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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT

TESTIMONY OF

MARVIN H. KAHN

ON BEHALF OF

ICG TELECOM GROUP, INC.

MARCH 18, 1997

DOCUMENT NUMBER-DATE

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

TESTIMONY OF

DR. MARVIN H. KAHN

I. QUALIFICATIONS

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

A. My name is Marvin H. Kahn. I am a Senior Economist and a founding principal of Exeter Associates, Inc. Our offices are located at 12510 Prosperity Drive, Silver Spring, Maryland 20904.

Q. PLEASE REVIEW YOUR BACKGROUND AND QUALIFICATIONS.

A. I am an economist specializing in public utility regulation, energy, communications and antitrust analysis. My primary research interest is in the application of microeconomic principles to public policy issues. Over the last several years, my interests have turned most specifically to matters regarding the regulation of firms operating simultaneously in competitive and non-competitive markets. Particular issues addressed include the unbundling of services, the effects of imposing line of business restrictions on regulated firms, assessments of alternative regulatory structures, and matters regarding cost allocation and rate design.

In addition to my consulting experiences, I taught economics or lectured at the University of Tennessee, the University of Missouri in St. Louis, Washington University in St. Louis, at Merrimac College and at The Johns Hopkins University. I served as a senior economist with the Institute of

1 Defense Analysis and the Mitre Corporation, both not-for-profit Federal
2 Contract Research Centers in the Washington, D.C. metropolitan area. I also
3 served as a senior staff economist with an Ad Hoc Committee of the U.S.
4 House Committee on Currency and Banking, focusing on energy and
5 employment issues.

6 I am a graduate of Ohio Northern University and hold a Ph.D. in
7 Economics from Washington University in St. Louis.

8 **Q. HAVE YOU TESTIFIED BEFORE REGULATORY AGENCIES ON**
9 **MATTERS DEALING WITH TELECOMMUNICATIONS?**

10 **A.** Yes. I have served as an expert witness on matters regarding
11 telecommunications before commissions in over 20 jurisdictions in this country
12 and Canada. I have also undertaken research and prepared reports on
13 ratemaking issues for the U.S. Postal Service, the National Association of State
14 Utility Consumer Advocates (NASUCA), the Federal Communications
15 Commission (FCC) and the National Regulatory Research Institute (NRRI).

16 I have testified before this Commission on telecommunications matters
17 in Docket Nos. 880069-TL and 860984-TP, and in Docket No. 960916-TP, the
18 BellSouth Arbitration proceeding.

19 Recently I submitted testimony on substantially similar issues on behalf
20 of another petitioner in a Florida arbitration proceeding involving GTE.
21 (Petition of ACSI, Docket No. 961169-TP.)

1 **Q. HAVE YOU TESTIFIED ON ISSUES RELATED TO LOCAL**
2 **COMPETITION?**

3 **A. Yes. I have testified on local competition issues in Alabama, Arizona,**
4 **California, Georgia, Louisiana, New Mexico, Tennessee, Kentucky, Texas,**
5 **Pennsylvania, Delaware, West Virginia and Florida. Directly or indirectly, all**
6 **of these testimonies involved the issue of appropriate pricing for unbundled**
7 **telecommunications network elements.**

8 A copy of my resume is attached as Exhibit 1.

9 **II. PURPOSE AND SUMMARY OF TESTIMONY**

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

11 **A. I have been asked by ICG Telecom Group, Inc. (ICG) to address the economic**
12 **and ratemaking principles that underlie the pricing of unbundled network**
13 **elements and wholesale rates for retail service. Specifically, I have been asked**
14 **to address the appropriate methodology for pricing unbundled local elements,**
15 **one that is consistent with the Telecommunications Act of 1996 (1996 Act or**
16 **Act) and with the promotion of meaningful and effective competition in the**
17 **market for local exchange services. ICG has also asked me to address the**
18 **principles underlying the development of reciprocal compensation for mutual**
19 **traffic exchange, and the establishment of appropriate non-recurring charges for**
20 **telephone number portability.**

21 **Q. WHAT OBJECTIVES ARE IMPORTANT IN DETERMINING THE**
22 **APPROPRIATE RATES FOR NETWORK ELEMENTS?**

1 **A.** The 1996 Act established a vehicle to allow meaningful and effective
2 competition to develop in the markets for local exchange services. Currently in
3 the telephone industry, competition does not prevail. The incumbent local
4 exchange carriers (ILECs), including GTE Florida, Inc. (GTE), still hold a
5 monopoly or near monopoly on most of their telecommunications services and
6 elements; thus, regulatory oversight is still required to ensure the competitive
7 outcome. Where competition prevails, market forces naturally drive prices
8 toward cost and the result is economic efficiency. Hence, a key objective of
9 any pricing policy is to obtain the competitive outcome.

10 Adherence to economic pricing principles is important in achieving the
11 competitive outcome. The methodology used to determine the price ILECs
12 charge for use of their facilities must send the correct price signals, encourage
13 the entry of efficient competitors, promote efficient make-buy decisions, and
14 allow consumers to benefit from an increase in competitive activity, including
15 lower retail prices and a diversity of service choices.

16 **Q. WHAT ARE YOUR RECOMMENDATIONS REGARDING THE**
17 **APPROPRIATE METHODOLOGY FOR DEVELOPING RATES FOR**
18 **UNBUNDLED ELEMENTS?**

19 **A.** Prices in a competitive market are based on forward-looking, market-oriented
20 costs. To achieve this competitive market outcome, prices for network
21 elements should be developed based on two criteria.

- The first is a measure of forward-looking, direct costs. The total service long run incremental cost (TSLRIC) method when focusing on services and the total element long run incremental cost (TELRIC) method when focusing on network elements are thus the appropriate standards for achieving the desired results.

As noted, TELRIC and TSLRIC are identical methodologies, but focus on different aspects of ILEC operations - network elements and services. The terms are used interchangeably throughout the testimony.

- The second input is a mark-up over TSLRIC/TELRIC to permit recovery of forward-looking, efficiently incurred joint and common costs. As I describe below, I propose that this mark-up not be based on the ILECs' accounting records, but rather limited to a mark-up that ILECs elect by their own activities in competitive markets.

This is the best approach for ensuring the efficient level of entry, efficient production of end user services, competitively determined end user prices and the avoidance of anticompetitive behavior by ILECs. Since the markup is limited to that which does prevail in the ILECs' more competitive markets, it is reasonable by market standards.

Under the 1996 Act, determinations by a state commission as to whether the rates for interconnection and network elements are just and reasonable are to be based on whether the rate is based on cost (determined without reference to a rate-of-return or other rate-based proceeding). (Section 252(d)(1)(A)). The

1 rate may include a reasonable profit. (Section 252(d)(1)(B)). A
2 TSLRIC/TELRIC-based rate is a cost-based rate which is determined without
3 reference to a rate-of-return or other rate-based proceeding. A mark-up over
4 direct cost limited to a level determined by competitive market forces in the
5 telecommunications industry permits a reasonable profit. Thus, the approach
6 outlined above is both economically sound and satisfies the pricing standards of
7 the Act.

