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DIRECT TESTIMONY OF

MIKE GUEDEL

ON BEHALF OF AT&T COMMUNICATIONS

OF THE SOUTHERN STATES, INC.

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 960847-TP

FILED: AUGUST 16, 1996

Q. WILL YOU PLEASE IDENTIFY YOURSELF?

A. My name is Mike Guedel and my business address is AT&T, 1200 Peachtree Street, NE, Atlanta, Georgia, 30309. I am employed by AT&T as Manager-Network Services Division.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCES.

A. I received a Master of Business Administration with a concentration in Finance from Kennesaw State College, Marietta, GA in 1994. I received a Bachelor of Science degree in Business Administration from Miami University, Oxford, Ohio. Over the past years, I have attended numerous industry schools and seminars covering a variety of technical and regulatory issues. I joined the Rates and Economics Department of South Central Bell in February of 1980. My initial assignments included cost analysis of terminal equipment and special assembly offerings.

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In 1982, I began working on access charge design and development. From May of 1983 through September of 1983, as part of an AT&T task force, I developed local transport rates for the initial National Exchange Carrier Association (NECA) interstate filing. Post divestiture, I remained with South Central Bell with specific responsibility for cost analysis, design, and development relating to switched access services and intraLATA toll. In June of 1985, I joined AT&T, assuming responsibility for cost analysis of network services including access charge impacts for the five South Central States (Alabama, Kentucky, Louisiana, Mississippi, and Tennessee).

Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES.

A. My current responsibilities include directing analytical support activities necessary for AT&T's provision of intrastate communications service in Florida and other southern states. This includes detailed analysis of access charges and other Local Exchange Company (LEC) filings to assess their impact on AT&T and its customers. In this capacity, I have represented AT&T through formal testimony before the Florida Public Service Commission, as well as regulatory commissions in the states of Georgia, Kentucky, and South Carolina.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to:

- 1 1 . Describe the basis for the prices recommended in this testimony for unbundled
2 network elements and interconnection.
- 3 2 . Provide specific price recommendations for interconnection arrangements
4 between AT&T and GTE.
- 5 3 . Provide specific price recommendations for many of the GTE unbundled
6 network elements requested by AT&T
- 7 4 . Recommend procedures for establishing prices where no relevant cost data are
8 currently available for other requested network elements; collocation; and
9 access to poles, ducts, conduits, and rights-of-way.

10

11 **Q. WHY IS IT NECESSARY FOR THE COMMISSION TO ESTABLISH**
12 **PRICES FOR GTE UNBUNDLED NETWORK ELEMENTS AND**
13 **INTERCONNECTION?**

14

15 A. The Telecommunications Act of 1996 (the Act) requires the local exchange
16 companies, including GTE, to provide certain capabilities to new entrants in the
17 local services market to facilitate the development of local competition. The local
18 companies are permitted to recover their costs of providing these capabilities, but
19 only to the extent that such charges conform to specific provision's of the Act's
20 pricing requirements. The Commission is therefore charged by the Act to establish
21 such prices as part of the arbitration process.

22

23 **Q. WHAT CAPABILITIES DOES THE ACT REQUIRE THAT GTE MAKE**
24 **AVAILABLE TO NEW ENTRANTS?**

25

1 A. Section 251, paragraph (c)(2) requires that incumbent local exchange carriers
2 provide any requesting telecommunications carrier interconnection with the local
3 exchange carrier's network for the transmission and routing of telephone exchange
4 service and exchange access. Paragraph (c)(3) requires the incumbent to provide to
5 any requesting telecommunications carrier unbundled network elements. Paragraph
6 (c)(4) requires the incumbent to offer for resale at wholesale rates any
7 telecommunications service that the carrier provides at retail. Paragraph (c)(6)
8 requires the incumbent to provide physical collocation and, where physical
9 collocation is not practical, virtual collocation. Paragraph (b)(2) requires GTE to
10 provide number portability in accordance with requirements prescribed by the FCC.
11 Paragraph (b)(4) requires GTE to provide access to poles, ducts, conduits, and
12 rights-of-way. The technical aspects of these prescriptions are addressed in the
13 testimony of AT&T witness, Mr. Ray Crafton.

14
15 **Q. WILL YOU DISCUSS PRICES FOR ALL OF THESE REQUIREMENTS IN**
16 **YOUR TESTIMONY?**

17
18 A. No. I will address the pricing of each of the requirements with the exception the
19 pricing of GTE services offered for resale, which is addressed by AT&T witness Art
20 Lerma.

