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**DIRECT TESTIMONY OF
WAYNE ELLISON**

**ON BEHALF OF AT&T COMMUNICATIONS
OF THE SOUTHERN STATES, INC.**

Docket No. 960833-TP

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TITLE.

A. My name is Wayne Ellison. My business address is 1200 Peachtree Street N.E., Atlanta, Georgia 30309. I am employed by AT&T as a District Manager in the Law and Government Affairs organization.

Q. WOULD YOU PLEASE STATE YOUR EXPERIENCE?

A. I have 32 years experience in the telecommunications industry including 20 years as a manager for C & P Telephone Company, now a part of Bell Atlantic, and 12 years with AT&T. At C&P Telephone, I worked for 7 years in the outside plant engineering organization where I was responsible for loop planning and design, construction engineering and plant utilization. I also worked 13 years in the C&P Telephone costs and economics organization. My primary responsibility within the costs and economics organization was to supervise the analysis of service costs in support of the Company's rate filings. During my time in the costs and economics organization, I also administered plant purchases and sales transactions, negotiated borderline billing agreements, and performed special separations analysis. For the past twelve years I have been employed by AT&T. For a portion of that time, I performed various service management functions. However, the majority of my time with AT&T has been devoted to the advocacy of AT&T's positions as a regulatory witness and to the analysis of information and issues in support of those positions. This later assignment has required that I devote a considerable amount of

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1 time to the analysis of local exchange company services, costs, and prices.

2 **Q. HAVE ANY OF YOUR PREVIOUS ANALYSES OF LOCAL EXCHANGE**
3 **COMPANY COSTS AND PRICES INVOLVED ANALYZING**
4 **BELLSOUTH'S COSTS AND PRICES?**

5 A. Yes. As a member of the AT&T Law and Government Affairs organization, I have
6 worked specifically with BellSouth prices and costs since 1985. During that time I
7 have monitored BellSouth's various service filings to determine their impact on
8 AT&T as both a competitor and customer. I have also examined BellSouth cost data
9 provided in regulatory proceedings and contained in publicly available documents.

10 **Q. BASED UPON YOUR PRIOR EXPERIENCE, DESCRIBE YOUR LEVEL OF**
11 **FAMILIARITY WITH BELLSOUTH COSTS.**

12 A. I am very familiar with many of the procedures and methods followed by BellSouth
13 to develop costs. BellSouth's procedures and methods are in fact very much like the
14 procedures and methods I followed at C & P Telephone to perform the same
15 functions. I am also familiar with BellSouth's stated costs for selected services in
16 the various BellSouth jurisdictions. I have not in the past been able to generally
17 verify the accuracy or suitability of BellSouth's stated costs for specific uses
18 because sufficient supporting documentation has not been available.

19 **Q. DESCRIBE YOUR INVOLVEMENT IN NEGOTIATIONS WITH**
20 **BELLSOUTH.**

21 A. I have been responsible for determining acceptable prices for BellSouth's network
22 elements and interconnection services. To meet this responsibility, I have
23 participated in AT&T's negotiations with BellSouth and have analyzed the cost data
24 that BellSouth has provided to AT&T.

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

1 A. The purpose of my testimony is to:

2 1. Describe the basis for AT&T's pricing proposals.

3 2. Provide specific price recommendations for interconnection arrangements
4 between AT&T and BellSouth.

5 3. Provide specific price recommendations for numerous BellSouth unbundled
6 network element options requested by AT&T.

7 4. Recommend procedures for establishing prices for other requested network
8 elements; collocation; and access to poles, ducts, conduits, and rights-of
9 way where no relevant cost data are currently available.

10 **Q. WHY IS IT NECESSARY FOR THE COMMISSION TO ESTABLISH**
11 **PRICES FOR BELL SOUTH CAPABILITIES PROVIDED TO NEW**
12 **ENTRANTS IN THE LOCAL SERVICES MARKET?**

13 A. The Act requires the local exchange companies, including BellSouth, to provide
14 certain capabilities to new entrants in the local services market to facilitate the
15 development of local competition. The local companies are permitted to recover
16 their costs of providing these capabilities, but only to the extent that such charges
17 conform to specific provisions of the Act. BellSouth has not agreed to meet the
18 Act's pricing requirements. The Commission is therefore charged by the Act to
19 establish such prices as part of the arbitration process.

20 **Q. WHAT ARE THE REQUIREMENTS OF THE ACT REGARDING PRICING**
21 **FOR THESE VARIOUS CAPABILITIES?**

22 A. Section 251, paragraph (c)(2) of the Act requires that incumbent local exchange
23 carriers provide any requesting telecommunications carrier interconnection with the
24 local exchange carrier's network for the transmission and routing of telephone
25 exchange service and exchange access. Paragraph (c)(3) requires the incumbent to

1 provide to any requesting telecommunications carrier unbundled network elements.
2 Paragraph (c)(4) requires the incumbent to offer for resale at wholesale rates any
3 telecommunications service that the carrier provides at retail. Paragraph (c)(6)
4 requires the incumbent to provide physical collocation and, where physical
5 collocation is not practical, virtual collocation. Paragraph (a)(2) requires the
6 Company to provide number portability in accordance with requirements prescribed
7 by the FCC. Paragraph (a)(4) requires the Company to provide access to poles,
8 ducts, conduits, and rights-of-way.

9 **Q. WILL YOU DISCUSS PRICES FOR ALL THESE REQUIREMENTS IN**
10 **YOUR TESTIMONY?**

11 A. No. I will address each of the requirements with the exception of BellSouth services
12 offered for resale, which are addressed by AT&T witness Art Lerma, and number
13 portability requirements, which are being addressed by the FCC.

14 **Q. WHAT COSTS ARE ASSOCIATED WITH NETWORK**
15 **INTERCONNECTION?**

16 A. The primary component of cost within the interconnection category is the cost to
17 AT&T and BellSouth of terminating traffic originated by the other company's
18 customers. The Act specifies that each local exchange carrier has an obligation to
19 establish reciprocal compensation arrangements for the transport and termination of
20 such telecommunications traffic. More specifically, the Act requires that such
21 arrangements provide for the mutual and reciprocal recovery by each carrier of costs
22 associated with the transport and termination on each carrier's network of calls that
23 originate on the network of the other carrier.

24 **Q. WHAT COSTS ARE ASSOCIATED WITH THE PROVISION OF**
25 **NETWORK ELEMENTS?**

1 A. The Act defines a network element as a facility or equipment used in the provision
2 of a telecommunications service, including features, functions, and capabilities that
3 are provided by means of such facility or equipment. Network element costs
4 therefore may include both recurring and non-recurring costs, for various
5 configurations and capabilities. The provision of physical collocation, virtual
6 collocation, poles, ducts, conduits, and rights-of-way may involve some or all of
7 these same costs.

