BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION 1 2 3 4 In Re: Petition by Metropolitan ) DOCKET NO. 960757-TP Fiber Systems of Florida, Inc. for 5 arbitration with BellSouth Telecommunications, Inc. concerning 6 interconnection rates, terms, and conditions, pursuant to the Federal Telecommunications Act of 1996. 7 8 In Re: Petition by AT&T Communications) DOCKET NO. 960833-TP of the Southern States, Inc. for 9 arbitration of certain terms and conditions of a proposed agreement with BellSouth Telecommunications, 10 Inc. concerning interconnection and 11 resale under the Telecommunications Act of 1996. 12 ) DOCKET NO. 960846-TP In Re: Petition by MCI Telecommunications Corporation and MCI) 13 Metro Access Transmission Services, ) Inc. for arbitration of certain terms ) 14 and conditions of a proposed agreement) with BellSouth Telecommunications, 15 Inc. concerning interconnection and resale under the Telecommunications 16 ) Act of 1996. } 17 18 19 THIRD DAY - MORNING SESSION 20 DOCUMENT NUMBER-DATE VOLUME X 21 22 PAGE 1498 through 1655 23 24 BUREAU OF REPORTING 25 RECEIVED 2.9.98 C & N REPORTERS TALLAHASSEE, FLORIDA (850)697 - 8314

1498

GRDS/REPORTING

SC - 25

1499 1 2 PROCEEDINGS: HEARING COMMISSIONER J. TERRY DEASON 3 **BEFORE**: COMMISSIONER SUSAN F. CLARK COMMISSIONER E. LEON JACOBS, JR. 4 COMMISSIONER JOE GARCIA 5 DATE: Wednesday, January 28, 1998 6 Commenced at 9:00 a.m. TIME: 7 PLACE: Betty Easley Conference Center 8 Room 151 9 4075 Esplandade Way Tallahassee, Florida 10 REPORTED BY: NANCY S. METZKE, RPR, CCR 11 12 **APPEARANCES:** 13 (As heretofore noted.) 14 15 16 17 18 19 20 21 22 23 24 25 TALLAHASSEE, FLORIDA (850)697-8314 C & N REPORTERS

		1500
_		
1	INDEX	
2	WITNESSES	
3	NAME	PAGE NO.
4		
5	MICHAEL MAJOROS	
6	Prefiled Direct Testimony Inserted Prefiled Rebuttal Testimony Inserted	1504 1516
7		
8	ART LERMA	
9	Direct Examination by Mr. Hatch Prefiled Rebuttal Testimony Inserted	1527 1529
10	Cross Examination by Mr. Twomey Further Cross by Mr. Twomey	1574 1584
	CATHERINE E. PETZINGER	
12	Direct Examination by Mr. Hatch	1588
14	Cross Examination by Mr. Ross	1621
1 5	Redirect Examination by Mr. Hatch	1653
1.5		
17		
- /   18		
19		
20		
21		
22		
23		
24		
25		
	C & N REPORTERS TALLAHASSEE, FLORIDA (850)	697-8314

1		EXHIBIT	rs -	v	OL	JUM	ie x		
2	NUME	BER						ID.	ADMTD.
3	51	Dr. Cornell's direct							
4	50	and reputtal exhibits	•	•	•	•	•	1502	1502
5	52		•	•	•	•	• '	1502	1502
6	23	and rebuttal exhibits		٠	٠	٠		1526	1526
7	54	MJM-3	٠	•	•	•		1526	1526
8	55	Mr. Lerma's rebuttal	۰.						
9	56	ATR-12	•	·	•	•	•	1567	1587
10	57	Confidential amhibite	•	•	•	٠	· • •	1572	1587
11		attached to the							
12	!	Dismukes	•	•	<b>,</b> '	•	· • / ·:	1573	1587
13	58	CEP-1	•	•	٠		•	1617	1654
14	59	An excerpt from the Northern Business							
15		Information study	٠	٠	•	٠	•	1628	1654
16		•							
17							•		
18									
19									
20	•								
21									
22		•							
23									
24									
25									
			1007	1	FT	07		106010	<u> </u>

& N REPORTER

•.

LAHASSEE, FLORIDA (850)697-8314

1 PROCEEDINGS 2 (Transcript continued in sequence from Volume IX) MR. HATCH: And I would also request that his 3 direct and rebuttal exhibits be marked for identification. 4 COMMISSIONER DEASON: They will be marked as a 5 6 composite exhibit, exhibit number 51. MR. HATCH: And we would ask that those be 7 inserted into the record. 8 COMMISSIONER DEASON: Without objection, they 9 will be inserted into the record. 10 MR. PELLEGRINI: Commissioner Deason. 11 COMMISSIONER DEASON: Yes. 12 MR. PELLEGRINI: The packets identified as BC-12, 13 staff would ask that it be marked for identification 14 purposes at this time. It consists of Doctor Cornell's 15 16 January 13, 1998 deposition transcript, deposition and late-filed deposition exhibits numbers 1 through 2, and an 17 update to exhibit -- an update to exhibit BC-3. 18 19 COMMISSIONER DEASON: All right. That will be identified as exhibit 52. Do you move it at this time? 20 MR. PELLEGRINI: And staff would move it at this 21 22 time, yes. 23 COMMISSIONER DEASON: Without objection exhibit 24 52 is admitted. 25 MS. KEATING: Commissioner Deason. C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

COMMISSIONER DEASON: Yes. MS. KEATING: Staff also has an exhibit for Michael Majoros. We'd ask that it be marked for the record at this time. COMMISSIONER DEASON: Let's get his testimony admitted first. MR. HATCH: Yes, with respect to Mr. Majoros, he filed both direct and rebuttal testimony. We'd request that that testimony be inserted into the record as though read. COMMISSIONER DEASON: Without objection the testimony of Michael Majoros will be inserted into the record. 

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1		DIRECT TESTIMONY OF
2		MICHAEL J. MAJOROS, JR.
3		ON BEHALF OF
4		AT&T OF THE SOUTHERN STATES, INC. AND
5		MCI TELECOMMUNICATIONS COMPANY AND
6		MCI METRO ACCESS TRANSMISSION SERVICES, INC.
7		DOCKET NOs: 960833-TP/960846-TP/971140-TP
8		
9	Q.	PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.
10		
11	Α.	My name is Michael J. Majoros, Jr. I am Vice President of the economic
12		consulting firm of Snavely King Majoros O'Connor & Lee, Inc. ("Snavely
13		King"). My business address is 1220 L Street, N.W., Suite 410,
14		Washington, D.C. 20005.
15		
16	Q.	PLEASE DESCRIBE SNAVELY KING.
17		
18	A.	Snavely King was originally founded in 1970 to conduct research on a
19		consulting basis into the rates, revenues, costs and economic
20		performance of regulated firms and industries. The firm has a
21		professional staff of 16 economists, accountants, engineers and cost
22		analysts. Most of the firm's work involves the development, preparation
23		and presentation of expert witness testimony before Federal and State

regulatory agencies. Over the course of the firm's 26-year history, its
 members have participated in over 500 proceedings before almost all of
 the state commissions and Federal commissions that regulate
 telecommunications companies, utilities. and transportation industries.

5

#### 6 Q. PLEASE DESCRIBE THE TYPE OF WORK YOU HAVE PERFORMED 7 WHILE AT SNAVELY KING.

8

9 I have provided consultation specializing in accounting, financial and Α. management issues. I have testified in over 80 regulatory proceedings. A 10 11 significant number of these appearances have related to the subject of 12 telecommunications and public utility depreciation. Exhibit MJM-1 to this testimony summarizes my appearances relating to depreciation. I have 13 also negotiated and/or represented various user groups in fifteen of the 14 Federal Communications Commission's ("FCC's") three-way triennial 15 depreciation represcription conferences. Page 1 of MJM-2 identifies 16 I have also participated in several regulatory 17 those conferences. proceedings in which depreciation was an issue that was ultimately 18 settled. Page 2 of MJM-2 summarizes these proceedings. 19

20

21 Q. WHAT WAS YOUR EMPLOYMENT PRIOR TO JOINING SNAVELY 22 KING?

1 Α. I joined Snavely King in 1981 and have been with the firm since that time. 2 My prior employment and educational background is summarized in 3 Exhibit MJM-3 to this testimony. 4 5 Q. FOR WHOM ARE YOU APPEARING IN THIS PROCEEDING? 6 7 Α. 1 am appearing on behalf of MCI Telecommunications Corporation ("MCI") 8 and AT&T Communications of the Southern States, Inc. ("AT&T"). 9 WAS THIS TESTIMONY PREPARED BY YOU OR UNDER YOUR 10 Q. 11 DIRECT SUPERVISION? 12 Yes, it was. I should note, however, that this testimony and its analytical 13 Α. 14 framework draws heavily upon work performed by myself and others at Snavely King on behalf of AT&T, MCI, and AT&T Canada LDS for use in 15 16 other proceedings. 17 WHAT IS THE PURPOSE OF YOUR TESTIMONY? 18 Q. 19 20 AT&T and MCI have asked me to identify the appropriate plant lives to be Α. used in Total Element Long Run Cost ("TELRIC") and other incremental 21 cost studies. Specifically, I am to provide plant lives in conformance with 22 the FCC's requirements.<sup>1</sup> 23

#### Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

2

A. I recommend that the projection lives and future net salvage values
underlying the depreciation rates prescribed by the FCC for BellSouth in
Florida as set forth in the FCC's 1995 prescription of BellSouth's
depreciation rates be used for the determination of cost based rates in this
proceeding.<sup>2</sup> A majority of this testimony addresses lives.

8

#### 9 Q. DOES THE FCC SPECIFY THE PLANT LIVES TO BE USED IN THE 10 PRICING OF UNBUNDLED NETWORK ELEMENTS?

11

Yes, indirectly. The FCC rules require that only forward-looking costs be 12 Α. used in the setting of interconnection prices.<sup>3</sup> The Florida Public Service 13 14 Commission's adoption of TSLRIC reflects a consistent conceptual Forward-looking costs require the use of economic 15 requirement. depreciation rates.<sup>4</sup> To comply with this requirement, the plant lives used 16 in the calculation of costs must be based upon the expected economic 17 lives of newly placed plant.<sup>5</sup> In depreciation proceedings, such plant lives 18 are termed "projection lives," to differentiate them from "remaining lives" 19 20 and "average service lives" which reflect past plant placements.

21

#### 22 Q. ARE BELLSOUTH'S CURRENT INTRASTATE DEPRECIATION RATES 23 BASED ON PROJECTION LIVES?

A. No. BellSouth's current intrastate depreciation rates are based on
 estimated remaining lives, and embedded plant and reserve balances as
 of December 31, <u>1991</u>. They are inappropriate for forward-looking cost
 studies.

5

#### 6 Q. ARE THE FCC'S PROJECTION LIVES FORWARD-LOOKING?

7

A. Yes. Over a decade ago the FCC directed its staff to put less emphasis
 on historic data in estimating productive lives, and to pay "closer attention
 to company plans, technological developments and other future-oriented
 analyses."<sup>6</sup>

12

13 Recently, the FCC reaffirmed its forward-looking orientation in connection with the simplification of its depreciation represcription practices. 14 The 15 FCC prescribed a range of projection lives which could be selected by 16 carriers for prescription on a streamlined basis. The ranges were based 17 upon "statistical studies of the most recently prescribed factors. These 18 statistical studies required detailed analysis of each carrier's most recent 19 retirement patterns, the carriers' plans, and the current technological 20 developments and trends."7 As such, this streamlined represcription 21 practice assures the development of projection lives that allow forward-22 looking capital recovery.

1	Q.	DO YOU BELIEVE THE FCC STAFF HAS FOLLOWED THE FCC'S
2		DIRECTIVE TO EMPHASIZE FORWARD-LOOKING ANALYSES?
3		
4	Α.	Yes. In my experience in fifteen FCC triennial represcription conferences
5		(including BellSouth represcription conferences), the FCC staff always
6		used a forward-looking approach to setting depreciation rates.
7		
8		The FCC staff rarely relied solely on historical data to set depreciation
9		parameters. The FCC bases its parameter prescriptions upon the studies
10		and information supplied by the individual companies, specific company
11		plans, information submitted by state commission staffs, consumer groups
12		and its broad industry-wide experience.
13		
14	Q.	IS THERE EMPIRICAL EVIDENCE THAT THE PROJECTION LIVES
15		PRESCRIBED BY THE FCC HAVE BEEN FORWARD-LOOKING?
16		
17	Α.	Yes. I would point to recent trends in the depreciation reserve levels in
18		the industry, generally, and BellSouth specifically. As the FCC has
19		recognized, "[t]he depreciation reserve is an extremely important indicator
20		of the depreciation process because it is the accumulation of all past
21		depreciation accruals net of plant retirements. As such, it represents the
22		amount of a carrier's original investment that has already been returned to
23		the carrier by its customers."8 The FCC's recognition of the reserve level

as an indicator of the depreciation process can best be understood by
 examining a steady state example.
 3

Assume that we start with a stable environment in which the average age of plant is 9 years and the expected life of plant is 27 years. I have assumed the addition rate, retirement rate and straight-line accrual rate are all 3.7 percent (1/27), and the reserve level is stable at 33 percent of plant in service (9 years/27 years).<sup>9</sup>

9

As we vary these factors, we can see the effect on the reserve level. For
example:

12

If the addition rate were to increase above 3.7
percent, the reserve level would go down. This
should not be a cause for concern, since the average
age of plant would similarly represent a lower percent
of its expected life and the reduced reserve level is
anticipated in a growing environment.

19

If the retirement rate were to increase above 3.7
 percent, the reserve level would also go down. This
 would be a cause for concern, since it would indicate
 that the actual life of plant is shorter than previously

expected. If the actual life is shorter the reserve
 should be higher, not lower than 33 percent.

1511

- If the accrual rate were to increase above 3.7
  percent, the reserve level would go up. This would
  not be appropriate absent a reduction in the actual life
  of the plant, since it would indicate that the age of
  plant is higher than 33 percent of its expected life
  when, in fact, it is not, without a reduction to the
  actual service life of plant.
- 11

3

In summary, a declining reserve percent would be a reason for concern absent indications that it is merely the result of growth in plant. On the other hand, a rising reserve percent is generally a sign that accrual rates anticipate increasing retirement levels. Indeed, absent indications that the expected life of plant is decreasing, it might be a sign that accrual rates are too high.

18

Exhibit MJM-4 to this testimony charts reserve levels and other plant rates
since 1944 for all local exchange carriers ("LEC's") providing full financial
reports to the FCC. As shown on Page 1 of Exhibit MJM-4, reserve
percents decreased steadily following World War II due to industry growth.
These declines continued through the 1970's due in part to accrual rates

which were too low.<sup>10</sup> As shown on Page 1 of Exhibit MJM-4, however, the
FCC's change to forward-looking depreciation practices in the 1980s
resulted in a dramatic rise in reserve levels after 1980. The composite
reserve level rose from 18.7 percent in 1980 to an historic high of 47.1
percent in 1996. This track record indicates that the depreciation process
is resulting in adequate depreciation accruals, and that the FCC's
projection life estimates have been forward-looking and unbiased.

8 Confirmation of the forward-looking unbiased nature of current FCC prescriptions can be gained by comparing the 1996 accrual rate of 9 10 7.2 percent (Exhibit MJM-4, Page 4, Column I) to the 1996 retirement 11 rate of 3.7 percent (Exhibit MJM-4, Page 4, Column k). The prescription of an accrual rate much higher than the current retirement 12 rate indicates an expectation that the retirement rate will be much higher 13 in the future. If the FCC were prescribing depreciation rates based only 14 upon historical indicators, it would be prescribing depreciation rates in the 15 range of 3 to 5 percent. 16

17

Exhibit MJM-5 confirms that these national LEC trends apply also to BellSouth. The depreciation reserve level for BellSouth has grown from 35.3 percent in 1990 to 48.9 percent in 1996. BellSouth depreciation rates have averaged 7.3 percent over the last seven years, while its retirement rates have averaged only 3.6 percent.

1	Q.	HAVE YOU COMPARE	D BELLSOUTH FLORIDA'S H	IISTORICAL LIVES
2		AND RETIREMENT PA	TTERNS TO THE FCC'S PR	RESCRIBED LIVES
3		AND RETIREMENT PA	TTERNS?	
4				
5	Α.	Yes. Exhibit MJM-6 co	mpares BellSouth Florida's	historical lives and
6		retirement patterns to the	e FCC prescribed lives and ret	irement patterns for
7		the major accounts. Pa	ge 1 of Exhibit MJM-6 is replic	ated below:
8				
9		Comparis	on of Recent Life Indications	
10		to I	FCC-Prescribed Lives	
11			BellSouth Florida	
12				
13		Account Name	Recent Life Indications	FCC
14		Prescribed		
15		Digital Switch	23.0	16.0
16		Digital Circuit	11.0	10.5
17		Aerial Cable-Metallic	25.0	18.0
18		Underground-Metallic	32.0	23.0
19		Buried Metallic	27.0	18.0
20				
21		The FCC's prescribed p	rojection lives are much shor	ter than the recent
22		historical indications. Als	so, as shown on pages 2 to 6	of Exhibit MJM-6,
23		the FCC's prescribed ret	irement patterns are much mo	re accelerated than

.

1		indicated by recent historical experience. In my opinion, on this basis
2		alone, it is reasonable to conclude that the FCC's prescribed lives
3		and retirement patterns as set forth in the FCC's most recent
4		prescription of BellSouth Florida's depreciation rates are forward-
5		looking.
6		
7	Q.	HAVE YOU SUMMARIZED THE FCC'S PRESCRIBED LIVES AND NET
8		SALVAGE VALUES FOR BELLSOUTH FLORIDA?
9		
10	A.	Yes. The FCC's most recently prescribed lives for BellSouth Florida are
11		summarized in on Exhibit MJM-7, which compares the FCC's range of
12		lives and future net salvage values in Columns (a) and (b) to its most
13		recent state-specific parameters for Florida in Column ( c ).
14		
15	Q.	DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
16		
17	Α.	Yes, it does at this time.
18		
19		
20		
21		
22		

<sup>1</sup> FCC, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, first Report and Order, FCC 96-325, released August 8, 1996 ("August 8 Order"), Appendix B ("Rules"). While the court has ruled that state commissions are not required to follow the FCC's rules, the detailed guidelines described by the FCC for the calculation of depreciation of unbundled network elements continue to represent sound economic costing principles and should be applied in the context of this proceeding.

<sup>2</sup> FCC Docket No. 95-1635.

<sup>3</sup> Rules, 47 CFR § 51.505 (a).

<sup>4</sup> Rules, 47 CFR § 51.505 (b) (3).

<sup>5</sup> The economic life of an asset is its total revenue producing life. Public Utility Depreciation Practices, National Association of Regulatory Utility Commissioners, August 1996, p. 318.

<sup>6</sup> Report on Telephone Industry Depreciation, Tax and Capital/Expense Policy, Accounting and Audits Division, Federal Communications Commission, April 15, 1987 ("AAD Report"), p. 8.

<sup>7</sup> FCC, Simplification of the Depreciation Prescription Process, CC Docket No. 92-296 ("Prescription Simplification" proceeding) Third Report and Order, FCC 95-181, released May 4, 1995, p. 6.

<sup>8</sup> AAD Report, pp. 5-6.

<sup>9</sup> Reserves will stabilize at 33 percent assuming a triangular (straight-line) mortality curve. <u>See</u> Notes for Engineering Economics Courses, American Telephone and Telegraph Company, Engineering Department - 1966, p. 121.

<sup>10</sup> AAD Report, p. 7.

FPSC-RECORDS/REPORTING

1		REBUTTAL TESTIMONY OF
2		MICHAEL J. MAJOROS, JR.
3		ON BEHALF OF
4		AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC., AND
5		MCI TELECOMMUNICATIONS CORPORATION, AND
6		MCI METRO ACCESS TRANSMISSION SERVICES, INC.
7	DO	CKET NOs.: 960833-TP, 960846-TP, 971140-TP, 960757-TP, 960916-TP
8		
9	Q.	PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.
10	Α.	My name is Michael J. Majoros, Jr. I am Vice President of the economic
11		consulting firm of Snavely King Majoros O'Connor & Lee, Inc. ("Snavely
12		King"). My business address is 1220 L Street, N.W., Suite 410,
13		Washington, D.C. 20005.
14		
15	Q.	HAVE YOU SUBMITTED TESTIMONY PREVIOUSLY IN THIS
16		PROCEEDING?
17	Α.	Yes, I submitted Direct Testimony on November 13, 1997.
18		
19	Q.	DID YOUR DIRECT TESTIMONY CONTAIN A DESCRIPTION OF YOUR
20		BACKGROUND, EXPERIENCE AND QUALIFICATIONS?
21	Α.	Yes, it did.
22		
23	Q.	WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?
24	Α.	I have been asked to compare the lives proposed by BellSouth for use in
25		Unbundled Network Element (UNE) cost study calculations to the

.

projection lives I recommended in my Direct Testimony. I am also to
 comment on the propriety of BellSouth's proposed lives.

3

#### 4 Q. WOULD YOU BRIEFLY SUMMARIZE THE PROJECTION LIVES THAT 5 YOU RECOMMEND BE USED IN BST'S COST STUDIES?

A. Yes. I recommend the projection lives underlying the FCC's 1995
prescription of BellSouth-Florida's depreciation rates.<sup>1</sup> My Direct
Testimony explains the projection life concept and demonstrates why
those lives are appropriate for forward-looking cost studies.

10

## 11Q.HAVE YOU COMPARED THE LIVES USED BY BELLSOUTH IN ITS12COST STUDIES TO THE PROJECTION LIVES UNDERLYING THE

#### 13 FCC'S RATES?

## 14 A. Yes, I have. Rebuttal Exhibit MJM-1 Page 1 of Attachment 1 compares 15 the lives proposed by BellSouth (Column e) to:

- the range of projection lives prescribed by
  the FCC pursuant to its recent Prescription
  Simplification proceeding (Columns a and
  b); and
- the projection lives underlying the FCC's
  1995 prescription for BS-FL (Column c).

The lives used by BellSouth (Column e) are much shorter than the projection lives underlying the FCC's 1995 prescription (Column c), consequently they are inappropriate for use in UNE calculations.

25

1	Q.	WHAT IS THE SOURCE OF THE LIVES PROPOSED BY BELLSOUTH
2		FOR FLORIDA?
3	Α.	BellSouth notes that "Regional economic lives were used in all states."2
4		BellSouth's witnesses stated:
5		BellSouth used projected depreciation lives
6		generally consistent with the depreciation lives
7		we use for public reporting purposes in
8		Florida. <sup>3</sup>
9		
10	Q.	ARE "REGIONAL" LIVES APPROPRIATE FOR USE IN FLORIDA?
11	Α.	No. The FCC lives specific to Florida are available and should be used
12		for UNE calculations.
13		
14	Q.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE
14 15	Q.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS?
14 15 16	<b>Q.</b> A.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the
14 15 16 17	<b>Q.</b> A.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As
14 15 16 17 18	<b>Q.</b> A.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As the FCC has found, GAAP is investor-focused, and may not always serve
14 15 16 17 18 19	<b>Q.</b> A.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As the FCC has found, GAAP is investor-focused, and may not always serve the interest of ratepayers. The FCC states:
14 15 16 17 18 19 20	<b>Q.</b> A.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As the FCC has found, GAAP is investor-focused, and may not always serve the interest of ratepayers. The FCC states: One of the primary purposes of GAAP is to
14 15 16 17 18 19 20 21	Q. A.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As the FCC has found, GAAP is investor-focused, and may not always serve the interest of ratepayers. The FCC states: One of the primary purposes of GAAP is to ensure that a company does not present a
14 15 16 17 18 19 20 21 22	<b>Q.</b> A.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As the FCC has found, GAAP is investor-focused, and may not always serve the interest of ratepayers. The FCC states: One of the primary purposes of GAAP is to ensure that a company does not present a misleading picture of its financial condition and
14 15 16 17 18 19 20 21 22 23	Q.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As the FCC has found, GAAP is investor-focused, and may not always serve the interest of ratepayers. The FCC states: One of the primary purposes of GAAP is to ensure that a company does not present a misleading picture of its financial condition and operating results by, for example, overstating
14 15 16 17 18 19 20 21 22 23 23 24	Q.	ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS? No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism" As the FCC has found, GAAP is investor-focused, and may not always serve the interest of ratepayers. The FCC states: One of the primary purposes of GAAP is to ensure that a company does not present a misleading picture of its financial condition and operating results by, for example, overstating its asset values or overstating its earnings,

investors. GAAP is 1 guided by the principle which holds, for 2 conservatism example, that, when alternative expense 3 amounts are acceptable, the alternative having 4 the least favorable effect on net income should 5 be used. Although conservatism is effective in 6 protecting the interest of investors, it may not 7 8 always serve the interest of ratepayers. Conservatism could be used under GAAP, for 9 example, to justify additional (but, perhaps not 10 "reasonable") depreciation expense by a LEC 11 to avoid its sharing obligation. Thus, GAAP 12 13 would not effectively limit the opportunity for LECs to manage earnings so as to avoid the 14 sharing zone as the basic factor range option. 15 In this instance, GAAP does not offer adequate 16 protection for ratepayers.<sup>4</sup> 17

18

# 19Q.IS THE CONSERVATIVE BIAS INHERENT IN FINANCIAL BOOK LIVES20THE ONLY REASON WHY SUCH LIVES SHOULD NOT BE USED IN21UNE CALCULATIONS?

A. No. BellSouth's financial book lives assume the replacement of
 telecommunications plant to provide non-regulated video services. The
 lives appropriate for UNE calculation should be forward-looking and reflect
 the expected economic lives of newly placed plant. However, the plant

lives appropriate for such a calculation should not be based upon the
assumption that efficient telecommunications facilities will be <u>prematurely</u>
retired in order to provide non-regulated services. The FCC has
specifically ruled that the costs of premature retirements will not be
charged to ratepayers. The FCC states:

6 Facilities upgrades and accelerated re-7 placement of older facilities might also be 8 undertaken primarily for the benefit of 9 unregulated service offerings. The principles 10 adopted in the Order dictates that such costs be excluded from the regulated accounts.<sup>5</sup> 11

12

13 The use of plant lives based upon the assumption that the 14 telecommunications network will be replaced by an integrated 15 telecommunications/video network would effectively cause the costs of 16 premature retirements to be charged to telephone ratepayers.

17

18Q.IS THIS DISTINCTION BETWEEN TELECOMMUNICATIONS AND19VIDEO SERVICES UNIQUE TO THE FCC?

A. No. The Canadian Radio-Television and Telecommunications
Commission ("CRTC") draws the very same distinction. The CRTC
divides cost between the Competitive (non-regulated) and Utility
(regulated) segments, and states:

24The Commission finds that, in general, the25most appropriate regulatory treatment for

1 broadband initiatives is require to the 2 telephone companies to assign to the 3 Competitive segment all new investments and related 4 expenses associated with the 5 deployment of fiber. coaxial cable, 6 optoelectrical equipment, asynchrocus transfer mode (ATM) switches, and video servers.6 7 8 \* \* \* 9 10 The Commission does not foresee any 11 instances where it would be appropriate to 12 have fiber or coaxial cables in the distribution 13 portion of the loop assigned to the Utility segment.7 14 15 DOES BELLSOUTH PLAN TO DEPLOY SUCH A NETWORK IN 16 Q. 17 FLORIDA? 18 Apparently not. My Rebuttal Exhibit MJM-1 Attachment No. 2 contains Α. the company's responses to several AT&T Data Requests which indicate 19 20 that the company does not, in fact, have plans to deploy the video 21 network. 22

Q. HAVE ANY STATE COMMISSIONS ISSUED ORDERS WHICH
 ADOPTED FCC PRESCRIBED PROJECTION LIVES, OR SIMILAR
 STATE PRESCRIBED LIVES, FOR USE IN UNE CALCULATIONS?

1 Α. Yes. Prescribed projection lives have already been adopted for use in 2 TELRIC calculations by Massachusetts,<sup>8</sup> New York,<sup>9</sup> West Virginia,<sup>10</sup> Wyoming,<sup>11</sup> Delaware,<sup>12</sup> Ohio,<sup>13</sup> Michigan,<sup>14</sup> and Colorado.<sup>15</sup> In many other 3 4 states, TELRIC proceedings are in progress. For example, the Hearing 5 Examiner in Illinois recently proposed the use of prescribed lives.<sup>16</sup> 6 7 This is not surprising. In its recent Price Cap decision, the FCC adopted 8 the use of its prescribed lives for use in Total Factor Productivity 9 calculations. The FCC noted that: 10 We can think of no reason why 11 incumbent LECs should be permitted to 12 use different depreciation rates for different regulatory purposes.<sup>17</sup> 13 14 15 SUMMARY 16

## 17Q.WHAT EFFECT WOULD THE USE OF PLANT LIVES WHICH ARE18UNREALISTICALLY SHORT HAVE ON COMPLETION?

A. The use of unrealistically short lives would cause unbundled network
elements to be priced above TELRIC. Such pricing would be contrary to
the FCC's guidelines and impede the development of competition based
upon the purchase of unbundled network elements in the local market.

23

## 24Q.WHAT EFFECT WOULD THE USE OF PLANT LIVES WHICH ARE25UNREALISTICALLY SHORT HAVE ON TELEPHONE RATEPAYERS?

1 Α. Effectively, telephone ratepayers would be required inappropriately to 2 provide capital contributions to the ILEC. I will demonstrate this with 3 simple illustration. Assume a plant asset costs \$1000 and will have a 4 productive life of 20 years. Depreciation expense should be \$50 per year for 20 years. Assume further that regulatory authorities allow the ILEC to 5 depreciate this asset using a 10-year period at a 10 percent rate and then 6 7 freeze prices at the resulting \$100 level. There are at least two erroneous consequences. First, the depreciation reserve would build to an 8 9 excessive level. The Supreme Court has ruled that excessive depreciation results in an unwarranted capital contribution by telephone 10 ratepayers.<sup>18</sup> Second, the ratepayers would pay for this asset at \$100 per 11 12 year in perpetuity even though they should be paying \$50 per year for 20 13 vears. 14 DOES THIS CONCLUDE YOUR TESTIMONY? 15 Q. 16 Yes, it does. Α. 17 18 19 20

- 21
- 22
- 23
- 24
- 25

#### 1 Endnotes:

- FCC Docket No. 95-1635.
- <sup>2</sup> BellSouth Economic Life Input for Capital Cost Runs Used in Development of 1996 Cost Factors.
- <sup>3</sup> Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell, p. 13.
- <sup>4</sup> Prescription Simplification, Report and Order, FCC 93-452, released October 20, 1993, para. 46.
- Separation of costs of regulated telephone service from costs of non-regulated activities, CC Docket No. 86-111, Report and Order, FCC 86-564, released February 6, 1987, para. 115.
- <sup>6</sup> CRTC, Implementation of Regulatory Framework splitting of the Rate Base and Related Issues, Telecom Decision CRTC 95-21, 31 October 1995, pp. 34-35.
- <sup>7</sup> Id., p. 35.
- <sup>8</sup> Docket DPU 96-73/74, 96-75, 96-80/81, 96-83, 96-84-Phase 4, December 4, 1996.
- <sup>9</sup> Docket 95-C-0657, 94-C-0095, 91-C-1174, April 1, 1997 ("NY Order).
- <sup>10</sup> Docket 96-1516-T-PC, April 21, 1997.
- <sup>11</sup> Docket 70000-TF-96-319, 72000-TF-96-95, April 23, 1997.
- <sup>12</sup> Docket 96-324, April 29, 1997.
- <sup>13</sup> Docket 96-922-TP-UNC, June 19, 1997.
- <sup>14</sup> Docket U11280, July 14, 1997.
- <sup>15</sup> Docket 96S-331T, July 28, 1997.
- <sup>16</sup> Docket 96-0486, 96-0569, August 8, 1997.
- <sup>17</sup> Docket 94-1, 96-262, May 21, 1997, footnote 122.

<sup>18</sup> Lindheimer v. Illinois Bell Telephone Co., 292 U.S. 151, 78 L.ed. 1182, 54 S.Ct. 658 (1934).

