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1	FLORIE	BEFORE THE DA PUBLIC SERVICE COMMISSION	
2			
3	In the Matter of	f .	
4	PETITION OF COMPETITE	IVE CARRIERS DOCKET NO. 981834-TP	
5	FOR COMMISSION ACTION	N TO SUPPORT BELLSOUTH	
6	TELECOMMUNICATIONS, SERVICE TERRITORY.	INC.'S	
7	PETITION OF ACI CORP	. d/b/a DOCKET NO. 990321-TP	
8	ACCELERATED CONNECTION GENERIC INVESTIGATION	ONS, INC. FOR ON TO ENSURE	
9	THAT BELLSOUTH TELEC	INCORPORATED,	
10	WITH OBLIGATION TO P	PROVIDE	,
11	ALTERNATIVE LOCAL EXWITH FLEXIBLE, TIMEL	CCHANGE CARRIERS LY. AND COST-	١
12	EFFICIENT PHYSICAL C	COLLOCATION.	
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14		C VERSIONS OF THIS TRANSCRIPT ARE /ENIENCE COPY ONLY AND ARE NOT	
15	II THE OFFI	ICIAL TRANSCRIPT OF THE HEARING, ERSION INCLUDES PREFILED TESTIMONY.	
16	111E .101 VE	VOLUME 4	
17		Pages 520 through 644	
18		rages 320 till bagli 044	
19	PROCEEDINGS:	HEARING	
20	MOSEEDINGS.	TILAKING	
21	BEFORE:	CHAIRMAN BRAULIO L. BAEZ COMMISSIONER J. TERRY DEASON	
22	1	COMMISSIONER LILA A. JABER	
23	1	COMMISSIONER RUDOLPH "RUDY" BRADLEY COMMISSIONER CHARLES M. DAVIDSON	
24	DATE:	Wednesday, January 28, 2004	
25	1 500	# 10001000001, Outlidely 20, 2004	
		The public conversion	
	FLORI	DA PUBLIC SERVICE COMMISSION	

1 2	TIME:	Commenced at 9:30 a.m. Concluded at 5:10 p.m.
3	PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
4		Tallahassee, Florida
5		
6	REPORTED BY:	LINDA BOLES, RPR Official FPSC Reporter (850) 413-6734
7		(850) 413-6734
8	APPEARANCES:	(As heretofore noted.)
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1	PROCEEDINGS	
2	(Transcript follows in sequence from Volume 3.)	
3	CHAIRMAN BAEZ: Mr. Hatch.	
4	MR. HATCH: AT&T would call Mr. Steve Turner to the	
5	stand.	
6	Mr. Chairman, I don't believe Mr. Turner was sworn	
7	earlier.	
8	CHAIRMAN BAEZ: Mr. Turner, would you raise your	
9	right hand.	
10	STEVEN E. TURNER	
11	was called as a witness on behalf of AT&T Communications of the	
12	Southern States, LLC, and, having been duly sworn, testified as	
13	follows:	
14	DIRECT EXAMINATION	
15	BY MR. HATCH:	
16	Q Mr. Turner, could you please state your name and	
17	address for the record.	
18	A It's Steven E. Turner, and my address is 2031 Gold	
19	Leaf Parkway, Canton, Georgia 30114.	
20	Q By whom are you employed and in what capacity?	
21	A I have my own consulting company, Kaleo, K-A-L-E-O,	
22	Consulting.	
23	Q And on whose behalf are you testifying in this	
24	proceeding?	
25	A I'm testifying here on behalf of AT&T Communications	
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FLORIDA PUBLIC SERVICE COMMISSION

1	of the Sou	uthern States, LLC.
2	Q	Did you prepare and cause to be filed in this
3	proceeding	g rebuttal testimony?
4	Α	Yes, I did.
5	Q	Do you have any changes or corrections to your
6	rebuttal 1	testimony?
7	A	I have just one correction that's at Page 10 of my
8	testimony	at Line 9. TELRIC should be spelled T-E-L-R-I-C.
9	Q	Subject to that one change, if I asked you the same $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right$
10	questions	as are in, today as are in your rebuttal testimony,
l1	would your	r answers be the same?
L2	А	Yes, they would.
13		MR. HATCH: Mr. Chairman, I'd request that
14	Mr. Turne	r's rebuttal testimony be inserted into the record as
15	though read.	
16		CHAIRMAN BAEZ: The rebuttal testimony of Witness
17	Turner wi	ll be entered into the record as though read.
18	BY MR. HA	TCH:
19	Q	Did you also cause to be prepared and attached to
20	your	
21		COMMISSIONER JABER: Mr. Chairman?
22		CHAIRMAN BAEZ: Yes.
23		COMMISSIONER JABER: I'm sorry to interrupt. That
24	was Page 1	10, Line what?
25		CHAIRMAN BAEZ: 9, I believe.

1	COMMISSIONER JABER: Okay. It's not going to be a
2	problem for me, but just to put folks on notice that my page
3	numbers don't line up with what the witness's are. And, again,
4	I'm going to be fine. I just don't know if others have that
5	same situation. That change was on Line 2 for me.
6	CHAIRMAN BAEZ: So it was. Commissioners, make note
7	of that. All right.
8	MR. HATCH: That's something we'll have to deal with.
9	I think the problem is, is that I'm running off an electronic
10	copy, not the .PDF file off the Web site, and so the printing
11	alters.
12	CHAIRMAN BAEZ: It happens all the time.
13	BY MR. HATCH:
14	Q Mr. Turner, did you have ten exhibits to your
15	rebuttal testimony?
16	A Yes, I did.
17	Q Were they prepared by you or under your supervision?
18	A Yes, they were.
19	Q And those would be labeled SET-1 through SET-10; is
20	that correct?
21	A That's correct.
22	Q And did you also file, subsequent to the original
23	rebuttal filing, revisions to SET-7 through 9?
24	A Yes, I did.
25	O And those are the exhibits that currently are being

1	proffered to your testimony?
2	A That's correct.
3	MR. HATCH: Okay. Mr. Chairman, could we get
4	Mr. Turner's exhibits marked for identification?
5	CHAIRMAN BAEZ: Help me with this, Mr. Hatch. Which
6	exhibits do we have? Because I'm not showing any on the back.
7	MR. HATCH: SET-1 through 10. I guess to be more
8	precise for the record it would be SET-1 through 6, revised
9	SET-7 through 9 and SET-10 are the exhibits we're proffering.
10	CHAIRMAN BAEZ: Show witness exhibits SET-1 through
11	6, revised 7 through 9 and SET-10 marked as composite Exhibit
12	43.
13	(Exhibit Number 43 marked for identification.)
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1		AT&T COMMUNICATIONS OF THE SOUTHERN STATES, LLC
2		REBUTTAL TESTIMONY OF STEVEN E. TURNER (REDACTED)
4		DOCKETS NOS. 981834-TP/990321-TP
5 6		APRIL 18, 2003
7	I.	BACKGROUND AND EDUCATION
8	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
9	A.	My name is Steven E. Turner. My business address is Kaleo Consulting, 2031 Gold Leaf
10		Parkway, Canton, Georgia 30114.
11	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
12	A.	I head my own telecommunications and financial consulting firm, Kaleo Consulting.
13	Q.	PLEASE DESCRIBE YOUR EDUCATION BACKGROUND.
14	A.	I hold a Bachelor of Science degree in Electrical Engineering from Auburn University in
15		Auburn, Alabama. I also hold a Masters of Business Administration in Finance from
16		Georgia State University in Atlanta, Georgia.
17	Q.	PLEASE DESCRIBE YOUR WORK EXPERIENCE.
18	A.	From 1986 through 1987, I was a Research Engineer for General Electric in its Advanced
19		Technologies Department developing high-speed graphics simulators. In 1987, I joined
20		AT&T and, during my career there, held a variety of engineering, operations, and
21		management positions. These positions covered the switching, transport, and signaling
22		disciplines within AT&T. From 1995 until 1997, I worked in the Local Infrastructure
23		and Access Management organization within AT&T. In this organization, I gained
24		familiarity with many of the regulatory issues surrounding AT&T's local market entry,
25		including issues concerning the unbundling of incumbent local exchange company
26		(incumbent) networks. I was on the AT&T team that negotiated with Southwestern Bell DOCUMENT NUMBER-LATE

Telephone Company ("SWBT") concerning unbundled network element definitions and methods of interconnection. A copy of my resume is attached as Exhibit SET-1.

3 Q. HAVE YOU PREVIOUSLY TESTIFIED OR FILED TESTIMONY BEFORE A PUBLIC UTILITY OR PUBLIC SERVICE COMMISSION?

A. I have testified or filed testimony before commissions in the states of Alabama, Arkansas,
 California, Colorado, Delaware, Florida, Georgia, Hawaii, Indiana, Illinois, Kansas,
 Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Mississippi, Missouri,
 Nebraska, Nevada, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South
 Dakota, Texas, Washington, and Wisconsin. Additionally, I have filed testimony before
 the Federal Communications Commission ("FCC").

11 II. PURPOSE AND SUMMARY

12 O. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

My testimony responds to the Direct Testimony of W. Bernard Shell on behalf BellSouth A. 13 14 Telecommunications, Inc. ("BellSouth"); the Direct Testimony of Jimmy R. Davis on 15 behalf of Sprint-Florida, Incorporated ("Sprint"); and the Direct Testimony of Barbara K. Ellis, Allen E. Sovereign, and James H. Vander Weide on behalf of Verizon Florida Inc. 16 17 ("Verizon"). My testimony will address the costs for collocation for all three of these 18 incumbent local exchange carriers in Florida. My testimony will review the concerns that 19 I have with the cost inputs provided by these carriers for collocation elements and 20 provide the Commission with alternative collocation inputs. Moreover, I will present an 21 approach in testimony and through my supporting work papers that will outline how the 22 Commission can readily establish consistent collocation costs that are efficient and 23 forward-looking across all three companies in Florida while reflecting the unique cost aspects of the separate companies to the extent possible. My testimony begins with a 24

1 discussion of why this is important and essential in developing collocation costs that are 2 consistent with total element long run incremental cost ("TELRIC") principles. 3 III. CONSISTENCY ACROSS COLLOCATION COST DEVELOPMENT 4 Ο. WHY DO YOU BELIEVE IT IS IMPORTANT TO ESTABLISH CONSISTENCY BETWEEN THE COLLOCATION COST DEVELOPMENT FOR THESE THREE COMPANIES? 7 ALECs operate in all three of the incumbent territories in Florida. Currently, there is an A. 8 extremely wide disparity in the rates for collocation found in these three territories and in 9 the application of those rates. The rate elements associated with collocation such as the 10 application process, DC power, interconnection arrangements, cage construction, and space within the central office should not have widely disparate costs in a TELRIC 11 12 environment. The costs for these components should be very similar in that all three of 13 the incumbents have the ability to purchase the underlying telecommunications assets at 14 similar prices and operate them in a similarly efficient manner on a forward-looking basis. Given that the underlying investments should be similar, developing widely 15 16 disparate costs and rates for collocation indicates that the results are inaccurate and 17 inconsistent with cost-based TELRIC principles. 18 Q. WHAT CONTRIBUTES TO THE DEVELOPMENT OF WIDELY DISPARATE RESULTS IN A COST PROCEEDING BETWEEN THE THREE INCUMBENTS? 19 20 Quite simply, the use of three different collocation cost models makes it almost Α. impossible for the Commission to easily compare inputs and resulting costs between the 21 22 three models even in situations where the inputs and costs should be virtually identical. 23 Achieving accurate, comparable, and consistent results using three different cost studies 24 is considerably less likely and clearly less efficient than using a single modeling

approach. When a single modeling approach is used, the focus can be placed on the

accuracy and appropriateness of the inputs to that model rather than on debating whether

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the outputs of three different models can even be compared or whether the outputs have achieved equitable cost-based results.

A.

It is my understanding that this Commission has recognized that the current approach of having three different cost models with three different rate structures, inputs, and resulting rates is making it virtually impossible to establish equitable, cost-based rates between the three incumbents. This concern led the Commission to seek comments from parties in Florida regarding the "Commission's Examination of Standardization in UNE Costing." I understand that the Commission has received comments both from ALECs and the incumbents in this proceeding. My testimony will address in more detail why it is important in this present collocation proceeding to utilize a standard collocation model to establish efficient, forward-looking costs and rates for collocation.

A. Efficient Forward-Looking Investments Should Not Vary Widely Between ILECs

Q. DO YOU BELIEVE THERE SHOULD BE WIDE DISPARITY IN THE INVESTMENTS USED BY THE INCUMBENTS IN THE DEVELOPMENT OF COLLOCATION COSTS?

No. The investments for telecommunications assets, particularly in a simple technology area such as collocation, should not have much variation at all between incumbents in Florida. As an example, the investment for the DC power plant between the three companies uses the same set of components: batteries, rectifiers, controllers, cable, battery distribution fuse bays, and the like. BellSouth, Sprint, and Verizon all buy essentially the same components with equivalent capabilities and design characteristics to provide for DC power in their central offices. Further, given the scope of these three companies, there should not be widely differing costs for the purchase of these assets between the three companies. As such, the Commission should anticipate that the investment per DC amp between the three companies should be similar, and that the

application of the similar investment in the three different cost models should lead to similar resulting costs. This is not the case currently in the three disparate cost models submitted by BellSouth, Sprint, and Verizon.

The following table compares the starting investments proposed by the three companies as well as the resulting rates per amp proposed.

***BEGIN CONFIDENTIAL

	BellSouth	Sprint	Verizon
Investment per Amp	\$429		
Rate per Amp	\$10.87	\$16.14	\$25.45

END CONFIDENTIAL***

This simple chart illustrates at least two significant problems with the use of three models. *First*, the focus needs to be placed on the efficient, forward-looking investment that should be used to develop the cost for DC power. In this regard, BellSouth and Sprint have largely similar investments with Verizon as the obvious outlier. As discussed earlier, there is no basis for Verizon to have such a higher investment per amp than BellSouth and Sprint given that the assets used for DC power are essentially identical and all three incumbents have similar ability to purchase the assets at largely equivalent prices. Please note that I am not recommending the BellSouth and Sprint investments for use in this proceeding. I will propose an alternative investment that is consistent with efficient, forward-looking cost principles later in the testimony. This table is simply to demonstrate the problems of using three different models.

Second, while BellSouth and Sprint have similar investments that differ by only 7.9 percent, the use of the two different cost models has resulted in rates for DC Power that differ by 48.5 percent. It is true that BellSouth and Sprint have different Commission-approved common cost factors and cost of capital inputs, but these

l	differences simply do not account for the wide disparity in results produced by the two
2	cost models.

3 Q. HOW WILL USING A SINGLE COST MODEL FACILITATE ESTABLISHING APPROPRIATE FORWARD-LOOKING COSTS IN THE EXAMPLE ABOVE?

A. The Commission will be able to focus on what the appropriate input should be for the investment per DC amp and *know* that once that input has been established that it flows through into results that will be equivalent for the three companies. In other words, the Commission will not be left either guessing at why equivalent input choices lead to such disparate results or alternatively investing large amounts of time evaluating the internal operation of the three cost models to see why the differences are generated. In short, the use of a single cost model will allow the Commission and the parties to focus on the critical input issues which should be largely similar across the three companies.

Q. ONCE THE COMMISSION HAS DETERMINED THE APPROPRIATE FORWARD-LOOKING INVESTMENTS FOR COLLOCATION COMPONENTS, WILL A SINGLE MODEL BE ABLE TO PRODUCE COMPANY-SPECIFIC COSTS?

A. Yes. I will address this question in more detail below. The important point is that the Commission will be able to focus on the critical cost driver – the investments for the various components of collocation – rather than attempting to evaluate the innerworkings of three different cost models. The Commission will also be able to avoid the controversy of how three different cost models may produce results that are not comparable because of rate element definition problems. Further, as will be discussed in more detail below, a single cost model will still permit the application of company-specific factors so that where there are differences between the companies that the Commission has determined to be appropriate, these differences can be equivalently reflected in the results for all three incumbents.

1 2		B. Costs Can and Should Reflect the Unique Expense and Common Cost Attributes of the ILECs
3 4 5	Q.	HOW CAN A SINGLE COLLOCATION COST MODEL PRODUCE COST RESULTS THAT ARE CONSISTENT WITH THE UNIQUE EXPENSE AND COMMON COST ATTRIBUTES OF THE INCUMBENTS?
6	A.	All cost models have a similar high level structure. First, the cost model develops the
7		investment for the particular component including any installation cost and related
8		support investments for building or land depending on the element under study. Second,
9		once these investments are developed, cost factors are applied against these investments
10		that allow for the conversion of those investments into recurring costs. In some models,
11		these factors are implemented as a single number that has been developed in an external
12		factor development model. In others, these factors are explicitly identified or calculated
13		internally within the cost model and then applied to the investments also contained within
14		the same model. Nonetheless, in either case, the investments are converted into a
15		recurring cost using the application of factors within the model. <i>Third</i> , this recurring cost
16		is then converted into a recurring rate by the application of a common cost factor.
17		A single collocation cost model can readily be used for all three incumbents in
18		Florida as long as it is readily capable of allowing the three companies to reflect their
19		own unique expense and common cost factors in the model. Effectively, the single cost
20		model would be run three times with the same investment inputs for all three companies,
21		but with the slight variations in cost factors that would lead to the differences in resulting
22		rates.
23 24 25	Q.	DOES ANY ONE OF THE THREE COST MODELS FILED IN THIS PROCEEDING PERMIT A MORE EFFICIENT APPLICATION OF COMPANY-SPECIFIC COST INPUT INTO THE MODEL?
26	A.	Yes. The BellSouth Cost Calculator is by far the most flexible of the three cost models in

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permitting the use of company-specific cost factors. I will discuss this issue in more

detail later, but only the BellSouth Cost Calculator of the three cost models filed in this collocation cost proceeding has the internal calculations to allow for the flexible use of different cost factor inputs. As an example, the BellSouth Cost Calculator has a built in model that allows one to enter different cost of capital inputs such as the cost of equity, cost of debt, capital structure, and the like and then calculate within the model the input on all related cost factors from those inputs. This flexibility is vitally important and only the BellSouth Cost Calculator has this flexibility among the collocation models filed in this proceeding. Moreover, of the three models filed, BellSouth has the most comprehensive set of cost factor inputs of the models allowing for any potential variations that might exist between the companies.

Α.

In short, a single cost model must be able to reflect the unique cost factor inputs of the three companies in this proceeding and such a model already exists in this proceeding. As such, no harm would come to any of the three companies involved in using a single cost model with a common set of investment inputs that were deemed to be cost-based in that the unique company-specific cost factors could be applied to those inputs.

C. Rate Element Structures Should Be Consistent between the ILECs

- Q. WHY IS IT IMPORTANT TO HAVE SIMILAR RATE ELEMENT STRUCTURES FOR COLLOCATION BETWEEN THE THREE INCUMBENTS IN FLORIDA?
 - First, it is essential to have similar rate element definitions so that the Commission can more readily establish collocation costs that are comparable between the three companies. While it is possible to make some comparisons between important elements (such as for DC power) between the three companies resulting rate sheets, it is a painstaking process to make these comparisons on a comprehensive basis. Furthermore, doing so illustrates how incomplete the cost development is particularly for Sprint and Verizon.

Second, cost proceedings are not a once and done event. The Florida Commission has a responsibility to periodically review the costs for interconnection and UNEs to ensure that the costs that are in place are cost-based. Having a single model for collocation will enable the Commission to perform this analysis at less cost to itself. Further, a single model will permit the analysis to be performed by the three incumbents and the ALECs at less cost in that the evaluation of inputs and modifications to three different models will not be required. Only one model will have to be modified and a consistent set of inputs can be readily compared within that one model.

Third, moving to a single rate structure for collocation will simplify the interconnection process for ALECs within the state of Florida. Currently, ALECs have to work with three different rate structures with three different implementations of collocation arrangements. This is not necessary. Collocation is a very straightforward process of establishing space within a central office for collocator equipment and then establishing interconnection facilities and power to that equipment. There is no reason that a single set of terms and conditions for collocation along with a single rate structure for those collocation costs could not be implemented in Florida. Moreover, doing so would again lessen the overall cost of the regulatory process and facilitate the Commission ensuring that ALECs are treated in a nondiscriminatory manner between the three incumbents in Florida.

