked the necessary documentation, to evaluate the incumbents' models, input values, and resulting UNE costs, they could have requested additional time and/or introduced one of the cost models they now advocate.

D. The Cost Models Recommended by AT&T/WorldCom Are Unsuitable for UNE Costing Purposes and Inconsistent with the Modeling Principles Advocated by AT&T/WorldCom

Two of the cost models advocated by AT&T/WorldCom are inappropriate for UNE costing, repeatedly have been rejected for UNE costing purposes,[48] and contradict many of the modeling principles advocated by AT&T/WorldCom in their opening comments.

The FCC's Universal Service Synthesis Model Is Incapable of Producing Accurate UNE Cost Estimates. The FCC's universal service Synthesis Model is wholly inappropriate for UNE costing purposes. The Synthesis Model was not designed to develop forward-looking UNE costs, and the FCC has repeatedly cautioned parties against making any claims regarding the use of the Model for such purposes. The FCC has made it clear that:

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[48] Curiously, AT&T/WorldCom allege, "In the end, there is *one cost model* that most faithfully incorporates TELRIC concepts and it makes no sense to rely on an inferior approach to establish UNE rates in some Florida locations when a superior cost model is available." AT&T/WorldCom Comments at 5 (emphasis added). In the very next sentence, AT&T/WorldCom recommend the adoption of *three different cost models* -- HM 5.3, the Synthesis Model and BSTLM (AT&T/WorldCom Comments at 5) -- a statement clearly at odds with

> The federal cost model was developed for the purpose of determining federal universal service support, and it *may not be appropriate to use nationwide values for other purposes, such as determining prices for unbundled network elements.* We caution parties from making any claims in other proceedings based upon the input values we adopt in this Order. [49]
>
> The FCC recently reiterated this position when it stated:
>
> *The Commission has never used the USF cost model to determine rates for a particular element, nor was it designed to perform such a task.* The model was designed to determine relative cost differences among different states, not actual costs. That is the purpose for which the Commission has used the model in the universal service proceeding. [50]

Thus, contrary to AT&T/WorldCom's assertions, the Synthesis Model was not intended, and cannot properly be used, to develop accurate and reliable UNE cost estimates.

AT&T/WorldCom's attempts to modify the Synthesis Model for UNE costing purposes have also proven unsuccessful. In an effort to remedy obvious model deficiencies (while at the same time substantially reducing the cost estimates produced by the Model), AT&T/WorldCom made significant changes to the Synthesis Model's platform and input values, thereby producing the so-called "Modified Synthesis Model." However, AT&T/WorldCom's attempts to "fix" the Synthesis Model only exacerbated existing model flaws, producing cost estimates that were significantly understated and inappropriate for state UNE purposes.

One of the most fundamental, and ultimately fatal, flaws with the Modified Synthesis Model is its inability to produce cost estimates for the vast majority of UNEs that ILECs must

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AT&T/WorldCom's assertion that there is *one* clearly superior cost model. This assertion also begs the question of why AT&T/WorldCom did not file any of these "superior" cost models in the UNE dockets below.

[49] In re Federal-State Joint Board on Universal Service, In re Forward-Looking Cost Mechanism for High Cost Support for Non-Rural LECs, 14 FCC Rcd 20156, *Tenth Report and Order* (1999) at ¶ 32 (emphasis added) ("Tenth Report and Order"). *See also* Tenth Report and Order at 31, n.416.

[50] In the Matter of Application of Verizon VA New England, Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon VA Long Distance), NYNEX Long Distance (d/b/a Verizon VA Enterprise Solutions) And Verizon VA

make available to ALECs. This shortcoming stems from the Synthesis Model's genesis as a universal service cost model: in a universal service context, where the range of costs to be estimated is limited to plain old telephone service ("POTS"),[51] there is simply no need to model the network elements used to provide special access and high-capacity services (*e.g.*, DS-1 and DS-3 loops, dark fiber, and ISDN loops), let alone the broad spectrum of UNEs required by the FCC.[52] The ability to model these network elements is essential and, indeed, required by the FCC's rules.[53] The Modified Synthesis Model, however, lacks this ability.[54] For these and other reasons, the Modified Synthesis Model has been rejected repeatedly by state regulatory commissions.