8 **Q. HAS AT&T REQUESTED THAT BELLSOUTH PROVIDE UNBUNDLED**
9 **ACCESS TO NETWORK ELEMENTS?**

10 A. Yes. AT&T has requested access to the following 12 network elements:

- 11 1. Network Interface Device
- 12 2. Loop Distribution
- 13 3. Loop Concentrator/Multiplexer
- 14 4. Loop Feeder
- 15 5. Local Switching
- 16 6. Operator Systems
- 17 7. Dedicated Transport
- 18 8. Common Transport
- 19 9. Tandem switching
- 20 10. Signaling Link Transport
- 21 11. Signal Transfer Points
- 22 12. Service Control Points/Databases

23 The prices for all twelve requested network elements remain in dispute.

24 **Q. DOES THE ACT SPECIFY HOW INTERCONNECTION; NETWORK**
25 **ELEMENTS; COLLOCATION; AND ACCESS TO POLES, CONDUITS,**

1 **DUCTS, AND RIGHTS OF WAY ARE TO BE PRICED?**

2 A. Yes. The Act specifies that just and reasonable rates for the interconnection of
3 facilities and network elements shall be based on the cost (determined without
4 reference to a rate-of-return or other rate-based proceeding) of providing the
5 interconnection or network element. . . . and may include a reasonable profit.
6 The Act further requires that compensation for transport and termination of traffic
7 reflect costs that are a reasonable approximation of the "additional costs" of
8 terminating such calls. In this regard, the Act does not preclude recovery through
9 offsetting reciprocal obligations, including bill-and-keep arrangements.
10 The Act specifies that collocation rates, terms, and conditions must be just,
11 reasonable, and non-discriminatory.
12 The Act also requires that the Commission consider, in its regulation of the rates,
13 terms, and conditions for attachments to poles, ducts, conduits, and rights of way,
14 the interests of the subscribers of the services offered via such attachments, as well
15 as the interests of the consumers of the utility.

16 **Q. HOW SHOULD PRICES FOR SERVICES PROVIDED TO NEW MARKET**
17 **ENTRANTS BE DETERMINED?**

18 A. As discussed in the testimonies of Dr. Kaserman and Joe Gillan, prices for each of
19 these capabilities should be set equal to direct economic cost, measured by total
20 service long run incremental cost studies (TSLRIC).

21 **Q. HAS BELLSOUTH OFFERED TO PROVIDE NETWORK ELEMENTS TO**
22 **AT&T AT RATES EQUAL TO BELLSOUTH'S TSLRIC?**

23 A. No. At AT&T's urging BellSouth presented AT&T an initial price proposal for
24 selected network elements and network interconnection on May 7, 1996, and
25 updated that proposal on June 13, 1996. However, the rates contained in both

1 proposals were, in large part, drawn from BellSouth's various tariffs.

2 **Q. DID BELLSOUTH ATTEMPT TO DEMONSTRATE THAT THE TARIFFED**
3 **RATES PROPOSED BY THE COMPANY WERE BASED ON COSTS OF**
4 **ANY SORT?**

5 A. No. Moreover, it would be impossible for BellSouth to do so, given that tariff rates
6 contain elements and mark-ups not appropriately recovered from the Company's
7 network element and local interconnection offerings. Retail rates contain marketing,
8 advertising, and customer services costs entirely inappropriate for wholesale
9 services, and existing wholesale rates contain mark-ups not consistent with cost-
10 based pricing.

11 **Q. WHAT WAS AT&T'S RESPONSE TO BELLSOUTH'S INITIAL PRICE**
12 **PROPOSAL?**

13 A. Upon receiving BellSouth's initial proposal, AT&T decided that it was unlikely that
14 BellSouth would make a cost-based proposal to AT&T during the negotiations, and
15 that AT&T would need to put its own cost-based counter-proposal on the
16 negotiating table.

17 Recognizing that BellSouth had already conducted forward-looking incremental cost
18 studies for many of the relevant network elements, AT&T intensified its efforts to
19 obtain those studies and other cost data, with the objective of developing a cost-
20 based price proposal for interconnection for each of the various network elements
21 requested by AT&T, and for collocation, poles, ducts, conduits, and rights-of-way.
22 On May 8, 1996, AT&T filed for mediation in Tennessee, seeking more complete
23 responses to its initial April 4, 1996 cost request to BellSouth. AT&T also requested
24 additional BellSouth cost data on June 5, 19, and 26, 1996. There were also several
25 discussions and letters between AT&T and BellSouth employees regarding AT&T's

1 need for cost information and BellSouth's willingness (or hesitancy) to provide the
2 requested data.

3 **Q. DID BELLSOUTH PROVIDE THE REQUESTED COST INFORMATION?**

4 A. Not entirely. BellSouth did provide various cost summaries and some underlying
5 detail to AT&T. However, much of the information provided by BellSouth is not
6 adequately documented and/or not specific to individual interconnection
7 arrangements and network elements. Moreover, BellSouth has generally
8 represented its data as being LRIC data, requiring AT&T to analyze the extent to
9 which the studies provide reasonable measures of TSLRIC. Finally, AT&T has not
10 yet been successful in obtaining and analyzing studies and back-up material needed
11 to either fully validate or refute BellSouth's stated costs.

12 **Q. WHAT ARE THE DIFFERENCES BETWEEN TSLRIC COSTS AND LRIC?**

13 A. There are often no differences between LRIC and TSLRIC costs in actual practice,
14 but in a theoretical sense there can be differences due to the service increment
15 analyzed in the study.ⁱ TSLRIC determines incremental unit costs to reflect the
16 average cost of production considering entire product demand. On the other hand,
17 LRIC determines only the incremental unit cost of an additional increment of
18 service. The LRIC for additional units could be higher or lower than TSLRIC
19 depending upon the trend of future costs. If costs for additional units are declining,
20 as is generally accepted to be the case for telecommunications services, LRIC costs
21 for the additional units is lower than TSLRIC. Such differences between TSLRIC
22 and LRIC disappear, however, if the studied demand increment for the LRIC study
23 is full service demand (making it in fact a TSLRIC study). Differences also
24 disappear if the LRIC increment is great enough to capture essentially all relevant
25 costs, or the LRIC study procedure is not sufficiently refined to reflect incremental

1 economies/dis-economies of scale or differences in the mix of incremental and full
2 service inputs.

3 Differences between LRIC and TSLRIC can also be expected to disappear when a
4 specific study is prepared as support for prices charged competitors. While
5 BellSouth has an interest in obtaining lower LRIC results for retail services by
6 studying small demand increments, BellSouth should have no interest in
7 understating network element costs.

8 **Q. WERE YOU ABLE TO DETERMINE THAT BELLSOUTH'S STUDIES**
9 **ACTUALLY REFLECT TSLRIC?**

10 A. Yes. I found that most of the BellSouth LRIC results provided to AT&T were
11 designed to produce TSLRIC results. This outcome occurred because the BellSouth
12 LRIC studies presented to AT&T generally included service increments great
13 enough to reflect TSLRIC results, or otherwise used inputs and methodologies
14 designed to capture all costs of providing a service. That is not to say, however, that
15 BellSouth's studies contained the most accurate or appropriate methodologies for
16 obtaining TSLRIC costs.