21
22 **Q. DOES THE ACT SPECIFY HOW INTERCONNECTION, NETWORK**
23 **ELEMENTS, COLLOCATION, AND ACCESS TO POLES, CONDUITS,**
24 **DUCTS, AND RIGHTS-OF-WAY ARE TO BE PRICED?**

25 A. Yes. The Act specifies that just and reasonable rates for the interconnection of

1 facilities and network elements “ (A) shall be (i) based on the cost (determined
2 without reference to rate-of-return or other rate-based proceeding) of providing the
3 interconnection or network element (whichever is applicable), and (ii)
4 nondiscriminatory, and (B) may include a reasonable profit” 47 U.S.C.
5 § 252(d)(1)(A)&(B). The Act further requires that compensation for transport and
6 termination of traffic reflect costs that are a reasonable approximation of the
7 “additional costs” of terminating such calls. In this regard, the Act does not
8 preclude recovery through offsetting reciprocal obligations, including bill-and-keep
9 arrangements - 47 U.S.C. § 252(d)(2). The Act specifies that collocation rates,
10 terms, and conditions must be just, reasonable, and non-discriminatory - 47 U.S.C
11 § 251(c)(6).

12
13 The Act also requires that the Commission consider, in its regulation of the rates,
14 terms, and conditions for the attachments to poles, ducts, conduits, and rights-of-
15 way, the interests of the subscribers of the services offered via such attachments, as
16 well as the interests of the consumers of the utility.

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

20
21 **A.** As discussed in the testimonies of Dr. David Kaserman and Joseph Gillan, prices for
22 each of these capabilities should be set equal to direct economic cost, measured by
23 Total Service Long Run Incremental Cost (TSLRIC) studies.

24
25 **Q. HAS GTE OFFERED TO PROVIDE NETWORK ELEMENTS TO AT&T AT**

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RATES EQUAL TO TSLRIC?

A. No. In its proposal dated July 24, 1996, GTE offered prices (on a limited number of the requested elements) that reflected a mark-up of nearly 30% above its TSLRIC cost estimate. Importantly, GTE's supporting cost study is fatally flawed and appears to have significantly overstated the TSLRIC costs.

Q. HAVE THESE GTE COST STUDIES BEEN REVIEWED BY A REGULATORY COMMISSION?

A. Yes. Through Decision No. 96-08-021, dated August 2, 1996, the California Public Service Commission reviewed the California version of these GTE cost studies, found the studies to be inadequate, and ordered GTE to produce new cost studies conforming to TSLRIC principles.

Q. WHAT IS THE BASIS FOR YOUR PRICING RECOMMENDATIONS DISCUSSED IN THIS PROPOSAL?

A. My pricing recommendations are based upon available cost data. Principally, I have utilized GTE Florida specific cost estimates developed through the Hatfield Model for pricing network elements. This Model is currently sponsored by AT&T and MCI and has been documented before the Federal Communications Commission (FCC), as well as numerous state regulatory bodies. The testimony of Mr. Wood documents the Hatfield methodology and the specific results of the model with respect to GTE Florida. Exhibit MG-3 to this testimony includes a summary of the

1 cost numbers used in my pricing recommendations.

2

3 I have also relied upon certain cost relationships contained in a loops study provided
4 by GTE to AT&T as part of the negotiations process.

5

6

INTERCONNECTION

7

8 **Q. WHAT IS MEANT BY THE TERM INTERCONNECTION?**

9

10 A. Interconnection refers to the act of linking two networks together such that calls or
11 messages that originate on the network of one carrier may transit or terminate on the
12 network of another carrier. Interconnection involves the physical linking of two
13 networks and may include the need to collocate equipment and/or the joint use of
14 poles, ducts, conduits, and rights-of-way. 47 U.S.C. § 251(b)(4).

15

16 **Q. WHAT COSTS ARE ASSOCIATED WITH NETWORK**
17 **INTERCONNECTION?**

18

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

1 originate on the network of the other carrier.

2

3 **Q. DOES THE ACT ADDRESS THE PRICING FOR CALL TRANSPORT AND**
4 **TERMINATION?**

5

6 A. Yes. 47 U.S.C. Section 251(b)(5) requires the establishment of reciprocal
7 compensation arrangements and 47 U.S.C. Section 252(d)(2) requires that the
8 reciprocal compensation reflect the additional costs of terminating telephone calls.

