

ORIGINAL
FILE COPY

DIRECT TESTIMONY OF
JOSEPH GILLAN
ON BEHALF OF
AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

Table of Contents

I. QUALIFICATIONS AND PURPOSE OF TESTIMONY 1

II. ACHIEVING THE COMPETITIVE ENVIRONMENT OF THE TELECOMMUNICATIONS ACT 8

 A. The Competitive Environment 8

 B. Restoring Competitive Balance 12

 C. The Tools of Comprehensive Entry: Resale and Network Elements 16

 D. Local Entry And Consumer Prices 21

 E. Entry and Facilities Deployment 25

III. LOCAL SERVICES RESALE 27

 A. The Role of Local Services Resale 27

 B. The Dilutive Effect of Access Charges on the Wholesale Discount 32

IV. UNBUNDLED NETWORK ELEMENTS 35

 A. The Nature of Unbundling 35

 B. Network Element Pricing 38

 C. Transport and Termination 40

V. OPERATIONAL BARRIERS TO ACHIEVING CUSTOMER CHOICE 44

 A. Supporting Customer Choice 45

DOCUMENT NUMBER-DATE
08672 AUG 16 88
FPSC-RECORDS/REPORTING

B. Ordering Combinations of Unbundled Network Elements.....	46
VI. <u>SUMMARY</u>	51

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DIRECT TESTIMONY OF

JOSEPH GILLAN

ON BEHALF OF AT&T COMMUNICATIONS

OF THE SOUTHERN STATES, INC.

Docket No. 960847 - TP

I. QUALIFICATIONS AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Joseph Gillan. My business address is P. O. Box 541038, Orlando, Florida 32854.

Q. WHAT IS YOUR OCCUPATION?

A. I am an economist with a consulting practice specializing in telecommunications. My clients span a range of interests and have included state public utility commissions, consumer advocate organizations, local exchange carriers, competitive access providers and long distance companies.

Q. PLEASE BRIEFLY OUTLINE YOUR EDUCATIONAL BACKGROUND AND RELATED EXPERIENCE.

A. I am a graduate of the University of Wyoming where I received B.A. (1978) and M.A. (1979) degrees in economics. My graduate program concentrated on the

1 economics of public utilities and regulated industries.

2

3 In 1980 I joined the Illinois Commerce Commission where I had responsibility for
4 policy analysis relating to the emergence of competition in regulated markets, in
5 particular the telecommunications industry. While on the staff of the Commission, I
6 served on the staff subcommittee for the NARUC Communications Committee and
7 was appointed to the Research Advisory Council overseeing NARUC's research
8 arm, the National Regulatory Research Institute.

9

10 In 1985 I left the Commission to join U.S. Switch, a venture firm organized to
11 develop interexchange access networks in partnership with independent local
12 telephone companies. At the end of 1986, I resigned my position of Vice President-
13 Marketing to begin a consulting practice. I currently serve on the Advisory Council
14 for New Mexico State University's Center for Regulation. A complete listing of my
15 background, publications and prior testimony is included as Exhibit JPG-1.

16

17 **Q. WHO IS SPONSORING YOUR TESTIMONY IN THIS PROCEEDING?**

18

19 **A. My testimony is being sponsored by AT&T Communications of the Southern States,**
20 **Inc. ("AT&T"). Although sponsored by AT&T, the perspective that I will**
21 **emphasize is that of competition in general, and most importantly, the intended**
22 **beneficiary of competition, consumers.**

23

24 **Q. WHAT IS UNIQUE ABOUT THIS ARBITRATION?**

25

1 A. The single feature that most distinguishes this arbitration is the preferred treatment
2 that GTE obtained under the Telecommunications Act of 1996. GTE, the nation's
3 *largest* exchange carrier, and the *monopoly* local service provider in its territory,
4 was provided immediate entry to the interLATA market without first satisfying *any*
5 of the actions needed for other carriers to provide local exchange service.

6

7 Nowhere is the need for the Commission to take the steps necessary to permit local
8 competition more clear than in the case of GTE. GTE has *no* incentive to open its
9 markets to competition. The Act uniquely positioned GTE to provide both long
10 distance and local exchange services. With its pockets full of quid, GTE now has no
11 corporate reason to live up to the quo imposed by the Act. Only this Commission,
12 through its decision in this arbitration, can achieve the Act's fundamental intention
13 to make local markets as competitive as long distance markets.

14

15 In the testimony which follows, I place great emphasis on establishing conditions for
16 local competition that are comparable to those in the long distance industry. As
17 explained below, there is underway a fundamental industry shift towards one-stop
18 shopping where consumers purchase local and long distance services from a single
19 provider. GTE has leapfrogged the natural sequence of competitive entry -- first
20 establish the conditions expected to permit local competition, see if the local
21 competition develops, then permit the incumbent LEC to provide long distance
22 service -- by becoming the *only* provider of both long distance and local telephone
23 services without first taking any of the actions needed to permit other carriers to
24 provide local service.

25

1 Q. PLEASE SUMMARIZE THE PRINCIPAL CONCLUSIONS OF YOUR
2 TESTIMONY.

3

4 A. This is the second proceeding to *comprehensively* consider *each* of the entry tools
5 contemplated by the Act (the first proceeding, of course, is the AT&T/BellSouth
6 arbitration pending before the Commission). The full mosaic of entry tools are
7 especially needed here -- and quickly -- because GTE is *already* in the market as a
8 long distance carrier, not just in downtown Tampa, but throughout its region. To
9 broadly approach this market, offering service to residential and business customers
10 alike, AT&T -- and importantly, all other potential entrants -- need the full range of
11 entry options to which they are entitled under the Act.

12

13 The purpose of my testimony is to emphasize the need for immediate, clear action to
14 implement the tools Congress provided entrants so that they may compete with GTE
15 across the full range of services, local and long distance, throughout the GTE
16 territory. As I explain below, GTE's long distance entry was accomplished quickly,
17 ubiquitously and simply because the *long distance* industry had already been
18 restructured to support a multi-vendor, competitive environment. The only way that
19 the consumers in GTE's territory will face competitive choice among full service
20 providers is if the Commission creates a similar multi-vendor environment at the
21 *local* level.

22

23 Specifically, my testimony concludes that:

24

25 ● The fundamental promise of the Act is a competitive environment

1 where consumers enjoy choices for all services. The threshold predicate
2 to this change is the emergence of local competition -- not on a limited
3 scale, or for a few fortunate customers -- but on a broad scale to all
4 residential and business subscribers.

5
6 ● The Act eliminated GTE's legal barrier to providing long distance
7 service. GTE demonstrated how easily an incumbent LEC can add long
8 distance service -- called by some the "ultimate" vertical service -- to its
9 product line, quickly offering service throughout its region at negligible
10 cost. This entry was made possible because the regulatory and
11 competitive actions necessary to open the long distance market to
12 competition are all well behind us. The only way that consumers will
13 have a *choice* of full service providers, however, is if the barriers to
14 offering local exchange service fall as well. Making local competition a
15 reality requires the full implementation of the Act's provisions that
16 enable entrants to use the existing network to offer competitive services.

17
18 ● Fostering a competitive environment is the principal mechanism
19 available to the Commission to influence retail rates. The key factor
20 that will decide the price that consumers pay for local telephone
21 services will be the price that competing carriers pay GTE for the
22 wholesale local exchange services which are resold to customers, as
23 well as the price carriers pay to GTE for unbundled network elements
24 and local interconnection.

25

- 1 ● Resale of wholesale services and unbundling of network elements will
2 accelerate the deployment of alternative local networks and yield a far
3 more competitive environment at the end of the entry process than can
4 otherwise exist.
- 5
- 6 ● Consumers will consider local competition a failure unless operational
7 support systems accommodate consumer movement from one local
8 exchange carrier to another on a level comparable to the process used to
9 move customers among long distance carriers. Implementing
10 automated systems that support broad-scale local competition requires
11 that both entrants (which have the incentive) and GTE (which does not)
12 design, test, and implement these systems.

13

14 Finally, a reminder that the Commission is effectively playing “catch-up” in this
15 arbitration. GTE has already entered the long distance market. Congress
16 established the basic framework for local competition, but this framework will
17 remain hollow until this Commission implements those provisions that provide
18 entrants the tools they need to offer consumers in GTE’s territory a choice of full
19 service providers. The Commission cannot affect GTE’s entry, it can only move to
20 quickly establish the tools GTE’s rivals need to provide consumers choice.

21

22 **Q. HOW DOES YOUR TESTIMONY RELATE TO THE TESTIMONY OF**
23 **OTHER AT&T WITNESSES?**

24

25 **A. My testimony describes the interrelationship among the requests in AT&T’s**

1 arbitration petition and how these requests fit within an overall strategy to
2 implement the Act. Other witnesses will provide detailed explanations of AT&T's
3 requests for wholesale services, unbundling of network elements and local
4 interconnection; the appropriate economic pricing principles to apply; as well as the
5 particular dimensions of the operational support systems being requested. My role
6 is to explain how these carrier-to-carrier issues can be expected to yield tangible
7 benefits in the prices and choices experienced by consumers.

8

9 **Q. DOES YOUR TESTIMONY REFLECT THE FCC'S RULES**
10 **IMPLEMENTING SECTIONS 251 AND 252 OF THE ACT?**

11

12 A. No, not completely. On August 8, 1996, the Federal Communications Commission
13 ("FCC") released its Report and Order in Docket 96-98. Although I have not had an
14 opportunity to review the Order in detail, it is clear that the basic framework adopted
15 by the FCC parallels my recommendations here. The Order embraces, and the rules
16 reflect, the Act's fundamental intention to make local markets as competitive as long
17 distance markets are today, including the implementation of an operational
18 infrastructure to support a multi-vendor local environment.

19

20 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

21

22 A. In testimony sections which follow, I:

23

- 24 • describe the competitive environment envisioned by the Act, with
25 particular emphasis on its effect on consumer prices and choices, and

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

explain how GTE's preferred status threatens this competitive environment (Section II);

- explain the particular importance of local services resale to achieving broad customer choice and accelerated entry (Section III);
- present the fundamental role of unbundled network elements to achieving the competitive structure contemplated by the Act (Section IV);
- conclude with a discussion of the importance of operational changes needed to provide consumers with the widest choices with the least disruption (Section V).

II. ACHIEVING THE COMPETITIVE ENVIRONMENT OF THE TELECOMMUNICATIONS ACT

A. The Competitive Environment

Q. PLEASE DESCRIBE THE LONG-TERM COMPETITIVE EQUILIBRIUM ENVISIONED BY THE ACT.

A. The long-term competitive environment contemplated by the Act will be quite different from today's structure where regulatory and market conditions define separate long distance and local markets, and carriers are labeled as interexchange

1 carries ("IXCs"), competitive access providers ("CAPS"), alternative local exchange
2 carriers ("ALECs"), or local exchange carriers ("LECs"). The environment created
3 by the Act is intended to enable carriers to offer the full range of services to their
4 customers, extending the benefits of long distance competition to all market
5 segments. The Act permitted GTE to benefit immediately from this new
6 environment, but it also imposed on GTE specific obligations so that a consumer's
7 choice of a full service provider in GTE's local territory is not limited to only GTE.