- D. BellSouth Cost Calculator Should Be Used as the Base Cost Model for Collocation Elements
- Q. GIVEN THE ABOVE DISCUSSION, WHAT RECOMMENDATION WOULD
 YOU MAKE TO THIS COMMISSION REGARDING THE COSTING OF
 COLLOCATION ELEMENTS IN FLORIDA?
- A. I believe the most efficient approach would be to identify a single cost model for
 collocation. A single cost model would allow the Commission to focus on the important

issues of the efficient, forward-looking investment inputs that are consistent with IELRIC.

TELTIC principles that should go into the model for all three incumbents without the model for all three incumbents with the model for all three incumbents with the model for all three incumbents without the model for all three incumbents.

A.

TEETTICC principles that should go into the model for all three incumbents without being concerned with how three different models may convert the single input into widely disparate results. Further, a single cost model would allow the Commission to establish cost-based rates for the three incumbents in Florida that are easily compared and would have more certainty that the resulting costs borne by ALECs for collocation would be consistent between the three Florida incumbents.

Q. WHAT SINGLE MODEL WOULD YOU RECOMMEND TO THE COMMISSION?

As noted earlier, the BellSouth Cost Calculator has significant advantages over the Sprint and Verizon cost models with regards to its comprehensive ability to internally calculate and flexibly apply cost factors. As I alluded to above and will discuss in more detail below, the BellSouth Cost Calculator is the only model of the three that easily permits the Commission to change the cost of capital inputs and have these inputs flow through to resulting costs for the three companies.

Another important benefit to the BellSouth Cost Calculator is that it is the only one of the three cost models that develops a comprehensive set of collocation elements for all of the forms of collocation. Sprint has an extremely limited set of cost elements that simply does not begin to address all of the necessary rate elements for collocation. Further, Verizon's while more comprehensive than Sprint's does not include the comprehensive set of collocation rate elements found in the BellSouth Cost Calculator.

Finally, the BellSouth Cost Calculator is flexible allowing the user to easily add new cost elements if necessary and it is auditable in that all of the internal calculations within the model can be exported to EXCEL spreadsheets to demonstrate how the calculations within the model are conducted. In short, the BellSouth Cost Calculator

1		presents the best alternative for developing collocation costs among the models submitted
2		in this proceeding and the Commission should use this model to establish a
3		comprehensive and consistent set of collocation rates for Florida ALECs.
4	IV.	FACTOR APPLICATION ISSUES
5 6 7	Q.	CAN YOU GIVE THE COMMISSION A SENSE OF THE APPROACHES TAKEN BY THE THREE INCUMBENTS WITH REGARDS TO THE COST FACTORS USED IN THIS COLLOCATION PROCEEDING?
8	A.	Yes. BellSouth's cost factor approach is straightforward. Mr. Shell identifies
9		BellSouth's approach in his Direct Testimony on pages 9-10:
10 11 12 13 14 15		BellSouth used the same cost methodology previously approved by this Commission in its Orders in Docket No. 990649-TP (Order No. PSC-01-1181-FOF-TP, date May 25, 2001 and Order No. PSC-01-2051-FOF-TP, dated October 18, 2001). Additionally, BellSouth has made all applicable ordered adjustments in that docket. For example, BellSouth is using the ordered cost of capital, depreciation rates, and income tax factor.
17		In general, BellSouth has utilized the same cost factors for collocation that this
18		Commission already approved for unbundled elements generally. This is appropriate in
19		that collocation is simply the vehicle for obtaining access to unbundled elements as well
20		as for interconnecting with BellSouth's network. It is only reasonable that the same cost
21		factors that are used to establish the costs for unbundled elements should be used to
22		establish the costs for collocation as well.
23		Sprint claims to have taken a similar approach. Specifically, Sprint notes the
24		following::
25 26 27 28 29 30		Annual charge factors (ACF) were determined based on the capital structure, debt and equity costs and tax rates ordered for Sprint by the Florida Public Service Commission on January 8, 2003 in Docket No. 990649B-TP. The common cost factor applied to collocation rate elements is also consistent with the Commission's order in Docket No. 990649B-TP. (Davis Direct, p. 11)

While, Mr. Davis' testimony on behalf of Sprint makes this representation, it has not been possible for me to confirm whether this is the case. *First*, Sprint makes reference to a model entitled the "Annual Charge Factor Model" where its cost factors are apparently developed. All that is loaded into Sprint's collocation cost study is a single hard-coded number. Given the importance of this model in developing Sprint's proposed costs, this model should have been submitted with its cost filing. Nonetheless, Sprint has left the Commission in the position of simply having to trust that Sprint has used the appropriate approved factors.

Second, as noted earlier with DC Power, Sprint's cost factors on their surface do not appear to be reasonable. I have been able to confirm that BellSouth did in fact use the factors approved by the Commission through comparing the factors to BellSouth UNE compliance filings in Florida so I am confident as a baseline that the BellSouth cost factors accurately reflect the Commission's prior orders. For DC Power, as an example, the factors proposed by Sprint in this proceeding are approximately 37.6 percent higher than the factors used by BellSouth. On its surface, there does not appear to be any reason that the costs within Sprint should be 37.6 percent higher than the costs within BellSouth. Moreover, when the Commission-approved cost of capital inputs are compared, there is virtually no reason to believe there should be such a difference. Specifically, the BellSouth approved cost of capital is 10.24 percent. See Florida Public Service Commission, In re: Investigation Into Pricing of Unbundled Network Elements, Docket No. 990649-TP, Order No. PSC-01-1181-FOF-TP, Issued: May 25, 2001, p. 188. Sprint, on the other hand, actually has a lower Commission-approved cost of capital at 9.86 percent. See Florida Public Service Commission, In re: Investigation Into Pricing of Unbundled Network Elements (Sprint/Verizon Track), Docket No. 990649B-TP, Order

No. PSC-03-0058-FOF-TP, Issued: January 8, 2003, p. 70. The bottom line is that while I cannot confirm whether Sprint has accurately reflected the Commission's ordered cost factors in its collocation cost filing, on their surface the factors appear to be significantly overstated given the similarity in the underlying cost of capital. Certainly the cost of capital is only one of the inputs that help to derive to cost factors for a particular company. However, it is the most influential input on the resulting cost factors and leads me to believe that Sprint's factors do not appear to be reasonable in light of the Commission's apparent attempt to set the cost factors at relatively similar levels.

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While BellSouth and Sprint both acknowledge that the use of the existing approved factors are the appropriate route to take for collocation costs (even though I believe Sprint may not have implemented this approach), Verizon has taken a very different tact. Specifically, Mr. Vander Weide has recommended a cost of capital of 18.36 percent. (Direct Testimony of James H. Vander Weide, , p. 62.) By way of comparison, the Florida Commission ordered the use of a 9.63 percent cost of capital for establishing UNE rates. See Florida Public Service Commission, In re: Investigation Into Pricing of Unbundled Network Elements (Sprint/Verizon Track), Docket No. 990649B-TP, Order No. PSC-02-1574-FOF-TP, p. 88. In other words, Verizon proposed to almost double the cost of capital in this collocation proceeding above that which was recently ordered by this Commission for use in establishing unbundled element rates. It is simply not reasonable to use a cost of capital proposal that is almost double that which was used by this Commission to set the rates for unbundled elements that the collocation arrangements will provide access to. Moreover, I should point out that if the cost of capital was subject to a fresh look in this proceeding, AT&T would have proposed a cost

1		of capital in the seven percent range based on recent filings in Texas and California that I
2		have been a part of.
3 4 5	Q.	HOW DO YOU PROPOSE TO ADDRESS THE COST FACTOR ISSUES GIVEN THE INCONSISTENCY IN SPRINT'S FACTORS AND THE SIGNIFICANT DIFFERENCE IN VERIZON'S PROPOSED FACTORS?
6	A.	With BellSouth, the factors that have been included in the BellSouth Cost Calculator will
7		not be changed. However, for Sprint and Verizon, I would recommend that the
8		Commission use the cost of capital inputs that it has ordered in Docket No. 990649B-TP,
9		Order No. PSC-03-0058-FOF-TP (Sprint) and Order No. PSC-02-1574-FOF-TP
10		(Verizon). The BellSouth Cost Calculator as documented earlier has a tool included
11		within the model that allows the user to load company-specific cost of capital inputs. In
12		doing this, the BellSouth Cost Calculator then recalculates the appropriate cost factors for
13		each asset class using the revised cost of capital. Separate runs can then be generated for
14		Sprint using the Commission-ordered Sprint cost of capital and for Verizon using the
15		Commission-ordered Verizon cost of capital.
16 17 18	Q.	CAN THE SAME APPROACH BE USED TO INCORPORATE THE COMMISSION-ORDERED COMMON COST FACTORS FOR EACH COMPANY?
19	A.	Yes. The BellSouth Cost Calculator provides an input that allows the user to incorporate
20		a company-specific common cost factor. BellSouth, Sprint, and Verizon-specific
21		common cost factors have been used in developing my restated collocation rates for each
22		company.
23	V.	EVALUATION OF COLLOCATION INPUTS
24 25	Q.	HOW DO YOU INTEND TO PROCEED IN YOUR ANALYSIS OF THE COLLOCATION INPUTS?
26	A.	Given that the BellSouth Cost Calculator is being used as the starting point for the
27		development of collocation rates for all three incumbents, I have focused my critique of

these inputs on those found in BellSouth's cost filing. As such, to the extent that I have left cost inputs unmodified, my implicit recommendation is that the input used by BellSouth is cost-based and should represent the cost or investment input for all three companies. However, for those elements where I have proposed an alternative cost or investment input for BellSouth, my recommendation is that this input should be used again for all three incumbents.

Q. COULD YOU PLEASE PROVIDE AN OVERVIEW OF THE PROBLEMS THAT YOU FOUND WITH BELLSOUTH'S COLLOCATION COST STUDY?

17.

A.

Yes. There are 135 rate elements contained in BellSouth's collocation cost study. The areas I address, including the proposed corrections that I document in my testimony affect 58 rate elements. However, while the number of rate elements that need corrections is large, the corrections can be categorized into seven main areas.

First, BellSouth's DC Power rate has significant problems that prevent it from being consistent with TELRIC:

based upon "augment jobs" for DC power. An "augment job" occurs when BellSouth alters its power provisioning infrastructure to accommodate an incremental demand for power. Augments fail to account for the "total demand" upon which an appropriately constructed TELRIC cost study must be based. Thus, BellSouth's analysis of its investment precludes ALECs from obtaining the same economies of scale that BellSouth has with its use of its DC power plant. Because the DC power unit investment is significantly overstated it must be corrected to a TELRIC level that accounts for total demand.

- (2) BellSouth has overstated the AC power component of its DC power rate as compared to an independent source for this cost in Florida. Moreover, BellSouth has not reflected the proper efficiency in its rectifiers in its cost study. The overstatement related to these two problems must be corrected in BellSouth's DC power rate.
- Commission has recognized in the order establishing this present proceeding that charging for DC power on a *load* or *used* basis may be more appropriate. My testimony will demonstrate that charging for DC power on a fuse amp basis, even if calculated correctly, does not efficiently track the costs associated with the DC power plant. My testimony demonstrates that DC power should have its cost based on the *usage* that is placed on the plant not the size of the fuse that is placed in a power board or Battery Distribution Fuse Bay ("BDFB"). This is because the fuse has little or no bearing on the cost that BellSouth actually incurs and is entitled to recover.

Second, BellSouth has overstated many collocation nonrecurring rate elements associated with collocation planning, engineering, installation times, and cable records. This is primarily due to BellSouth's failure to account for activities and costs that the ALEC bears when establishing the collocation arrangement. In addition, in several instances the time estimates that BellSouth has offered appear overstated based on my experience or based on comparisons with related tasks in BellSouth's own cost study.

Third, BellSouth's Floor Space cost is not based on TELRIC costs for a central office and the space that is occupied by collocation. BellSouth provides little information

about the method that it used to develop the investment. However, it appears that once again, augments to the central office and not the comprehensive cost to construct a central office are the basis for BellSouth's investment per square foot. As explained earlier, TELRIC requires that the total demand for an element be evaluated in developing the incremental cost for a unit of that demand. In this case, BellSouth has failed to account for the investment associated with the total space within the central office thereby overstating the investment per square foot. Given the inappropriate method BellSouth used in developing its building investment and the general lack of support provided by BellSouth, my testimony provides a TELRIC analysis for building space cost that is based on an independent firm's assessment of the forward-looking cost to construct telecommunications space. In addition, I outline how to take this investment per square foot and appropriately convert it into costs for collocation space. Finally, BellSouth fully recovers the land cost for the space occupied by the collocator in its land and building rate per square foot. However, in several other instances BellSouth attempts to recover additional land investment on a factor basis for: (1) modifications that are made to the space; or for (2) the construction of the cage on the space that is already being recovered by the land and building rate element. My testimony explains why this double-recovery should not be permitted.

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Fourth, BellSouth has failed to properly account for the quantity of cables that can be placed in a cable rack in developing the pro-rata cost that the ALEC should bear. I provide details on how to properly calculate these costs and restate BellSouth's cost study to correct these errors.

Fifth, BellSouth has not consistently applied fill factors to equipment in the collocation cost study. These inconsistencies have been identified and corrected.

Sixth, several of the material items contained in BellSouth's cost study for the construction cost of a collocation cage are higher than TELRIC. My restatement relies on external professional cost estimating resources to offer an alternative cost for the items.

Α.

Seventh, BellSouth has several rate elements related to Space Preparation that purport to recover costs for retrofitting the central office space to make it capable of providing collocation. There are several problems with the investment BellSouth seeks to recover in these elements. However, the principal problem is that in a TELRIC cost study, the building investment already recovers the forward-looking investment for central office space capable of housing all carriers' telecommunications equipment.

BellSouth cannot recover a forward-looking investment for the building and then also recover the cost for modifying that same building to house collocated telecommunications equipment. Doing so results in a double-recovery of cost that is inconsistent with TELRIC principles.

Q. HOW WILL YOU ORGANIZE YOUR TESTIMONY ON COLLOCATION?

In general, I will address each of the seven categories identified above and explain why BellSouth's approach or input values are incorrect. I will also recommend an alternative approach or value and support why my analysis is correct. In instances where a problem affects several types of rate elements, I make distinctions between the different rate elements.

1		A. <u>DC Power</u>				
2		1. <u>Investment per Amp for DC Power</u>				
3 4	Q.	WHAT INVESTMENT PER DC AMP DID BELLSOUTH USE IN ITS PREVIOUS DC POWER COST STUDY SUBMITTED IN FLORIDA?				
5	A.	BellSouth used an investment per amp of \$165.80 per fuse amp. See Florida PSC Docker				
6		Nos. 960846-TP, 960757-TP, 971140-TP Cost Study Filing, Output Report for Element				
7		H.1.8. See attached Exhibit SET-2. As best as I can determine this investment per amp				
8		was used to establish BellSouth's collocation power rates.				
9 10	Q.	WHAT INVESTMENT PER DC AMP IS BELLSOUTH PROPOSING IN THE CURRENT PROCEEDING?				
11	A.	BellSouth has proposed an investment of \$286.00. This amounts to a 72 percent increase				
12		over the investment BellSouth used in Docket Numbers 960846-TP, 960757-TP, and				
13		971140-TP. Given the nature of how the current investment was developed, the				
14		Commission should reject this increase in investment for the rates BellSouth charges				
15		ALECs for DC power.				
16 17	Q.	HOW DID BELLSOUTH DEVELOP THE REVISED INVESTMENT FOR DC POWER?				
18	A.	According to BellSouth's Response to AT&T's 3 rd Request for Production (POD No. 32)				
19		BellSouth developed the investment per amp exclusively on the basis of augments for				
20		power for collocators and not based on the total demand for DC power placed on the				
21		power plant by all users – including BellSouth.				
22 23	Q.	WHY IS IT WRONG TO USE ONLY AUGMENTS TO DEVELOP THE COST FOR DC POWER?				
24	A.	TELRIC principles require that the costs for unbundled elements or interconnection				
25		utilize total demand (the "T" in TELRIC) to develop cost. This principle applies to DC				
26		power as well. BellSouth's cost study relies only on small power augments. Augments				
27		mean that BellSouth has added a small incremental amount of DC power capacity to its				

existing power plant to support only the demand for power associated with collocators.

Augments, by nature, do not provide the scale economies in the derivation of the DC power investment that BellSouth benefits from based on its installation of a

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comprehensive DC power plant.

This is the same issue that arises when determining rates for unbundled switching. In that instance, the prices for new switches include a discount that is much larger than for "growth" jobs for the switch. It is widely accepted under TELRIC principles that ALECs should not pay the "growth" cost of the switch, but rather should benefit from the purchase of new switches which include the larger discounts the incumbent obtains. See FCC First Report and Order, August 8, 1996, ¶ 677, where it notes: "The term 'total service,' in the context of TSLRIC, indicates that the relevant increment is the entire quantity of the service that a firm produces, rather than just a marginal increment over and above a given level of production." The concept remains the same in TELRIC. This same TELRIC principle applies to DC power. ALECs should not pay for "growth" or "augment" jobs in central office power facilities. In addition, when all of the equipment associated with an entire DC power plant is installed, there are economies of scale in doing all of this work at one time rather than spreading the work across numerous small jobs. TELRIC requires that BellSouth size the DC power plant for all demand on the plant including BellSouth's demand and then develop the investment consistent with this total demand. On its face, BellSouth's use of only small augments associated with the demand from ALECs clearly contradicts the requirements of a TELRIC cost study.

Q. ARE THERE OTHER PROBLEMS WITH BELLSOUTH'S DATA BESIDES THAT IT IS BASED EXCLUSIVELY ON AUGMENT JOBS?

A. Yes. Again, on its face, the data that BellSouth used was exclusively based on augment power jobs performed only for collocators. The data did not incorporate BellSouth's

1 demand for power or account for the total power capacity available in the central office. 2 However, there are many unusual aspects to BellSouth's DC power investments that 3 cause the use of its data to be unwarranted. First, the data provided by BellSouth does 4 not support the investment per amp proposed by BellSouth in this proceeding. 5 Specifically, BellSouth provided a document that it claims supports its investment per 6 amp – H.1.8, H.1.71, and H.2.4.xls in Appendix F of its backup work papers. I have 7 reviewed this document and it does not support the investment per amp proposed by 8 BellSouth. BellSouth's proposed investment per amp is \$429.00 per used or load amp. 9 See "FLphycol.xls" Workbook, "INPUTS Recurring" Worksheet, Row 293 ("Average 10 Investment per Used Amp"). However, the work paper BellSouth cites to in its response to AT&T POD No. 32 indicates an investment per amp of ***BEGIN 11 12 CONFIDENTIAL \$ **END CONFIDENTIAL*****. *See* "H.1.8, H.1.71 & 13 H.2.4.xls" Workbook (Located in Appendix F), "FL" Worksheet, Row 10 (Power Construction \$\$\$/Amp – Plant Only). The Commission will note that this same 14 document also contains BellSouth's proposed investment of \$429.00 per amp, but the 15 16 backup data simply does not support that investment. ARE YOU AWARE OF WHY THIS DISCREPANCY EXISTS? 17 0. 18 Yes. BellSouth has not provided a complete set of the supporting documentation for its A. 19 investment of \$429.00 per amp. I know from participation in the collocation proceeding in Georgia that BellSouth proposed the same investment there as in Florida. However, 20 when NewSouth – an ALEC participating the in the cost proceeding – filed discovery 21 22 with BellSouth, BellSouth provided supporting documentation that led to the \$429.00 23 investment. BellSouth has been asked for the same support in Florida, but BellSouth has 24 thus far not produced the documentation. The fundamental difference between the

Georgia backup documentation for the \$429.00 investment and the Florida backup documentation for the \$429.00 investment is that in Georgia BellSouth provided the backup documentation for all of its states such that the sum of data across all of its states ultimately led to the investment per amp that it proposed. BellSouth in Florida has only 5 provided the Florida backup documentation even though it is relying on states outside of Florida to support its ultimate proposal of \$429.00 per amp.

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ARE YOU ABLE TO USE THE INFORMATION FROM THE NEWSOUTH 7 Q. **DISCOVERY IN GEORGIA?**

9 No. The information I have provided above is public knowledge from the cost A. 10 proceeding in Georgia. However, the content of the backup documentation in Georgia is 11 proprietary to the cost proceeding in Georgia. AT&T has made repeated efforts to have BellSouth provide this documentation so that Florida can have the same support for 12 13 BellSouth's proposed investment as was obtained in Georgia. Thus far, BellSouth has 14 not provided this documentation. As a result, my evaluation of the support of 15 BellSouth's investment will be incomplete. Nonetheless, I believe it demonstrates that 16 the investment per amp proposed by BellSouth should be completely rejected.