8 In addition, the rates charged for network elements and bundled services
9 must be priced in a manner that prevents uncompetitive price squeezes. A
10 price squeeze occurs whenever the combined price of the unbundled
11 components and bottleneck services (such as number portability and directory
12 assistance) equals or exceeds the price of the bundled function to the end user.
13 While a price squeeze is always a matter of competitive concern, pricing of
14 bundled services and functions is not addressed in this testimony.

15 Further, this approach is consistent with sound economic policy, with
16 the requirements of the 1996 Act and with the FCC's ruling on interconnection
17 interpreting Section 252(d)(1) of the 1996 Act. (First Report and Order, in the
18 Matter of Implementation of the Local Competition Provisions in the
19 Telecommunications Act of 1996, CC Docket No. 96-98, Released August 8,
20 1996 (First Report and Order). The First Report and Order has been stayed
21 with respect to certain provisions. That notwithstanding, the approach taken by
22 the FCC is the appropriate approach to costing and pricing unbundled elements.

1 one that is consistent with the promotion of the competitive market outcome.
2 Because the TSLRIC studies are for network elements, the FCC calls them
3 Total Element Long Run Incremental Costs (TELRIC). Throughout the
4 remainder of this testimony the terms TSLRIC and TELRIC are used
5 synonymously; the only difference between the two being the object or focus of
6 the study.

7 **Q. WHAT RATES DO YOU RECOMMEND FOR UNBUNDLED**
8 **NETWORK ELEMENTS?**

9 **A.** GTE did not provide cost studies to ICG during negotiations. Therefore, the
10 GTE Florida version of TELRIC or of TSLRIC for network elements, as well
11 as the data necessary to develop a cost-based, competitive mark-up, are not
12 available to ICG. In the absence of such data, I recommend using the best cost
13 information currently available to the extent it is also consistent with the
14 approach outlined above.

15 **Q. WHAT IS THE BEST COST-BASED ALTERNATIVE AVAILABLE?**

16 **A.** The best alternative (at this time) for estimating reasonable TELRIC/TSLRIC
17 data uses the updated Hatfield Model. (Hatfield Model, Version 2.2, Release 2,
18 by Hatfield Associates, Inc., attached to an ex parte filed by AT&T Corp. on
19 September 10, 1996, in CC Docket No. 96-45.) Hatfield version 3.1 recently
20 became available. I am in the process of evaluating that version of the Hatfield
21 model.) This model produces TELRIC data by density zone (six density zones)
22 for each state. The model is forward looking and takes into consideration

1 population demographics, geology, network architecture and technology. The
2 cost estimates relating to loops for Florida, both statewide and by density zone,
3 are provided in Exhibit 2 to my testimony. Estimates for other elements will
4 be provided in a supplemental exhibit to my testimony. The loop rates and
5 other element rates will be based on Hatfield 3.1 in that supplement. In the
6 absence of GTE sponsored TELRIC studies completed within two months, I
7 recommend setting interim rates based on the TELRIC estimates developed in
8 the Hatfield Model. Further, the Commission should order GTE to provide the
9 information necessary to estimate the mark-up on GTE's more competitive
10 services and to provide GTE cost studies or other data which the Commission
11 determines to be necessary to evaluate and verify TELRIC estimates. The
12 interim rates should remain in effect until GTE's TELRIC-cost-based rates are
13 effective, which should occur no later than six months from now.

14 **Q. HOW IS THE REMAINDER OF YOUR TESTIMONY STRUCTURED?**

15 **A.** Section III addresses economic efficiency goals and explains the role of pricing
16 in achieving those goals. Section IV focuses on a cost based pricing
17 methodology for achieving a competitive outcome and the efficiency goals
18 referenced in Section III. In Section IV, I discuss a cost-based pricing
19 methodology for achieving the competitive outcome and explain why a
20 TELRIC methodology best satisfies the criteria for efficient pricing. I also
21 discuss the FCC's First Report and Order, which implements Sections 251 and
22 252 of the Telecommunications Act of 1996 (Act). My discussion focuses on

1 various parts of the First Report and Order that pertain to network element
2 costs and prices.

3 In Sections V, VI, VII and VIII, I discuss specific pricing issues. I
4 discuss the setting of non-recurring charges in Section V and appropriate
5 compensation mechanisms for transport and termination cost recovery in
6 Section VI. Section VII compares the theoretical pricing methodology
7 discussed in Section IV with the proxy cost model developed by Hatfield
8 Associates, Inc. to estimate TELRIC for network elements. Section VIII
9 discusses the FCC requirement that rates for interim number portability be
10 competitively neutral.

11 **III. EFFICIENCY GOALS**

12 **Q. WHAT OBJECTIVES ARE IMPORTANT IN DETERMINING THE** 13 **APPROPRIATE PRICES FOR NETWORK ELEMENTS?**

14 **A.** A key objective of the 1996 Act is a structure that allows the entry of both
15 facilities-based and resale carriers into the local service market to promote
16 effective competition. The pricing of unbundled network elements is one of the
17 critical components of any open market policy, as reflected in new Sections
18 251(c)(3) and 252(d)(1) of the Communications Act of 1934 adopted by the
19 1996 Act.

20 With this in mind, the goal should be to structure a competitive
21 outcome. A competitive outcome requires efficiency in production and pricing.
22 Efficient pricing, in turn, requires that price reflect the cost of the good or

1 service in question which means that rational choices by producers and
2 consumers are encouraged. Production, entry and consumption decisions are
3 each influenced by pricing, or at least potentially so. Only when prices reflect
4 costs will the market yield the competitively determined quantity or
5 combination of those goods and services valued by society at the minimum
6 resource cost to society. Adherence to economic costing principles is important
7 in achieving the competitive outcome and requires the use of reasonable,
8 accurate measures of cost.

9 **Q. WHAT EFFICIENCY RESULTS CAN BE ANTICIPATED FROM A**
10 **PRICING POLICY CONSISTENT WITH COMPETITIVELY**
11 **FUNCTIONING MARKETS?**

12 **A.** In a market structured so that no one firm can dictate price or quantity, the
13 market yields important efficiencies. Relevant aspects of these efficiencies are
14 referred to as operational efficiency and allocative efficiency.

15 Operational efficiencies result when the lowest cost method of
16 production is selected. Competition acts to ensure this result, as entry and exit
17 occur freely. New entrants are not required to use the same technology as does
18 the incumbent, but are free to select among all available technologies and adopt
19 lower cost methods of production. As market price is often forced downward
20 with an increase in supply and, in particular, with an increase in lower cost
21 supply, incumbents are forced to become more efficient, lose market share or
22 cease production altogether.

1 Allocative efficiencies result when resources are channeled into the
2 production of those goods and services that are valued more highly than are the
3 resources consumed in the production process. As long as market price covers
4 the additional cost of production, the unit will be produced in a competitive
5 market. Since resources are limited, it is in society's interest that resources are
6 used in a manner that maximizes the value of the goods and services produced
7 from those resources. A competitive market allocates resources efficiently, i.e.,
8 to the goods and services valued most highly.