8

9 To effect the transition to a fully competitive environment, Congress adopted a
10 completely new framework to govern the relationship between GTE (and other
11 incumbent LECs) and other carriers. This *carrier-to-carrier* framework provides
12 entrants quite different entitlements -- and imposes on GTE quite different
13 obligations -- than have existed in the past. This carrier-to-carrier framework
14 enables entrants to use GTE's existing network to fashion their own local exchange
15 and exchange access services on an economic basis comparable to GTE.

16

17 **Q. WHAT ARE THE CORE ELEMENTS OF THE CARRIER-TO-CARRIER**
18 **FRAMEWORK OUTLINED BY THE ACT?**

19

20 **A. The core provisions describing these new carrier-to-carrier relationships are**
21 **contained in Sections 251 and 252 of the Act. In simple terms, these Sections**
22 **impose on incumbent LECs, including GTE, the obligation to permit the resale of its**
23 **retail services at wholesale prices, to unbundle its network and sell these elements to**
24 **entrants at cost-based rates, and to implement a system of reciprocal compensation**
25 **for the transport and termination of traffic. It is important to understand that these**

1 items form the backbone of the relief AT&T seeks and are not options which GTE
2 may, or may not, fulfill at its option. Rather, these are clear obligations which
3 Congress adopted in order to effect a fundamental change in the industry by
4 promoting robust local competition.

5

6 **Q. WHY WOULD CONGRESS HAVE ADOPTED CARRIER-TO-CARRIER**
7 **ARRANGEMENTS WHICH PROVIDE ENTRANTS THESE RIGHTS?**

8

9 **A.** The Act recognized that full retail competition would be seriously delayed, if not
10 effectively foreclosed, if it first required the building of new competitive exchange
11 networks. While some limited local networks are under construction, no carrier can
12 construct ubiquitous local networks capable of supporting broad competition. The
13 GTE exchange network in Florida is massive, with nearly 2 million access lines
14 serving virtually every residence and business in its territory.

15

16 Measuring the network solely in terms of loops (i.e., the last connection to the
17 customer) significantly understates the enormous (in fact, unprecedented)
18 investment that would be necessary for even a single provider -- much less, the
19 multiple providers necessary for a fully competitive environment -- to duplicate
20 GTE's network. In addition to the loop plant to each and every premise in its
21 territory, GTE's exchange network (as of 1995) encompassed nearly 239 local
22 switches (including remotes) interconnected by a vast web of interoffice facilities.

23

24 Overall, the GTE network represents more than \$3.7 billion in investment in Florida
25 alone (Source: 1995 ARMIS 43-01, Total Plant in Service) and is more than \$36

1 billion nationwide. In contrast, AT&T's *worldwide* investment is approximately
2 \$23 billion. (Source: AT&T 1994 Form M.) Because of the size and geographic
3 reach of GTE's network -- in fact, every incumbent's network -- Congress
4 recognized that local competition would develop at a snail's pace unless these
5 networks could be used by other carriers to provide local exchange and exchange
6 access services.

7

8 **Q. ARE THERE OTHER REASONS TO PERMIT OTHER CARRIERS TO USE**
9 **THE EXISTING EXCHANGE NETWORK TO OFFER THEIR SERVICES?**

10

11 A. Yes. The overarching goal of the Act is to provide consumers with the most choices
12 at the lowest possible cost. In many areas, this goal can best be satisfied if GTE's
13 network is used by multiple local providers so that the cost-efficiencies of a single
14 network can be fully realized. Where the GTE network is the most economic
15 choice, carriers are permitted to use it; where new investment will lower cost,
16 carriers may deploy alternatives and interconnect with GTE to provide service. The
17 result is to achieve the lowest potential cost and, by achieving the most efficient cost
18 level, provide consumers with the lowest prices possible.

19

20 This framework of the Act is designed to foster local competition as rapidly and as
21 broadly as possible. Once the Act is fully implemented, consumers should be able
22 to select among a number of providers of telecommunication services, obtaining
23 local and long distance services separately or in a package, and shifting between
24 local carriers with the same ease that they today choose their long distance carrier.
25 For consumers to enjoy this choice, however, entrants must have the same ability to

1 craft services using the GTE network that GTE itself enjoys. Because GTE is
2 already in a position to offer local and long distance services, the Commission must
3 rapidly open GTE's network to other providers so that they may offer local exchange
4 services as well.

5

6 ***B. Restoring Competitive Balance***

7

8 **Q. WHY IS IT IMPORTANT TO REDUCE LOCAL ENTRY BARRIERS**
9 **QUICKLY?**

10

11 **A. The Act provided GTE preferential treatment that distorts competition and denies**
12 **consumers in its territory competitive choice. GTE's experience proves that it is**
13 **simple for an incumbent LEC to offer long distance services, while the tools needed**
14 **for others to provide local service are not yet created, much less created equally.**

15

16 **Unlike the very real obstacles to local competition faced by rivals, the barriers that**
17 **confronted GTE essentially were eliminated "at the stroke of a pen." The barriers to**
18 **GTE offering long distance service were minimal because there is competition at**
19 ***both* the retail and wholesale levels in that market. At the wholesale level, a variety**
20 **of companies compete to provide the central ingredients of long distance service --**
21 **transmission, switching, and billing. In effect, the long distance equivalents to**
22 **unbundled network elements and the resale of wholesale services are already in**
23 **place.**

24

25 **A new entrant to the long distance market need not construct its own network or**

1 wait for the development of back-office systems to offer its services. Systems to
2 move customers rapidly between long distance carriers -- i.e., changing a customer's
3 primary interexchange carrier or PIC -- are already sized to process large numbers
4 of consumer requests. The industry has in place the necessary infrastructure to
5 support a multi-vendor, competitive long distance environment.

6

7 **Q. IS GTE BENEFITING FROM THIS MULTI-VENDOR**
8 **INFRASTRUCTURE?**

9

10 A. Yes. GTE is now benefiting from the fruits of the long distance industry's history
11 with competition. GTE was able to begin to offer long distance services without
12 investing in a single switch or strand of optical fiber, obtaining a single right of way,
13 or negotiating a single interconnection agreement with a recalcitrant monopolist.
14 GTE only had to choose its underlying interexchange carrier and begin marketing
15 long distance services to its preexisting base of local customers, which today, is the
16 *entire* market in its exchanges. As it attracts these customers, GTE is able to easily
17 move customers from their existing long distance carriers using the PIC-change
18 process that the long distance industry paid to have developed and implemented.

19

20 **Q. HOW LONG DID IT TAKE FOR GTE TO ESTABLISH ITS LONG**
21 **DISTANCE OPERATIONS?**

22

23 A. The Telecommunications Act of 1996 was enacted into law on February 8, 1996.
24 GTE announced its agreement to offer long distance services under an agreement
25 with LDDS WorldCom on February 12, 1996. GTE's tariff describing its flagship

1 long distance service, the Easy Savings Plan, became effective on March 19, 1996.
2 And GTE was aggressively marketing long distance service by May, 1996. From
3 the Act's enactment to GTE's operation was less than four months.

4

5 **Q. IS THERE EVIDENCE SUPPORTING YOUR CLAIM THAT GTE NOW**
6 **ENJOYS A ONE-SIDED ADVANTAGE?**

7

8 **A. Yes. GTE's special opportunity is well recognized by its management and Wall**
9 **Street analysts. As Merrill Lynch (May 14, 1996) so clearly summarized:**

10

11 GTE has already begun to offer long distance services to its in-
12 region customers and intends to gain 10% of its \$4.8 billion
13 addressable long distance market within 12 months with negligible
14 cost to the bottom line. GTE management presentations at its
15 quarterly analyst meeting reiterated the company's plans to achieve
16 10% EPS growth for the foreseeable future, despite the "negligible"
17 startup cost of long distance entry. We also learned the company
18 believes its long distance effort will generate positive earnings
19 impact in 1997, which reflects, in our view, the remarkably
20 attractive economics facing an RBOC entering an adjacent market
21 (long distance). How often is it that an industry wakes up one day,
22 finds its addressable market expanded by 40% and can launch the
23 new service without noticeable dilution and achieve positive
24 earnings by the second year?

25

1 This analysis embodies every conclusion of the market dynamic I have described
2 above. GTE expects to gain share rapidly. GTE expects to do so with negligible
3 costs. GTE's opportunity is *immediate* higher profits and market share. In fact,
4 GTE's management expects its profitability to grow for the "foreseeable future," a
5 period which must include this arbitration and the local entry that should result.

6

7 **Q. HOW IS GTE USING ITS HEAD START?**

8

9 A. GTE is exploiting its head start by *encouraging* customers to sign contracts with 1, 2
10 and 3 year terms. These contracts enable GTE to translate its immediate advantage
11 to a long-term gain by locking customers into contracts while GTE is the only
12 provider able to offer local and long distance services as a package.

13

14 **Q. WHAT IS THE EFFECT OF GTE'S ENTRY INTO THE LONG DISTANCE
15 MARKET WITHOUT FIRST ESTABLISHING WIDE-SCALE LOCAL
16 COMPETITION?**

17

18 A. GTE's entry proves that a substantial portion of the market prefers to obtain its
19 telecommunications services as a package. Its management expects to gain 10% of
20 the market in 12 *short months*, and that its earnings will continue to improve by 10%
21 per year for the foreseeable future. At this pace, GTE would obtain a market share
22 comparable to this industry's most successful entrant, MCI. But it took MCI two
23 *decades* to reach the same level that GTE now expects to reach in two *years*.

24

25 This begs the obvious question: Why would GTE be so successful? Is it the quality

1 of its long distance network? If this were the answer, then LDDS WorldCom, on
2 whose network GTE provides service, would similarly gain 10% of the market per
3 year. No, the answer is quite clear: GTE is reaping the advantage of an incumbent
4 local exchange carrier that is able to provide local and long distance services while
5 *no other competitor has the opportunity to respond.*

6

7 **Q. WHAT WOULD BE THE LONG TERM IMPACT IF THIS COMPETITIVE**
8 **IMBALANCE WERE PERMITTED TO CONTINUE?**

9

10 A. The long term impact would be a decline in long distance competition. Local
11 exchange service is likely to become a compulsory element of the basic package
12 that carriers must offer to remain competitive. Local service *must* be made
13 competitive or competition for other services, including long distance, will suffer.
14 GTE cannot be the consumers' only full service choice or competition will fail, and
15 with its failure, the principal protection that consumers may have from monopoly
16 *pricing will fail.*

17

18 A reduction in *long distance* competition because of a failure to establish *local*
19 competition is not what Congress intended or consumers deserve. The Act provided
20 -- prematurely, in my view -- GTE the ability to offer long distance service, but it
21 also imposed on GTE a clear obligation to open its network and permit the resale of
22 its services so that other carriers will be able to offer packages of local and long
23 distance service as easily as GTE.