O. WHAT ARE YOUR CONCERNS WITH THE SUPPORT DOCUMENTATION THAT YOU DO HAVE FOR BELLSOUTH'S PROPOSED DC POWER **INVESTMENT?**

As noted earlier, BellSouth's data is based exclusively on the use of augment projects to support the power needs for ALECs collocating in Florida. However, augments are not consistent with TELRIC methodology in that they do not reflect the total demand for DC power in the central office and the total investment to support that demand. Instead, BellSouth approach calculates the power investment just looking at the cost to augment its existing plant to supply the demand from the ALECs which provides none of the scale economies that BellSouth enjoys. (Note: I will point out later that even this calculation

was done improperly by BellSouth.) I took the Florida data – the only state that BellSouth provided data even though its proposed investment is based on region-wide jobs – and analyzed the distribution of projects done in this state. In Florida, there were DC power augment projects conducted in 99 central offices. Of these projects, 57 of the projects are at an investment per amp that is more than double the BellSouth proposed average. Fully 46 of the projects resulted in investments per amp that were greater than \$1,000. BellSouth's proposed average is \$429.00. These investments per amp for so many of BellSouth's central offices are simply outside any reasonable estimate of the forward-looking investment for DC power. Remember, BellSouth proposed an investment of \$248.70 (on a load or used amp basis) in the previous collocation cost proceeding in Florida. This investment is much more within the appropriate range of reasonableness. For this comparison, I took the investment per fuse amp that BellSouth proposed in the last collocation proceeding and multiplied it by the 1.5 fuse amp to load amp factor so that it would be comparable to the load or used amp investment proposed by BellSouth in the present proceeding of \$429.00 per amp.

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I would also direct the Commission's attention to a collocation cost proceeding in Texas that I participated in. I point this out because Southwestern Bell's collocation cost filing was made public by the Texas Public Utilities Commission. In Texas, Southwestern Bell determined that its investment for installing a 2,500 amp DC power plant is \$677,706.61. *See* Exhibit SET-3 to review Southwestern Bell's investment proposal for the 2,500 amp and 4,000 amp DC power plants in Texas. Further, Southwestern Bell also determined that its investment for installing a 4,000 amp DC power plant is \$952,581.61. Please note that these values were the investments that Southwestern Bell *proposed* in Texas. Ultimately, the Commission actually awarded

lower investments in that there were numerous issues even with Southwestern Bell's investments that caused them to be higher than TELRIC. Nonetheless, these examples demonstrate just how outrageous BellSouth's proposed investments are for Florida. Please see Exhibit SET-4 for the investments that the Texas PUC ultimately approved for DC power rates in Texas. These two Southwestern Bell data points lead to an investment per amp of \$250.81. Further, given that BellSouth's analysis is at times conducted on a fuse amp basis, this value per amp must be divided by 1.5 to obtain a comparative investment to that used by BellSouth in its cost study for rate element H.1.8 (DC Power per Fuse Amp). Thus, Southwestern Bell's proposed investment per amp is \$167.21 whereas BellSouth is seeking \$286.00 per amp. BellSouth's previous investment of \$165.80 is almost exactly what Southwestern Bell *requested* in Texas.

Q. IS THERE ANY WAY TO CORRECT BELLSOUTH'S DATA TO REMOVE THESE UNREASONABLE AUGMENT INVESTMENT VALUES?

A.

Fundamentally, there is no way to correct BellSouth's analysis in total. BellSouth has failed to provide a TELRIC investment cost study for DC power that includes *all* of the jobs rather than just the augments for ALECs. However, in addition to the fundamental error BellSouth made in not accounting for the total demand required in a TELRIC study, BellSouth also made a calculation error as well in developing the investment per amp. A review of the BellSouth response to AT&T POD No. 32 shows that BellSouth has taken the investment for an augment to its power plant and divided by only the DC power amperage *requested* by the ALEC. However, this does not provide an accurate representation of the investment per amp *placed* by BellSouth in that BellSouth has routinely placed more power capacity than the ALEC requested. It turns out that there is one office in Florida where BellSouth has made a large scale installation of DC power capacity that begins to provide insight into the efficient, forward-looking investment that

BellSouth actually enjoys with its plant. As documented in BellSouth's response to AT&T POD No. 32, the Gainesville-Main (GNVLFLMA) central office added ***BEGIN CONFIDENTIAL END CONFIDENTIAL*** amps of DC power capacity (defined through the rectifier capacity added to the office) at an investment of ***BEGIN CONFIDENTIAL END CONFIDENTIAL***. Based on this DC power installation project, BellSouth's investment per used amp would be \$196.00. Adjusting this investment to a fuse amp basis using BellSouth's 0.667 load amp to fuse amp conversion factor arrives at an investment of \$130.73. Given that this investment per amp does not account for fill, it would need to be adjusted with an 85 percent fill factor. This is typically the fill factor that I have observed in the development of DC power investments. This final adjustment leads to an investment of \$153.80. This investment is almost precisely equal to the \$165.80 that was recommended by BellSouth in the previous cost proceeding in Florida. While it is slightly lower than what BellSouth proposed in the last collocation cost proceeding, it is far more indicative of the scale economies that should be incorporated into a TELRIC calculation of DC power investment in that it reflects the power plant size - ***BEGIN CONFIDENTIAL END CONFIDENTIAL*** amps – that is more typical of the total demand for a central office.

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Of course, BellSouth distorts this analysis in that instead of dividing the investment in the power plant by the capacity of the power plant, BellSouth only divides the investment by the amount of power that the CLEC orders – ***BEGIN

CONFIDENTIAL END CONFIDENTIAL*** amps in this case. This leads to an investment per load or used amp of \$1,277.35 or 5.54 times higher than would be consistent with TELRIC. The bottom line is that the Commission should reject

BellSouth's approach in that it simply does not represent the scale economies appropriate with TELRIC and is calculated across an artificially defined capacity that does not reflect the total demand inherent in a TELRIC analysis.

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The analysis described above for Gainesville can be extended to all of the central offices in Florida that have received capacity upgrades to the rectifier plant. The augment to the rectifier plant is important in that this determines whether capacity has really been added to the plant or not in that the telecommunications equipment actually receives its power from the rectifiers with backup provided through batteries and other equipment. When all of the rectifier augments are considered, the total DC power investment in those offices totals ***BEGIN CONFIDENTIAL **END** CONFIDENTIAL*** with a total capacity added of ***BEGIN CONFIDENTIAL END CONFIDENTIAL*** load amps. This leads to an investment per amp of \$248.49 after the application of an 85 percent fill factor. Converting this to fused amps arrives at an investment of \$165.74. Both the used and fuse amp values are within pennies of the investment per amp recommended by BellSouth in the prior collocation cost proceeding. GIVEN THE FUNDAMENTAL PROBLEMS WITH BELLSOUTH'S DATA AND APPROACH TO DEVELOPING ITS INVESTMENT FOR DC POWER, WHAT RECOMMENDATION DO YOU MAKE? Given all of the foregoing problems, I recommend that the Commission retain the investment per amp that was used by BellSouth in setting the previous DC power rate in Florida. In other words, I recommend that the Commission use the \$165.80 for fuse amp or \$248.70 per used amp that was previously used by BellSouth in Docket Numbers 960846-TP, 960757-TP, and 971140-TP in light of BellSouth's failure to provide a TELRIC study for its DC power investment in this present proceeding. Moreover, these

investments are supported by the data BellSouth has provided in this docket when

]	l appropriat	te conversions are ma	ade to reflect a TE	ELRIC calculation o	f cost from

2 BellSouth's data.

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Q. HAVE ANY OTHER STATE COMMISSIONS IN THE BELLSOUTH TERRITORY RECENTLY UTILIZED THIS INVESTMENT LEVEL TO SET DC POWER RATES FOR COLLOCATION?

A. Yes. The Georgia Public Service Commission recently concluded its re-evaluation of the costs for UNEs and collocation. Please understand that BellSouth requested the same investment in Georgia per fuse amp – \$286.00 – that BellSouth is seeking in Florida. In the Georgia proceeding, the Commission determined that \$165.80 per fuse amp or \$248.70 per used amp are the appropriate investments to utilized for establishing the TELRIC cost for DC power. *See* Georgia PSC Docket No. 14361-U, rates approved on March 18, 2003, written order not yet released.

2. AC Component of the DC Power Rate

Q. COULD YOU EXPLAIN WHAT THE AC COMPONENT OF THE DC POWER RATE IS?

Yes. There are two main components to the DC Power rate. First, the majority of the 16 A. cost is associated with recovering the cost of the equipment necessary to generate DC 17 power. Virtually all telecommunications equipment operates on DC power (or direct 18 19 current power). Yet, the power that can be purchased from the electric utility is AC 20 power (or alternating current power). A whole series of equipment must be installed by 21 BellSouth to convert this AC power to DC power and provide for its redundancy: 22 rectifiers (which actually convert the AC power to DC power); batteries (which stabilize the DC power and provide for short-term backup in the event of an AC power failure); 23 controllers and power distribution service cabinets (for managing the DC power elements 24 25 and distributing the power throughout the central office); and the emergency generator (for providing long-term backup in the event of a lengthy AC power failure). The cost 26

recovery of these elements constitutes the majority of the costs in the DC Power rate.

Second, the other part of the DC Power rate is the AC power that is purchased from the electric utility that is then converted into DC power. This part of the DC Power rate

element is a smaller part of the overall DC power cost.

A.

Q. ARE THERE PROBLEMS WITH BELLSOUTH'S AC COMPONENT OF THE DC POWER RATE?

Yes. There are two. *First*, BellSouth is imposing a higher cost on ALECs for AC power than what BellSouth itself incurs from the AC electric utility. Specifically, BellSouth has indicated in its DC Power cost study that BellSouth pays \$0.07 per kilowatt hour for AC electricity. *See* "FLphycol.xls" Workbook, "INPUTS_Recurring" Worksheet, Cell B26 ("Average Monthly Cost per KWH") and Cell F26. BellSouth proposed precisely the same cost per kilowatt hour in Georgia well. However, in Georgia we also obtained copies of invoices for two of BellSouth's central offices and learned that BellSouth actually incurs costs that are much lower than the \$0.07 per kilowatt hour that BellSouth seeks here. The problem in Florida is that AT&T asked the same discovery request as in Georgia but BellSouth has not provided an adequate response. Nonetheless, alternative data does exist that allows me to restate the AC kilowatt hour rate.

Attached as Exhibit SET-5 to my testimony I have provided the US Department of Energy Estimated U.S. Electric Utility Average Revenue per Kilowatt Hour to Ultimate Consumers by Sector, Census Division, and State, Year-to-Date (November) 2002 and 2001. This report provides the average AC kilowatt hour rate for residential, commercial, and industrial power users for every state in the country. The report is updated every six months and reflects the average AC rate over the preceding 12 months. The appropriate category to use for BellSouth is the industrial user category. I am confident of this selection for at least two reasons. *First*, from experience I know that the

incumbent LECs tend to have AC power rates that are most closely approximated by the rates in this column. *Second*, incumbent LECs normally have load-sharing arrangements with the AC power provider in that the incumbent LECs can provide their own AC power if needed. Moreover, incumbent LECs often have agreements that allow them to place AC power back onto the power grid, if needed by the electric utility. The bottom line, however, is that I have used the industrial category for 2002 in identifying the appropriate AC kilowatt hour rate for BellSouth and the other incumbents.

8 Q. WHAT IS THE SECOND PROBLEM THAT YOU HAVE WITH BELLSOUTH AC COMPONENT OF THE DC POWER RATE?

A.

Quite simply, BellSouth has used a rectifier efficiency that is too low. Rectifiers are used to convert AC power from the electric utility into DC power that is used by telecommunications equipment. Whenever this conversion is done, there is some loss that is experienced through the rectifier in that the amount of AC power that is brought into the rectifier does not come through completely as DC power. The inverse of this loss is expressed as the efficiency of the rectifier. BellSouth has recommended the use of 85 percent efficiency on its rectifiers. *See* "FLphycol.xls" Workbook, "wp H.1.8" Worksheet, Row 19 ("Rectifier Efficiency"). In reality, based on the rectifiers used in AT&T's network which are similar to those used in incumbent networks, the efficiency of rectifiers is at least 90 percent. There is no reason to believe that BellSouth's rectifiers should operate at less efficiency than AT&T's. Moreover, in a TELRIC environment, the most efficient, least-cost technology should be used in the developing the forward-looking cost.

Q. WHAT RECOMMENDATION DO YOU HAVE FOR THESE ISSUES?

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A. The Commission should reduce BellSouth's cost for AC electricity to \$0.053 per kilowatt hour as documented in Exhibit SET-5. Further, the Commission should implement an efficiency of 90 percent for the rectifier.

3. Fused Amp versus Load or Used Amp

6 Q. COULD YOU EXPLAIN THE DIFFERENCE BETWEEN "FUSED AMP" AND "LOAD AMP" OR "USED AMP" AS IT RELATES TO DC POWER?

The distinction between "load amps" or "used amps" and "fused amps" is important to understand to develop a cost-based rate for DC Power. The DC "load" or "used amp" is determined based on the requirements of the equipment being powered. For example, a piece of telecommunications equipment (or a collocator) may require 15 amps of DC power. This would be the DC power "load." Later in my testimony I will provide more detail on the term "load" explaining that it is defined in two forms: List 1 and List 2 Drain. For the time being, the example that follows is illustrative and will be refined later in the testimony to provide a specific adjustment that must be made to BellSouth's cost study. The DC power "load" is sourced from the BDFB or power distribution center for the power plant. It is common engineering practice that if the "load" required on a power feed is 15 amps, the engineer will "fuse" this feed at around 25 to 50 percent greater than the "load" or at around 20 to 25 amps in the example I have provided. The 20 to 25 amps would be the "fuse amps." It is necessary to fuse the power feed at a greater level than the load on the power feed to avoid having short-term spikes in amperage to the equipment causing the fuse to blow. Blown fuses stop the flow of power to the equipment through the power feed. Also, it is necessary not to fuse the feed at too high of a level because if there is a problem with the telecommunications equipment and it starts to draw too much amperage, the engineer wants the fuse to blow to protect the

telecommunications equipment and the power plant itself. The 25 to 50 percent factor is used by the engineer to balance these two objectives.

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It is critical to understand that the economic cost for DC power is based on "used or load amps" because this is what the collocator or piece of equipment actually uses.

The size of the fuse has engineering significance, but it is irrelevant from a cost perspective.

There is a second distinction that is equally important to understand. Vendors that sell telecommunications equipment such as Lucent or Nortel identify the load that the equipment will require with two measurements: List 1 Drain and List 2 Drain. List 1 Drain is the amperage that the equipment uses when the power plant is operating normally. List 2 Drain is the amperage that the equipment uses when the power plant is in distress meaning that the batteries are nearing the point of complete failure. It is an industry standard to provide this type of engineering information for each piece of equipment. Using this information, engineers base their power drain requirements off of the List 1 Drain for the equipment, but use List 2 Drain for cable sizing and fuse requirements for the rare circumstance of meeting the List 2 Drain. Nonetheless, the load that is important is the List 1 Drain load amps that are placed on the incumbent's power plant by the ALEC. While List 1 Drain is the current that the equipment draws when it is operating at normal voltages, the equipment will not always draw that current. The primary reason for this is that the List 1 Drain is the current that the particular piece of equipment draws when it is fully functional normally meaning that service is placed on the equipment. In other words, the vendor specification may note that a piece of equipment has a List 1 Drain of five amps, but if the actual usage on the piece of

equipment was metered, the actual usage would be less if the equipment was not being fully utilized.

Q. WHY IS THIS IMPORTANT FROM A COSTING STANDPOINT?

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Quite simply, the cost for DC Power is based on the load that is placed on the plant. This A. is what causes BellSouth to incur cost and it is the basis upon which BellSouth should be compensated according to TELRIC. The size of the fuse that is installed for the ALEC is somewhat arbitrary and is not directly correlated to the cost that the ALEC is causing BellSouth to incur. In other words, the ALEC may place several pieces of equipment in its collocation arrangement that have a sum total List 1 usage of 62 amps. Unless BellSouth's power plant is not operating properly, this is the total load that the collocator will draw for the equipment placed in the collocation arrangement. However, BellSouth wants to charge the collocator based on the size of the fuse that is placed into the BDFB or power distribution center. The size of this fuse can be set at virtually any size larger than the List 1 (and List 2) drains anticipated. However, the size of the fuse, which would typically be 90 or 100 amps for the example that I have described, is not indicative of the costs that BellSouth will incur. The List 1 drain actual usage defines the cost that BellSouth will incur and the cost that the ALEC should bear. This "used amp" drain is measured in load amps – not fuse amps – and, as such, the rate element for DC Power should also be based on "load" or "used" amps.

20 Q. CAN THIS EASILY BE ADJUSTED IN BELLSOUTH'S COLLOCATION COST STUDY?

Yes. Actually, BellSouth has already incorporated this adjustment into its BellSouth Cost Calculator based on the requirements of this Commission. BellSouth has assumed a fixed relationship between fuse and load in its filing of the BellSouth Cost Calculator in Florida. BellSouth did not file the BellSouth Cost Calculator with these calculations in

Georgia. However, BellSouth has implemented the calculations for the *load* amp calculations in the same manner that I provided for in my restatement of the Georgia version of the BellSouth Cost Calculator on behalf of AT&T. BellSouth has assumed that for every load amp placed on its plant, 1.5 amps of fusing will be placed at the BDFB or power distribution center. To convert BellSouth's cost study to a load amp basis the investment per fuse amp in BellSouth's study would have to be divided by 0.667 to convert it to an investment per load amp. This is what BellSouth has done in Element H.1.71.

9 Q. IS THERE ANY OTHER CHANGE THAT WOULD BE REQUIRED?

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A. Yes. While the Commission has reflected its willingness to consider the issue of whether DC power cost should be recovered on a fuse used basis, there are other adjustments that would have to be made if the Commission were to determine that a used amp basis were preferred. The rate element definition in BellSouth's interconnection agreements and in its collocation handbook would need to be modified to ensure that ALECs pay for DC power on a load amp basis rather than on a fuse amp basis. In addition, the terms and conditions in the interconnection agreements and in BellSouth's collocation handbook would need to be modified to ensure that the cost recovery is based on the List 1 drain or actual power usage of the equipment placed in the collocation arrangement by the ALEC.

Q. IS IT EVEN POSSIBLE TO HAVE DC POWER PRICED ON A PER FUSE AMP BASIS, AS BELLSOUTH PROPOSES, AND EVER ACHIEVE A STRUCTURE THAT IS COST BASED?

No. I have attempted to devise adjustments that would allow BellSouth to charge for DC power on a fuse amp basis and have that rate represent the cost that the ALEC is placing on BellSouth's DC power plant. However, it is simply not possible. As I have stated repeatedly above, while there are engineering guidelines that facilitate the development of fuse sizing, ultimately the size of the fuse has very little to do with the actual *load or*

1		usage that is placed on the DC power plant. There can be many different levels of load
2		that can fit within the fuse size that is implemented. However, for each of those different
3		levels of load, it is never the size of the fuse that drives the cost that is being incurred in
4		BellSouth's DC power plant. It is the <u>actual usage measured as List 1 Drain</u> that causes
5		BellSouth to incur cost, and therefore the rate structure must be organized around usage
6		(and not fused amps) to achieve a cost-based system.
7		B. Planning, Engineering, and Installation Times
8 9 10	Q.	YOU INDICATED IN YOUR INTRODUCTION THAT BELLSOUTH HAS OVERSTATED SEVERAL COLLOCATION PLANNING ELEMENTS. COULD YOU IDENTIFY WHICH ELEMENTS YOU ARE REFERRING TO?
11	A.	Yes. My introduction noted that there are several instances in Collocation Planning
12		where the ALEC is responsible for and will directly bear the cost of activities that
13		BellSouth has included in the planning costs for collocation. In doing so, collocators pay
14		the cost twice in violation of TELRIC principles which require that the cost of
15		interconnection be based on cost. Those rate elements area:
16		(1) Fiber Entrance Cable Installation, per Cable
17		(2) Security Access System – New Access Card Activation, per Card
18		(3) Security Access System – Replace Lost or Stolen Card, per Card
19		(4) Application Cost, Subsequent
20		(5) Space Availability Report per C.O.
21		(6) Security Access – Initial Key, per Key
22		(7) Security Access – Replace Lost or Stolen Key, per Key
23		(8) Copper Entrance Cable Installation, Per Cable
24		(9) Collocation Cable Records
25		These nine rate elements (and their related elements for other forms of collocation such

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1.	Fiber	Entrance	Cable	Installation

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2	Q.	WHAT PLANNING, ENGINEERING, AND INSTALLATION COSTS HAVE
3		YOU FOUND TO BE OVERSTATED OR DUPLICATED WITH BELLSOUTH'S
4		FIBER ENTRANCE CABLE INSTALLATION ELEMENTS?