9 **Q. WILL THE EFFICIENCIES JUST DESCRIBED INURE TO THE**
10 **BENEFIT OF CONSUMERS?**

11 **A.** There is no question that meaningful competition will create benefits for
12 consumers. What is less clear, unfortunately, is when or even whether the
13 successful emergence of competition can be expected in the various markets for
14 local services. There are generally two factors to consider.

15 First, it must be recognized that natural monopoly properties which
16 allow the ILECs' to retain control over some network elements may delay
17 competitive entry in certain local markets. The Commission should establish
18 rates to allow the benefits of a competitive outcome to be realized by
19 consumers well before full facilities-based competition emerges for all elements
20 and in all areas of the local service market. Otherwise, the benefits of
21 competition could be delayed indefinitely given the tremendous practical and

1 economic obstacles involved in replicating more than a negligible portion of the
2 incumbent LEC's network.

3 Second, the Commission's pricing rules must guard against
4 anticompetitive pricing behavior by the ILEC. This is assured if a competitive
5 norm or competitive outcome serves as the basis for pricing all non-competitive
6 network elements. For instance, if the competitive outcome is emulated, the
7 relationship between price and cost will be the same for competitive and non-
8 competitive elements alike. Further, through the application of
9 nondiscrimination obligations and imputation principles, the ILEC will "pay"
10 the same for all non-competitive network elements set by tariff or arbitration as
11 its competitors. Under these conditions, price squeezes and other forms of anti-
12 competitive conduct will be deterred.

13 In short, the pricing policy designed to promote competition must
14 recognize that competition is not likely to evolve evenly or with equal success
15 for all network elements, in all areas of the state. The policy should be
16 designed to provide the benefits of competition in the end use market to
17 consumers, even before the successful emergence of that competition. In fact,
18 the policy should be structured to create these benefits in the end use market
19 for consumers, even if competition for each network element never emerges.

20 **Q. WHY IS A TOTAL SERVICE OR TOTAL ELEMENT LONG RUN**
21 **INCREMENTAL COST METHODOLOGY BETTER SUITED THAN**

**OTHER COSTING METHODOLOGIES TO PROMOTING
COMPETITION?**

A. Prices should be set to recover incremental, forward-looking costs, not the firm's historically incurred embedded costs or revenue requirements. Pricing based on TSLRIC or TELRIC results in several market benefits. First, entrants have a continuous stream of make-buy decisions. Prices based on forward-looking cost will provide the correct signals on which to base decisions regarding facilities based investment and market entry. Second, cost-based pricing identifies the low cost supplier in any market, affecting decisions among alternative providers of a given product or service. Finally, cost-based prices permit efficient decisions in choosing among different goods.

Pricing based on embedded costs or revenue requirements cannot provide these benefits. Further, such pricing requires that the firm has -- and that it exercises -- a certain degree of market power. Market power permits the ILEC to engage in anticompetitive conduct by allocating costs to non-competitive network elements. This will provide a "cost basis" to raise the prices for those non-competitive network elements, removing the need to recover these costs from competitive network elements.

**Q. TO WHAT EXTENT IS UNBUNDLING OF NETWORK ELEMENTS
NECESSARY FOR THE EFFICIENCY GOALS TO BE MET?**

A. Without the availability of unbundled network elements, entry into the local exchange market is severely restricted and in some circumstances would be

1 impossible. It is for this reason that the Act specifically requires incumbents to
2 provide nondiscriminatory access to network elements on an unbundled basis at
3 any technically feasible point. (Section 251(c)(3)). Further, to facilitate
4 competition, network elements must be available in a manner such that new
5 entrants are not forced to take and pay for elements that are not needed by that
6 entrant in the provision of the local service, and are not denied access to key
7 elements needed to ensure quality provision on a par with the ILEC's services.
8 If new entrants are forced to buy unneeded elements in order to get others (if
9 elements are not sufficiently unbundled), they will incur unnecessary costs
10 which will deter efficient entry. Similarly, if access is denied to certain
11 elements needed to ensure equal quality service, efficient entry will be deterred.
12 The Act not only requires access to unbundled elements, it requires that
13 unbundled elements be available in a manner that allows requesting carriers to
14 choose the desired combination of those elements to provide the services they
15 choose to the extent technically feasible. (*Ibid.*)

16 **Q. DOES COMPETITION REQUIRE THE AVAILABILITY OF**
17 **UNBUNDLED LOOPS AT COST-BASED RATES?**

18 **A.** Yes. Physical replication of the loop by facilities-based carriers could not
19 occur in the relatively near future; such massive investment would take time, if
20 it occurs at all. Currently, GTE has a virtual monopoly on loop elements,
21 which, in turn, are necessary for facilities-based competition to occur. Without
22 access to the unbundled loop, and specifically without access at economically

1 feasible rates, entry will not occur and the objective of promoting efficient
2 facilities-based entry will not be met. Such entry barriers are inefficient from
3 an economic perspective and clearly inconsistent with the 1996 Act.

4 **IV. APPROPRIATE METHODOLOGY**
5 **FOR PRICING UNBUNDLED ELEMENTS**

6 **A. TELRIC/TSLRIC Costing Methods**

7 **Q. WHAT IS THE APPROPRIATE METHODOLOGY FOR ACHIEVING**
8 **THE EFFICIENCY GOALS DESCRIBED IN SECTION III OF YOUR**
9 **TESTIMONY?**

10 **A.** Rates based on a TSLRIC/TELRIC methodology give the signals consistent
11 with a competitive outcome to carriers and consumers, ensure efficient entry
12 into the market, and promote efficient utilization of the telecommunications
13 network. As pointed out in Section III, in a competitive market, prices are
14 driven toward market-oriented, incremental costs over the long term. Thus, the
15 rates for unbundled network elements should be based on a long run
16 incremental cost methodology. TELRIC is just such a cost methodology.

17 **Q. WHAT IS THE DIFFERENCE BETWEEN TSLRIC AND TELRIC?**

18 **A.** TSLRIC and TELRIC draw on identical costing principles. The only
19 difference between them is that TSLRIC is the term used when applying these
20 principles to services. The FCC coined the term TELRIC to describe the
21 application of these same principles to identifying costs of network elements.
22 The terms can be used interchangeably. Stated differently, a TELRIC is the

1 TSLRIC for a network element. A TSLRIC is the TELRIC for an end-use
2 service.

3 Both TSLRIC and TELRIC are forward-looking costing methodologies
4 attempting to identify the long-run incremental cost of an operation, where that
5 cost estimate is based upon utilization of a least cost technology. The primary
6 difference between the methods is the focus or cost object. A TSLRIC focuses
7 on the impact of introducing or discontinuing a service, whereas the TELRIC
8 focuses on the impact of introducing or discontinuing the provision of a
9 network element.