24

25 ***C. The Tools of Comprehensive Entry: Resale and Network Elements***

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Q. HOW WILL OTHER CARRIERS BE ABLE TO PROVIDE COMPETITIVE LOCAL SERVICES?

A. Congress recognized the massive dominance of the incumbent LEC's network and the reality that it will take many years for the local transmission (especially loop) market to become as competitive as the interexchange transmission market. *Alternative networks will take time to develop. As a result, the Act provides for a number of entry strategies that rely, to one extent or another, on the immediate use of the incumbent's facilities and services by other providers, so that local competition may develop quickly.*

Each of these strategies can be found in the central components of AT&T's requests that led to this arbitration. These key components include AT&T's request to:

- resell wholesale equivalents of GTE's retail services,
- provide local exchange and exchange access services using network elements obtained from GTE as basic ingredients to AT&T's services, and
- transport and terminate traffic under reciprocal compensation arrangements.

In later sections of my testimony, I address more extensively the importance of

1 wholesale services (Section III) and network elements (Section IV) to providing
2 exchange services. The point that I would like to emphasize here is the significance
3 of *comprehensively* establishing the basic conditions of local competition quickly so
4 that consumers may enjoy a choice of full service provider.

5

6 **Q. WHY IS AT&T'S REQUEST SO COMPREHENSIVE?**

7

8 **A.** One of the distinguishing features of this arbitration -- like the AT&T/BellSouth
9 arbitration which precedes it -- is its breadth. The importance of comprehensively
10 establishing each of the entry tools contemplated by the Act is especially critical in
11 the context of GTE, an incumbent LEC that has crossed the line to full service
12 provider.

13

14 The GTE territory is representative of the entire Florida market, encompassing both
15 metropolitan business districts and rural communities. Significantly, AT&T
16 provides long distance service to a broad cross-section of customers, geographically
17 scattered across the full range of market and network conditions. There are no
18 barriers to GTE's offering its long distance services *anywhere* in this region; for
19 consumers to have a choice of full service provider, however, AT&T (and others)
20 must similarly be able to offer local services throughout GTE's territory.

21

22 Importantly, no single entry vehicle is best suited for every customer and geographic
23 consideration. Some strategies -- loop resale for instance -- are particularly ill-
24 suited for mass application because they either require physical circuit
25 rearrangements as customers move between providers or presuppose the extensive

1 deployment of alternative networks which do not now exist. Broad entry requires
2 that the full range of entry strategies be available so that a carrier may tailor its
3 offerings to particular conditions.

4
5 Because AT&T's request is so comprehensive, its value extends beyond this single
6 entrant to an entire industry. By encompassing all possible entry strategies, AT&T's
7 request necessarily includes the individual approaches that other carriers will use to
8 address their markets. This observation is particularly important. By deciding the
9 AT&T arbitration, the Commission is establishing the conditions of entry not just
10 for AT&T, but effectively defining the entry conditions for any entrant that will use
11 all (or part) of GTE's network to provide local services.

12

13 **Q. DOES COMPREHENSIVE ENTRY ALSO REQUIRE NEW OPERATING**
14 **SYSTEMS?**

15

16 **A. Yes. Just as the development of meaningful long distance competition required new**
17 **systems to support a multi-vendor environment, meaningful local competition will**
18 **not succeed without a similar commitment of industry resources to operational**
19 **support. Consumers will widely perceive local competition -- and the Congressional**
20 **action upon which it relies -- as a failure if changing local telephone companies is**
21 **associated with extended delays, high costs, periods of outage, unreliable bills, or**
22 **disrupted services. Operational systems are absolutely critical to robust competition**
23 **in the local exchange market.**

24

25 The process with which consumers are familiar -- and which GTE is using to enter

1 the long distance market -- allows consumers to change long distance carriers (i.e.,
2 their primary interexchange carrier, or "PIC") with a simple telephone call or stroke
3 of the pen. It is an easy, streamlined process. The operating standards of this
4 process, in terms of cost, speed and accuracy, must become the standard for judging
5 systems used to change local service providers as well.

6

7 **Q. WHAT ARE THE BASIC WAYS IN WHICH AT&T (INDEED, ANY**
8 **ENTRANT) IS LIKELY TO COMPREHENSIVELY SERVE THE MARKET?**

9

10 A. There are three basic entry tools created by the Act. The first involves the resale of
11 GTE's retail services at wholesale rates. This entry tool (described more fully in
12 Section III) should permit carriers to quickly enter the market, but there are limits to
13 its usefulness because it permits only limited price competition and little product
14 differentiation.

15

16 Second, entrants are able to configure their own exchange networks using
17 components of GTE's network, including combinations that rely entirely on GTE's
18 network. Providing local exchange service using unbundled network provides
19 entrants a far broader ability to define their own services, develop the unique skills
20 of a local exchange carrier, and set the stage to sequentially deploy a local network
21 by replacing elements obtained from GTE with its own. For simplicity, I will refer
22 to this entry strategy as the network-element approach (described in Section IV),
23 although it also requires that the entrant obtain transport and termination from GTE
24 to complete local calls.

25

1 Finally, entrants will deploy their own facilities. This final step will take time and, in
2 some areas, may never be an economic choice. As a result, the Commission's
3 principal role under the Act will be assuring that GTE's network is available to other
4 competitors, at cost-based rates, to provide consumers service choices and lower
5 prices.

6

7 ***D. Local Entry And Consumer Prices***

8

9 **Q. HOW WILL THE COMPETITIVE ENVIRONMENT CREATED BY THE**
10 **ACT BENEFIT CONSUMERS?**

11

12 A. The Act is fundamentally about choice. Choice for consumers is made possible
13 through the carrier-to-carrier arrangements that will underlie the service offerings of
14 new competitors. This is why correctly arbitrating carrier-to-carrier arrangements is
15 so important -- these agreements ultimately translate to the choices and price levels
16 that consumers experience. Much as the visible contours of the earth's surface (its
17 mountains, valleys and plains) are determined by underlying geographic conditions,
18 so too will *consumer* choices and prices be decided by the underlying conditions of
19 these *carrier-to-carrier* arrangements.

20

21 **Q. HOW WILL THE PRICES GTE CHARGES CARRIERS FOR UNBUNDLED**
22 **NETWORK ELEMENTS, INTERCONNECTION AND TRANSPORT AND**
23 **TERMINATION ON ITS NETWORK INFLUENCE RETAIL RATES?**

24

25 A. GTE's competitors will use unbundled network elements, interconnection and

1 transport and termination to provide local exchange services to consumers and
2 exchange access services to other carriers. For simplicity, I will refer to the price of
3 these components -- i.e., unbundled network elements, interconnection, and
4 transport and termination -- as carrier-network charges. With correctly priced
5 carrier-network charges (which is to say, prices based on economic cost), these
6 entrants will be able to offer -- and competition will force them to offer -- local
7 exchange services at prices no higher than today's prevailing (i.e., GTE's) rates.

8
9 Importantly, once competition is established in this manner, the existence of
10 multiple providers of local exchange services will constrain GTE's own pricing
11 behavior. GTE will not be able to raise local exchange prices to consumers because
12 these consumers will have a choice of other providers. There is simply no consumer
13 protection stronger than the ability to "take your business elsewhere."

14
15 *This logic, while simple, is so important that it bears repeating. As entrants first*
16 *approach the market, they are constrained by GTE's retail prices. The entrant must*
17 *provide service at competitive prices in order to attract and retain customers. Cost-*
18 *based carrier-network charges should provide this ability because both the entrant*
19 *and GTE would incur the same cost for the underlying network used to provide*
20 *service. If GTE can profitably provide service at today's rates, then so too should*
21 *the entrant. Having entered the market, these entrants then become the constraint on*
22 *GTE's prices, limiting GTE's ability to raise rates in the future.*

23
24 However, the entire basis for the above conclusion is that the unbundled network
25 elements, interconnection and termination arrangements used by the entrant are

1 priced at economic cost. If so, then the entrant and GTE each will face the same
2 underlying cost of the facilities needed to provide service. So long as these carrier-
3 network prices facilitate profitable initial entry, then competition should provide
4 sustained pressure on price levels in the future.

5

6 **Q. WHAT WOULD HAPPEN IF THESE PRICES ARE INFLATED ABOVE**
7 **THEIR COSTS?**

8

9 A. The result would be higher consumer prices and fewer choices. GTE would be able
10 to increase the costs of its rivals, limiting their ability to compete with lower prices.

11

12 **Q. IS THIS WHY THE COMMISSION SHOULD MAKE SURE THAT**
13 **UNBUNDLED NETWORK ELEMENTS, INTERCONNECTION AND**
14 **TERMINATION PRICES ARE ESTABLISHED CORRECTLY?**

15

16 A. Yes. The Act represents a fundamental shift in regulatory focus from *directly*
17 setting retail prices and service dimensions (such as the size of local calling areas) of
18 local exchange carriers, to *indirectly* influencing retail services through the review
19 of the underlying carrier-to-carrier arrangements. If unbundled network element
20 interconnection and termination prices are correctly established, then both GTE and
21 other providers will be able to compete upon a common foundation, at least with
22 respect to the cost of the underlying network.

23

24 **Q. WHAT WOULD HAPPEN TO THE PRICE OF RESIDENTIAL LOCAL**
25 **EXCHANGE SERVICE IF IT IS CURRENTLY PRICED BELOW COST?**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A. The answer to this question has both a short and long run component. For the sake of discussion, *assume* that residential local exchange prices do depend upon the excessive pricing of other services, principally access charges. (This is a claim that I do not necessarily accept, but I will not dispute here).

In the short-run, entrants are likely to provide services either through resale or through a heavy, perhaps complete, reliance on network elements obtained from GTE. In the resale scenario, GTE *retains* all access revenues, even those of the reseller's customers. *This arrangement seriously undermines the usefulness of resale to the entrant (discussed in more detail in Section III below), but at least it eliminates any claimed pressure by GTE to increase its local rates.*

In the scenario where the entrant provides local services using unbundled network elements, the entrant fully compensates GTE for the economic cost of the facilities and the entrant provides the access service. If GTE is correct that local rates are below cost, then both GTE and the entrant (who has paid GTE for the cost of its facilities) will have a revenue shortfall. But, in this scenario, both GTE and the entrant have the respective access revenues from their own customers to offset any revenue shortfall, again eliminating any alleged need for local rates to increase.

However, in the long run, the competitive environment envisioned by the Act (if not the plain language of the Act itself) requires that all carrier-to-carrier prices be nondiscriminatory and cost based. This means that the excessive revenues currently embedded in access charges must end. If long term support to local rates is

1 determined to be needed, then such support must be explicitly provided through a
2 universal service fund. Of course, any such funding must be equally available to
3 both the entrant and GTE so as to not disrupt the consumer's choice of provider.
4 The Act requires that any universal service mechanism be explicit and
5 nondiscriminatory.