First, BellSouth has included 4.0 hours for Common Systems Capacity Management for Riser Cable Installation. See FLPHYCOL.xls Workbook, INPUTS Nonrecurring Worksheet, Rate Element H.1.5, Row 160. BellSouth notes that this function and associated time is to: "Coordinate with OSP Construction to plan riser cable installation." See FLPHYCOL.xls Workbook, INPUTS Nonrecurring Worksheet, Rate Element H.1.5, Row 161. The problem is that BellSouth's OSP Construction does not install the fiber riser cable according to BellSouth's interconnection agreements with ALECs and, therefore, BellSouth is not required to coordinate with this group. For example, the AT&T Interconnection Agreement with BellSouth notes: "AT&T will provide and install a sufficient length of fire retardant riser cable, to which the entrance cable will be spliced, which will extend from the splice location to the AT&T's equipment in the Collocation Space." See AT&T-BellSouth Interconnection Agreement-Florida, February 21, 2002, § 5.3. If AT&T or any other ALEC is responsible for this cost of installation, which includes coordination with its BellSouth certified vendor to perform this installation, BellSouth should not be compensated for coordinating with its OSP Installation group, which is not even performing the work. Thus, these 4.0 hours for Common Systems Capacity Management for Riser Cable Installation have been removed from BellSouth's cost study.

Second, BellSouth has included 7.5 hours for Outside Plant Engineering. See FLPHYCOL.xls Workbook, INPUTS_Nonrecurring Worksheet, Rate Element H.1.5, Row 162. Although BellSouth identifies the tasks that are associated with this function, BellSouth does not provide data to support the time associated with the function. In

addition, some of the functions that BellSouth has identified will not be performed by BellSouth and, therefore, should not be included in this time estimate. For example, BellSouth has included time for the Outside Plant Engineer to "Draft work order for OSP construction." See FLPHYCOL.xls Workbook, INPUTS Nonrecurring Worksheet, Rate Element H.1.5, Row 167. As indicated above, BellSouth does not perform the cable installation according to its interconnection agreements – the collocator is responsible for this cost. Thus, BellSouth's Outside Plant Engineers will not be required to develop the same complex work orders for its OSP construction personnel as it would if it were actually performing the riser cable installation. All that BellSouth is responsible for is the splicing that occurs between the fiber entrance facility (that is installed by the collocator) and the riser cable (that is also installed by the collocator). And even here, the interconnection agreements indicate that in certain instances the collocator may install facilities that will not require any splicing. Nor does BellSouth's time estimate take into account what work is performed by BellSouth compared to that which the collocator performs. For instance, BellSouth has included time for the Outside Plant Engineer to "Schedule work order for OSP construction." See FLPHYCOL.xls Workbook, INPUTS Nonrecurring Worksheet, Rate Element H.1.5, Row 168. The only work activity that the OSP Construction personnel could be required to perform is the splicing of the entrance cable to the riser cable. However, this does not always occur based on the interconnection agreement language contained in BellSouth's agreements. Thus, this scheduling task will not always be required. For example, the AT&T-BellSouth Interconnection Agreement-Florida, February 21, 2002, § 5.3 contains the provision that the splice is not always required: "In the event AT&T utilizes a non-metallic, riser-type entrance facility, a splice will not be required." Finally, BellSouth has included time for

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1 the Outside Plant Engineer to "Coordinate with Master Contractor for manhole entry." 2 See FLPHYCOL.xls Workbook, INPUTS Nonrecurring Worksheet, Rate Element H.1.5, Row 169. However, the collocator is responsible for the installation of the entrance cable 3 through the manhole into the interconnection point within the cable vault. The 4 coordination and the cost associated with this coordination will be borne by the collocator 5 6 - not BellSouth. In summary, I have reduced BellSouth's estimate of the time required 7 for Outside Plant Engineering to 5.5 hours to account for these three problems 8 Third, BellSouth has made the same type of errors with its Outside Plant 9 Construction time estimate of 16.0 hours. See FLPHYCOL.xls Workbook, 10 INPUTS Nonrecurring Worksheet, Rate Element H.1.5, Row 170. Specifically, BellSouth has included time for at least three functions that the collocator, not BellSouth, 11 is required to perform. They are: (1) Place pull wire; (2) Pull cable into building; and (3) 12 13 Place & rack cable in C.O. See FLPHYCOL.xls Workbook, INPUTS Nonrecurring 14 Worksheet, Rate Element H.1.5, Rows 172, 173, and 176. The removal of these three 15 functions leaves BellSouth with the only work that it will perform – splicing of the entrance cable to the riser cable. In my experience, based on the installation of a 24-fiber 16 cable, 5.0 hours would be required for this function. This time includes 3.0 hours for 17 Splicing Preparation Activity associated with set-up, take-down, and travel and 2.0 hours 18 19 for fiber splicing based on 5.0 minutes per splice for a 24-fiber cable. Fourth, BellSouth has included cost for Manhole Contract Labor that again is 20 21

borne directly by the collocator who is responsible for installing the entrance facility through the manhole into the interconnection point in the cable vault. *See*FLPHYCOL.xls Workbook, INPUTS Nonrecurring Worksheet, Rate Element H.1.5,

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1		Rows 179-189. This cost should be removed from BellSouth's Fiber Cable Installation
2		nonrecurring cost.
3 4 5	Q.	SHOULD BELLSOUTH HAVE TWO RATE ELEMENTS FOR ENTRANCE CABLE INSTALLATION: ONE WHEN BELLSOUTH PERFORMS SPLICING AND ONE WHEN NO SPLICING IS REQUIRED?
6	A.	Yes. Alternatively, BellSouth could "weight" the costs that only occur when splicing is
7		required with a factor that is based on how often fiber entrance cable installations require
8		splicing. This would allow BellSouth to retain only one rate element but more accurately
9		reflect the cost that it incurs. Nonetheless, I do not have information on how often
10		BellSouth is not required to perform the splicing in the vault. Based upon my experience
11		in other parts of the country, splicing is generally not required. I would expect that this
12		would be the same for BellSouth, but do not have independent information on this at
13		present.
14 15	Q.	DO THE SAME ADJUSTMENTS YOU HAVE IDENTIFIED ABOVE APPLY EQUALLY FOR THIS ELEMENT IN VIRTUAL COLLOCATION?
16	A.	Yes. BellSouth proposed the same nonrecurring charge of \$1,473 for Fiber Entrance
17		Cable Installation, per Cable regardless of whether the collocator is using Physical
18		Collocation or Virtual Collocation. All of the changes that I have proposed apply equally
19		to both forms of collocation.
20		2. <u>Security Access Labor Times</u>
21 22	Q.	WHAT PROBLEM HAVE YOU OBSERVED IN THE SECURITY ACCESS LABOR TIMES THAT BELLSOUTH HAS PROPOSED?
23	A.	Primarily, there is a very interesting contradiction in BellSouth's Security Access System
24		- New Access Card Activation times. BellSouth proposes what I believe to be a
25		reasonable activation time per request for security cards of 1.0 hour. See FLPHYCOL.xls
26		Workbook, wp H.1.38 NRC Worksheet, Row 17. BellSouth goes on to propose what I
27		believe to be a reasonable number of access cards of 5.0 cards issued per request. See

FLPHYCOL.xls Workbook, wp H.1.38 NRC Worksheet, Row 19. This yields a calculation of 0.2 labor hours per card. *See* FLPHYCOL.xls Workbook, wp H.1.38 NRC Worksheet, Row 21. BellSouth calculates this value, but does not use it in the cost study. Instead, BellSouth then goes through several calculations to develop a value of 0.8583 labor hours per card. *See* FLPHYCOL.xls Workbook, wp H.1.38 NRC Worksheet, Row 33.This is the labor time that is used in the cost study. There is no explanation that I could identify for why BellSouth did not use its reasonable calculation of 0.2 labor hours per card and instead used the value of 0.8583 labor hours per card. My recommendation is that 0.2 labor hours per card is more reasonable and should be used.

10 Q. ARE THERE ANY OTHER LABOR TIMES RELATED TO SECURITY THAT YOU BELIEVE SHOULD BE MODIFIED?

A.

Yes. There are two other modifications I believe the Commission should make. *First*, BellSouth has a higher cost to replace a lost security card than to initially provide one. Replacement of a card should not take materially longer than providing a new card. Instead, the replacement of a security card should cost less. Nonetheless, I recommend that the Commission modify BellSouth's cost for replacing a security card to be the same as that for initially providing it. I have made the underlying modifications to BellSouth's cost study labor times to yield this result. Please note also, that even BellSouth has made this type of assumption for its Security Access Key costs by setting replacement costs at the same level as new costs.

Second, unlike with the Security Access Card costs where BellSouth at least provided some support for the development of its costs, BellSouth has provided no such support for the Security Key costs. In my experience, the forward-looking choice for security is the use of a key card. There are many instances where smaller central offices are secured using other mechanisms. Thus, I would recommend that the Commission set

the Security Key costs equal to those for the Security Card to be consistent with TELRIC, particularly in light of BellSouth's failure to provide support for the times or costs associated with the Security Key approach.

3. <u>Subsequent Application Cost</u>

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Q. WHAT CONCERNS DO YOU HAVE WITH BELLSOUTH'S SUBSEQUENT APPLICATION COST?

There are at least three problems that I have found in BellSouth's Application Cost – Subsequent nonrecurring cost element. *First*, with an initial application for collocation, BellSouth has included 6.5 labor hours for Job Grade 58 functions. *See* FLPHYCOL.xls Workbook, INPUTS_Nonrecurring Worksheet, Rate Element H.1.1, Row 12. However, with a subsequent application for collocation, BellSouth has included 7.5 labor hours for Job Grade 58 functions. *See* FLPHYCOL.xls Workbook, wp H.1.1 & wp H.1.46 NRC Worksheet, Rate Element H.1.46, Row 25. The problem is that subsequent applications generally have less labor or at most the same amount of labor. BellSouth provided some detail regarding the Job Grade 58 functions for an initial application, but did not provide any detail regarding the activities for a subsequent application. Based on the information BellSouth provided for the initial application, there is no reason to believe that the subsequent application should require any more time than an initial application. As a result, I have reduced the subsequent Job Grade 58 labor time to 6.5 labor hours.

Second, Outside Plant Engineering is virtually never involved in a subsequent collocation activity because multiple fibers (normally 24) are installed with the initial installation for collocation. As a result, the 0.5 labor hours that BellSouth included for this function has been removed. See FLPHYCOL.xls Workbook, wp H.1.1 & wp H.1.46 NRC Worksheet, Rate Element H.1.46, Row 30.

Third, the level of Parsons Engineering that BellSouth has assumed for an initial application and a subsequent application for collocation are the same, which is wrong. There is always a significantly greater amount of work involved with an initial application with collocation than there is with a subsequent application. Subsequent applications are generally associated with additional Cross-Connect arrangements or incremental power. Occasionally, subsequent applications can be for the addition of space. However, overall the engineering work will be substantially less than that which is required for an initial application for collocation. BellSouth has provided no information substantiating the level of Parsons Engineering that has been included in the cost study. Thus, I have only been able to make a rough adjustment to BellSouth's value by reducing if by half. This adjustment is supported by BellSouth making similar reductions for work activities associated with subsequent applications as compared to the initial application. See FLPHYCOL.xls Workbook, wp H.1.1 & wp H.1.46 NRC Worksheet, Rate Element H.1.46, Rows 12-33. Please note that Corporate Real Estate & Support (JG58) and Corporate Real Estate & Support (JG55) were both reduced by half. Also, note that Interexchange Network Access Coord (INAC), Circuit Capacity. Management (CCM), and Common Systems Capacity Mgmt. (CSCM) were all reduced by approximately one-third.

4. Space Availability Report

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20 Q. WHAT IS THE DIFFICULTY WITH BELLSOUTH'S PROPOSED SPACE AVAILABILITY REPORT CHARGE?

BellSouth's proposed nonrecurring charge of \$572.66 is completely outrageous when compared to charges that have been established in other parts of the country. It is also outrageous when compared to the work activity that is necessary to perform this function.

1 Q. HOW DOES BELLSOUTH'S PROPOSED RATE COMPARE TO THAT DETERMINED FOR OTHER INCUMBENTS AROUND THE COUNTRY?

3 A. The table below summarizes a selection of the Space Availability Report charges in states 4 where I have participated in collocation proceedings.

State	Space Availability Report Charge
Texas	\$204.06
Missouri	\$168.04
Kansas	\$168.04
Oklahoma	\$168.04
California	\$150.00

The point of these comparisons is not to suggest the absolute rate that the Commission should order for Florida, but to illustrate that the rate of \$572.66 that BellSouth has put forward in Florida is completely out of range with what other states have ordered (or even that has been proposed by other the incumbent LECs).

Q. WHAT ARE YOUR CONCERNS WITH BELLSOUTH'S INPUTS IN DEVELOPING THE COST FOR THE SPACE AVAILABILITY REPORT?

A. BellSouth has inappropriately included costs for developing the Space Availability
Report that should be treated as a normal part of being in the telecommunications
business. In other words, BellSouth's development of the cost for this report shows that
it intends to transfer to the ALEC the cost for it to inventory the use of its
telecommunications space within a central office every time a report of this nature is
requested. See FLPHYCOL.xls Workbook, INPUTS_Nonrecurring Worksheet, Rate
Element H.1.47, Rows 348-350, and 353-355 for activities that demonstrate that
BellSouth intends "to transfer to the ALEC the cost for it to inventory the use of its
telecommunications space within a central office every time a report of this nature is
requested." Moreover, the \$572.66 BellSouth is requesting for this report absolutely does

1		not account for efficient processes that I am confident BellSouth has at its disposal such
2		as using computer aided design (CAD) systems to maintain a space inventory. This
3		proposed cost by BellSouth should be completely rejected.
4 5	Q.	WHAT INPUTS WOULD YOU RECOMMEND THAT THE COMMISSION UTILIZE?
6	A.	First, I would retain BellSouth's estimate of 0.5 labor hours for the Account Team
7		Collocation Coordinator. See FLPHYCOL.xls Workbook, INPUTS_Nonrecurring
8		Worksheet, Rate Element H.1.47, Row 341. Second, the Common Systems Capacity
9		Management function will only require one hour to pull the space availability from the
10		CAD systems that BellSouth has available to it, identify the available space, and provide
11		this information to the Account Team Collocation Coordinator in an email message.
12		These are the only two labor times and categories that are necessary for this nonrecurring
13		rate element.
14		5. <u>Copper Entrance Cable Installation</u>
15 16	Q.	WHAT PROBLEMS HAVE YOU FOUND WITH BELLSOUTH'S COPPER ENTRANCE CABLE INSTALLATION NONRECURRING CHARGE?
17	A.	There are at least two problems with this element based upon how BellSouth developed
18		the inputs for this nonrecurring rate element. First, similar to the Fiber Entrance Cable
19		Installation element discussed earlier in this testimony, BellSouth has included costs that
20		the ALEC will have to pay. Specifically, the ALEC will have to pay the cost of entering
21		the manhole to deliver its copper cables to that point. Therefore, the manhole cost needs
22		to be removed from BellSouth's Copper Entrance Cable Installation element.
23		Second, BellSouth has included a "Connect and Test" function performed by
24		Outside Plant Construction for a total of 16.8333 labor hours in rate element H.1.57. See

FLPHYCOL.xls Workbook, INPUTS_Nonrecurring Worksheet, Rate Element H.1.57,

Row 413. However, this is inappropriate because BellSouth also included a "Connect

1 and Test" function performed by Outside Plant Construction for a total of 0.4167 labor 2 hours per 100 copper pairs in rate element H.1.58. FLPHYCOL.xls Workbook, 3 INPUTS Nonrecurring Worksheet, Rate Element H.1.58, Row 432. Both of these rate 4 elements would be required if a collocator ordered a copper entrance facility. However, 5 the second element that is based on the number of 100 pair increments of copper facilities 6 that are installed is a more appropriate cost element for the ***BEGIN 7 **CONFIDENTIAL** END CONFIDENTIAL*** function in that the time 8 will be directly proportional to the amount of work the Outside Plant Construction 9 personnel are required to perform. As a result, the 16.8333 labor hours in rate element 10 H.1.57 will be removed. 11 6. Collocation Cable Records 12 Q. WHAT IS YOUR CONCERN WITH BELLSOUTH'S DEVELOPMENT OF THE 13 COLLOCATION CABLE RECORDS NONRECURRING CHARGE? 14 Quite simply, there is a large portion of the cost that is already recovered through other A. 15 elements that the ALEC pays for when it purchases interconnection arrangements from 16 BellSouth. Specifically, the labor time that BellSouth includes for the Circuit Capacity 17 Management (CCM) function in Rate Elements H.7.1, H.7.2, H.7.4, H.7.5, and H.7.6

appears to be completely duplicative of functions and labor cost captured in Rate

Elements H.1.1 and H.1.46. It is these latter two elements that recover the cost for the

CCM engineering time with establishing the interconnection arrangements. There is no

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1 2 3 4	Q.	NOTWITHSTANDING THIS CORRECTION TO THE CABLE RECORD LABOR TIMES, DO YOU BELIEVE THAT BELLSOUTH SHOULD CHARGE AN ALEC FOR UPDATING ITS OPERATIONAL SUPPORT SYSTEMS WITH CABLE RECORD INFORMATION GENERALLY?
5	A.	No. Establishing the operational support systems records of an ALEC's cables
6		terminating on a BellSouth frame is a routine process and is already a cost being paid by
7		the ALEC through the factors applied on the capital recovery of the equipment
8		investment that is contained in recurring rates. Additionally, as with any capital asset,
9		making updates to the records is a normal function of maintaining the integrity of the
10		asset and included in the recurring maintenance charge. This Commission should not
11		accept BellSouth's nonrecurring rate proposal for Cable Record Charges. AT&T
12		proposes that there is no cost justification to create such a chargeable collocation element
13	Q.	DO SPRINT AND VERIZON HAVE CHARGES OF THIS TYPE?
14	A.	No. Sprint and Verizon do not have charges of this type in their collocation rate
15		proposals. The bottom line is that these costs are simply not reasonable in that they
16		double-recover costs that are already picked up in recurring elements. Moreover, in my
17		experience reviewing collocation costs across the country, I do not believe I have seen
18		any other incumbent charge for Cable Record systems updates as part of the collocation
19		elements.
20		C. Floor Space Cost
21 22	Q.	WHAT IS YOUR CONCERN WITH BELLSOUTH'S PROPOSED FLOOR SPACE CHARGE?
23	A.	The investment BellSouth has used is higher than publicly available data on
24		telecommunications space investment. As a result, BellSouth's resulting rate for Floor
25		Space is inconsistent with TELRIC principles and should be rejected by the Commission.

Q. WHAT PUBLICLY AVAILABLE DATA DID YOU REVIEW TO DETERMINE THAT BELLSOUTH'S INVESTMENT IS IMPROPER?

- 3 A. The source that I used for the per square foot cost of building space is R.S. Means. R.S.
- 4 Means is a data sourcebook widely used in the construction industry. The data provided
- 5 in this sourcebook are compiled from submissions from companies who actually have
- 6 constructed telecommunications central offices. Therefore, the investment is an
- 7 independent evaluation of the forward-looking cost for central office construction.
- 8 Moreover, the investment information contained in the R.S. Means guide can be adjusted
- 9 to be state-specific because it provides adjustments to modify its "national" numbers to
- 10 correspond to numerous cities across the United States including 16 in Florida.