10 There are differences in the cost estimates that result from focusing on
11 elements rather than services. For instance, there are costs or expenses that
12 would be incurred when providing services to end use customers that will be
13 avoided when providing network elements. These end use related or "retail"
14 related costs should be included in a TSLRIC, but excluded from a TELRIC.
15 Similarly, there may be costs or expenses that are common to several services
16 which share a network facility, but are, nevertheless, directly attributable to the
17 network facility itself. These are costs that are shared or common in the
18 context of a TSLRIC, but are directly attributable in the context of TELRIC.

19 At the same time, I would caution that the term TSLRIC and the term
20 TELRIC can be used interchangeably with no loss in accuracy. The difference
21 that results from undertaking a study that focuses on *services vs. elements* is the
22 cost characteristics of the underlying object, not the approach used. Hence, as

1 a description of a methodological approach, the terms can be used
2 interchangeably.

3 **Q. WHAT ARE THE MAJOR DIFFERENCES BETWEEN TSLRIC AND**
4 **TELRIC, AS THOSE STUDIES ARE NORMALLY UNDERTAKEN?**

5 **A.** As described earlier, the major differences between these cost approaches are
6 that there are costs incurred in the provision of services which are not incurred
7 in the provision of unbundled elements. Similarly, there are costs that are
8 common (and not directly attributable) among services when they share a
9 network element, whereas these costs may be directly attributable to the
10 network element itself.

11 **Q. WHY IS TELRIC THE PROPER MEASURE OF THE COST OF**
12 **NETWORK ELEMENTS?**

13 **A.** Using TELRIC will result in prices for network elements reflecting forward-
14 looking, efficiently incurred costs. It is appropriate that prices be based on
15 forward looking costing methodologies. Efficient decisions regarding market
16 entry, exit and expansion are based on forward-looking comparisons of
17 expected revenues and expected costs. For correct price signals to promote
18 efficient market activity, forward-looking costs should be used.

19 The appropriate cost study is *long run in nature*, i.e., it is based on a
20 time horizon long enough to allow entry or exit to occur and/or for substantial
21 changes in capacity or technology to occur. All costs affected by any of these
22 decisions (entry, exit, capacity expansion or technology adoption) are variable.

1 A properly structured incremental cost study should therefore include forward-
2 looking capital costs, and the preponderance of all expenses should be viewed
3 as variable, i.e., joint and common costs should amount to a relatively small
4 fraction of total costs.

5 The relevant increment of demand to estimate network element costs is
6 the total demand by all users, including the incumbent. Hence, the "total
7 service" (or total element) designation. ILECs realize economies of scale.
8 Focusing on any volume of output smaller than the total volume realized may
9 result in higher per unit costs than are actually realized.

10 Further, a larger increment is considered in a "total service (or
11 element)" cost study than in a traditional LEC cost study. In the traditional
12 study (the LRIC), the increment to demand is typically a fraction of the
13 demand (e.g., a 10% or 15% increase). There may be costs or expenses that
14 are volume insensitive and not attributable when considering relatively small
15 changes in demand, but are volume sensitive when considering larger changes
16 in demand. These type of costs should be captured in a properly structured
17 TSLRIC/TELRIC study. There should be a greater allocation of joint and
18 common costs in a TSLRIC/TELRIC than in a LRIC.

19 Further, the incremental cost calculation is intended to capture the added
20 cost from producing or the cost avoided from discontinuing the service,
21 assuming all other ILEC outputs remain unchanged. The incremental cost of a
22 port is calculated assuming no change in the volume of loops and the

1 incremental cost of loops is calculated assuming no change in the volume of
2 ports. Since all else is held constant, the calculations focus exclusively on the
3 cost of the unbundled network element.

4 **Q. MANY OF THE PRICING PROVISIONS OF THE FCC ORDER HAVE**
5 **BEEN STAYED. THAT FACT NOTWITHSTANDING, PLEASE**
6 **SUMMARIZE THE FCC'S RULING REGARDING THE COSTING**
7 **METHODOLOGY FOR PRICING UNBUNDLED LOOPS?**

8 **A. The FCC adopted specific requirements in its First Report and Order governing**
9 **the methodology to be used in developing cost-based rates for interconnection**
10 **and unbundled elements (including unbundled loops) which are consistent with**
11 **the economic principles I outlined above. The FCC's general pricing standard**
12 **requires that rates be established equal to what it termed the forward-looking**
13 **economic cost of an element. This forward-looking economic cost of an**
14 **element is defined by the FCC as the sum of the total element long-run**
15 **incremental cost of the element (TELRIC), and a reasonable allocation of**
16 **forward-looking joint and common costs. (First Report and Order, Appendix**
17 **B-Final Rules, § 51.505(d).)**

18 Adhering to its requirement of cost-based rates, the FCC also required
19 states to establish different rates for unbundled loop elements in at least three
20 geographic areas within the state to reflect geographic cost differences. (Id.
21 § 51.507(f).) In the event that state commissions do not have cost information
22 available which meets the forward-looking economic cost criteria, the FCC

1 produced a statewide average ceiling proxy at or below which unbundled loops
2 can be priced on an interim basis.

3 **Q. IN SECTION III, YOU INDICATED THAT EMBEDDED OR**
4 **HISTORICAL COSTS DO NOT SEND THE CORRECT PRICE**
5 **SIGNALS AND DO NOT LEAD TO ECONOMIC EFFICIENCY. WAS**
6 **THE FCC'S RULING CONSISTENT WITH THIS POSITION?**

7 **A.** Yes. In terms of establishing requirements, the FCC specifically excluded
8 embedded costs from any calculation of forward-looking economic costs. (First
9 Report and Order, Appendix B-Final Rules § 51.505.) The FCC recognized the
10 importance of including forward-looking incremental costs only.

11 **Q. SHOULD OPPORTUNITY COSTS BE A FACTOR IN PRICING**
12 **UNBUNDLED ELEMENTS?**

13 **A.** Not as that term has been used by ILECs in the context of rates for
14 interconnection services. Opportunity costs, as that term has been used, is not
15 captured in a TSLRIC/TELRIC nor in the joint and common cost. Hence, it
16 should not be considered in pricing unbundled elements.

17 **Q. PLEASE EXPLAIN WHY OPPORTUNITY COSTS ARE NOT PART OF**
18 **A TELRIC OR TSLRIC.**

19 **A.** Incremental costs, be that a LRIC, TSLRIC or TELRIC, attempt to identify the
20 (dollar) volume of society's economic resources that are used in the provision
21 of one product or service (or a group thereof) and, therefore, not available for
22 use elsewhere. Opportunity cost, as used by the ILECs, has nothing to do with

resources incurred. Instead, it measures the operating margin or profit that the ILEC has at risk as a result of some particular activity. More specifically, opportunity cost is simply the LECs' revenues less incremental costs, given the existing retail prices of services.

Q. WHAT CONSIDERATION SHOULD BE GIVEN TO THIS INTERPRETATION OF OPPORTUNITY COSTS?

A. None. Opportunity cost can never be appropriately considered in establishing forward-looking, efficient rates for unbundled elements. Using opportunity cost as a factor or add-on to direct costs is an improper method for setting prices because it does not yield the efficient or pro-competitive price signals. The use of opportunity costs is simply a means, proposed by some LECs, of guaranteeing a certain level of revenue (GTE has proposed this as a pricing principle in several state jurisdictions during arbitration proceedings.) -- known as the Efficient Component Pricing Rule (ECPR or ECP). This approach was rejected by the FCC because it yields input prices which are not cost-based and, therefore, does not foster competition. (First Report and Order, ¶708-710.)