17 **Q. DO YOU HAVE ANY FURTHER SUPPORT FOR YOUR CONCLUSION**
18 **THAT THE BELLSOUTH COST DATA PROVIDED TO AT&T REFLECT**
19 **BELLSOUTH'S ESTIMATE OF TSLRIC COSTS?**

20 A. Yes. BellSouth submitted studies to the Louisiana Commission on June 25, 1996 in
21 response to a Commission order requiring the Company to produce both TSLRIC
22 and LRIC network element costs. In documentation accompanying the studies,
23 BellSouth noted that there were no differences between TSLRIC and LRIC costs for
24 loops, switching, and transport, which in combination represent the bulk of
25 BellSouth's network elements. Moreover, BellSouth noted only insignificant

1 differences for the majority of remaining elements.

2 **AT&T'S ANALYSIS OF BELLSOUTH COST STUDIES**

3 **Q. DESCRIBE HOW YOU ANALYZED THE BELLSOUTH COST STUDIES**
4 **THAT AT&T RECEIVED.**

5 A. AT&T first reviewed BellSouth's individual incremental cost studies to assure that
6 the study reflected least cost and forward-looking technology and operating
7 methods. We then reviewed the study to determine if the included investments and
8 costs were properly calculated. We checked to determine that appropriate costs
9 were included, and that inappropriate costs were excluded. And, importantly, we
10 attempted to determine the exact capabilities included in each cost element. Where
11 we identified significant problems with study methodologies, calculations, or inputs,
12 we sought data from BellSouth to make appropriate adjustments. Where we were
13 unable to check the validity of BellSouth's study due to insufficient documentation
14 we sought additional documentation. We weighed the total impact of other
15 discrepancies, and discounted offsetting discrepancies where appropriate.

16 **Q. WERE YOU ABLE IN ALL CASES TO RESOLVE CONCERNS WITH**
17 **BELLSOUTH'S STUDIES AND TO ARRIVE AT AN ACCEPTABLE COST**
18 **ESTIMATE?**

19 A. No, not in all cases. However, we were able to validate several individual BellSouth
20 studies within reasonable limits, and were able to validate other BellSouth cost
21 estimates conditioned upon the acceptance of additional BellSouth documentation.
22 In the following sections of my testimony, I describe AT&T's findings as a result of
23 our analysis, and make either concrete or conditional price proposals. I will update
24 those proposals prior to hearing based on further review and any additional
25 documentation and information provided by BellSouth.

1 **I. UNBUNDLED NETWORK ELEMENTS**

2 **Q. WHAT COST DATA HAS BELLSOUTH PROVIDED AT&T REGARDING**
3 **2-WIRE LOOPS?**

4 A. BellSouth provided AT&T an initial incremental cost study of 2-wire loopⁱⁱ costs on
5 April 26 and, in response to an AT&T request, provided additional study
6 documentation on May 24. On June 18, BellSouth provided AT&T the 2-wire loop
7 study it had submitted to the PSC in response to Florida Public Service Commission
8 Order No. PSC-96-0444-FOF-TP. This later study package also included
9 BellSouth's cost estimates for certain 4-wire loops, 2-wire ISDN loops, and DS1
10 digital grade loops. BellSouth also has provided AT&T similar 2-wire loop studies
11 for other BellSouth jurisdictions.

12 **Q. HAVE THESE STUDIES ALLOWED AT&T TO CALCULATE**
13 **BELLSOUTH'S 2-WIRE LOOP COSTS?**

14 A. Yes. Although neither the initial nor subsequent loop studies provided by BellSouth
15 reflect least-cost, forward-looking loop technologies, and could not therefore be
16 taken at face value, BellSouth did include information in back-up documents and
17 supplemental data responses regarding efficient, forward-looking costs. AT&T used
18 that information to calculate appropriate loop cost.

19 **Q. PLEASE EXPLAIN.**

20 A. BellSouth's 2-wire loop study results assume that the least cost, forward-looking
21 configuration for providing 2-wire loops consists entirely of metallic loop facilities
22 for customers within 12,000 feet of the customer's wire center, and loops provided
23 over digital loop carrier for all other customers. This assumption is somewhat
24 reasonable if properly applied, and if appropriate costs are considered for each
25 technology.

1 BellSouth included inappropriate costs, however, by assuming that those loops
2 provided over digital loop carrier would be converted to analogⁱⁱⁱ format at the wire
3 center. Adding analog conversion cost is inappropriate because analog conversion
4 does not represent the least-cost, forward-looking technology for providing loops, or
5 BellSouth's actual provisioning plans.

6 BellSouth stated during negotiations that the use of existing digital loop carrier
7 systems requiring analog conversion is declining. BellSouth further indicated that
8 only a small percentage of its loops use systems requiring analog conversion today,
9 while a greater percentage use growing digital loop technologies that require no
10 such conversion. Loop cost estimates based upon the use of digital loop carrier
11 systems requiring analog conversion, therefore, cannot possibly represent the least
12 cost, forward-looking technology for providing loops. Including this conversion
13 cost inappropriately increases BellSouth's calculated loop costs.

14 **Q. WHAT IMPACT DOES INCLUSION OF ANALOG CONVERSION HAVE**
15 **ON 2-WIRE LOOP COSTS?**

16 A. Data included in the BellSouth studies provided to AT&T indicate that analog
17 conversion costs significantly increase both the monthly cost of loops provided over
18 digital loop carrier, and BellSouth's composite loop cost, reflecting a mix of both
19 copper and digital carrier loops. This data was included in the back-up information
20 provided to AT&T, evidently because BellSouth also performs studies of loop costs
21 using this forward-looking, least-cost technology. AT&T was able to estimate the
22 cost impact of analog conversion before it made its price offer, but AT&T has
23 requested BellSouth's other loop studies so that it can verify its results.

24 **Q. WHY WOULD BELLSOUTH INCLUDE ANALOG CONVERSION COSTS**
25 **IN THE COST STUDIES PROVIDED TO AT&T?**

1 A. BellSouth may have done so due to its position that it will not provide unbundled
2 loops over digital loop carrier without analog conversion. If so, BellSouth's
3 position is untenable. First, BellSouth must allow the connection of its unbundled
4 loops to BellSouth's unbundled switching element, and the loops that BellSouth
5 provides in those instances will actually utilize the same forward-looking
6 technologies (without the required analog conversion) BellSouth uses for its own
7 customers. Secondly, even if BellSouth prevailed in its decision to deny new
8 entrants the more efficient loop technology, the result would be that new entrants
9 would be limited primarily to the use of metallic loops, not the preponderance of old
10 digital technology loops that BellSouth reflects in its cost result presented to AT&T.
11 In this second case, the average cost of loops actually provided to new entrants
12 would be even less than BellSouth's efficient composite price.
13 Finally, if BellSouth decides to serve these new entrants using more expensive
14 technology, it should not be allowed to pass those inefficient costs along. By
15 permitting BellSouth to do so, the Commission would simply be allowing BellSouth
16 to artificially inflate the prices charged to new entrants, thus impeding the
17 development of competition in the local service market.