MR. HATCH: And with respect to Mr. Majoros, we 1 2 would request that his direct and rebuttal exhibits be marked for identification. 3 4 COMMISSIONER DEASON: They will be identified as composite exhibit 53. And staff's -- I'm sorry? 5 MR. HATCH: I was going to request that they be 6 7 admitted into the record. 8 COMMISSIONER DEASON: Okay. Exhibit 53 without 9 objection will be admitted, and staff's exhibit identified 10 as MJM-3 will be identified as exhibit 54. Staff moves 54? MS. KEATING: Staff moves exhibit 54. 11 COMMISSIONER DEASON: Without objection exhibit 12 54 is also admitted. 13 14 MR. HATCH: We have already done Mr. Wells. AT&T 15 would call Mr. Art Lerma. 16 COMMISSIONER DEASON: Okay. Before Mr. Lerma takes the stand, we are going to take a recess. We will 17 reconvene at 10:45. 18 (BRIEF RECESS) 19 20 COMMISSIONER DEASON: Call the hearing back to order. Mr. Hatch. 21 MR. HATCH: AT&T would call Art Lerma to the 22 23 stand. COMMISSIONER DEASON: Has Mr. Lerma been sworn? 24 MR. HATCH: I don't believe so. 25

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1 Have you been sworn, Mr. Lerma? WITNESS LERMA: I'm sorry? 2 3 MR. HATCH: Have you been sworn, Mr. Lerma? WITNESS LERMA: No. 4 5 COMMISSIONER DEASON: Please stand and raise your 6 right hand. 7 (Whereupon, Witness Lerma was duly sworn by Commissioner Deason) 8 9 10 11 12 Whereupon, ART LERMA 13 was called as a witness on behalf of AT&T and, after being 14 first duly sworn, testified as follows: 15 DIRECT EXAMINATION 16 17 BY MR. HATCH: Could you state your name and address for the 0 18 record please? 19 Yes. 20 Α My name is Art Lerma and my address is Promenade I, 1200 Peachtree Street, Atlanta, Georgia. 21 By who are you employed and in what capacity? 0 22 Α I'm employed by AT&T as regional regulatory CFO 23 24 for the Southern States region. 25 Did you prepare and cause to be filed in this 0 C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1528 proceeding rebuttal testimony? 1 Yes, I did. 2 Α 3 0 Do you have any changes or corrections to that testimony? 4 No, I do not. 5 Α Did you also prepare and cause to be filed 6 0 7 attached to your rebuttal testimony several exhibits, ALR-1 through ALR-11? 8 Yes, I did. 9 Α 0 Were those exhibits prepared by you or under your 10 11 supervision? Yes, they were. 12 Α 13 0 Do you have any changes or corrections to your exhibits? 14 15 Α No, I do not. 16 MR. HATCH: Mr. Chairman, I would request that the direct -- or the rebuttal of Mr. Lerma be inserted in 17 18 the record as though read. 19 COMMISSIONER DEASON: Without objection it shall be so inserted. 20 21 22 23 24 25 C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

#### **BEFORE THE**

ţ.

#### FLORIDA PUBLIC SERVICE COMMISSION

#### **REBUTTAL TESTIMONY OF**

#### ART LERMA

#### **ON BEHALF OF**

#### AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

Docket Nos. 960833-TP/960846-TP/971140-TP/960757-TP/960916-TP

Filed: December 9, 1997

1		REBUTTAL TESTIMONY OF
2		ART LERMA
3		ON BEHALF OF
4		AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.
5		DOCKET NOS. 960833-TP/960846-TP/971140-TP/960757-TP/960916-TP
6		
7	I.	<b>INTRODUCTION AND QUALIFICATIONS:</b>
8		
9	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
10	А.	My name is Art Lerma and my business address is Promenade I, Room 5082,
11		1200 Peachtree Street, Atlanta, Georgia, 30309.
12		
13	Q.	PLEASE STATE YOUR CURRENT POSITION AND THE SCOPE OF
14		YOUR RESPONSIBILITIES.
15	А.	I am employed by AT&T as Regional Regulatory Chief Financial Officer for the
16		Southern States region. I am currently responsible for AT&T's financial
17		regulatory matters and for certain local exchange carrier ("LEC") cost analysis
18		functions in nine southern states including Florida.
19		
20	Q.	PLEASE DESCRIBE YOUR EXPERIENCE.
21	А.	I have 23 years experience in the telecommunications industry. I began my career
22		in 1974 with Southwestern Bell Telephone Company ("SWBT") as a supervisor
23		in Accounting Operations with responsibility for accounts receivable processing
24		and revenue journalization. For the next nine years, I held various line and staff
25		positions at SWBT Accounting Centers, where I was responsible for data

processing operations, toll operations, customer billing and collection, payrolls, ł accounts payable, and the production of corporate books and records. In July of 2 1983, I transferred to AT&T and accepted the position of Manager - Accounting 3 Regulatory Support with responsibility for AT&T financial regulatory matters in 4 5 Texas. Since 1983, I have been responsible for AT&T financial regulatory matters and have been involved in the review of LEC cost information filed 6 before public utility regulatory agencies in the southern and southwestern portions 7 of the country. 8

9

#### 10 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I have a Bachelor of Arts degree in Mathematics from Trinity University in San
 Antonio, Texas. I have also received a Master of Business Administration from
 St. Edwards University in Austin, Texas with a concentration in General Business
 and Telecommunications Management.

15

## 16 Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY OTHER 17 REGULATORY COMMISSION OR AUTHORITY?

- A. Yes. In addition to testifying before the Florida Public Service Commission
   ("FPSC), I have also testified in numerous proceedings involving cost issues
   before public regulatory commissions in Alabama, Arkansas, Georgia, Kentucky,
   Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas.
- 22
- 23 **II. <u>PURPOSE</u>**:
- 24

25

#### 1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS 2 PROCEEDING?

A. The purpose of my testimony is to evaluate certain cost factors and labor rates
applied in the calculation of Total Element Long Run Incremental Costs
("TELRIC") rates in the BellSouth Telecommunications, Inc. ("BST") TELRIC
cost study. I provide an assessment and, where possible, I recommend
adjustments consistent with my findings.

- 9 Specifically, I have reviewed the following calculations in the BST cost study: 10 the common cost, shared cost, and shared labor rate factors produced in the 11 shared and common cost model; TELRIC labor rates; and other loading factors.
- 12

8

- Based on my analysis, I make a recommendation on the use of BST's proposed cost factors and labor rates. I also rebut certain statements reflected in the direct testimony of BST witness Walter S. Reid.
- 16

#### 17 III. RECOMMENDATIONS:

18

## Q. SHOULD THE FLORIDA PUBLIC SERVICE COMMISSION ("FPSC") ACCEPT BST's SHARED AND COMMON COST MODEL?

A. No. The FPSC should not rely on BST's shared and common cost model to calculate the shared costs, common costs, or labor rates for use in developing UNE prices. The reason that the FPSC should not rely on BST's shared and common cost model is that the model is not forward looking, the accuracy of the

outputs cannot be confirmed, and the model contains numerous methodological errors.

3

#### **Q**. DOES YOUR TESTIMONY CONTAIN ANY RECOMMENDED 4 UNBUNDLED NETWORK ELEMENTS ("UNE") RATES FOR 5 **CONSIDERATION BY THE FPSC?** 6

- No. The FPSC should establish rates based upon the recommendations of 7 Α. AT&T/MCI witness Wayne Ellison who has incorporated my adjustments and 8 those proposed by other AT&T and MCI witnesses. Due to the lack of available 9 10 data, I have not been able to calculate and propose adjustments to address all of the deficiencies in the Florida BST UNE Cost Study that I have noted in my 11 testimony. My testimony provides only limited adjustments which are reflected 12 13 on Rebuttal Exhibits ALR-1 through ALR-6.
- 14

#### ANALYSIS OF SHARED AND COMMON COST MODEL

16

15

# IS BST's SHARED AND COMMON COST MODEL AN ACCEPTABLE MEANS FOR CALCULATING THE SHARED COSTS, THE COMMON COSTS, OR THE SHARED LABOR RATES FOR USE IN DEVELOPING PRICES FOR BST's UNEs? IF NOT, WHY NOT?

A. No. BST's shared and common cost model is an unreliable and unacceptable
 means for calculating the shared costs, the common costs, or the shared labor rates
 that are used to establish prices for BST's unbundled network elements for the
 following reasons:
1 (1) BST's shared and common cost model is inadequate to determine the 2 long-run shared and common costs of an efficient, forward-looking, least-3 cost network because the shared and common cost model is based largely 4 upon the embedded historical costs of BST's existing network;

5

13

- 6 (2) The accuracy of the outputs of BST's shared and common cost model 7 cannot be confirmed because: (a) many inputs to the model are based upon 8 untested and unwarranted data extrapolations; (b) many other model inputs 9 lack an adequate evidentiary basis; and (c) BST's shared and common cost 10 model is so unduly complex and so insufficiently integrated that it is 11 neither auditable nor readily understandable by persons familiar with the 12 industry and its costs; and
- 14 (3) BST's model contains numerous methodological errors. Examples include
  15 the following: BST's model (a) improperly treats recurring costs as non16 recurring in its shared labor factors; (b) uses improper attribution bases for
  17 attributing shared and common costs; and (c) includes unsupported costs
  18 for a local carrier service center ("LCSC") that should not be recovered in
  19 UNE prices. I will explain each of these deficiencies in more detail below.
- 21Q.IS BST's SHARED AND COMMON COST MODEL ADEQUATE FOR22DETERMINING THE LONG-RUN SHARED AND COMMON COSTS OF23AN EFFICIENT, FORWARD-LOOKING, LEAST-COST NETWORK?"
- A. No. BST's shared and common cost model does not yield the long-run shared and common costs of an efficient, forward-looking, least-cost network. The model is

not based upon a "bottoms-up" assessment of the costs that would be incurred by BST in a competitive environment using industry best practices and least-cost methods. Instead, BST's shared and common cost model is based upon BST's embedded or historic costs and largely projects the costs that would be incurred if BST simply did "business as usual" in 1997, 1998, and 1999.

6

1

2

3

4

5

7

8

### Q. PLEASE PROVIDE EXAMPLES OF HOW THE SHARED AND COMMON COST MODEL IS NOT FORWARD-LOOKING.

I will provide two examples. The first example relates to BST's estimate of **A**. 9 expenses for the years 1997, 1998, and 1999 in Account Nos. 6110 (Network 10 Support), 6120 (General Support), 6510 (Other Property, Plant and Equivalent), 11 6540 (Access), 6610 (Marketing), 6620 (Services), and 67xx (General and 12 Administrative, excluding 6727), in which it applied an inflation factor that did 13 not account for any productivity improvements. The second example relates to 14 BST's estimate of expenses for the years 1997, 1998, and 1999, in Account Nos. 15 62xx (Central Office), 6310 (Information Origination / Termination), 6410 (Cable 16 and Wire Facilities), 6530 (Network Operations), and 6727 (Research and 17 Development), in which BST applied a growth rate that purportedly accounted for 18 certain productivity improvements. 19

20

Q. PLEASE EXPLAIN THE FIRST EXAMPLE IN WHICH BST
ESTIMATED EXPENSES FOR THE YEARS 1997, 1998, AND 1999 IN
ACCOUNT NOS. 6110, 6120, 6510, 6540, 6610, 6620, AND 67xx
(EXCLUDING 6727).

25

BST estimated expenses in these accounts by: (1) taking the expenses incurred by 1 Α. BST during the first ten months of 1996; (2) extrapolating 1996 expenses from the 2 ten months of historical expenses; (3) normalizing the extrapolated 1996 data to 3 adjust for non-regulated business, the impact of the Olympics and Hurricane Fran, 4 for the effects of a projected 11,300 employee workforce reduction, and for the 5 effects of a compensated absence issue; (4) inflating the normalized and 6 7 extrapolated 1996 data by a 3.4% inflation factor to measure 1997 expenses; (5) normalizing the inflated 1997 expenses to adjust for the effects of the projected 8 11,300 employee workforce reduction; (6) inflating the inflated and normalized 9 1997 expenses by a 3.5% inflation factor to measure 1998 expenses; (7) 10 normalizing the inflated 1998 expenses to adjust for the effects of the projected 11 11,300 employee workforce reduction; and (8) inflating the normalized and 12 inflated 1998 expenses by a 3.5% inflation factor to measure 1999 expenses. 13

14

### Q. DOES BST'S USE OF "INFLATION" AND NORMALIZATION ADJUSTMENTS FOR THESE ACCOUNTS RENDER BST'S COST STUDY FORWARD LOOKING?

No. Contrary to the conclusion of BST witness Walter S. Reid (Reid direct 18 A. testimony, p.7, lines 16-18) that the application of these factors converts the data 19 to forward-looking costs, the study is not forward-looking because it is not 20 representative of an efficient least cost network based on current technology. 21 Except for the effects of Hurricane Fran, the Olympics, a single announced 22 ongoing downsizing initiative, and the compensated absences issue, BST's shared 23 24 and common cost model assumes that BST will incur the same expenses in 1997, 25 1998, and 1999 that it incurred during the first ten months of 1996 and that the amount of those expenses will increase with inflation at a rate of approximately 3.5% per year. BST's shared and common cost study for Account Nos. 6110, 6120, 6510, 6540, 6610, 6620, and 67xx (excluding 6727), simply ignores the fact that competition, technology, and improved productivity will result in further reductions in BST's shared and common costs beyond the levels experienced in 1996.

7

1

2

3

4

5

6

Indeed, the BST cost study states that the inflation rates used for those accounts -called "Telephone Plant Indexes" ("TPIs") - "are not intended to be forecasts of
technology changes or productivity improvements. ...Use of these inflation rates
implicitly makes the assumption that history will more or less repeat itself."
(BST's Florida cost study, Vol.1, Sec.4, p. 34).

13

### Q. AT A MINIMUM, WHAT CHARACTERISTICS MUST BE MET FOR THE BST SHARED AND COMMON COST MODEL TO BE PROPERLY FORWARD-LOOKING FOR USE IN SETTING TELRIC RATES?

17 Α. BST's shared and common cost model cannot simply assume that normalized and annualized 1996 expense levels will increase with inflation. To the contrary, a 18 forward-looking model must consider all reduced expense levels and productivity 19 (1) that inevitably result when a member of a regulated. improvements: 20 monopoly industry becomes subject to competition; (2) that would result from the 21 22 application of current, least-cost technology across BST's entire network; (3) that would result from BST's adoption of industry best practices; and (4) that would 23 result from additional workforce reduction, outsourcing, and reengineering 24 initiatives that will occur as BST encounters competition. BST's shared and 25

I

common cost model completely ignores these factors with respect to Account Nos. 6110, 6120, 6510, 6540, 6610, 6620, and 67xx (excluding 6727).

23

# Q. YOU REFERRED EARLIER TO A SECOND EXAMPLE IN WHICH BST ESTIMATED EXPENSES FOR THE YEARS 1997, 1998, AND 1999, IN ACCOUNT NOS. 62xx, 6310, 6410, 6530, AND 6727. IS THIS ESTIMATE OF EXPENSES FORWARD-LOOKING?

No, it is not. BST's shared and common cost study is not adequately forward 8 Α. looking even though BST's estimate for these accounts purports to consider 9 certain productivity improvements. This is so because the study fails to fully 10 consider the amount of cost reduction that should be expected in a competitive 11 environment. Indeed, the model even fails to consider all of the cost reduction 12 initiatives identified by BST. For these accounts, BST's shared and common cost 13 model estimated 1997, 1998, and 1999 expenses in the manner previously 14 described on pages 7 and 8 of my testimony, except that the "growth rate" used 15 for each year purportedly considered the impact of changes in demand (called 16 "load changes"), service enhancements (called "service initiatives"), and 17 "productivity changes," as well as the effects of inflation. Based upon these 18 factors, BST's shared and common cost study used growth rates of 5.1% for 1997. 19 4.5% for 1998, and 4.2% for 1999, for Account Nos. 62xx, 6310, 6410, 6530, and 20 6727. However, the supporting documentation for BST's shared and common 21 cost study indicates that additional "re-engineering initiatives," "organizational 22 alignment initiatives," and "productivity changes" not considered in the 23 development of the growth rates would result in cost reductions of 4.4% in 1997, 24 4.3% in 1998, and 2.8% in 1999. (See BST's response to AT&T's First Set of 25

Data Requests, SCPSC Docket No. 97-374-C, Item No. 281, page 9 of Rebuttal Exhibit ALR-11. This BST response to an AT&T data request in South Carolina is being used throughout this testimony because a Florida equivalent response was not available at the time this testimony was prepared. This information is of a regional nature and is the same information used by BST in all states that BST has filed its TELRIC UNE cost model.) Had BST considered those cost reductions, their "growth rates" would be .7% in 1997, .2% in 1998, and 1.4% in 1999. These growth rates would have been even lower if BST had fully considered the effects

10

9

1

2

3

4

5

6

7

8

of competition.

### Q. YOU STATED EARLIER THAT "COMPETITION, TECHNOLOGY, AND PRODUCTIVITY WILL REDUCE BST's SHARED AND COMMON COSTS." PLEASE EXPLAIN WHY THAT IS SO.

А. Competition, technology, and improved productivity will reduce BST's shared 14 and common expenses below normalized 1996 levels for a number of reasons. 15 First, the onset of competition is a powerful incentive for a formerly regulated 16 monopoly such as BST to reduce its overhead expenses and increase its 17 productivity. Otherwise, BST would find itself unable to compete against its 18 "leaner and meaner" competition. Although the onset of competition should 19 impact shared and common expenses across-the-board at BST, it should have a 20 particularly significant impact on BST's general and administrative ("G&A") 21 22 costs, such as those recorded in Account Nos. 6711, 6712, and 6721-28. 23 Automated Results Mechanized Information System ("ARMIS") results for the Bell Operating Companies indicate that G&A expenses per line have been 24 trending downward anywhere from 22% to about 54% depending on the 25

11

individual BOC. (See Rebuttal Exhibit ALR-9). In contrast, BST's shared and common cost study pretends that competition will not impact BST's G&A expenses at all.

Second, network operating expenses, such as those recorded in Account Nos. 5 6 6512, and 6530-6535, will also be reduced by the use of modern, least-cost technology across BST's network. In a least-cost, forward-looking environment, 7 modern network equipment will replace antiquated systems that are more costly to 8 operate and more susceptible to breakdown. The antiquated systems that are 9 reflected in BST's historical costs require extensive staffing at end offices for 10 repair, maintenance, upgrade, and supervisory work. With modern equipment, 11 however, network surveillance can be executed from a central facility. New 12 technologies will allow for substantial savings from new management network 13 standards, intranets, and the like. Also, in a wholesale environment, some of the 14 repair service functions resulting from customer trouble reports and related plant 15 administration work will be performed by competing local exchange companies 16 like AT&T. In addition, current trends show network operations expenses 17 declining. They can be expected to decline even more. For these reasons, network 18 operations expenses can be expected to be reduced by approximately 50%. 19 Rebuttal Exhibit ALR-1 to my testimony reflects a 50% reduction to the 1996 20 normalized level of expenses in the shared and common cost model for Account 21 22 Nos. 6512, 6531, 6532, 6533, 6534, and 6535. Rebuttal Exhibit ALR-8 provides supporting documentation for the 50% reduction in network operations expenses. 23

24

1

2

3

4

25

Q. YOU EARLIER TESTIFIED THAT BST'S SHARED AND COMMON
 COST MODEL IS NOT AN ACCEPTABLE MEANS OF CALCULATING
 THE SHARED COSTS, THE COMMON COSTS, AND THE SHARED
 LABOR RATES TO BE USED IN PRICING BST'S UNES BECAUSE THE
 ACCURACY OF THE MODEL'S OUTPUTS CANNOT BE CONFIRMED.
 PLEASE EXPLAIN THE BASIS FOR THIS TESTIMONY.

7 Α. Although BST has constructed a complex and elaborate shared and common cost model, the outputs of that model are only as credible as the data inputs, 8 assumptions, and extrapolations upon which the model are based. The FPSC 9 should not accept BST's shared and common cost model as a basis for 10 determining the shared costs, the common costs, and the shared labor rates to be 11 used in pricing BST's UNEs because: (a) many inputs to the model are based 12 13 upon untested and unwarranted data extrapolations; (b) many other inputs to the 14 model are unsupported by any data that would permit a verification of the 15 accuracy and reasonableness of the inputs; and (c) the model is so complex and poorly integrated that it cannot be adequately tested. Simply put, BST has not 16 provided the FPSC with sufficient data to assess the data inputs, assumptions, and 17 extrapolations upon which the shared and common cost model is based. In such 18 circumstances, the model's outputs cannot be accepted as reliable, reasonable, or 19 20 appropriate. The elegance of a model is irrelevant if the data inputs, extrapolations, and assumptions underlying the model are unsupported or 21 incorrect. 22

23

24 25 Perhaps an analogy will help drive home the skepticism with which BST's shared and common cost model should be viewed. That model is like an elaborate

mansion built upon a foundation of dubious structural strength. Although the
 mansion's facade will be impressive to a first-time visitor, no one should purchase
 the mansion for use as a home before being given adequate proof of the soundness
 of the foundation.

5

Q. YOU EARLIER TESTIFIED THAT BST'S SHARED AND COMMON 6 COST MODEL IS UNACCEPTABLE IN PART BECAUSE IT RELIES 7 UPON UNTESTED AND UNWARRANTED DATA EXTRAPOLATIONS. 8 9 PLEASE EXPLAIN WHAT YOU MEAN BY "DATA **EXTRAPOLATIONS."** 10

A. By "data extrapolations," I mean those instances where BST has gathered data relating to a relatively brief period of time or a relatively few examples of a cost incurrence, and used that data to project what the costs would be for a longer period of time or for a greater universe of cost incurrences.

15

### 16 Q. PLEASE EXPLAIN THE IMPACT THAT UNTESTED AND 17 UNWARRANTED DATA EXTRAPOLATIONS CAN HAVE ON A COST 18 STUDY.

19 A. Untested and unwarranted data extrapolations can lead to erroneous conclusions 20 about the level of costs that will be incurred. The cost study filed by BST in 21 Florida demonstrates that the use of "data extrapolations" can lead to incorrect 22 conclusions about the amount of costs that will be incurred, even when the period 23 upon which the extrapolation is based is very close in time to the period to which 24 the extrapolation is being applied. For example, Rebuttal Exhibit ALR-7 to my 25 testimony is a copy of page 240 of Appendix H to BST's Revised Exhibit P-1 in Daonne Caldwell's Direct Testimony filed in Georgia Docket No. 7061-U. It refers to a forecast of "pole rental" income based on "actuals through June, 1996." The cost study indicates, however, that "[a]ctual activity increased significantly in August. Therefore, we should overrun the forecast."

6 In this example, BST's extrapolated forecast failed to correctly predict future 7 "pole rental" income because it failed to account for the increase in "pole rental" 8 income. Similarly, the extrapolations in BST's shared and common cost study 9 lead to incorrect cost projections because they fail to account for the expense 10 reductions and productivity increases that will result from competition.

11

5

## Q. DOES THE SERVICE ORDER STUDY USED IN THE SHARED AND COMMON COST MODEL INCLUDE EXAMPLES OF UNTESTED AND UNWARRANTED DATA EXTRAPOLATIONS? PLEASE EXPLAIN.

BST's service order study relies on untested and unwarranted data 15 A. Yes. extrapolations. That study, used to identify the amount of non-recurring costs to 16 be excluded from attribution as shared and common costs, is separated into two 17 18 parts, both of which rely heavily on untested and unwarranted data extrapolations. The first part estimates the amount of service order related costs for the years 19 1997-1999. The second part estimates the central office non-recurring costs for 20 these years. 21

- 22
- 23
- 24
- 25

Q. PLEASE EXPLAIN HOW THE USE OF THE SERVICE ORDER STUDY 1 2 TO ESTIMATE SERVICE ORDER-RELATED COSTS FOR OUTSIDE PLANT **NON-RECURRING** COSTS IS ON 3 BASED DATA **EXTRAPOLATIONS** WHOSE REASONABLENESS AND 4 APPROPRIATENESS HAVE NOT BEEN DEMONSTRATED BY BST. 5

1543

With respect to outside plant non-recurring costs, BST estimated the non-6 Α. recurring costs that would be incurred region-wide from 1997 through 1999 by 7 BST's outside plant workforce by extrapolating from a study of the work 8 performed by a small portion of the applicable workforce during a single month in 9 1996. For example, the Florida portion of the POTS I & M (Plain Old Telephone 10 Service Installation and Maintenance) service order study for outside plant forces 11 was based on the activities during only one month of just 1.2% of the appropriate 12 workforce (30 technicians of a universe of 2530), while, across the BST region, 13 less than 4% of the applicable workforce was included in the sample. BST's cost 14 study provides no information that would permit the FPSC to assess whether the 15 workforce sample in BST's study was statistically representative or whether the 16 one-month sampling period was representative of the outside plant service order 17 activities in 1996, let alone in 1997 through 1999. (Florida BST Cost Study, CD-18 ROM version 1.2, blstric.fl\ Appendix E \svcord.xls). Absent such information, 19 BST has failed to demonstrate that its extrapolation is a reasonable or reliable 20 basis for estimating non-recurring outside plant costs. 21

- 22
- 23
- 24

# Q. PLEASE EXPLAIN HOW THE USE OF THE SERVICE ORDER STUDY TO ESTIMATE NON-RECURRING CENTRAL OFFICE COSTS IS ALSO BASED UPON UNTESTED AND UNWARRANTED EXTRAPOLATIONS FROM NONREPRESENTATIVE DATA.

BST estimated its non-recurring central office costs by extrapolating from a study Α. 5 of the non-recurring costs incurred by central office employees during a two-6 month period in 1996. Moreover, BST excluded all Florida data from its 7 supposedly "region-wide" study because of unexplained problems with the 8 Florida data, despite the fact that Florida accounts for more of BST's business 9 10 than any other state. No effort was made to identify the problem with the Florida data, or to perform a study that was free of the problem. BST's cost study 11 provides no information that would permit the FPSC to assess whether the two-12 month sampling period was representative of the central office service order 13 activities in 1996, let alone in 1997 through 1999, or whether a sample that 14 excludes Florida can be representative of region-wide activity. Absent such 15 information. BST has failed to demonstrate that its extrapolation is a reasonable or 16 reliable basis for estimating non-recurring outside plant costs. 17

18

### 19 Q. PLEASE PROVIDE OTHER EXAMPLES OF UNTESTED AND 20 UNWARRANTED DATA EXTRAPOLATIONS FROM BST's SHARED 21 AND COMMON COST MODEL.

A. First, BST used an unsupported extrapolation to estimate the amounts of salaries
 and wages that would be capitalized in various accounts in 1997 through 1999.
 This data is needed to develop salary and wage ratios for apportioning attributable
 costs among specified investment or expense accounts and for accumulating

17

salary and wage cost pool data used in developing shared labor cost factors . BST's extrapolation is based upon data from only a three-month period in 1996. BST's cost study provides no information that would permit the FPSC to assess whether the data from the three-month period is representative of salary and wage capitalization in 1996, let alone the salary and wage capitalization that should be expected in 1997 through 1999.

7

6

l

2

3

4

5

Second, as I mentioned earlier in my testimony, BST utilized the costs incurred in 8 9 various accounts during the first ten months of 1996 as the starting point for its 10 calculation of the costs expected to be incurred in 1997-99 in those accounts. It then extrapolated those ten-month amounts to full-year 1996 costs by multiplying 11 the ten-month costs by a factor of 1.2. BST provides no rationale for its use of 12 13 this "annualized" data, rather than using actual full-year data for 1996 (which was available well prior to the filing of the Florida BST TELRIC cost study), and it 14 provides no information that would permit the FPSC to determine whether the 15 16 "annualized" 1996 costs are in fact representative of the actual costs incurred in 1996. 17

18

Q. YOU TESTIFIED EARLIER THAT BST'S SHARED AND COMMON
 COST STUDY IS UNACCEPTABLE BECAUSE MANY OF THE DATA
 INPUTS TO THE MODEL ARE UNSUPPORTED AND THEREFORE
 NOT VERIFIABLE. PLEASE PROVIDE EXAMPLES.

A. There are numerous examples where BST's data inputs are not supported by
 documentation that would permit the FPSC to assess their accuracy and

- 1
- 2

reasonableness. In effect, BST is asking the FPSC to accept its data inputs without establishing their appropriateness or accuracy.

3

To demonstrate just how pervasive unsupported data inputs are in BST's shared 4 5 and common cost study, I'd like to discuss just one part of that study: the calculation by BST of the amount of expenses that it estimates will be incurred in 6 7 various accounts in 1997, 1998, and 1999. These costs are used to calculate the 8 Expense/Salary & Wage Development Factors that are extensively used in BST's shared and common cost model. I discussed the eight-step process earlier in my 9 10 testimony on page 7. The documentation relevant to this process is set forth in BST's response to AT&T's First Set of Data Requests, SCPSC Docket No. 97-11 374-C, Item No. 281, pages 12-14 of Rebuttal Exhibit ALR-11. 12

13

BST has failed to provide adequate supporting data for each element of its 14 calculation of the costs estimated to be incurred in 1997 through 1999 that it used 15 in developing the Expense/Salary & Wage Development Factors. First, as I 16 explained in response to an earlier question, BST supplied no data justifying its 17 extrapolation of the full-year 1996 costs from the ten months of data. Second, it 18 failed to support the "normalizing" adjustments that it made to the annualized 19 1996 data and made, to a limited extent, to the estimated 1997-99 costs. Finally, 20 it failed to provide adequate support for the inflation factors/growth rates that it 21 utilized in estimating the costs to be incurred from 1997-99. 22

- 23
- 24
- 25

## Q. PLEASE EXPLAIN HOW THE INFLATION RATES AND GROWTH FACTORS THAT ARE PART OF THE EXPENSE/SALARY AND WAGE DEVELOALENT FACTORS ARE UNSUPPORTED.

1547

Α. 4 The inflation rates and growth factors that are part of the expense/salary and wage development factors are the most significant examples of unsupported data inputs 5 in BST's development of costs. For Account Nos. 6110, 6120, 6510, 6540, 6560, 6 6610, 6620, and 67xx (excluding 6727), the inflation rates/growth factors used 7 were 3.4% in 1997, 3.5% in 1998, and 3.5% in 1999. BST's response to AT&T's 8 9 First Set of Data Requests, SCPSC Docket No. 97-374-C, Item No. 281, page 8 of Rebuttal Exhibit ALR-11 identifies the source of these rates/factors as the 10 11 "BellSouth Regional Telephone Plant Index, RL95-10-015BT, attachment C, 12 Union Wages." This reference raises several concerns. First, the referenced 13 document does not appear in the Florida BST cost study. Indeed, there appears to be no support for the 3.4%, 3.5%, and 3.5% rates in that section even though 14 various inflation forecasts for labor costs appear there. Second, BST's cost study 15 never explains the manner in which the inflation factors/growth rates were 16 derived, and fails to provide or identify the source of the data inputs or 17 assumptions (if any) that underlie the forecasts. Third, BST never explains, and it 18 is not immediately apparent, why an inflation forecast relating to "Union Wages" 19 is appropriate for use with the expenses in Account Nos. 6110, 6120, 6510, 6540, 20 6560, 6610, 6620, and 67xx (excluding 6727). Fourth, as noted earlier in my 21 testimony, the inflation rates/growth factors utilized by BST for these accounts do 22 not reflect the cost reductions that should be expected from the onset of 23 competition. 24

25

Similarly, BST failed to supply adequate supporting documentation for the 1 2 inflation rates/growth factors used to determine estimates of 1997-99 expenses for 3 Account Nos. 62xx, 6310, 6410, 6530, and 6727. For these accounts, BST used inflation rates/growth factors of 5.1% in 1997, 4.5% in 1998, and 4.2% in 1999. 4 BST's response to AT&T's First Set of Data Requests, SCPSC Docket No. 97-5 6 374-C, Item No. 281, page 8 of Rebuttal Exhibit ALR-11 is the sole supporting documentation for those rates/factors, which were calculated by summing the 7 estimated percentage impact on costs in each year of: (a) load changes (primarily 8 9 increases in average access lines in service ("AALIS")); (b) the cost of a service-10 improvement initiative; (c) the impact of salary and wage increases for nonmanagement employees; and (d) the impact of productivity changes related to 11 "network operations." 12

13

The use of the rates/factors to inflate the expenses in Account Nos. 62xx, 6310, 14 6410, 6530, and 6727 is unacceptable for several reasons. First, BST supplied no 15 supporting data whatsoever for any of the subfactors identified in the previous 16 paragraph, that were used to derive the inflation rates/growth factors for 1996 17 through 1997 for those accounts. Second, there is no support in the section of the 18 Florida BST cost study (CD-ROM version 1.2, blstric.fl\ Appendix E\ 19 flfactors.xls, TPI-A, TPI-B, TPI-C) for the non-management salary and wage 20 BST has simply failed to demonstrate the reasonableness or 21 subfactor. appropriateness of the inflation rates/growth factors used for Account Nos. 62xx, 22 23 6310, 6410, 6530, and 6727.

24

# Q. DOES BST'S SHARED AND COMMON COST MODEL RELY ON UNSUPPORTED DATA INPUTS FOR OTHER ELEMENTS OF ITS CALCULATION OF THE COSTS EXPECTED TO BE INCURRED FROM 1997-99? IF SO, PLEASE PROVIDE EXAMPLES.