ECPR has also been rejected by this Commission in Order No. PSC-96-0811-FOF-TP (MFS Arbitration).

Upon consideration, we do not believe that ECP produces a desirable result. A competitive market does not thrive on indifference. If a LEC is rendered indifferent by virtue of the pricing of its services as to whether it serves the customer or not, the reason for establishing

1 competition is eliminated. There is no
2 longer any incentive for the LEC to seek to
3 attract customers, and the market is no
4 longer driven by competition. If
5 competitive providers do not have to
6 compete, the consumer will not be served
7 well. Therefore, we do not agree with
8 GTE FL that ECP is an appropriate
9 approach to determining price. (Order No.
10 PSC-96-0811-FOF-TP, page 17. (Docket
11 No. 950984-TP).
12

13 In Docket Nos. 960847-TP and 960980-TP (AT&T/MCI Arbitration).

14 Staff also rejected GTE's proposed rates based on ECPR. Staff stated that the
15 rates should "foster competition as opposed to guaranteeing monopoly
16 revenue." (Docket Nos. 960847-TP and 960980-TP Memorandum, November
17 22, 1996, p. 149.)

18 The Commission should continue to reject any pricing approach based
19 on a consideration of contribution (i.e., any variation of the ECPR method).

20 **Q. SHOULD RETAIL COSTS BE INCLUDED IN THE MEASUREMENT**
21 **OF THE TELRIC OF UNBUNDLED NETWORK ELEMENTS?**

22 **A.** No. In providing a service to end use customers, certain 'retail' or 'end-use'
23 costs will be incurred and are properly included in the TELRIC (where that
24 methodology is used to estimate the cost of a service, as opposed to the cost of
25 an element). (The FCC identified a series of administrative expenses as retail
26 related. These include product management, product advertising and customer
27 services. Costs for support facilities associated with each of these functions,
28 and the depreciation, return and taxes pertaining to those facilities should also

1 be avoided.) These costs include, but are not necessarily limited to, marketing.
2 billing and customer service. These are the costs that are not incurred (i.e., that
3 are avoided or avoidable) where the provision is to another telecommunications
4 provider, instead of to a retail customer. This is one of the two main cost
5 differences discussed in my section on the difference between TSLRIC and
6 TELRIC. The other difference was the inclusion of joint and common costs
7 which can be reasonably attributed to a facility or element.

8 **Q. WHAT DO THE RETAIL RELATED COSTS ENCOMPASS?**

9 **A.** There are two sets of retail related costs that are avoided when providing
10 network elements rather than end user services. One is the same set of costs
11 that are avoided when service is provided on a resale basis. Obviously, the
12 facilities based entrant will have to provide the same set of functions as will a
13 reseller. These are sales, product management, billing and other overhead
14 activities that the ILEC will avoid whenever it functions as a wholesaler,
15 whether to a reseller or to a facilities based carrier.

16 When the ILEC functions as a wholesaler of unbundled elements to
17 facilities based carriers, it will avoid additional costs. It is ICG's position that
18 since many of the engineering and network management activities will be
19 transferred to the CLEC, they will be avoided by the ILEC. This constitutes a
20 second set of avoided costs.

Hence, the avoided cost "discount" applicable to unbundled network elements will necessarily be greater than that applicable to resellers of wholesale services.

B. Setting Cost-Based Prices

Q. PLEASE EXPLAIN THE ECONOMIC CIRCUMSTANCES WHICH GOVERN THE NEED FOR A MARK-UP OVER DIRECT COSTS.

A. In economic terms, when a firm is characterized by economies of scale or scope, its cost structure is such that incremental costs will generally be less than average costs. Thus, even in a highly competitive market, the price charged by firms with this cost structure will exceed the marginal or incremental costs, if the firm is to recover its costs in total, i.e., if the firm is to remain in business. It is generally accepted that the telephone industry is characterized by scale and scope economies. This will lead to various costs being joint and common. Therefore, the total costs of the firm operating in this industry will exceed the direct costs, and the rates charged must generally exceed the sum of the direct costs. This is true whether the services or network elements in question are provided in markets that are competitive or that are monopolistic.

Q. HOW DO YOU PROPOSE THAT THE RELEVANT MARK-UP FOR NETWORK ELEMENTS BE ESTABLISHED?

A. A mark-up over direct costs is appropriate to recover forward-looking joint and common costs. Since a competitive environment would limit the mark-up to a

1 level needed to fully recover only efficiently incurred, forward-looking joint
2 and common costs, it would be reasonable that the mark-up be limited to (1) an
3 amount no greater than the ratio of efficiently incurred joint and common costs
4 to direct costs, or (2) that realized on GTE's competitive services, whichever is
5 lower. To do otherwise will allow the ILEC to recover monopoly rents by
6 overpricing these essential, monopoly network elements.

7 A primary issue with regard to the provision of network elements is the
8 "make-buy" decision. Many of the potential entrants have the option of either
9 functioning as a reseller (buying unbundled components from the LECs) or,
10 alternatively, becoming a facilities-based provider (using their own network).
11 Setting the mark-up at other than what would be expected to exist in a
12 competitive market could well result in incorrect price signals and inefficient
13 investment. Because the goal, however, is to promote efficient entry through
14 proper pricing policy, restricting that mark-up to the competitive market norm,
15 appears to be an appropriate economic and regulatory policy.

16 **Q. WHY IS A LIMIT TO THE MARK-UP APPLIED TO NETWORK**
17 **ELEMENTS APPROPRIATE?**

18 **A.** There are at least four reasons why a limit to the mark-up should be applied.

19 First, by applying the competitive mark-up to all elements, non-
20 competitive elements are treated as if they were competitive. This allows the
21 benefits of competition to be realized even before actual competition emerges.

1 This also keeps the ILEC from using revenues from non-competitive elements
2 to finance strategic pricing responses in competitive markets.

3 Second, this produces non-discriminatory rates, consistent with the
4 requirements of the 1996 Act. Sections 251 and 252 require that rates for
5 interconnection and network elements be cost-based and non-discriminatory.
6 Discrimination results whenever price differentials are not cost-based, that is,
7 whenever mark-ups differ.

8 Third, by not limiting the mark-up, the ILEC is able to recover a large,
9 if not virtually unlimited, volume of shared and common costs in prices
10 charged for monopoly elements. As such, it has no incentive to accurately
11 classify costs as direct as opposed to shared or common in TSLRIC/TELRIC
12 studies. Misclassifying costs as shared or common will reduce price floors and
13 maximize pricing flexibility, improving the ILEC's position in competitive
14 markets without any change in the level of costs incurred. On the other hand,
15 if the extent to which monopoly service elements can bear a mark-up is limited,
16 there is less opportunity to recover these costs through pricing of monopoly
17 services and there is less incentive to misassign these costs as shared or
18 common. To be sure, the ILEC can still misassign costs and can still reduce
19 prices selectively. However, the ability to recover the costs misassigned is
20 substantially limited and, therefore, the incentive to do so is reduced. The
21 result is a general incentive to increase the proportion of costs subject to direct
22 attribution. Further, putting shared and common costs at risk by limiting the

1 mark-up will also provide the ILEC with greater operational incentives to
2 minimize these shared and common costs.