18 **Q. DID AT&T IDENTIFY OTHER PROBLEMS WITH BELLSOUTH'S 2-**
19 **WIRE LOOP STUDIES?**

20 A. Yes. The initial BellSouth study presented to AT&T appears to also overstate unit
21 investment costs for the digital loop carrier components actually used. These
22 unexplained additional investments add to the overstatement of costs resulting from
23 use of incorrect technology.
24 In addition, BellSouth's original and revised 2-wire loop studies include return on
25 equity assumptions of up to 17 or 18%. Equity returns this high are not reasonable

1 for monopoly network elements and produce greatly inflated cost estimates. AT&T
2 has multiplied BellSouth's adjusted recurring cost figures by a factor of 85% to
3 produce a more reasonable equity return of approximately 11.5%. Calculations
4 supporting the 85% adjustment factor are included on Exhibit WE-3.

5 **Q. INCLUDING THE THREE NECESSARY ADJUSTMENTS YOU DESCRIBE,**
6 **WHAT IS YOUR ESTIMATE OF FORWARD-LOOKING 2-WIRE LOOP**
7 **COST?**

8 A. AT&T's calculation of 2-wire loop cost is shown on Exhibit WE-4.

9 **Q. WHAT INFORMATION HAS BELLSOUTH PROVIDED REGARDING**
10 **COSTS OF OTHER TYPES OF LOOPS?**

11 A. AT&T's primary information source for costs of other BellSouth loops was the
12 BellSouth study submitted to the Commission in response to Florida Public Service
13 Commission Order No. PSC-96-0444-FOF-TP. In addition to 2-wire loop costs, this
14 package included BellSouth's cost estimates for certain 4-wire loops, 2-wire ISDN
15 loops, and DS1 digital grade loops. Unfortunately, the package provided AT&T
16 (and possibly the Commission) did not include information sufficient to audit
17 BellSouth's results or to make adjustments in the event BellSouth's calculations
18 were found to be faulty.

19 **Q. GIVEN THE SCARCITY OF DOCUMENTATION FOR THESE OTHER**
20 **LOOP COSTS, HOW DID AT&T ARRIVE AT ESTIMATED BELLSOUTH**
21 **COSTS?**

22 A. AT&T accepted BellSouth's stated ratio of costs for 4-wire versus 2-wire loops
23 contained in the unbundled studies provided to the Commission. AT&T then
24 calculated BellSouth's adjusted 4-wire loop cost by applying this ratio to AT&T's
25 previously calculated 2-wire loop cost.

1 AT&T next calculated DS1 loop costs by accepting BellSouth's DSI loop cost,
2 adjusted to reflect a more appropriate cost of money. The cost of money
3 adjustment was made utilizing the 85% factor described for 2-wire loops.
4 BellSouth's Basic Rate ISDN (BRI ISDN) loop studies raised questions that AT&T
5 could not reconcile, given the absence of cost support documentation. The
6 documentation included with the BellSouth study given the Commission does not
7 precisely define BellSouth's assumptions regarding the least-cost, forward looking
8 technology for BRI ISDN loops (or, for that matter, other included loops).
9 BellSouth's brief description indicates that the assumed least cost technology for
10 BRI ISDN loops is fiber for feeder and metallic for distribution. BellSouth
11 representatives stated in negotiations, however, that such is not the case, and that the
12 assumptions used for BRI ISDN loops and other revised study loops are the same as
13 those used in the Company's prior studies (i.e., digital carrier beyond 12,000 feet).
14 BellSouth's insufficient documentation raises questions regarding the use of the
15 most efficient technologies, given that the economic break-point for using digital
16 loop carrier instead of copper loops appears to be quite different for POTS and
17 ISDN loops. Moreover, BellSouth ISDN studies are flawed because they reflect the
18 same inefficient analog conversion included in BellSouth's 2 and 4-wire studies, and
19 once again overstate cost of money requirements.
20 For all these reasons AT&T rejected BellSouth's BRI ISDN loop studies. The
21 Commission should also reject these studies and require BellSouth to provide
22 revised results using documented least-cost, forward-looking technology and
23 reasonable cost of money assumptions. Until the new studies are completed, the
24 Commission should set the BRI ISDN unbundled loop rate equal to the rate for 2-
25 wire loops. This is a reasonable alternative, given that the majority of BRI ISDN

1 loops are in fact provisioned using 2-wire POTS loops.

2 **Q. WAS AT&T ABLE TO DETERMINE BELLSOUTH'S NON-RECURRING**
3 **COSTS RELATED TO THE PROVISIONING OF LOOPS?**

4 A. No. Although BellSouth provided non-recurring cost estimates, the BellSouth
5 studies assume that unbundled elements will be ordered on an individual, stand-
6 alone basis. This approach is not consistent with the manner in which unbundled
7 elements are likely to be purchased. The Commission should therefore determine
8 those network elements BellSouth must provide and, thereafter, require BellSouth to
9 submit new non-recurring cost estimates structured to reflect the various single
10 element and combination element ordering and provisioning processes actually
11 required.

12 **Q. DID BELLSOUTH PROVIDE AT&T WITH COST INFORMATION AT THE**
13 **SUB-LOOP LEVEL?**

14 A. No. Although AT&T requested that BellSouth provide the customer network
15 interface device, loop distribution, loop concentrator/multiplexer functions, and loop
16 feeder as separate unbundled network element offerings, the various cost studies
17 provided by BellSouth included no break-down of costs for these individual loop
18 components. Following receipt of the original loop studies, AT&T inquired as to
19 whether data were available from BellSouth to separate the Company's loop costs
20 into the four sub-loop elements. BellSouth representatives responded that a break-
21 down was not possible because underlying sample data did not include sufficient
22 information. In fact, BellSouth loop studies presented to the Public Service
23 Commission actually account for distribution and feeder costs separately and could
24 easily be partitioned to identify multiplexer/concentrator costs. Thus, if sub-loop
25 element costs were not available before, they are now, and the Commission should

1 require BellSouth to produce such studies.

2 **Q. WOULD THE DISAGGREGATION YOU DESCRIBE ABOVE IDENTIFY**
3 **BELLSOUTH'S COST FOR THE NETWORK INTERFACE DEVICE (NID)**
4 **AT&T SEEKS TO PURCHASE?**

5 A. Disaggregating the NID from other loop components should be one objective for the
6 disaggregated loop study, and BellSouth can easily calculate the cost of a NID. In
7 the alternative, the Commission should set the rate for the NID at AT&T's estimate
8 of cost, which AT&T calculates at \$.19 per month, based on an installed cost for the
9 NID of no more than \$15.00, and annual carrying charges of 15%. Due to the small
10 resulting charge it may be more efficient to convert this rate to a one-time charge.

11 **Q. WHAT COST DATA HAS BELLSOUTH PROVIDED REGARDING COSTS**
12 **FOR THE LOCAL SWITCHING ELEMENT?**

13 A. BellSouth provided AT&T an initial study of unbundled local switching costs for
14 voice services on April 26 and, on June 18, provided AT&T the voice local
15 switching cost package the Company had submitted to the Commission (in response
16 to Florida Public Service Commission Order No. PSC-96-0444-FOF-TP).

17 **Q. DID THESE BELLSOUTH STUDIES ALLOW AT&T TO DETERMINE**
18 **BELLSOUTH'S LOCAL SWITCHING COSTS?**

19 A. The studies have allowed AT&T to determine BellSouth's costs for providing local
20 voice switching services. However, no data has been provided to date that would
21 allow AT&T to determine costs for BellSouth's data switching elements.