6
7 ***E. Entry and Facilities Deployment***

8
9 **Q. IF CARRIERS CAN OFFER SERVICES USING GTE'S NETWORK, WILL**
10 **THEY ALSO CONSTRUCT COMPETING NETWORKS?**

11
12 **A.** Certainly, but local facilities deployment is a longer-term proposition. It took more
13 than 100 years to construct these local networks and the Commission should not
14 expect entrants to deploy comparable networks overnight. No company employing
15 sound business judgment would expend the type of capital it will take to deploy
16 extensive local networks without strong evidence that it can succeed in this market.
17 In this respect, wholesale services and unbundled network elements permit carriers
18 to begin operation and gain needed experience to more efficiently design and plan
19 investment strategies.

20
21 In addition, entry using GTE's network will permit entrants to build the necessary
22 revenue streams to justify the massive investment necessary to construct even
23 relatively modest local networks. It is useful to remember that the gross plant of
24 GTE nationwide is more than \$36 billion (Source: 1995 ARMIS 43.01), 50% larger
25 than that of AT&T. This buildup of local plant took place over decades, not

1 overnight.

2

3 As entrants build their base of customers using wholesale services and unbundled
4 network elements, only then will they be able to make rational investment decisions
5 concerning where to construct networks, invest in switching, add new capabilities,
6 etc. Teleport, in fact, has publicly stated that its business strategy is to win
7 customers first and then build facilities in an efficient way to serve them
8 (Telecommunications Reports, October 16, 1995, page 20). With tangible market
9 experience and a strong customer base, entrants are more easily able to raise capital,
10 and just as importantly, convince their shareholders of the wisdom of their actions,
11 thereby accelerating the deployment of alternative networks.

12

13 **Q. DOES THIS PROCESS PARALLEL THE DEVELOPMENT OF FACILITIES**
14 **COMPETITION IN THE LONG DISTANCE MARKET?**

15

16 **A.** Yes. In the long distance market, early entrants like MCI were able to expand their
17 services and customer base by reselling services off of AT&T's network. This
18 growth financially justified the deployment of their own networks providing internal
19 investment capital and shareholder confidence, and encouraged the entry of others,
20 including (what is now) the third major network provider, Sprint. Later, the
21 continued growth of the resale market resulted in the construction of the fourth
22 national network (WilTel) for the express purpose of providing wholesale carrier -
23 to-carrier services, as opposed to retail services, for use by the "resale" industry.

24

25 **Q. DO YOU EXPECT CARRIERS WILL REPLICATE GTE'S ENTIRE**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

NETWORK?

A. No. It is likely that some portions of the network may never see a competitive alternative, certainly in the next several years. For instance, it is easy to visualize significant resistance on the part of residential homeowners to multiple network interface boxes being installed on their premises to reflect previous, and future, competitive choices in local services. Other elements of the network may best be provisioned by a sole network vendor (for instance, the loop and local switching in many areas). The point is not simply to encourage new construction -- the goal is to encourage efficient facilities deployment. Wholesale services and correctly priced unbundled network elements, that is to say economically priced unbundled network elements, are key elements of this transition.

III. LOCAL SERVICES RESALE

A. The Role of Local Services Resale

Q. WHAT IS LOCAL SERVICES RESALE?

A. Local services resale is the purchase of an incumbent LECs services by a competing local service carrier on a wholesale basis with the intent to resell these services to consumers. Wholesale local services are expressly designed, supported, and *priced* to be resold by another carrier in the retail market. These wholesale local services provide multiple entrants a simple means to begin offering local exchange services and attract customers. GTE is required to offer its local services for resale at

1 wholesale rates under Section 251(c)(4) of the Act.

2

3 **Q. WILL LOCAL SERVICES RESALE PROVIDE IMMEDIATE CONSUMER**
4 **BENEFITS?**

5

6 **A. Yes. In the long distance marketplace today, many carriers buy long distance**
7 **services at wholesale rates for purposes of reselling them to customers, and compete**
8 **by differentiating their billing systems, customer support and other elements of**
9 **services. This same strategy can be extended to the local marketplace, with carriers**
10 **using their marketing and customer skills to resell services obtained from the**
11 **incumbent LEC.**

12

13 **The utility of local services resale as a means to support broad entry has been**
14 **verified by the Rochester Telephone Company experiment. The Rochester**
15 **experiment is best known for exposing the importance of operational support**
16 **systems and the need for a viable discount. The Rochester Telephone Company was**
17 **unable to support local resale on a mass market basis, and the experimental 5%**
18 **discount showed the importance of correct pricing. Ultimately, AT&T had to stop**
19 **soliciting customers until the Rochester Telephone Company could establish support**
20 **systems and the New York Commission established a more reasonable differential**
21 **between retail and wholesale services.**

22

23 **The deficiencies in the Rochester experiment are well documented and widely**
24 **understood. But there are other, more subtle, lessons from the Rochester experiment**
25 **that should not be overlooked. Foremost is that Rochester did prove the usefulness**

1 of local resale as a way to enter a market quickly and offer customers a choice of
2 local providers. AT&T was able to offer service throughout the territory, while
3 other entrants remained confined to multi-tenant buildings. Equally telling,
4 however, is that the operational and pricing problems caused AT&T to terminate its
5 marketing, demonstrating that establishing conditions that will *sustain* competition is
6 just as important as *permitting* the entry itself.

7

8 **Q. WILL LOCAL SERVICES RESALE PROVIDE AN EFFECTIVE CHECK**
9 **ON GTE'S PRICING?**

10

11 A. Only in small ways. Requiring GTE to provide wholesale local exchange services
12 will limit its ability to discriminate between classes of customers, except where the
13 Commission has blessed such discrimination to satisfy a unique public need (such
14 as, for instance, preventing lifeline services from being offered outside the targeted
15 class).

16

17 Wholesale services, however, will not police the overall level of rates as effectively
18 as the pricing of unbundled network elements, interconnection, transport and
19 termination as discussed earlier in this testimony. This is because the wholesale
20 price is calculated off the retail rate. As retail prices move up, so too do wholesale
21 rate levels, and price competition is constrained by the differential. As a result, only
22 limited price competition is made possible by reselling wholesale services. Thus,
23 the need to regulate GTE's retail rates remains unchanged.

24

25 **Q. SHOULD ALL RETAIL SERVICES HAVE A WHOLESAL**

1 **EQUIVALENT?**

2

3 A. Yes. There are a number of strategies that GTE could use to limit the usefulness of
4 the wholesale option. In particular, as noted by AT&T witness L.G. Sather, GTE
5 proposed to AT&T several exclusions to its wholesale pricing and resale
6 obligations.

7

8 These exclusions could be used by GTE to evade its wholesale obligation by
9 selectively targeting customers for special pricing, rolling promotions, and
10 grandfathering, which is a more polite phrase for warehousing, large sections of the
11 market. Together, these exclusions could eliminate or greatly reduce the wholesale
12 option as an entry option.

13

14 **Q. WHAT IS THE BASIC APPROACH TO CALCULATING THE**
15 **WHOLESALE PRICE FOR LOCAL SERVICES?**

16

17 A. The basic approach is to remove from the retail price an estimate of the retail-related
18 costs that will be avoided by GTE as a wholesaler of services. AT&T witness
19 Lerma's testimony deals with the calculation of these avoided costs.

20

21 **Q. WHAT WOULD OCCUR IF THE COMMISSION DOES NOT FULLY**
22 **REMOVE THESE RETAILING COSTS WHEN ESTABLISHING THE**
23 **WHOLESALE RATE?**

24

25 A. Failing to fully remove retail costs would create a wholesale rate level that is too

1 high. This would distort competition and artificially depress entry. The effect
2 would be to deny consumers the benefits of competition -- lower prices, more
3 choices and the ability to vote their dollar between rivals vying for their attention.

4

5 It is useful to remember that although the immediate recipient of a wholesale
6 discount is the local reseller, the ultimate beneficiaries are consumers. An
7 artificially low wholesale discount will not lead to lower retail prices. In other
8 words, the smaller the discount, the less competitive pressure to lower prices.

9

10 **Q. ARE THERE ANY MARKET BENCHMARKS TO JUDGE THE**
11 **REASONABLENESS OF THE PROPOSED DISCOUNTS?**

12

13 **A. Yes. In the long distance market there is a competitive wholesale market that**
14 **actively solicits retail carriers with attractive wholesale pricing and operational**
15 **systems specifically designed for resale. It is useful to consider the discounts that**
16 **the LECs have trumpeted to Wall Street analysts to place the local wholesale**
17 **discounts discussed in this proceeding into context.**

18

19 **For instance, NYNEX recently indicated to Wall Street analysts that it anticipated a**
20 **80% discount on the long distance services it buys at wholesale. (Source: Dean**
21 **Witter, November 6, 1995.) Further, Merrill Lynch (Merrill Lynch, August 24,**
22 **1995) states:**

23

24 **. . . reseller spreads in long distance are already huge (50%) given**
25 **the existence of four fiercely competitive long distance networks.**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Merrill Lynch also predicts that:

For calls terminating outside an individual RBOC's franchise area, that RBOC will be able to bargain for volume discounts given that its volumes are likely to exceed that of any other long distance customer in that region -- *discounts that are likely to grow over time as RBOC long distance shares and thus negotiating leverage grows.*

Emphasis added.

The point here is simple: where *competition* decides the wholesale discount, that discount is large and is expected to increase.

B. The Dilutive Effect of Access Charges on the Wholesale Discount

Q. DO YOU BELIEVE THAT THE DISCOUNT ESTIMATED BY AT&T WILL BE SUFFICIENT TO FOSTER LOCAL ENTRY?

A. No. Even though a discount of this level would apparently comply with the avoided-cost standard of the Act, the Commission should be aware that the interplay between local resale and access service (i.e., the charges GTE imposes on long distance companies) will significantly reduce the viability of local resale. This is because GTE would continue to charge a reseller-entrant carrier access charges, even to originate or terminate traffic to the reseller's own customers. As explained below, this arrangement diminishes the attractiveness of local resale.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Q. PLEASE DESCRIBE THE RELATIONSHIP BETWEEN ACCESS CHARGES AND THE WHOLESALE PRICES.

A. With local resale, GTE remains the access provider even to the customers that have “left” and become customers of the reseller. Because access charges are priced above cost, GTE is able to retain much of the profits from a customer, even after it has lost its retail business. In effect, this means that the reseller markets the relatively less profitable service (local service), while GTE retains the cream (access service). This situation is somewhat analogous to agreeing with Gillette to market its razor handles, while Gillette retains a monopoly on the blades. Sound competition cannot proceed on this basis.