HM 5.3 Is an Inaccurate and Unsupported UNE Costing Tool. HM 5.3 is equally ill-suited to the task of UNE costing. HM 5.3 is nothing more than a convoluted conglomeration of unsubstantiated engineering assumptions and dubious estimating methodologies that have never been shown to be reasonable. The vast majority of the inputs used in the Model are based upon data from inconsistent sources and, in most cases, "expert" opinion that has little or no record support. Moreover, the Model's customer location data, along with the underlying components and algorithms, are essentially a "black box" that is insusceptible to meaningful review and analysis.

Global Networks Inc. for Authorization to Provide In-Region, Inter-LATA Services in Massachusetts, CC Docket No. 01-9, FCC 01-130, *Memorandum Opinion and Order* (rel. April 16, 2001) at ¶ 32 (emphasis added).

[51] In re Federal-State Joint Board on Universal Service, In re Forward-Looking Cost Mechanism for High Cost Support for Non-Rural LECs, 13 FCC Rcd 21323, *Fifth Report and Order* (1998) at ¶¶ 70, 75; *see also* Tenth Report and Order at ¶¶ 31-32.

[52] *See* 47 C.F.R. § 51.319.

[53] *See id.* § 51.505 (requiring prices that are based on TELRIC costs to be "calculated taking as a given the incumbent LEC's provision of other elements").

HM 5.3 is based upon a set of theoretical and hypothetical assumptions, often supported by only the opinion of AT&T/WorldCom's consultants. In effect, AT&T/WorldCom substitute the judgment of a handful of consultants—principally engaged in the support of a litigation effort rather than running a real-world network—for the collective record of efficient decisions made while operating an actual, fully-functioning network.

HM 5.3 also violates many of the cost modeling principles advocated by AT&T/WorldCom. For example, AT&T/WorldCom claim, "[T]he Commission will need to put procedures in place to ensure that the models are sufficiently open and verifiable to ensure that its criteria are fully met – no 'black-boxes' can exist."[55] If there is one cost model that has consistently been rejected because it remains a "black box," it is HM 5.3 (and its predecessor releases). Critical components of HM 5.3 are closed entirely from inspection—paramount among them is the Model's customer location database. Fundamental to determining the cost of providing service is the location of the customers to be served. The customer location data used in HM 5.3, however, is preprocessed and input into the model to determine the "clustering," or allegedly natural groupings, of customers. AT&T/WorldCom and TNS have steadfastly refused to grant any party—including state and federal regulatory commissions, incumbents, competitive

[54] Indeed, AT&T/WorldCom's own witness in the UNE dockets below, Mr. Brian F. Pitkin, admits that the Modified Synthesis Model "does not produce costs for all of the UNEs as they are outlined . . . [in] this proceeding." Before the Maryland Public Service Commission, Case No. 8879, *Hearing Transcript* (Dec. 6, 2001) at 1215.

[55] AT&T/WorldCom Comments at 19. AT&T/WorldCom also accuse the ILECs of attempting "to 'game' the regulatory system by designing cost models that bury key assumptions in obscure computer code." AT&T/WorldCom Comments at 7. This is not true and, not surprisingly, no legitimate support is offered to substantiate AT&T/WorldCom's claims. Indeed, as Verizon demonstrated in its UNE proceeding, AT&T/WorldCom (not Verizon) are the parties attempting to game the regulatory process, as the only thing that prevented AT&T/WorldCom from analyzing and evaluating the source code of Verizon's cost model (ICM-FL) was the abilities of its chosen consultant. Before the Florida Public Service Commission, Docket No. 990649-TP, *Deposition of Dr. August H. Ankum* (March 15, 2002) at 20-25; Before the Florida Public Service Commission, Docket No. 990649-TP, *Surrebuttal Testimony of David G. Tucek on Behalf of Verizon Florida Inc.* (March 19, 2002) at 26-28.

entrants, and their consultants—the right to review the numerous files, algorithms, and processes used by TNS to convert the source data into customer location data. Claiming that the source code and processed customer location data is third-party proprietary information, that they were prohibited from making these files available, and that such a review was not necessary, AT&T/WorldCom have steadfastly refused to grant the ILECs access to this data and source code.[56]