Α. Yes. BST also failed to provide adequate supporting data for the adjustments that 5 were used to "normalize" the annualized 1996 costs prior to their being inflated to 6 1997, 1998, and 1999 costs. For example, BST provided the FPSC with no data 7 supporting its estimates of the impact of the Olympics and Hurricane Fran on the 8 amount of costs incurred in 1996 in various accounts, and provided no 9 explanation of the methodology or assumptions (if any) used in deriving those 10 estimates. Similarly, BST has neither provided nor explained the basis for its 11 estimates of the impact of a 11,300-employee workforce reduction on costs 12 incurred in 1996, and to be incurred in 1997 through 1998. Moreover, BST failed 13 to explain the basis on which it selected these "normalizing" adjustments, and 14 offered no justification for its failure to make other adjustments. I find it 15 particularly likely, for example, that BST will be engaging in additional 16 workforce reductions prior to the year 2000, which will result in additional cost 17 reductions not considered by BST in the shared and common cost model. I 18 understand from an article in the August 7, 1997, edition of the Atlanta Journal-19 Constitution, that BST is in the process of finalizing an outsourcing arrangement 20 with EDS and Andersen Consulting. ("BellSouth Job Shift Riles Union, 21 Multibillion-Dollar Outsourcing Deal Will Touch 2,000 workers," Atlanta 22 Journal-Constitution, August 7,1997, p. E1). Although a BST spokesman claims 23 that this action will not result in job cuts, it is evident that some of BST's workers 24 may be hired by the consultants, while others may not. Consequently, the charges 25

from EDS and Andersen Consulting will be contract expenses instead of payroll expenses. So, in addition to the fact that the contract expenses could result in cost savings to BST, contract expenses could be booked in different account categories from the accounts in which the current payroll expenses are reflected in BST's embedded costs.

6

Similarly, BST has failed to provide any auditable data supporting the \$15 million
in costs that BST expects to incur for the operation of a Local Carrier Service
Center ("LCSC"). Putting aside the question of whether such costs should be
included in the shared and common cost study, BST has provided the FPSC with
no data with which to support its estimate of the amount of LCSC expenses that
may be incurred in the future.

13

## Q. ARE OTHER ELEMENTS OF BST'S SHARED AND COMMON COST MODEL ALSO UNDERMINED BY THE LACK OF SUPPORTING DATA?

This same lack of adequate support pervades BST's calculation of the 17 Α. Yes. Investment Development Factors which are used to adjust booked investment to a 18 projected level of investment based on current cost. In the shared and common 19 cost model, the wholesale portion of this projected investment is reflected in the 20 denominator of the common cost and shared cost factors. It is also the same 21 projected investment that is used to calculate the carrying charges (cost of money, 22 depreciation, income taxes and ad valorem taxes) that are reflected in the model. 23 These factors are determined in part using projections of the net additions to 24 investment that will be made in various BST accounts from 1997 through 1999 25

(BST's Florida Cost Study, Appendix E, pp. 1430-1432). However, the 1 methodology utilized to derive the projections used in calculating investment 2 development factors is inadequately explained in BST's cost study. BST relied 3 upon "out-years" budgets for these projections. Again, however, BST's own cost 4 study provides a basis for being skeptical about BST's budget projections. For 5 6 example, in the memorandum that appears on page 5 of Rebuttal Exhibit ALR-11 to Item No. 281 of BST's response to AT&T's First Set of Data Requests, SCPSC 7 Docket No. 97-374-C, a BST official explains that BST did not use its 1997-99 8 budgets to derive the Expense/Salary & Wage Development Factors "due to the 9 ever-present problem of inadequate out-years' budgets." 10

11

12 Q. YOU TESTIFIED EARLIER THAT BST'S SHARED AND COMMON COST APPLICATION IS UNACCEPTABLE IN PART BECAUSE IT IS 13 SO UNDULY COMPLEX AND SO INSUFFICIENTLY INTEGRATED 14 THAT IT IS **NEITHER** AUDITABLE NOR READILY 15 UNDERSTANDABLE BY PERSONS FAMILIAR WITH THE INDUSTRY 16 AND ITS COSTS. PLEASE EXPLAIN THE BASIS FOR THIS 17 **TESTIMONY.** 18

In describing the standards that should be applied to a cost study, BST witness Mr. William P. Zarakas has testified that "development of economic costs are understandable and auditable." (Zarakas testimony, p. 12, line 5). BST's shared and common cost model, however, is so complex and poorly integrated that it cannot be independently tested. The simplest way to demonstrate the difficulty one would have in testing BST's model is by providing some concrete examples.

25

24

#### Q. PLEASE PROVIDE SOME CONCRETE EXAMPLES OF THE DIFFICULTIES OF TESTING BST'S SHARED AND COMMON COST MODEL.

Α. One very important example of the difficulty of testing BST's shared and 4 common cost model involves BST's decision to calculate non-recurring costs 5 disparately in different parts of their TELRIC cost model. On the shared and 6 7 common cost side of the model, BST has attempted to remove non-recurring 8 costs, based on embedded costs, for limited number of cost pools in a combination of ways including the application of service order factors and direct assignment. 9 BST attempted to remove non-recurring costs from the shared and common cost 10 11 model because it intends to recover them in proposed non-recurring prices derived from separate non-recurring cost studies also filed in this proceeding. However, 12 BST has not provided any data with which to compare and test the reasonableness 13 14 of the non-recurring costs removed from the shared and common cost model versus the projected non-recurring costs resulting from BST's separate non-15 recurring cost studies. BST did not use the non-recurring costs identified in the 16 shared and common cost side to calculate its proposed non-recurring prices. 17 Instead, BST calculated the non-recurring costs anew by taking actual data and 18 multiplying those numbers by a labor rate to calculate the projected non-recurring 19 20 costs.

21

1

2

3

This decision causes two serious problems. First, due to BST's inconsistent methodologies for calculating the non-recurring costs, there exists the danger that BST could be removing a lesser number on the shared and common side than the numbers that it calculates in its non-recurring cost calculation. Simply put, this

25

raises the specter of double recovery of non-recurring costs. The second problem is that there is no way to determine whether the first problem occurred. BST's choice to use two different methodologies makes the model unusable for the purpose of verifying BST's non-recurring cost calculations. BST's model may double count some of the non-recurring costs. Furthermore, any adjustments made to one set of the calculations would not translate to the other set, creating another hurdle to a thorough testing of the data.

8

9 The next example of the difficulty of testing BST's shared and common cost model concerns the process of attributing shared costs to various investment 10 accounts, which is at the heart of the model. An appropriate way to test BST's 11 attributions is to track the amounts from each shared cost account all the way 12 through BST's reclassification and attribution process to ensure that each dollar of 13 shared cost is attributed only once and consistent with the attribution basis chosen 14 by BST. Complicating this desired test is the fact that it needs to be performed at 15 the individual cost pool or sub-pool basis. Unfortunately, BST has structured its 16 shared and common cost application in a way that makes this verification 17 extremely difficult. During his deposition, BST expert Charles B. Lee even 18 19 admitted, "I don't know that I could do it sitting here with you." (Reid and Lee Deposition Transcript, Georgia Docket No. 7061-U, p. 112, see Rebuttal Exhibit 20 ALR-10). 21

22

Much of the problem with the BST model is that many cells are populated without formulas, and instead are simply numbers calculated off-line and then hard input into the model. During their panel deposition in the Georgia Cost Docket, BST

employees Walter S. Reid and Charles B. Lee, Jr., unwittingly demonstrated the 1 2 complexity of testing the shared and common cost model. Despite the fact that 3 both men described their knowledge of the study as comprehensive, neither could initially explain the source of the calculation of certain cells; rather, they blamed 4 the errors in their calculations as mathematical "rounding errors." (It took until the 5 second day of the deposition for BST's experts, Messrs. Reid and Lee, to 6 understand the source of the BST's own calculations in their own model.) When 7 Messrs. Reid and Lee attempted to demonstrate how to track one of the cost pools 8 through the shared and common cost study, they arrived at a calculation that 9 would disaggregate the value of one of the account pools into three subpools. The 10 proportion of that pool that was disaggregated, however, to each subpool was not 11 12 apparent from simply looking at the model. In the cell of the computer model where there should have been a formula that would permit the Commission to 13 verify the attribution to the subpools, BST failed to provide a formula; rather, 14 BST inserted the result of a calculation performed outside the shared and common 15 cost model. The frequent use of hard inputs such as this makes it extremely 16 difficult to verify the results of BST's model. Lee admitted, "I'm just not sure we 17 have a mathematical representation of how we get from there to there." (Reid and 18 Lee Deposition Transcript, Georgia Docket No. 7061-U, p. 151, see Rebuttal 19 20 Exhibit ALR-10). Messrs. Reid's and Lee's failure occurred because the formulas that they needed to replicate the calculations in the model were inaccessible to 21 22 them, just as they are to the Commission. Only through a time intensive manual process by an individual very familiar with the model can the simple exercise of 23 tracking the initial dollar values of the accounts through the primary and 24 secondary attributions be achieved. Even then, BST admits the process is very 25

difficult and can only be done by backtracking the values from the attributed cost pools back through the front of the study where the dollars started in the accounts initially. BST expert Lee admitted that this process is "very tedious work." (Reid and Lee Deposition Transcript, Georgia Docket No. 7061-U, p. 113, see Rebuttal Exhibit ALR-10).

6

5

1

2

3

4

### 7 Q. YOU EARLIER TESTIFIED THAT BST's MODEL CONTAINS 8 NUMEROUS METHODOLOGICAL ERRORS. PLEASE PROVIDE AN 9 EXAMPLE OF A METHODOLOGICAL ERROR.

BST erred in the method it used to calculate its shared labor factors. BST's model Α. 10 included recovery of recurring costs. Therefore, the shared and common cost 11 model must be modified to produce shared labor factors that exclude recurring 12 costs. BST's shared labor factors are used to determine a portion of shared costs 13 that BST believes should be recovered via the TELRIC labor rates used to price 14 out non-recurring costs. However, costs generally are non-recurring if they are 15 transactional in nature, such as those resulting from transactions involving the 16 installation of a new customer line. BST improperly assumed that recurring 17 wholesale expenses in account/cost pools that are attributed based on salary and 18 wages should be recovered via the shared labor rate factors and subsequently, the 19 labor rates applied to calculate non-recurring prices. 20

21

Q. DOES BST'S COST ATTRIBUTION APPROACH RESULT IN
 RECURRING COSTS BEING IMPROPERLY TREATED AS NON RECURRING COSTS? PLEASE EXPLAIN.

25

1556

Yes. BST has relied on a cost attribution approach that results in wholesale **A**. 1 expenses for specified account/cost pools being recovered through shared labor 2 factors as non-recurring costs without any showing that recurring expenses have 3 4 been excluded. Although some of the costs in the specified cost pools may in fact include some increment of non-recurring costs, BST has provided no way to 5 determine that increment. As stated in Walter S. Reid's direct testimony, the 6 shared and common cost model relies primarily on the use of the cost attribution 7 principles as specified in the Cost Allocation Manual ("CAM") filed with the FCC 8 (Reid testimony, p.5, lines 8 - 11). Some accounts/cost pools in the CAM are 9 attributed to other expense or investment accounts based on salary and wages. 10 11 BST's assumption that costs attributed based on salary and wages should be recovered in labor rates used to calculate non-recurring costs is unwarranted and 12 unsupported. 13

14

### Q. PLEASE PROVIDE AN EXAMPLE OF AN ACCOUNT/COST POOL THAT INCLUDES RECURRING COSTS THAT ARE IMPROPERLY RECOVERED IN THE SHARED LABOR RATE FACTORS.

A. Account 2112 (Motor Vehicles) is a good example. Investment-related costs resulting from Account 2112 are recurring costs that should not be recovered in non-recurring rates. In the shared and common cost model, the wholesale expenses for all cost pools in Account 2112 are attributed based on salary and wages. In the shared and common cost model, as stated previously, attribution based on salary and wages signifies that the amounts in Account 2112 are to be recovered in the shared labor rate factors that produce the shared cost labor

portion of BST's TELRIC labor rates. These labor rates are subsequently used to
 calculate non-recurring costs.

3

### 4 Q. HOW SHOULD SHARED COSTS IN ACCOUNT 2112 (MOTOR 5 VEHICLES) BE RECOVERD?

A. Due to the fact that the amounts in Account 2112 are recurring costs, they should
be recovered in recurring rates. In BST's shared and common cost model, each of
the cost pools in Account 2112 should be attributed on some cost causative basis
other than salary and wages. This results in recovery of the costs in Account 2112
via the shared cost factor, which in BST's model, recovers recurring shared costs.

11

### Q. HAS BST TREATED OTHER ACCOUNTS/COST POOLS THAT INCLUDE RECURRING COSTS IN A FASHION SIMILAR TO THE MOTOR VEHICLES EXAMPLE?

Yes. In fact, the amounts in numerous cost pools for various accounts are Α. 15 attributed based on salaries and wages without any showing that the costs in these 16 accounts are non-recurring in nature. Those accounts include 6121 (land and 17 buildings), 6124 (general purpose computers), 6512 (provisioning), 6534 (plant 18 administration), 6535 (engineering), 6711 (executive), 6723 (Human Resources), 19 6724 (information management), 6726 (procurement), 1120 (materials and 20 supplies), 2116 (other work equipment), 2121 (Buildings), 2122 (furniture), 2123 21 (office equipment), 2681 (Capital leases), and 2682 (leasehold improvements). 22 Nowhere in the shared and common cost model or in supporting documentation is 23 24 a determination made that some of the amounts in these cost pools are recurring

1

2

3

## 4 Q. HAVE YOU CALCULATED AN ADJUSTMENT TO THE SHARED 5 LABOR RATE FACTORS IN THE BST MODEL THAT CORRECTS THE 6 PROBLEM THAT YOU HAVE NOTED?

calculate non-recurring costs.

and should be excluded from the calculation of shared labor factors used to

- 7 A. Yes. That information is provided on Rebuttal Exhibit ALR-2. This adjustment
   8 reflects alternative attribution bases for those cost pools attributed using salary
   9 and wages. This adjustment has the effect of reducing the shared labor factors to
   10 zero.
- 11

### Q. IS BST PREVENTED FROM RECOVERING ANY OF THE COSTS FOR THOSE ACCOUNTS/COST POOLS APPEARING ON REBUTTAL EXHIBIT ALR-2?

15 Α. No. The changed attribution basis shifts recovery from the shared labor rate factors to the shared cost factors used to calculate recurring TELRIC rates. Should 16 BST be able to provide the FPSC with a reliable and auditable method with which 17 18 to identify those non-recurring costs that are legitimate for recovery through the shared labor rate factors, then the shared labor factors could be adjusted 19 accordingly. The data supplied to date by BST to the FPSC is insufficient to 20 21 permit a determination of the amount, if any, of non-recurring costs in those 22 accounts.

- 23
- 24
- 25

Q. IN ADDITION TO THE EMBEDDED COSTS REFLECTED IN THE BST
 SHARED AND COMMON COST MODEL, ARE THERE OTHER COSTS
 THAT ARE INAPPROPRIATE FOR RECOVERY IN THE COMMON
 COST, SHARED COST, AND SHARED LABOR FACTORS? PLEASE
 EXPLAIN.

Α. Yes. BST has included recovery of new forecasted costs for what it calls the 6 Local Carrier Service Center ("LCSC") costs that should not be recovered in the 7 shared cost or common cost factor. BST has included \$15,536,528 in new 8 expenses for which it has arbitrarily assumed that 25% are recurring in nature and 9 10 75% are non-recurring in nature. Based on the testimony of Mr. Thomas Hyde, none of the expenses of this new center should be reflected in the UNE prices that 11 are being established in this proceeding. In addition, BST has not provided 12 sufficient information to allow for validation of any of these costs. For these 13 reasons, I recommend that the costs be removed from consideration in the shared 14 and common cost model. 15

16

### Q. DOES THE METHOD BY WHICH DEREGULATED PUBLIC COIN COSTS ARE REMOVED ALSO UNDERMINE BST'S SHARED AND COMMON COST MODEL?

A. Yes. BST's adjustment to remove deregulated public coin costs is another
example of a methodological error. A review of this adjustment indicates that
BST failed to remove any increment of G&A expenses in account series 67xx
(BST's Florida Cost Study, Appendix E, pp. 1427-1428). The public coin data
inputs filed in this proceeding differ from the inputs included in the Florida
Payphone Subsidy Study dated February 20, 1997. Florida Payphone Subsidy

Study identified a portion of corporate operations expense in Account 67xx that l represented a burden on BST's payphone business and then removed it from the 2 regulated costs. The requirements of Section 276 of the Telecommunications Act 3 of 1996 made it necessary for BST to complete these payphone subsidy studies 4 for multiple jurisdictions. Because of Section 276, BST had already developed 5 the methodology and the ability to determine these costs on a regional basis. 6 Therefore, BST has no excuse for its failure to remove from the shared and 7 common cost model the same level of corporate expenses in accounts 67xx as 8 were identified in the payphone subsidy study. The development of a new 9 methodology for the payphone adjustment in this proceeding is obviously self-10 11 serving. Further, not only is it different from the previous payphone subsidy 12 study provided to the FPSC, but it is also not supported by that study.

13

### 14 Q. PLEASE DESCRIBE THE ADJUSTMENTS THAT YOU HAVE MADE 15 TO THE BST SHARED AND COMMON COST MODEL.

A. The adjustments that I have made do not address all of the deficiencies in BST's shared and common cost model which are explained in my testimony. I was able
to propose adjustments only in those instances where BST provided the FPSC with sufficient data. The adjustments and supporting documentation for those issues that could be quantified are as follows:

21

22 Rebuttal Exhibit ALR-1 provides revised expense development factors and 23 supporting calculations that remove growth from inflation, reduce G&A expenses 24 by 27%, and reduce network operating expenses by 50% (Rebuttal Exhibit ALR-8

2		9 provides supporting documentation for the 27% reduction);
3		
4		Rebuttal Exhibit ALR-2 describes the alternative attribution bases used to shift
5		recovery of costs from the shared labor cost factors which recover non-recurring
6		costs, to the shared cost factors that recover recurring costs;
7		
8		Rebuttal Exhibit ALR-3 describes the removal of the LCSC costs; and
9		
10		Rebuttal Exhibit ALR-4 provides a comparison of the original and revised shared
11		cost, common cost and shared labor rate factors. The revised factors also reflect
12		AT&T's recommended change in carrying costs that results when the cost of
13		money and depreciation rates are adjusted.
14		
15	V.	ANALYSIS OF LABOR RATES:
16		
17	Q.	HAS BST DEVELOPED LABOR RATES REFLECTIVE OF A
18		FORWARD-LOOKING COMPETITIVE ENVIRONMENT?
19	<b>A.</b>	No. As with the rest of the shared and common cost model, BST once again
20		assumes that embedded wage and salary expense is the appropriate starting point
21		for determining labor rates that will be applicable in a forward looking
22		environment. In this case, BST's labor rates are calculated from 1995 salaries and
23		wages and the actual hours worked.
24		

#### 156?

## Q. WHY IS IT IMPROPER TO USE 1995 EMBEDDED SALARIES, WAGES, AND HOURS TO CALCULATE THE LABOR RATES TO BE USED IN CALCULATING TELRIC RATES?

A couple of examples will help illustrate why the use of 1995 salary and wage Α. 4 information is improper for setting TELRIC labor rates. First, BST is currently 5 involved in implementing an announced downsizing initiative whereby 11,300 6 employees will be off the payroll by the end of 1997. Some of the downsizing is 7 made possible because of a trend in the outsourcing of work exemplified by 8 9 BST's negotiations regarding an outsourcing agreement with EDS and Andersen Consulting involving 2000 employees. Further, outsourcing can be expected in an 10 environment in which BST will be needing to trim costs to allow it to compete 11 more aggressively with new competitors. To the extent that employees who are 12 downsized have been replaced by outsourcing expenses in 1996 or later, the 1995 13 salary and wage expense is no longer representative of forward-looking salary and 14 wage expenses in a competitive environment. 15

16

Second, reengineering initiatives that have occurred in 1995 and 1996, or later, 17 have resulted in productivity improvements that can result in both changes to the 18 number of people required to do a job, the salary grade of the individual 19 performing the job in cases where skillset requirements have been reduced, and 20 the amount of time that it takes to complete the job. It is evident from this 21 example that use of 1995 salaries and wages and the corresponding hours are not 22 representative of forward-looking environment and should not be the basis for 23 determining forward-looking labor rates. 24

25

1Q.IS IT IMPROPER FOR BST TO APPLY INFLATION FACTORS TO ITS2CALCULATION OF LABOR RATES?

A. Yes. The application of inflation factors to booked salary and wages for 1995
assumes business as usual in a monopoly environment instead of the competitive
environment in which BST will be operating. In a competitive environment, BST
will have continued pressure to hold payroll costs down. The application of
inflation factors to historical salaries is not representative of the forward-looking
labor rates that should be calculated for use in developing TELRIC rates.

9

Q. ARE THERE ANY CATEGORIES OF COSTS THAT BST HAS
 INCLUDED IN ITS DIRECTLY ASSIGNED LABOR RATES THAT ARE
 INAPPROPRIATE? PLEASE EXPLAIN.

- A. Yes. BST's calculation of directly assigned labor rates includes commissions and
   incentive awards paid to employees for the sale of retail services. These
   Commissions are not a wholesale cost that should be reflected in labor rates.
   Unfortunately, BST has not included supporting documentation that allows for a
   removal of these payments.
- 18

19 20

#### Q. WHAT ADJUSTMENTS HAVE YOU MADE TO THE CALCULATION OF THE TELRIC LABOR RATES?

A. For the reasons previously stated, I have eliminated the inflation factors from the calculation of directly assigned labor rates. In addition, as explained earlier in my testimony, adjustments that I calculated for the shared and common cost model produced revised shared labor rate factors. Due to the lack of available data, I have not been able to calculate and propose adjustments to address all the

deficiencies in the BST calculation of labor rates. Rebuttal Exhibit ALR-5
 reflects calculations that I have been able to quantify.

3

### 4 Q. ARE THESE THE TELRIC LABOR RATES RECOMMENDED BY AT&T 5 IN THIS PROCEEDING?

A. No. Due to the lack of available data, I have not been able to calculate and
propose adjustments to address all the deficiencies in the BST calculation of labor
rates. There are issues that could not be quantified or adequately addressed.
While the resulting labor rates are an improvement over the TELRIC labor rates
proposed by BST, the labor rates reflected in the AT&T NonRecurring Cost
("NRC") model, as presented by AT&T witness John P. Lynott, are the labor rates
that should be approved by the Commission.

13

#### VI. ANALYSIS OF PLANT SPECIFIC EXPENSE FACTORS:

15

14

### Q. DID BST BASE THE CALCULATION OF THE PLANT SPECIFIC EXPENSE FACTORS ON EMBEDDED COSTS? PLEASE EXPLAIN.

Yes. In a fashion similar to the development of the shared and common cost 18 Α. factors, the inputs are based on partial year 1996 data which purportedly is 19 normalized for the same events as the shared and common cost factors, including 20 21 the effects of Hurricane Fran, the Olympics, and a compensated absence issue. 22 As in the case of the shared and common cost model, growth factors are also 23 applied. Here too, data extrapolations are utilized which are untested. For example, the factors are calculated at the field reporting code ("FRC") or 24 25 subaccount level based on a 1995 study. Data from that study is used to

1

2 3 determine what percentage each FRC is of the total account, but does not show that these relationships can be expected to be unchanged in 1996 or the future.

# 4 Q. DO YOU AGREE WITH THE METHOD BY WHICH BST HAS 5 CALCULATED ITS PLANT SPECIFIC EXPENSE FACTOR THAT 6 INCLUDES THE COST OF MATERIAL USED AND DIRECT LABOR 7 FOR MAINTENANCE AND REARRANGEMENT EXPENSE?

8 A. No. As in the case of the inputs to the shared and common cost model, the inputs
9 should be based on forward-looking expenses based on least cost technology.
10 Instead, BST has once again assumed a business-as-usual environment and
11 applied growth factors to the embedded cost data to calculate what it considers to
12 be forward-looking factors.

13

### Q. IS IT APPROPRIATE FOR BST TO FURTHER APPLY INFLATION GROWTH FACTORS TO THE EMBEDDED EXPENSES FROM WHICH THE PLANT SPECIFIC FACTORS ARE CALCULATED?

Α. No. Similar to the rationale previously explained in my testimony regarding 17 18 network operating expenses in the shared and common cost model, network 19 operating expenses will be reduced in a competitive forward-looking environment. The series of accounts that is included in the calculation of the plant 20 21 specific factor (Account Nos. 6121-6441 and 6531) should experience negative 22 growth instead of inflation because expense levels are tied to older plant 23 equipment included in embedded costs. Competition should drive these expenses downward as new technology is deployed. 24

1	Q.	HAVE YOU ADJUSTED THE CALCULATION OF THE PLANT
2		SPECIFIC FACTOR?
3	А.	Yes. I adjusted the BST calculation of the 1997-99 amounts to remove the
4		inflation/growth factors, shown on Rebuttal Exhibit ALR-6. Although these
5		accounts will experience negative growth, I did not have sufficient data to
6		estimate the amount of that negative growth. Therefore, to be conservative, the
7		adjustments that I propose merely remove BST's inflation factors.
8		
9	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
10	А.	Yes it does.
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

MR. HATCH: I would also request that Mr. Lerma's 1 2 exhibits to his rebuttal testimony be marked for identification. 3 COMMISSIONER DEASON: It will be identified as 4 composite exhibit 55. 5 BY MR. HATCH: 6 7 0 Mr. Lerma, if I asked you the same questions today, would your answers be the same? 8 9 А Yes, they would. Do you have a summary of your testimony, 10 0 Mr. Lerma? 11 12 Α Yes, I do. Would you please give that? 13 Q Yes. Good morning, Commissioners. My name is 14 А Art Lerma. And my duties the last 13 years have included 15 the review of local exchange company cost studies. In this 16 proceeding, I have evaluated the development of BellSouth's 17 shared factors, common cost factors and plant specific 18 factors that are used to determine expenses applicable to 19 each unbundled network element. I've also evaluated the 20 calculation of BellSouth's labor rates. These labor rates 21 are the basis for the development of nonrecurring costs and 22 prices in BellSouth's UNE cost studies. 23 24 Now as a result of my review, I've concluded that these BellSouth factors and labor rates aren't acceptable 25

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1 for several reasons. First, they are not based on 2 competitive costs. Second, the accuracy of the shared and common cost model inputs cannot be confirmed. And third, 3 4 the shared and common cost model treats some recurring costs as nonrecurring costs. For these reasons, acceptance 5 of these BellSouth factors and labor rates will be 6 7 detrimental to consumers because UNE recurring and nonrecurring rates will be set too high and result in 8 barriers to entry for competing local exchange companies. 9

First, before I go on, some explanations about 10 the BellSouth factors and labor rates are in order. 11 12 Recurring costs related to the UNE investments are calculated by applying factors. The common cost factor 13 assigns wholesale overhead costs like executive salaries or 14 15 accounting and finance costs to each of the unbundled network elements. Shared cost factors recover recurring 16 wholesale costs that apply to two or more elements. 17 BellSouth's engineering expenses, for example, are examples 18 of costs shared by multiple unbundled network elements. 19

Shared labor factors are a third set of factors, and these identify shared costs that BellSouth seeks to recover in labor rates that are used to price out nonrecurring cost. Now this is important because TELRIC labor rates include two different components. One of those are the direct labor rates that reflect your actual

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314
salaries and wages and benefit loadings, and then they also
 include a shared cost component, and this is the shared
 labor factor that I refer to that in some cases amounts to
 about 50% of the direct labor rate.

5 Should BellSouth's factors and labor rates be 6 accepted? No, they should not. And why not? The factors and labor rates do not reflect competitive costs. 7 Why? First, because they don't reflect long-run productivity 8 9 improvements. In a competitive environment, there will be more pressure to reduce costs than in a monopoly 10 environment. They are also not reflective of a least cost 11 environment in which new technology is being used. 12 Instead, the factors and labor rates are based largely on 13 historical or embedded costs. For example, overhead 14 expenses, like executive planning and finance costs, are 15 costs that are reduced in a competitive environment. 16 BellSouth has overstated the forward-looking level of these 17 overhead expenses. In a competitive environment, 18 BellSouth's overhead expenses are likely to be considerably 19 lower than they are in a monopoly environment. 20 Another reason that BellSouth's factors and labor 21 rates should not be accepted is that the accuracy of the 22 shared and common cost model inputs cannot be confirmed and 23

25 inputs were calculated off line, and there was significant

it's difficult to test the model. Many of the model's

24

1 reliance on data extrapolations. And when I say data 2 extrapolations, what I'm referring to there is using data 3 that was based on short periods of time, a month, two 4 months, and using it to project costs for a longer period 5 of time, in this case, for three years or forward.

Wherever BellSouth has used these data 6 extrapolations, it provides no evidence that these 7 8 extrapolations produce reasonable results and have been 9 tested. Another reason that this Commission should reject the BellSouth shared and common cost factors and labor 10 rates is that the shared and common cost model treats 11 12 recurring costs as nonrecurring costs. How does this occur? As I stated earlier, TELRIC labor rates are key in 13 14 the development of these nonrecurring rates, and a significant portion of these BellSouth TELRIC labor rates 15 16 is the shared cost component, which I stated earlier that 17 in some cases increases the labor rate by almost 50 This component is generated by shared labor 18 percent. 19 factors that are calculated in the shared and common cost 20 model.

The shared labor factors as calculated by BellSouth should be rejected. Why? Well, using motor vehicle costs as an example, BellSouth's cost attribution process causes recurring expenses to be recovered in nonrecurring rates. Motor vehicle costs are recovered in

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

recurring rates through recovery of recurring costs like 1 2 depreciation and ad valorem taxes. Recovery of recurring 3 costs in nonrecurring rates creates barriers to entry for 4 the competing local exchange companies. In attachment ALR-4, page 3 of my testimony, reflects my recommended 5 6 adjustment in which I zeroed out the shared labor factors 7 and instead shifted recovery of those costs to the shared cost factors. 8

Aside from this adjustment, the attachments to my 9 10 testimony reflect only those adjustments that I could quantify. For the shared and common cost model they 11 include removal of projected inflation for expenses because 12 13 they trend downward in the competitive environment. My adjustments also recognize reduced network operating 14 expenses and overhead. I have also adjusted labor rates 15 16 and plant specific factors to remove inflation.

17 There are other problems with the BellSouth factors and labor rates that can't be fixed with the data 18 that BellSouth has made available to this Commission, and 19 20 consequently, this Commission should not accept them. Τf the Commission adopts these factors and labor rates without 21 considering these adjustments, it will hurt consumers 22 because they will pay higher rates and recover higher 23 24 costs. This concludes my summary.

25

MR. HATCH: We tender the witness for cross.

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

MS. KEATING: Commissioner Deason. 1 2 COMMISSIONER DEASON: Yes. 3 MS. KEATING: Staff would ask that its exhibit 4 for this witness be marked at this time. Staff has one 5 exhibit, it's ALR-12, and it contains the deposition 6 transcript and the deposition exhibits and late-filed 7 deposition exhibits from Mr. Lerma's deposition. 8 COMMISSIONER DEASON: It will be identified as exhibit 56. 9 MS. KEATING: Thank you. 10 11 MR. TWOMEY: What was that number, Commissioner 12 Deason? COMMISSIONER DEASON: 56. 13 MR. TWOMEY: At this time, BellSouth -- and I 14 have already talked to Mr. Hatch about this. One of the 15 16 deposition late-filed exhibits was the testimony of 17 Kimberly Dismukes that was filed in Louisiana. The copy of that testimony that was submitted by Mr. Lerma did not 18 include the exhibits to that testimony because the exhibits 19 20 were proprietary. I'd just like to make the exhibits to that testimony part of the exhibit 56 as well, and I have 21 copies here, but we would propose submitting them with a 22 notice of intent no later than Friday, if that's acceptable 23 to everybody. 24 25 COMMISSIONER DEASON: Any objection?

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1 That's fine with us, Commissioner MR. HATCH: 2 Deason. 3 MR. MELSON: Commissioner Deason, if we could just have that marked as a separate exhibit to aid in 4 5 keeping track of it. MR. TWOMEY: We have no objection to that. 6 That's fine. 7 8 COMMISSIONER DEASON: Very well, That will be 9 exhibit 57, and it will be the confidential exhibits 10 attached to the testimony of Witness Dismukes which 11 testimony is part of exhibit 56; is that correct? MR. TWOMEY: Just for the record to be perfectly 12 13 clear, there are exhibits that are not confidential, but there are some that are, and we are going to submit them 14 altogether as a package; and there were also certain 15 16 revisions made by Ms. Dismukes two days after she submitted 17 her testimony. We've included those as well because those are revised exhibits. 18 19 COMMISSIONER DEASON: Very well. MR. TWOMEY: Thank you, Commissioner Deason. 20 21 MR. TWOMEY: Good morning, Mr. Lerma. 22 WITNESS LERMA: Good morning. 23 COMMISSIONER DEASON: Mr. Melson, did you have 24 any questions? MR. MELSON: No. 25

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1574 1 MR. TWOMEY: Thank you. 2 CROSS EXAMINATION 3 BY MR. TWOMEY: Mr. Lerma, this is not the first cost proceeding 4 Q 5 that you have testified in, is it? 6 А No, that's correct. 7 0 You've testified on behalf of AT&T in a number of the cost dockets, around the BellSouth region at least, 8 since mid 1997, correct? 9 А Yes. 10 In the states other than Florida, AT&T has 0 11 advocated the use of a 10.4% common cost factor derived 12 from 1994 AT&T data, correct? 13 If you are referring to the Hatfield model and Α 14 the common cost factor that is included in that, that's the 15 factor, and that is part of the testimony of Mr. Don Wood. 16 And just so the record is clear, is the answer to 0 17 my question yes? 18 Yes. Α 19 Thank you. 20 0 Now you describe that as a common cost factor, 21 correct? 22 Yes. А 23 Would you please define common cost for me? 0 24 Generally speaking, common costs are costs that 25 А C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

apply to all facets of the business. In this case it would 1 be those costs that apply to all of the unbundled network 2 3 elements and not just to a smaller group. 4 0 Is common cost the same thing as shared cost? Shared costs normally apply to two or more 5 А elements, and if the shared costs applied to all the 6 7 elements, then they would be the same. But in most cases, shared costs would apply to a smaller group of unbundled 8 network elements. 9 COMMISSIONER CLARK: The answer is no? 10 WITNESS LERMA: NO. 11 Is common cost the same thing as overhead cost? 12 0 Yes, generally speaking. 13 А So if I were to use the term common cost or 0 14 overhead cost, as far as you're concerned, those two things 15 mean the same thing? 16 As far as I'm concerned, but with respect to how, 17 Δ say, BellSouth calculated its common cost factor within its 18 own model, it went through an extensive attribution process 19 where it attempted to attribute costs -- shared costs to 20 individual investment categories; and to the extent that 21 they weren't able to do that, there were sometimes some 22 costs that they included in the common cost factor that 23 aren't traditionally considered as general and 24 administrative costs, like executive and planning. So in 25

the case of BellSouth, there may be some costs in there
 that aren't normally considered as common costs.