Q. WHAT IS THE EFFECT OF GTE'S RETAINING AN ACCESS MONOPOLY TO THE RESELLER'S CUSTOMERS?

A. One way of measuring the impact of this arrangement is to calculate an “effective” wholesale discount that not only considers what the interexchange carrier/local reseller pays for the wholesale local exchange service, but also includes the access charges that the interexchange-carrier/local-reseller continues to pay GTE. This “effective” discount can then be compared to the nominal discount; i.e., the discount that considers only the price paid for the wholesale local exchange service.

When access charges are included in the equation, the effective discount is reduced substantially. For instance, if the nominal discount is 30%, GTE does not receive

1 30% less revenue for each customer that moves to a reseller because it continues to
2 receive access revenues. For the *average* customer, if the nominal discount is 30%
3 the effective discount to GTE is only 17.3%. This comparison understates the
4 effect of access, however, since it is calculated for the *average* customer. The
5 dilutive effect increases as the average toll usage of the reseller increases because
6 higher toll users cause higher access charges to be paid by the long distance carrier
7 to the incumbent LEC. Consequently, even when nominal wholesale discount levels
8 appear large, the realized differential remains relatively small once access charges
9 are taken into consideration.

10
11 The magnitude of this problem should not be underestimated. For the purpose of
12 comparison, consider the combined effect of a 30.9% wholesale discount (as
13 suggested by AT&T) and current access charges. On average, the reseller's margin
14 would be approximately \$7.60 for each subscriber line it attracted, while GTE
15 would retain approximately \$18.00 per month in access revenues, even from the
16 customers that it lost.

17
18 No matter how diligently the Commission removes retail-related costs from GTE's
19 wholesale prices, the above-cost pricing of access will distort a reseller's ability to
20 compete with GTE. GTE recovers its costs in the price of *both* local/retail service
21 and access service, while its competitors must recover all their costs solely through
22 the wholesale discount. As the Department of Justice noted (CC Docket No. 96-98,
23 page 39):

24

25 The economics of a competitive [local] marketplace would not

1 support entry solely on the revenues derived from local exchange
2 service.

3
4 Similarly, local competition based on the resale of wholesale services will not
5 succeed so long as the access charges which the local exchange carrier continues to
6 receive from the reseller are a principal source of local profit. Real competition
7 requires that both the entrant and incumbent face the same cost for the facilities used
8 to provide service and have the same opportunity to recover those costs.

9

10 **IV. UNBUNDLED NETWORK ELEMENTS**

11

12 ***A. The Nature of Unbundling***

13

14 **Q. PLEASE DEFINE "UNBUNDLING."**

15

16 **A. Unbundling refers to the offering of discrete elements of the incumbent's network as**
17 **generic functionalities, not as finished services. These network elements are**
18 **"unbundled," both from each other and from the retail services of the incumbent**
19 **LEC.**

20

21 A useful metaphor for unbundling is that of the "Chinese Restaurant." Chinese
22 restaurants typically have extensive menus, detailing dozens of selections. Yet, in
23 the kitchen, only a few basic ingredients are used to create all these choices.
24 Similarly, telecommunications services are typically constructed from a limited
25 number of key ingredients (switching and transmission are the most basic), but the

1 variety of services (from the consumer's perspective) can be quite extensive.

2

3 Unbundling represents the availability of the incumbent's network elements as

4 ingredients to other providers so that they may combine these ingredients

5 (sometimes adding their own, sometimes not) to provide their own finished services.

6

7 **Q. IS UNBUNDLING THE SAME AS RESALE?**

8

9 A. No. Resale involves the purchase of *finished services* by the reseller from the

10 incumbent LEC (albeit at wholesale rates) which are then resold by the reseller.

11 Unbundling is the purchase of underlying *network elements* -- which may be

12 facilities, functions or capabilities -- that can be combined to offer services, either

13 equal to, or different from, the services of the incumbent LEC.

14

15 **Q. WHAT ARE THE POTENTIAL BENEFITS FROM UNBUNDLING?**

16

17 A. There are three primary benefits. First, opening the incumbent's network to other

18 carriers as a menu of generic ingredients will make robust competition possible

19 despite the dominance, if not complete monopoly, of the incumbent LEC's network.

20 New entrants could fashion service packages not now available, providing

21 consumers additional choices.

22

23 Second, unbundling allows carriers to sequentially replace individual components of

24 GTE's network as competitive networks slowly develop. The enormity of GTE's

25 network necessarily implies that the process of facilities deployment will take time,

1 and will occur unevenly throughout its region. However, through unbundling,
2 carriers will have an opportunity to develop markets, establish services, and attract
3 consumers on a timely basis in the *entire* market, with the process of facilities-
4 deployment following wherever economic.

5
6 Third, with unbundling there will be substantially more choices at the end of the
7 process than would result if each individual entrant had to construct network
8 facilities in order to offer services. Unbundling prevents local network deployment
9 from becoming a prerequisite to offering service, both for today's entrants and new
10 providers that may form in the future. By creating an open entry environment,
11 investment capital can be directed to developing new services and applications,
12 rather than used exclusively to replicate transmission and switching facilities. By
13 reducing, and then keeping, barriers to entry low, the most diverse competitive
14 environment will develop.

15
16 Thus, unbundling has the potential for *immediate, transitional and long lasting*
17 benefits for the market and Florida consumers. What matters most at the end of the
18 process is that multiple carriers have the opportunity to broadly approach the Florida
19 marketplace, designing services which they believe best satisfy the needs of their
20 customers, on an economic basis similar to that of the incumbent LEC, and fully
21 supported by operational systems which will easily accommodate choices by
22 consumers.

23
24 A full description of the most fundamental elements that should be unbundled
25 immediately is identified in the testimony of AT&T Witness Ray Crafton.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

B. Network Element Pricing

Q. HOW SHOULD NETWORK ELEMENT PRICES BE ESTABLISHED?

A. Network element prices set at direct economic costs will yield the greatest choice and benefits to Florida consumers. To maximize competition -- that is, to promote an environment that will present Florida consumers with the greatest diversity of pricing plans, calling options, and service features -- it is important that the underlying exchange network be available to *all* retail providers of local exchange services on the same terms, conditions and prices.

There are only two ways to assure that all providers have access to the exchange network on equivalent terms. The first is to prohibit the network owner from offering competitive services at all. This was the basic approach that underlaid divestiture; for obvious reasons I am not recommending that action here.

In the absence of such structural protection, the only viable mechanism is to establish prices of the underlying network components at their economic resource cost. The key is to make the network available to all providers on equivalent terms. For the incumbent LEC, this is the element's economic cost, i.e., its total service long run incremental cost ("TSLRIC"). So that all providers face the *same* effective cost for the use of a network component, the *price* charged other carriers must be equal to the economic *cost* of the element in question. Dr. Kaserman's testimony provides additional details concerning the appropriateness of TSLRIC pricing for

1 network elements.

2

3 **Q. DOES PRICING NETWORK ELEMENTS AT TSLRIC IMPLY THAT GTE**
4 **WOULD NOT BE ALLOWED TO EARN A PROFIT OR COVER ALL OF**
5 **ITS COSTS?**

6

7 **A. No. First, economic pricing includes a return on investment sufficient to attract and**
8 **retain capital. Although commonly referred to as “profit,” the “cost of capital” is a**
9 **legitimate economic cost and is included in TSLRIC.**

10

11 **Second, the economic cost of network elements would include costs associated with**
12 **planning, engineering and operating GTE's network, including costs which are**
13 **shared by more than one network element (such as the salary of the Operations**
14 **Director). In the context of retail services, these costs would be viewed as**
15 **“common,” and would not be included in the economic cost of any particular**
16 **service. Because of this historical context, the Commission may mistakenly assume**
17 **that the economic costing of network elements would leave a number of “costs”**
18 **unrecovered.**

19

20 **Importantly, however, perceptions concerning common costs derived in an**
21 **environment of *retail* costing are not applicable to the costing of *network elements*.**
22 **For example, consider the salary of a switch technician. In a typical *retail cost***
23 **analysis, this cost would be considered common to each of the GTE's retail services**
24 **that rely (to one extent or another) on the use of local switching. Yet, when**
25 **calculating the cost of the local switching *element*, the technician's salary is a direct**

1 cost and is included in TSLRIC.

2

3 Finally, there is a category of common costs -- the costs associated with product
4 development, marketing, and advertising that support GTE's retail operations, as
5 well as financial and managerial costs, that would be incurred whether GTE owned
6 and managed its network or not -- that have no relevance to the costing of network
7 elements because these costs are not incurred to provide network functions.

8 However, this does not mean that these costs will go unrecovered. It only means
9 that GTE must be as efficient as its rivals, who must also recover these costs in the
10 prices of their services.

11

12 ***C. Transport and Termination***

13

14 **Q. WHAT IS "TRANSPORT AND TERMINATION"?**

15

16 **A.** Transport and termination is the network function used to complete a call on a
17 network. It includes two components: the interoffice *transport* between wire
18 centers in a network, and the *termination* through the end office switch to the
19 customer's premise.

20

21 **Q. ARE ACCESS AND "TRANSPORT AND TERMINATION" IDENTICAL?**

22

23 **A.** Yes. The functionality to terminate a call is the same whether the call is classified
24 as a "local" call or a "long distance" call. A pricing issue arises, however, because
25 the charges to long distance carriers to terminate toll traffic (i.e., access) are far

1 above cost.

2

3 **Q. WHY ARE CALL TERMINATION PRICES SO IMPORTANT?**

4

5 A. The prerequisite to any form of telecommunications competition is the ability to
6 complete calls to other subscribers, virtually all of whom (within GTE's exchanges)
7 are served by GTE's network. In this regard, the introduction of local competition is
8 not unique. Whether a call is labeled local or long distance, it still must be
9 terminated to the customer.

10

11 **Q. WHY IS IT IMPORTANT THAT RATES FOR TRAFFIC TERMINATION**
12 **BE THE SAME FOR "LOCAL" AND "LONG DISTANCE" TRAFFIC?**

13

14 A. One of the potential benefits of full service competition is competitively determined
15 "local" calling areas. In a competitive market, the "local" calling area should
16 become an important dimension of product differentiation, with carriers offering a
17 variety of price and boundary packages to consumers.

18

19 For GTE to charge a different price for terminating "long distance" calls and "local"
20 calls, GTE would need to require that all competitors adopt the same definition of
21 local calling *and* GTE would need to implement auditing systems to correctly assess
22 its charges. Such systems are not only unnecessary, but they would be used solely
23 to accomplish an unreasonable result -- the continued discrimination between local
24 and long distance calling, and to maintain the payment of access charges far above
25 costs to the incumbent LEC.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

The preferable approach is to establish non-discriminatory termination rates that do not attempt to differentiate between types of calls. In this way, carriers would be free to decide the scope of their own local calling areas, sizing these areas to match their own perception of the market and to reflect their own pricing and marketing strategies. In this way, the market -- which is to say, *consumers* -- will decide the size and shape of the local calling area as carriers compete along this important dimension of service.