E. AT&T/WorldCom's Arguments Regarding the Other Potential Workshop Outcomes Are Incorrect and at Odds with its Endorsement of a Standardized Model

AT&T/WorldCom's arguments on the remaining three workshop options (*i.e.*, adoption of standardized model criteria or methodologies, a standard set of inputs or input development processes, and standard output reports) have only one goal: to reinforce their contention that the adoption of a standardized cost model is the only feasible outcome of the workshop. Rather than bolster their claims, however, AT&T/WorldCom's arguments are riddled with inaccuracies and provide further proof that the adoption of a common model is an unworkable outcome.

The Costs Associated with the Adoption of Standardized Model Criteria or Methodologies Apply Equally to the Adoption of a Standardized Model. AT&T/WorldCom emphasize the costs, and minimize the benefits, of adopting standardized criteria or methodologies in a transparent attempt to bolster their claim that the adoption of a standardized model is the preferable workshop outcome. However, AT&T/WorldCom's advocacy is unconvincing. The vast majority of the costs identified by AT&T/WorldCom—costs that

[56] Before the Department of Telecommunications and Energy Department, D.T.E. 01-20, *Initial Brief of Verizon Massachusetts* (March 5, 2002) at 174-77; Before the California Public Service Commission, Application Nos. 01-024, et al., *Reply Comments of Pacific Bell Telephone Company* (Feb. 7, 2003) at 23.

AT&T/WorldCom claim make the three proposed alternatives to a standardized model unworkable—apply equally to the adoption of a single, standardized model.

AT&T/WorldCom identify "a minimum" of twenty-four separate issues that will need to be addressed if the Commission decides to adopt a common set of standardized criteria.[57] However, each of the matters listed—from "[d]oes TELRIC require keeping existing wire centers, switch locations or both? to "Should equipment be sized based on a design standard per unit, a fill factor, or a sizing factor?"—would also need to be addressed when fashioning a standardized model.

AT&T/WorldCom also claim that the following costs counsel against the adoption of a standard set of costing criteria or methodologies:

> The proposal to adopt UNE cost standards without adopting a model will require significant up-front costs by requiring numerous extensive workshops to develop the appropriate standards for each detail relating to cost models. Developing a set of standards and guidelines would require many rounds of comments to develop the final set of "criteria and guidelines" that are clear and precise.[58]

Again, these costs would be equally applicable to the development of a standardized model, and AT&T/WorldCom have presented nothing to suggest otherwise.

AT&T/WorldCom's Advocacy in Favor of Standardized Inputs Casts Further Doubt on the Efficacy of Adopting a Standardized Model. AT&T/WorldCom claim that "the benefits, costs and likely success of [selecting a standardized cost model or standardized model criteria and methodologies] *will hinge* on the ability of the Commission to ensure consistency in the application of the standardized inputs."[59] As Verizon noted in its opening comments, the

[57] AT&T/WorldCom Comments at 15-16.
[58] AT&T/WorldCom Comments at 18.
[59] AT&T/WorldCom Comments at 20 (emphasis added).

development of a standardized set of inputs or input parameters will be an exceedingly difficult (if not impossible) task:

> The mere development of a menu of cost model inputs for the parties to consider would be expensive and consume considerable amounts of time. Moreover, assuming agreement could be reached on the *possible* input choices (a highly speculative assumption), getting the parties to agree on the details of the inputs' application (*i.e.*, how the data will be used within the model) would be a massive undertaking.[60]

Like company-specific cost model platforms, differences among the inputs used by the different ILECs reflect differences in the carriers' operating realities and engineering assumptions. Attempts to standardize the inputs or input parameters used by the various ILECs would be futile and, as AT&T/WorldCom correctly note, would almost certainly doom any attempt to select a standardized cost model. As Sprint correctly acknowledges:

> No single set of input values can accurately calculate the costs which all ILECs incur to provide UNEs. When the resulting impacts to ILEC ordering, billing, provisioning and information systems are fairly acknowledged and accounted for, it is clear that the development of a standard cost model will not meet Commission objectives of fair and comparable UNE rates in the most efficient manner.[61]

Indeed, the input parameters of a company-specific cost model tend to reflect the unique attributes and operations of the company. In other words, a company does not modify its operations to accommodate the input parameters of its cost model; rather, the input parameters are designed to conform to the company's operations.