22 **Q. WHICH DATA SWITCHING ELEMENTS IS AT&T SEEKING TO**
23 **PURCHASE?**

24 A. AT&T has requested circuit-switched and ISDN packet data switching capability
25 between industry standard ISDN interfaces, Frame Relay functionality, and ATM

1 functionality.

2 **Q. REGARDING VOICE SWITCHING, WHAT WAS THE OUTCOME OF**
3 **AT&T'S REVIEW OF STATED BELL SOUTH COSTS?**

4 A. The initial studies provided by BellSouth divided BellSouth's basic voice switching
5 costs into two components: line termination costs and usage-related costs. AT&T
6 has determined that BellSouth's cost estimates for both elements appear reasonable
7 for voice services, but BellSouth has not provided sufficient supporting
8 documentation to allow AT&T to make an absolute determination. AT&T has
9 therefore sought additional information from BellSouth to verify our conclusion. At
10 the same time, AT&T has accepted BellSouth's calculated costs for the purpose of
11 negotiations, adjusted only for the previously described 85% cost of money factor.
12 It has been necessary for AT&T to interpret and restructure BellSouth's cost
13 estimates to obtain unbundled costs for the local switch as a stand-alone unbundled
14 element. This step has been necessary because BellSouth aggregated its study
15 results to include both local switch costs and costs associated with the separate
16 transport element. AT&T's adjustments to arrive at unbundled local switching costs
17 are included in Exhibit WE V.

18 AT&T has not been able to verify BellSouth's ISDN line termination costs, as the
19 ISDN cost estimates have not been accompanied by either back-up calculations or
20 documentation. Until such information is received, the rate recommended by AT&T
21 should be considered as tentative and subject to significant adjustment.

22 **Q. IS THE ORIGINAL BELL SOUTH LOCAL SWITCHING STUDY**
23 **PROVIDED TO AT&T CONSISTENT WITH THE STUDY LATER**
24 **PROVIDED BY BELL SOUTH TO THE COMMISSION?**

25 A. No. The two studies are significantly different with respect to one major cost item.

1 The original studies provided to AT&T determined that local switching costs for
2 billing, business office, and operator services were negligible, as would be expected
3 for unbundled elements. However, the studies provided to the Commission include
4 a large additional and unexplained cost for these functions. I know of no additional
5 costs of the magnitude of BellSouth's addition that should be included in its
6 unbundled studies, and the Commission should require BellSouth to justify this large
7 additional expense or remove it from BellSouth's calculated costs. In this regard,
8 AT&T has requested supporting data for BellSouth's cost additions, and will make
9 specific additional recommendations to the Commission after receipt and review of
10 such data.

11 **Q. WHAT DATA HAS BELLSOUTH PROVIDED AT&T REGARDING**
12 **OPERATOR SERVICES SYSTEMS COSTS?**

13 **A. BellSouth provided AT&T an initial cost study of operator function costs on May**
14 **21, 1996. BellSouth has not provided AT&T cost studies for directory assistance,**
15 **directory assistance call completion, and intercept element capabilities for Florida,**
16 **but it has provided such information for Louisiana. To date, BellSouth has not**
17 **provided AT&T cost studies for its busy line verification, emergency interrupt, and**
18 **emergency call trace functions for any state.**

19 **Q. HAVE THE STUDIES PROVIDED BY BELLSOUTH ALLOWED AT&T TO**
20 **DETERMINE BELLSOUTH'S UNBUNDLED OPERATOR SYSTEMS**
21 **ELEMENT COSTS?**

22 **A. Yes. With the exception of the noted outstanding studies, the studies provided by**
23 **BellSouth included operator cost estimates which AT&T believes to be a somewhat**
24 **reasonable estimate of forward-looking costs. However, because little supporting**
25 **documentation was provided with the studies, AT&T adjusted BellSouth's costs**

1 downward by a factor of 10% to reflect the possibility of inappropriate cost loadings
2 in AT&T's initial price proposal and requested additional supporting data. When
3 AT&T has completed its review of the requested data it will be able to make a
4 conclusive cost recommendation to the Commission.

5 **Q. WHAT DATA HAS BELLSOUTH PROVIDED AT&T REGARDING**
6 **COMMON AND DEDICATED TRANSPORT COSTS?**

7 A. BellSouth provided AT&T an initial unbundled element study including common
8 transport costs on April 26, 1996, and FGA and FGD (Feature Group A and Feature
9 Group D) studies and local transport restructure studies on May 21. BellSouth has
10 also provided AT&T similar data for other states and, just recently, provided AT&T
11 local transport unbundled element studies required by the Louisiana Commission.

12 **Q. HAVE THESE BELLSOUTH STUDIES ALLOWED AT&T TO**
13 **DETERMINE BELLSOUTH'S COMMON AND DEDICATED TRANSPORT**
14 **COSTS?**

15 A. The data provided by BellSouth has enabled AT&T to calculate most common and
16 dedicated transport costs. The initial common transport studies provided by
17 BellSouth included a calculation of common transport costs which AT&T
18 determined to be reasonable, subject only to cost of money adjustments. AT&T has
19 made this adjustment through the previously described 85% adjustment factor.
20 AT&T has also found BellSouth's dedicated transport estimate to be reasonable, but
21 with limitations for pricing purposes. The primary limitations relate to the way in
22 which BellSouth's Florida study bundles various elements as part of "typical"
23 configurations that should actually be priced and offered separately. As a result,
24 AT&T made BellSouth an original offer based on the bundled configurations, but
25 was unable to develop an unbundled proposal until receipt of BellSouth's Louisiana

1 studies. The dedicated transport rates I recommend in my testimony are in fact
2 based on those Louisiana studies. To the extent BellSouth can demonstrate different
3 costs in Florida, it should be allowed to do so.

4 There are other transport features, functions, and capabilities that remain to be
5 priced. These include real time access and reconfiguration capabilities on
6 BellSouth's digital cross-connect systems, and costs for use of entire transport
7 systems. The Commission should order BellSouth to produce these studies.

8 **Q. WHAT COST STUDIES HAS BELLSOUTH PROVIDED AT&T
9 REGARDING COSTS OF TANDEM SWITCHING?**

10 A. BellSouth provided AT&T an initial unbundled element study that included tandem
11 switching costs on April 26, 1996. BellSouth also provided a tandem switching cost
12 estimate in its FGA and FGD studies and local transport restructure studies provided
13 on May 21. Finally, BellSouth has provided AT&T similar data for other states.

14 **Q. HAVE THESE BELLSOUTH STUDIES ALLOWED AT&T TO
15 DETERMINE BELLSOUTH'S TANDEM SWITCHING COSTS?**

16 A. Yes. The studies provided by BellSouth provide a calculation of tandem switching
17 costs which AT&T believes to be reasonable.

18 **Q. WHAT DATA HAS BELLSOUTH PROVIDED AT&T REGARDING
19 SIGNALING LINK TRANSPORT COSTS?**

20 A. BellSouth provided AT&T an initial unbundled element study reflecting signaling
21 link transport costs on May 21. BellSouth has also provided AT&T similar data for
22 other states.