Q. DOES GTE AGREE THAT INTERCONNECTION PRICES SHOULD BE NON-DISCRIMINATORY?

A. Yes. In GTE's Comments to the FCC on these same issues (CC Docket No. 96-98, page 72), GTE recommends that:

... in a regulatory environment that compels unbundling and resale, discrimination based on the identity of the customer is generally untenable because there is no way to enforce such restrictions or prevent arbitrage.

Accordingly, state and federal regulators must rationalize pricing structures for all users of the ILEC's network.

Similarly, this Commission should implement a comprehensive cost-based pricing system which does not discriminate between types of calls or carriers. To the extent

1 that some portion of today's access rates are needed to subsidize particular
2 consumers or services, then that subsidy should be specifically identified and
3 explicitly recovered through a competitively neutral universal service fund.
4

5 **Q. IF TERMINATING LOCAL CALLS AND TERMINATING LONG**
6 **DISTANCE CALLS ARE IDENTICAL, WHY SHOULDN'T THE**
7 **COMMISSION APPLY ACCESS CHARGES TO LOCAL CALLS?**

8
9 **A.** The problem is that access charges are significantly inflated over cost. Using these
10 inflated charges to establish charges for local termination would simply adopt a
11 "poison both wells" pricing strategy. While the services might be equivalent, the
12 consequences from the excessive rate levels would not be.

13
14 Long distance competition has survived despite high access prices for two reasons.
15 First, incumbent LECs could not provide long distance services and, as a result,
16 retail price levels reflected that all providers faced the same (albeit high) cost for
17 this input. Second, long distance prices and access charges are both measured.
18 Therefore, access costs and revenues both grow or diminish with traffic volumes.

19
20 Neither of these conditions holds true in the local exchange marketplace. Entrants
21 will have to compete with GTE on day one, and GTE's cost to offer local service is
22 the economic cost of network usage, not the access charge. Second, local exchange
23 prices in Florida are flat-rated, and imposing on GTE's rivals a cost-structure
24 directly at odds with retail rates will place them at a disadvantage when serving
25 consumers with relatively high local calling patterns.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Q. HOW SHOULD THE COMMISSION ESTABLISH LOCAL CALL TERMINATION RATES UNTIL IT IS ABLE TO CORRECTLY ESTABLISH ACCESS CHARGES?

A. The Commission should establish cost-based transport and termination rates for access and local traffic. In the interim, the Commission should rely on a bill and keep system. Until both access and local transport and termination rates are cost-based, mutual traffic exchange should be used as the interim basis for compensation.

V. OPERATIONAL BARRIERS TO ACHIEVING CUSTOMER CHOICE

Q. HOW DO OPERATIONAL ISSUES AFFECT CUSTOMERS AND THEIR ABILITY TO BENEFIT FROM LOCAL COMPETITION?

A. There are two ways that operational questions directly will impact consumer perceptions concerning local competition. In order for local competition to be viewed as a success:

- it must be easy for *consumers* to change local carriers, at least as easy as the PIC-change process they are now familiar with, and
- it must be easy for *carriers* to serve consumers quickly and with a minimum of network disruption.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Only if these conditions are satisfied will the market changes contemplated by the Act roll out smoothly in the eyes of consumers.

A. Supporting Customer Choice

Q. WHY IS IT IMPORTANT FOR OPERATING SYSTEMS TO BE ABLE TO EASILY ACCOMMODATE CONSUMER CHOICES?

A. When the Act is fully implemented, today’s familiar separation between local and long distance companies will be replaced with many consumers choosing a full service provider for both their local and long distance needs. A primary motivation for full service (i.e., one-stop shopping) competition will be convenience. This may seem obvious, but the benefits of full service competition cannot be realized if *moving* to a full service provider is inconvenient and disruptive.

With this in mind, it is useful to compare the relative ease and convenience that consumers would experience when choosing between GTE and any other full service provider, including their existing long distance carrier. This is the most relevant comparison, because these carriers today share the *same* customer base and thus are most likely to approach these customers with the goal of becoming their full service provider.

Q. ARE THE EXISTING PROCESSES USED TO IMPLEMENT CONSUMER CHOICES AMONG LONG DISTANCE PROVIDERS AT ALL

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

COMPARABLE TO LOCAL SERVICES?

A. No. The process used to transfer a customer to a new long distance company, the PIC-change process, is automated, inexpensive and sized to handle large demands. Significantly, it is also well tested, having been used for more than a decade, through countless product introductions, advertising campaigns, and marketing initiatives. In contrast, the "process" used to change local providers is unknown and, in any environment where a physical circuit rearrangement is necessary, inherently more complicated and problematic.

Q. WHAT MUST OCCUR FOR COMPETITION TO SUCCEED?

A. Consumers must be able to move between local service providers with the same ease that they now move between long distance carriers. This is necessary both for consumers to perceive this market change as beneficial and to assure that both local and long distance carriers have a fair opportunity to become the consumer's full service provider.

Second, however, a PIC-like customer migration process must be available both for local services resale *and* the unbundled network element approaches. Without the ability to honor customer changes inexpensively, the network element option could only be used to serve selected customers and the advantages of this option would be limited to the few.

B. Ordering Combinations of Unbundled Network Elements

1

2 **Q. HOW CAN UNBUNDLED NETWORK ELEMENTS BE USED TO PROVIDE**
3 **LOCAL SERVICES WITH THE LEAST DISRUPTION TO CONSUMERS?**

4

5 A. In order for consumers to benefit from competition, carriers must be able to easily
6 obtain and configure the unbundled network elements that they will use to provide
7 services. The key to rapid competition and easy customer choice is the ability of
8 entrants to provide service using unbundled local switching, frequently in
9 combination with other elements. With unbundled local switching, customers can
10 be moved between different providers without physically reconfiguring the service
11 to the customer.

12

13 **Q. CAN THE UNBUNDLED LOOP, BY ITSELF, PROVIDE THIS**
14 **FLEXIBILITY?**

15

16 A. No. Unbundled loops, while important, are unlikely to support broad-scale, mass-
17 application, entry into the local services market.

18

19 **First, the unbundled-loop configuration is viable only where a collocated network**
20 **exists. Even where these networks are economically attractive, they now do not**
21 **exist and it will take time for them to be constructed and made operational.**

22

23 **Second, and more permanently, the unbundled-loop configuration easily cannot**
24 **effect large changes in market share between alternative providers because physical**
25 **changes in the network will be necessary -- i.e., the actual loop to the customer must**

1 be reconfigured from GTE's local switch to a competitor's every time a customer
2 changes a local service provider.

3

4 As a result, unbundled loops (by themselves) are unlikely to foster a fully
5 competitive environment. Instead, carriers will need to order combinations of
6 network elements, typically involving unbundled local switching, to provide
7 competitive services to consumers.

8

9 **Q. HOW WILL CARRIERS BE ABLE TO MOVE CUSTOMERS MORE**
10 **RAPIDLY USING UNBUNDLED LOCAL SWITCHING?**

11

12 A. The answer is using the network to move customers without manual changes in the
13 physical connections to these customers. This condition is satisfied by a network
14 configuration which combines several network elements, including local switching,
15 to provide service. Customers can easily change among local carriers who are
16 providing services using the incumbent LEC's unbundled local switching element,
17 because the customer's lines need not be reconfigured to a different switch for
18 service. This arrangement is sometimes referred to as the "platform" configuration.

19

20 **Q. WHAT IS THE "PLATFORM" CONFIGURATION?**

21

22 A. The platform configuration is the combined purchase of unbundled switching and an
23 unbundled loop (frequently in combination with transport, termination and
24 signaling) to form a basic exchange platform to offer local exchange and exchange
25 access services. The critical element is correctly defining unbundled local switching

1 to enable the new entrant to: (a) activate (more precisely, to *order* that the
2 incumbent LEC activate) the various features on the customer's loop that defines its
3 local services, (b) define traffic routing as alternative networks become available
4 (although, initially, it is likely that local traffic would be terminated using the
5 incumbent LEC's network), and (c) create the records to bill the end-user for local
6 exchange service and other carriers for exchange access and interconnection service.
7 By providing services using a combination of unbundled loops and switching,
8 several of the operational barriers presented by utilizing unbundled loops alone can
9 be overcome. Again, the basic definition of unbundled local switching is provided
10 in more detail in the testimony of AT&T Witness Ray Crafton.

11

12 **Q. HOW DOES THIS CONFIGURATION OVERCOME THE LIMITATIONS**
13 **ASSOCIATED WITH THE UNBUNDLED LOOP ELEMENT DESCRIBED**
14 **EARLIER?**

15

16 **A.** First, the platform configuration efficiently uses the existing network to obtain
17 switching and call termination. As a result, its value is not artificially limited to
18 central offices where a carrier has established a collocated network node, nor does it
19 require a duplication of GTE's preexisting interoffice and local switching matrix as a
20 prerequisite to entry.

21

22 Second, customers can easily shift between local providers using the platform
23 configuration because the existing exchange line does not need to be reconfigured to
24 provide service. Because the underlying facility arrangement is unaffected,
25 operational systems should be able to accommodate market changes with an ease

1 comparable to the PIC-change process used in the long distance industry.

2

3 Third, one of the benefits of the platform configuration is that it solves (at least
4 temporarily) the entry barrier presented by the absence of number portability.

5 Because the new entrant's customers would continue to be served by the incumbent's
6 local switch, there is no need for consumers to change phone numbers as they move
7 between local providers.

8

9 **Q. ARE THERE OTHER BENEFITS FROM THIS ARRANGEMENT?**

10

11 **A.** Yes. The platform approach provides every carrier an ability to design its own
12 services, constrained only by its own imagination and the inherent ability of the
13 network. Unbundled local switching enables a carrier to purchase switching
14 capacity as a generic ingredient and then determine which features and capabilities
15 of the switch it will offer as part of its finished local services. The advantages of
16 this approach will become even more pronounced as the "Advanced Intelligent
17 Network" ("AIN") call processing model is introduced.

18

19 AIN uses a system of "triggers" to access remote databases for call processing
20 instruction. For instance, the "off-hook trigger" automatically suspends call
21 processing at the switch when the customer lifts its receiver. The trigger then
22 queries a service control database for additional instructions. One way of looking at
23 AIN is that it takes the *intelligence* out of the network switch, and uses the switch
24 simply to execute call processing. In an AIN environment, each entrant should be
25 able to define unique new services for their particular customers, even if they all use

1 the same local switch to provide dial-tone and provide the first point of switching.

2

3 In addition, the platform configuration allows each carrier the flexibility to provide
4 its own local exchange services to end-user customers, and exchange access services
5 to other carriers, achieving the same status and opportunities as any other local
6 telephone provider. Competition across all prices and services would then be
7 possible.