AT&T/WorldCom's Claims Regarding Standardized Output Reports Identify False Benefits and Ignore Many of the Costs Associated With Such an Endeavor. With respect to the standardization of output reports, AT&T/WorldCom identify false benefits and ignore many of

[60] Verizon Comments at 10.

the costs associated with such an endeavor. For example, AT&T/WorldCom claim that a standardized output report will "create[] a consistent rate structure and formalize[] the way the rate structure is reported (e.g., where each rate appears on a given output spreadsheet)."[62] This is not true. Common output reports will not standardize either an ILECs' actual rates or their application. The rate structure is driven by a company's ordering and provisioning process—consistency will never be achieved simply by adopting a standardized output report for costs.

AT&T/WorldCom also ignore the costs associated with standardized output reports. For example, AT&T/WorldCom overlook that, if an incumbent's ordering and provisioning systems must be changed to conform to a specific Florida format, the nonrecurring costs associated with ordering and provisioning will necessarily increase, since the economies of scale inherent in multi-state operations will be lost. Accordingly, AT&T/WorldCom's arguments regarding the benefits of a standardized model cannot be taken at face value.

III. SPRINT'S PROPOSED PRINCIPLES FOR UNE COST ANALYSIS AND COST MODEL DESIGN ARE GENERALLY APPROPRIATE, BUT REQUIRE CLARIFICATION

In addition to the three proposed workshop outcomes, Sprint proffers a number of principles for UNE cost analysis and cost model design. Verizon agrees with Sprint's proposed guidelines in large part, but offers the following observations:

- UNE Cost Analysis Principle No. 5: Verizon notes: (1) all costs are variable and avoidable in the long run only because exit of the industry is an option; (2) once the decision to produce has been made, there will always be some fixed costs; (3) with respect to telecommunications in particular, these fixed costs include the costs associated with the need to operate and add capacity to an existing network; and (4) as a result, all costs are not variable and avoidable in the long run, and all inputs to a UNE model and

[61] Sprint Comments at 3.
[62] AT&T/WorldCom Comments at 24.

all network characteristics need not change. In this regard, the Commission should follow the conclusions reached in Docket No. 98-0696TP:

> While this proceeding is to determine the cost of a forward-looking scorched node network, there needs to remain a basis in reality if the costs developed for the network are to have any relevance to the cost of basic local telephone service. We believe that assuming sharing percentages which require, for example, power and cable TV companies to rebuild their networks so that more of the cost of a telephone network can be shifted to other industries, means a network severed from reality.[63]

- UNE Cost Analysis Principle No. 7: Verizon notes that, "while costs must be based on a reasonable projection of fill," that does not mean that fill factors need to be an input to a UNE cost model. In reality, fills are the result of technology deployed, engineering practices, provisioning procedures, and market demand.

- UNE Cost Model Design Principle No. 3: Verizon takes exception to Sprint's assertion that "[a]ll inputs should be capable of being modified by a user" (*i.e.*, they should not be hardcoded). Verizon notes that there are some values that could be viewed as inputs, but are hardcoded because they reflect an industry or a company practice (*e.g.*, the configuration of conduits in terms of the number of ducts, the additional trench depth needed to place cable in a shared environment, etc.).

- UNE Cost Model Design Principle No 4: Sprint's claim that algorithms "should not be hardcoded" is unclear. Algorithms are represented by either program code or spreadsheet formulas. While they can be changed, they are hardcoded in the sense that the logic underlying the algorithm cannot be modified in the manner that inputs can be modified.

- UNE Cost Model Design Principle No. 6: Verizon agrees that a "Cost Model should be manageable . . . [and] easy to run," but notes that ease of use should not be the primary criterion for evaluating a cost model.