9

10 **Q. COULD YOU DESCRIBE THE CONCEPTS OF CALL TERMINATION**
11 **AND RECIPROCAL COMPENSATION?**

12

13 A. Call termination is the function of receiving a call from an interconnecting company
14 at the terminating company's switch and delivering the call to an end user customer
15 (a customer of the terminating company).

16

17 For example, assume that two companies are offering competitive local telephone
18 service in a given geographic territory. One company is the incumbent LEC and the
19 other is an Alternative Local Exchange Company (ALEC). Further assume that
20 these companies have established interconnecting facilities linking their respective
21 switches. When a customer of the ALEC places a call to a customer of the LEC, the
22 call is transmitted over the interconnecting facility to the LEC switch. Likewise,
23 when a customer of the LEC places a call to a customer of the ALEC, the call can be
24 transmitted over the same interconnecting facility to the ALEC switch. The function
25 of call completion, in either case, includes the reception of the call at the terminating

1 company switch and the delivery of the call to the end user customer.

2

3 **Q PLEASE EXPLAIN IN MORE DETAIL THE CONCEPT OF RECIPROCAL**
4 **COMPENSATION ARRANGEMENTS.**

5

6 **A.** When competition develops, each of the competing local service providers in a
7 given territory will serve a certain number of customers. In order for each of these
8 companies to offer ubiquitous local service to their respective customers, each
9 provider will have to rely on the other providers to complete calls, and the provider
10 completing the call will expect some form of compensation. Thus, during a given
11 period, a provider may terminate calls entitling it to compensation and have its calls
12 terminated requiring that it pay compensation. Reciprocal compensation
13 arrangements would provide a mechanism to allow fair compensation and
14 appropriate accounting for compensation among the various providers.

15

16 **Q. WHAT ARE THE APPROPRIATE TERMS AND PRICES FOR**
17 **RECIPROCAL COMPENSATION ARRANGEMENTS?**

18

19 **A.** Initially, the best solution may be the "bill and keep" arrangement. Under this
20 arrangement no dollars change hands. The compensation that one company offers
21 to another for the completion of its calls is the agreement to complete the other
22 company's calls in a like manner.

23

24 The beauty of this arrangement is its simplicity. There is no bill preparation or bill
25 rendering involved, and there is no need to review bills for accuracy. Further, this

1 arrangement can be implemented without the development of cost studies that would
2 be required to establish and justify specific prices.

3
4 AT&T supports the decision of the Florida Public Service Commission establishing
5 "bill and keep" as the initial arrangement for inter-company compensation.

6

7 **Q. IF THE COMMISSION DETERMINES THAT A RATE FOR CALL**
8 **COMPLETION IS APPROPRIATE, AT WHAT LEVEL SHOULD THE**
9 **COMMISSION SET THE RATE?**

10

11 A. The rates charged for call termination should be set at the TSLRIC that the LEC
12 incurs in providing the service. No additional mark-up should be allowed. A LEC
13 should be permitted to recover the costs that it incurs in providing call termination
14 arrangements, but it should not be allowed to exact any additional mark-up from
15 potential competitors simply for the right to do business in its (the incumbent
16 LEC's) territory.

17

18 *The Commission should order the incumbent LEC (in this case GTE) to produce*
19 *valid TSLRIC cost studies prior to establishing a specific price for this call*
20 *termination and transport service.*

21

22 **Q. WHAT ARRANGEMENTS SHOULD GOVERN THE INTERCONNECTION**
23 **BETWEEN AN ALEC AND GTE FOR THE DELIVERY OF CALLS**
24 **ORIGINATED BY AND/OR TERMINATED FROM CARRIERS TO THE**
25 **ALEC THROUGH A GTE TANDEM SWITCH?**

1

2 A. When a local call originated by an ALEC customer traverses a GTE tandem switch
3 to be completed through another ALEC switch, GTE should be entitled to charge the
4 originating ALEC the TSLRIC associated with the tandem switching function.

5

6 When a toll call carried by an interexchange carrier traverses a GTE tandem switch
7 to be completed at an ALEC end office switch, standard meet point billing
8 arrangements should apply. Essentially, GTE would be entitled to the revenues
9 associated with tandem switching (and also common transport if applicable, but not
10 the residual Interconnection Charge) and the ALEC would be entitled to all other
11 appropriate switched access charges.