Q All right. Well, let's just talk about the AT&T Common cost factor that we have previously identified. You would use the phrase common cost factor and overhead cost factor synonymously with respect to the AT&T number, correct?

А Not necessarily. Your question earlier was what 8 I considered common costs to be, and I said that they --9 10 you know, overheads are what comes to mind for me. I was not involved in the development of the Hatfield model. Τ 11 understand that there is a common cost factor that is 12 applied within the Hatfield model, but I can't tell you 13 specifically what it's intended to do. That would be 14 better left probably for Mr. Wood to answer. 15

Q Well, without regard to what it is intended to do, you have defined common cost for us as being synonymous with overhead cost, correct?

A Yes, generally speaking.

19

25

20 Q Now Mr. Lerma, in your testimony you have 21 criticized BellSouth's shared and common cost model for, 22 among other things, your opinion that BellSouth is not 23 using the least cost, most efficient technology, correct? 24 A Yes.

Q You have concluded that BellSouth is not using

1 the least cost, most efficient technology, correct? 2

Α Yes, it would appear so.

3 0 What technology is BellSouth currently using to provide services in Florida? 4

5 А I'm sorry, that's a fairly broad question. I'm not sure I understand what you're asking. 6

7 0 Well, you've concluded, I think you've just agreed with me, that BellSouth is not using the least cost. 8 most efficient technology. My question to you is what 9 10 technology is BellSouth using in Florida in your opinion?

A Let me explain when I answered that what exactly 11 I meant, and that's that when I reviewed the shared and 12 13 common cost model the numbers that are used specifically in the shared and common cost model to come up with the shared 14 and common cost factors are primarily the current costs of 15 the company with some adjustments for reengineering. So 16 with respect to that, that would reflect that it's based on 17 the current technology and that there hasn't been any 1.8 adjustments for any newer, modern technology that might be 19 expected in the future. 20

Now that's different from, say, how BellSouth 21 might have developed its investment in the TELRIC 22 calculator which those factors are applied to. Within that 23 building up of investment, they may have considered other 24 technology. I did not review that. What I reviewed is 25

1 that within the shared and common cost model they used 2 primarily historical costs that did not reflect any kind of 3 adjustments to suggest that there was newer, current 4 technology being considered.

Q Okay. So when you did your analysis of the
shared and common cost factor, you took into consideration
that BellSouth's technology -- you took into consideration
BellSouth's technology choices, correct?

9

25

A I'm sorry, ask the question again.

10 Q When you did your analysis of the shared and 11 common cost model, you took into consideration BellSouth's 12 technology choices, correct?

A Yes. As I explained, the fact that there had not been any factoring in of the types of expense reductions that we would see from newer, more modern technology being brought in, that was evidence to me that it had not been adjusted for newer, forward-looking technology.

18 Q Now what is the current technology that BellSouth 19 is using as reflected in the shared and common cost model?

20 A Generally speaking, it is the embedded historical
21 network that is in place at this time.

Q Okay. And what analysis did you do personally to conclude that that current technology is not the least cost, most efficient technology?

A I did no separate analysis of my own. The fact

that that cost is based on historical embedded costs is 1 enough for me to know that it's not based on any 2 3 forward-looking technology that would involve least-cost economic costs. 4 5 0 Mr. Lerma, do you have any expertise in outside plant engineering? 6 7 Α No, I do not. 0 Have you ever purchased technology for a 8 telecommunications company? 9 10 Α No. So you're not able to offer us any opinion on 0 11 whether BellSouth's existing technology can actually 12 provide the least cost, most efficient service, can you? 13 А No, I cannot. 14 MR. TWOMEY: I have no further questions. 15 COMMISSIONER DEASON: Staff. 16 MS. KEATING: Staff has no questions for this 17 witness. 18 COMMISSIONER DEASON: Commissioners. 19 COMMISSIONER CLARK: I do have a question for 20 you, Mr. Lerma, and I guess it may engender more, I guess, 21 redirect or maybe recross. 22 Could somebody give to Mr. Lerma Mr. Reid's 23 rebuttal testimony? 24 WITNESS LERMA: I should have a copy of that 25

1 here.

2 COMMISSIONER CLARK: Okay. And I gather from 3 what he says in his exhibit 6 -- well, and specifically his conclusion on page 8 that their analysis of the common cost 4 5 factor calculated using the Hatfield model and BellSouth's forward-looking projections of expense produces a factor of 6 7 6.4 which is better than the factor that you all have indicated is appropriate which is 10.4. What I gather from 8 9 Mr. Reid's rebuttal is sort of doing a sanity check of what they've proposed. Using your model, they come out pretty 10 good, and it gives credence to their model. Do you 11 12 disagree with that?

WITNESS LERMA: Yes, let me answer that in two 13 parts. First off, and that's that there is a difference 14 between -- and I think I mentioned earlier when we were 15 trying to discuss what a common cost factor includes, and I 16 said generally it includes overheads. As BellSouth 17 calculated its cost factor, it didn't necessarily include 18 just overheads. A lot of the costs that are traditionally 19 included as common costs they moved into shared cost 20 21 factors, so you would have to, you would -- Going through the model in the detailed cells of the model, you can find 22 accounts that were attributed to investments that 23 traditionally are included in the common cost factor. Had 24 they not done that attribution, the common cost factor 25

1 would have been higher.

2 The point is, that because of that different 3 approach, it's also an apples and oranges comparison to use one factor to apply to the other. To give you an example, 4 5 AT&T didn't calculate -- my understanding, and when Mr. Wood is up here, he'd be a better person to talk to 6 7 about the Hatfield model, but there are no comparable shared cost factors in the Hatfield model. So the common 8 cost factor is intended to recover, you know, all common 9 So there is not -- you can't compare the two, and I 10 costs. think when they say that if you replace their numbers with 11 -- if you replace the Hatfield calculation with their 12 numbers, it creates, based on Mr. Reid's information, it 13 creates a lower factor. Based on that information, I think 14 it shows the conservativeness of the Hatfield model with 15 I think that factor could be respect to that factor. 1.6 significantly lower if you were to calculate it based on 17 the way that BellSouth has calculated its cost factor. For 18 example, I wouldn't have -- Bell's cost factor is 5.30%, 19 the common cost factor. I wouldn't have any problems with 20 that being substituted in the Hatfield model if that's what 21 the Commission decided to do; however, Mr. Wood has 22 conducted analysis that suggests to him that for the 23 purposes of the Hatfield model the 10.4% was the best 24 available information he had concerning what a 25

1 forward-looking common cost factor ought to be.

2 COMMISSIONER CLARK: Well, let me ask maybe a 3 different question. In the rebuttal testimony it says the 4 comparison -- I'm on page 7 -- the comparison of 5 BellSouth's proposed shared and common cost factors to 6 historical based factors shows that the forward-looking 7 costs that they are advocating average 32% lower than the 8 historical levels. First of all, do you agree or disagree?

WITNESS LERMA: I disagree, and let me explain to 9 I'm glad you asked that guestion because one of the 10 you. things that has occurred in the analysis that BellSouth has 11 put forward is they are comparing these changes to 1995 12 costs as if 1995 is the starting point, and if you look at 13 how they built their cost study, they took '95 costs and 14 then they nomralized them or brought them to 1996 levels, 15 and so what you ought to be looking at is after you've made 16 all of your adjustments at the end of 1996, then you look 17 and say, what is happening going forward? Instead, because 18 they chose to initially populate the data with '95, they 19 have now gone back and said, look what's happened since 20 1995. And so some of the reductions that they are 21 reflecting there include costs all the way back to 1995. 22 And how far back would be appropriate? You know, if they 23 had populated them with 1994 costs and then normalized them 24 to '96, they would be comparing it to '94. So I think it 25

was inappropriate that they look at those cost reductions
 based on 1995 as the starting point.

COMMISSIONER CLARK: Well, let me relate back to you what I think you said and tell me if I'm correct. What you're saying is by using 1995 historical costs it's really too far back to conclude that a 32% decline in terms of what they've developed for a forward-looking cost is really not significant?

WITNESS LERMA: That's correct.

9

12

15

 10
 COMMISSIONER CLARK: Because it starts too far

 11
 back?

WITNESS LERMA: That's correct.

13 COMMISSIONER CLARK: It would be more appropriate 14 to use 1996 actual costs?

WITNESS LERMA: Yes, ma'am.

16 COMMISSIONER CLARK: Normalize them for '97 and 17 then look at what the lower level -- what results when 18 compared to what they estimate for the forward-looking 19 cost?

20 WITNESS LERMA: Absolutely. I would agree with 21 that.

COMMISSIONER CLARK: Okay. I just say though, I can't say that I followed your explanation of why you can't compare the six point -- their 6.4% using the Hatfield model. I gather that what you might be saying is it's

1584 1 because they've shifted some costs to shared or they've 2 shifted some costs to common is the reason why you get a different fatcor. 3 4 WITNESS LERMA: Yes. That's part of it, yes, 5 absolutely. COMMISSIONER CLARK: Okay. 6 COMMISSIONER DEASON: Redirect. 7 8 MR. HATCH: No redirect. MR. TWOMEY: Commissioner Clark, would it be 9 appropriate for me to ask a follow-up question on that 10 question you just asked Mr. Lerma? 11 COMMISSIONER DEASON: Are you asking for further 12 cross as a result of Commissioner Clark's questions? 13 MR. TWOMEY: Yes. 14 COMMISSIONER DEASON: You may be permitted. 15 MR. TWOMEY: Thank you 16 FURTHER CROSS EXAMINATION 17 BY MR. TWOMEY: 18 Mr. Lerma, did someone provide you with a copy of 19 0 Mr. Reid's rebuttal testimony? 20 I have a copy of his. 21Α Okay. Would you turn to rebuttal exhibit WSR-6, 22 0 page 4 of 4? 23 Yes. Α 24 And I believe this is the exhibit that contains 25 Q TALLAHASSEE, FLORIDA (850)697-8314 C & N REPORTERS

the numbers that Commissioner Clark was asking you about? 1 2 Yes, it does. Α 3 0 Okay. Now there are actually three columns here, or three entries, a Hatfield model, BST historical data and 4 5 then BST data, correct? Α Yes. 6 7 0 Now under the entry BS -- excuse me, Hatfield 8 model, AT&T 1994 gross revenues were used. AT&T 1994 corporate operation expenses and then revenue less 9 corporate oppration expenses we used to derive a common 10 cost factor of 10.4%, correct? 11 12 Α That's correct. 13 0 And that's the 10.4% number that we were talking about during my cross examination, correct? 14 Yes. 15 А Now the entry immediately below that contains BST 1.6 0 1994 gross revenue. Do you see that? 17 18 А Yes. And you would agree with me that corresponds 19 0 directly with the AT&T 1994 gross revenue, correct? 20 That's what it says there. I have not verified Α 21 those numbers, but it says it's 1994 gross revenues. 22 Assuming BST hasn't misrepresented the numbers, 0 23 the categories correspond, correct? 24 25 Α Yes.

1585

1586 Okay. And the entry below that is BST 1994 1 0 actual corporate operations expense; do you see that? 2 3 Α Yes. 4 0 Does that correspond directly with the AT&T 1994 5 corporate operations expense? It's the same description of expenses, yes. 6 Α 7 0 Okay. And the last column is the revenue less corporate operations expense. Does that correspond 8 directly with the revenue less coporate operation expenses? 9 10 Yes, that's the description. Α 11 And what's the percentage number that is derived 0 as a common cost factor when BST historical revenue and 12 expenses are used rather than AT&T operations expenses and 13 revenue are used? 14 15 Α It says 9.7%. Okay. Would you describe AT&T as being in a 16 0 17 competitive industry in 1994? Α Yes. 18 19 0 Okay. Now the entry below that is BST projected data, and do you understand how those numbers were put 20 21 together? Yes, I do. It appears here that the 22 Α 23 relationships are BellSouth's total cost of service as a 24 percentage of the projected expenses. 25 And you understand that BellSouth replaced the Q C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1587 1 historical cost -- instead of using historical cost, we 2 used what we projected would be our expenses, correct? 3 Α Yes. And that made the number drive down to 6.4%, 4 0 5 correct? Α That's correct. 6 7 MR. TWOMEY: Thank you, Commissioner Deason. Т 8 have no further questions. COMMISSIONER DEASON: Redirect. 9 MR. HATCH: No redirect. 10 COMMISSIONER DEASON: Exhibits. 11 MR. HATCH: Move 55. 12 COMMISSIONER DEASON: Without objection, exhibit 13 55 is admitted. 14 MS. KEATING: Staff moves 56. 15 COMMISSIONER DEASON: Without objection, exhibit 16 56 is admitted. 17 MS. WHITE: And I guess we would move exhibit 57 1.8 subject to the notice of intent that will be filed on 19 20 Friday. COMMISSIONER DEASON: Without objection, exhibit 21 57 is admitted. 22 Thank you, Mr. Lerma, you are excused. 23 WITNESS LERMA: Thank you. 24 MR. HATCH: AT&T would call Catherine Petzinger. 25 C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1588 1 2 3 4 Whereupon, CATHERINE E. PETZINGER 5 was called as a witness on behalf of AT&T and, after being 6 7 duly sworn, testified as follows: 8 DIRECT EXAMINATION BY MR HATCH: 9 Ms. Petzinger, could you please state your name 10 0 and address for the record? 11 Yeah, my name is Catherine Petzinger. I'm at 279 12 Α North Maple Avenue, Basking Ridge, New Jersey. 13 By who are you employed and in what capacity? 14 Q I'm a district manager at AT&T. 1.5 Α Did you prepare and cause to be filed in this 16 0 proceeding rebuttal testimony? 17 Yes, I did. Α 18 Do you have any changes or corrections to that 0 19 testimony? 20 Yes, I have a couple of minor corrections. 21 Α Could you give them, please? 22 Q Certainly. On page 9, line 12, in the title 1996 23 Α is inadvertently there. It should be deleted. 24 COMMISSIONER CLARK: Would you repeat that? 25

1 WITNESS PETZINGER: Certainly. On page --Well. 2 hopefully I've got the same pagination. It's the question that says, "Does Southwestern Bell's switched price per 3 4 line 1996 support BellSouth's pricing." COMMISSIONER CLARK: And what is the change? 5 WITNESS PETZINGER: 1996 should be removed 6 7 Α And on page 11, in the center of the table it says "Raley testimony, dash, BellSouth." BellSouth should 8 be replaced with Southwestern Bell. That's the only 9 10 changes. BY MR. HATCH: 11 0 There were no exhibits attached to your 12testimony; is that correct? 13 That's correct. 14 Α If I asked you the same questions as were in your 15 0 prefiled testimony today, would your answers be the same? 16 Yes, they would. А 17 COMMISSIONER DEASON: Let me confirm, has 18 Ms. Petzinger been sworn? 19 0 Have you been previously sworn? 20 No. Α 21 Okay. Let's go ahead and COMMISSIONER DEASON: 22 do that right now. If you'll please stand and raise your 23 right hand. 24 (Whereupon, Witness Petzinger was duly sworn by 25

1589

Commissioner Deason) MR. HATCH: AT&T would request that the prefiled rebuttal testimony of Ms. Petzinger be inserted in the record as though read. COMMISSIONER DEASON: Without objection it shall be so inserted. C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1		REBUTTAL TESTIMONY OF
2		CATHERINE E. PETZINGER
3		ON BEHALF OF
4		AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.
5		DOCKET NOs: 960833-TP/960846-TP/971140-TP/960757-TP/960916-TP
6		
7	1.0	INTRODUCTION
8	Q.	PLEASE STATE YOUR NAME, PRESENT POSITION AND BUSINESS
9		ADDRESS
10	А.	My name is Catherine E. Petzinger. I am a District Manager with AT&T Corp. in
11		Regulatory and Legislative Affairs, 295 North Maple Avenue, Basking Ridge,
12		New Jersey.
13		
14	Q.	PLEASE DESCRIBE YOUR WORK EXPERIENCE AND EDUCATIONAL
15		BACKGROUND
16	А.	I have an MBA from Rutgers University, New Jersey, and have thirteen years of
17		experience in the telecommunication industry building, and subsequently leading,
18		a group that developed switching cost models, including the Switching Costs
19		Information System ("SCIS"). My experience includes extensive consultation on
20		the use of cost models in various cost studies in the United States and abroad.
21		
22		At Bellcore for 13 years, I was one of three individuals who designed the
23		SCIS/IN <sup>1</sup> model and implemented new incremental costing methodology into the
24		program. I also was the lead subject matter expert on feature costing in general as
25		well as a subject matter expert on 1ESS, 1A ESS and 5ESS switches. When I was

promoted to lead the SCIS group of approximately 20 people, I had responsibility
 for the technical development, production, documentation, customer care and cost
 study consultation or the SCIS family of models. I also had responsibility for
 marketing the Bellcore cost models in Europe and Asia/Pacific.

5

# Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGARD TO LEC COST MODELS IN GENERAL, AND THE SWITCHING COST INFORMATION (SCIS) IN PARTICULAR?

9 A. Yes, I have presented expert testimony in numerous State proceedings dealing
10 with local switching unbundled element cost studies.

11

#### 12 2.0 PURPOSE AND SUMMARY OF TESTIMONY

#### 13 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

- A. The purpose of my testimony is to report my findings regarding BellSouth's switching investment studies<sup>2</sup> and recommend new switching investments that serve as the foundation for the 4-wire port switching unbundled element rate sponsored by Mr. Ellison.
- 18

#### 19 Q. PLEASE SUMMARIZE THE MAIN POINTS OF YOUR TESTIMONY

20 A. BellSouth's costs for a 4-wire port is flawed in the following major respects:

211.BellSouth began its entire switching cost process with incorrect switching22prices. BellSouth entered the wrong discount to customize the SCIS/MO323switching vendor list prices to reflect the "actual prices" paid by24BellSouth. This incorrect discount causes all of BellSouth's switching25elements to be significantly overstated. In addition to comparing

BellSouth/vendor contracts to the switch prices used by BellSouth in this 1 study, I present publicly available information regarding switching prices 2 paid by Southwestern Bell, Pacific Bell, and U.S. West that provide 3 comparative price points. This publicly available information 4 demonstrates that BellSouth's SCIS switch price estimates are 5 substantially inflated. 6

The costs that BellSouth has identified for the limited numbers of features 2. 7 that were included are overstated because of double counting, input errors, 8 and inappropriate costing methodology.

10

9

When BellSouth's switching cost study for the 4-wire port is corrected, using 11 BellSouth's own cost models, to reflect switch prices in BellSouth's vendor 12 contracts and remove double counting of feature investments, the resulting 4-wire 13 port investment with features is less than BellSouth's port without features. 14

15

#### **BELLSOUTH'S SWITCHING COST STUDY OVERVIEW** 3.0 16

#### WHAT ARE THE SCIS MODELS? 17 Q.

The SCIS programs were originally developed by Bellcore to identify the A. 18 investments associated with features and services provided from central office 19 switching machines. The SCIS/MO program determines the investments for 20 various functions that a switch performs and the SCIS/IN model calculates the 21 investments for vertical features. 22

- 23
- 24
- 25

**Q**.

#### HOW DID BELLSOUTH USE THE SCIS MODELS?

A. BellSouth used the SCIS/MO program from Bellcore to calculate investments for
the 4-wire analog port. Specifically, they used a subset of the output called
Minimum Investment per Line. The Minimum Investment per Line is a melded
average of standard analog lines and lines served on integrated digital loop carrier.
BellSouth used a special report in SCIS to identify only those costs associated
with an analog line.

8

9 The SCIS/IN model utilizes the Unit Investment results from the SCIS/MO 10 program to develop the investment for services and features. BellSouth 11 apparently did not actually use the SCIS/IN program, but copied SCIS/IN 12 algorithms and program data inputs into multiple SCIS/IN-like spreadsheets to 13 calculate investments for the features. Thus, whatever reported integrity between 14 SCIS/MO and SCIS/IN is supposed to exist cannot be assured in the BellSouth 15 study.

16

17 Switching investments were then processed in BellSouth's TELRIC models to 18 include additional loadings, such as land and building; convert the investment to 19 an annual cash flow; and add expenses to generate the costs of switching 20 unbundled elements.

21

# 22 4.0 BELLSOUTH'S ACTUAL SWITCH PRICES ARE LOWER THAN THE 23 PRICES USED IN THE COST STUDY

## Q. DOES THE SCIS/MO CALCULATE THE ACTUAL PRICES PAID BY BELLSOUTH FOR SWITCHES?

No. The SCIS/MO model contains vendor list prices and requires the user to Α. enter a discount to customize the switching investments to reflect the "actual 2 prices" paid by the local telephone company, according to locally negotiated contracts and/or agreements.

4 5

3

1

The discount factors utilized for each switch type are of critical importance in the 6 evaluation of any SCIS study since these discounts affect every SCIS output (i.e., 7 a discount factor of 50% generates SCIS outputs that are half the values produced 8 using the list price). Therefore, if the discount factors do not reflect the actual 9 price in BellSouth's negotiated agreements with switching vendors, the results 10 produced by SCIS will misstate all of BellSouth's switching investments, 11 12 including those used as the basis for the 4-wire port.

13

#### WHAT ARE THE SWITCH PRICES PER LINE IN BELLSOUTH'S Q. 14 **VENDOR SWITCHING CONTRACTS?** 15

BellSouth recently made its switch vendor contracts available to AT&T in Α. 16 response to a data request. The accessibility to these contracts was limited. 17 because BellSouth would not allow copies to be made and AT&T had to review 18 these voluminous contracts on BellSouth's premises. 19 The Nortel contract indicated that BellSouth receives a discount plus up to a 20 discount<sup>4</sup>. The contract also references the existence of additional 21 discounts, but these were not specified. 22

- 23
- The Lucent 5E switches are covered via three contracts one general contract 24 crafted in 1992;<sup>5</sup> an additional agreement that is more current,<sup>6</sup> providing prices 25

1		for specific switch replacements throughout the BellSouth States, and a separate
2		agreement just for switch purchases in Tennessee.' The two recent contracts
3		indicate that BellSouth pays per line <sup>8</sup> for 5E switches. It is important to
4		note that these prices per
5		
6		·
7		
8		It is also interesting to note that BellSouth has an existing contract (1992-1999)
9		and a subsequent Letter of Authorization <sup>9</sup> with Siemens Stromberg-Carlson for
10		switches with prices even lower than the switches, <sup>10</sup> but these
11		switches have been excluded from BellSouth's studies.
12		
13	Q.	WHAT IS THE DIFFERENCE ON A PER LINE BASIS BETWEEN THE
14		NORTEL AND LUCENT CONTRACTS?
15	А.	The Nortel contract discounts were used by BellSouth as direct inputs to
16		SCIS/MO, which generates a DMS price per line of \$210 <sup>11</sup> and the Lucent
17		contract explicitly states the price per line is (including significant
18		amounts of additional equipment for features).
19		
20	<b>Q.</b>	WHAT EXPLANATIONS COULD THERE BE FOR THIS DISPARITY
21		BETWEEN THE VENDORS?
22	А.	The fact that BellSouth has included Nortel prices that are more than
23		than Lucent prices may indicate that:
24		• The Nortel contract could be a "baseline" contract, equivalent to the older
25		Lucent contract which is also still in effect.

- 1•There may be additional Nortel agreements that were not provided, that2could specify prices competitive with Lucent.
  - BellSouth simply may not have plans to place Nortel switches in the near future and has not initiated aggressive negotiations for \_\_\_\_\_\_ switching prices as they have done with Lucent.
- 6

4

5

### 7 Q. HOW SHOULD THIS DISPARITY BE TREATED IN THE COST 8 STUDIES?

- 9 Α. The cost studies should use switch prices per line for both technologies that are 10 comparable and reflect forward-looking, least-cost technology. Lucent and Nortel are aggressively competing in all areas of the switching market, as evidenced by 11 the recent Nortel/US WEST contract described below, these prices should be 12 comparable to the prices in the Lucent/BellSouth contract. It would likewise be 13 anticipated that in any head to head competition for BellSouth's business, bids 14 among the various switch providers would be similarly competitive. AT&T's 15 restated switching element investments for the 4-wire port assume that the 16 17 average Lucent price per line for switching also applies to the Nortel switches. Corroborating statements made by Southwestern Bell and Pacific Bell indicate 18 that the same price is paid for switching regardless of vendor.<sup>12</sup> If BellSouth is 19 20 going to place Nortel switches, then it should be expected that BellSouth would negotiate prices that are competitive with Lucent. 21
- 22

# 23 5.0 HOW DO THE PRICES IN BELLSOUTH'S COST STUDY COMPARE 24 TO SWTICHING PRICES IN THE INDUSTRY?

### 1 Q. WHAT ARE THE AVERAGE SWITCH PRICES PER LINE IN THE 2 INDUSTRY?

A. The Northern Business Information (NBI) study, "U. S. Central Office Equipment
 Market", states that the average price for RBOC digital switches per line shipped
 in 1995 was \$102, and \$99 in 1996. The study also indicates that per line prices
 are expected to continue to decline slightly through the remainder of the decade.
 Both Lucent and Nortel have referenced this document's marketing data

estimates, which lends credibility to NBI's expertise in the central office equipment market.<sup>13</sup>

10

8

9

### Q. DO THE SWITCH PRICES REPORTED FOR PACIFIC BELL SUPPORT BELLSOUTH'S PRICING?

No. Four years ago, Pacific Bell negotiated a major contract for approximately 13 Α. \$110 per line.<sup>14</sup> According to the NBI study, the price per line for switching has 14 been declining and is expected to continue to decline. The four-year old data for 15 Pacific Bell, when brought down to current switch prices with a .97 factor per 16 year<sup>15</sup> would result in \$97 per line.<sup>16</sup> There were no separate prices quoted for 17 different size switches, so the deflated \$97 per line either applies to all line size 18 switches or is an average; and the \$97 per line provides a comparative price point 19 to evaluate the BellSouth switching prices. 20

21

### Q. DO THE SWITCH PRICES REPORTED BY SPRINT SUPPORT BELLSOUTH'S PRICING?

A. No. The January, 1997, BCPM<sup>17</sup> proxy model contained switching prices using a
 fixed cost of \$261,871 and variable per line amount of \$225<sup>18</sup> that were the results

1 of a survey, based on telephone company inputs to SCIS. Sprint later retracted these switching prices, stating that "there exists a fundamental disagreement 2 concerning the costs of switching."<sup>19</sup> Sprint submitted new BCPM inputs for 3 switching prices of \$150,000 fixed/startup and \$110 per line.<sup>20</sup> Sprint said "the 4 current BCPM values [the new lower values] more closely approximate Sprint's 5 current costs of switching ....."<sup>21</sup> For a 15,000-line switch, allocating the 6 \$150,000 fixed cost to the lines would result in an overall average price of 7 switching of \$120 per line. While AT&T does not propose that this is the correct 8 price, it provides a comparative price point to evaluate the BellSouth switching 9 prices. 10

11

### Q. DOES SOUTHWESTERN BELL'S SWITCH PRICE PER LINE 1996 SUPPORT BELLSOUTH'S PRICING?

14 Α. No. Mr. Hugh Raley stated in 1996 testimony that for Southwestern Bell Telephone, "the Engineered, Furnished and Installed"(EF&I) price was 15 \$85/line<sup>22</sup> for switching. Mr. Raley stated that \$85 includes "everything that is 16 required to make the switch work,"... "the trunks, the fabric, the processors - the 17 total price from a vendor standpoint divided by the number of lines on the 18 switch." He also indicated that this figure represents recent bids both from Lucent 19 and Nortel and that this price was the average and not the lowest bid price. Mr. 20 Raley included in his testimony an Attachment<sup>23</sup>, which revealed the following: 21

22

	1-15,000 lines	15-40,000 lines	40-80,000 lines
EF&I Inv. Per Line	\$140	\$115	\$85

23

1	Q.	DOES BELLSOUTH'S MODEL TAKE INTO ACCOUNT THE MOST			
2		CURRENT INFORMATION REGARDING THE PRICE OF SWITCHES?			
3	А.	No. The most current information comes from Nortel's Internet web page <sup>24</sup>			
4		announcing that a contract has been signed with US WEST "in excess of \$US 100			
5		million" for 2.2 million DMS-100 lines. This implies switch prices as low as \$45			
6		per line. Even allowing for the in excess to be an incredible additional 50% of the			
7		contract, for a total of \$150 million, \$150 million divided by 2.2 million lines			
8		would yield a price per line of only \$68.25 Nortel also indicated that this upgrade			
9		of US WEST's network will provide advanced digital features, such as ISDN,			
10		network business services and advanced display services. In addition, Nortel			
11		stated that "Nortel will keep US WEST's network ready for new services, such as			
12		Local Number Portability and for Advanced Intelligent Network AIN features "			
13					
14		These prices are similar to the contract prices for BellSouth.			
15					
16	Q.	WHAT SWITCH PRICES HAS BELLSOUTH USED AND WHY ARE			
17		THEY INCORRECT?			
18	А.	BellSouth's average price per line for 5E switches is and for			
19		the DMS-100, <sup>26</sup> resulting in a melded price of per line. In addition to			
20		BellSouth not accurately reflecting their own switch vendor contract prices, a			
21		comparison of the prices from other RBOCs with BellSouth's prices demonstrates			
22		that BellSouth's prices are significantly overstated by all accounts.			
23					
24					
25					

Source	Price Per Line
NBI	~\$100
Pacific Bell	\$110
Sprint Inputs to BCPM	~\$120
Raley Testimony- SouthWESTERN BELL <del>BellSouth</del>	\$85/115/140
Nortel/US West	~\$68
BellSouth Lucent Contract	
BellSouth UNE Cost Study	

I

## 2 Q. WHAT SCIS/MO DISCOUNT INPUTS DOES AT&T PROPOSE AND 3 HOW DID YOU ARRIVE AT THESE DISCOUNTS?

A. Using BellSouth's Lucent contract, AT&T has calculated a SCIS/MO discount of
As stated above, SCIS begins with
vendor list prices in its investments tables and requires the local telephone
company to enter a discount in order to reflect actual prices paid by that company.
Each vendor begins with different list price levels and therefore the discounts that
the vendors offer will be different to generate approximately the same total switch
prices.<sup>27</sup>

11

In order to determine the correct discount that BellSouth should enter into SCIS/MO, the discount necessary for each switch technology to approximately equal the actual contract price of \_\_\_\_\_ per line was calculated using SCIS results. BellSouth accumulated all of the switches for a given technology into a "study" in SCIS/MO. We used the two studies with BellSouth's input data, but varied the discount input. The program was run iteratively until we matched the total switching investments calculated from the contract.

4

ĩ

2

3

## 5 Q. WHAT IMPACT WOULD THIS DISCOUNT INPUT CHANGE HAVE ON 6 OUTPUTS?

A. I have rerun the port investment study using BellSouth's models with BellSouth's
data, but substituted the discounts shown above. These revised investments are
compared to BellSouth's original values below:

10

	BellSouth <sup>28</sup>	Revised 5E	BellSouth	Revised
	5E Inv.	Inv.	DMS Inv.	DMS Inv.
4-wire Port				

11

12 Note that this is just the switching port investment. Additional investments for 13 converting the 4-wire to 2-wire signaling is added subsequently and is reflected in 14 the prices proposed by Mr. Ellison.

15

### 16 6.0 DESIGNATING SEPARATE COSTS FOR INDIVIDUAL FEATURES IS 17 INAPPROPRIATE

## 18 Q. SHOULD FEATURES AVAILABLE IN THE SWITCH BE COSTED 19 SEPARATELY?

A. No, this is inappropriate for several reasons. While BellSouth has costed a small
 subset of vertical features as if they are each a unique separate element, vertical
 services and features are an integral part of the switch. This becomes clearer if

you think of BellSouth's switch as a personal computer that is delivered by the manufacturer with a suite of software applications.<sup>29</sup> Now, whether the owner of the computer utilizes a word processing or spreadsheet program daily or only once a year, the owner does not incur a cost each time he utilizes the program. Instead, these costs are incurred at the outset as a part of the acquisition of the computer.