- UNE Cost Model Design Principle No. 7: Verizon agrees that "[r]esults generated utilizing the Cost Model should be replicable," but notes that it is not possible to replicate every calculation in a model when another platform is used (*i.e.*, it is not necessarily possible to use a spreadsheet to replicate all the calculations made using in a code-based platform).

- UNE Cost Model Design Principle No. 10: Verizon disagrees with this principle and believes that both PC-based and web-based cost models are acceptable.

[63] Before the Florida Public Service Commission, Docket No. 98-0696TP, *Order* (Jan. 7, 1999) at p. 129.

- UNE Cost Model Design Principle No. 11: Verizon agrees that a "Cost Model should include the capability to examine and modify the critical assumptions and engineering principles," but notes that "critical" should not be interpreted to mean "all."

AT&T Electric Cost per kwh

					Demand (kw)			Energy Usage (kwh)				
Line	File Name	Electric Provider	Tariff	Bill Date	Maximum	On Peak	Off Peak	Total KWH	On Peak	Off Peak	Total Bill	Cost per KWH
1	**FTLDFLOV**	FPL	GSLD-1									
2				6/20/2003								
3				7/23/2003								
4				8/21/2003								
5	**MIAMFLAC**	FPL	GS-1									
6				6/26/2003								
7				7/28/2003								
8				8/26/2003								
9	**OJUSFLTL**	FPL	GSLDT-1									
10				6/12/2003								
11				7/14/2003								
12				8/8/2003								
13	**SPBGFLHL**	Progress Energy										
14				6/1/2003								
15				7/1/2003								
16				8/1/2003								
17	**WPBHFLAN**	FPL	GSLDT-1									
18				6/13/2003								
19				7/15/2003								
20				8/13/2003								
21	**ORLDFLMA**	OUC	GSD1									
22				6/26/2003								
23				7/28/2003								
24				8/27/2003								
25	**Total**											
26	Average Cost Per KWH											

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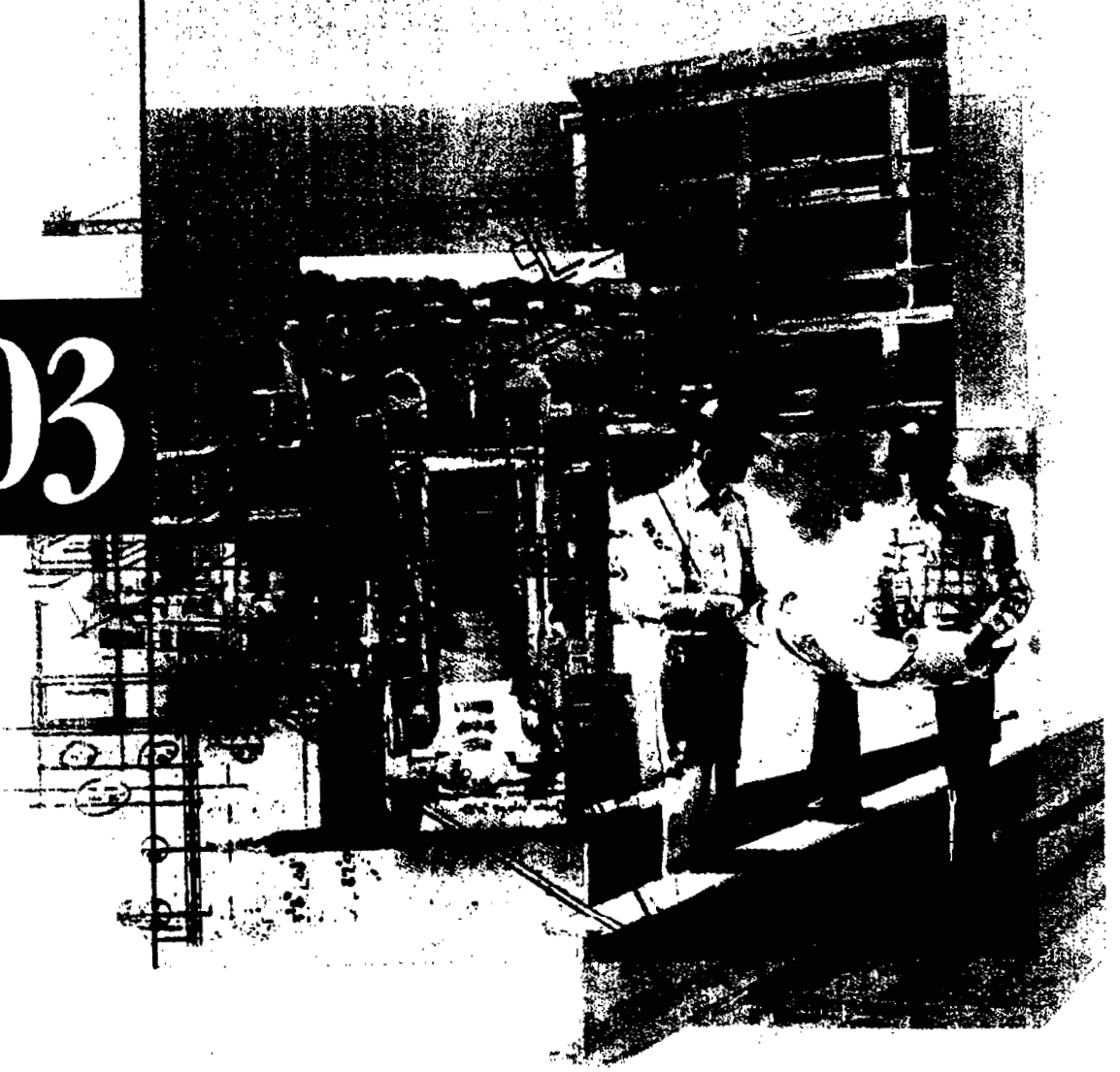