3 Finally, this will limit the prices that ILEC can charge competitors. The
4 ILEC has a clear incentive to charge competitors high prices. High prices
5 provide a financial advantage to ILECs by increasing their margins relative to
6 their competitors. Limiting the mark-up to the competitive norm establishes a
7 reasonable mark-up, while minimizing overcharging.

8 **Q. WHAT CRITERIA HAS THE FCC ESTABLISHED FOR**
9 **DETERMINING THAT MARK-UP?**

10 **A.** The FCC set two general criteria for the mark-up over TELRIC. First, it
11 required a mark-up to allow for the recovery of forward-looking joint and
12 common costs. At the same time, the FCC required that the mark-up be
13 consistent with the behavior in competitive markets (Id. ¶ 679.) and be limited
14 to a "reasonable allocation" of "forward-looking" costs. (Id. ¶ 682.) Forward-
15 looking common costs are defined as economic costs efficiently incurred in
16 providing a group of elements or services (which may include all elements or
17 services offered by the LEC) that cannot be attributed directly to an individual
18 element or service. (Id., Appendix B-Final Rules, § 51.505(c).) In determining
19 what is a "reasonable" allocation the FCC imposes two criteria on the allocation
20 of common costs. (Id. ¶ 698.)

- 1 (1) The sum of TELRIC plus the "reasonable" allocation of common
2 cost cannot exceed the stand-alone cost of producing the element.
3 and
4 (2) The sum of the allocations for all elements and service excluding
5 retail costs) should not exceed the total forward-looking common
6 costs attributable to operating the incumbent LEC's total network.

7 One reasonable allocation method mentioned in the First Report and Order
8 is to allocate common costs using a fixed allocator, such as a certain percentage
9 mark-up over the directly attributable forward-looking costs. Another
10 reasonable allocation method proposed by the FCC would be to allocate only a
11 relatively small share of common costs to certain critical network elements,
12 such as the local loop and collocation, since these are facilities that are the
13 most difficult for competitors to duplicate, (*Id.* § 696). The FCC refers to
14 facilities such as the loop as bottleneck facilities in this paragraph.) *i.e.*, those
15 facing the greatest barriers to entry. An allocation of common costs on that
16 basis ensures that the price of network elements that are subject to the least
17 competition are not "artificially inflated by a large allocation of common costs."
18 (*Id.*)

19 **Q. IS YOUR PROPOSAL FOR A MARK-UP IN THE PRICING OF**
20 **UNBUNDLED LOOPS CONSISTENT WITH THE FIRST REPORT AND**
21 **ORDER?**

1 A. Yes. A competitive based mark-up provides a market surrogate for the extent
2 to which joint and common cost can be recovered through prices of
3 competitively provided services and elements. For the same reasons as
4 explained in my testimony, the FCC required a mark-up over costs, TELRIC in
5 this instance. Second, the FCC limited the mark-up to a "reasonable level."
6 The mark-up proposed in my testimony, which would be limited to the mark-
7 up accepted by the ILEC on its most competitive services, is consistent with the
8 FCC mandated limits. A mark-up limit defined as the voluntarily accepted
9 return on a competitive service is consistent with the criteria which limits the
10 allocation of common costs to that which could be earned on a stand alone
11 basis and because it is competitively determined, it restricts the total or "sum of
12 the allocation" for all elements to the total of forward-looking common costs
13 less retail costs.

14 **Q. IS YOUR PROPOSED APPROACH TO PRICING NETWORK**
15 **ELEMENTS CONSISTENT WITH THE 1996 ACT?**

16 A. Yes. Section 251(c)(3) requires that incumbent IECs provide "non-
17 discriminatory access to network elements on an unbundled basis . . . on rates,
18 terms and conditions that are just, reasonable and non-discriminatory." Section
19 252(d)(1)(B) provides that determinations by a state commission are just and
20 reasonable if those rates are:

- 21 (i) based on the cost (determined without reference to a rate-of-
22 return or other rate-based proceeding) of providing the
23 interconnection or network element (whichever is applicable);
24

1 (ii) nondiscriminatory; and

2 (iii) may include a reasonable profit.

3 **Q. HOW WOULD THE MARK-UP ON COMPETITIVE SERVICES BE**
4 **DETERMINED OR MEASURED?**

5 **A.** The purpose of the mark-up is to capture the competitive outcome in the
6 pricing of network elements. By mark-up, I mean the difference between the
7 rate charged for an element (or service) and the TSLRIC/TELRIC of the
8 element (or service). The determination of a mark-up should be based on
9 comparable, competitive transactions and it must recognize that the tariff rate is
10 not always the relevant figure to use.

11 GTE's services are subject to various degrees of market competition. The
12 intent here is to identify the mark-up consistent with an actively competitive
13 market. Consequently, the focus should be on those elements or services
14 provided by GTE that are subject to more competition, rather than an average
15 of all services provided. Services subject to a greater degree of competition
16 (than basic local exchange or even MTS services) include, for example,
17 Centrex, and 800 service.

18 Further, it must be recognized that rates established historically have been
19 designed to allow GTE to fully recover its revenue requirement. Rates for
20 many of the services that are less elastic have been set at levels necessary to
21 accomplish this recovery. If competition successfully emerges in these markets,
22 rates for many of these services are likely to fall. Consequently, in the interest

1 of capturing a competitively inspired mark-up, it is inappropriate to take the
2 average of all services, but instead the focus should be on competitive market
3 operations and the market pricing of GTE's more competitive activities, i.e., on
4 the revenues realized under specific market-type contracts negotiated by GTE.

5 **Q. YOU INDICATED THAT TARIFFS MAY NOT ALWAYS BE THE**
6 **RELEVANT SOURCE OF PRICING INFORMATION. WHY IS THAT?**

7 **A.** The ILECs typically have had contracting capability for some time now. This
8 allows an ILEC to price off-tariff in especially competitive market conditions.
9 With this, rates covered by competitive contracts can be at discounts off of the
10 tariffed rate.

11 **Q. IS THERE ANY EVIDENCE ON THE EXTENT OF THE MARK-UP**
12 **NECESSARY TO RECOVER EFFICIENTLY INCURRED JOINT AND**
13 **COMMON COSTS?**

14 **A.** While none has been presented by GTE in this jurisdiction in the context of
15 negotiations, data on GTE operations in other jurisdictions and on RBOC
16 operations point to a mark-up in the 10-15 percent range.