- In contrast, BellSouth's switching studies are based on the incorrect assumption
  that each time a feature is used, there is a corresponding cost in the switch. This
  incorrect assumption that features are usage sensitive has been based on logic
  contained in the SCIS models.
- 11

6

#### 12 Q. WHY DOES SCIS MAKE THIS ASSUMPTION?

13 A. SCIS assumes that the processing capacity of a switch is the ultimate limiting factor for a switch and that every call or feature that uses this processing capacity 14 should pay its "fair share". In the past, as reviewed in Mr. Garfield's direct 15 testimony, switch vendors struggled to keep processing capacities on par with the 16 demand for new services and features. It was appropriate under those 17 circumstances to determine how much of the switch's capacity specific features 18 and calls were using and assign an allocated portion of the cost to those features 19 and calls. 20

21

#### 22 Q. WHY IS THIS ASSUMPTION INCORRECT?

A. It is simply no longer true that switches, in general, are limited by processing capacity; instead, they are primarily limited by the numbers of lines and trunks that can be served.<sup>30</sup> This is validated by BellSouth's own inputs to the SCIS l model that indicate they are currently utilizing only 27% of the processing capacities in switches in Florida. Today's switches provide call processing 2 capacities that far exceed the traffic that is expected over the entire lifetime of 3 these switches, especially given that much of the intelligence of call processing is 4 being moved from the end office switches to the Advanced Intelligent Network.<sup>31</sup> 5 Indeed, the newer, marginal version of SCIS identifies these costs as a fixed up-6 front investment, depending on the processor utilization inputs, rather than always 7 assuming these costs are sensitive to the processing capacity. 8

9

### 10 Q. WHAT OTHER PROBLEMS EXIST WITH BELLSOUTH'S FEATURE 11 COSTING METHODOLOGY?

12 Α. BellSouth's complicated methodology of determining individual investments for each feature requires large numbers of inputs and assumptions, many of which are 13 not "measurable" and amount to nothing more than unsubstantiated "estimates" 14 by BellSouth. SCIS was developed at a time when overestimating the costs of 15 features to be sold to subscribers carried no penalty; but that is not the case here. 16 By misallocating costs on a feature-usage basis coupled with the requirement that 17 the feature usage may be mis-estimated by BellSouth, new entrants are seeing 18 19 excessive costs for features that are entirely inappropriate in a unbundled switch element environment. 20

21

# 22 7.0 BELLSOUTH HAS INAPPROPRIATELY ASSIGNED ALL OF THE 23 GETTING STARTED INVESTMENTS TO TRAFFIC SENSITIVE 24 SWITCHING UNBUNDLED ELEMENTS

25
1	Q.	WHAT IS THE SCIS/MO GETTING STARTED INVESTMENT?
2	<b>A</b> .	SCIS computes a Getting Started Investment for each switch that includes the
3		initial investment for:
4		• Central processor and related equipment;
5		• Maintenance and test equipment;
6		• Spare components;
7		• Miscellaneous equipment; and
8		• Investment for underutilized equipment, termed "Breakage".
9		
10	Q.	HOW ARE THESE GETTING STARTED INVESTMENTS RECOVERED
11		IN SCIS?
12	А.	SCIS automatically assigns these getting started investments to a traffic sensitive
13		category, called Getting Started Investment per Millisecond, when SCIS/MO is
14		run in "average" mode (which is the way BellSouth ran the model for its cost
15		studies) based on the assumption that switch replacement occurs due to processor
16		exhaust, as discussed above. SCIS/MO inputs ask for processor utilization at
17		three time periods: (1) at initial installation of the switch, (2) at year 5, and (3) at
18		switch replacement. BellSouth's inputs indicate that utilization at time of switch
19		replacement is projected to be 28%. As correctly modeled in the SCIS/MO
20		marginal mode, the processor investments in BellSouth's study should not be
21		considered traffic sensitive if they are never expected to exhaust. It is simply a
22		fixed cost required to make the switch operational over its life.
23		
24		In addition to the processor, there are numerous other items in the SCIS/MO

In addition to the processor, there are numerous other items in the SCIS/MO Getting Started Investment, which are one-time fixed investments incurred as a

25

first cost. BellSouth, however, has assumed that the entire Getting Started
 Investment for every switch is traffic sensitive. This is inappropriate because it
 does not follow the basic TELRIC principle of reflecting costs based on causation.
 The non-traffic sensitive getting started investment should be assigned to the non traffic sensitive port elements.

6

### 7 Q. HOW DOES ALLOCATING THE GETTING STARTED INVESTMENT 8 TO THE PORT INVESTMENT CHANGE THE PORT INVESTMENTS?

9 A. Allocating the entire Getting Started investment from SCIS/MO over the total
10 lines increases the port investment. This Getting Started allocation was added to
11 the investments that AT&T calculated using the corrected discounts to arrive at
12 new 2-wire analog port investments as shown below:

13

	Line Inv.	GS Additive	Port Investment
	Per line		
5ESS			\$45.39
DMS			<b>\$</b> 50.70
Weighted			<b>\$</b> 47.03

14

### 15 8.0 GETTING STARTED INVESTMENT TREATMENT FUNDAMENTALLY

#### 16 AFFECTS BELLSOUTH'S ENTIRE COST METHODOLOGY

### 17 Q. WHAT IS THE RELATIONSHIP BETWEEN GETTING STARTED 18 INVESTMENT AND FEATURE INVESTMENT?

A. The Bellcore switching models were originally designed to distinguish
 investments for vertical features and services from POTS. Most feature

functionality is provided through the computer processor in the switch. The SCIS
 models, therefore, distinguish among various features and call types primarily by
 the amount of processor milliseconds that are used by each feature.<sup>32</sup> BellSouth,
 using SCIS/MO, has allocated the Getting Started Investment over the number of
 milliseconds available for call processing (and then inflated it by utilization
 factors averaging 27%<sup>33</sup>).

7

### 8 Q. HOW DOES AT&T'S REVISED TREATMENT OF GETTING STARTED 9 INVESTMENT AFFECT FEATURE COSTING?

As stated previously, in the vast majority of features, the only investments 10 Α. assigned to features is the allocated<sup>34</sup> Getting Started Investment. AT&T proposes 11 that the entire Getting Started Investment be allocated to, and recovered by, the 12 ports as a non-traffic sensitive investment. In this approach, there are no Getting 13 Started Investments that can be assigned to features without double counting and, 14 therefore, the complicated task of separately identifying feature investments 15 through detailed processor millisecond calculations is not necessary. As shown 16 below, when BellSouth's cost study is corrected for the incorrect discounts, the 17 inclusion of features (via allocating the entire Getting Started Investment to the 18 ports) results in a port investment that is still lower than BellSouth's port 19 investment without features. 20

21

	BellSouth Port	Corrected BellSouth
	without Features	Port with Features
Port Investment	\$57.37	\$47.03

1608

# 1Q.WHAT INPUTS AND ASSUMPTIONS ARE CRITICAL TO2BELLSOUTH'S TREATMENT OF FEATURE INVESTMENTS?

BellSouth's SCIS/IN-like spreadsheets require busy hour feature utilization inputs Α. 3 in order to calculate feature investments. These inputs usually have a one-to-one 4 relationship with the output. If the busy hour utilization input is estimated at 5 double the actual usage, the feature investment will also be double. Many of these 6 inputs are difficult to obtain because they must be explicitly measured in a special 7 study and many more simply are not measurable at all. Marketing/Product 8 managers are often asked to provide this data, but it is very difficult to estimate 9 how often subscribers use a particular feature. It is even more difficult to express 10 this estimate in terms of busy hour usage. 11

12

In addition, these estimates must average subscribers who frequently use features with subscribers who purchase features, but seldom use them. This difficulty is especially acute when features are bundled or packaged, as in ESSX offerings or residential custom calling packages.

17

### 18 Q. HOW SHOULD BELLSOUTH RECOVER THE COSTS FOR FEATURES 19 THAT REQUIRE SPECIAL HARDWARE?

A. A very small number of features use special hardware; the bulk of this equipment is conference circuits. The Lucent contract includes conference circuits, as well as some voice messaging equipment in the \_\_\_\_\_; and are therefore included in the port and other basic switching investments. BellSouth's study, however, also adds these conference circuits into the cost of the features; thereby double counting these investments.

# Q. DOES FEATURE USAGE CAUSE BELLSOUTH TO INCUR ADDITIONAL SWITCH HARDWARE INVESTMENTS?

No. BellSouth does not incur any additional investment per feature because the 3 A. special hardware, such as conference circuits, is already included in the basic 4 switching price. As described previously, features do not cause exhaust of 5 processing capacity of the switch, so there should be no processing capacity 6 allocations (in the form of Getting Started Investment per Millisecond costs) 7 based on feature usage.<sup>35</sup> BellSouth's feature cost methodology, however, 8 includes processing capacity costs based on feature usage and additives for the 9 10 already included special hardware.

11

15

16

### 12 Q. WHAT CORRECTIONS TO THE FEATURE COSTING 13 METHODOLOGY DOES AT&T RECOMMEND?

14 A. First, the investments for separate features must be eliminated to:

- Eliminate the double counting of special feature hardware, such as the conference circuits.
- Eliminate double counting the Getting Started Investment, or first cost, of the
  switch.

• Eliminate double counting feature software right to use fees.

20

19

21 Second, the BellSouth SCIS input discounts must be revised to accurately reflect 22 the actual forward-looking prices BellSouth pays for switching as stated in the 23 vendor contracts.

- 24
- 25

AT&T's restatement of BellSouth's cost study shows that the corrected port investment that includes features (via the assignment of the Getting Started Investment to the ports) is less than BellSouth's port without features. This proves that BellSouth's feature additives are incorrect, include double counting, and result in highly inflated port rates.

6

12

13

#### 7 9.0 SUMMARY AND CONCLUSION

#### 8 Q. PLEASE SUMMARIZE YOUR TESTIMONY

9 A. BellSouth's methodology, inputs and assumptions are not appropriate for
10 developing the cost of the 4-wire port unbundled network element. The problems
11 include:

- 1. Incorrect switching prices
- 2. Double counting the costing of vertical features
- 14 3. Various incorrect or inappropriate input data
- 15

#### 16 Q. WHAT ARE YOUR CONCLUSIONS?

4.

For the reasons stated above, the Commission should reject BellSouth's cost studies and resulting rates for the 4-wire analog port and adopt the rate proposed by Mr. Ellison.

20

#### 21 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

- 22 A. Yes.
- 23

24

#### 1 Endnotes:

- <sup>1</sup> SCIS/IN is the feature costing model in the SCIS family of models.
- <sup>2</sup> There is a technical distinction between "cost" and "investment." In my testimony, investment refers solely to the capital expenditure for the switch. To determine cost, additional capital expenditures for land, building, power, and local telephone company installation are added to the investment. This total is annualized via cost factors into a capital-related cash flow requirement and then expenses are added to determine "cost." I will use the term price to refer to the prices paid by telephone companies to switch vendors.
- <sup>3</sup> As explained more fully below, the SCIS/MO program calculates the investment for various functions performed by a switch.
- <sup>4</sup> Nortel Agreement PR-6900-A. BellSouth used a \_\_\_\_\_\_ iscount, implying it used a volume discount of \_\_\_\_\_\_. The maximum volume discount of \_\_\_\_\_\_.
- <sup>5</sup> Lucent Agreement PR-6700-B.
- <sup>6</sup> 1/95-12/06.
- <sup>7</sup> Special Tennessee Agreement "Special Order" 12/1/93-12/31/99
- <sup>8</sup> Id; the price drops from \_\_\_\_\_\_ when \_\_\_\_\_ lines are purchased. Note that the term "price per line" is equivalent to total switching price divided by total number of lines. The price per line is *not* the same as the port investment.
- <sup>9</sup> The Letter of Authorization was crafted to apply only to Tennessee switch purchases, but it is safe to assume that BellSouth could negotiate similar agreements in other states.
- <sup>10</sup> Letter of Authorization 5/31/95: "Siemens offers \_\_\_\_\_ (EF&I) per equipped line . . ."
- <sup>11</sup> Calculated from total DMS switching investment divided by total DMS lines.
- <sup>12</sup> This is substantiated by Mr. R. Scholl and Mr. J. Caling in Deposition of R. Scholl p. 46, ls 1-5, and Deposition of J. Caling, p. 93, ls 13-18, dated February 12, 1997.

- <sup>13</sup> Lucent and Nortel October 15, 1996, filings in response to FCC Supplemental Request for Information from Lucent and Nortel, respectively. Cited in FCC 97-125, page 24.
- Quoted in GTE's Responses to proxy cost model questions in CC Docket 96-45,
   Federal-State Joint Board on Universal Service Proxy Cost Models, January 7,
   1997.
- <sup>15</sup> Extrapolated from the NBI yearly prices.
- <sup>16</sup> This data substantiates the prices used in Hatfield. The average switch size for Pacific Bell is 27,200 lines. The average switching price on the Hatfield cost curve for a 27,200 line switch is **\$90**.
- <sup>17</sup> The Benchmark Cost Proxy Model ("BCPM") was, until recently, jointly sponsored as a proxy model by Sprint, US WEST and Pacific Bell. Pacific Bell has withdrawn and has been replaced by BellSouth.
- <sup>18</sup> BCPM Methodology (no date), Page 20.
- Ex Parte Letter, 3/24/97, from Mr. Warren D. Hannah, Sprint to Mr. William F. Caton, FCC, Attachment A, page 5.
- <sup>20</sup> Id., Attachment BCPM National Results Using Sprint Input Values, Page 3.
- <sup>21</sup> <u>Id.</u>, Attachment A, Page 3. The remainder of the quote dealt with a recommendation to use the higher rates for USF purposes.
- <sup>22</sup> Direct Testimony of Hugh W. Raley, 9/6/96, Docket Nos.
   16189,16196,16226,16285,16290; p. 7, lines 9-10 and Deposition of Hugh Raley, 9/13/96.
- Note, however, that there are other equipment costs added to Mr. Raley's \$85/line such as taxes. AT&T agrees that these need to be added, but the relevant cost in this analysis is the actual price paid to the vendor which Mr. Raley calls EF&I. This compares to the prices used in the Hatfield Model switch curve that also are switch prices paid to the vendor. The Hatfield Model includes costs for the other components shown on Mr. Raley's chart in subsequent calculations. Mr. Raley was claiming that Southwestern Bell Telephone's \$85 per line was significantly higher than the Hatfield Model's \$59 per line for an 80,000 line switch. This comparison was flawed for two reasons: [1] Mr. Raley stated that the \$85.00 per line was based on an average switch size of 53,653 lines; therefore, Mr. Raley's comparison to the Hatfield Model 80,000 line switch is inappropriate; and [2] the

Hatfield Model's \$59 per line is the price without trunk ports and when these are added back in, the actual price the Hatfield Model calculates for a 53,653 line switch is approximately \$80 per line. Mr. Raley's \$85.00 per line is, in actuality, very close to the \$80 per line that the Hatfield Model calculates.

<sup>24</sup> www.nortel.com/home/press/1997b/6\_16\_9797219 US West.html

- <sup>25</sup> Thus substantiating that the large switch price of \$75 per line used in Hatfield is conservative. All switch prices are quoted as prices paid to the vendor just for vendor EF&I switch equipment and do not include taxes, telephone company installation, etc.
- <sup>26</sup> Calculated from BellSouth's SCIS/MO study outputs by taking total switching investment and dividing by total lines.
- It is interesting to note that vendors have been consistently raising their list prices over many years, but actual switching prices per line are declining. This phenomenon has two causes - capacities are increasing and vendor discounts have been increasing.
- <sup>28</sup> These investments, as well as the DMS investments, were taken from the Input Workpapers for Port Elements in BellSouth's Cost Study
- <sup>29</sup> As noted earlier, BellSouth's switching contracts \_\_\_\_\_\_\_\_\_\_as part of the base price of the switch, and these costs are already included in the port investments.
- <sup>30</sup> This was confirmed by a statement by Mr. Scholl, of Pacific Bell, in his February, 1997, deposition that Pacific's switches are overwhelmingly line capacity constrained.
- <sup>31</sup> It is expected that vendors' efforts to further increase processing capacities are due to expectations of broadband traffic to provide services such as video, which is not relevant in this proceeding.
- <sup>32</sup> There is a tiny subset of features that have special hardware to make them operational. This issue will be addressed in a subsequent section.
- <sup>33</sup> This utilization is the average computed by SCIS/MO over the life of the switches, based on BellSouth inputs. Note that the previous discussion on processor utilization inputs by BellSouth were the utilizations at the end of the switches' lives.

1 BY MR. HATCH:

4

5

6

2 Q Ms. Petzinger, do you have a summary of your 3 testimony?

A Yes, I do.

Q Could you please give that?

A Certainly.

7 Good morning. I'm Cathy Petzinger, and I'm here to talk about the switching unbundled element cost that 8 used to support the 4-wire port element and the separate 9 feature costs proposed by BellSouth. BellSouth used the 10 BellCore SCIS model as the foundation for their switching 11 cost studies, and before I discuss that, I would like to 12 share with you a little of my background. Before coming to 13 AT&T, I worked for 13 years at BellCore, and before I left 14 I led the team that builds the SCIS model. I'm an expert 15 16 in switching and in switching cost studies.

The BellCore SCIS model starts with list prices 17 that the user must determine and enter a discount input to 18 modify the list prices to reflect the prices that will be 19 paid for switches in this case by BellSouth. The discount 20 input is absolutely critical because it affects every 21 switching unbundled element. In my review I found that 22 BellSouth has used an incorrect discount input to SCIS that 23 generates a switch price per line that is two and a half 24 times the prices that we reviewed in their switching 25

1 contracts with their vendor. I determined the correct 2 discount by running BellSouth's SCIS program loaded with 3 all of BellSouth's data but modifying the discount input 4 until the outputs from the SCIS model matched the number in 5 their contract.

6 This correction cut the proposed BellSouth port investment, not including the features, by approximately 7 50%. BellSouth is also fundamentally -- made a 8 9 fundamentally incorrect assumption in their cost studies regarding the first cost of a switch. The first cost is 10 11 called the getting-started investment in the SCIS model, and it is the cost of the equipment that is purchased to 12 get a switch up and running regardless of the amount of 13 traffic or the number of lines or size of the switch. It 14 is truly a non-traffic sensitive cost. However, BellSouth 15 16 has inappropriately allocated it to usage sensitive elements. 17

BellSouth has also developed separate feature 18 cost studies that are incorrect. For example, some 19 features have special hardware, such as three-way 20 conference circuits to enable three-way calling, and these 21 have been double counted. The double count occurs because 22 the switching contract includes some of this equipment, and 23 it was included in the base switching price per line that 24 was used to generate the port element. However, they then 25

went in and ran the model in the feature mode and added additional costs for the same conference circuits as a part of, for example, the three-way calling feature. This similar construct occurred in software right-to-use fees in the software that also is included in the basic switching price per line in their contract; therefore, to include it in a separate feature cost is a double count.

A good analogy is a computer that comes from the store loaded with software programs, you pay for the price for the computer up-front with the software. You don't incur costs every time you use the spread sheet or every time you bring up the word processor. It is an up-front cost and already paid for and should be recovered in a manner appropriately.

15 In summary, BellSouth does not actually incur additional switching investment when they provide features 16 to their users. It's already included in the basic 17 switching price per line in their contracts; therefore, it 18 is inappropriate to charge additional costs for features to 19 the new entrants in the form of unbundled elements. I have 20 21 restated the BellSouth investments to account for these errors, and these restated investments form the foundation 22 of the new rates sponsored by Mr. Ellison. That concludes 23 24 my summary.

25

MR. HATCH: We tender the witness for cross.

1 COMMISSIONER DEASON: Okay. Mr. Self. MR. SELF: No questions. 2 3 MR. PELLEGRINI: Commissioner Deason. COMMISSIONER DEASON: Just a second. 4 MR. MELSON: No questions. 5 6 COMMISSIONER DEASON: Okay. 7 MR. PELLEGRINI: Staff would ask that the packet 8 identified as CEP-1 be marked at this time. it consists of 9 Ms. Petzinger's January 12th, 1998 deposition transcript and deposition and late-filed deposition exhibit number 1. 10 COMMISSIONER DEASON: It will be identified as 11 exhibit 58. 12 Before we begin cross, I have a clarifying 13 question. You gave the analogy of the computer and the 14 software and if you buy a computer and software is already 15 included that is part of the -- I think your point is it's 16 17 basically part of the cost of the computer; is that I guess what is the point you are trying to make 18 correct? in terms of utilization of software that comes with the 19 computer, so to speak? 20 WITNESS PETZINGER: The point I was trying to 21 make was that when you purchase a computer, you purchase 22 23 the ability to use the software programs, such as word 24 processing or spread sheet programs as a function of the purchase price when you initially purchased the computer. 25

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

You don't actually incur a cost every time you use the
 spread sheet.

3 Now if you loan your computer out, you would 4 probably charge a general amount for the computer. You 5 would not charge someone each time they brought up a spread sheet program because your cost was not incurred in that 6 7 Similarly, with switching systems, if you think of way. 8 them as very large computers with a lot of extra equipment 9 as well, the equipment that I'm talking about here that is pre-loaded when BellSouth purchased it was the ability to 10 process three-way calls, for example, and other features. 11 They paid for that up front. They included it in the 12 switching unbundled elements as part of the general pricing 13 structure associated with the port elements and the minute 14 of use elements and all those basic switching unbundled 15 elements, and then added again and charged separately each 16 time a new entrant wants to buy a feature is not only a 17 double count, but it also doesn't -- has no cost causation 18 19 linkage.

20 COMMISSIONER DEASON: So would you propose those 21 costs being recovered through a depreciation on the 22 computer itself as its used as a -- or how would those 23 costs -- Obviously there is a cost associated with the 24 software which is part of the computer. How should those 25 costs be recovered?

WITNESS PETZINGER: Yeah, for any investment that 1 would be capitalized then, yes, the appropriate way to 2 3 recover it would be in the recurring rates for the general 4 switching in this case because it was included in the base 5 price of the switching equipment they purchased. 6 COMMISSIONER DEASON: BellSouth. 7 COMMISSIONER CLARK: Mr. Deason, can I follow 8 Are you presuming it was included in the base price, up? 9 or do you know it was included in the base price? 10 WITNESS PETZINGER: I've reviewed the contracts, and it was included. 11 COMMISSIONER CLARK: Okay. While I am asking you 12 questions, and maybe I should ask you, Mr. Hatch, is it 13 your intention that the end note should be considered as 14 15 testimony? MR. HATCH: Good question. Technically, yes. 16 The problem is that their end notes goofs up the line 17 1.8 numbers and that sort of thing. COMMISSIONER CLARK: It sure does. 19 MR. HATCH: We could mark it as a separate 20 exhibit if you wish. We probably ought to go back and 21 make -- for the record, if that's the point and the 22 problem, there are numerous witnesses that have that same 23 24 phenomena. COMMISSIONER CLARK: There are? 25

TALLAHASSEE, FLORIDA

(850)697 - 8314

C & N REPORTERS

1 MR. HATCH: Yes, for example Mr. Selwyn has lots 2 of end notes in his testimony. 3 COMMISSIONER CLARK: I don't remember seeing I thought it was just --4 that. MR. HATCH: As do several other witnesses. 5 COMMISSIONER CLARK: Okay. Let me ask --6 7 MR. HATCH: If you would like to mark them or mark it as a separate exhibit or note for the record that 8 they are included as part of --9 COMMISSIONER CLARK: They are testimony? 10 MR. HATCH: Yes. 11 COMMISSIONER CLARK: Okay. Let me just ask one 12 question. On page 7 you indicate -- you have a title, "How 13 do the prices in BellSouth's cost study compare to 14 switching prices in the industry?" And I take it from the 15 answers they do not compare favorably, BellSouth's prices 16 are higher based on the answers to the individual 17 questions. 18 WITNESS PETZINGER: Yes, that was what I found, 19 and in the table -- it's summarized in the table on page 20 11. 21 COMMISSIONER CLARK: Okay. Thanks. 22 WITNESS PETZINGER: Thank you. 23 COMMISSIONER DEASON: Mr. Ross. 24 MR. ROSS: Thank you, Commissioner Deason. 25

1620

	1621
1	CROSS EXAMINATION
2	BY MR. ROSS:
3	Q Good morning, Ms. Petzinger.
4	A Good morning.
5	Q I'd like to talk a little bit just generally
6	about BellSouth's cost studies and how it treated
7	switching. You would agree that BellSouth's cost studies
8	assumed one hundred percent digital switches, correct?
9	A Yes, that's correct.
10	Q And it assumed a combination of Nortel DSM-100s
11	and Lucent 5E switches; is that correct?
12	A Yes, that's correct.
13	Q And you would agree that those switches are
14	forward-looking, represent forward-looking technology?
15	A Yes, I would with the caveat that some of those
16	are remotes, and the decision to place remotes historically
17	might be different if it were reviewed today; and the
18	reason for that is that the capacities of remotes have
19	increased. So where in the past BellSouth may have decided
20	to place a full-size Nortel or Lucent switch, today they
21	might be able to efficiently place a remote.
22	Q Okay. Now BellSouth has an existing contract
23	with Nortel that governs the purchase of DMS-100 switches;
24	isn't that correct?
25	A I did review a Nortel contract.

1 Q Is the answer to that yes? 2 Α Yes. 3 0 BellSouth also has three existing contracts with Lucent; isn't that correct? 4 5 Α I believe there were actually more, but I was looking at three of them, yes. 6 7 0 All right. Well, on page 5 you identify -- you 8 state specifically Lucent 5E switches are covered via three contracts, lines 24 and 25. 9 Yeah, these were the three contracts that I 10 Α reviewed that seemed to cover the hardware for the switch 11 identified, and this also was the contracts I reviewed on 12 BellSouth's premises; so if there were some that weren't 13 provided, I don't know about it. 14 To your knowledge, did BellSouth not provide any 15 0 contracts that you've requested? 16 А I do not know that. 17 All right. Of the three contracts you listed, 0 18 one is a general contract that was entered into beginning 19 in 1992; is that correct? 20 That's correct. 21 Α To your knowledge, is that contract still in 22 Q effect with Lucent? 23 Yes, it is. The dates of it are still in effect, Α 24 25 yes.

1622

1623 1 0 To your knowledge, has that contract been 2 terminated or superseded? 3 Α I would say it is probably no longer used by BellSouth because of the newer contract that is in place --4 5 0 Do you know that, or you just ---- coincidentally with that. 6 Α 7 0 I'm sorry, excuse me. Do you know that for a 8 fact, or are you just guessing? Well, the second contract that I refer to А 9 specifically, it has a later date, it is more current, and 10 that is also still in effect. It has much lower prices, so 11 I assume that you would like to buy out of that contract as 12 13 opposed to the higher price, older contract. The second contract that you are referring to, 0 14 and you describe it specifically as for specific switch 15 replacements throughout the BellSouth states; is that 16 17 correct? That's correct. 18 Α And did you sit down to try to compare the switch 0 19 replacement contract with the master contract that 20 BellSouth has with Lucent to see any differences between 21 22 the two? Α I conducted the review because we were not 23 allowed to get copies of the contracts, so my review -- I 24 can't say that I remember everything that I saw in detail 25

1 that would compare the two contracts.

And the other contract that you mentioned with 2 0 3 Lucent is a Tennessee specific contract; is that correct? 4 А Yes, that was correct. 5 0 Now to your knowledge, which contracts did 6 BellSouth use or rely upon in developing its switching 7 investment for purpose of its cost studies? 8 It appears that they used the older, higher Α 9 priced contract. 10 That would be the Lucent 1992 contract? 0 11 А Yes, that's correct. There was also some other things that were done that would also explain the price 12 differences in the way they interpreted the contract and 13 entered the discount input into SCIS. 14 Are you also aware that BellSouth used its 15 0 existing contract with Nortel to establish the price for 16 the DMS-100 switches? 17 А Yes. 18 Have you attempted to verify whether the 0 19 discounts used by BellSouth in the SCIS model using the 20 existing contracts, or accurately reflect the existing 21 contracts with Nortel and the master contract with Lucent 22 23 entered into in 1992? Α I'm sorry, could you repeat that question? 24 Yes, I'm sorry, it was probably an inartful 25 0

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

question. Have you attempted to verify whether the discounts used by BellSouth in its cost model accurately reflect the discounts in the Nortel contract and the Lucent 1992 master contract?

5 A Yes, I have looked at that. In the Nortel 6 contract, it appears that -- an assumption had to be made 7 about the volume of lines that were purchased by BellSouth 8 in order to determine which discount in the Nortel contract 9 to use. It appeared reasonable to me based on the Nortel 10 contract.

The Lucent contract, however, there were two 11 things. It appeared that the older, higher priced contract 12 was used. It also appeared to me that that contract has 13 one price for the placement of new switches and one price 14 for when you add equipment to an existing switch. Now in 15 the standard ongoing daily business, if you are adding 1.6 switches -- excuse me, adding equipment to an existing 17 switch, pretty much the only equipment you are adding is 18 line and maybe trunk kind of peripheral equipment. You are 19 not going to be adding much else. 20

In the BellSouth analysis, however, what they did was they took the older, higher priced cost of a new switch and used it only for one small category of equipment in the SCIS run. They discounted that piece of equipment separately, called just the getting started costs. All the

other equipment for every line ever installed in all of BellSouth territory they assumed it was always priced at the higher growth price in the older contract, so it was a double whammy there.

5 The last item too is, as I mentioned in my testimony, although the Nortel numbers were used out of the 6 7 contract, my interpretation is that Nortel contract at this time is not competitive with the Lucent contract. 8 So I would assume that in a competitive environment where the 9 switch suppliers are competing for BellSouth's business, 10 that you would be able to obtain in a competitive bid 11 situation prices that are comparable no matter what vendor 12 13 you go to.

Q Putting aside our differences about what numbers to use and what are the appropriate numbers to use, can you verify that the discounts used by BellSouth in the SCIS model do, in fact, come from the existing Nortel contract and the existing Lucent 1992 master contract, yes or no?

I could verify it absolutely in the Nortel 19 А because it was a fairly easy calculation. As I mentioned, 20 in the Lucent contract there were multiple calculations 21 22 done between new pricing and growth pricing, and in the application in SCIS I was not able to validate that exactly 23 to the numbers in the contract, in the older contract 24 assuming that was the one that was being done. 25 It

definitely did not validate to the newer, lower priced
 switching contract.

Q Let's talk a little bit about switching purchases generally. Your testimony refers to a study by Northern Business Information entitled U.S. Central Office Equipment Market; is that correct?

A That's correct.

8 Q And I believe you acknowledge that Northern 9 Business Information has expertise in the area of 10 switching, and their publications are relied upon in the 11 industry; is that correct?

12 A For their marketing data, yes, that's correct. 13 MR. ROSS: Mr. Chairman, at this time I would 14 like to approach the witness and have an exhibit marked for 15 identification purposes.

COMMISSIONER DEASON: Very well.

17 BY MR. ROSS:

7

1.6

21

18 Q Ms. Petzinger, you have been handed a copy, an 19 excerpt from the Northern Business Information study which 20 is referenced in your testimony; is that correct?

A Yes, it does appear to be.

Q I'd like to direct your attention to the third page of this, I believe the third page of this exhibit, which is section 3.5, line and trunk prices, 1994 to 1999. A Yes.

1 Q There are three bullet points under the heading "Supplier Strategies." Do you see that? 2 Α Yes. 3 4 0 Could you read the first bullet point under that 5 heading please? "Cut price on sale of initials, paren, new Α 6 7 switches, to grow installed base and guarantee high margin sales of add-on hardware and software." 8 Can you turn to the next page of that exhibit? 9 0 10 And there is a paragraph, the second paragraph on that page 11 begins, "Once a switch supplier." Α "Once switch supplier sells a new system, it has 12 13 a nearly captive customer. A tel. co. can only grow a switch by buying add-on lines from the manufacturer of that 14 switch; therefore, add-on lines are priced higher than the 15 16 lines on new systems and represent higher margin sales. The price of add-on lines will remain higher than the price 17 of new lines throughout the forecast period." Exhibit 3-37 18 shows line and trunk prices from 1994 to 1999. 19 20 0 Thank you. Commissioner Deason, we'd like to have MR. ROSS: 21 that marked as the next exhibit which I believe is 59. 22 23 COMMISSIONER DEASON: Yes, exhibit 59. MR. ROSS: Thank you. 24 BY MR. ROSS: 25

Q Now if I understand this correctly, what Northern Business Information says happens is that switching manufacturers like Lucent and Nortel try to have a low initial placement price to encourage the telephone company to buy the switch, and then when it has to add growth lines it's going to pay higher prices down the road; is that correct?

8 A I have seen that frequently in the contracts but 9 not always.

Q Let's talk about the approach you've used to establishing BellSouth switching investments. First of all, in looking at the price that BellSouth would pay on a going-forward basis for DMS-100 switches, you ignored the existing contract that BellSouth has with Nortel; isn't that correct?

A Yes. As I said, I made the assumption that since the document that I was looking at indicated that consistently the Nortel switches were much more costly than in an actual competitive situation you would be able to get competitive bids that would be equivalent to the lower priced prices in the other vendors' contracts.