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This one-page section (see following page) can quickly get you started on your estimate.

How To Use the Book: The Details

This section contains an in-depth explanation of how the book is arranged . . . and how you can use it to determine a reliable construction cost estimate. It includes information about how we develop our cost figures and how to completely prepare your estimate.

Unit Price Section

All cost data has been divided into the 16 divisions according to the MasterFormat system of classification and numbering as developed by the Construction Specifications Institute (CSI) and Construction Specifications Canada (CSC). For a listing of these divisions and an outline of their subdivisions, see the Unit Price Section Table of Contents.

Estimating tips are included at the beginning of each division.

Division 17: Quick Project Estimates: In addition to the 16 Unit Price Divisions there is a S.F. (Square Foot) and C.F. (Cubic Foot) Cost Division, Division 17. It contains costs for 58 different building types that allow you to make a rough estimate for the overall cost of a project or its major components.

Reference Section

This section includes information on Reference Numbers, Change Orders, Crew Listings, Historical Cost Indexes, City Cost Indexes, Location Factors and a listing of Abbreviations. It is visually identified by a vertical gray bar on the edge of pages.

Reference Numbers: At the beginning of selected major classifications in the Unit Price Section are "reference numbers" shown in bold squares. These numbers refer you to related information in the Reference Section.

In this section, you'll find reference tables, explanations, and estimating information that support how we develop the unit price data. Also included are alternate pricing methods, technical data, and estimating procedures, along with information on design and economy in construction. You'll also find helpful tips on what to expect and what to avoid when estimating and constructing your project.

It is recommended that you refer to the Reference Section if a "reference number" appears within the section you are estimating.

Change Orders: This section includes information on the factors that influence the pricing of change orders.

Crew Listings: This section lists all the crews referenced in the book. For the purposes of this book, a crew is composed of more than one trade classification and/or the addition of power equipment to any trade classification. Power equipment is included in the cost of the crew. Costs are shown both with bare labor rates and with the installing contractor's overhead and profit added. For each, the total crew cost per eight-hour day and the composite cost per labor-hour are listed.

Historical Cost Indexes: These indexes provide you with data to adjust construction costs over time. If you know costs for a project completed in the past, you can use these indexes to calculate a rough estimate of what it would cost to construct the same project today.

City Cost Indexes: Obviously, costs vary depending on the regional economy. You can adjust the "national average" costs in this book to over 930 locations throughout the U.S. and Canada by using the data in this section. How to use information is included.

Location Factors, to quickly adjust the data to over 930 zip code areas, are included.