8

9 Of course, as noted at the beginning of this Section, none of these benefits are
10 possible unless consumers are able to easily implement a choice in carriers. That is
11 why it is so important to implement the operating systems that are described further
12 in the testimony of AT&T Witness Jim Carroll.

13

14

VI. SUMMARY

15

16 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

17

18 **A. The Commission's decision in this proceeding may be the most significant in its**
19 **history as a regulator of telecommunication services. The Act has the potential of**
20 **bringing substantial competitive benefits to Florida consumers, providing them, for**
21 **the first time, direct say in the services they are offered through the power of choice.**
22 **Realizing these benefits, however, can occur only if the entry tools described in the**
23 **Act become practical, working vehicles that entrants may use to provide that choice.**

24

25 **This, in a sentence, is the fundamental objective of this arbitration -- to provide**

1 AT&T (and other entrants) the tools they will need to provide local exchange
2 services in competition with GTE. Creating these tools quickly has particular
3 importance here because GTE has already crossed the line to full service provider
4 without having to first provide others an ability to compete.

5

6 What do entrants need? Simply this: the ability to resell wholesale equivalents of
7 GTE's retail services at wholesale rates; the ability to purchase and combine a core
8 list of unbundled network elements, correctly priced at economic cost; and the
9 ability to terminate traffic at cost-based, reciprocally applied, charges. Each
10 supported by an operational infrastructure designed for a multi-vendor local
11 marketplace. This is what the Act provides for, this is what the entrant is entitled to,
12 and this is what the Commission must see gets implemented.

13

14 Why? First and most obviously, to give consumers choice. But also, because GTE
15 has already entered the long distance market.. There, GTE found wholesale long
16 distance services and network elements at competitive prices. There, GTE found an
17 operational infrastructure specifically designed to support a multi-vendor market,
18 including systems to easily implement customer choices. In short, GTE found the
19 long distance equivalent to all that the Act requires that GTE offer others.

20

21 The Commission has long recognized its role as a surrogate for competition.
22 Historically, this role has been limited to the retail market. However, under the Act,
23 the Commission's role as a competitive surrogate shifts to the wholesale level,
24 because it is there that GTE's network monopoly poses the greatest risk. The
25 Commission's role now includes making this network available so that multiple

1 carriers may use it to offer retail services to consumers.

2

3 It is this final linkage to consumer prices that the Commission should not lose sight
4 of as it approaches the issues in this arbitration. Establishing the correct carrier-to-
5 carrier arrangements is complex, but, again, the ultimate beneficiaries will be
6 Florida consumers.

7

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

9

10 **A. Yes.**

**Qualifications, Publications and Testimony
Joseph Paul Gillan**

EDUCATION

B.A. Economics, University of Wyoming, 1978.

M.A. Economics, University of Wyoming, 1979.

Concentration in the economics of public utilities and regulated industries with an emphasis on price theory and statistics.

EMPLOYMENT HISTORY

1986 - Present

Private consulting practice specializing in the economic evaluation of regulatory policies and related business opportunities in the telecommunications industry. Economic and market analysis, product development, expert testimony, and regulatory planning services.

1985 - 1986 U.S. Switch; Vice President, Strategic Planning/Marketing

Responsibilities included project management, marketing and regulatory objectives for *Centralized Equal Access*, a networking concept design to provide equal access to rural areas while positioning independent telephone companies for competition.

1980 - 1985 Illinois Commerce Commission; Director, Market Structure Program

Primary staff responsibility for Commission policy concerning the level and structure of competition in the telecommunications and energy industries. Designed regulatory framework for IX competition, intralata market structure and developed intrastate access charge plan. Responsible for Commission representation in the Sunset process and all filings before federal agencies.

1979 Mountain States Telephone Company; Demand Analyst

Performed statistical analysis of the demand for access by residential subscribers.

EXPERT TESTIMONY

- California Re: Rulemaking to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development, Docket R.93-04-003, on behalf of LDDS WorldCom, Inc.
- Tennessee Re: The Avoidable Costs of Providing Bundled Local Services for Resale, Docket 96-00067, on behalf of AT&T Communications.
- Georgia Re: MCI Metro/MFS Intelenet Petitions to Establish Rates, Terms and Conditions for Unbundled Loops and Interconnection, Dockets 6537-U and 6415-U, on behalf of the Competitive Telecommunications Association.
- Georgia Re: Petition of AT&T to Establish Resale Rules, Rates, Terms, and Conditions and the Initial Unbundling of Services, Docket No. 6352, on behalf of AT&T Communications.
- Penn. Re: Application of MFS (et al) to Provide and Resell Local Exchange Telecommunications Services, Phase II, Dockets A-310203F0002 (et al), on behalf of the Competitive Telecommunications Association.
- Florida Re: Petitions to Establish Non-Discriminatory Interconnection Terms for GTE and United, Docket 95-0984-TP, on behalf of AT&T Communications.
- Kentucky Re: An Inquiry into Local Competition and Universal Service, Case No. 365, on Behalf of WorldCom, Inc.
- Mississippi Re: A Docket to Consider Competition in the Provision of Local Telephone Service, Docket 95-UA-358, on behalf of LDDS Worldcom and AT&T Communications.
- Florida Re: Petitions to Establish Non-Discriminatory Interconnection Terms for BellSouth, Docket 95-0984-TP, on behalf of AT&T Communications.
- Illinois Re: Petition of AT&T for a Total Local Exchange Wholesale Service Tariff, Docket 95-0458, on behalf of LDDS Worldcom.

EXPERT TESTIMONY (continued)

- California** Re: Commission Investigation Into Competition for Local Exchange Service, Dockets R.95-04-043 and L.95-04-044, on behalf of LDDS Worldcom.
- Florida** Re: Determination of Funding For Universal Service and Carrier of Last Resort Responsibilities, Docket No. 95-0696-TP, on behalf of the Florida Interexchange Carriers Association and AT&T Communications.
- Georgia** Re: Petition to Remove Subsidies from Access Charges, Docket 5755-U, on behalf of AT&T Communications.
- S Carolina** Re: Southern Bell's Request for a Price Regulation Plan, Docket No. 95-720-C, on behalf of ACSI of South Carolina.
- Michigan** Re: Establishment of Permanent Interconnection Arrangements, Case No. U-10860, on behalf of LDDS/Worldcom.
- Mississippi** Re: Docket to Consider Formulating a Properly Structured Price Regulation Plan for South Central Bell, Docket 95-US-313, on behalf of AT&T Communications and LDDS/Worldcom.
- Missouri** Re: The Application of Southwestern Bell to Provide Local Plus Service, Case No. TR-95-241, on behalf of MCI Telecommunications Corporation.
- Washington** Re: Interconnection Complaint against US West, Docket UT-941464, on behalf of the Interexchange Access Coalition.
- Maryland** Re: Matter of the Application of MFS-Intelenet for Local Exchange Authority, Case No. 8584, Phase II, on behalf of LDDS Worldcom.
- Mass.** Re: Investigation by the Department into IntraLATA and Local Exchange Competition, D.P.U. 94-185, on behalf of LDDS Worldcom.
- Wisconsin** Re: Complaint of MCI, AT&T, Sprint and Schneider Communications to Require Equal Access to the Exchanges of Ameritech Wisconsin, Docket No. 6720-TI-111, on behalf of Schneider Communications.
- N Carolina** Re: Investigation into Defined Radius Calling Plans, Docket No. P-100, Sub 126 and 65, on behalf of LDDS Communications.
- Georgia** Re: Investigation into IntraLATA Presubscription, Docket 5319-U, on behalf of MCI and LDDS/Metromedia

EXPERT TESTIMONY (continued)

- Mississippi** Re: Inquiry as to Whether the Regulation of South Central Bell Should Be Changed from Incentive Regulation to Price Regulation, Docket 94-UA-536, on behalf of LDDS/Metromedia, Inc.
- Georgia** Re: Petition of BellSouth for Approval of Georgians First, Docket no. 5258-U, on behalf of LDDS/Metromedia
- Florida** Re: Investigation in IntraLATA Presubscription, Docket No. 930330-TP, on behalf of the Florida Interexchange Carriers Association.
- Alabama** Re: South Central Bell's Proposed Tariff Restructuring the Switched Access Local Transport Element, Docket 23260, on behalf of LDDS/Metromedia Communications.
- New Mexico** Re: US West's Proposed Changes to Intrastate Switched Access, Docket 94-204-TC, on behalf of LDDS/Metromedia Communications.
- Kentucky** Re: Application of South Central Bell to Modify the Method of Regulation, Docket No. 91-121, on behalf of AT&T, Sprint Communications, and LDDS/Metromedia.
- Texas** Re: Applications of Southwestern Bell and GTE to Restructure the Local Transport Pricing of Switched Access Service, Docket 12784, on behalf of the Interexchange Access Coalition.
- Illinois** Re: Customer's First Plan Experimental Trial and AT&T Petition for Local Competition, Dockets 94-0096 and 94-0146, on behalf of LDDS/Metromedia.
- Louisiana** Re: Application of South Central Bell to Modify the Method of Regulation, Docket No. U-17949-D, on behalf of AT&T, Sprint Communications, and LDDS/Metromedia.
- New York** Re: Petition of Rochester Telephone for Approval of a Corporate Restructuring, Case Nos. 93-C-0103 and 93-C-0033, on behalf of LDDS Communications.
- Illinois** Re: Review of Tariffs Restructuring Switched Access Local Transport for GTE, Centel and Illinois Bell, Dockets 94-0043 to 94-0046, on behalf of the Interexchange Access Coalition.

EXPERT TESTIMONY (continued)

- Florida** Re: Petition for Expanded Interconnection by Intermedia Communications of Florida, Docket 92-1074-TP, Requests by United Telephone, Centel, GTE and Southern Bell for Approval of Tariffs Restructuring Switched Access, Dockets 94-0014-TL, 94-0020-TL, 94-0190-TL and 93-0955-TL, on behalf on the Interexchange Access Coalition.
- Louisiana** Re: Southern Central Bell's Proposed Tariff Restructuring the Switched Access Local Transport Element, Docket U-20800, on behalf of LDDS, Inc.
- Tennessee** Re: Southern Central Bell's Proposed Tariff Restructuring the Switched Access Local Transport Element, Docket 93-08865, on behalf of LDDS, Inc.
- Ohio** Re: Application of Ohio Bell for an Alternative Form of Regulation, Docket 93-487-TP-ALT, on behalf of Allnet, LCI and LDDS.
- Mississippi** Re: Southern Central Bell's Proposed Tariff Restructuring the Switched Access Local Transport Element, Docket 93-UN-0843, on behalf of LDDS-II, Inc.
- S Carolina** Re: Southern Bell's Proposed Tariff Restructuring the Switched Access Local Transport Element, Docket 93-756-C, on behalf of the Interexchange Access Coalition (IAC).
- Georgia** Re: Southern Bell's Proposed Tariff Restructuring the Switched Access Local Transport Element, Docket 4817-U, on behalf of the IAC.
- Louisiana** Re: Generic Hearing to Clarify the Pricing/Imputation Standard, Docket No. U-20710, on behalf of LDDS.
- Ohio** Re: In the Matter of Western Reserve Telephone Company's Request for an Alternative Form of Regulation, Case Nos. 93-230-TP-ALT and 92-1525-TP-CSS, on behalf of an IXC Coalition (MCI, Allnet and LCI).
- New Mexico** Re: Inquiry by the Commission into the Local Calling Area for the Albuquerque Metropolitan Area, Docket No. 93-218-TC, on behalf of LDDS Communications.