Q To your knowledge, does BellSouth presently have a contract which allows it to get DMS-100 switches for the price you've assumed it can get?

25

A No, I have not. I have no knowledge of that.

Q Now in looking at the price that BellSouth would pay for Lucent 5E switches, you've disregarded the master contract that BellSouth has that was entered into in 1992; isn't that correct?

51

A Yes, I used the older contract.

Q Instead, you relied upon the switch replacement
contract that BellSouth entered into with Lucent I believe
8 in 1996; is that correct?

9

25

Α

That's correct.

10 Q Now would you agree that the switch replacement 11 contract with Lucent covers existing analog switches that 12 BellSouth intends to replace with digital switches in its 13 network?

14 A I did not see those words. It did have specific
15 switch replacements. It did not say what the existing
16 switches were that I remember.

Q Well, is a 1A switch an analog switch?
A Yes, it is.

19 Q All right. But I think you would agree that the 20 switch replacement contract specifically identified the 21 central offices that were covered by the switch replacement 22 contract; is that right?

A Yes, there were large lists of offices that I guess BellSouth was negotiating for replacement.

Q And how many central offices do you recall were

1 identified as being in Florida for which the switch 2 replacement contract applied?

A I don't have that information. I do know that BellSouth-wide there were a couple of pages. I couldn't write down all the data. As I said, you know, we were reviewing this on your premises.

7 Q It was a couple of pages throughout the region;8 is that correct?

A Yes.

10 Q Would you agree that the switch replacement 11 contract is not a general contract that BellSouth can elect 12 to purchase under for any central office in its region?

A I would not necessarily characterize it that way. I would say that although it identifies specific switch replacements, my assumption is -- and I think, you know, a legitimate one -- forward-looking is that BellSouth would be able to negotiate similar prices for any new switches they elected to purchase, even if it may not be on that contract.

20

9

Q Well, I --

A It didn't say that it excluded -- I didn't read language that said this was only available for these and, you know, that it affirmatively excluded anything else. It just was laying out what it was including at that point. Q Putting aside the question of whether or not

BellSouth could go back and renegotiate a different deal, I'm asking about the terms of the existing contract. To your knowledge, does the existing replacement switch contract with Lucent govern the central offices specifically identified in the contract where BellSouth would be purchasing switches?

A Yes.

7

8 Q And would you agree that the price per line that 9 is quoted in the switch replacement contract is only for 10 initial placement and does not cover the price for growth 11 of the switch?

That was correct, and I believe that's the 12 Α correct number to use in a long-run study because the rule 13 here, the fundamental principle is that you must assume 14 that all costs are -- the time period is long enough that 15 16 all the investment is avoidable or variable so, therefore, an entire -- you know, if you are assuming a ten-year 17 depreciation like, for example, of switching, then the 18 appropriate period would be at least ten years where you 19 actually have to put in new switches. 20

21 Q All right. Just so we are clear here, when you 22 were looking at the switching investment that you believed 23 should be included in the model, you looked only at initial 24 placement and ignored any expenses associated with growth; 25 is that correct?

А 1 That's correct. The other reason I did that was 2 because if I were faced with the decision BellSouth has which says I have, can buy prices -- or excuse me, 3 4 switching equipment at one price per line today but that it 5 goes up next year and stays higher to add equipment to that switch for the next few years, then obviously I'm going to 6 7 do an analysis and figure out how many lines should I buy today at a lower price because I want to minimize my cost 8 for investing in a switch. And if I, you know, know that 9 I'm going to be growing 3%, 5%, whatever is appropriate for 10 the local area being studied, I would make sure that I get 11 the lowest price; and if that means buying more lines today 12 at the new switch placement price, I would buy them today. 13 Now of course those lines will be paid for in the future by 14 future customers, so those costs should not be included in 15 today's analysis. If you're going to do that, if you're 16 going to include the cost of growth, then you absolutely 17 must include the revenues that you expect to receive to 18 offset those costs in the future, and you also must include 19 things such as the growth of that switch in other areas of 20 When you take a cost study, and let's simplify the study. 21 it, and you take the total investment and divide it by the 22 total minutes of use to come up with a minute of use cost, 23 if you include the cost of new switch equipment at a higher 24 price but don't grow the number of minutes you expect over 25

that same time period, you've got apples and oranges. You
 can't include growth in one place and not in another.

3 0 I just want to get this straight here. You are looking out at a snapshot in time and you are going to size 4 5 the network including switches for the demand that exists at that point in time even though you know a month from 6 7 then, two months later you are going to have additional growth or additional capacity demands for the network; 8 isn't that correct? 9

Yeah, the model that BellSouth used, the SCIS 10 Α model, is what they call a snapshot model. It has no 11 capability to do life cycle costs. It is looking at the 12 13 cost of the network if you replaced it in one snapshot in time today. It includes the equipment, vintages and, you 14 know, all of the underlying assumptions. It's basically a 15 snapshot model, which is fairly consistent with the way 16 cost studies have been done for many years. 17

18 Q Well, SCIS also allows you to include assumptions 19 about growth and purchasing switch -- growth lines as 20 demand increases, doesn't it?

A No, it doesn't. You can only put in one number
for the number of lines.

Q Well, and that number of lines could include a growth number as opposed to just the initial placement of the switch?

A What you can do is run the model multiple times should you want to perform this kind of analysis and change the number of lines each year as you increase your investment. It is not something that is inherent in the model. It would be controlled by user inputs.

Q Now the Hatfield model -- your approach to just looking at a snapshot in time and ignoring future demand is the approach taken in the Hatfield model; isn't that correct?

10 A Yeah, I believe so. I'm not an expert in all of 11 the Hatfield model; however, the assumption there is that 12 future revenues, future customers will take care of future 13 demand costs.

I just want to make sure I understand what you've 14 Q assumed will happen in the future. You believe that 15 BellSouth can go to Lucent and/or Nortel and say we need to 16 buy switching to cover our entire network, and by the way, 17 we don't want to pay any high margin growth lines later on, 18 we only want to pay for initial placement and we want 19 everything included, right-to-use fees, all the necessary 20 hardware, and you think we can get that for the price that 21 is in the replacement switch contract? 22

A No, I don't agree with that.

23

Q Okay. You don't agree that is what is going on here or what you're assuming?

A No, I don't.

Q Okay.

1

2

3 Α I would say that what I'm assuming is that as a 4 rational consumer, BellSouth would try to minimize their 5 investment. If that means buying more lines today at the 6 cheaper replacement price, they would do that, and only 7 when, only -- let's say, take an example, in year five when 8 you present value that cost back to today's dollars, only 9 then would you decide to start purchasing at the higher So it's not that I've ignored the concept, 10 growth price. I just feel it does not impact the decision on what is the 11 correct price for switching in a long-run cost study. And 12 I have also not taken the assumption that you are going to 13 go to the vendor and say, I'm going to change out every one 14 of my switches, give me a price. Obviously, that kind of a 15 contract, you could argue over whether or not it would be a 16 17 lot cheaper or a lot more expensive. We have not taken that extreme approach. All we have taken is what is the 18 19 price for -- that BellSouth incurs today at its current level, if you will, of switching replacement, not the 20 extreme of I'm going to go buy every new switch right now. 21 22 Q Well, but don't you understand that's what we are doing in a forward-looking environment, we are trying to 23 determine what cost BellSouth would incur if it were to 24 rebuild its network today using forward-looking, least-cost 25

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1 technology; isn't that correct?

2	A It's correct; however, the way you apply it is
3	not as simplified as what you're saying. If that were
4	true, then the correct price of switching would be what can
5	I go to Nortel and Lucent and whatever other vendors that
6	are out there, and I want to buy literally hundreds and
7	hundreds and hundreds of switches for all of BellSouth.
8	Obviously you are going to get a much better price than any
9	of the numbers I used in my analysis. I think
10	Q Well, and you are going to get I'm sorry.
11	A You know, to take your study assumptions to that
12	extreme, I think is illogical.
13	Q Well, you are going to get a better price because
14	they, the vendors have you locked in. Once you put the
15	price in once you put the switch in, you are stuck with
16	that switch; and when you actually grow it, you are
17	committed to purchasing additional lines from the switch
18	vendor; isn't that correct?
19	A That is correct. However, it is not a situation
20	where you go and build a contract and say, I'm only going
21	to negotiate today the price of a new switch. Tomorrow
22	I'll worry about the cost of the growth. Obviously they
23	have the capability, under those circumstances, to take
24	advantage of that situation. When you go to structure a
25	contract with the vendors, you are going to take into

1 account up front how many switches am I purchasing and what 2 is going to be my growth additional cost of switching; but 3 again, you are going to make the decision how much 4 equipment to buy based on an economic analysis of should I 5 buy more equipment today at the cheaper price versus paying 6 more later.

Q Let me ask it this way, the price that you have
assumed BellSouth can get would apply in your estimation
for replacing the entire network; isn't that correct?

10 A I would say that the limited number of
11 switches -- I mean it was a substantial number of switches,
12 but still not the entire network, that that was a
13 reasonable price to assume on a going-forward basis that
14 BellSouth will incur to purchase swtiching.

Q All right. And that is irrespective of any
additional margins that switch vendors can obtain from
BellSouth for growth of that switch, correct?

Α No. Let me try this again. I did take into 18 account the concept that a higher growth price exists. The 19 reality is it isn't relevant, and the reason it's not 20 relevant is because you have an option to buy today at a 21 lower price and then you can pay a higher price tomorrow 22 and next year and the year after that. At some point in 23 the life cycle of that switch, it will be cheaper in 24 today's dollars to buy at the higher growth price. The 25

reality is, that insures that the maximum price you will 1 2 ever actually pay is the new switch number. You're only 3 going to go and buy out of the higher growth price number 4 when it's actually cheaper to do so in today's dollars. And the reality is you've ignored any expense 5 0 that BellSouth will incur when it has to pay to grow the 6 7 switch? No, I don't think so. I think I just answered 8 Α 9 that question. The number that you've included for the price per 10 0 line, I think you've already acknowledged, only includes 11 the initial placement of the switch, correct? 12Α That's correct. 13 So that X-dollars per line does not include any 14 0 expenses associated with growth, correct? 15 MR. HATCH: Objection, asked and answered. 16 We have been over this and over this. 17 COMMISSIONER CLARK: Commissioner Deason, you can 18 probably ask this a different way. What I understand you 19 to be saying is that to make the most economic decision you 20 may purchase growth in, say, year six but you would have 21 done an analysis that says on a net present value, for 22 instance, that's going to cost you 150 dollars, a hundred 23 dollars for the current -- Let me take that back. 24 On a net present value, it's going to cost you a 25

1639

1 hundred dollars, whereas, if -- when you are looking at 2 that, your offer to price for the new switch of being 149, 3 and that covers, say, to year seven, you're going to choose 4 the current thing because on a net present value it is 5 less?

WITNESS PETZINGER: Yeah, that's basically 6 7 exactly right. I would go year by year and say, you know, 8 what is my cost per line if I buy out of the replacement when I first buy the switch? What is my cost in year one 9 per line? What happens if I buy it today out of those 10 extra lines today versus buying it in year one and net 11 present value that back to today's dollars? Always the 12 13 comparison would be today's dollars. And you wouldn't start purchasing at the growth price until it is equal to 14 or less than in today's dollars, net present valued back to 15 the actual replacement price you have initially available 16 17 to you. BY MR. ROSS: 18 19 0 Let me ask you, the chart that you've identified on page 11 comparing the price per line --20 I'm sorry, are you in my testimony now? А 21

22QYes, page 11 of your testimony. Do you see that?23AYes, I do.

Q Those prices you've identified for NBA, for Pacific Bell, for Southwestern Bell, for Nortel/U.S. West
1 and for BellSouth/Lucent contract is the price on initial 2 placement of switch, correct? 3 Α Yes, that's correct. It's unclear about the 4 Sprint numbers. They may have been a meld of new and 5 growth pricing. And the number that --6 0 7 But the other numbers I understand to be new Α switch placement prices. 8 And the numbers that you have --9 0 Which is considerably lower than anything that А 10 we're using. 11 I'm sorry, I don't mean to interrupt. 0 12 The number that you've reflected as the element 13 used in the BellSouth cost study, that is also a melded 14 number of growth and initial placement; isn't that correct? 15 Α Are you talking about the last line? 16 Yes, ma'am. 17 0 Okay, I'm also avoiding numbers because they are Α 18 proprietary. 19 I'm just asking if that is a melded growth and Q 20 initial placement number. 21 That number comes directly out of BellSouth's 22 А study and would and does reflect the average price for a 23 Nortel and Lucent and whatever weightings BellSouth gave to 24 new and growth, that's correct. 25

Q All right. So that is -- you are comparing apples and oranges here in your chart on page 11, aren't you?

4 Α What I was trying to do is show what is the 5 average price per line that BellSouth is using in their 6 cost study, and I was comparing it to other switching 7 prices per line. In this case we are talking total switch investment divided by total lines. And I would say that 8 the relevant comparison is what is the number out of the 9 BellSouth study compared to other numbers we know represent 10 11 cost of switching. I would not say that they are apples and oranges. 12

13 Q So you would say --

14 A If they are, you've chosen to use the wrong15 numbers.

Q Okay. So you would say comparing a melded growth, an initial placement number against just strictly initial placement number is not an apples to oranges comparison?

A I see what you're asking me. I would say that, yes, it's an apples to orange comparison, but it is the only comparison we could make because you use the melded growth and new numbers. If we substituted the new number into -- just the new placement number in there, that would be a totally irrelevant comparison because BellSouth didn't

1 use that number.

2 0 Going back to vertical features for just a 3 minute. COMMISSIONER DEASON: Are you leaving to a 4 5 different subject? MR. ROSS: Yes, sir. 6 7 COMMISSIONER DEASON: Okay. Let me ask a 8 question. You just indicated in your answer to a previous question that if it was BellSouth's choice to use a melded 9 10 number and that perhaps that was incorrect and that obviously you feel that the per-line cost for a totally new 11 installation at the time is the more relevant price; is 12 13 that -- I'm sorry, cost; is that correct? WITNESS PETZINGER: Yes, that's right. 14 COMMISSIONER DEASON: All right. But it seems to 15 16 me -- and you in answer to a previous question, you also indicated that there needs to be an analysis of the 17 relevant cost of adding lines at a later time comparing 18 that to the cost of having it installed with the initial 19 installation, correct? 20 Right. 21 WITNESS PETZINGER: Right. COMMISSIONER DEASON: There needs to be some type 22 23 of a present analysis value of that. WITNESS PETZINGER: 24 Right. 25 COMMISSIONER DEASON: So that if you make the C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

decision that on a present analysis value it's cheaper to
 get some additional growth with the initial installation,
 that that perhaps is the economic decision.

WITNESS PETZINGER: Right. Now be aware though that those additional lines you are purchasing are the lines that would be purchased at the lower new switch price because you are buying it co-incidentally with the placement switch.

9 CHAIRMAN DEASON: But isn't there a carrying cost 10 of putting that up-front, making that up-front investment 11 so that there is an additional cost of having made that 12 up-front investment and that that economic cost is more 13 than what you have listed for the other contracts?

14 WITNESS PETZINGER: That's a good question. To 15 do a total life cycle cost is an extremely complicated analysis which is why none of these cost studies are based 16 17 on true life cycle costing. That is why they are snapshot in time cost studies. The life cycle cost that you are 18 talking about, if you were going to do that, you would 19 definitely identify, what is the additional carrying cost I 20 am carrying today? Let's say you buy two years worth of 21 lines that are sitting idle in anticipation of future 22 revenues. Now what you have to do is do a forecasted 23 24 revenue projection, bring back the revenues to today's 25 dollars, compare that to the cost and see if there is a

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

differential. It's an extremely complicated analysis when 1 2 you start getting into forecasted demand and revenues, and in most cases I have not seen that kind of a cost study in 3 4 any of these proceedings.

5 COMMISSIONER DEASON: It is complicated, and there are certain risks involved, are there not? 6 WITNESS PETZINGER: Yes. 7

If your forecasts do not 8 COMMISSIONER DEASON: 9 bear out and you anticipate a more rapid growth and you get the additional lines up front, and then you have to carry 10 that for a longer period of time without the forecasted 11 growth, there is a certain risk associated with that 12 13 possibility, isn't there?

WITNESS PETZINGER: Yes, I agree with that. 14 Yes. BY MR. ROSS: 15

Just to go back to the issue about the vendors. 16 0 If BellSouth were to go to Lucent and say I want the buy 17 one switch and I don't want to ever grow this switch, just 18 talking about initial placement, do you believe that Lucent 19 would give the price that you have quoted on the table on 20 page 11 as being the price under BellSouth's Lucent 21 22 contract? 23

А It's a very illogical hypothetical.

24 Q Well, just bear with me.

Α Could you repeat it again? 25

> C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

Q Yes. If BellSouth were to go to Lucent and say I 1 2 want to buy a switch and I'm not interested in ever growing this switch, is it your testimony that BellSouth could get 3 4 that switch for the price you have identified on page 11? Yeah, I do, unless they are breaking the law and 5 Α 6 selling under cost because they have the option to provide 7 you that switch or give their business to the competitor, whether it's growth or not. 8 Okay. So you do not believe that initial 9 Q placement costs or prices are lost leaders for switch 10 11 vendors as suggested by the Northern Business Information Systems? 12 No, I don't think they are necessarily saying 13 Α it's a total lost leader. Let me relook at that, that 14 15 phrase. (WITNESS REVIEWED DOCUMENT) 16 It doesn't say anything about being a lost 17 А It just says that they sell the new switch leader. 18 placement cheaper than growth. 19 20 0 Okay. But putting aside the phraseology "lost leader," you do not believe that initial placement prices 21 are a mechanism by which to entice the company to buy the 22 switch so that they can make higher margin sales on growth? 23 We are getting into areas now where you are 24 Α 25 asking me to contemplate how vendors structure their

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

pricing, and the only thing I can tell you is I have seen 1 situations where the contracts do not include separate 2 prices for new and growth, they are the same price. 3 So the answer is you don't know? 4 Q The answer is I don't know what a vendor would Α 5 6 do. Turning to vertical features. You accused 7 Q BellSouth of double counting specific feature hardware; is 8 9 that correct? Yes, that's correct. 10 Α Are special feature hardware included in the 11 Q 12 price per line reflected in the Nortel contract? I did not see any reference to that, nor did I 13 Α use the Nortel contract in my analysis. 14 15 Q To your knowledge, are special feature hardware included in the general contract with Lucent? 16 I don't remember seeing anything in there, but 17 Α 18 again, I didn't use that contract in my analysis. I used the newer contract that did include the feature hardware. 19 So if the Commission were to decide that the 20 0 Nortel contract and the general contract with Lucent are 21 the appropriate contracts to use in calculating switching 22 23 investment, you know of no reason to think there is any double counting going on, do you? 24 25 А Yeah, we were through this in the deposition, and

C & N REPORTERS TALLAHASSEE, FLORIDA (850)697-8314

1 I will agree with you that you would not classify it as a 2 double count in that particular instance; however, obviously it would be highly inflated because you are using 3 4 an older, more expensive contract for switching. 5 0 With respect to right-to-use fees, to your knowledge are right-to-use fees included in the price per 6 7 line reflected in the Nortel contract? 8 I don't know that. Again, I didn't use the Α 9 Nortel contract in the analysis. I don't remember what it said in that. 10 To your knowledge, were right-to-use fees 11 0 included in the price per line in the Lucent general 12 contract? 13 I believe there were some. I don't remember what Α 14 15 exactly. If the Commission were, again, to decide that the 16 0 Nortel contract and the Lucent general contract were the 17 appropriate contracts to use in BellSouth's cost studies, 18 would you have any reason to believe there is any double 19 counting of right-to-use fees going on? 20 Technically speaking, no, but obviously the costs Α 21 would be included using an older contract and then added 22 again separately in the feature cost that would highly 23 overstate the actual cost that BellSouth would be expecting 24 25 to pay.

Going back to your analogy to a computer, is it 1 Q your testimony that whenever an incumbent or any telephone 2 exchange company buys a switch that all the right-to-use 3 fees are included in that? 4 5 Α No, contracts vary significantly. 6 Q So it may very well be the case that even though 7 BellSouth buys a computer, that when, in fact, software is used that BellSouth has to pay a right-to-use fee 8 associated with that software? 9 I was referring to other contracts. In this 10 Α particular one it appeared to me that the features were 11 12 included up front. This would be the Lucent replacement contract? 0 13 That's right. Α 14 MR. ROSS: No further questions, Commissioner 15 Deason. 16 COMMISSIONER DEASON: Staff. 17 CROSS EXAMINATION 18 BY MR. PELLEGRINI: 19 Good afternoon, Ms. Petzinger. I'm Charlie 20 0 Pellegrini on behalf of the staff. 21 Good afternoon. Α 22 I think you've addressed most of our concerns in 23 0 responses to Mr. Ross and to Commissioners Deason and 24 Clark, but I just have one or two questions I think to be 25

absolutely sure we understand the basis for your
 recommended per line switching investment.

Now I think I understood you to state that essentially switches are priced on the basis of new switches and on the basis of growth switches; is that correct?

A Are you referring to my testimony or --

Q Yes, and --

7

8

9

A I mean my restatement?

Q Well, I'm referring to your testimony and to your
responses here today.

Okay. What I said was we incorporated the idea 12 Α of whether or not BellSouth should be paying higher growth 13 prices. We said that if you take the net present value, 14 that -- of the growth prices in future years, that the 15 highest cost that you would ever pay would be the price 16 that is identified at the initial switch placement price 17 because you would simply buy additional lines at that 18 So I said I included the concept but the actual time. 19 price I used from the contract was the new switch placement 20 price. 21

Q All right. That's one point that I wanted to establish, and I thank you for that, but what I was asking with my initial question is this, vendors typically offer switches under new switch terms and under growth terms;

1 would you agree with that?

2 А Yes, quite often they do. And did you say that the new, the prices under 3 0 4 the new switch terms are typically less than the terms under -- the prices under the growth terms? 5 А That's typically true, yes. 6 7 0 But it's not always true I think you said? 8 А Well, it's not always true that you see two 9 different prices. Sometimes they are the same. All right. And you disagree with BellSouth's 10 0 choice of using melded new and growth prices in 11 establishing this investment, correct? 12 Yes, I objected for two reasons. 13 Α Briefly recount those reasons, briefly. 14 0 Sure. One was my analysis of the net present 15 Α value, that an efficient provider would minimize their cost 16 if they know they are placing a switch today at a new 17 switch price, that they would buy enough lines at the new 18 switch price and not begin to pay the growth price until 19 the net present value of that growth price was equal to or 20 less than the new switch price. So I feel that the maximum 21 price they would ever actually pay in today's dollars, or 22 what they should pay anyway, would be the new switch 23 price. 24 The second item I objected to in their analysis 25

was the melding itself. They assumed that only the 1 getting-started cost of a switch was priced at a new switch 2 3 price, and even the first line on that switch they priced at the higher growth rate. That's incorrect, absolutely, 4 you know, without a doubt. There are definitely lines and 5 trunks that were purchased the same time as that switch 6 7 that definitely should have received a new switch price. 8 You can see that in the discount table. They use what they call the custom discount table in SCIS. 9 10 0 Just to be certain, again, of another point, on page 5, you -- or actually I think it was page 6, you 11 12 identified the contract, the Lucent contract which you 13 reviewed as a replacement contract? А Yes. 14 Does that contain what we are presently calling 15 Q new prices? 16 Α Yes. 17 New switch prices? 18 Q That's right. А 19 Just a final question. I think you 0 20 acknowledged -- you acknowledged to Mr. Ross that you 21reviewed -- the replacement contracts which you reviewed 22 were specific to certain central offices? 23 It was one contract that laid out all the new Α 24 switch purchases that BellSouth was buying over all of its 25

1 territory.

Q Was it apparent why those contracts were specific or why that contract was specific to certain central offices?

5 A I simply assumed that it was because they were 6 buying a fairly good size number of switches at one time in 7 their planning period, that they could go to the vendor and 8 negotiate a better deal than the older, you know, sort of 9 off the shelf type contract.

10 Q And I think you said that in your view at least 11 those prices should be generally applicable?

12 A I would say that given a ten-year depreciation 13 life for switching, as the rate of replacement switching 14 continues, that they should be able to continue those kinds 15 of prices.

MR. PELLEGRINI: Thank you, Ms. Petzinger, that's all the questions we have for you.

18 COMMISSIONER DEASON: Commissioners.

19 (NO RESPONSE)

20 COMMISSIONER DEASON: Redirect.

MR. HATCH: Just a small portion.

REDIRECT EXAMINATION

23 BY MR. HATCH:

21

22

Q Ms. Petzinger, I expect you recall numerous questions regarding the contents of the switch vendor

1654 contracts that you have reviewed at BellSouth's 1 headquarters. Do you recall those? 2 А 3 Yes. Do you know whether those contracts were filed 4 Q 5 before this Commission in this proceeding? No, they weren't. We had to go to BellSouth's 6 Α 7 offices to review them. If BellSouth had submitted those contracts, would 0 8 it be easier for the Commission to assess the validity of 9 your assertions regarding those contracts? 10 Α Oh, absolutely. 11 MR. HATCH: No further redirect. 12 COMMISSIONER DEASON: Okay. Exhibits. 13 MR. ROSS: BellSouth would like to move exhibit 14 59 into the record. 15 COMMISSIONER DEASON: Without objection, exhibit 16 17 59 is admitted. MR. PELLEGRINI: Staff moves exhibit 58. 18 COMMISSIONER DEASON: And without objection, 19 exhibit 58 is admitted. 20 MR. HATCH: May Ms. Petzinger be excused? 21 COMMISSIONER DEASON: Yes. 22 WITNESS PETZINGER: Thank you. 23 COMMISSIONER DEASON: We are going to take a 24 lunch break, and we will reconvene at one o'clock. 25









PSC DOCKET NOS. 960757, 960833 & 960846-TP, VOLUME X . administrative 1575:25 1571:17,19 1572:14 1574:8 1575:18 1576:1,22,25 1577:3, 8,10,21 1578:18 1580:17 1581: 1585:10 1586:12 admitted 1587:14,17,22 adopts 1571:21 companies 1568:9 1571:4 company 1567:16 1577:16 94 1582:25 **'95** 1582:14,19 **'96** 1582:25 advocated 1574:12 18 1582:11 1586:25 1589:8,8 1579:9 advocating 1582:7 after 1573:16 1582:16 1588:6 BellSouth's 1567:17.21,23 comparable 1581:7 compare 1581:10 1583:24 '97 1583:16 1568:18 1569:5,19,21 1570:23 1576:21 1578:7,8,11 1579:12 again 1578:9 \* compared 1583:18 agree 1582:8 1583:20 1585:19 1580:5 1582:5 1586:23 1589:4 comparing 1582:12,25 \* 1588:3,3,3,3 agreed 1577:8 below 1585:16 1586:1,19 comparison 1581:3 1582:4,4 ahead 1589:22 benefit 1569:1 competing 1568:9 1571:4 competitive 1568:2 1569:7,9, aid 1573:4 best 1581:24 almost 1570:17 better 1576:15 1580:7 1581:6 10.4 1580:8 16,18 1571:13 1586:17 ALR-12 1572:5 ALR-4 1571:5 10.4% 1574:12 1581:24 1585: between 1580:15 component 1569:2 1570:16, broad 1577:5 11,13 18 aiready 1572:15 altogether 1573:15 among 1576:22 brought 1578:16 1582:15 BS 1585:7 components 1568:24 composite 1567:5 concerned 1575:15,17 11 1589;7 12 1588:23 BST 1585:4,5,16,23 1586:1,12 13 1567:15 amounts 1569:3 19 concerning 1581:25 conclude 1578:23 1583:6 1994 1574:13 1582:24 1585:8. analysis 1578:5,10,22,25 building 1577:24 built 1582:14 8.17.20,22 1586:1.4.17 1580:4 1581:23 1582:11 1995 1582:12,13,21,22 1583:2 concluded 1567:24 1576:25 Another 1569:21 1570:9 answer 1574:17 1575:10 business 1575:1 1577:7 concludes 1571;24 1996 1582:15.17 1583:14 1576:15 1580:13 С conclusion 1580:4 conducted 1581:23 1588:23 1589:4,6 answered 1577:11 1997 1574:9 calculate 1581:5,17 answers 1567:8 1589:16 calculated 1568:13 1569:25 confidential 1573:9,13 appear 1577:2 2 1570:19,21 1575:18 1580:5.18 confirm 1589:18 appears 1586:22 1581:18 confirmed 1568:3 1569:23 279 1588:12 apples 1581:3 consequently 1571:20 calculation 1567:21 1581:12 applicable 1567:19 3 calculator 1577:23 conservativeness 1581:15 applied 1575:6 1576:13 1577: considerably 1569:19 consideration 1578:6,7,11 call 1587:25 3 1571:5 called 1588:6 apply 1568:17 1575:1,2,5,8 1581:4 32% 1582:7 1583:6 considered 1575:24 1576:2,9 can 1579:12,13 1580:22 1577:24 1578:4 can't 1571:18 1576:13 1581: 4 applying 1568:13 approach 1581:3 considering 1571:22 consumers 1568:7 1571:22 10 1583:23.23 4 1584:23,23 cannot 1568:3 1569:23 1579: appropriate 1580:8 1582:23 1583:13 1584:10 contains 1572:5 1584:25 14 5 capacity 1588:14 case 1570:5 1575:1 1576:1 1585:16 aren't 1567:25 1575:24 1576:2 5.30% 1581:19 copies 1572:22 around 1574:8 50 1570:17 cases 1569:3 1570:17 1575:7 coporate 1586:9 Art 1567:15 copy 1572:17 1579:25 1584: 50% 1569:4 categories 1575:21 1585:24 Aside 1571:9 55 1567:5 1587:12,14 192 Catherine 1587:25 1588:5,12 ask 1572:3 1578:9 1582:2 56 1572:9,13,21 1573:11 1587: cause 1588:16 corporate 1585:9,10 1586:2,5, 1584:10 15,17 causes 1570:24 **correct** 1573:11 1574:6,9,13, 22 1576:18,23 1577:1 1578:8, 12 1583:4,9,12 1585:5,11,12, asked 1567:7 1582:10 1584: cells 1580:22 57 1573:9 1587:18,22 11 1589:15 center 1589:7 asking 1577:6 1584:12 1585:1 6 certain 1573:15 assigns 1568:14 Certainly 1588:23 1589:1 change 1589:5 14,20,24 1587:2.6 1589:13,14 **6** 1580:3 Assuming 1585:23 AT&T 1574:7,11,13 1576:3,6 1581:5 1585:8,8,20 1586:4,13, corrections 1588:19,21 6.4 1580:7 changes 1582:12 1588:19 1589:10 correspond 1585:24 1586:4,8 6.4% 1583:24 1587:4 corresponds 1585:19 16 1587:25 1588:6,15 1590:2 cost 1567:16,18,23 1568:3,4, check 1580:9 13,16,23 1569:2,11,23 1570: 10,11,16,19,23 1571:8,11 attached 1573:10 1589:12 choices 1578:8,12 7 1582:4 attachment 1571:4 chose 1582:19 1574:4,8,12,15,21,24 1575:4,4, 12,12,14,15,18,23 1576:4,5,5, 12,17,18,21,23 1577:1,8,13,14, attachments 1571:9 CLARK 1575:10 1579:20 1580:2 1582:2 1583:3,10,13 8 attempted 1575:20 8 1580:4 attribute 1575:20 16,22 1584:6,9 1585:1 1588:25 attributed 1580:23 15 1578:1,6,11,19,24 1579:1, 1589:5 9 attribution 1570:23 1575:19 Clark's 1584:13 clear 1573:13 1574:17 13 1580:4,16,18,20,24,25 1581:8,9,18,19,20 1582:1,5,14 1583:1,7 1585:11 1586:12,23 9 1588:23 1580:25 available 1571:19 1581:25 9.7% 1586:15 column 1586:7 Avenue 1588:13 1587:1.1 columns 1585:3 Α average 1582:7 **costs** 1567:22 1568:2,5,5,12, 14,15,17,19,21 1569:7,10,14, 15,16 1570:4,12,12,23,25 come 1577:14 1580:10 able 1575:22 1579:11 about 1568:10 1569:4 1572:15 comes 1576:10 Commission 1570:9 1571:19, 1571:137,24 1574:25,25 1575:2,5,6,8,20,20,23,25 1576: 1,2,9 1577:15 1578:2 1579:1,4 back 1582:20,22,23 1583:3,6 barriers 1568:9 1571:3 1576:3 1581:7 1585:1,14 20,21 1581:22 Absolutely 1583:20 1584:5 accept 1571:20 COMMISSIONER 1567:4 based 1568:1 1569:13 1570:3 1572:1,2,8,11,13,25 1573:1,3, 8,19,20,23 1575:10 1579:16, acceptable 1567:25 1572:23 acceptance 1568:5 1577:17 1579:1,2 1581:13.14. 1580:19,20 1581:10 1582:7,13, 19.20 1580:2 1582:2 1583:3 17 1582:6 1583:2 14,22,24 1583:5 14 1584:1,2 10,13,16,22 1584:6,7,9,12,13, accepted 1569:6,22 basis 1567:22 couple 1588:21 accounting 1568:15 accounts 1580:23 Basking 1588:13 creates 1571:3 1581:13,14 15 1585:1 1587:7,9,11,13,16, because 1568;7,23 1569:8 1571:12,23 1572:19 1573:17 21 1588:25 1589:5.18.22 1590: credence 1580:11 accuracy 1568:2 1569:22 actual 1568:25 1583:14 1586: criticized 1576:21 1.5 cross 1571:25 1574:2 1584: 1581:2 1582:10,18 1583:10 Commissioners 1567:14 13,17 1585:14 1584:1 1579:19 actually 1579:12 1585:3 ad 1571:2 before 1568:10 common 1567:18 1568:3.4.13 current 1577:15,18 1578:3,18, 1569:23 1570:10,11,19 1571: 11 1574:12,15,21,24,25 1575: 4,12,14,18,23 1576:2,4,5,9,12, behalf 1574:7 1588:6 23 address 1588:11 believe 1584:25 currently 1577:3 Bell 1589:9 adjusted 1571:15 1578:17 17,21 1577:13,14,15 1578:1,6, 11,19 1580:4,16,20,24,25 adjustment 1571:6,9 Bell's 1581:19 1589:3 adjustments 1571:10,14,22 BellSouth 1567:25 1568:6 11, dash 1589:8 1577:16,19 1578:3 1582:17 21 1569:17 1570:6,10,15,22 1581:8,9,20 1582:1,5 1584:2 data 1570:1,1,2,6 1571:18