11 Q. WHY DO YOU BELIEVE IT IS IMPORTANT TO USE AN INDEPENDENT SOURCE FOR THIS INVESTMENT VALUE?

13 A. There are several advantages to using external sources for construction elements wherever possible. First, the information is verifiable because the source is public. 14 Because the investment is not based on proprietary information from BellSouth's 15 accounting systems or based on adjustments to those systems that the Commission and 16 17 ALECs have had no access to, it is far better to use an external source where available that can be independently evaluated for its veracity. Second, the information can be 18 reviewed to ensure that the costs are competitive and least-cost. R.S. Means is a 19 guidebook used throughout the construction industry to estimate the cost of construction 20 projects in a variety of areas. It is in the self-interest of the publishers of the R.S. Means 21 guidebook to be as accurate and current in its information as possible. Moreover, R.S. 22 Means has been used by state Commissions and incumbents in developing investments 23 for collocation. For example, the Texas Public Utilities Commission found the following 24 in its evaluation of the use of R.S. Means in developing collocation investments: 25

In an effort to determine accurate forward-looking costs, the 1 2 Arbitrators agree with AT&T/WorldCom and the Coalition that 3 R.S. Means should be used as a cost reference. R.S. Means 4 provides costing figures on a national average. The Arbitrators believe that R.S. Means provides an objective and independent 5 6 cost reference in this proceeding where real costs of the incumbent 7 are in dispute. ... Without evidence to support the conclusion that 8 the vendor quotes were not obtained solely for the use of this 9 regulatory costing proceeding, the Arbitrators find that SWBT's "real world" vendor quotes are inflated and overstated when 10 compared to R.S. Means data in similar categories. See Revised 11 Arbitration Award, Docket No. 21333, Proceeding to Establish 12 13 Permanent Rates for Southwestern Bell Telephone Company's Revised Physical and Virtual Collocation Tariffs, April 12, 2001, 14 15 p. 60. 16 Moreover, in California, Pacific Bell, a sister company to SWBT, used the 2000 version 17 of R.S. Means to develop the cost for Cage Partitioning as support for its input in 18 California. Further, Sprint also relied on R.S. Means for some of the inputs it proposed in 19 this present cost proceeding. The bottom line is that when construction related elements such as the cost of constructing a central office are in question, the investment that comes 20 21 from an independent source like R.S. Means should be used. 22 DOES R.S. MEANS EXPLICITLY IDENTIFY THE INVESTMENT FOR A Q. TELECOMMUNICATIONS CENTRAL OFFICE? . 3 24 Yes. R.S. Means provides the total project cost to construct a telephone exchange. See A. R.S. Means Building Construction Cost Data, 2003, 61st Annual Edition, R.S. Means 25 Company, Inc., Line 17100-870-0010, p. 491. (Hereafter referred to as "R.S. Means.") 26 The information provided in R.S. Means is based on the actual construction of 27 telecommunications central offices by contractors who have then reported back to R.S. 28 Means what their costs were for the project. R.S. Means compiles this information and 29 30 reports the costs in the Building Construction Cost Data guide each year.

1 Q. COULD YOU PLEASE REVIEW HOW YOU USED THE INFORMATION 2 FOUND IN R.S. MEANS AND HOW YOU CONVERTED THIS INFORMATION 3 INTO A PROPOSED RATE PER SQUARE FOOT?

A.

Yes. *First*, R.S. Means provides three different costs per square foot to construct a central office: ¼ Quartile, Median, and ¾ Quartile. According to the notes accompanying R.S. Means, the use of the ¾ Quartile figure provides the greatest assurance that site preparation work and ancillary equipment needs are included in the investment per square foot. This is the value (\$200.00 per square foot) that I selected for the calculation.

Second, R.S. Means provides a "Square Foot Project Size Modifier." The purpose for this modifier is to allow for adjustments off of the average investment per square foot based on whether the building being constructed is larger or smaller than average. See R.S. Means, R171, p. 573. R.S. Means indicates that the typical square footage of the central offices in its study was 4,500 square feet. In my experience, virtually all central offices where collocation will be required are larger than 4,500 square feet. They range from around 20,000 square feet and up. R.S. Means provides for an adjustment for central offices up to 15,750 square feet by multiplying the average of \$200.00 per square foot by a factor of 0.90. This leads to an investment of \$180.00. Larger central offices would actually cost less than this value. Thus, the investment I have included in the restatement of BellSouth's land and building cost is conservatively high.

Third, central offices are built to house telecommunications equipment.

However, all of the space within the central office is not "assignable" to telecommunications equipment. Some of the space is used for hallways, bathrooms, break rooms, offices, and other administrative space. Generally, I have found that approximately 80 percent of the space within central offices is assignable to

telecommunications use. Thus, to fully recover the investment for the central office, the \$180.00 investment per square foot must be divided by this factor to yield an investment per assignable square foot of \$225.00.

Fourth, and last, the value of \$225.00 is a national value that should be adjusted based on the information provided by R.S. Means for the 16 cities in Florida. Specifically, R.S. Means provides indices that should be multiplied by the national averages to bring the costs in line with those for a particular city. The values for Florida range from a high of 88.4 percent for Melbourne down to 70.6 percent for Panama City. The median and the average value for all 16 cities is 81.0 percent. This is the value that I used. Multiplying the 81.0 percent factor times the investment of \$225.00 yields a final investment of \$182.25. This is the investment that should be used for Florida in lieu of BellSouth's value for augments of \$268.70. See FLPHYCOL.xls Workbook, INPUTS_Recurring Worksheet, Rate Element H.1.6, Row 13.

Q. IN YOUR OPINION DOES THE R.S. MEANS SOURCE PROVIDE A FORWARD LOOKING INVESTMENT FOR FLOOR SPACE COST IN A BELLSOUTH CENTRAL OFFICE?

A. Yes and I recommend that the Commission use the \$182.25 value I derive above. This figure is calculated based on highly conservative assumptions and is far more likely to be consistent with the true economic cost for central office floor space than BellSouth's proposal.

D. Cabling Racking Capacity

A.

Q. WHAT IS YOUR CONCERN WITH THE CABLE RACKING CAPACITY USED BY BELLSOUTH?

Cable racks have a certain capacity of cables that they are able to carry based on the size of the cable rack and the height to which the cable rack is filled. BellSouth's cost study assumes a certain number of cables that can be carried in a cable rack and then

determines a capacity cost for the cable based on the percentage of the rack that the collocator cable occupies. For the Cable Support Structure per Fiber Entrance Cable rate element, BellSouth has significantly understated the capacity of the cable racks based on excessively conservative engineering assumptions regarding the size of the cable rack and pile heights within those racks. In understating the capacity, BellSouth is assigning a cost greater than TELRIC to collocators. This should be corrected.

Q. COULD YOU PLEASE EXPLAIN WHAT YOU BELIEVE THE APPROPRIATE CAPACITY SHOULD BE AND HOW YOU DEVELOPED THIS CAPACITY?

A.

Yes. The capacity that I recommend is 74 cables. BellSouth's proposed capacity is 30 cables. *See* FLPHYCOL.xls Workbook, wp H.1.7 Worksheet, Row 17. Understating the cable quantity by this amount effectively more than doubles the cost that collocators must bear for the Cable Support Structure per Fiber Entrance Cable rate element.

The approach that I took to develop the quantity of cables available in a rack was to utilize information provided by Bell Labs regarding the capacity of cable racks given varying pile heights used in those racks. The table below documents several different sized cable racks along with different pile heights and the number of typical cables that these racks can contain.

Cable Rack Width			Cable Pile Height										
Rack Size Cable Space		1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"
10"	8.5"	26	51	77	102	128	154	179	204	230			
12"	10.5"	32	63	94	126	158	189	221	252	283	315		
15"	13.5"	41	81	122	162	203	243	284	324	365	405	446	486
20"	18.5"	56	111	167	222	278	333	389	444	500	555	611	666
25"	23.5"	71	141	212	282	353	423	494	564	635	705	776	846
30"	28.5"	86	171	257	342	428	513	599	684	770	855		

In my experience, the typical cable rack used for fiber is a 12-inch cable rack. To develop the capacity of the cable rack, I have used a conservative pile height for this rack of seven inches. With this pile height in this rack, the table above indicates that the

- capacity of the rack is 221 cables. However, this quantity is based on the diameter of a

 DS1 cable containing wiring for 28 DS1s. A 24-fiber riser cable is larger, approximately

 equivalent to three of the DS1 cables. Therefore, the 221-cable count would need to be

 divided by three to arrive at the value that I am recommended of 74 cables.
- 5 Q. HAS BELLSOUTH GIVEN ANY INDICATION THAT IT HAS USED THIS
 6 TYPE OF AN APPROACH OR ANY OTHER SYSTEMATIC APPROACH IN
 7 DEVELOPING THE CAPACITY OF ITS VARIOUS TYPES OF CABLE
 8 RACKS?
- 9 A. No. BellSouth has not documented any systematic approach to developing the capacity
 10 for its racks. However, the approach that I have described above is the only cost-based
 11 approach that is appropriate in developing this important cost variable. Therefore, I
 12 recommend that the Commission use the value that I have calculated because BellSouth
 13 provided no support for its value a value that is far out of line with a reasonable, cost14 based level for this input.

E. Fill Factors

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Q. WHAT PROBLEMS HAVE YOU FOUND WITH BELLSOUTH'S USE OF FILL FACTORS IN THE COLLOCATION COST STUDY?

A. Primarily, the problem that I have found is that BellSouth has inconsistently applied its application of its fill factors. BellSouth has consistently used a fill factor of 85 percent for the frame equipment that it has included in the collocation cost study. In particular, every form of terminal equipment – MDF, DSX-1, DSX-3, and LGX – uses 85 percent for its fill factor. However, when BellSouth applies a fill factor to the POT Frame – a

See FLPHYCOL.xls Workbook, wp H.1.9 Worksheet, Row 15 for the Distributing Frame Fill Factor at 85 percent in a 2-Wire Cross-Connect; wp H.1.10 Worksheet, Row 15 for the Distributing Frame Fill Factor at 85 percent in a 4-Wire Cross-Connect; wp H.1.11 Worksheet, Row 13 for the DSX-1 Panel Fill Factor at 85 percent in a DS-1 Cross-Connect; wp H.1.12 Worksheet, Row 13 for the DSX-3 Panel Fill Factor at 85 percent in a DS-3 Cross-Connect; wp H.1.31 Worksheet, Row 13 for the LGX Term Fill Factor at 85 percent in a 2-Fiber Cross-Connect; and wp H.1.32 Worksheet, Row 13 for the LGX Term Fill Factor at 85 percent in a 4-Fiber Cross-Connect.

1		piece of terminal equipment that BellSouth is also responsible for engineering –
2		BellSouth has applied a fill factor of ***BEGIN CONFIDENTIAL END
3		CONFIDENTIAL*** percent. See Flphycol.xls Workbook, wp H.1.13 Worksheet,
4		Row 15.Because BellSouth is responsible for engineering the POT Frame, there is no
5		reason why BellSouth should engineer this piece of terminal equipment at such a less
6		efficient and discriminatory level as compared to the engineering of frames that
7		BellSouth uses. Thus, BellSouth should be required to utilize a fill factor that is
8		consistent with the engineering BellSouth applies to its terminal frames within the central
9		office – 85 percent.
10		F. Alternative Construction Prices for Cage Preparation
11 12	Q.	WHAT CONSTRUCTION COSTS IN BELLSOUTH'S COST STUDY HAVE YOU FOUND TO BE OVER-PRICED?
13	A.	BellSouth's cost estimate for constructing a 100 square foot collocation cage is greatly
14		overstated. Similarly, the cost estimate BellSouth has developed for constructing a 50
15		square foot addition to the collocation cage is also greatly overstated. Each of these
16		needs to be modified to make BellSouth's costs more realistic.
17 18 19	Q.	WHAT APPROACH HAVE YOU TAKEN TO DEVELOP AN APPROPRIATE COST FOR CONSTRUCTING THE 100 AND 50 SQUARE FOOT COLLOCATION ARRANGEMENTS?
20	A.	As with BellSouth's building investment, I have used R.S. Means to develop the cost for
21		the elements that go into constructing a collocation arrangement. As discussed earlier in
22		this testimony, R.S. Means is a guidebook used throughout the construction industry to
23		estimate the cost of construction projects in a variety of areas. The fundamental problem
24		is that the construction costs BellSouth has presented for cage construction elements are
25		significantly higher than an independent, verifiable source – R.S. Means. In a
26		competitive environment, there would be no reason for BellSouth to use construction

1 costs that are significantly higher except for the fact the ALECs are a captive customer 2 who must acquire space within BellSouth's central office for interconnection. Moreover, 3 simply because BellSouth has proposed certain cage construction costs (providing 4 virtually no backup documentation) does not make the quotes per se consistent with 5 TELRIC. The bottom line is that if the cage construction costs go out of line with R.S. 6 Means, they should not be relied upon at all. 7 HOW DID YOU USE R.S. MEANS TO DEVELOP ALTERNATIVE COSTS FOR Q. **CAGE CONSTRUCTION?** 9 BellSouth in its support documentation provided the elements and costs that it included in Α. 10 the construction of a 100 square foot collocation arrangement. See "H.1.23 & 11 H.1.24.xls" Workbook (Located in Appendix F), "H.1.23 & H.1.24" Worksheet, 12 Columns A, H, I, and J. Based on this information, I used R.S. Means to restate all of those elements for which there was a directly comparable element in R.S. Means. For 13 14 example, BellSouth used 30 feet "Welded mesh panels" in the construction of the 100 15 square foot collocation arrangement. R.S. Means also provides the cost for Woven Wire 16 Mesh Partitions that come in a panel form just as are used in collocation arrangements. 17 See R.S. Means, Lines 10605-100-0010 through 10605-100-2200, p. 326. Incumbent 18 LECs such as Pacific Bell and Southwestern Bell have used precisely this element for the 19 cost estimate of partitioning material in a collocation arrangement. Based on an eightfoot high wire mesh partition, the cost per linear foot in Florida is \$29.80.3 BellSouth's

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See R.S. Means, Lines 10605-100-0400 and 10605-100-0700, p. 326. Line 10605-100-0400 provides the cost for a four-foot wide eight-foot high panel of \$150.00. Line 10605-100-0700 indicates that this panel cost must be increased by five percent to account for a five-foot wide panel. Six of these panels would be required to provide for the 30 feet of paneling that BellSouth has included in its study. See BellSouth Telecommunications, Inc., Appendix F, "H.1.23 & H.1.24.xls" Workbook, "H.1.23 & H.1.24" Worksheet, Cell H8. The cost information from R.S. Means leads to a cost of \$31.50 per linear foot (dividing the panel cost increased by the five percent factor by five feet per panel). Next this cost needs to be adjusted to be Florida specific as indicated earlier for the building investment. The factor for

- cost per linear foot is significantly higher at \$74.87. See "H.1.23 & H.1.24.xls"
- Workbook (Located in Appendix F), "H.1.23 & H.1.24" Worksheet, Cell I8. It is
- 3 unreasonable for BellSouth's cost for this element of constructing a collocation cage to
- 4 be 151 percent higher than an independent source for constructing the same element.
- Moreover, the R.S. Means guide also includes additional cost for overhead borne by the
- 6 contractor providing the item to BellSouth and profit for the contractor as well.
- 7 BellSouth's cost should be rejected.

8 O. ARE ALL OF BELLSOUTH'S VALUES SIMILARLY OVERPRICED?

9 A. Yes. The table below shows the value used by BellSouth in one column and the price
10 that I used and the source that was relied on for the restatement. I have attached a more
11 detailed analysis of this table to my testimony as Exhibit SET-6.

Element	BellSouth	Joint Sponsors	Restatement Source		
	Cost	Cost			
Welded Wire Mesh Enclosure	\$2246.00	\$893.97	R.S. Means		
Swinging Door and Lockset	\$726.00	\$529.33	R.S. Means		
Dust Protection	\$478.00	\$0.00	Engineering Experience		
Electrical Work	\$336.00	\$367.15	R.S. Means		
Electrical Grounding	\$1558.00	\$675.33	R.S. Means		
Signage	\$132.00	\$132.00	None		
General Conditions	\$433.00	\$0.00	Included in R.S. Means		
Contractor's Fee	\$709.00	\$0.00	Included in R.S. Means		
Architectural/Engineering Fee	\$1059.00	\$1059.00	None		
Project Management Fee	\$529.00	\$529.00	None		
Total	\$8206.00	\$4185.78			

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Q. COULD YOU EXPLAIN WHY YOU REMOVED THE DUST PARTITION COST?

15 A. Yes. In my experience, there is virtually no dust created with the type of work that is

16 required to install the wire partitions, lighting, and grounding work identified above. The

this type of material in R.S. Means is 0.9460 (see Exhibit SET-6 for the details on this calculation). Multiplying this factor times the cost per linear foot leads to a final Florida-specific cost of \$29.80.

main source of dust is the drilling that would be required for securing the partitions to the floor. However, I have directly observed Lucent Technologies personnel installing framing material in telecommunications lineups that required drilling and not installing a dust curtain. The reason for this is that the drills actually have a vacuum that captures the dust that is caused at the time of drilling so that the expense of installing the dust curtain is eliminated.

7 Q. DID YOU USE THE SAME PROCESS WITH YOUR RESTATEMENT OF THE 50 SQUARE FOOT ADDITION?

Yes. BellSouth's approach to developing the incremental cost for a 50 square foot A. addition was based on rearranging cage construction components. The reality is that this element would more typically be used for building a properly sized cage from the beginning. As such, I have identified the elements needed to add an additional 50 square feet of space to a cage that is ordered. I identified in Exhibit SET-6 what I believed would be required and developed the cost for the elements. BellSouth's value is \$947. The value I developed is \$552.60. Again, the cost difference results primarily from the cost for the partitioning.

G. Space Preparation Costs

A.

Q. WHAT IS THE SPACE PREPARATION ELEMENT USED FOR?

It appears that BellSouth uses the Space Preparation rate elements to recover costs it alleges are necessary to generally prepare the telecommunications space within its offices for ALECs. BellSouth identifies three elements that it charges for associated with Space Preparation: Cage Cost Set Fee, Barrier Wall, and Card Reader. The Barrier Wall price changes based on how many feet BellSouth installs, but it appears that the largest costs are for the Card Reader.

Q. WHAT ARE YOUR CONCERNS WITH BELLSOUTH'S COSTS FOR THE SPACE PREPARATION ELEMENT?

Before getting into the specific problems with BellSouth's cost development, it is first important to understand the principles around the costs for security, which substantially affect BellSouth's inputs for this element. It is important to understand that the Federal Communications Commission ("FCC") Advanced Services Order requires that BellSouth not impose a security requirement on ALECs for collocation that is any more stringent that what BellSouth imposes on its own employees or authorized contractors working on BellSouth's equipment. See First Report and Order and Further Notice of Proposed Rulemaking, In the matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket 98-147, FCC 99-48 (rel. March 31, 1999) ("FCC Advance Services Order"), ¶ 47. In my experience, in central offices where card readers exist, they are used by all of the personnel entering the central office including the incumbent's employees and authorized contractors that have a need to enter critical areas of the incumbent's central office. Moreover, where other forms of secured entrances exist (e.g., keyed door or combination lock access), these are maintained for use in securing access to space for the incumbent's employees or authorized contractors as well. There is no reason to believe that BellSouth does things any differently in Georgia. However, in proposing the Space Preparation element in Georgia, BellSouth has incorporated significant additional security cost for collocators to be included in the costs for collocation. In effect, BellSouth has assumed that it must have expensive new card readers, barrier walls, and other security related costs that the collocator must pay for exclusively. It is precisely this type of discriminatory security treatment that the FCC

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was trying to avoid in the *Advanced Services Order* with its prohibition on treating

ALECs differently from the incumbent's employees or authorized contractors.

Q. CAN YOU EXPLAIN IN MORE DETAIL WHY YOU BELIEVE THESE
 SECURITY MEASURES ARE DISCRIMINATORY AS COMPARED TO HOW
 BELLSOUTH TREATS ITS OWN EMPLOYEES OR AUTHORIZED
 CONTRACTORS?

A.

The Card Reader and new barrier walls that BellSouth is imposing are unnecessary and, again inconsistent with FCC guidelines on the costs for security. BellSouth's normal course of business is to have a Card Reader either at the entrance to the building or at the entrance into the telecommunications space or at both. When the ALEC employee passes through these initial security card readers, the ALEC employee will be identified and the time of his or her entry will be documented. However, BellSouth then accounts for an additional Card Reader for which it seeks full recovery from collocators. There is no need to perform a second (or potentially third) validation of the ALEC employee's entry into the collocation arrangement. Security within the collocation arrangement can be efficiently provided via key-locked doors, the cost for which is already included in the cage preparation element. As a result, it is unnecessary to include BellSouth's cost for the Card Reader as an input for Space Preparation.