23 **Q. HAVE THESE BELLSOUTH STUDIES ALLOWED AT&T TO
24 DETERMINE BELLSOUTH'S SIGNALING LINK TRANSPORT COSTS?**

25 A. Yes. The studies provided by BellSouth provide a calculation of signaling link

1 transport costs which AT&T believes to be reasonable. The only necessary
2 adjustments to these costs are reductions to cost of money requirements, which
3 AT&T has performed through the previously described 85% adjustment factor.

4 **Q. WHAT DATA HAS BELLSOUTH PROVIDED AT&T REGARDING**
5 **SIGNAL TRANSFER POINT COSTS?**

6 A. BellSouth provided AT&T an initial unbundled element study reflecting signal
7 transfer point (STP) costs on May 21.

8 **Q. HAVE THESE BELLSOUTH STUDIES ALLOWED AT&T TO**
9 **DETERMINE BELLSOUTH'S COSTS FOR SIGNAL TRANSFER POINTS?**

10 A. Yes. The studies provided by BellSouth provide a calculation of STP and common
11 signaling link costs which AT&T has determined to be reasonable. Again, AT&T
12 adjusted BellSouth's cost of money through the previously described 85%
13 adjustment factor.

14 **Q. WHAT COST DATA HAS BELLSOUTH PROVIDED REGARDING**
15 **BELLSOUTH COSTS FOR PROVIDING SERVICE CONTROL**
16 **POINT/DATABASE (SCP) CAPABILITIES?**

17 A. BellSouth provided AT&T an initial unbundled element study reflecting costs for its
18 Line Information Database (LIDB) on May 21. While BellSouth has not provided
19 similar studies for BellSouth's 800 portability database in Florida, it has provided a
20 cost study for this function to the Louisiana Commission.

21 **Q. HAVE THESE BELLSOUTH STUDIES ALLOWED AT&T TO**
22 **DETERMINE BELLSOUTH'S COSTS FOR NECESSARY SCP**
23 **CAPABILITIES?**

24 A. The studies provided by BellSouth have permitted AT&T to determine costs for
25 BellSouth's LIDB and toll-free number databases. However, BellSouth has not

1 provided data for SCE/SMS AIN access.

2 **Q. HAVE YOU PREPARED AN EXHIBIT REFLECTING THE BELLSOUTH**
3 **COST STUDY RESULTS YOU HAVE DESCRIBED AND YOUR**
4 **ADJUSTMENTS TO THOSE COSTS?**

5 A. Yes. Attached Exhibit WE-1 documents the BellSouth sources from which AT&T's
6 cost estimates were obtained, BellSouth's stated costs, AT&T's adjustments to
7 BellSouth's stated costs, and the resulting AT&T estimate of TSLRIC costs. I
8 should note that the corrected costs are likely to exceed TSLRIC because AT&T
9 adjusted the BellSouth cost studies only for the most obvious departures from
10 efficient least cost practices. The BellSouth cost studies most likely reflect other
11 departures from efficient, least-cost practices, the correction of which would lead to
12 lower cost results. The BellSouth cost studies, even as corrected, do not represent
13 perfect measures of TSLRIC. Rather, BellSouth's studies (as corrected) provide
14 reasonable estimates under circumstances that AT&T is willing to accept in this
15 arbitration.

16 **Q. HAS AT&T PRESENTED A PRICE PROPOSAL TO BELLSOUTH?**

17 A. Yes. AT&T submitted a price proposal for those network elements for which
18 AT&T was able to estimate costs on June 21, 1996. At the same time, and in the
19 same proposal, AT&T requested BellSouth to provide a price proposal and
20 supporting cost studies for the various other elements for which BellSouth had not
21 provided an adequate cost estimate.

22 **Q. DO THE PRICES AT&T PROPOSED ON JUNE 21, 1996, EQUAL AT&T'S**
23 **ESTIMATE OF BELLSOUTH TSLRIC IN ALL CASES?**

24 A. No. The June 21, 1996, AT&T proposal for individual rate components may deviate
25 from AT&T's estimate of BellSouth's costs for any of three reasons. First, AT&T's

1 included estimate of costs on Exhibit I reflects our latest view of BellSouth costs,
2 which has been refined in a few instances by receipt of supplemental BellSouth data.
3 The AT&T price proposal also deviated from calculated costs in those instances
4 where BellSouth documentation was insufficient, and AT&T felt uneasy about
5 BellSouth's stated costs. In such cases AT&T's initial proposal was conservative.
6 Finally, some of the rates in AT&T's initial proposal were based on Company-wide
7 costs and proposed as a Company-wide rate. The costs in Exhibit WE I reflect
8 Florida costs, which may be different from the BellSouth average.

9 **Q. WHAT ACTION SHOULD THE COMMISSION TAKE WITH RESPECT TO**
10 **EXHIBIT WE I?**

11 A. The Commission should implement the rates recommended by AT&T.

12 **Q. DOES EXHIBIT WE I LIST ALL UNBUNDLED ELEMENTS REQUESTED**
13 **BY AT&T?**

14 A. No. Exhibit WE I includes only those network elements for which AT&T has been
15 able to develop cost estimates. Attached Exhibit WE II lists several additional
16 unbundled elements, functions, and capabilities for which BellSouth has provided
17 neither a price proposal nor adequate cost support. The exhibit also lists collocation
18 and access to poles, conduits, ducts, and rights-of-way, for which no costs have been
19 provided. The Commission should require BellSouth to produce TSLRIC studies
20 for these additional capabilities and, following opportunity for review, require
21 BellSouth to provide such capabilities at TSLRIC cost. The Commission should
22 also require that BellSouth provide the additional elements required by AT&T in the
23 future at TSLRIC.

24 **Q. CAN YOU COMPARE AT&T'S PRICE PROPOSAL TO THE PROPOSAL**
25 **OF BELL SOUTH IN TERMS OF AT&T'S ABILITY TO COMPETE AS A**

1 **NEW ENTRANT IN THE LOCAL SERVICE MARKET?**

2 A. Yes. Under BellSouth's initial proposal AT&T would incur unbundled element
3 charges amounting a total of more than \$34.00 to provide local residential service,
4 should AT&T provide such service entirely over BellSouth unbundled elements.
5 Consider that BellSouth offers residential customers full local service, with all the
6 vertical features the customer chooses, for a flat rate of \$26.00 per month. AT&T
7 proposes to pay BellSouth approximately \$15.00 for the underlying network
8 elements to provide local service, to which it must add its own provisioning and
9 service costs.

10 **Q. IS YOUR ESTIMATE OF BELLSOUTH'S NETWORK ELEMENT COSTS**
11 **SUPPORTED BY OTHER AVAILABLE DATA?**

12 A. Yes. BellSouth filed a cost study summary with the Kentucky Public Service
13 Commission on September 28, 1995, stating that the cost of an additional retail
14 residential service line in that state with average vertical features was \$14.03 per
15 month, including basic service costs of \$13.44 and vertical service costs of \$.69.
16 This BellSouth cost estimate should include both network element and retail
17 function costs, yet is actually lower than the charges AT&T proposes to pay for only
18 the underlying unbundled elements in Florida.