PSC DOCKET NOS. 960757, 960833 & 960846-TP, VOLUME X 1574:13 1582:19 1585:4.5 exchange 1567:16 1568:9 guess 1579:21,21 1587:18 1586:20 later 1572:23 1571:4 days 1573:16 DEASON 1567:4 1572:1,2,8, least 1569:11 1574:8 1576:23 1577:1,8 1578:23 1579:13 excuse 1585:7 Н excused 1587:23 hand 1589:24 12,13,25 1573:3,8,19,20,23 1579:16,19 1584:7,12,15 1587: least-cost 1579:3 executive 1568:14 1569:15 left 1576:15 Lerma 1567:7,11,15 1572:18 happened 1582:20 1575:25 happening 1582:18 HATCH 31:1 1567:6 1571:25 1572:15 1573:1 1584:8 1587: 7,9,11,13,16,21 1589:18,22 exhibit 1567:5 1572:3,5,9,21 1573:21,22 1574:4 1575:11 1576:20 1579:5,21,23,25 1580: 13 1582:9 1583:9,12,15,20 1584:4,11,19 1587:23,24 Lerma's 1567:1 1572:7 less 1585:9 1586:7,9 1590:1.5 1573:4,9,11 1580:3 1584:22,25 decided 1581:22 1587:13,16,18,21 10,12,25 1588:9 1589:11 1590: decline 1583:6 exhibits 1567:2 1572:6,7,16 define 1574:24 19,19,20 1573:9,13,18 1587:11 Hatfield 1574:14 1576:11,13 defined 1576:17 deleted 1588:24 1589:12 1580:5 1581:7,8,12,15,21,24 existing 1579:12 expected 1577:20 Let 1577:11 1580:13 1582:2,9 1583:3 1589:18 1583:24 1585:4,7 deposition 1572:5,6,7,7,16 here 1572:22 1581:6 1585:3 depreciation 1571:2 expense 1578:14 1580:6 1586:22 let's 1576:3 1589:22 derive 1585:10 1586:2,5,8 high 1568:8 derived 1574:12 1586:11 describe 1574:21 1586:16 level 1569:17 1583:17 expenses 1567:19 1568:18 higher 1571:23,23 1581:1 levels 1582:8.15 1569:15,18,19 1570:24 1571: like 1568:14 1569:15 1571:1 historical 1569:14 1578:2,20 description 1586:6,10 12,15 1585:9,10 1586:6,9,13 1572:20 1575:25 1579:1 1582:6,8 1583:5 1585:4 detailed 1580:22 13,24 1587:2 likely 1569:19 line 1569:25 1588:23 1589:4 1586:12 1587:1,1 expertise 1579:5 explain 1577:11 1582:9 determine 1567:19 hopefully 1589:2 How 1570:12 1575:17 1577:21 1582:14,23 1586:20 detrimental 1568:7 loadings 1569:1 local 1567:16 1568:9 1571:4 developed 1577:22 1583:7 explained 1578;13 development 1567:17,22 1570:14 1576:11 explanation 1583:23 however 1581:22 long-run 1569:8 explanations 1568:10 longer 1570:4 look 1582:13,17,20 1583:1,17 hurt 1571:22 didn't 1580:18 1581:5 extensive 1575:19 difference 1580:14 different 1568:24 1577:21 extent 1575:21 looking 1582:16 lot 1580:19 extrapolations 1570:1,2,7,8 l'd 1572:20 1581:2 1582:3 1584:3 Louisiana 1572:17 identification 1567:3 difficult 1569:24 lower 1569:20 1581:14,17 1582:7 1583:17 direct 1568:25 1569:4 1588:8 directly 1585:20 1586:4,9 identified 1567:4 1572:8 1576: facets 1575:1 fact 1578:13,25 identify 1568:21 immediately 1585:16 disagree 1580:12 1582:8,9 factor 1568:13 1569:3 1574: 12,15,16,21 1575:18,23 1576: M discuss 1580:16 important 1568:23 ma'am 1583:15 Dismukes 1572:17 1573:10,16 4,5,6,12 1578:6 1580:5,6,7,16, made 1571:19 1573:16 1582: improvements 1569:9 district 1588:15 18,24,25 1581:4,9,14,16,16,18, 19,20 1582:1 1585:11 1586:12 inadvertently 1588:24 16 1587:4 dockets 1574:8 inappropriate 1583:1 include 1568:24 1569:2 1571: 12 1572:19 1580:18 1582:22 factoring 1578:14 factors 1567:18,18,19,25 1568:6,11,13,16,20,20 1569:5, 6,13,21 1570:10,19,21 1571:6, 8,16,18,21 1577:15,23 1580:21 make 1572:20 does 1570:12 1585:2 1586:4,8 manager 1588;15 Many 1569:24 Maple 1588:13 marked 1567:2 1572:4 1573:4 1589:3 doing 1580:9 Don 1574:16 included 1567:15 1573:17 1574:15 1575:23 1580:20,24 done 1580:25 includes 1580:16,17 may 1576:1 1577:24 1579:21 down 1587:4 1581:8 1582:5,6 increases 1570:17 indicated 1580:8 1584:15 downward 1571:13 fairly 1577:5 far 1575:15,17 1582:23 1583: maybe 1579:22 1582:2 drive 1587:4 duly 1588:7 1589:25 during 1585:14 duties 1567:15 individual 1575:21 mean 1575:16 6,10 industry 1586:17 inflation 1571:12,16 meant 1577:12 fatcor 1584:3 MELSON 1573:3,23,25 filed 1572:17 1587:19 1588:16 information 1581:13,14,25 mentioned 1580:15 finance 1568:15 1569:15 initially 1582:19 inputs 1568:3 1569:23,25 mid 1574:9 find 1580:22 might 1577:19,22 1583:25 each 1567:20 1568:15 fine 1573:1,7 inserted 1590:3,6 mind 1576:10 earlier 1570:13,16 1576:8 First 1568:1,10 1569:8 1574:4 Instead 1569:13 1571:7 1582: minor 1588:21 1580:15 1580:14 1582:8 misrepresented 1585:23 model 1568:3,4 1569:23,24 1570:11,20 1571:11 1574:14 18 1587: economic 1579:4 fixed 1571:18 intended 1576:14,16 1581:9 efficient 1576:23 1577:1,9 Florida 1574:11 1577:4,10 intent 1572:23 1587:19 follow-up 1584:10 followed 1583:23 follows 1588:7 1578:24 1579:13 1575:19 1576:11,13,21 1577: 13,14 1578:1,11,19 1580:5,10, 11,22,22 1581:7,8,15,21,24 1583:25 1585:4,8 investment 1575:21 1577:22. element 1567:20 24 elements 1568:16,17,19 1575: investments 1568:12 1580:23 3,6,7,9 forward 1570:5 1582:12.18 involve 1579:3 forward-looking 1569:17 1578:17 1579:3 1580:6 1582:1 embedded 1569:14 1578:20 involved 1576:11 model's 1569:24 1579:1 modern 1577:19 1578:15 employed 1588:14 end 1582:17 6 1583:7,18 monopoly 1569:10,20 month 1570:3 Friday 1572:23 1587:20 Jersey 1588:13 engender 1579:21 further 1579:15 1584:12 17 months 1570:4 engineering 1568:18 1579:6 enough 1579:2 more 1570:4 more 1568:17 1569:10 1575:5 1578:15 1579:21 1583:13 morning 1567:14 1573:21,22 most 1575:7 1576:23 1577:1,9 1587:8 κ future 1577:20 KEATING 1572:1,3,10 1579: entries 1585:4 entry 1568:9 1571:3 1585:7,16 1586:1,19 G 17 1587:15 keeping 1573:5 key 1570:13 Kimberly 1572:17 kind 1578:2 gather 1580:2,8 1583:25 1578:24 1579:13 environment 1569:9,11,12,16, motor 1570:22,25 general 1575:24 18,20 1571:13 Generally 1574:25 1575:13 1576:19 1578:20 1580:17 Move 1587:12,18 estimate 1583:18 evaluated 1567:17,20 moved 1580:20 know 1576:10 1579:2 1581:9 generated 1570:18 moves 1587:15 1582:23 ever 1579:8 give 1567:13 1579:23 1581:4 1588:22 MS 1572:1,3,10 1573:16 1579: 17 1587:15,18 1588:10 1589: everybody 1572:24 evidence 1570:7 1578:16 gives 1580:11 glad 1582:10 Good 1567:14 1573:21,22 19 1590:3 exactly 1577:11 EXAMINATION 1574:2 1584: labor 1567:21,21,25 1568:6, 11,20,22,24,25 1569:3,4,5,7, multiple 1568:19 17 1585:14 1588:8 13,21 1570:10,13,15,17,18,21 Ν 1580:1 1571:6,15,18,21 largely 1569:13 last 1567:15 1586:7 example 1568:18 1569:14 1570:23 1581:4,19 got 1589:2 name 1567:14 1588:10,12 necessarily 1576:8 1580:18 network 1567:20 1568:16,19 gross 1585:8,17,20,22 examples 1568:18 group 1575:3,8 late-filed 1572:6.16

1571:14 1575:2,9 1578:21 populate 1582:19 reflected 1578:19 Southwestern 1589:3,9 new 1569:12 1588:13 populated 1582:24 reflecting 1582:22 reflective 1569:11 speaking 1574:25 1575:13 1576:19 1578:20 newer 1577:19 1578:3,15,17 nomralized 1582:15 portion 1570:15 prefiled 1589:16 1590:2 reflects 1571:5 regard 1576:16 specific 1567:18 1571:16 nonrecurring 1567:22 1568:5 8,23 1570:12,14,25 1571:3 prepare 1588:16 specifically 1576:14 1577:13 pressure 1569:10 pretty 1580:10 region 1574:8 1580:3 Normalize 1583:16 Reid's 1579:23 1580:9 1581: Staff 1572:3.4 1579:16.17 normalized 1582:24 normally 1575:5 1576:2 North 1588:13 previously 1576:4 1589:20 price 1568:22 1589:3 13 1584:20 1587:15 reject 1570:9 stand 1589:23 prices 1567:23 rejected 1570:22 starting 1582:13 1583:2 starts 1583:10 Now 1567:223 1587:19 Now 1567:24 1568:23 1574:21 1576:20 1577:21 1578:18 1582:20 1585:3,7,16 1586:19 pricing 1589:4 relate 1583'3 primarily 1577:15 1578:2 probably 1576:15 related 1568:12 state 1588:10 relationships 1586:23 stated 1570:13,16 states 1574:11 problems 1571:17 1581:20 reliance 1570:1 1589:23 proceeding 1567:17 1574:4 removal 1571:12 studies 1567:16,23 remove 1571:16 number 1572:11 1574:7 1576: 1588:17 study 1582:14 subject 1587:19 6 1585:13 1586:11 1587:4 process 1570:24 1575:19 removed 1589:6 numbers 1577:13 1581:11,13 produce 1570:8 submit 1573:14 submitted 1572:18 1573:16 repeat 1588:25 1585:1,22,23 1586:20 produces 1580:6 replace 1581:11.12 productivity 1569:8 project 1570:4 replaced 1586:25 1589:9 request 31:1 1590:2 submitting 1572:22 Г projected 1571:12 1586:19,24 1587:2 substituted 1581:21 objection 1572:25 1573:6 respect 1575:17 1576:6 1577: suggest 1578:3 1587:13,16,21 1590:5 occur 1570:13 suggest 1578.5 suggests 1581:23 summary 1567:10 1571:24 support 1589:4 17 1581:16 result 1567:24 1568:8 1584:13 results 1570:8 1583:17 projections 1580:6 propose 1572:22 proposed 1580:10 1582:5 occurred 1582:11 revenue 1585:9,17,20 1586:7, oepration 1585:10 sure 1577:6 proprietary 1572:20 provide 1577:4 1579:13 1584: 9,12,14 off 1569:25 1580:14 switched 1589:3 sworn 1588:7 1589:19,20,25 synonymous 1576:17 revenues 1585;8,22 offer 1579:11 review 1567:16,24 1577:25 Okay 1578:5,22 1580:2 1583: 22 1584:6,22 1585:3 1586:1,7, 19 provides 1570:7 reviewed 1577:12,25 synonymously 1576:6 purchased 1579:8 16.19 1589:22 revised 1573:18 One 1568:24 1572:4,15 1581:4 purposes 1581:24 revisions 1573:16 Ridge 1588:13 right 1576:3 1589:23,24 put 1582:12 1586:20 1582:10 table 1589:7 only 1571:10 1589:9 talk 1576:3 1581:6 talked 1572:15 G operating 1571:14 operation 1585:9 1586:9 S talking 1585:13 taxes 1571:2 quantify 1571:11 operations 1586:2,5,8,13 question 1574:18 1576:8 said 1576:9 1580:17 1582:20 1583.4 technology 1569:12 1576:23 1577:1,3,9,10,18,19,25 1578:4, opinion 1576:22 1577.10 1577:5,9 1578:9 1579:20 1582: 3,10 1584:10,11 1589:2 questions 1567:7 1573:24 salaries 1568:14 1569:1 same 1567:7,8 1575:4,7,12,16 1586:6 1589:2,15,16 1579:11 oranges 1581:3 7,8,12,15,17,18,23,24 1579:3, 1579:15,17 1584:13 1587:8 order 1568:11 8.12 sanity 1580:9 say 1570:1 1575:18 1577:21 other 1571:17 1574:11 1576: 22 1577:24 1581:4 1589:15 telecommunications 1579:9 tell 1576:13 1583:4 TELRIC 1568:23 1570:13,15 R ought 1582:1,16 out 1568:22 1571:6 1580:10 1581:11 1582:18 1583:22,23 saying 1583:5,25 says 1580:3 1582:3 1585:21, raise 1589:23 1577:22 outside 1579:5 tender 1571:25 Raley 1589:8 rate 1569:4 1570:17 term 1575:14 terms 1583:6 overhead 1568:14 1569:14,18, 22 1586:15 1589:3.8 rates 1567:21,21,25 1568:6,8, 11,22,24,25 1569:5,7,13,22 1570:11,13,14,15,25 1571:1,3, 15,18,21,23 Second 1568:2 19 1571:15 1575:12,15 1576:5, test 1569:24 see 1578:15 1585:17 1586:2 18 seeks 1568:21 tested 1570:9 overheads 1576:10 1580:17, testified 1574:5,7 1588:7 testimony 1567:2,10 1571:5, 10 1572:16,18,19,21 1573:10, separate 1573:4 1578:25 19 service 1579:13 1586:23 overstated 1569:17 rather 1586:13 read 1590:4 own 1575:19 1578:25 services 1577:4 set 1568:8,20 11,17 1574:16 1576:20 1579; really 1583:5,7 reason 1569:21 1570:9 1584:2 several 1568:1 24 1582:3 1584:20 1588:17,20 1589:8,13,16 1590:3 package 1573:15 page 1571:5 1580:4 1582:4 1584:23 1588:23 1589:1,7 shall 1590:5 reasonable 1570:8 shared 1567:18 1568:2,4,16, 19,20,21 1569:2,2,23 1570:10, Thank 1572:10 1573:20 1574: 1,20 1584:16 1587:7,23,24 reasons 1568:1.5 rebuttal 1567:2 1579:24 1580: 9 1582:3 1584:20,22 1588:17 11,16,18,19,21 1571:6,7,11 1575:4,5,6,8,20 1576:21 1577: 12,14,14 1578:1,6,10,19 1580: that's 1572:23 1573:1,7 1574: pagination 1589:2 6,15 1577:5,12,21 1580:14 1581:21 1583:9,12 1584:4 part 1572:21 1573:11 1574:16 1590:3 1584:4 recognize 1571:14 parts 1580:14 20 1581:8 1582:5 1584:1 1585:12,13,21 1586:10 1587:6 recommended 1571:5 pay 1571:23 per 1589:3 shifted 1571:7 1584:1,2 1589:9,14 record 1573:12 1574:17 1588: short 1570:3 they've 1580:10 1583:7 1584: 11 1590:4 Should 1569:5,6,22 1570:9,22 1571:20 1579:25 1588:24 recover 1568:16,22 1571:23 percent 1570:18 percentage 1586:11,24 perfectly 1573:12 period 1570:4 thing 1575:4,12,16 1581:9 1589:6,8 things 1575:15 1576:22 1582: recovered 1570:24.25 recovery 1571:1,2,7 recross 1579:22 shows 1581:15 1582:6 think 1577:7 1580:15 1581:11, 14,16 1582:25 1583:4 significant 1569:25 1570:15 periods 1570:3 1583:8 recurring 1568:4,7,12,16 1570:12,24 1571:1,1,2 permitted 1584:15 significantly 1581:17 since 1574:9 1582:20 third 1568:3,20 person 1581:6 those 1568:24 1571:7,10 1573:17,17 1575:2,15 1577:23 1583:1 1585:22 1586:20 though 1583:22 1590:4 Personally 1578:22 Petzinger 1587:25 1588:5,10, 12 1589:1<u>.6,19</u>,25 1590:3 redirect 1579:22 1584:7,8 six 1583:24 1587:9,10 reduce 1569:10 smaller 1575:3,8 some 1568:4,10 1569:3 1570: 17 1573:14 1575:22 1576:1 reduced 1569:16 1571:14 phrase 1576:5 three 1570:5 1585:3.4 place 1578:21 reductions 1578:14 1582:21 1577:16 1582:21 1584:1,2 somebody 1579:23 planning 1569:15 1575:25 plant 1567:18 1571:16 1579:6 time 1570:3,5 1572:4,14 1578: 1583:1 reengineering 1577:16 refer 1569:3 title 1588:23 today 1567:8 1589:16 together 1586:21 someone 1584:19 please 1567:13 1574:24 1588: referring 1570:2 1574:14 reflect 1568:25 1569:7,8 1571: sometimes 1575:22 10,22 1589:23 sorry 1577:5 1578:9 sort 1580:9 point 1581:2 1582:13 1583:2, took 1578:6,7,11 1582:14 10 1577:17 1578:2



	afternoon 1649.20.22	attention (007.00		
	again 1618:16 1638:3.18	available 1621:22	5 1640:11 1644:7 1652:25	-
1 1617:10	1645:25 1647:18 1648:8.16.2	3 average 1641 23 1640 5	1653:6	
11 1640:20,22 1642:2 1645:2	1 1652:10	avoidable 1632 16	buys 1649:3,7	
1646;4	against 1642:17	avoiding 1641:18	C	
12 1614:14	agree 1621:7,13 1630:10,19	aware 1624:15 1644:4		_
149 16/0.2	1631:10 1632:8 1635:23,24	D	calculation 1636:00	
150 1639:23	1040.14 1048(1 1651(1 allocated 1615:16	<b>D</b>		
1992 1622 20 1624 10 22	allowed 1622-24	back 1619:21 1632:1 1636:8	call 1634.11 1652.9	
1625 4 1626 18 1630 3	allows 1620-22 1624-10	1639:24 1640:12,15 1643:2	called 1615:11 1625:25	
1994 1627:24 1628 19	aiready 1616 13 17 1617 15	1644:24 1645:16 1649:1	calling 1615:21 1616:3 1652	
1996 1630:8	1639:11	packground 1614:13	15	
1998 1617:9	although 1626:6 1631:14	Dase 1615:24 1619:4,8,9	calls 1618:11	
1999 1627:24 1628:19	always 1626:2 1629:9 1640:1	2 hared 1620:17 1005-0 1000 1	can 1619:7 1626:15 1628:9,13	
<b>1A</b> 1630:17	1651:7,8	1644.16	1629:24 1631:11 1633:3 1634	
	- amount 1615:13 1618:4	hasic 1616:5 17 1619:15	21 1635:1,16,21 1637:4 1638:	
	analog 1630:11,17	basically 1617:17 1634:15	8, 16,22 1639:18 1646:23 1647:	
24 1622:9	analogy 1616:8 1617:14 1649	1640:6	can't 1622.0	1
25 1622:9		basis 1629:13 1638:13 1650:1	capability 1634:12 1637:00	
3	- analysis 1020:21 1033:7,16	4,5	Capacities 1621.18	
<u> </u>	- 1643:17 22 1644:1 16 1645:4	bear 1645:9,24	capacity 1634:8	
3% 1633:10	1647 14 18 1648 9 1651 15 26	because 1614:21 1615:22	capitalized 1619:2	1
3-37 1628:18	and/or 1635 16	1618:6 1619:4 1623:4,23 1626	captive 1628:13	ļ
3.5 1627:24	another 1634:2 1652 10	20 1632:13 1633:2,8 1637:13	care 1635:12	
Δ	answer 1622:1 1643:8.16	1038:21 1640:4 1641:18 1642:	carry 1645:10	1
A mine 1014.0	- 1647:4,5	1650-18 1652-5	carrying 1644:9,20,21	ł
4-WIFE 1614:9	answered 1639:8,16	before 1614:12 13 14 1617:12	Case 1614:20 1619:4 1642:7	
5	answers 1620:16,17	1654:5	1049.0 Caros 1645-9	ĺ
E 1600-7 1650-11	anticipate 1645:9	begin 1617:13 1651 19	categony 1625-22	I
5 1022.7 1002.11	anticipation 1644:22	beginning 1622:19	Cathy 1614.7	Į
50% 1615 8	anytning 1631:23 1641:10	begins 1628:11	causation 1618 18	L
58 1617:12 1654:18 20	1040.17 1047.17	behalf 1649:21	caveat 1621:15	L
59 1628:22 23 1654 15 17	annarent 1653-2	believe 1622:5 1627:8,23	Central 1627:5 1630:21.25	L
5E 1621:11 1622:8 1630:2	appear 1627:21	1628:22 1630:7 1632:12 1635:	1631:12 1632:4 1652:23 1653:	L
	appeared 1625:9.12 13 1649	10,15 1645:19 1646:9,21 1648:	3	
0	11	helieved 1620:00	CEP-1 1617:8	
6 1652:11	appears 1624:8 1625:6	Bell 1640:25 25	Certain 1645:6,12 1652:10,23	Į
	apples 1634:1 1642:2,11,18,	BellCore 1614 11 14 17	Certainly 1614-6	
	21	BeilSouth 1614:10.10.20.23	Chairman 1627 13 1644 0	
7 1620:13	applicable 1653:11	1615:6.8.15.18 1616:15.21	change 1635 2 1636 14	
A	application 1626:23	1618:10 1619:6 1621:19.22	characterize 1631 13	L
A	applied 1631:2	1622:3,15 1623:4,16,21 1624:	charge 1616:19 1618:4.5	L
ability 1617:23 1618:10	apply 1037.2 1038.8	6,15,20 1625:2,7,21 1626:2,16	charged 1618:16	L
able 1621:21 1626:11,23	1635 6 8 1636 18	1629:11,12,14,22 1630:1,3,7,	Charlie 1649:20	l
1629:19 1631:17 1653:14	appropriate 1619:2 1626:15	12,24 1631 11,16 1632 1,5	chart 1640:19 1642:2	
about 1614:8 1618:9 1621:6	1632:19 1633:10 1647:22	1033:2 1034:10 1035:16 1636:	cheaper 1636:6,17 1638:5,24	
1022.14 1025.7 1020.14 1027.	1648:18	1639:6 1641:14 24 1642:5 10	1639:4 1644:1 1646:19	
1637.22 1641.3 16 1644.19	appropriately 1616:14	25 1645 17 1646 1 3 1647 8	choce 1643:9 1651:17	
1645 16 19 1646 17	approximately 1615:7	1648:24 1649:7.8 1650 13	chosen 1642:14	
absolutely 1614:21 1626:19	area 1627:9 1633:11	1652:25 1654 8 14	circuits 1615:21 1616:2	
1633:17 1650:1 1652:4 1654:	areas 1633:20 1646:24	BellSouth's 1615:2,3 1620:14.	circumstances 1637-23	
11	aren't 1642:2	16 1621:6,7 1622:13 1626:10	clarifying 1617:13	
account 1616:21 1638:1,19	aigue 1000.10	1641:22 1643.9 1645:21 1648:	CLARK 1619:7,12,19,25 1620:	
accurately 1624:21 1625:2	20	18 1651:10 1654:1,6	3,6,10,12,22 1639:18 1649:25	
accused 1647;7	ask 1617;7 1619:13 1620:6 12	BellSouth/Lucent 101114	classify 1648:1	
acknowledge 1627:8	1638:7 1639:19 1640:19 1643	better 1637:8 12 1650:0	ciear 1632:21	
21 21	7	between 1623:21 1626:22	CD 1028.13	
actual 1629 19 1640 16 1648	asked 1639:16	bid 1626:11	coincidentally 1623.6	
24 1650:19	asking 1619:12 1632:2 1641:	bids 1629:20	combination 1621:10	
actually 1616:15 1618:1 1622;	20 1642:20 1646:25 1650:23	bit 1621:5 1627:3	come 1626:17 1633:23	
5 1632:20 1637:16 1639:2,4	assentions 1654:10	break 1654:25	comes 1616:8 1617:19 1641:	
1651:22 1652:11	associated 1618:14 23 1632	breaking 1646:5	22	
add 1625:15 1629:5 1633:5	24 1639:15 1645:12 1649:9	<b>Drierly</b> 1651:14,14	coming 1614:13	
add-on 1628:8,14,15,17	assume 1623:12 1626:9 1632:	brought 1619:5	Commission 1647:20 1648:16	
22	14 1638:13	build 1637:20	COMMISSIONED 1017.4.0.4	
adding 1625:16 17 18 20	assumed 1621:8,10 1626:2	builds 1614:15	6 11 1618 20 1610 6 7 10 10	
1643:18	1629:24 1635:15 1638:8 1652:	bullet 1628:1.4	25 1620 3 6 10 12 22 24 25	
additional 1616:2.16.19 1634:	1 1653:5	business 1625:16 1626:10	1627:16 1628:21.23 1639:18	
7,8 1637:17 1638:2,16 1644:2.	assuming 1626:25 1632:17	1627:5,9,19 1629:2 1646:7,11	18 1643:4,7.15.22.25 1645 5 8	
5,11,20 1645:10 1650:18	assumption 1615-0 1605-6	buy 1617:15 1618:17 1623:12	1649:15,17 1653:18,20 1654:	
addressed 1649:23	1629:16 1631:15 1635:11	1629:5 1633:3,7,13 1635:17	13,16,19,22,24	
admitted 1654:17,20	1636:13	1630:21 1637:6 1638:4,5,21,25	Commissioners 1649:24	
auvaniaye 1637.24	assumptions 1634:15.18	1645:17 1646:2 22 1650:10	1003:18	
affirmatively 1631-23	1637:11	1651:18	company 1620:4 1646:00	
after 1638:23	AT&T 1614:14	buying 1628:14 1633:12 1636	1649:3	
	attempted 1624:19 1625:1			

comparable 1626:12 compare 1620:14,16 1623:19 1624.1 1644:25 compared 1642:10 comparing 1640:20 1642:1,6, 16 1643:18 comparison 1640:13 1642:9, 19,21,22,25 competing 1626:10 competitive 1626:8,9,11 1629:19.20 competitor 1646:7 complicated 1644;15 1645;1. computer 1616:8,10 1617:14 15,17,20,22,25 1618:3,4,22,24 1649:1.7 computers 1618:8 concept 1636:10 1638:19 1650:19 concerns 1649:23 concludes 1616:23 conducted 1623:23 conference 1615:21 1616:2 considerably 1641:10 considered 1619:14 consistent 1634:16 consistently 1629:18 consists 1617:8 construct 1616:4 consumer 1636:4 contain 1652:15 contemplate 1646:25 contents 1653:25 continue 1653:14 continues 1653:14 1655:1 contract 1615:5,23 1616:6 1621:22,25 1622:19,22 1623:1 4,9,12,13,14,20,20 1624:2,3,9, 10,13,16,22 1625:3,4,6,8,10, 11,12,13 1626:3,7,7,8,17,18, 21,24,24 1627:2 1629:14,23 1630:3,5,7,11,20,22 1631:2,11 11,19 1632:2,4,5,9 1635:22 1636:16 1637:20,25 1641:1 1645:22 1647:12,14,16,18,19, 21,21 1648:4,7,9,13,17,17,22 1649:13 1650:20 1652:12,12 13,24 1653:3.9 contracts 1615:1 1616:18 1619:10 1622:3,9,10,12,16,18 1623:24 1624:1,5,21,22 1629: 8,21 1644:13 1647:2,22 1648: 18 1649:5.10 1652:22 1653:2 1654:1,4,8,10 controlled 1635:5 copies 1623:24 copy 1627:18 correct 1615:1 1617:18 1621: 8,9,11,12,24 1622:4,20,21 1623:17,18 1624:3,4,11 1627: 6,7,11,12,20 1629:15 1630:4,8, 9 1631:8 1632:12,13,25 1633:1 1634:9 1636:12 1637:1,2,4,18, 19 1638:9,17 1639:12,13,15 1641:2,3,15,25 1643:13,20 1647:9,10 1651:12 correction 1615:6 correctly 1629:1 cost 1614:8,12,16 1615:9,10 10,12,15,19 1616:7,13 1617:17 1618:1,6,18,23 1620:14 1621: 6,7 1624:7 1625:2,22 1633:8 17,21,23,24 1634:13,17 1636: 8,12,24 1637:22 1638:2 1639: 23,25 1640;8,9 1641:14 1642 6,11 1643:11,13,18,19 1644:9 11,12,15,16,18,18,20,25 1645. 3 1646:6 1648:18,23,24 1650: 16 1651:16 1652:2 costing 1644:17 costly 1629:18 costs 1614:10 1616:2,11,19