12

13 **Q. WHAT SPECIFIC RATE SHOULD GTE CHARGE FOR PERFORMING AN**
14 **INTERMEDIARY TANDEM FUNCTION PROVIDED IN THE**
15 **COMPLETION OF A LOCAL CALL?**

16

17 A. GTE should be entitled to charge the TSLRIC based price associated with the
18 unbundled tandem switching element. The recommended price for this function is
19 \$.0007 per tandem switched minute of use. The development of this specific
20 recommended price is discussed below in conjunction with the proposed prices for
21 unbundled network elements.

22

23 **Q. WHAT ARE THE APPROPRIATE FINANCIAL ARRANGEMENTS**
24 **REGARDING THE COMPLETION OF INTEREXCHANGE CALLS**
25 **TERMINATED TO A NUMBER THAT HAS BEEN "PORTED" TO AN**

1 **ALEC THROUGH AN INTERIM LOCAL NUMBER PORTABILITY**
2 **ARRANGEMENT?**

3
4 A. Under this scenario, the incumbent LEC is entitled to the switched access charges
5 associated with the local transport functions (either the dedicated or
6 tandem/common transport elements but not the Residual Interconnection Charge)
7 required to transport the call to the incumbent's end office from which the call will
8 be "ported" to the ALEC. The incumbent LEC is not entitled to any other switched
9 access charges. The cost that the incumbent LEC incurs in "porting" the call to the
10 ALEC is recovered through the interim local number portability charges. To the
11 extent that the incumbent bills the non-transport access charges in this arrangement,
12 the associated revenue should be remitted to the ALEC.

13
14 **Q. WHAT ARE THE APPROPRIATE ARRANGEMENTS FOR THE**
15 **EXCHANGE OF INTRALATA 800 TRAFFIC WHICH ORIGINATES FROM**
16 **AN ALEC CUSTOMER AND TERMINATES TO AN 800 NUMBER SERVED**
17 **BY OR THROUGH GTE?**

18
19 A. When an 800 call is originated by a customer of an ALEC, the ALEC must first
20 determine where to send the call by querying an 800 database. If the call is to be
21 routed to GTE, the originating ALEC should forward the call with appropriate call
22 detail information to GTE so that GTE can bill its 800 customer. GTE should
23 compensate the ALEC with appropriate 800 originating access charges and an 800
24 database query charge.

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UNBUNDLED NETWORK ELEMENTS

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Q. WHAT IS AN UNBUNDLED NETWORK ELEMENT?

A. The Act defines a network element as a facility or equipment used in the provision of a telecommunications service, including features, functions, and capabilities that are provided by means of such facility or equipment.

Q. WHAT TYPES OF COSTS ARE ASSOCIATED WITH A NETWORK ELEMENT?

A. Network element costs may include both recurring and non-recurring costs associated with the physical facilities and service requirements used to support various network configurations and capabilities.

Q. HAS AT&T REQUESTED THAT GTE PROVIDE UNBUNDLED ACCESS TO NETWORK ELEMENTS?

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

- 1 . Network Interface Device
- 2 . Loop Distribution
- 3 . Loop Concentrator/Multiplexer
- 4 . Loop Feeder
- 5 . Local Switching

- 1 6 . Operator Systems
- 2 7 . Dedicated Transport
- 3 8 . Common Transport
- 4 9 . Tandem Switching
- 5 10 . Signaling Link Transport
- 6 11 . Signal Transfer Points
- 7 12 . Service Control Points/Databases

8

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

10

11 **Q. HAS AT&T DEVELOPED A PRICE FOR A 2-WIRE COMBINED LOOP?**

12

13 **A.** Yes. Based upon the Hatfield analysis, AT&T recommends that the Commission
14 establish a rate for a 2-wire composite loop at \$11.25 per line per month. This
15 combined 2-wire analog loop consists of four loop subelements (network interface
16 device, loop distribution, concentrator/multiplexer, and loop feeder). A complete
17 listing of AT&T's recommended price for each of these subelements is included in
18 Exhibit MG-1 to this testimony.