EXPERT TESTIMONY (continued)

- Illinois** Re: Application of Illinois Bell for Alternative Regulation, Docket 92-0048, on behalf of LDDS Communications.
- Mississippi** Re: Notice of South Central Bell Telephone Company to Introduce Banded Rates for MTS, WATS and 800 Services, Docket 93-UN-0038, on behalf of LDDS Communications.
- Florida** Re: Petition of Intermedia Communications of Florida for Expanded Interconnection for AAVs within LEC Central Offices, Docket 92-1074TP, on behalf of the Florida Interexchange Carriers Association.
- Louisiana** Re: Objection to the Filing of Reduced WATSSAVER Service Rates, IntraLATA, State of Louisiana, Docket U-20237 on behalf of LDDS, MCI and AT&T Communications.
- S Carolina** Re: Application of Southern Bell to Introduce Area Plus Service, Docket 93-176-C, on behalf of LDDS and MCI Telecommunications Corporation.
- Mississippi** Re: Application of South Central Bell Telephone Company for Adoption and Implementation of a Rate Stabilization Plan, Case 89-UN-5453, on behalf of LDDS and Advanced Telecommunications Corporation.
- Illinois** Re: Development of a Statewide Policy Regarding Local Interconnection Standards, Docket 92-0398, on behalf of the Competitive Carrier Coalition.
- Louisiana** Re: Petition of the Louisiana Payphone Association for Implementation of Dial Around Compensation, Docket U-19993, on behalf of MCI.
- Maryland** Re: Petition of the Middle Atlantic Payphone Association to Implement Dial Around Compensation, Docket 8525, on behalf of MCI.
- S Carolina** Re: Petition of the South Carolina Public Communications Association for Implementation of Dial Around Compensation, Docket 92-572-C, on behalf of MCI.
- Georgia** Re: Application of the Georgia Communications Association for Dial Around Compensation, Docket 4206-U, on behalf of MCI.
- Delaware** Re: The Diamond State Telephone Company's Application for a Rate Increase, Docket 91-47, on behalf of MCI.

EXPERT TESTIMONY (continued)

- Florida Re: Comprehensive Review of the Revenue Requirements and Rate Stabilization Plan of Southern Bell, on behalf of the Florida Interexchange Carriers Association.
- Mississippi Re: Order of the Mississippi Public Service Commission to South Central Bell to (1) Expand ACP Calling Area, and (2) Include Calls to the County Seat in Capped Local Calling, 92-UA-100, on behalf of LDDS and ATC.
- Florida Re: Application for a Rate Increase by GTE Florida Incorporated 1992, Docket 920188-TL, on behalf of MCI and FIXCA.
- Wisconsin Re: Investigation Into the Extent of Competition in the IntraLATA Toll Telecommunications Market, 05-TI-119, on behalf of MCI and Schneider Communications.
- Florida Re: Investigation Regarding the Appropriateness of Payment for Dial Around Compensation from Interexchange Telephone Companies to Pay Telephone Providers, Docket 920399-TP, on behalf of MCI and FIXCA.
- California Re: The Matter of Alternative Regulatory Frameworks for Local Exchange Carriers and Related Matters, I.87-11-033, on behalf of Intellical, Inc.
- Florida Re: Petition of Southern Bell Telephone and Telegraph Company for Rate Stabilization and Implementation Orders and Other Relief, Docket 880069-TL, on behalf of the Office of Public Counsel and the Florida AdHoc Users Group.
- New York Re: Impact of the Modification of Final Judgment and FCC Docket 78-72 on the Provision of Toll Service in New York, Case 28425 Phase III, on behalf of Empire/Aitel.
- Wisconsin Re: Investigation of Intrastate Access Costs and Intrastate Access Charges, Docket 05-TR-103, on behalf of Wisconsin CompTel and MCI.
- Mississippi Re: Order of the Mississippi Public Service Commission Initiating Hearings Concerning (1) IntraLATA Competition and (2) Payment of Compensation by Interexchange Carriers and Resellers to Local Exchange Companies, Docket 90-UA-0280, on behalf of Intellical, Inc.

EXPERT TESTIMONY (continued)

- Louisiana Re: Investigation of the Revenue Requirement, Rate Structure, Charges, Services, Rate of Return, and Construction Program of Central Bell Telephone Company, Docket No. U-17949, Sub-Docket B (IntraLATA Competition), on behalf of Cable & Wireless Communications and ATC Corporation.
- Florida Re: Petition of Southern Bell Telephone and Telegraph Company for Rate Stabilization and Implementation Orders and Other Relief, Docket 880069-TL, on behalf of the Florida Interexchange Carriers Association.
- Wisconsin Re: Investigation of Intrastate Access Costs and Intrastate Access Charges, Docket 05-TR-103, on behalf of Wisconsin CompTel.
- Florida Re: Generic Investigation into the Operations of Alternate Access Vendors, Docket No. 890813-TP, on behalf of Intermedia Communications Inc.
- Alaska Re: In the Matter of Consideration of Regulations Governing the Market Structure for Intrastate Telecommunications Service, Docket R-90-1, on behalf of Telephone Utilities of Alaska.
- Minnesota Re: In the Matter of the Minnesota Independent Equal Access Corporation's Application for a Certificate of Public Convenience and Necessity, Docket P-3007/NA-89-76, on behalf of MCI and Telecom*USA.
- Florida Re: Investigation into Equal Access Exchange Areas, Toll Monopoly Areas, 1+ Restriction to the Local Exchange Carriers, and Elimination of the Access Discount, Docket 880812-TP, on behalf of the Florida Interexchange Carriers Association.
- Wisconsin Re: Investigation of Intrastate Access Costs, Settlements and Intralata Access Charges, Docket 05-TR-102, on behalf of Wisconsin CompTel.
- Wisconsin Re: Investigation of Application of Wisconsin Independent Telecommunications Systems, Inc. (WITS) for CPCN to Offer Centralized Equal Access, etc..., Docket 6655-NC-100, on behalf of Wisconsin CompTel.

EXPERT TESTIMONY (continued)

- Florida Re: Petition of Southern Bell Telephone and Telegraph Company for Rate Stabilization and Implementation Orders and Other Relief, Docket 880069-TL, on behalf of the Florida Interexchange Carriers Association.
- Wisconsin Re: Application of Various Interexchange Carriers for Authority to Provide Certain IntraLATA Toll Telecommunications Services (Not Including WATS and MTS), Docket 05-NC-100, on behalf of Wisconsin CompTel.
- Florida Re: Forbearance from Earnings Regulation of AT&T and Waiver of Rules, Docket 870347-TI, on behalf of FIXCA.
- Illinois Re: Investigation Concerning the Appropriate Methodology for the Calculation of Intrastate Access Charges for all Illinois Telephone Utilities, Docket 83-0142, on behalf of Illinois Consolidated Telephone Company.
- Texas Re: Inquiry of the General Counsel into the WATS Prorate Credit, Docket 8218, on behalf of TEXALTEL
- Iowa Re: Iowa Network Access Division, Docket RPU 88-2, on behalf of MCI and Teleconnect
- Florida Re: Investigation into Regulatory Flexibility for Local Exchange Carriers, Docket 871254-TL, on behalf of Microtel.
- Wisconsin Re: Investigation of Intrastate Interexchange Access Charges and Related Intralata and Interlata Compensation Matters, Docket 05-TR-5 Part B, on behalf of the Wisconsin State Telephone Association.
- Florida Re: Investigation into NTS Cost Recovery - Phase II, Docket 860984, on behalf of the Florida Association of Concerned Telephone Companies.

Legislative testimony before state legislatures of Illinois, Wisconsin and Indiana.

PROFESSIONAL APPOINTMENTS

Advisory Council: New Mexico State University, Center for Regulation

Faculty: Summer Program, Public Utility Research and Training Institute, University of Wyoming

Contributing Editor: Telematics: The National Journal of Communications Business and Regulation, 1985 - 1989

Member: NARUC Staff Subcommittee on Communications 1984-1985

Advisory Committee: National Regulatory Research Institute, 1985

SELECTED PUBLICATIONS

"The Local Exchange: Regulatory Responses to Advance Diversity", with Peter Rohrbach, Public Utilities Fortnightly, July 15, 1994.

"Reconcentration: A Consequence of Local Exchange Competition?", with Peter Rohrbach, Public Utilities Fortnightly, July 1, 1994.

"Diversity or Reconcentration?: Competition's Latent Effect", with Peter Rohrbach, Public Utilities Fortnightly, June 15, 1994.

"Consumer Sovereignty: An Proposed Approach to IntraLATA Competition", Public Utilities Fortnightly, August 16, 1990.

"Reforming State Regulation of Exchange Carriers: An Economic Framework", Third Place, University of Georgia Annual Awards Competition, 1988, Telematics: The National Journal of Communications, Business and Regulation, May, 1989.

"Regulating the Small Telephone Business: Lessons from a Paradox", Telematics: The National Journal of Communications, Business and Regulation, October, 1987.

"Market Structure Consequences of IntraLATA Compensation Plans", Telematics: The National Journal of Communications, Business and Regulation, June, 1986.

"Universal Telephone Service and Competition on the Rural Scene", Public Utilities Fortnightly, May 15, 1986.

SELECTED PUBLICATIONS (continued)

"Strategies for Deregulation: Federal and State Policies", with Sanford Levin, Proceedings, Rutgers University Advanced Workshop in Public Utility Economics, May 1985.

"Regulatory Considerations in the Introduction of Competition into the Telecommunications Industry", with Sanford Levin, Proceedings of the Thirteenth Annual Telecommunications Research Conference, April, 1985.

"Charting the Course to Competition: A Blueprint for State Telecommunications Policy", Telematics: The National Journal of Communications Business, and Regulation, with David Rudd, March, 1985.

"Detariffing and Competition: Options for State Commissions", Proceedings of the Sixteenth Annual Conference of Institute of Public Utilities, Williamsburg, Virginia, December 1984.

"Externalities, Competition and Telecommunications Pricing: Access and You Shall Receive", Proceedings, NARUC/NRRI Biennial Regulatory Information Conference, September 1982.

"Analyzing the Allocative Efficiency of Lifeline Electricity Rates", Proceedings of ISSUE 82, SPSS Users Conference, August, 1982.