1618:21,23,25 1625:25 1632: 15 1633:15,19 1634:12 1635: 13 1646:10 1648:21 couldn't 1631:4 count 1615:22 1616:7 1618:18 1648:2 counted 1615:22 counting 1647:8,24 1648:20 couple 1631:4,7 course 1633:14 cover 1622:11 1632:10 1635: 17 covered 1622:8 1630:21 covers 1630:11 1640:3 critical 1614:21 cross 1616:25 1617:13 1621:1 1649:18 current 1623:10 1636:19 1639:24 1640:4 custom 1652:9 customer 1628:13 customers 1633:15 1635:12 cut 1615:6 1628:6 cycle 1634:12 1638:24 1644: 15,17,18 D daily 1625:16 data 1615:3 1627:12 1631:5 date 1623:10 dates 1622:24 deal 1632:1 1653:8 DEASON 1617:1,3,4,6,11 1618:20 1619:6,7 1620:24,25 1627:16 1628:21,23 1639:18 1643:4,7,15,22,25 1644:9 1645:5,8 1649:16,17,24 1653: 18,20 1654:13,16,19,22,24 decide 1636:9 1647:20 1648: 16 decided 1621:19 decision 1621:16 1633:2 1636:11 1638:3 1639:20 1644: 1.3 definitely 1627:1 1644:20 1652:5,3 demand 1634:5 20 1635:7,13 1645:2 demands 1634:8 deposition 1617:9,10,10 1647:25 depreciation 1618:21 1632:18 1653:12 describe 1623:15 detail 1623:25 determine 1614:18 1625:8 1636:24 determined 1615:1 developed 1615:18 developing 1624:6 didn't 1631:21,21 1642:25 1647:18 1648:8 differences 1623:21 1624:13 1626:14 different 1621:17 1632:1 1639:19 1643:5 1651:9 differential 1645:1 digital 1621:8 1630:12 direct 1627:22 directly 1641:22 disagrée 1651:10 discount 1614:18,20,23 1615: 2,3 1624:14 1625:8 1652:8,9 discounted 1625:24 discounts 1624:20 1625:2,3 1626:16 discuss 1614:12 disregarded 1630:2 divide 1633:22 divided 1642:8 DMS-100 1621:23 1624:17 1629:13.23

document 1629:17 1646:16 22,23 1654:14,16,18,20 does 1616:15 1619:19 1627: 21 1629:22 1632:3,10 1636:11 Exhibits 1654:13 existing 1621:22 1622:3 1624: 16,21,21 1625:15,17 1626:17, 1639:14 1641:23 1652:15 doesn't 1618:18 1634:20,21 18 1629:14 1630:11,15 1632:2, 1646:17 doing 1636:23 exists 1634:5 1638.19 dollars 1636:8 1638:25 1639: expect 1633:18,25 1653:24 4,23,24 1640:1,12,13 15 1644: expecting 1648:24 expense 1639:5 25 1651:22 done 1624:12 1626:22 25 expenses 1632:24 1639:15 1634:17 1639:22 double 1615:22,22 1616:7 expensive 1636:17 1648:4 expert 1614:15 1635:10 1618:18 1626:4 1647:8,24 expertise 1627:9 1648:2.19 explain 1624:12 doubt 1652:5 extra 1618:8 1640:11 down 1623:19 1629:6 1631:5 extreme 1636:18,21 1637:12 DSM-100s 1621:10 extremely 1644:15 1645:1 each 1618:5.16 1635:3 faced 1633:2 easier 1654:9 fact 1623:8 1626:17 1649:7 fairly 1626:20 1634:16 1653:6 easy 1626:20 favorably 1620:16 feature 1614:10 1615:18 1616: economic 1638:4 1639:20 1644.3,12 effect 1622:23,24 1623:11 1,3,7 1618:17 1647:8,11,15,19 efficient 1651:16 1648:23 efficiently 1621:21 features 1615:7.20 1616:16.19 elect 1631:11 1618:11 1643:2 1647:7 1649: elected 1631:18 11 element 1614:8,9,22 1615:25 fee 1649:8 feel 1636:11 1643:11 1651:21 1641:13 elements 1615:17 1616:20 fees 1616:4 1635:20 1648:5,6, 1618:13,14,15,16 Ellison 1616:23 11,20 1649:4 few 1633:6 else 1625:20 1631:23 figure 1633:7 enable 1615:21 filed 1654:4 encourage 1629:4 end 1619:14,17 1620:2 enough 1632:15 1651:18 final 1652:20 first 1615:10,10 1628:4 1629: 11 1640:9 1652:3 enter 1614:18 five 1636:7 entered 1622:19 1624:14,23 Florida 1631:1 1630:3,7 follow 1619:7 entice 1646.22 forecast 1628:18 entire 1632:17 1635:17 1638: forecasted 1644:23 1645:2,11 9,12 forecasts 1645:8 entitled 1627:5 form 1616:20.22 forward-looking 1621:14,14 1631:16 1636:23,25 entrant 1618:17 entrants 1616:20 environment 1626:9 1636:23 found 1614:22 1620:19 equal 1640:14 1651:20 foundation 1614:11 1616:22 equipment 1615:12,23 1618: 8,9 1619:5 1625:15,17,18,19, frequently 1629:8 front 1618:12 1638:1 1645:10 23,24 1626:1 1627:5 1633:4,5, 24 1634:14 1638:4,5 1649:12 full-size 1621:20 equivalent 1629:20 function 1617:24 errors 1616:22 fundamental 1632:14 essentially 1650:4 establish 1624:16 1650:23 fundamentally 1615:8,9 further 1649:15 1654:12 establishing 1629:11 1651:12 estimation 1638:8 future 1633:14,15,19 1635:7, 12,12,12,15 1644:22 1650:15 even 1631:18 1634:6 1649:6 G 1652:3 ever 1626:1 1639:2 1645:18 1646:2 1650:16 1651:22 gave 1617:14 1641:24 general 1618:4,13 1619:3 1622:19 1631:11 1647:16,21 every 1614:21 1616:11,11 1618:1 1626:1 1636:14,21 1648:12,17 everything 1623:25 1635:20 exactly 1626:23 1640:7 1648: generally 1621:5 1627:4 1653: generate 1615:25 EXAMINATION 1621:1 1649: generates 1614:24 getting 1625:25 1645:2 1646: 24 18 1653:22 example 1615:19 1616:3 1618:11 1620:1 1632:18 1636: getting-started 1615:11 1652: give 1614:5 1636:15 1645:20 excerpt 1627:19 exchange 1649:3 1646:7 excluded 1631:21,23 given 1653:12 excuse 1623:7 1625:17 1633:3 goes 1633:5 excused 1654:21 going-forward 1629:13 1638: exhibit 1617:10,12 1619:21 1620:8 1627:14,23 1628:9,18, Good 1614:7 1616:8 1619:16

	1621:3,4 1644:14 1649:20,22	1620:9 1632:23 1633:15 1635	1647 15 1648 6 11	
1	000fs 1619-17	20 1639:10 1647:11,16 1648:	5,	
-	got 1634:1	12,22 1049:4 12 1650:19	L	_ 1633;11 1635;14 1638;3 1630
- 1	govern 1632:4	1639:11	laid 1652:24	20 1642:22 1643:25 1646:23
	governs 1621:23 grow 1629:7 12 1000:05 400-	including 1615:7 1631:24	lame 1618:8 1630:00	making 1644:10
	16 1639:6 1645 18	1634:5	last 1626:5 1641:16	manufacturer 1629-14
[	growing 1633:10 1646:2	incorporated 1650:12	late-filed 1617:10	manufacturers 1629:3
	growth 1626:3,22 1629:5	1643:10 1652:4	later 1623:10 1634:7 1635:18	many 1630:25 1633:7 1634:17
5	1632:10,24 1633:17,20 1634:2	2, increase 1635:3	law 1646:5	1638;7 Margin 1629:7 16 1005:40
	1637:22 1638:2 17 19 25 1639		laying 1631:24	1646:23
	3,15,21 1640:14 1641:5,15,20,	incumbent 1649:2	leader 1646:14,18,21	margins 1638:16
Ž	25 1642:17,23 1644:2 1645:9,	incur 1616:11,15 1618:1 1636	least 1632:10 1652:10	mark 1619:20 1620:7,8
E	5.13 15 25 1651 5 11 19 20	24 1638:14 1639:6	least-cost 1636:25	22
1	652:4	incurs 1636/19	leaving 1643:4	Market 1627:6
Ş	uarantee 1628:7	indicate 1620:13	led 1614:15	marketing 1627:12
g	Uess 1617:18 1630:24	indicated 1629:17 1643:8,17		<b>Master</b> 1623:20 1624:22 1625:
18		(Individual 1620:17	less 1640:15 1651:4,21	matched 1615:4
_	Ħ	inflated 1648:3	Let 1620:6,12 1638:7,18 1639:	matter 1626:12
h	alf 1614:24	Information 1627:5,9,19 1629	24 1640 19 1643 7 1646 14	maximum 1639:1 1651:21
h	anded 1627:18	2 1631:3 1646:11	1636:7 1644:21	1641:4 1649:6 1654:21
h	appens 1629.2 1640.10	initial 1629:4 1632:10 23	level 1636:20	maybe 1619:13 1625:19
h	ardware 1615:20 1622:11	1634:24 1635:19 1639:12	<b>IITE</b> 1634:12 1638:24 1644:15, 17 18 1659:19	mean 1638:11 1641:12 1650:9
1	628:8 1635:21 1647:8,11,15,	1641:1,15,21 1642:17,18 1643:	like 1614:12 1620:7 1621:5	mechanism 1646-22
- H	9 ATCH 78:1 1616:25 1610:12	19 1644:2 1645:19 1646:9,21 11650:17 24	1623:12 1627:14,22 1628:21	meld 1641:4
1	6,20 1620:1.5.7.11 1639:16	initially 1617:25 1640:16	1629:3 1632:18 1654:14	melded 1641:14,20 1642:16,
1	653:21,23 1654:12,21	initials 1628:6	line 1614:24 1615:24 1616:6	22 1043:9 1651:11 melding 1652:1
H	atfield 1635:6,8,11	input 1614:18,21,23 1615:3	18 1619:17 1625:19 1626:1	MELSON 1617:5
h	eading 1628:1.5	inputs 1635:5	1627:24 1628:19 1632:8 1633:	mentioned 1624:2 1626:5,20
h	eadquarters 1654:2	installation 1643:12,20 1644:2	1641:16 1642:5 7 1647:12	minimize 1632:8 1626:4 1651
h	ere 1614:7 1618:9 1632:14,	installed 1626:1 1628:7 1643:	1648:7,12 1650:2 1652:3	16
1	1 1634:3 1635:25 1642:2 350:11	instance 1639:23 1648:2	lines 1615:14 1622:9 1625:7	minute 1618:14 1633:23
h	igh 1628:7 1635:18	Instead 1630:6	1628:14,15,16,17,18 1629:5	minutes 1633:23,25
hi	gher 1620:17 1623:13 1624:	insures 1639:1	1635:3,18 1636:5 1637:17	model 1614:11.15.17 1615:4
16	1625:12,22 1626:3 1628:15, 3 17 1629:6 1633:5 24 1636:0	intends 1630:12	1640:11 1642:8 1643:18 1644;	11 1616:1 1624:20 1625:2
lie	38:19,22,25 1639:3 1646:23	interested 1646:2	5,6,22 1645:10 1650:18 1651:	1626:17 1632:23 1634:10,11,
16	50:13 1652:4	interpretation 1626:7	linkage 1618:19	modify 1614:19
nr Ibi	gnest 1650:16 ably 1649:2.02	Interpreted 1624:13	list 1614:17,19	modifying 1615:3
hi	storically 1621:16	investing 1633:9	listed 1622:18 1644:13	month 1634:6
h	w 1618:22,24 1620:13 1621:	investment 1615:7,11 1616:16	literally 1637:6	more 1622:5 1623:10 1629:18
6	1630:25 1633:7 1638:1,3	1619:1 1624:7 1632:16,22	little 1614:13 1621:5 1627:3	1633:12 1636:5,17 1638:5,6
H	946.25 Dwever 1615:15 25 1625:11	1644:10.12 1647:23 1650:2	loaded 1615:2 1616:9	1643:12 1644:12 1645:9 1648:
21	1635:11 1637:2,19 1648:2	1651:12	local 1633:11	morning 1614:7 1621:3 4
h	Indred 1621:8 1639:23	investments 1616:21,22 1629:	locked 1637:14	most 1639:20 1645:3 1649:23
ha	140:1 Indrede 1637:6 7 7	involved 1645.6	long 1632:15	move 1654:14
hy	pothetical 1645:23	irrelevant 1642:25	longer 1623:3 1645:11	Ms 78:2 1617:9 1621:3 1627
-	· · · · · · · · · · · · · · · · · · ·	irrespective 1638:15	looked 1625:5 1632:23	18 1649:20 1653:16,24 1654
120	1621:5 1607:00	1630 4 1634 9 1635 8 1637 1	looking 1622:6 1629:12,17	21
id	a 1650:12	18 1638:9,20 1641:15 1644:9	1630:1 1632:22 1634:4,12	mucn 1623:11 1625:18,20
ide	entification 1627:15	1645:13	lost 1646:10,14,17,20	multiple 1626;21 1635;1
ide	entified 1617:8,11 1622:12	item 1626 5 1651 25	lot 1618:8 1636:17,17	must 1614:18 1632:14 1633:
19	24 1646:4 1650:17 1652:12	itself 1618:22 1652:1	lots 1620:1 low 1620:3	18,19
ide	entifies 1631:14		lower 1623:11 1627:1 1629:20	N
lide	entify 1622:7 1644:20		1633:8 1638:22 1641:10 1644:	NBA 1640:24
ia	ored 1629:13 1632:24		o Iowest 1633:12	nearly 1628:13
16	36:10 1639:5	<u> </u>	Lucent 1621:11,20 1622:4.8.	necessary 1635:20
igr ill	oring 1635:7	kind 1625:19 1635:2 1636:15	23 1623:21 1624:3,10,22 1625:	need 1635:16
im	pact 1636:11	1645/3 kinds 1653:14	3,11 1626.8,18,21 1629.3	needs 1643:17,22
ina	ppropriate 1616:19	know 1619:9 1622:14.17	1637.5 1641:24 1645:17.19.21	1653:8
ina	ppropriately 1615:16	1623:5,7 1631:3,5,16,23 1632:	1646:1 1647:16,21 1648:12,17	negotiating 1630:24
ine	ude 1616:7 1633.17 18 10	17 1633:9,9 1634:6,15 1637:11	1049:13 1652:12	net 1639:22,25 1640:4,11,15
24	1634:2,18,23 1639:14 1647:	1648:8 1651:17 1652:5 1653:8	<b>B</b>	1000014 1651115,20 network 1630113 163415 9 12
2,1	9 Juded 1615:04 1616:5 47	1654:4		1635:17 1636:25 1638:9,12
16	17:16 1618:12 1619:4.8.9 11	knowieage 1622:15,22 1623:1    1624:5 1629:22 25 1639:3	ma'am 1641:17	new 1616:20,23 1618:17 1625:
			1013,6 1023,6 1029,16	

1631:17 1632:20 1633:13,24 1636:21 1637:21 1639:2 1640: 1637:5 1641:7 1642:6,10 1644: previous 1643:8,16 13 1649:10 price 1614:24 1615:24 1616:6, reason 1621:18 1633:1 1638: 2 1641:4,7,25 1642:23,23,24 20 1647:23 1648:19 ought 1619:21 9,18 1617:25 1619:5,8,9 1623: 1643:11 1644:6 1646:18 1647: reasonable 1625:9 1638:13 out 1618:3 1623:12 1626:6 13 1624:12,16 1625:14,14 1626:3 1628:6,17,17 1629:4, 12,24 1630:1 1632:8,10 1633: reasons 1651:13,14 3 1650:4,20,25 1651:3,4,11,17 1631:24 1633:7 1634:4 1636: 18,21,23 1652:2,7,16,18,24 rebuild 1636:25 14 1637:6 1639:3 1640:8 10 newer 1623:4 1627:1 1647:19 recall 1630:25 1653:24 1654:2 1641:22 1642:9 1645:9 1652: 4,8,12,13,25 1635:21 1636:6, next 1628:9,22 1633:5,6 1638: receive 1633:18 24 10,12,15,19 1637:4,8,13,15,21 1638:5,7,13,19,22,22,25 1639: 1,3,10 1640:2,14,16,20 1641:1, received 1652:7 outputs 1615:4 over 1633:25 1636:16 1639: 123 recommended 1650:2 non-traffic 1615:15 none 1644:16 reconvene 1654:25 17.17 1652:25 23 1642:5 1643:12 1644:6 nor 1647:13 record 1619:22 1620:8 1654: overstate 1648:24 1645:20,21 1646:4 1647:3,12 Nortel 1621:10,20,23,25 1624: 15 1648:6,12 1650:16,17,20 1651: 18,19,19,20,21,22,24 1652:3,7 16,22 1625:3,5,8,9 1626:6,7, 17,19 1629:3,14,18 1635:16 1637:5 1641:24 1647:12,14,21 recount 1651:14 recover 1619:3 priced 1624:9 1625:12,22 1626:2 1627:1 1628:15 1629: Pacific 1640:25 recovered 1616:13 1618:21. packet 1617:7 1648:7,9,1 page 1620:13,20 1622:7 1627: 23,23 1628:9,10 1640:20,22 21 1650:4 1652:2,3 recurring 1619:3 Nortel/U.S 1640:25 prices 1614:17,19,19,25 1620: Northern 1627:4,8,19 1629:1 Redirect 1653:20,22 1654:12 1642:2 1645:21 1646:4 1652: 14,15,16 1623:11 1626:12 refer 1623:9 1646:1 1627:24 1628:19 1629:6,21 1631:17 1633:3 1640:24 1641: 8 1642:7 1646:10,21 1647:3 11.11 reference 1647:13 note 1619:14 1620:8 pages 1631:4,7 notes 1619:17 1620:2 referenced 1627:20 paid 1614:20 1616:13 1618:12 referring 1623:14 1649:10 Now 1618:3 1621:22 1624:5 1633:14 1650:14,15 1651:3,5,9,11 1650:7,10 1625:15 1629:1 1630:1,10 paragraph 1628:10,10 1652:16,18 1653:11.15 refers 1627:4 1633:14 1635:6 1636:21 1640: pricing 1618:13 1626:22,22 1641:5 1647:1 paren 1628:6 reflect 1614:19 1624:21 1625: 21 1644:4,23 1646:24 1650:3 part 1616:2 1617:16,17 1618: number 1615:4,14 1617:10 1632:13 1633:25 1634:21,22 3 1641:23 13,24 1620;9 principle 1632:14 reflected 1641:13 1647:12 probably 1618:4 1619:21 1623:3 1624:25 1639:19 particular 1648:2 1649:11 1648:7 23,24 1635:3 1638:10,11 1639: 2,3,10 1641:6,13,15,21,22 past 1621:19 regarding 1615:10 1653:25 1654:10 pay 1616:9 1629:6 12 1630:2 1635:18,19 1638:22 1639:2,6 problem 1619:17,23 1642:9,17,18,23,24 1643:1,10 proceeding 1654:5 regardless 1615:13 1653:6 1648:25 1649:8 1650:16 1651: proceedings 1645:4 region 1631:7,12 numbers 1619:18 1626:6,14, 19.22.23 process 1618:11 relevant 1638:20,21 1642:9 15,24 1637:9 1641:4,7,9,18 paying 1638:5 1650:13 PELLEGRINI 1617:3,7 1649: processing 1617:24 processor 1616:12 1643:12,18 1642:10,15,23 relied 1627:10 1630:6 numerous 1619:23 1653:24 19,21 1653:16 1654:18 program 1615:2 1618:6 relook 1646:14 per 1614:24 1615:24 1616:6 programs 1616:9 1617:23,24 rely 1624:6 remain 1628:17 18 1632:8 1633:4 1639:10,14 projection 1644:24 o'clock 1654:25 1640:8,10,20 1642:5,7 1647:12 propose 1618:20 remember 1620:3 1623:25 objected 1651:13,25 1648:6 12 1650:2 proposed 1614:10 1615.6 1630:16 1647:17 1648:9,14 proprietary 1641:19 provide 1616:16 1622:15 Objection 1639:16 1654:16.19 per-line 1643:11 remote 1621:21 obtain 1626:11 1638:16 percent 1621:8 remotes 1621:16,16,18 Obviously 1618:23 1633:6 perform 1635:2 1646:6 renegotiate 1632: 1636:15 1637:8,22 1643:11 perhaps 1643:10 1644:3 provided 1622:14 repeat 1624:24 1645:25 period 1628:18 1632:15,19 1648:3,2 provider 1651:16 replace 1630:12 replaced 1634:13 occurred 1616:4 1634:1 1645:11 1653:7 publications 1627:10 occurs 1615:22 peripheral 1625:19 purchase 1617:22,22,25 1621: replacement 1623:20 1630:6. 23 1631:12 18 1638:14 1639: off 1653:9 Petzinger 1614:2,7 1617:21 10,20,21,24 1631:2,10 1632:3, 9 1635:22 1636:6,20 1640:8,16 1649:13 1652:13,22 1653:13 offer 1640:2 1650:24 1619:1,10 1620:19,23 1621:3 21 Office 1627:5 1631:12 1627:18 1640:6 1643:14,21,24 1644:4,14 1645:7,14 1649:20 purchased 1615:12 1617:25 offices 1630:21,23,25 1632:4 1618:10 1619:5 1625:7 1644:6 replacements 1623:16 1630: 1652:23 1654:7 1653:16,24 1654:21,23 1652:6 15 1631:15 offset 1633:19 Petzinger's 1617:9 purchases 1627:3 1652:25 replacing 1638:9 represent 1621:14 1628:16 often 1651:2 Oh 1654:11 purchasing 1632:6 1634:19 1636:9 1637:17 1638:1 1640: phenomena 1619:24 phrase 1646:15 1642.10 Okay 1617:1,6 1619:12 1620: 6,12,22 1621:22 1635:24 1636: phraseology 1646:20 piece 1625:24 14 1644:5 requested 1622:16 respect 1648:5 purpose 1624:7 2 1641:18 1642:16 1643:7 1646:9,20 1650:12 1654:13 RESPONSE 1653:19 place 1621:16,20,21 1623:4 purposes 1627:15 put 1632:20 1634:21 1637:14, 1634:2 responses 1649:24 1650:11 older 1623:13 1624:8 1625:12 placement 1625:14 1629:4 restated 1616:21.22 22 1626:3 24 1630:5 1648:4 22 Putting 1626:14 1631:25 1644:10 1646:20 1632:10,24 1633:13 1634:24 restatement 1650:9 1653:8 1635:19 1639:12 1641:2,8,15 revenue 1644:24 21 1642:17,18,24 1644:8 1645: 19 1646:10,19,21 1650:17,20 Once 1628:11,12 1637:14,15 revenues 1633:18 1635:12 one 1620:12 1621:8 1622:19 1625:14,14,23 1626:25 1631: C 1644:23,24 1645:2 placing 1651:17 question 1617:14 1619:16 review 1614:22 1621:25 1623: 16 1633:4 1634:2,13,21 1636: planning 1653:7 please 1614:5 1628:5 1620:13 1624:24 1625:1 1631: 23.24 1654:7 14 1640:9,11 1645:18 1649:11, 25 1650:22 1651:15 1652:24 25 1639:9 1643:8,9,16 1644:14 reviewed 1614:25 1619:10 point 1617:16,18,21 1619:22 1628:4 1631:24 1634:6 1638: 1621:17 1622:11,12 1646:16 1652:13,22,22 1654:1 1650:24 1652:20 1653:6 1654:25 questions 1617:2,5 1619:13 ongoing 1625:16 only 1618:17 1625:18,23 1628:13 1631:22 1632:9,23 1634:21 1635:19 1636:6,7,8 23 1650:22 1652:10 reviewing 1631.6 right 1622:7,18 1630:19,22 1632:21 1636:21 1638:15 1640:7 1642:1 1643:14,15,21 1620:18 1649:15,25 1653:17, points 1628:1 port 1614:9 1615:6,25 1618:14 auite 1651:2 portion 1653:21 quoted 1632:9 1645:20 possibility 1645:13 pre-loaded 1618:10 premises 1622:13 1631:6 present 1656:8 1639:22,25 1637:20 1639:2,11 1642:22 21,24 1644:4 1649:14 1650:22 R 1647:1 1652:1 1651:10 1652:19 opposed 1623:13 1634:24 right-to-use 1616:4 1635:20 1648:5,6,11,20 1649:3,8 ran 1616:1 option 1638:21 1646:6 rapid 1645:9 orange 1642:21 1640:4,12,15 1643:23 1644:1 risk 1645:12 rate 1652:4 1653:13 1650:14 1651:15,20 presently 1629:22 1652:15 presuming 1619:8 pretty 1625:18 oranges 1634:1 1642:2,12,18 rates 1616:23 1619:3 risks 1645;6 order 1625:8 road 1629:6 rational 1636:4 other 1618:11 1620:5 1624:2. Ross 1620:24,25 1621:2 1627: 13,17 1628:21,24,25 1640:18 1643:6 1645:15 1649:15,24 read 1628:4 1631:21 11 1626:1 1629:21 1633:1,20 reality 1638:20 1639:1,5

	PSC DOCKET NOS. 960757,	960833 & 960846-TP. VOLUM	FX
1652:21 1654:14	1622:13 1624:11 1638:23	25 1615:23 24 1616:6 16 19	
run 1625:24 1625:1	1643:22 1644:2 1648:14	1618:7,13,15 1619:4.5 1620:1	5 <b>today</b> 1621:17 20 1623:4 p 40
running 1615:2.13	something 1635-4	1621:7 1624:6 1627:2,3,10	13 1634:14 1636:5.19.25 1637
	- Sometimes 1651:9	1629:2,11 1632:18,22 1633:4	21 1638:5,21 1640:10,11 1644:
3	sorry 1623:7 1624:24,25 1637	1638:2 1642:6.11 1647:22	21 1650:11 1651:17 today's 1622:16 1620:0 1000
<b>Said</b> 1629:16 1631:5,22 1648:	10 1640:21 1641:12 1643:13	1648:4 1650:2 1653:13,13	25 1639:4 1640:12 13 15 1644
10 1050.12,14,19 1051.7 1653	Southwestern 1640/25	swtiching 1638:14	24 1651:22
sale 1628:6	speak 1617:20	systems 1618:7 1628:16	Tomorrow 1637:21 1638:22
sales 1628:8,16 1646:23	speaking 1648:21	1646:12	total 1633:22 23 1642:7 9
1647 3 1651 9 1652 6	special 1615:20 1647:11,15	T	1644:15 1646:14
saw 1623:25	14 1631:14 1647:8 1652:23		totally 1642:25 1643:11
say 1623:3,25 1630:15 1631:	1653:2,3	1652:8.9	transcript 1617'9 1655'1
14,21 1635:16 1636:3,7,14	<b>Specifically</b> 1622:8 1623:10,	take 1620:15 1633:21,22	treated 1621:6
1640:3.7 1642:8.11.13.16.20	sponsored 1616:23	1635:12 1636:7 1637:11,23,25	<b>true</b> 1637:4 1644:17 1651:6,7,
1644:21 1645:17 1646:1,17	spread 1616:11 1617:24 1618	1654.24	8 truly 1615 15
1651:3 1653:12	2,5 Sprint 1641/4	taken 1635:8 1636:13.17.18	trunk 1625:19 1627:24 1628:
13	IStaff 1617'7 1649'17 21 1654	talk 1614:8 1621:5 1627:3	19
says 1629:2 1633:3 1639:22	18	1629:10 talking 1618:9 1641:16 1649:7	trunks 1652:6
1646:18	standard 1625:16	1644:19 1645:19	1638:18
SCIS 1614:11,15,17,23 1615:	start 1636:9 1640:14 1645:2	team 1614:15	trying 1617:18,21 1636:23
1626:16.23 1634:10.18 1652:9	starts 1614:17	lechnically 1619:16 1648:21	1642:4
second 1617:4 1623:9,14	state 1622:8 1650:3	tel 1628:13	Turning 1647.7
1628:10 1651:25	States 1623:16	telephone 1629:4 1649:2	two 1614:24 1623:22 1624:1
see 1623:21 1628:2 1630:14	<b>still</b> 1622:22.24 1623:11 1638	tell 1647:1	1625:11 1634:7 1644:21 1649:
1640:22 1642:20 1644:25	12	ten-vear 1632:17 1653:12	type 1643:22 1653:9
1647:13 1651:8 1652:8	store 1616:9	tender 1616:25	typically 1650:24 1651:4,6
seemed 1620:3 1647:17	Strategies 1628:2	Tennessee 1624:3	
seems 1643:15	strictly 1642:17	iterms 1617:19 1632:2 1650	U S 1627'5
seen 1629:8 1645:3 1647:1	structure 1618:14 1637:24	25,25 1651:4,4,5	unbundled 1614:8.22 1616:20
sell 1646:18	stuck 1637:15	territory 1626:2 1653:1	1618:13,15
selling 1646:6	studied 1633:11	1620:2.10 1626:6 1627:4 20	under 1628:1 / 1621:12 1627
sells 1628:12	<b>studies</b> 1614:12,16 1615:9,19	1640:21,22 1646:3 1649:2	23 1645:21 1646:6 1650:25.25
sensitive 1615:15.16	16.18 1648:18	1650:7,10	1651:3,5,5
separate 1614:9 1615:18	study 1620:14 1627:4,19	1650:23 1653:16 1654:23	understand 1629:1 1635:14
1616:7 1619:20 1620:8 1647:2	1632:13 1633:21,21 1636:12	Thanks 1620:22	1636:22 1639:19 1641:7 1650:
1648.23	1645:3	that's 1619:22 1621:9,12	1
sequence 1655:1	subject 1643:5	1627:7.12 1630:9 1632:12	Understood 1650:3
seven 1640:3	submitted 1654:8	1633:1 1636:22 1639:13,23	until 1615:4 1640:14 1651:19
several 1620:5	substituted 1642:23	1640:6 1641:3,25 1643:14	up 1615:13 1616:12 1618:5,12
sheet 1616:11 1617:24 1618:	such 1615:20 1617:23 1633:	1650:22 1651:6 1652:4 19	1619:8,17 1633:5,23 1638:1
2,6	20 suggested 1646:11	1653:16	up-front 1616:10,12 1644:10.
should 1616:13 1618:24 1619	summarized 1620:20	therefore 1616:6,18 1628:15	10,12
13,14 1632:23 1633:7,15 1635:	summary 1614:2 1616:15,24	thing 1619:18 1640:4 1647:1	usage 1615:16
2 1638:4 1650:13 1651:23	Supplier 1623:2	things 1624:12 1625:12 1633:	use 1616:11 1617:23 1618:1,
show 1642:4	suppliers 1626:2,11,12	20 think 1617:16 1619:7 1690:10	15 1624:6 1625:9 1626:15,15
shows 1628:19	support 1614:9	1631:15 1635:21 1637:9.12	22 1643 1 9 1647 14 18 22
significantly 1649:5	sure 1619:19 1633:11 1635:14	1639:8,8,11 1646:13 1647:23	1648:8,18 1652:8
Similarly 1618:7	switch 1614:24 1615:10.13.14	1649:23,25 1650:3 1651:7	used 1614:9,10,23 1615:25
simplified 1637:3	1621:20 1622:11 1623:15,19	third 1627:22.23	1625 2 13 23 1626 6 16 1629
simplify 1633:21	1625:15,18,22 1626:10 1628:	those 1618:15,20,22,24 1621:	10 1630:5 1634:10 1637:9
since 1629:16	15,17,17,20,21 1631:1,10,15	13,15 1630:14 1633:14,15,19	1641:14 1647:18 1649:8 1650:
sir 1643:6	1632:3,9,11 1633:6,9,13,20,24	1651:14 1653:2,11,14 1654:2	User 1614:18 1635:5
sit 1623:19	1634:19,25 1635:22 1636:21	4,8,10	users 1616:17
situation 1626:12 1629:19	24 1639:2,12 1640:2,9 1641:2.	though 1634:6 1644:4 1649:6   thought 1620:4	using 1624:20 1636:25 1641:
1637:19,24	8 1642:7 1644:6,8 1645:18,18	three 1622:3,6,8,10.18 1628:1	utilization 1617:19
situations 1647:2	1650:17.20.25 1651 4 17 18	three-way 1615:20,21 1616:3	
size 1615:14 1634:4 1653:6	19,21,23 1652:2,2,3,6,7,18,25	throughout 1623:16 1628:18	
small 1625:23 1653:21	1653:25 switches 1614:20 1004:0 44	1631:7	vanuate 1626:23 1627:1
1635:7 1644:17	<b>39000000000000000000000000000000000000</b>	time 1616:11,12 1617:8 1618:	value 1636:8 1639:22,25 1640:
software 1616:4,5,9,10 1617:	17 1628 7 1629 13, 18, 23 1630	1634:1.4.6.14 1635:7 1643:12	4,12 1643:23 1644:1 1650:14
15,15,19,23 1618:24 1628:8	2,11,12,16 1631:18 1632:6,20	18 1644:18 1645:11 1650:19	valued 1640:15
some 1615:19.23 1621:15	11,11 1650:4,5,5,25 1653:6	1652:6 1653:6 times 1614:25 1635:1	variable 1632:16
	switching 1614:8,11,16,16,22,		vary 1649:5

vendor 1615:1 1626:12 1636: 14 1637:18 1647:5 1653:7,25 vendors 1637:5,14,25 1638:16 1645:16 1646:11,25 1650:24 vendors' 1629:21 verify 1624:19 1625:1 1626; 16,19 versus 1638:5 1640:11 vertical 1643:2 1647:7 very 1618:8 1627:16 1645:23 1649:6 via 1622:8 view 1653:10 vintages 1634:14 volume 1625:7 1655:1 W want 1633:8 1634:3 1635:2,14, 18,19,19 1637:6 1645:17,18 1646:2 wanted 1650:22 wants 1618:17 way 1618:7 1619:2 1624:13 1631:14 1634:16 1635:17 1637:2 1638:7 1639:19 we're 1641:11 weightings 1641:24 well 1618:9 1622:7 1623:9 1627:16 1630:17 1631:20 1634:18,23 1636:22 1637:10, 13 1645:24 1649:6 1650:10 1651:8 West 1640:25 whammy 1626:4 whatever 1633:10 1637:5 1641:24 whenever 1649:2 whereas 1640:1 whether 1624:19 1625:1 1631: 25 1636:16 1646:8 1650:13 1654:4 will 1614:19 1617:11 1628:17 1633:14 1635:12,15 1636:20 1638:14,24 1639:1,6 1648:1 1654:25 wish 1619:21 without 1645:11 1652:5 1654: 16,19 witness 1616:25 1617:21 1619:1,10 1620:19,23 1627:14 1640:6 1643:14,21,24 1644:4, 14 1645:7,14 1646:16 1654:23 witnesses 1619:23 1620:5 word 1616:12 1617:23 words 1630:14 worked 1614:14 worry 1637:22 worth 1644:21 wouldn't 1640:13 write 1631:5 wrong 1642:14 х X-dollars 1639:14 XI 1655:1 year 1633:5 1635:3 1636:7 1638:23,23 1639:21 1640:3,7, 7,9,11 years 1614:14 1632:19 1633:6 1634:17 1644:21 1650:15