19

20 **Q. HAS AT&T DEVELOPED PRICES FOR RELATED 2-WIRE ISDN LOOPS**
21 **AND 4-WIRE ANALOG LOOPS?**

22

23 **A.** Yes. Based upon the 2-wire cost estimate developed through the Hatfield model,
24 and cost relationships contained in the GTE cost studies, AT&T recommends that
25 the Commission establish a price for a 2-wire ISDN loop at \$11.25 - the same as the

1 price of a standard 2-wire loop. In this case, the GTE cost information indicates that
2 the cost of the 2-wire ISDN loops is the same as the cost of the standard 2-wire loop.
3 While AT&T disagrees with the absolute quantification of the cost estimates
4 developed in the GTE cost study, AT&T is willing to accept the relationships that
5 GTE's study establishes until GTE produces more accurate studies.

6
7 Likewise, AT&T recommends that the Commission establish the price for the 4-wire
8 loop at \$13.67. This price is approximately 21.5% above AT&T's recommended
9 price for the standard 2-wire loop and consistent with the cost relationship
10 developed through the GTE cost study.

11
12 A complete summary of AT&T's recommended price for these local loops is
13 contained in Exhibit MG-1.

14
15 **Q. HAS AT&T DEVELOPED A PRICE FOR A 4-WIRE DS1 LOOP AND**
16 **RELATED CHANNELIZATION?**

17
18 A. No. At this time AT&T does not have adequate cost information to recommend a
19 price for this type of facility. The Commission should order GTE to produce
20 TSLRIC studies to support the pricing of these elements.

21
22 **Q. HAS AT&T DEVELOPED PRICES FOR THE LOCAL SWITCHING**
23 **ELEMENT?**

24
25 A. Yes. The Hatfield Model estimates the cost of local switching through two cost

1 components: 1) a monthly cost for the port, and 2) a per minute cost associated with
2 usage. The cost of the port is \$1.12 per line per month. The cost of usage is
3 estimated to be \$0.002 per minute of use. AT&T recommends that the price for
4 each of these components be established at these respective cost levels. AT&T
5 acknowledges that more sophisticated cost models (assuming the availability of
6 appropriate data) may be capable of further disaggregating switching cost by various
7 characteristics such as: 1) originating versus terminating minutes of use, 2) first
8 minute versus additional minutes, or 3) line to line versus line to trunk switching
9 arrangements, etc. AT&T recommends that the Commission order GTE to produce
10 these supporting cost studies to further refine the pricing process. However, in the
11 interim, the recommended prices should apply to all local switching minute of use.

12

13 **Q. HAS AT&T DEVELOPED PRICES FOR RELATED SWITCHING**
14 **FUNCTIONS SUCH AS CUSTOM CALLING FEATURES, CLASS**
15 **FEATURES, ACCESS TO ADVANCED INTELLIGENT NETWORK (AIN)**
16 **TRIGGERS, ETC.?**

17

18 **A.** Yes. The Hatfield Model is not capable of separately identifying the cost of
19 providing these switching features. However, the Model includes all of these costs
20 in its development of the local switching costs described above. Therefore, a carrier
21 purchasing the local switching port and usage components should be allowed
22 unlimited access to these additional features at no extra charge. AT&T
23 acknowledges that more sophisticated cost models (assuming the availability of
24 appropriate data) may be capable of further disaggregating switching costs by these
25 various features and functions. AT&T recommends that the Commission order GTE

1 to produce such supporting cost studies to further refine the pricing process.
2 However, in the interim, no additional charges should apply.

3

4 **Q. HAS AT&T DEVELOPED PRICES FOR THE TANDEM SWITCHING**
5 **FUNCTION?**

6

7 A. Yes. The Commission should set a rate no higher than \$.0007 per tandem switched
8 minute of use. This level equals the cost estimated through the Hatfield Model and
9 is only slightly below GTE's current tandem switching rate associated with switched
10 access service (\$.00075) - a rate believed to be in excess of TSLRIC. The
11 Commission should order GTE to produce TSLRIC cost studies to further refine this
12 pricing process.

13

14 **Q. HAS AT&T DEVELOPED PRICES FOR THE TRANSPORT ELEMENTS?**

15

16 A. Yes. The Hatfield Model estimates the cost for both the common and dedicated
17 transport elements. The estimated cost of providing dedicated transport is \$3.60 per
18 equivalent DS0 per month (a DS0 is a voice grade equivalent path or channel). The
19 estimated cost of providing common transport is \$0.00086 per minute of use.
20 AT&T recommends that the prices charged for these network elements be
21 established at the respective cost level.