The barrier walls are also not appropriate in that BellSouth does not treat its own authorized contractors in this way. The barrier walls are essentially an unnecessary cost to prevent the ALEC from walking where BellSouth does not want them. In effect, BellSouth's approach to security is to assume that the ALEC employees are effectively criminal – severely limit where they can walk and time stamp every door through which they pass. Because BellSouth does not treat its employees and authorized contractors in this way, BellSouth should not treat ALEC collocators in this way either. Thus, I have removed these costs from my restatement of BellSouth's Space Preparation element.

1 VI. PROPOSED COLLOCATION RATES

- Q. DO YOU HAVE PROPOSED COLLOCATION RATES FOR BELLSOUTH,
 SPRINT, AND VERIZON?
- 4 A. Yes. The proposed collocation rates are attached as exhibits to this testimony and are
- 5 consistent with the modifications outlined above. Specifically, Exhibit SET-7 provides
- 6 the proposed collocation rates for BellSouth; Exhibit SET-8 provides the proposed
- 7 collocation rates for Sprint; and Exhibit SET-9 provides the proposed collocation rates
- 8 for Verizon. Finally, Exhibit SET-10 is a detailed change matrix outlining the
- 9 modifications that were made to the underlying inputs in the BellSouth input worksheets
- to the BellSouth Cost Calculator.
- 11 Q. DOES THIS CONCLUDE YOUR TESTIMONY?
- 12 A. Yes.

1	MR. HATCH: We'll tender the witness.
2	CHAIRMAN BAEZ: I'm assuming no friendly cross on
3	this side. Ms. White.
4	MR. WATKINS: Actually, Mr. Chairman
5	CHAIRMAN BAEZ: Oh, I'm sorry. Hold on. Mr.
6	Watkins. Okay.
7	MR. WATKINS: I had a question or two for Mr. Turner
8	I apologize.
9	CHAIRMAN BAEZ: No, I apologize. Go ahead.
10	CROSS EXAMINATION
11	BY MR. WATKINS:
12	Q Mr. Turner, I've handed you what's marked as
13	confidential Exhibit Number 38. Have you seen that document
14	before? Mr. Turner, have you seen that document before?
15	A It doesn't look immediately familiar to me.
16	Q If you'll take a moment to examine that, I'd like to
17	direct your attention to the far right column of the bottom
18	table that's labeled "Months To Total Compensation." Do you
19	see that?
20	A Yes, I do.
21	Q And for your own edification, I'll ask you to assume
22	for the purposes of my friendly cross-examination that the
23	numbers in here are accurate and that the 41 months is derived
24	by dividing the confidential number in the Verizon column with
25	the infrastructure percentage of the total MRC to arrive at a

1	time	to co	ompensate for infrastructure?
2		Α	So let me just see if I understand. You took the
3	confi	dent	ial number in
4		Q	Under infrastructure NRC.
5		Α	And you divided that by the number in total MRC
6	colum	ın?	
7		Q	No. Infrastructure percentage.
8		Α	Okay.
9		Q	That's not confidential. It's \$14.61.
10		Α	Okay.
11		Q	And arrived at a number that's in the total months to
12	compe	ensat	ion.
13		Α	Okay.
14		Q	Am I getting at that
15			COMMISSIONER DEASON: Well, I believe that you
16	just		
17]		MR. WATKINS: I just realized I may have been
18	creat	ing	a mathematical formula by which you could roughly
19	arriv	e at	a number that is so I apologize for that.
20	BY MF	R. WA	TKINS:
21		Q	Knowing what you know about the BellSouth and Verizon
22	cost	mode	ls, do you have an explanation as to the wide
23	diffe	erenc	e between the months, assuming all this is accurate,
24	the t	total	months to compensation?
25		Α	Well, given the premise that you've laid out as to

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how you've calculated, the main, the main two drivers in terms of the months difference would be that BellSouth used a cost of capital, and these are public numbers, but they used 10.24 percent. My understanding is that Verizon used a much larger number, closer to approximately 18 percent. And, therefore, they're effectively expecting the payback of their investment on a much more rapid basis than does BellSouth by using such a higher cost of capital.

And then the second aspect of this would be using a shorter depreciation life. That would be the other key driver that would cause a recovery to be so much more quick than the recovery that BellSouth has.

Q And is your understanding of the depreciation factors used by Verizon, that for infrastructure associated with power it would arrive at something as low as three-and-a-half years, the average depreciation applied to all the equipment associated with power?

A Well, again, in your -- in the, the rough approach that you've used here to compare these two numbers, that would be roughly the time period over which Verizon would anticipate recovering the investment in their plan.

Q If Covad were collocated with Verizon for a period of, say, four years, would Verizon be overcompensated for its power infrastructure based on the facts contained in confidential Exhibit Number 38?

5

MR. McCUAIG: Objection to the characterization of the facts in confidential Exhibit 38.

MR. WATKINS: I apologize.

BY MR. WATKINS:

Q Assuming the facts are accurate in confidential Exhibit Number 38 and Covad were collocated in a Verizon central office, beginning on month 42 would Verizon begin being overcompensated for its infrastructure?

A Well, the simple answer to your question is yes. But I think it's important to note that if, if Verizon had to replace its power infrastructure approximately every three-and-a-half years because of obsolescence or it was fully depreciated and had to be replaced, if that was, in fact, the case that power infrastructure had a lifespan that short, then the answer to your question would be no. But -- do you understand what I'm saying?

Q Absolutely.

A In other words, if, if power assets had this extremely short life of three-and-a-half years, then the answer to your question would be no, that they would not be overrecovering because then they would, theoretically would be replacing the assets at that three-and-a-half year mark.

The reality is that power assets have much, much longer lives than three-and-a-half years, and so that's the reason I answered your question that, yes, they would be

1 overrecovering at that three-and-a-half year mark because the 2 asset lives associated with power equipment are much longer 3 than three-and-a-half years. 4 MR. WATKINS: That's all I have. Thank you, 5 Mr. Turner. 6 CHAIRMAN BAEZ: Thank you, Mr. Watkins. 7 Ms. White. Mr. Carver. I'm sorry. 8 MR. CARVER: Thank you, Mr. Chairman. 9 CROSS EXAMINATION 10 BY MR. CARVER: 11 Mr. Turner, my name is Phil Carver, and I represent 0 12 BellSouth. And I can't see the witness at all. If I could 13 just request the lawyers to move back. Tracy, you have a paper 14 in front you. If you could just move it up a little bit. 15 I appreciate it. Thanks. 16 Okay. First of all, I want to ask you a little bit 17 about your testimony relating to BellSouth's proposed rates for security cards. In your testimony on Page 39 you state that, 18 19 "BellSouth has a higher cost to replace a lost security card 20 than to initially provide one"; correct? 21 Where did you see that? Α 22 That's in Page 39 of your testimony at Line 7. Q 23 Α Yes. That's what my statement, my testimony says. 24 0 Okay. And in your testimony you don't list the actual rates for the initial card or for the replacement card, 25

1	do you?
2	A I don't think I do.
3	Q Do you have a copy with you of Mr. Shell's Exhibit
4	WBS-2? That's the Element Summary Report.
5	A No, I do not.
6	Q Okay. Let me bring you a copy of that. And that's
7	already been entered into the record, but I have some copies
8	that we'll hand out just for convenience sake.
9	Do you have that exhibit in front of you now,
10	Mr. Turner?
11	A Yes, I do.
12	Q If you would look down the, the first page to Element
13	Number H.1.38, do you see that?
14	A Yes, I do.
15	Q And it's entitled "New Access Card Activation, per
16	Card"; correct?
17	A Yes.
18	Q And the rate is \$38.95; correct?
19	A That's correct.
20	Q And if you look down a couple of more lines to
21	H.1.40, that is entitled "Replace Lost or Stolen Card, per
22	Card"; correct?
23	A Yes.
24	Q And the rate for that is \$28.78.
25	A That's correct.

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- So, in fact, BellSouth does charge more for the Q initial card than for the replacement card; correct?
 - Α That is correct.
- Okay. So that portion of your testimony, your 0 prefiled testimony would be an error?

What I was more addressing here was the labor No. times. And if you look at the preceding page, which are directly related to the cost, is this whole issue of the discrepancy that's within BellSouth's cost study where they effectively developed two different labor times for the new card. And I don't believe these two labor times are confidential. But one, one of the labor times that's calculated is that it's .2 labor hours per new card, and then there's another place in the study that calculates .8583.

What my testimony is is that the labor time and therefore the cost should be .2 hours for both of those. when I'm dealing with the inputs in this section of my testimony, if there's an error, it would be that I made a reference to cost.

But what I'm specifically relating here is that for labor times, if you make the correction that I make on Page 38 where BellSouth calculates these two different labor times and you correct it to be .2 hours, then you have this unusual aspect for a replacement card where they actually have more time than the .2 hours that I corrected the initial card to.

Q So is it your testimony that as these rates currently appear on BellSouth's rate sheet, the charge for the initial card is more than the charge for the replacement card, but if the Commission made the change that you recommend, then those two would be reversed?

A No. My testimony is that BellSouth internal to their cost study identified that a new card should take .2 labor hours and that the Commission should use that amount of time both for the new card instead of this anomalous .8583 hours, and that they should also use the .2 hours for the replacement time as well.

- Q Okay. But in terms of the relationship between the two, just so we're clear, the way BellSouth has it now, the initial rate is more than the replacement rate; correct?
 - A I'll acknowledge that.
 - Q Thank you. I have a few questions also on AC power.

Regarding the rate that BellSouth proposes to charge CLECs for AC power, would you agree that BellSouth charges the commercial rate or proposes to charge the commercial rate of 7 cents, and your position is that BellSouth should charge the industrial rate, which is somewhat lower? Is that a fair assessment?

- A Could you give me just a second?
- Q Sure.
- A You're making, I think, a connection to an exhibit

that I attached to my testimony. Just one moment.

Q Well, if it'll help -- well, go ahead. Take your time, and I'll clarify, if necessary.

A And there is -- and the reason I'm being careful here is that BellSouth did not propose the commercial or industrial rate in its filing in Florida. It actually proposed a number that's higher than both.

And just so we're all on the same page, there's an Exhibit SET-5 to my testimony, which is a, a survey that's produced by the Department of Energy that provides the average rate per kilowatt hour by state. They provide this for four jurisdictions: Residential, commercial, industrial and other. And this is a source that I've used to restate the AC rates in various states. And -- but the 7 cents per kilowatt hour that BellSouth proposed is neither the commercial rate, which for Florida is 6.7 cents, nor is it the industrial rate, which is 5.3 cents.

Q Well, it would appear that it would be the commercial rate for 2001 on your chart; correct?

A Yes. The commercial rate in 2001 was 7 cents. But I believe BellSouth filed this cost study in early 2003, so I would assume that it would be more appropriate to use 2002, if you were going to use a time period.

Q And you advocate the, what, the 5.3 or the 5.4?
A I believe I used the 5.3.

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And you used the 5.3 because that's the industrial 0 rate?

It's in part for that. But it's also that based on Α the opportunity of actually seeing invoices in BellSouth's territory in Georgia and being able to then compare those invoices to the Department of Energy report, it was clear that it's more appropriate to match up to the industrial rate than it is to match up to the commercial rate for BellSouth.

Well, whether BellSouth qualifies in Florida for the industrial rate or the commercial rate would depend on the particular tariffs on file or rather that had been filed by the electric utility; correct?

I don't know about that.

0 Okay. You're not aware of the process whereby electrical utilities would file tariffs and they would have particular usages or particular demand characteristics that would have to be met in order to be classified as commercial or industrial?

I do know that that is the case. But the question Α you're asking is more, in my opinion, how does the Department of Energy specify usage characteristics as to whether the usage and, therefore, the prices associated with that would fall into the residential, commercial or industrial categories.

No, sir. That's not my question. My question is are you aware that in Florida the electric utilities file rates.

that they basically file tariffs? The tariffs have categories of rates, and there are particular things that have to be met in order to take from that rate. Are you familiar with that process?

A I'm generally familiar with it.

Q Okay. In the state of Florida do you know what types of restrictions there are on usage, on demand characteristics in order to qualify for industrial rates specifically?

A No, I do not.

Q Okay. So then obviously you don't know whether BellSouth would qualify for that industrial rate in Florida, do you?

A Other than the testimony I've already provided where I was able to do a comparison of your invoices to the Department of Energy report, that was the main basis that I used for making this comparison.

Q Okay. But you didn't use any state-specific information or state tariffs that would have these restrictions in them; correct?

A We tried to obtain that state-specific information through discovery here in Florida and were unable to obtain that.

Q Okay. Now BellSouth did produce to AT&T in response to its 6th request for production of documents some electrical bills; correct?

A I recall that was a request that I had asked, and I recall some response. But it was certainly not something that we were necessarily able to translate into a rate per kilowatt hour as we were able to do in Georgia.

Q Okay. But you did, you did review what BellSouth provided?

A Yes, I did.

Q And is it your testimony that from looking at that, those documents that were provided, that you cannot tell whether it's a commercial or industrial rate?

A Well, that was not, again, something I was particularly looking for. What I had seen that you had provided previously was more an actual bill, and from that bill you had kilowatt hours and you had a rate that you paid and it was quite easy to deduce what your rate per hour was. And we were looking for similar information here in Florida.

Q Okay. So your answer is, no, you couldn't tell whether it was commercial or industrial?

A No, I could not.

Q A few questions about cable placement.

Regarding cable placement, and I'm going to read a brief portion from Page 36 of your testimony, and you state -- in your revised it's Line 5 through 7.

A I'm sorry. What did you say?

Q I'm on Page 36, and in the revised testimony it's on

1 Lines 5 through 7.2 And you3 installation accor

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And you state, "BellSouth does not perform the cable installation according to its interconnection agreements. The collocator is responsible for this cost." Is that correct?

A I'm sorry. There's a mismatch in page numbers, but I

Q Okay. Well, if you'd like to --

A I found it in my copy, it starts at the bottom of Page 35 on Line 24. "As indicated above, BellSouth does not perform the cable installation according to its interconnection agreements. The collocator is responsible for this cost."

- Q Okay. So that is in your testimony?
- A Yes, it is.
- Q Okay. I'm going to provide you with a copy of the collocation section of the interconnection agreement between AT&T and BellSouth, and if we may take just a moment to hand that out.

Do you have that document in front of you, Mr. Turner?

A I do.

Q Could you please turn to Section 7, and it's on Page 25 of that attachment. Just let me know when you're there.

A I am there.

Q Okay. And this section details the rates and charges that BellSouth would assess to AT&T under the agreement;

25 that BellSouth would assess to AT&T und

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1 | correct?

A That's -- the title of the section is "Rates and Charges." My general understanding is this outlines the charges and how they would be applied.

Q So let's go down to Section 7.3. And if you'll read along with me, it says, "Cable Installation. Cable Installation Fee(s) are assessed per entrance cable placed."

Do you see that?

A Yes.

Q So the contract has in it a provision that AT&T will pay BellSouth on a per cable basis for the entrance cable it places; correct? Isn't that correct?

A There's two problems.

Q Okay. Well, let's start with 7.3. My question is, would you agree that that's what that says?

A You've read that correctly.

Q Okay.

A There's still -- did you want me or allow me to comment on the problems for just having that read into the record?

Q Well, sure. I'd like to hear the problems because here, given the fact that there is a rate when BellSouth installs the cable, I don't understand your position that BellSouth never installs the entrance cable. So perhaps if you could explain that to us.

A Well, first of all, if you'll look at Exhibit SET-8 revised, or I believe it's SET-7 revised, and you look at Element H.1.5, the name of the element is "Physical Collocation - Fiber Entrance Cable Installation - per Cable," and you'll notice that I have a nonzero nonrecurring charge there of \$486.53. And so I do not dispute that there's a cost per cable that the CLEC places that the CLEC must pay. What my testimony was taking issue with was that the terms of the interconnection agreement require that the actual placement labor be performed by the CLEC.

The other problem I'd point out is that the document that you've provided to me is the October 26, 2001, interconnection agreement, and the section that I quoted from is actually Section 5.3 and not 7.3, because 5.3 actually tells what the CLEC is responsible for doing. But I would also note that the interconnection agreement that's actually in effect between AT&T and BellSouth today is dated February 21st, 2002. And just on my quick reading of it, Section 5.3 in the current interconnection agreement which you have not handed me actually has different language than in the one that you have given me.

Q And do you have a copy of that with you?

A I do not have a copy of the entirety of the February 21st, 2002, agreement, which was the one that was actually signed and agreed to by AT&T and BellSouth. I quote the language from Section 5.3, which says that, "AT&T will

provide and install a sufficient length of fire retardant riser 1 cable, to which the entrance cable will be spliced, which will 2 3 extend from the splice location to AT&T's equipment in the collocation space." 4 Okay. And that exact same language appears about 5 0 halfway through the middle of Section 5.3 in the copy that I've 6 7 given you: correct? When I was reading this real quick, I wasn't sure 8 that it said the same thing. 9 If you'll look nine lines down, it begins at the end 10 of that line, it's exactly what you read; correct? 11 Okay. I was just pointing out that the dates are 12 different. You're right. It appears that that language is in 13 14 both places. 15 0 16 17

Okay. So you told us that you were relying on Section 5.3 rather than Section 7.3. If you look at the first line of 5.3, it says, "AT&T may elect to place AT&T-owned or AT&T-leased entrance facilities": correct?

Α That's right. That's what it says.

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So wouldn't you take that -- when it says "AT&T may place," wouldn't you take that to mean that AT&T may elect to place them, but if they don't, that BellSouth would place them?

Α No, that's not the way I take that language.

So where it says, "AT&T may place the 0 facilities." you take that to mean that AT&T would always place

them in a BellSouth neighborhood (phonetic)? 1 2 The language there --MR. CARVER: I'm sorry. Could I -- Mr. Chairman, 3 could I have a yes or no, please, to that? 4 5 CHAIRMAN BAEZ: You can lead off with a yes or no and 6 you can --7 THE WITNESS: The answer to his question is, no, that's not what that language means. 8 9 BY MR. CARVER: Okay. So just to clarify, is it your testimony that 10 0 under 5.3, AT&T would always place the cable or that AT&T could 11 elect to place it, or if it did not elect, BellSouth would 12 13 place it? Do you want a yes or no, or can I give you the more 14 full answer now? 15 Well, that one is an either/or, so I don't think you 16 can give me a yes or no to that one. 17 Okay. In this particular element it's an optional 18 Α 19 20

A Okay. In this particular element it's an optional element. The CLEC does not have to purchase an entrance cable at all. If the CLEC purchases it and you actually look at the information in the BellSouth cost study, BellSouth does not include the time for it to install that entrance cable. If it's going to be installed, it has to be provided by AT&T. It can either be provided as AT&T owned or AT&T leased, but it cannot be -- it's not installed by BellSouth. Now you can

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actually collocate without using an entrance facility, and that's the reason why, in my opinion, 5.3 starts off as it's an optional element. AT&T may elect. For instance, you could collocate and use your collocation to pick up unbundled elements that are cross-connected to your cage, but then do cage-to-cage connections with another CLEC for transport and actually never put your own entrance fiber into your cage. So this is an optional element. But if AT&T elects to take that option, then what you read from Line 9 and what I quoted from is the requirement that AT&T would actually install that cable, excuse me, itself.

Q Okay. If you're correct and if BellSouth would never install this cable, then why in 7.3 is there a charge that would be assessed when BellSouth installs the cable?

A Because if AT&T installs an entrance cable, there is engineering work that has to be performed. And so I've included the appropriate engineering work that BellSouth would do.

For instance, BellSouth is going to have to work with AT&T to identify the route that the cable would take from the vault up to the collocation area. That's a reasonable activity and, therefore, I've included a nonrecurring cost of \$486.53 that's directly related back to hours associated with engineering. But the cost of installing that cable should not be included because they're not appropriate given the terms and

conditions in the interconnection agreement. 1 2 I didn't ask you what you had done in your cost 0 3 study. What I asked you about was the language in the 4 document. Which document? 5 Α The document that we're reading from, the 6 0 interconnection agreement, Section 7.3. The first three words 7 are "Cable Installation Fee." Is it your testimony that that 8 charge does not actually relate to cable installation? 9 It is my understanding that it does relate to cable 10 Α 11 installation, but it does not include the actual hours associated with BellSouth installing the cable. 12 Okay. And is it your testimony that in Florida, AT&T 13 has actually invoked its election right under Section 5.3 and 14 15 installed the entrance cable itself? My conversations with AT&T personnel who are 16 responsible for actually doing these projects is that they are 17 installing these cables themselves. 18 19 In Florida? 0 20 Α Yes. 21 In central offices here? 0 22 Α Yes. 23 0 Can you name some?