19 **Q. WHAT OTHER NETWORK ELEMENT PRICING ACTIONS SHOULD THE**
20 **COMMISSION TAKE AT THIS TIME?**

21 A. The Commission should direct BellSouth to conduct disaggregated loop studies to
22 determine the cost of providing unbundled loops in various density zones, and to
23 thereafter deaverage the statewide loop rate approved in this proceeding. Various
24 studies and analyses indicate that the average loop cost in high density areas may be
25 as much as 25% or more less than the state average rate, while loop costs in rural

1 areas are substantially higher. Absent de-averaged rates, BellSouth could use its
2 cost advantage to block competition in those urban areas where competition could
3 otherwise incubate, and simultaneously delay the spread of competition to suburban
4 and rural areas.

5 **Q. WHAT PRICE HAS AT&T OFFERED BELLSOUTH FOR**
6 **INTERCONNECTION?**

7 A. AT&T proposed to BellSouth that prices be set at TSLRIC. Because BellSouth has
8 not provided adequate TSLRIC studies, AT&T also proposed to BellSouth the
9 interim use of a "bill and keep" system for transport and termination of traffic, as
10 provided for by the Act.

11 **Q. WHAT IS BELLSOUTH'S POSITION REGARDING INTERCONNECTION**
12 **PRICES?**

13 A. BellSouth has proposed tariffed access rates for interconnection. As I have
14 previously discussed, tariffed rates do not reflect economic costs and, therefore, are
15 improper under the Act.

16 **Q. WHAT SHOULD THIS COMMISSION DO REGARDING**
17 **INTERCONNECTION PRICES?**

18 A. The Commission should order that interconnection be priced at TSLRIC and that
19 BellSouth develop TSLRIC studies as promptly as possible. The indicated studies
20 could quickly be produced by using existing network element studies. Until such
21 studies are completed, this Commission should require a bill and keep arrangement
22 for interconnection.

23 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

24 A. Yes.

ⁱ As Dr. Kaserman explains in his testimony, long-run incremental cost (LRIC) and total service long-run incremental cost (TSLRIC) both measure the change in the firm's total costs caused by a change in output. In that sense, they are very similar conceptually. The only difference between them is the magnitude of the change in output contemplated. For TSLRIC, the change is the entire output of the service. And for LRIC, the change is finite but may be less than the entire output.

ⁱⁱ I use the term "loop" here to describe a complete transmission path from the customer's premises to the customer's serving wire center. It includes all sub-loop elements, including the Network Interface Device at the customer's premises, the customer's drop, loop distribution plant, loop multiplexer/concentrator equipment, and loop feeder plant.

ⁱⁱⁱ An analog interface at the local switch delivers voice, data, and signaling information transmitted from the customer in analog format. Information transmitted to the customer must also be input to the loop interface in analog format.

FLORIDA - UNBUNDLED ELEMENTS (RECURRING)

	<u>BellSouth Cost Results</u>		<u>AT&T Cost Adjustment</u>		<u>BellSouth Cost After Adjustment</u>	<u>AT&T 19-Jun-96 Proposal</u>	<u>Recommended Rate</u>
	<u>Amount</u>	<u>Source</u>	<u>Amount</u>	<u>Source</u>			
NID - Twisted Pair							
Loop Combination							
- 2W							
- 4W							
- BRISDN							
- DS1							
Loop Channelization							
- Per System							
- Per Circuit							
Local Switching							
(Includes all features, functions, capabilities)							
Line Interface							
- Residence							
- Business							
- Coin							
- PBX Line							
- 2W ISDN							
Trunk Interface							
- Analog/DSO (Incl. PBX)							
- DS1 (Incl. PBX)							
- DS1 ISDN							

"Information Claimed to be or Potentially Proprietary"

	<u>BellSouth Cost Results</u>		<u>AT&T Cost Adjustment</u>		<u>BellSouth Cost After</u>	<u>AT&T</u>	<u>Recommended</u>
	<u>Amount</u>	<u>Source</u>	<u>Amount</u>	<u>Source</u>	<u>Adjustment</u>	<u>19-Jun-96</u>	<u>Rate</u>
						<u>Proposal</u>	
Switching							
- Orig. First Minute							
• Line to Line							
• Line to Trunk							
- Orig. Add'l Minute							
• Line to Line							
• Line to Trunk							
- Term. Per Minute							
• Trunk to Line							
• Line to Line							
Univ. local call termination							
- Orig. First Minute							
- Orig. Add'l Minute							
Operator Systems							
0+ Calling Card							
0+ Calling Card							
Automated Calling Card							
Station-to-Station							
0- Calling Card							
0- Bill-To-Third							
0- Collect							
0- No Attempt							
0+ Bill-to-Third							
Automated Bill-To-Third							
0+ Collect							
Automated Collect							
Sent Paid							

	<u>BellSouth Cost Results</u>		<u>AT&T Cost Adjustment</u>		<u>BellSouth Cost After</u>	<u>AT&T</u>	<u>Recommended</u>
	<u>Amount</u>	<u>Source</u>	<u>Amount</u>	<u>Source</u>	<u>Adjustment</u>	<u>19-Jun-96</u>	<u>Rate</u>
						<u>Proposal</u>	
Person-to-Person							
0- Calling Card							
0- Bill-To-Third							
0- Collect							
0+ Calling Card							
0+ Bill-To-Third							
0+ Collect							
- Dialing Instructions							
- Time & Charges							
- Busy Line Verification							
- Emergency Interrupt							
- Call Trace							
Local Directory Assistance							
- Directory Assistance							
- DA Call Completion							
Intercept							
Common Transport							
- per mi., per local minute							
- fac, term., per local minute							
Dedicated Transport, per local channel:							
2-Wire DSO or Analog							
4-Wire DSO or Analog							
DS1 - Meld							
- Fixed							
DS3 - Meld							
- Fixed							

	<u>BellSouth Cost Results</u>		<u>AT&T Cost Adjustment</u>		<u>BellSouth Cost After</u>	<u>AT&T</u>	<u>Recommended</u>
	<u>Amount</u>	<u>Source</u>	<u>Amount</u>	<u>Source</u>	<u>Adjustment</u>	<u>19-Jun-96</u>	<u>Rate</u>
						<u>Proposal</u>	
Dedicated Transport Interoffice Channel							
Voice Grade							
	-facility term. meld						
	- per mile						
	- fixed						
	- per analog conv.						
DSO							
	-facility term. meld						
	- fixed - IOC Ckt Equip.						
	-per mile						
DS1							
	-facility term. meld						
	- fixed - IOC Ckt Equip.						
	-per mile						
DS3							
	-facility term.						
	-per mile						
Channelization							
	- DS1 to DSO/Analog, Per System						
	- DS3 to DS1, Per Arrangement						
	(SONET OC-3 with STS-1 Interface)						
	- Per DS1						
Tandem Switching							
Signaling Link Transport							
	56 Kbps Sig. Conn.						
	56 Kbps Sig. Termination						