22

23 **Q. HAS AT&T DEVELOPED PRICES FOR SIGNALING SERVICES?**

24

25 A. Yes. The Hatfield Model estimates costs for three signaling components: links,

1 Signal Transfer Points (STPs), and Signal Control Points (SCPs). The cost of
2 providing the A-link is \$16.83 per link per month. The cost of providing the D-link
3 is \$8.65 per link per month. The cost of providing a TCAP or ISUP message
4 through the STP is estimated to be \$.00003. The cost of providing a TCAP message
5 through the SCP is estimated to be \$.00103. AT&T recommends that the price for
6 each of these signaling components be set at its respective cost.
7

8 **Q. HAS AT&T DEVELOPED PRICES FOR OPERATOR SYSTEMS?**

9
10 A. No. The Hatfield Model is not capable of estimating the costs of unique operator
11 function. The Commission must order GTE to produce TSLRIC studies to support
12 unbundled operator service offerings. Exhibit MG-2 to this testimony includes a
13 listing of operator functions and services that requires GTE cost support.
14

15 The Hatfield Model, however, does estimate GTE's total cost of providing operator
16 systems within the state and expresses that result as a function of total switched
17 lines. This quantification should be used to evaluate the reasonableness of
18 anticipated GTE operator cost analyses. The Hatfield Model estimates GTE's
19 average cost of providing operator systems to be is \$.178 per switched line per
20 month in Florida.
21

22 **Q. HAS AT&T DEVELOPED AN ESTIMATE OF THE NON-RECURRING**
23 **CHARGES ASSOCIATED WITH THESE VARIOUS NETWORK**
24 **ELEMENTS?**
25

1 A. Yes. The Hatfield Model does not have the capability of independently identifying
2 the non-recurring costs associated with the various network elements. However, the
3 model does include applicable carrier to carrier non-recurring costs in its estimate of
4 the related recurring cost components. Therefore, carriers should be allowed to
5 establish all of these unbundled network elements without assessment of non-
6 recurring charges.

7
8 **Q. DOES EXHIBIT MG-1 LIST ALL OF THE UNBUNDLED ELEMENTS**
9 **REQUESTED BY AT&T?**

10
11 A. No. AT&T has only recommended prices for specific elements where some form
12 of cost support was available. Other elements must be priced following the
13 production of cost support. Exhibit MG-2 to this testimony lists many of those
14 additional items. AT&T recommends that the Commission order GTE to produce
15 TSLRIC cost studies to support the pricing of each of these necessary components.
16 In the interim, prices for these items should reflect any appropriate FCC default
17 prices. However, once acceptable TSLRIC cost information is available, element
18 prices should reflect the TSLRIC costs as opposed to any FCC default proxies.

19
20 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

21
22 A. Yes.

UNBUNDLED NETWORK ELEMENTS

	COST ESTIMATE	COST SOURCE	RECOMMENDED PRICE
COMBINED LOOP			
2-WIRE	\$11.25	HATFIELD	\$11.25
- NID	\$0.55	HATFIELD	\$0.55
- Distribution	\$6.01	HATFIELD	\$6.01
- Concentrator	\$2.39	HATFIELD	\$2.39
- Feeder	\$2.30	HATFIELD	\$2.30
4-WIRE	\$13.67	GTE STUDY / HATFIELD	\$13.67
ISDN - BRI	\$11.25	GTE STUDY / HATFIELD	\$11.25
DS1	NA		NA

UNBUNDLED NETWORK ELEMENTS

	COST ESTIMATE	COST SOURCE	RECOMMENDED PRICE
LOCAL SWITCHING (includes all features, functions, and capabilities)			
LINE INTERFACE (PORT)	\$1.12	HATFIELD	\$1.12
TRUNK INTERFACE (PORT)	NA		NA
SWITCHING	\$0.002	HATFIELD	\$0.002
TANDEM SWITCHING (per minute of use - MOU)	\$0.00070	HATFIELD	\$0.00070
TRANSPORT			
DEDICATED (per DS0 equivalent)	\$3.60	HATFIELD	\$3.60
COMMON (per MOU)	\$0.00086	HATFIELD	\$0.00086

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UNBUNDLED NETWORK ELEMENTS

	COST ESTIMATE	COST SOURCE	RECOMMENDED PRICE
SIGNALING			
A-Link (per link)	\$16.83	HATFIELD	\$16.83
D-Link (per link)	\$8.65	HATFIELD	\$8.65
STP (per message)	\$0.00003	HATFIELD	\$0.00003
SCP (per message)	\$0.00103	HATFIELD	\$0.00103
OPERATOR (average cost per line per month)	\$0.178	HATFIELD	NA
NON-RECURRING ELEMENTS	\$0.00	DEFAULT	\$0.00
CALL TERMINATION	na		bill and keep