Abbreviations: A listing of abbreviations used throughout this book, along with the terms they represent, is included.

Index

A comprehensive listing of all terms and subjects in this book to help you find what you need quickly when you are not sure where it falls in MasterFormat.

The Scope of This Book

This book is designed to be as comprehensive and as easy to use as possible. To that end we have made certain assumptions and limited its scope in three key ways:

1. We have established material prices based on a "national average."
2. We have computed labor costs based on a 30-city "national average" of union wage rates.
3. We have targeted the data for projects of a certain size range.

For a more detailed explanation of how the cost data is developed, see "How To Use the Book: The Details."

Project Size

This book is aimed primarily at commercial and industrial projects costing $1,000,000 and up, or large multi-family housing projects. Costs are primarily for new construction or major renovation of buildings rather than repairs or minor alterations.

With reasonable exercise of judgment the figures can be used for any building work. *For civil engineering structures such as bridges, dams, highways, or the like, please refer to* ***Means Heavy Construction Cost Data.***

How to Use the Book: The Details

What's Behind the Numbers? The Development of Cost Data

The staff at R.S. Means continuously monitors developments in the construction industry in order to ensure reliable, thorough and up-to-date cost information.

While *overall* construction costs may vary relative to general economic conditions, price fluctuations within the industry are dependent upon many factors. Individual price variations may, in fact, be opposite to overall economic trends. Therefore, costs are continually monitored and complete updates are published yearly. Also, new items are frequently added in response to changes in materials and methods.

Costs—$ (U.S.)

All costs represent U.S. national averages and are given in U.S. dollars. The Means City Cost Indexes can be used to adjust costs to a particular location. The City Cost Indexes for Canada can be used to adjust U.S. national averages to local costs in Canadian dollars.

Material Costs

The R.S. Means staff contacts manufacturers, dealers, distributors, and contractors all across the U.S. and Canada to determine national average material costs. If you have access to current material costs for your specific location, you may wish to make adjustments to reflect differences from the national average. Included within material costs are fasteners for a normal installation. R.S. Means engineers use manufacturers' recommendations, written specifications and/or standard construction practice for size and spacing of fasteners. Adjustments to material costs may be required for your specific application or location. Material costs do not include sales tax.

Labor Costs

Labor costs are based on the average of wage rates from 30 major U.S. cities. Rates are determined from labor union agreements or prevailing wages for construction trades for the current year. Rates along with overhead and profit markups are listed on the inside back cover of this book.

- If wage rates in your area vary from those used in this book, or if rate increases are expected within a given year, labor costs should be adjusted accordingly.

Labor costs reflect productivity based on actual working conditions. These figures include time spent during a normal workday on tasks other than actual installation, such as material receiving and handling, mobilization at site, site movement, breaks, and cleanup.

Productivity data is developed over an extended period so as not to be influenced by abnormal variations and reflects a typical average.

Equipment Costs

Equipment costs include not only rental, but also operating costs for equipment under normal use. The operating costs include parts and labor for routine servicing such as repair and replacement of pumps, filters and worn lines. Normal operating expendables such as fuel, lubricants, tires and electricity (where applicable) are also included. Extraordinary operating expendables with highly variable wear patterns such as diamond bits and blades are excluded. These costs are included under materials. Equipment rental rates are obtained from industry sources throughout North America—contractors, suppliers, dealers, manufacturers, and distributors.

Crew Equipment Cost/Day—The power equipment required for each crew is included in the crew cost. The daily cost for crew equipment is based on dividing the weekly bare rental rate by 5 (number of working days per week), and then adding the hourly operating cost times 8 (hours per day). This "Crew Equipment Cost/Day" is listed in Subdivision 01590.

Mobilization/Demobilization—The cost to move construction equipment from an equipment yard or rental company to the job site and back again is not included in equipment costs. Mobilization (to the site) and demobilization (from the site) costs can be found in Section 02305-250. If a piece of equipment is already at the job site, it is not appropriate to utilize mob/demob costs again in an estimate.