17 **Q. WHAT ARE THESE DATA?**

18 **A.** The available data include research undertaken by our firm, as well as
19 commission orders. First, I have performed an analysis of the more
20 competitive service contracts entered into by GTE and Pacific Bell in
21 California. This analysis focused primarily (though not exclusively) on the
22 competitive Centrex offerings points to mark-ups over TSLRIC of up to 15

1 percent. GTE California and Pacific Bell have flexible pricing authority which
2 permits them to negotiate contracts for a number of services on an individual
3 customer basis. Both companies have to file contracts and cost support with
4 the California PUC. Cost information can be based on company-wide costs or
5 customer specific costs, at the LEC's choosing. The vast majority of the
6 contracts were for Centrex services, though other services were often also
7 included in the contract. While there were a range of mark-ups found, the
8 median mark-up for Pacific Bell was below 15 percent. That is, over half the
9 contracts had a mark-up of less than 15 percent. The mark-ups obtained by
10 GTE were generally lower than those obtained by Pacific. (R.93-04-003, 1.93-
11 04-002, Rebuttal Testimony of Dr. Marvin H. Kahn (Revised), July 25, 1996,
12 Tables III and IV.)

13 I also reviewed competitive service contract pricing by BellSouth in
14 Alabama. That review indicated a range of mark-ups over cost also averaging
15 less than 15 percent. (Alabama, Docket No. 25625.) The examination focused
16 on the Company's ESSX operations, including the provision of ESSX add-on
17 services, such as ISDN, as well as various private line, digital and other
18 dedicated services. BellSouth files contract data and cost data with the
19 Alabama PSC. The conclusion of that analysis was similar to that found in
20 California, the mark-up selected by the LEC for its competitive operations is
21 approximately 15 percent.

1 There are other data available regarding the pricing and contracting actions
2 of other LECs. GTE Southwest has contracting and flexible pricing authority
3 in Texas. Data provided by GTE in Docket No. 16473 before the Texas PUC
4 indicate that it seeks a mark-up over costs consistent with this 15 percent. The
5 California Public Utilities Commission arbitrators have recommended interim
6 rates in the GTE-AT&T case in that jurisdiction based on TSLRIC plus a 16
7 percent mark-up for shared and common costs. (TR Daily
8 (Telecommunications Reports, Inc.) November 5, 1996, p. 3.) Mark-ups within
9 this same approximate range have been identified by Bell
10 Atlantic-Pennsylvania, as well. (Opinion and Order, short form, Application of
11 MFS Intelenet of Pennsylvania, Inc., Docket No. A-310203F002, et al., page
12 13. Bell Atlantic-Pennsylvania, Inc.'s Reply to MCI Metro Arbitration Petition,
13 Exhibit A; Docket No. A-310236 F0002.)

14 **Q. WHAT CONCLUSIONS DO YOU DRAW FROM THESE DATA?**

15 **A. In short, there is ample data supporting the use of 15 percent as an estimate of**
16 **joint and common costs recovered by LECs in competitive circumstances. This**
17 **evidence also suggests that 15 percent is a reasonable estimate of the efficiently**
18 **incurred, forward-looking joint and common costs, as that is what a**
19 **competitive market will allow to be recovered.**

20 As I noted, competitive markets allow the recovery of joint and
21 common costs. These markets restrict that recovery to joint and common costs
22 that are forward-looking and efficiently incurred. A competitive market

1 surrogate provides a reasonable indication of the extent to which prices can be
2 set above direct cost to allow the recovery of joint and common costs in a
3 manner and to a degree consistent with a competitive market outcome. The
4 data available suggest that 15 percent is a reasonable estimate of that mark-up
5 for local exchange telephone company operations.

6 **Q. COULD THE PSC RELY ON GTE'S COMMON COSTS PER BOOKS**
7 **FOR THE MEASURE OF THIS MARK-UP?**

8 **A.** Only with extreme caution. Note that the intent of the markup is to permit the
9 incumbent LEC an opportunity to recover forward-looking, economically
10 efficient joint and common costs. These are not necessarily the same as the
11 incumbent LEC's booked expenses, or stated differently its embedded level of
12 such expenses. This is the same position as expressed by the FCC (First
13 Report and Order, ¶ 705):

14 Rather, we reiterate that the prices for the interconnection
15 and network elements critical to the development of a
16 competitive local exchange should be based on the
17 procompetition, forward-looking, economic costs of those
18 elements, which may be higher or lower than historical
19 costs.

20
21 When using book costs, the determination of economically relevant, forward-
22 looking expenses would require the consideration of elements such as the
23 following:

- 24 (1) The incumbent LEC clearly takes the position that virtually all
25 aspects of its operations on a forward-looking basis will differ and
26 differ materially from its recent operations, even from its current

1 operations, i.e., those in 1995 or 1996. Among other things, the
2 incumbent LEC has even greater pressures to become "lean and
3 mean" than it had before. Hence, to blindly rely on historical data
4 on operations and cost levels as the basis for any forward-looking
5 estimate is not only incorrect, but in this case a guarantee of inflated
6 rates for monopoly services.

7 (2) When attempting to project a level of expenses, it is appropriate to
8 adjust current levels of efficiently incurred expenses for anticipated
9 future events. Rates of inflation may act as a reasonable surrogate
10 for increases in labor expenses, which are the primary factor
11 affecting these common costs. On the other hand, the experience
12 with the telephone industry in general, and the ILECs in particular,
13 indicates that the cost of producing any good or service tomorrow
14 will be less than what it is today. This is not because labor costs are
15 going down, but rather because productivity improvements are
16 outpacing any increase in expenses incurred. All available evidence,
17 including that prepared by ILECs, points to a continuation in this
18 trend.

19 (3) The costs must be adjusted to reflect the portion allocated to retail
20 operations.

1 **Q. DOESN'T ALLOWING A MARK-UP ON ESSENTIAL MONOPOLY**
2 **ELEMENTS PROVIDE GTE AN ADVANTAGE OVER ANY ENTRANT**
3 **THAT MUST TAKE SERVICE FROM GTE TO COMPETE?**

4 **A. In part, it may. The mark-up provides GTE cash flow from any profit that**
5 **may be realized. On the other hand, it is for reasons such as this that I am**
6 **suggesting that the mark-up be restricted to no more than a competitively**
7 **determined level. In this manner whatever profit realized is no more than what**
8 **could be expected from a competitive activity.**

9 These conditions clearly proscribe the use of the embedded or fully-
10 allocated cost methodology of traditional regulation, which is based on the
11 historical and actual costs incurred, in setting cost-based rates for network
12 elements. A long-run incremental cost methodology does not rely on historical,
13 embedded costs and is, therefore, consistent with the 1996 Act. In addition,
14 rates based on a competitive mark-up are nondiscriminatory; reassured by
15 Section 252(i) of the Act which requires an ILEC to make available any
16 interconnection, service or network element provided under any agreement
17 approved by a state commission on the same terms and conditions. With my
18 proposal, competitive and non-competitive elements are each priced according
19 to identical standards.