ITEMS REQUIRING COST SUPPORT

	ADDITIONAL DESCRIPTION	TSLIRC COST
4-WIRE DS1 LOOP		RC* /loop
LOOP CHANNELIZATION		
- Per System		RC
- Per Circuit		RC
DATA SWITCHING		
- Circuit Switched	Functionality to switch between industry standard ISDN interfaces	RC /Packet
- Packet Switched	Functionality to switch between industry standard ISDN interfaces	RC /Packet
- Frame Relay	Functionality required to connect facilities from the Frame Relay User to Network Interface (UNI) to another UNI or a communications path at the Network to Network Interface (NNI)	RC /Packet

ITEMS REQUIRING COST SUPPORT

	ADDITIONAL DESCRIPTION	TSLRIC COST
- 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 /Packet
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	RC
SONET TRANSPORT	Systems dedicated to AT&T	
- SONET line-switched rings, OC-48		RC
- SONET path-switched rings, OC-3, OC-12		RC

ITEMS REQUIRING COST SUPPORT

	ADDITIONAL DESCRIPTION	TSLRIC COST
OPERATOR SYSTEMS		
Operator Services		
- 0+, 0-	dial local calls	RC /Msg
- 0+	intraLATA toll calls	RC /Msg
-	Calling Card	RC /Msg
-	Person-to-person calls	RC /Msg
-	Collect calls	RC /Msg
-	Bill to a third party	RC /Msg
-	Station to station calls	RC /Msg
-	Emergency calls	RC /Msg
-	Busy line verification	RC /Msg
-	Emergency interrupt	RC /Msg
-	Emergency call trace	RC /Msg
-	Operator assisted directory assistance calls	RC /Msg RC /Msg
-	Rate quotes	RC /Msg
-	Time and Charges	RC /Msg
-	Route 0- traffic directly to a "live" operator	RC /Msg RC /Msg

ITEMS REQUIRING COST SUPPORT

	ADDITIONAL DESCRIPTION	TSLRIC COST
<i>Directory Assistance Service</i>		
- Directory assistance		RC /Msg
- DA call completion		RC /Msg
POLES, DUCTS, CONDUITS, and other PATHWAYS		RC
COLLOCATION	Physical, Virtual	RC
NON-RECURRING CHARGES	Non -recurring costs should be developed as applicable for all elements/services for which GTE provides a recurring cost estimate	NRC

RC = Recurring cost
NRC = Non-recurring cost

COST OF NETWORK ELEMENTS

Florida GTE FLORIDA INC

A. Loop elements

	0 - 5 lines/sq mi	5 - 200 lines/sq mi	200 - 850 lines/sq mi	850 - 850 lines/sq mi	850 - 2550 lines/sq mi	> 2550 lines/sq mi	Totals
<i>Loop Distribution (including NID)</i>							
Annual Cost	\$ 1,905,627	\$ 31,327,754	\$ 24,045,208	\$ 5,529,014	\$ 44,681,230	\$ 62,757,082	\$ 170,245,915
Unit Cost/month	\$ 56.55	\$ 18.78	\$ 9.08	\$ 6.27	\$ 5.38	\$ 5.06	\$ 6.56
<i>Loop Concentration</i>							
Annual Cost	\$ 236,471	\$ 6,297,998	\$ 8,955,476	\$ 2,430,386	\$ 20,164,966	\$ 23,931,630	\$ 62,016,926
Unit Cost/month	\$ 7.02	\$ 3.77	\$ 3.38	\$ 2.75	\$ 2.43	\$ 1.93	\$ 2.39
<i>Loop Feeder</i>							
Annual Cost	\$ 209,160	\$ 2,902,642	\$ 3,653,437	\$ 1,610,702	\$ 18,340,176	\$ 32,873,645	\$ 59,589,763
Unit Cost/month	\$ 6.21	\$ 1.74	\$ 1.38	\$ 1.83	\$ 2.21	\$ 2.65	\$ 2.30
<i>Total Loop</i>							
Annual Cost	\$ 2,351,259	\$ 40,528,394	\$ 36,654,122	\$ 9,570,101	\$ 83,186,371	\$ 119,562,357	\$ 291,852,605
Unit Cost/month	\$ 69.78	\$ 24.29	\$ 13.85	\$ 10.85	\$ 10.01	\$ 9.64	\$ 11.25
Total lines	2,808	139,040	220,599	73,530	692,197	1,033,771	2,161,945
Total lines served by DLC	2,808	124,119	179,068	46,531	387,111	452,140	1,191,777