General Conditions

Cost data in this book is presented in two ways: Bare Costs and Total Cost including O&P (Overhead and Profit). General Conditions, when applicable, should also be added to the Total Cost including O&P. The costs for General Conditions are listed in Division 1 and the Reference Section of this book. General Conditions for the *Installing Contractor* may range from 0% to 10% of the Total Cost including O&P. For the *General* or *Prime Contractor*, costs for General Conditions may range from 5% to 15% of the Total Cost including O&P, with a figure of 10% as the most typical allowance.

Overhead and Profit

Total Cost including O&P for the *Installing Contractor* is shown in the last column on the Unit Price pages of this book. This figure is the sum of the bare material cost plus 10% for profit, the base labor cost plus total overhead and profit, and the bare equipment cost plus 10% for profit. Details for the calculation of Overhead and Profit on labor are shown on the inside back cover and in the Reference Section of this book. (See the "How To Use the Unit Price Pages" for an example of this calculation.)

Factors Affecting Costs

Costs can vary depending upon a number of variables. Here's how we have handled the main factors affecting costs.

Quality—The prices for materials and the workmanship upon which productivity is based represent sound construction work. They are also in line with U.S. government specifications.

Overtime—We have made no allowance for overtime. If you anticipate premium time or work beyond normal working hours, be sure to make an appropriate adjustment to your labor costs.

Productivity—The productivity, daily output, and labor-hour figures for each line item are based on working an eight-hour day in daylight hours in moderate temperatures. For work that extends beyond normal work hours or is performed under adverse conditions, productivity may decrease. (See the section in "How To Use the Unit Price Pages" for more on productivity.)

Size of Project—The size, scope of work, and type of construction project will have a significant impact on cost. Economies of scale can reduce costs for large projects. Unit costs can often run higher for small projects. Costs in this book are intended for the size and type of project as previously described in "How the Book Is Built: An Overview." Costs for projects of a significantly different size or type should be adjusted accordingly.

Location—Material prices in this book are for metropolitan areas. However, in dense urban areas, traffic and site storage limitations may increase costs. Beyond a 20-mile radius of large cities, extra trucking or transportation charges may also increase the material costs slightly. On the other hand, lower wage rates may be in effect. Be sure to consider both these factors when preparing an estimate, particularly if the job site is located in a central city or remote rural location.

In addition, highly specialized subcontract items may require travel and per diem expenses for mechanics.

Other factors—

- season of year
- contractor management
- weather conditions
- local union restrictions
- building code requirements
- availability of:
  - adequate energy
  - skilled labor
  - building materials
- owner's special requirements/restrictions
- safety requirements
- environmental considerations

Unpredictable Factors—General business conditions influence "in-place" costs of all items. Substitute materials and construction methods may have to be employed. These may affect the installed cost and/or life cycle costs. Such factors may be difficult to evaluate and cannot necessarily be predicted on the basis of the job's location in a particular section of the country. Thus, where these factors apply, you may find significant, but unavoidable cost variations for which you will have to apply a measure of judgment to your estimate.

Rounding of Costs

In general, all unit prices in excess of $5.00 have been rounded to make them easier to use and still maintain adequate precision of the results. The rounding rules we have chosen are in the following table.

Prices from . . .	Rounded to the nearest . . .
$.01 to $5.00	$.01
$5.01 to $20.00	$.05
$20.01 to $100.00	$.50
$100.01 to $300.00	$1.00
$300.01 to $1,000.00	$5.00
$1,000.01 to $10,000.00	$25.00
$10,000.01 to $50,000.00	$100.00
$50,000.01 and above	$500.00

Final Checklist

Estimating can be a straightforward process provided you remember the basics. Here's a checklist of some of the items you should remember to do before completing your estimate.

Did you remember to . . .

- factor in the City Cost Index for your locale
- take into consideration which items have been marked up and by how much
- mark up the entire estimate sufficiently for your purposes
- read the background information on techniques and technical matters that could impact your project time span and cost
- include all components of your project in the final estimate
- double check your figures to be sure of your accuracy
- call R.S. Means if you have any questions about your estimate or the data you've found in our publications

Remember, R.S. Means stands behind its publications. If you have any questions about your estimate . . . about the costs you've used from our books . . . or even about the technical aspects of the job that may affect your estimate, feel free to call the R.S. Means editors at 1-800-334-3509.