	<u>BellSouth Cost Results</u>		<u>AT&T Cost Adjustment</u>		<u>BellSouth Cost After</u>	<u>AT&T</u>	<u>Recommended</u>
	<u>Amount</u>	<u>Source</u>	<u>Amount</u>	<u>Source</u>	<u>Adjustment</u>	<u>19-Jun-96</u>	<u>Rate</u>
						<u>Proposal</u>	
Signaling Transfer Point							
- ISUP Msg							
- TCAP MSG							
Usage Surrogate, per mo.							
SCPs/Databases							
- Toll Free Number							
- Basic, per query							
- Complex, per query							
- LIDB							
- Screening, per query							
- Msg. Invest., per query							

FLORIDA - UNBUNDLED ELEMENTS (NONRECURRING)

	<u>BellSouth Cost Results</u>		<u>AT&T Cost Adjustment</u>		<u>BellSouth Cost After</u>	<u>19-Jun-96</u>	<u>Recommended</u>
	<u>Amount</u>	<u>Source</u>	<u>Amount</u>	<u>Source</u>	<u>Adjustment</u>	<u>Proposal</u>	<u>Rate</u>
Network Interface							
- Twisted Pair							
Loop Channelization							
- First System							
- Add'l System							
- Per Circuit - First							
- Per Circuit - Add'l							
Dedicated Transport, per local channel:							
Voice Grade							
2-Wire - First							
- Add'l							
4-Wire - First							
-Add'l							
DS1 - First							
-Add'l							
DS3 - First							
-Add'l							
Dedicated Transport Interoffice Channel							
Voice Grade							
-facility termination First							
-facility termination Add'l							
DSO							
-facility termination First							
-facility termination Add'l							

	<u>BellSouth Cost Results</u>		<u>AT&T Cost Adjustment</u>		<u>BellSouth Cost After</u>	<u>19-Jun-96</u>	<u>Recommended</u>
	<u>Amount</u>	<u>Source</u>	<u>Amount</u>	<u>Source</u>	<u>Adjustment</u>	<u>Proposal</u>	<u>Rate</u>
DS1							
		-facility termination First					
		-facility termination Add'l					
DS3							
		-facility termination First					
		-facility termination Add'l					
Channelization							
		- DS1 to DSO, per system					
		First					
		Add'l					
		DS3 to DS1					
		- First Arrangement					
		- Add'l Arrangement					
		- Per DS1					
		First					
		Add'l					
Signaling Link Transport							
		- 56 Kbps Svc Established					

ITEMS REQUIRING COST INFORMATION

Item	Type	Explanation	Type Charge
Network Interface	Smart Jack		NRC
Loop Distribution	All capabilities		RC, NRC
Loop Concentrator	All capabilities		RC, NRC
Loop Feeder	All capabilities		RC, NRC
Loop Combination	2W		NRC
	4W		NRC
	DS1		NRC
	DS3		NRC
Local Switching	Line Interface	2Wire	NRC
		4Wire	NRC
		2W ISDN	NRC
		DS1 ISDN	NRC
		DS1 Trunk Termination	NRC
		TR-08 Dig Loop Cxr	RC, NRC
		TR-303 Dig Loop Cxr	RC, NRC

Item	Type	Explanation	Type Charge
Dedicated Transport	System dedicated to AT&T	Includes transmission equipment, facilities, and redundant equipment and facilities to support protection and restoration.	
		- SONET line-switched rings, OC-48	RC, NRC
		- SONET path-switched rings, OC-3, OC-12	RC, NRC
Digital Cross Connect System (DCS)		Auto cross-connect grooming, pt. to multi-pt., auto test, broadcast capabilities. Include cross-connect to DSX or LGX. Real time access, real time configuration capabilities.	
		DCS3/3, DCS3/1, DCS1/0	RC, NRC
Data Switching	Circuit Switched	Functionality required to switch between industry standard ISDN interfaces.	RC, NRC
	Packet Switched	Functionality required to switch between industry standard ISDN interfaces.	RC, NRC

Item	Type	Explanation	Type Charge
Data Switching (Cont'd)	Frame Relay	Functionality required to connect facilities from the Frame Relay User to Network Interface (UNI) to either another UNI or a communications path at the Network to Network Interface (NNI)	RC, NRC
	ATM	Functionality required to connect facilities from the ATM User to Network Interface (UNI) to either another UNI or a communications path at the Network Interface (NNI)	RC, NRC
Signaling Link Transport	Signaling facility termination @ DS1 level		RC, NRC
SCPs/Data Bases	SCE/SMS/AIN Access	Ability to create service applications in the BST SCE and deploy those applications to the BST SCP	RC, NRC
		Ability to create service applications in the AT&T SCE and deploy those applications via the AT&T SCP to BST SSPs	RC, NRC

Item	Type	Explanation	Type Charge
Poles, Ducts, Conduits and other Pathways			RC
Collocation			RC, NRC

Capital Costs- Bell vs. AT&T Assumptions

FPSC Exhibit Number _____
 FPSC Docket 960833-TP
 Ellison Exhibit WE-3
 Capital Costs
 Page 1 of 1

Asset Life	Comp. Return Rate	Debt/Equity Ratio	Debt Interest Rate	Equity Return Rate	A/P	A/F	SAL %	AC Cap	Comp. Tax Rate	PHI Factor	Net Sal. Factor	Book Depr Rate	AC Tax	AC Total	Diff Vs. Bell	Avg Bell Ann. Chg Rate	Indicated % Reduction
5																	
10																	
15																	
20																	
25																	
30																	
5																	
10																	
15																	
20																	
25																	
30																	
5																	
10																	
15																	
20																	
25																	
30																	

"INFORMATION CLAIMED TO BE OR POTENTIALLY PROPRIETARY"

I. Adjusting BellSouth Initial Loop Study

- A. BellSouth Result
- B. Excess for Non-Integrated Investment
- C. Excess for Integrated Investment
- D. Total Excess (B + C)
- E. Annual Charge Rate
- F. Excess Annual Charge (D X E)
- G. Excess Monthly Charge (F ÷ 12)
- H. Weight - DLC Loops
- I. Weighted Monthly Excess
- J. Net After Adjustment (A-I)
- K. Monthly Loop Expense Adjusted
for Return @ 85%

II. Adjusting BellSouth Revised Loop Study

- A. BellSouth Result
- B. Excess for Integrated Investment
- C. Annual Charge Rate
- D. Excess Annual Charge
- E. Excess Monthly Charge
- F. Weighted - DLC loops
- G. Weighted Monthly Excess
- H. Net after adjustment (A-G)
- I. Monthly Loop Expense Adjusted
for Return @ 85%

LOCAL SWITCHING

USAGE COSTS

ITEM	SOURCE	AMOUNT
1a. Line to Line switch - set-up	BST Study	
1b. Line to Line switch - duration	BST Study	
1c. Line to Line switch - Originating 1st minute	1a + 1b	
- Originating additional minute	1b	
2a. Two Line to Trunk switches - set-up	BST Study	
2b. Two Line to Trunk switches - duration	BST Study	
3a. Line to Trunk - set-up	2a	
3b. Line to Trunk - duration	2b + 2	
3c. Line to Trunk - originating 1st minute	3a + 3b	
- originating additional minute	3b	
4a. Trunk to Line - set-up	Estimate	
Trunk to Line - duration	3b	

Note: BST study refers to BellSouth unbundled element studies provided to AT&T on April 26, 1996 in response to AT&T's Final Data Request, Item 5.