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talked to AT&T personnel who were like the project managers for

I do not have a list of the offices. But I actually

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collocation installation in Florida, and that was what they communicated to me.

Q And what time frame are we talking about? Within the last year, the last two years?

A The conversations that I had with the AT&T project manager would have been in the 2002 and 2003 time frame. And

Q And in the 2002/2003 time frame, how many times has AT&T collocated in central offices for BellSouth in Florida?

A Well, I was pausing to say then, but my understanding of what her -- the scope of timing that she was referring to would have been probably within 2001 and perhaps earlier time frames. I don't know how many collocation cages AT&T has actually installed. I do know from my conversations with AT&T though they have installed them, and it was on that basis that I was asking some of these question.

Q But you don't have any personal knowledge as to what AT&T has done: correct?

A Other than first-hand conversations with the project managers, which -- I don't, I don't have personal knowledge in the sense that I didn't sit there and watch who actually installed the cable.

Q Okay. Well, and you can't tell us how many times they've done this installation in the last two years or where they've done it either; correct?

1	A Not sitting here right now.
2	Q Okay.
3	A If the Commission wanted to know that, I'm sure it
4	could be obtained.
5	Q Let's move on to your proposals for floor space and
6	for cage construction. And for both of these you propose the
7	use of the R.S. Means database; correct?
8	A It's the R.S. Means Building Construction Cost Guide,
9	yes.
10	Q Okay. Well, if I call it database, is that okay?
11	Will you know what I'm talking about? Because the actual title
12	is kind of long. Is that okay? Is that accurate?
13	A It's not a database. But as long if that's what
14	you'd like to refer to it as, as long as it's known that it's
15	an actual book.
16	Q How about construction guide, would that be good?
17	A That would be fine.
18	Q Okay. Now basically what you did was rather than
19	using BellSouth's actual cost for the floor space and for the
20	cage construction, you use the R.S. Means guide to develop a
21	rate that you proposed; correct?
22	A That is correct.
23	Q And the R.S. Means guide is a national guide;
24	correct?
25	A It is a national quide with information that allows

for state-specific and city-specific adjustments. 1 2 Okay. We're going to get to that in just a moment. 3 But let me ask you generally, what you've done with the R.S. Means guide, is this the same approach that you advocated 4 5 in Georgia when you testified in Docket 14361-U? 6 Yes. it is. 7 And did you go through the same sort of process to 0 8 develop your proposed rate in Florida that you did in Georgia? 9 I believe that I did. 10 And the Georgia commission declined to use the 0 11 R.S. Means guide as you proposed; correct? 12 To be honest with you, I don't remember what they 13 decided on that particular point. 14 0 You haven't had occasion to review their final order? 15 Α I have as it pertains principally to issues related 16 to power because there's been several follow-up items related 17 to that. But I don't recall anything specific related to what 18 they did with R.S. Means. 19 MR. CARVER: Okay. Mr. Chairman, I don't want to 20 take time to cross-examine the witness on an order, so what I 21 would propose is at the end of the cross I'll just find the 22 order and request official recognition of it. Thank you.

Q Now in your use of R.S. Means, did you use portions that did not relate specifically to telecommunications

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BY MR. CARVER:

applications?

A Are we talking about the building space or are you talking about the cage construction?

- Q Well, let's start with the building space. Did you use -- for that did you use portions that did not specifically apply to telecommunications?
 - A I would say the answer would be no.
- Q Okay. So everything you used applied specifically to telecommunications?

A Well, and I understand that there's, we're trying to pin this down, but the starting point in R.S. Means is a telecommunications central office. Then there's information in R.S. Means on how to adjust that number to different size buildings. That chart is not specific to any one type of building, but the starting number is specific to a telecommunications central office.

Q Okay. I just want to be clear on this point. So you've told us that you used the same process here that you used in Georgia. So I would like to read to you a portion of the testimony that you gave during cross-examination in this proceeding in Georgia and ask if you recall this testimony.

It occurs on Page 1759 of that transcript. And the question is, "R.S. Means' average construction cost is based on the notion that construction jobs as reported by contractors is reflective of telecommunications construction. Is that

1 correct?"

MR. HATCH: Objection. Could we get a copy of the transcript so we know what we're looking at?

CHAIRMAN BAEZ: Mr. Carver, do you have a copy of the transcript.

MR. CARVER: Yes, I do. I thought the witness might recall it, but I'll show it to him, if he'd like to read the language.

CHAIRMAN BAEZ: Please. And if you can -- if you've got enough for everybody, it would be -- if you don't have enough for everybody, I understand, but.

MR. CARVER: No, I don't. I'm sorry.

CHAIRMAN BAEZ: All right. That's okay.

MR. CARVER: And I apologize for not having copies, but I didn't intend to put it into the record. I was just going to try to refresh his recollection.

CHAIRMAN BAEZ: Okay.

BY MR. CARVER:

Q If you'd turn to Page 1759, please.

A Okay.

Q And beginning around Line 21, do you see the question sort of stops and then starts, and starts over? And then it says, "R.S. Means' average construction cost is based on the notion that construction jobs as reported by contractors is reflective of telecommunications construction. Is that

correct?"

And then your answer is, "No. R.S. Means is more general than that. It does include the cost of constructing telecommunications central offices and it collects that data from contractors that have actually constructed telecommunications central offices, but I use other parts of R.S. Means that are more general than just telecommunications applications." Was that the testimony you gave in Georgia?

- A Yes. it is.
- Q And did you use this same process in Florida?
- A I did.
 - Q Okay.

A And it is why I asked you the question early on if you were asking about the telecommunications space or cage construction.

Q Okay.

A The telecommunications space is specific to telecommunication central offices. The cage construction elements are more general. And that answer that I provided, if seen in that context, is that when you take the piece of information out of R.S. Means that's related to constructing a central office, it's specific to telecom. But when you pull out the piece out of R.S. Means that's related to the cost for a welded wire mesh partition, that welded wire mesh partition is the cost of installing it either in a central office or

- perhaps in another environment as well. And I was trying to give you that complete, or whoever was asking me this question in Georgia, give them that complete answer.
- Q Okay. So basically then, if I understand your testimony, you used data specific to telecommunications for the floor space, but you used other data for the cage construction; correct?
- A Yes. And it's -- and I gave you one example. But there's an exhibit in my testimony that shows each of the elements that I pulled from R.S. Means and where for cage construction. But it includes things such as fixtures, light switches and the like. Those types of things in R.S. Means are, are general in terms of how they could be used.
- Q And R.S. Means is a surrogate for actual cost information: correct?
 - A Not in my opinion.

- Q Okay. Please, in the transcript that I provided you with already, please turn to Page 1758, Line 16. Let me know when you're there.
 - A Okay. I'm -- 1758, Line 16?
- Q Yes. The question is, "Your position is that R.S. Means' average construction costs should be used in calculating floor space cost; correct?"
- And your answer is, "Well, my more general position is that you should use the overall cost of constructing the

telecommunications space on a forward-looking basis. And in light of the fact that it did not have that data available from BellSouth, I used the next best surrogate that I could find, which was an independent guide, R.S. Means, that provides an investment per square foot for telecommunications space." Is that the testimony you gave in Georgia?

A Yes.

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Q Okay. So in Georgia you identified it as a surrogate, did you not?

A I did, but not a surrogate for actual cost, which what I said here was when you're constructing costs on a forward-looking basis, that the best surrogate that I could find was R.S. Means. Actual costs frequently has the connotation associated with your embedded costs, which is what BellSouth used, and not even embedded costs on the total demand basis. But what I used was this is a surrogate for your forward-looking investment for constructing an entire central office.

Q And I believe you told us before that the R.S. Means guide is a national publication. In other words, it uses data drawn from throughout the country; is that correct?

A Yes, it is.

Q And to make it state specific, you make adjustments to the national data; correct?

A That's correct.

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Q Do you know if the R.S. Means database, the one that's used to develop the guide, contains any actual data taken from any central office construction or augments in the state of Florida?

A I do not know that.

Q Now obviously you've proposed the use of the R.S. Means for floor space, but in your testimony I couldn't find a place where you identified any deficiency that you found in the process that BellSouth went through to develop floor space. Did I miss that?

A I thought that I had, but if you'll give me a moment, I'll check and double-check.

Q And let me be a little more specific. You discussed this in your rebuttal testimony on Pages 45 through 49, and certainly you give the opinion there that R.S. Means should be used. But in that four or five pages I don't see any discussion of any deficiency in BellSouth's investment that you identify.

CHAIRMAN BAEZ: Mr. Carver and Mr. Turner, while you're busy checking or rechecking your testimony, we're going to break for five minutes and let the court reporter re-gas. Thank you.

(Recess taken.)

CHAIRMAN BAEZ: We're back on the record. Mr. Carver, you were asking a question.

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MR. CARVER: Thank you, Mr. Chairman. 1 2 BY MR. CARVER: Do you remember the question, Mr. Turner, or would 3 Q 4 you like for me to repeat it? I remember the question. 5 6 Q Okay. 7 And the answer is that I did identify specific Α 8 concerns found on Page 17 of my rebuttal testimony. 9 Okay. And this is with the floor space element? 0 10 Yes. it is. Α 11 Q Okay. Okay. And your criticisms are limited to Page 17? 12 13 I make a reference to it again in the section where I explain the basis for using R.S. Means. But, yes, it's, it's 14 15 pretty much a full page that starts on Line 3 and goes to Line 16 22. And in summary, it's that the investment that BellSouth 17 developed was related to augments, and so generally I have a 18 discussion that's earlier that explains the importance of using 19 total demand and the total cost to calculate investments. And 20 so it's not limited to just Page 17 in that there's the earlier 21 discussion as to how TELRIC relates to the development of 22 collocation cost. But the specific application of this problem 23 with BellSouth's floor space investment is on Page 17. 24 Okay. And it relates specifically to your position 25 regarding augments, as I understand your testimony?

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Α	Yes.

Q Okay. Now in your testimony as we were discussing beginning on Page 45, you talk about why you believe that R.S. Means data should be used.

Let me ask you, hypothetically if R.S. Means produced a higher rate for this particular element than the actuals that BellSouth used, would you still advocate the use of the R.S. Means?

A Yes, I would.

Q Okay. So it's not simply a question of advocating whichever one is lower?

A No. I mean, I have many, many examples of testimony that I've given over the years where as an expert I believe what you're supposed to do is give the Commission an accurate portrayal of what you think forward-looking costs are. If those forward-looking costs are higher than the incumbent's identified or lower, it's my responsibility to provide accurate testimony to the Commission as to what that is.

Q Now regarding your testimony on cage construction, you've told us that you always -- you also used the R.S. Means guide to develop that rate.

Let me ask you, do you understand that the rates BellSouth proposes are based on actual quotes received from vendors?

A I do not know precisely whether it's based on actual

quotes or what. There was not a whole lot of backup 1 2 documentation on that. MR. CARVER: May I have just a moment, please? 3 4 I'm sorry to take the time, but there is quote in 5 Mr. Shell's testimony and I'm just looking for it because I 6 would like to show that to the witness. So it may take a 7 moment. 8 (Pause.) 9 Thank you. I apologize for the delay. 10 BY MR. CARVER: Do you have a copy of Mr. Shell's testimony with you? 11 0 No. I do not. 12 Α 13 0 The surrebuttal testimony? 14 I, I didn't bring copies of his testimony up to the Α 15 stand with me. Okay. I believe Ms. White is bringing you a copy. 16 Q 17 Please turn to Page 51. I'm there. 18 Α On the first line, it states, "The investment numbers 19 0 20 used by BellSouth for cage construction are based on actual contractor quotes and actual prices for manufacturers." Do you 21 22 see that? 23 Α Yes. 24 Do you have any basis to contend that that's 0 Okav. 25 not the case?

A No, I do not have any specific basis other than what my testimony says in regard to the comparison of those quotes, if, in fact, that's what they are, to R.S. Means, which is actual projects that are conducted by vendors and reporting of those costs back into R.S. Means.

Q And other than your comparison to R.S. Means in your testimony, you don't identify any specifically deficient -- any specific deficiency in the data that BellSouth uses to develop its investment number for this element, do you?

A For pricing, that's correct. For the inclusion of some of the elements, I had other bases for eliminating them.

Q Okay. And my question went to the pricing, and I think you answered that.

Before you said that for floor space the difficulty you had was with the fact that BellSouth based its cost study on augments. For the cage construction, if BellSouth simply asked a vendor what it would cost to build a cage and the vendor tells them, then obviously your objection regarding augments wouldn't apply to this particular element, would it?

A I don't believe it would be in that context. I had a different issue related to BellSouth just going and asking a vendor for a quote, but -- and the problem from that standpoint. But, no, I don't find that this is an issue related to augments.

Q Okay. Let's assume that BellSouth hypothetically

2 3 vendor is the only qualified one in this particular area of the 4 state that gives the lowest rate. In other words, there are 5 several that are qualified, but this is the one that gives the 6 lowest rate. So in a real world situation this is the best 7 price that BellSouth can get from a vendor to construct the 8 9 testimony that the Commission should still use the R.S. Means

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rate?

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Let me make sure I understand the hypothetical. You said there were multiple vendors that were qualified?

cage. If the R.S. Means produces a lower rate, is it your

obtains a rate for construction of the cage from a particular

vendor, and this is a hypothetical question. Assume that this

Well, my hypothetical is that they're qualified vendors, and from the qualified vendors BellSouth selects one so that it gets the actual lowest best price that it can get in that particular area. In other words, in this part of the state where the central office is being built, of the qualified vendors, this is the one that gives them the best price. So for purposes of my hypothetical I want you to assume this is the best price that BellSouth can get in the real world.

If you have advocated a lower rate through the use of R.S. Means, is it your position that the Commission should adopt that lower rate?

Well, yes. Α

Okay. Let's move on to space availability reports. Q

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A Can I -- just to explain though real briefly and it'll only be one sentence. It's because I don't believe the tenets of your hypothetical are appropriate. But I don't, I don't believe that your hypothetical changes the recommendation I give to this Commission.

Q Okay. Now regarding space availability reports, in your testimony on Page 42 you provide a chart that shows the rates set in five other states; correct?

A Yes.

Q And I believe you describe this chart as summarizing the selection of the space availability report charges in states in which you participated in the hearings; correct?

A Yes.

Q What's your basis for selecting these particular states for inclusion in your chart?

A It was to show places where I had first-hand experience. I mean, the list could be much longer now because I've -- in the intervening period we've had other states that I participated in. But, but I think you stated what my basis is. It's the sentence that says, "The table below summarizes a selection of space availability report charges in states where I have participated in collocation proceedings." I was just trying to give the Commission an example.

Q Is it your testimony that these are representative of the rates that have been set nationally?

- A I did not do a national evaluation for this element.
- Q Is it your testimony that these are representative of the cases that you've appeared in?
 - A Yes.
- Q And for the space availability report, what BellSouth has proposed is a charge of \$572.66; correct?
 - A That's correct.
- Q Okay. I'm going to hand you a portion of the testimony that you prefiled in Georgia in Docket 14361-U, and I have the entire prefiled testimony, if you want it. But for now I'm just going to hand out an excerpt.

The reason I've hesitated is because the testimony that I'm handing out has a legend in the right-hand corner that says, "Trade Secret," but I don't believe any of the trade secret information appears on these pages. There's certainly no indication. So I assume that whatever portion of his testimony in Georgia that was a secret is something other than what's here.

Is this a portion of the testimony that you filed in Georgia, Mr. Turner?

- A Yes.
- Q And I see here that you've included the five rates that you've included in Florida. Those would be the five for Texas, Missouri, Kansas and Oklahoma; correct?
 - A It does.

And also you've included a rate for California and 1 0 2 Florida: correct? 3 Α Yes. 4 And in the testimony you filed in Georgia, you also 0 5 noted that you participated in a proceeding in Massachusetts and the Commission set a rate of \$651.76: correct? 6 That was the rate that Verizon in Massachusetts 7 Α 8 proposed, and I did participate in that proceeding. I don't 9 know what the Commission ordered. Well, I interpreted the chart that you filed in 10 0 11 Florida to be a representation that these are the rates ordered 12 by commissions. Is it your testimony that these were only proposed rates and not ordered rates? 13 On Page 83 of my Georgia testimony? 14 Α 15 0 Yes. Well, there's a footnote 74 that specifically says 16 that it was a Verizon proposed rate in Massachusetts. 17 18 0 Okay. For that one. For the others, immediately 19 after that in your Georgia testimony you cited to Pennsylvania, 20 Virginia, Maryland, New Jersey and Delaware, and according to your chart, each of them set a rate of \$800. Well, I assume 21 22 they set. I should ask the question, are these proposed rates 23 or are these rates ordered by the commissions?

These are rates that were part of a settlement

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between AT&T and Verizon.

Q Okay.

A I said AT&T. It was AT&T and a group of CLECs and Verizon.

Q So basically, if I understand these two charts, comparing them, it looks like in your Florida testimony you took the Georgia chart, added California to it, and then deleted six different states where the rates were higher than what BellSouth is proposing in this proceeding; is that correct?

A That would be correct, except that California, I believe, is in both of these charts.

Q Okay. Well, you obviously provided this information to the Georgia commission. Isn't this something that you would think this Commission would be interested also in terms of looking at what's been said in the states where you participated?

A If I was trying, again, to -- I don't understand. Would this Commission be interested in knowing that there are states that are higher than BellSouth's proposal of \$572.66? I suppose that they would be. In the case in Georgia, BellSouth was proposing \$1,958. So I was trying to give some comparisons to that value.

Q Right. And that gets to my question, which is it appears to me that what's occurred here is BellSouth lowered its proposed rate considerably from what it proposed in Georgia

1	in terms of the rate it proposed here. So in your testimony
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	you took the Georgia chart and just took out everything that is
3	higher than what BellSouth proposed here; is that correct?
4	A I did.
5	Q Okay.
6	A And I did not put in other states that are lower that
7	have since been ordered by commissions.
8	MR. CARVER: Okay. I'd like to have this marked as
9	an exhibit, please, for identification.
LO	CHAIRMAN BAEZ: Would you give it a title there,
L1	Mr. Carver?
.2	MR. CARVER: Pardon me?
L3	CHAIRMAN BAEZ: Do you want to give it a title?
L4	MR. CARVER: Yes. Turner testimony-Georgia.
15	CHAIRMAN BAEZ: And that will be marked Exhibit 44.
L6	(Exhibit 44 marked for identification.)
7	MR. CARVER: And that's all I have. Thank you.
L8	CHAIRMAN BAEZ: Ms. Masterton.
L9	MS. MASTERTON: Sprint has no questions.
20	CHAIRMAN BAEZ: Mr. McCuaig.
21	MR. McCUAIG: Yes. Thank you, Mr. Chair.
22	CROSS EXAMINATION
23	BY MR. McCUAIG:
24	Q Mr. Turner, my name is Dan McCuaig. I'm representing
25	Verizon in this proceeding. I'd like to ask you a few

questions.

Going back to the chart that Covad's counsel presented to you that's currently marked as confidential Exhibit 38 for purposes of identification, you told him that your explanation for why the last column of this chart would have a much higher number for BellSouth and for Verizon is based on two factors: One, a cost of capital difference between the companies; and, two, a shorter depreciation life that Verizon has proposed vis-a-vis BellSouth. Is that correct?

A Just to be clear, just to qualify what the premise of your question was, I gave those as two possible explanations. Without knowing the entirety of how this analysis was done, I wouldn't be able to give you an exhaustive list of the reasons. But those are two that I am very certain would contribute to the difference.

Q I understand. Looking at the first column with the numbers, did BellSouth -- under what's labeled, "Proposed MRC Per Amp," the total MRC listed for BellSouth is \$7.26; correct?

A That's correct. I mean, you've read what's on the chart correctly.

Q That's BellSouth's proposal based on a per fused amp rate; is that correct?

A Seeing as BellSouth gave me their rate sheet, I can confirm that that is their per fuse amp rate.

Q The Verizon and Sprint numbers that follow the BellSouth number, those are based on the per ordered amp rate that Verizon and Sprint have proposed in this proceeding; is that correct?

A Your mike is distorting a bit. Did you say -- I didn't hear what you said. The ordered rate?

- Q I'm sorry. Is this better if I step back a little bit?
 - A Right there is perfect.
- Q Okay. The numbers associated on this chart with Verizon and Sprint are not per fused amp proposals, those are per ordered amp proposals; is that correct?