	Annual Cost	Units	Unit Cost
End office switching	\$ 88,453,936		
1 Port	\$ 26,536,181	1,980,859 switched lines	\$ 1.12 per line/month
2 Usage	\$ 61,917,755	30,377,499,190 minutes	\$ 0.0020 per minute
Signaling network elements	\$ 2,161,663		
1 Links	\$ 39,986	198 links	\$ 16.83 per link per month
2 STP	\$ 662,253	20,457,319,278 TCAP+ISUP messages	\$ 0.00003 per signaling message
3 SCP	\$ 1,459,424	1,414,681,000 TCAP messages	\$ 0.00103 per signaling message
Transport network elements			
1. Dedicated	\$ 16,117,834	373,168 trunks	\$ 3.60 per DS-0 equivalent/month
Switched	\$ 8,296,377	192,082	\$ 0.00036 per minute
Special	\$ 7,821,457	181,086	
2. Common	\$ 2,239,793	2,671,241,519 minutes	\$ 0.00086 per minute per leg (orig or term)
3 Tandem switch	\$ 1,865,202	2,506,345,147 minutes	\$ 0.0007 per minute
Operator systems	\$ 4,232,244		
Total	\$ 406,923,276		
Total cost of switched network elements	\$ 15.76	per line/month	

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 FPSC Docket 960847-TP
 Guedel Exhibit MG-3
 Cost of Network Elements
 Page 2 of 3

Intrastate Toll DEMs	3,747,129,748			
Interstate Toll DEMs	8,498,672,303			
			10,044	trk-min/mo
Common Transport MOU			interLATA ded. trunks	98,023
Local	222,081,109	w/o OS usage	end office trk port Inv	\$ 28,614,013
Intrastate Toll	749,425,950			
Interstate Toll	1,899,734,461			
	2,671,241,519			
Intrastate IntraLATA Calls	76,966,000	14.37%	SOCCC message counts	
Intrastate InterLATA Calls	458,660,000	85.63%		
	535,646,000			
		trunk port usage	44,968,112,483	
Calculation of EO Usage				
Local DEMs, incl OS	24,817,463,805	67.0%	of total DEMs	
Intraoffice Local DEMs	13,371,533,333			
Intraoffice Local Actual Min	6,685,766,666		Dedicated Transport MOU	
Interoffice Local Actual Min	11,446,930,473	per end	Local, w/o OS	5,440,987,165
Intrastate Toll Actual Min	3,747,129,748		IntraLATA Toll	215,423,269
Interstate Toll Actual Min	8,498,672,303		InterLATA Toll	11,814,955,513
	30,377,499,190			17,471,365,947
Tandem Switch MOU			Dedicated Trunk-SW	144,951

Cost detail

Loops percent	0.13%	6.44%	10.23%	3.40%	32.05%	47.75%	100.00%
Loops	2,788	138,434	219,727	73,128	688,750	1,026,065	2,148,891

	interconnected at			
	end office	tandem	wtd average	
Local interconnection	\$ 0.0021	\$ 0.0037	n/a	
IXC switched access	\$ 0.0024	\$ 0.0040	\$ 0.0028	
per 800 attempt (TCAP)	\$ 0.0021			
	\$ 0.0002			
ISUP cost/transaction	\$ 0.0002			
ISUP cost/completion	\$ 0.0003			
IXC switched access MOU/comp	8.19			
ISUP cost/min	\$ 0.0000			
D link per month	\$ 8.65			
DS-1 per month	\$ 86			
DS-3 per month	\$ 2,419			

	0 - 5 lines/sq mi	5 - 200 lines/sq mi	200 - 650 lines/sq mi	650 - 850 lines/sq mi	850 - 2550 lines/sq mi	> 2550 lines/sq mi	wtd average
NID cost per month	\$ 0.48	\$ 0.59	\$ 0.61	\$ 0.58	\$ 0.59	\$ 0.50	\$ 0.55

trunk port costs		
per trunk port (DS-0)	\$	3.90
per trunk port minute	\$	0.00057
total EO usage per minute	\$	0.00204
trk port/min	\$	0.00057
other	\$	0.00147