A To the extent -- well, no, I don't believe that's correct. They are per load amp numbers and -- because you can order in fused increments or load increments. But to my best of my recollection these are, the Verizon and Sprint values are per load amp; whereas, you're correct, the BellSouth number on the BellSouth line is per fuse amp. And the equivalent number to that \$7.26, if it was on a load amp basis, would be \$10.87, which is element H.1.71 from the BellSouth Exhibit WBS-2.

Q Just to be clear, on the chart above the chart we've been talking about, the chart that's labeled "Current Power MRC Per Amp," there's the same apples-to-oranges comparison problem; is that correct?

A I do not know sitting here right now if the prior

Verizon and Sprint tariffs in Florida were per fuse amp or per load amp. I know what you sponsored in your cost studies, but I do not know what the prior versions of your tariffs or interconnection agreements provided for.

Q The BellSouth number is a per fused amp number though?

A I'm not sure. That's asking me to remember something that's quite a long time ago, but I'm not sure about that one.

Q Taking the \$10.87 rate that would be comparable to the Verizon and Sprint rates that are listed on the second chart of the exhibit marked 38 for identification purposes, the 50 percent swing or the 50 percent increase from the, from the number that's currently here would have the effect of knocking over 50 months off that last column; is that correct?

A I do not know sitting here right now unless I were to -- this is probably somebody's spreadsheet that they used, but I'm going to try and come close.

The value in the fifth column, which I think from the cross that Covad had for me earlier, is a percentage of \$7.26. So if you change that to the \$10.87 value and you took that percentage there, then I believe the fifth column would increase by roughly 50 percent. And I don't believe I can say that number on the record because I believe the percentage in Column 5 is confidential, or I'm assuming it is, or else I don't understand why that's confidential to begin with.

Q If, if what Mr. Watkins said was the way that he calculated that number in the last column was by essentially dividing for BellSouth the \$648.35 in the fourth column by the \$4.21 in the third column to come up with 154 months, then wouldn't it be true that adding an additional 50 percent on to that \$4.21 would have the effect of reducing the 154 month number by one-third?

A Okay. It could, but here's the problem. SB -- or BellSouth, excuse me, in their cost studies identify an investment per amp, which that infrastructure column which is in Column 1, 2, 3, 4, 5, 6, they identify a number comparable or -- and I don't mean comparable in terms of the number because I don't know exactly how that number was developed, but they identify a number, an investment value that's per load amp that they use in element H.1.71, and then they identify an investment per fuse amp which they use in element H.1.8.

So what I don't know right now is it's possible that whoever constructed this chart may have properly done an apples to apples comparison. In other words, Column 6 for BellSouth might be a fuse amp investment and, therefore, dividing that number by the value in Column 5 would be accurate. If Column 6 is a load amp infrastructure investment, then dividing that by the value that's in Column 5 would be inaccurate.

And so I was asked the question by Covad's attorney to assume that this was calculated correctly and then to

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explain why there would be a difference, and I did that to the best of my ability.

But I did not produce this analysis and, therefore, I cannot know if Column 5 and Column 6 and Column 1 for BellSouth were all done on a fuse amp basis. The only way that the analysis could be accurate would be if they were all done on that same basis or they would have to all be done on a load amp basis.

- So if the \$648.35 number is based on a load amp and the rest of the numbers are based on a fused amp, the last number, the 154 months number would be incorrect.
 - Yes. it would be.
 - 0 And that actual number would be about 103 months.
- Yes. The answer to your question is, correct, it would be -- is that -- I guess that period of time is not confidential, but it would be 103 months, if your hypothetical is correct.
- Going back to the two items that you identified as a 0 possible, as possibilities for discrepancy between the two companies, the first you mentioned was a cost of capital.

If the confidential number under "Infrastructure NRC" from Verizon was taken from Verizon's cost study as Verizon's investment per amp, that, that would not have had a cost of capital applied to it at that point; is that correct?

Α And I apologize to make you do this. Could you

repeat your question again, because I didn't hear which number 1 2 you were asking me to look at? 3 I'm asking you to look at the number that's marked 0 4 confidential. 5 Α Okay. 6 Under, under "Infrastructure NRC." 0 7 Oh, is it just the number that has the bracket around Α 8 it that's confidential? Okay. So --9 Q And we're trying not to do math that gives that away. 10 but. 11 Α Okay. You're asking me if that number that has the brackets around it in Column 6 -- and what do you want me to 12 13 assume about that number? 14 Q If that number came from Verizon's cost study as 15 Verizon's investment per amp, that number would not have 16 already had a cost of capital applied to it; is that correct? 17 Α That's correct, assuming what you've said is true. 18 Cost of capital is applied to -- as a part of the calculation 19 to convert an investment into a monthly recurring charge. If that's the case, then isn't it also true that the 20 calculation used to derive the number of months in the last 21 22 column, which is dividing, as Mr. Watkins said, the infrastructure NRC by the infrastructure number next to it, 23 24 would not the months to total completion, the last column,

assume a cost of capital of zero?

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Well, again, this is weird. I'm testifying about an exhibit that was presented to me by Covad that I didn't prepare. But in any event, the best I can say about this exhibit is that it's a rough apples -- trying to be a rough justice as to how long is it that you're recovering your investment. In other words, if you know something costs \$100 and you're going to charge out \$10 per month, how many months until I've equalled \$100? That's not really a very precise way to do these types of things because \$100 up-front is not equal to \$10 per month because of things like time value of money. But I took what Covad was asking me as kind of a rough justice type thing. If I have \$648, presuming that that number is not confidential, if I have \$648 of investment from BellSouth and I have a recurring cost of \$4.21, how would that compare roughly to your confidential number for Verizon compared to \$14.61? And I was being asked, I thought, to give some explanation as to why on a rough justice basis it appears that Verizon's recovery of a similar level of investment would be so different than BellSouth's recovery.

Now hypothetically I have a problem with this because I know that BellSouth's starting investment number is lower than Verizon's by approximately 80 percent, meaning Verizon's is 80 percent higher than BellSouth's. And so when I'm asked to compare these two numbers that appear to be the same, it's a hypothetical that I don't believe is necessarily accurate

because, in fact, in the filings made by BellSouth and Verizon,
BellSouth's costs, investment is quite a bit lower.

But if you set the investments equal, I do know that Verizon's cost recovery for a dollar of investment compared to a BellSouth recovery of a dollar investment, that Verizon's is much higher because of the two reasons that I provided, shorter asset lives and a much higher cost, higher cost of capital.

Q Looking at the first four columns with numbers in them on this bottom chart just for BellSouth, is it correct that the second, third and fourth numbers summed together add to the first number?

A The second, third and fourth. Okay. Yes. For BellSouth they do add together.

Q Is it therefore reasonable to assume that the second, third and fourth numbers are also calculated on a per fused amp basis?

A I think it would be reasonable to presume that.

Q If we were to convert the infrastructure number from \$4.21 fused to a number 50 percent higher than that to come up with a load number or a use number or an ordered load number, however you want to clarify, that number would be \$6.31 or \$6.32: is that correct?

- A You're talking about for the infrastructure number?
- Q Exactly.

A Yes. It would be \$2.11 higher, so it would be \$6.32.

Q And that number, that \$6.32 number is just under half of Verizon's infrastructure investment as set forth by this chart and just over half of Sprint's infrastructure investment; is that correct?

A No. It is just over half of Sprint's, but it's approximately 40 percent of Verizon's number. I don't have a calculator up here, but \$6.31 divided by \$14.61, I believe that would be roughly 40 percent. So it's two-and-a-half -- Verizon's number is roughly two-and-a-half times higher than BellSouth's without a calculator.

Q Well, without a calculator, let's do it this way. If we double the \$6.32, that equals \$12.64; correct?

A Yes.

Q And that's just over a dollar more than Sprint and just under \$2 less than Verizon; correct?

A That's right. But just so that this is all completely internally consistent as best we can do it right now, the number that is on this chart is \$648.35. Given that these first four columns are supposed to be related to that number, BellSouth's, and this is a public number, BellSouth's investment on a load amp basis that they sponsored was \$429, and the investment that they sponsored on a fuse amp basis was \$248.70.

And so to do this, to do it properly, you would put the \$4.21 and compare that to \$248.70. And, I apologize, I

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can't do that math in my head sitting here right now. And then if you were to increase the \$4.21 up to \$6.32, you would need to compare it to \$429 of investment. And then the number that is confidential that's identified by Verizon is quite a bit lower than what is actually included in its cost study. So I don't know where these numbers came from, but anyway.

Q Just for your own clarification, if, if you look at Page 190 of Exhibit BKE-1 to Barbara Ellis and Chuck, Charles Bailey's surrebuttal testimony, I think you'll see that --well, let me know if the infrastructure number there for Verizon looks very much like the number in the Verizon revised power study?

A I do not have that exhibit in front of me. If you'd like for me to look at it or my counsel would like for me to, I'd be happy to look at that.

- Q That's okay. Would you accept, subject to check?
- A Subject to check that the number you have brackets around here is the same number as in that exhibit?
- Q Is, is within a dollar of what we have in that exhibit.
 - A Well, the exhibit will speak for itself.
 - Q Exactly.
- A You know, I don't think you need me to check it then, do you?
 - Q No.

Okay. Α

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And you can put away the Exhibit 38 for Q identification purposes.

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In response to staff interrogatory 132, you state that you quote, reviewed, close quote, Verizon's cost study in this proceeding, and that you, quote, extensively reviewed, close quote, Verizon's cost studies in Nevada, Massachusetts, New Hampshire, Pennsylvania and Delaware; is that correct?

There were many, many discovery requests, but I would say that generally that's an accurate statement.

0 What's the difference between reviewing a cost study and extensively reviewing a cost study?

Α As I recall from what you just read there, the one that I said I reviewed was in Nevada: is that correct? And the one that I reviewed was --

Was Florida.

Florida. The difference was that, particularly with relation to Massachusetts -- I'm trying to remember some of the other states that I've done now. In some of those states I actually did a restatement of Verizon's cost study, and, therefore, the level of evaluation that one has to do to do a restatement is more than the evaluation that you have to do if you're not doing a restatement.

Would you say that you extensively reviewed BellSouth's cost study in this proceeding?

- A Yes, I would say that I did.

Q How many hours would you say you put into extensively reviewing BellSouth's cost study in this proceeding?

A Well, first of all, the cost study that they filed here was very similar to one that they filed in Georgia, and so to a certain extent my understanding of the BellSouth Cost Calculator was a collective learning, if you will. So if you would let me estimate it across both, I mean, I can give you a Florida-specific number if you wanted me to, but probably to be fair it would be across both states, and I would estimate probably in the range of 300 to 350 hours.

Q You did not put anywhere near that much time into reviewing Verizon's Florida cost study: is that correct?

A Well, if I were to do the same type of analysis given the fact that I've reviewed the Verizon cost study in so many states, I would say that it's probably roughly the same amount of time.

Q The Nevada cost study that you say in discovery response 132 you extensively reviewed, that's the one that Verizon filed in the year 2000; is that correct?

A I don't remember the exact year.

Q Was it within the last couple of years?

A I would have thought that it would have been in 2001 if you had asked me just cold what I thought it was, but I would have thought it was probably in 2001.

1	Q The Massachusetts, New Hampshire, Pennsylvania and
2	Delaware cost studies that you referred to as having
3	extensively reviewed in Interrogatory 132, those were all put
4	together in former Bell Atlantic states; is that correct?
5	A No. Well, it depends what you mean by former. Some
6	of those are NYNEX states formerly, some of them are Bell
7	Atlantic states. Do you consider the merger of both of them
8	together to then be Bell Atlantic?
9	Q Actually, yes. When NYNEX and Bell Atlantic merged,
10	the surviving entity was Bell Atlantic. So Bell Atlantic
11	vis-a-vis former GTE.
12	A Based on that clarification, yes, they were formerly
13	Bell Atlantic states.
14	Q Does AT&T collocate in Verizon central offices other
15	than Florida, in states other than Florida?
16	A I know that they do.
17	Q Do you have any idea how many other states, other
18	Verizon states AT&T collocates in Verizon central offices?
19	A No, I do not.
20	Q Fair to say more than ten?
21	A More than ten states? I don't really know.
22	Q It's your position that BellSouth's power cost study
23	is deeply flawed; is that correct?
24	A Yes.
25	MR. McCUAIG: Thank you I have no further

1	questions	, Chairman.
2		CHAIRMAN BAEZ: Thank you, Mr. McCuaig. Staff?
3		CROSS EXAMINATION
4	BY MR. RO	JAS:
5	Q	Mr. Turner, could you please refer to Page 52, Lines
6	3 through	12, of your revised rebuttal testimony?
7	А	I'm there, although if you could give me maybe the
8	first few	lines of what you're reading from because I don't
9	think my	3 through 12 matches yours because Line 3 is the
10	second li	ne of a question.
11	Q	I'm going to discuss with you the fill factors of the
12	POT frame	•
13	А	The fill factors for which frame? I'm sorry.
14	Q	POT.
15	А	The POT frame. Okay.
16	Q	Beginning with "However, "However, when BellSouth."
17	А	Okay.
18	Q	Are you aware that POT frames only apply to physical
19	collocation arrangements installed prior to June 1st, 1999?	
20	Α	No, I did not know that.
21	Q	I'd like now to refer to Exhibit SET-10 attached to
22	your rebuttal testimony.	
23	A	I have that.
24	Q	Is it your contention that the CLECs are responsible
25	for the i	nstallation of cross-connects: therefore. BellSouth

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should not be allowed a nonrecurring charge for the installation of cross-connects?

Α Just one second.

Yes. And I believe my testimony quotes from the specific sections of the interconnection agreement that make that requirement on the CLECs.

Staff has just handed you an exhibit from Exhibit 8. 0 BellSouth stipulated Exhibit 2, Pages 193, 215 through 218. Referring to BellSouth's response to staff Interrogatory 120, is it your contention that BellSouth should not be allowed to recover its costs dealing with connect and test of the cross-connect?

I'm not sure if I'm following your question. I mean, I've read through quickly what BellSouth said here. But your question is am I saying that the connect and test function should not be done by BellSouth, is that your question?

That's generally correct. 0

Α I mean, my understanding of what the language is in the interconnection agreement is that the BellSouth certified vendor that's hired by AT&T or any other CLEC is going to be responsible for the installing of the cables, including any testing that would need to be done to ensure that the installation work that they've done is correct.

So, no, I don't -- the only thing I'm concerned about is that there might, we might be dealing now with other

elements outside of collocation perhaps that BellSouth's response was addressing. But in the context of collocation, the BellSouth certified vendor would have to do that test to make sure that they installed a cable that has proper conductivity between the BellSouth frame and the CLEC's or, excuse me, in this state, ALEC's frame. And so they would -- the certified vendor would have to do that. If you're talking about a jumper on a frame, that would be something altogether different.

Q I'm going to read you a portion of BellSouth's response to staff Interrogatory 120.

"Page 3 of Mr. Turner's Exhibit SET-10 deals with the BellSouth cross-connects sometimes referred to as jumpers performed by BellSouth in conjunction with service orders placed by the ALEC for the connection of specific services to the ALEC's collocation space. These charges have nothing to do with the ALEC's cable installation from its collocation space to the demarcation point on the frame." Do you agree with the statement that I just read?

A You've read it correctly. And it's possible that BellSouth is talking past me here, but I'm not talking about the jumper either.

The, the BellSouth certified vendor is responsible for the cable that runs from the frame to the collocation arrangement. There is a separate element for the

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1	cross-connect, which is the jumper mark. And my evaluation of
2	the costs that I eliminated from BellSouth's study were not
3	these types of elements. The costs that I eliminated were
4	costs that I felt that BellSouth had improperly included that
5	were related to extending the interconnection cable between the
6	BellSouth frame and the ALEC frame.
7	Q I'd like now to refer to Page 12, Lines 9 through 16,
8	of your revised rebuttal testimony.
9	A I'm there.
10	Q Okay. You state here that Sprint's collocation model
11	indicates that the source of some of the inputs in its annual

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Q Okay. You state here that Sprint's collocation mode indicates that the source of some of the inputs in its annual charge factor model in that Sprint -- that the source of some of the inputs in its annual charge factor model, and that Sprint has not submitted that model with its cost filing. You are aware that through staff discovery Sprint provided a copy of its annual charge factor model? Are you aware?

A I haven't reviewed all of the discovery requests that the staff may have filed with Sprint, so I do not know whether that's the case or not.

Q So you've not had an opportunity to review Sprint's annual charge factor model?

A I was not able to as of April 18th, 2003, when I had to file my testimony.

MR. ROJAS: Thank you. That's all.

CHAIRMAN BAEZ: Commissioners, do you have any

1 questions? None. 2 Mr. Hatch, about how much redirect do you have? 3 MR. HATCH: If you'll give me a moment, I'll check. 4 I don't think I have much at all. 5 CHAIRMAN BAEZ: Okay. 6 MR. HATCH: Actually I only have one question. Now 7 is the time? 8 REDIRECT EXAMINATION 9 BY MR. HATCH: 10 Q Do you remember a discussion, Mr. Turner, with Mr. Carver in talking about R.S. Means and the differences 11 between teleco specific and general data in the R.S. Means 12 13 data? 14 Yes. I do. Α 15 0 Do you recall that -- I think in response to teleco 16 space preparation, that that was specific to telecom? Do you 17 recall that? 18 The telecommunications building investment is Α specific to teleco or telecom construction out of R.S. Means. 19 20 And you contrasted that with cage construction? 0 21 Α Yes. 22 Is there a difference between cage construction in a 0 23 telecom space versus any other environment? 24 Yeah, I believe that there is. The cage construction 25 or the use of wire mesh partitions to partition off an area is

something that is not just done in telecommunications 1 2 environments. It can be done in a variety of environments. The installation, just to give you another example, 3 4 the installation of, of fixtures, light fixtures, fluorescent 5 lighting fixtures, is done in telecommunications spaces and 6 I've included that cost. But that R.S. Means value would also 7 be applicable to installing a fluorescent fixture in a 8 different work environment as well. And so that was the distinction that I was trying to draw. 9 10 MR. HATCH: No further questions. 11 CHAIRMAN BAEZ: Thank you, Mr. Hatch. Commissioners, 12 I think we're going to let Mr. Turner be our last witness for 13 the day. We have exhibits that we need to --14 MR. HATCH: Yes. AT&T would move SET-1 through 6, revised 7 through 9 and SET-10, Exhibit 43. 15 16 CHAIRMAN BAEZ: Without objection, show those --17 composite 43 admitted. 18 (Exhibit 43 admitted into the record.) 19 CHAIRMAN BAEZ: And, Mr. Carver, you had an exhibit 20 as well. 21 MR. CARVER: Yes. BellSouth moves 44, please. CHAIRMAN BAEZ: Without objection, move it into the 22 23 record. 24 (Exhibit 44 admitted into the record.) 25 CHAIRMAN BAEZ: One last -- we're going to start

1	tomorrow with the Verizon panel. And along those lines, we
2	can't take up 38, your exhibit, until they're on the stand.
3	So, Mr. Watkins, I would ask you to collect these, if you
4	would, at the end when we adjourn.
5	MR. WATKINS: If everyone who's got a confidential 38
6	can hold it up, I'll come get it.
7	CHAIRMAN BAEZ: I'm surprised it's held up until this
8	afternoon really the way, the way people were circling around
9	it. But, you know, everybody did the best they could. Yeah.
10	You can return those.
11	Mr. Teitzman or Mr. Rojas, is there anything we need
12	to take up right now before we adjourn for the day?
13	MR. TEITZMAN: There are no other matters to address
14	this afternoon, Chairman.
15	CHAIRMAN BAEZ: Parties, anything we need to take up?
16	All right. We'll see you at 9:30 tomorrow. We're in recess.
17	(Hearing recessed at 5:10 p.m., and will resume at
18	9:30 a.m. on January 29, 2004.)
19	(Transcript continues in sequence with Volume 5.)
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1	STATE OF FLORIDA)
2	: CERTIFICATE OF REPORTER COUNTY OF LEON)
3	
4	I, LINDA BOLES, RPR, Official Commission
5	Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.
6	IT IS FURTHER CERTIFIED that I stenographically
7	reported the said proceedings; that the same has been transcribed under my direct supervision; and that this
8	transcript constitutes a true transcription of my notes of said proceedings.
9	I FURTHER CERTIFY that I am not a relative, employee,
10	attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in
11	the action.
12	DATED THIS 9th DAY OF FEBRUARY, 2003.
13	. 1
14	LINDA BOLES, RPR
15	FPSC Official Commission Reporter (850) 413-6734
16	(333) 123 3731
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