20 **Q. UNDER SECTION 252(d)(1)(B) OF THE ACT, A COST-BASED RATE**
21 **FOR NETWORK ELEMENTS MAY INCLUDE A REASONABLE**

**PROFIT. IS YOUR APPROACH CONSISTENT WITH THIS
PROVISION?**

A. Yes. The Act does not define "reasonable profit." However, few would disagree that a mark-up over direct costs equal to that which would prevail in a competitive market is reasonable. In a competitive market, the achievable mark-up over cost will be disciplined by competition in the market and held to a reasonable level. Attempts to maintain excessive mark-ups over price will invite entry into a competitive market, driving prices down and reducing mark-ups or profits to what economists sometimes call a normal level. Restricting the mark-up on monopoly elements to a competitive level ensures that the element will earn only a normal profit and that the mark-up will not exceed a reasonable level.

C. Cost-Based Geographic Deaveraging of Rates

**Q. WHY IS GEOGRAPHIC DE-AVERAGING OF COSTS OF
IMPORTANCE?**

A. A primary goal in establishing prices for unbundled loop elements is to achieve a competitive market outcome in the provision of these elements. In that regard, price signals to market participants should provide the correct information to guide efficient decisions with regard to market entry and exit and also with regard to facility make/buy decisions. For these decisions to be efficient, the price must accurately reflect the cost of providing such facilities.

1 Service and element cost studies and engineering analyses all point to the
2 fact that the cost of providing unbundled loop elements will vary across the
3 state. For efficient price signals to result to carriers utilizing the elements to
4 provide services, the cost calculation should reflect these differences. Hence,
5 loop costs must be geographically de-averaged. To be economically relevant,
6 the zones selected for the de-averaged areas must be consistent with the cost
7 differences.

8 **Q. ON WHAT BASIS DOES ICG PROPOSE DE-AVERAGING?**

9 **A. ICG proposes that either three or six density zones be established based upon**
10 lines per square mile. This is the method used in the Hatfield Model. The
11 boundaries of each area for establishing the density within the Hatfield Model
12 are defined by Census Block Groups, but alternative groupings are possible.
13 The density of lines in a given area bears a strong correlation to the cost of
14 installing and providing local loops in an area. Accordingly, this method meets
15 the criteria of the defining zones based on cost differences. (For purposes of
16 determining whether de-averaged rates for unbundled loop elements comply
17 with the proxy cost ceiling those actual, geographically de-averaged rates must
18 be less than or equal to the FCC proxy when combined on a weighted-average
19 basis, depending on the record before them.)

20 **Q. IS THE GROUPING OF LOOPS BY LOCAL EXCHANGE A**
21 **REASONABLE METHOD OF PROVIDING DISAGGREGATED COSTS?**

1 A. Not necessarily. Disaggregating loop costs by local exchange simply is a
2 method of establishing prices consistent with the Company's current marketing
3 and pricing practices. This results in marketing practices determining the
4 costing procedures, rather than costing similarities determining pricing
5 practices.

6 Further, prices established in this manner would likely be inefficient. The
7 purpose of geographic de-averaging is to group loops in a manner that
8 minimizes the variation in cost across the geographic de-averaged groups. The
9 goal is to establish geographic deaveraging in a manner that groups loops with
10 similar cost characteristics together and puts loops with different cost
11 characteristics in different categories. If this is done successfully, averaging
12 will not distort the underlying differences in costs. De-averaging structured on
13 any basis designed to meet the Company's marketing and pricing considerations
14 would not be based upon differences in costs incurred in provisioning
15 unbundled loop elements. As a result, the price signals generated from such
16 rates would not be consistent with efficient price signals in the manner that
17 those signals affect entry/exit or make/buy decisions, and would not be
18 consistent with forward-looking economic costs.

19 **Q. HAVE YOU ANY RECOMMENDATIONS REGARDING THE COST**
20 **BASED DE-AVERAGING OF RATES?**

21 A. Yes. One option available to the Commission is to use a Commission
22 approved, properly structured TELRIC to establish such rates. In the absence

1 of cost data provided by GTE, however, I recommend that the Hatfield data
2 serve as the basis of such geographically deaveraged rates. Data from Hatfield
3 Model 2.2 for GTE-Florida, displayed on a geographically de-averaged basis,
4 are included in Exhibit 2.

5 Exhibit 2 displays the use of the Hatfield results for both six and three
6 geographically deaveraged density zones. These figures are based on the
7 weighted average of the combined zones. For simplicity, to develop a three-
8 zone result, I combined the two most dense, the two middle, and the two least
9 dense zones in the Hatfield Model which adopted six density zones. It may be
10 appropriate in particular circumstances to combine zones differently.

11 **V. NON-RECURRING CHARGES**

12 **Q. WHAT ARE NON-RECURRING CHARGES?**

13 **A.** Non-recurring charges (NRCs) are the charges which an ILEC assesses to
14 recover the one-time or non-recurring costs associated with establishing,
15 moving and/or changing the service received by a particular customer.
16 Typically, NRCs consist of multiple elements which include charges for
17 activities such as service orders, central office line connections and premise
18 visits.

19 **Q. HOW SHOULD THE NON-RECURRING COSTS ASSOCIATED WITH** 20 **ESTABLISHING, MOVING OR CHANGING THE SERVICE RECEIVED** 21 **BY A CUSTOMER OF ICG OR ANOTHER COMPETITOR BE** 22 **RECOVERED BY GTE?**

1 **A.** The NRCs which GTE is allowed to charge ICG to establish, move, or change
2 service for a customer of ICG should not exceed the charges which would
3 apply if GTE was establishing, moving or changing service for a customer
4 which it was serving directly. (Non-recurring charges associated with interim
5 telephone number portability are discussed below separately in Section VII.)
6 Moreover, the NRCs assessed should be limited to only the charges applicable
7 to those activities specifically required by ICG or another competitor.

8 **Q.** **CAN YOU PROVIDE EXAMPLES OF THE TYPES OF NRCs WHICH**
9 **SHOULD APPLY BASED ON NRCs ASSESSED TODAY?**

10 **A.** Yes. One example of a situation where GTE would assess NRCs today would
11 involve the situation where ICG requests that service be established to a new
12 customer which is not currently served by GTE. In that case, ICG is
13 effectively acting as the customer's agent and the NRCs which apply should be
14 the same as those which apply if the customer was connecting directly to GTE.
15 This might include service order and central office line connection or similar
16 charges. Of course, if ICG will be responsible for activities at the customer's
17 premises, GTE should not be entitled to assess premise visit charges for that
18 purpose.

19 A second example of a situation where NRCs could apply would involve
20 an existing customer of GTE changing to a new location. In this case, the only
21 non-recurring costs involved would be those associated with changing the
22 cross-connect from GTE's switch to ICG's node. In situations such as this, the

1 appropriate NRC would be comparable to the NRC which applies when
2 customers switch from GTE to ICG. If GTE does not have a specific NRC in
3 place for changing local service providers, an appropriate level for the NRC
4 would be the secondary service charge applicable to a new customer or to a
5 customer moving to a new location.

6 **Q. YOU INDICATED PREVIOUSLY THAT THE NRCs ASSESSED TO**
7 **ICG SHOULD NOT EXCEED THE CHARGES WHICH WOULD APPLY**
8 **IF THE ILEC WAS PERFORMING THE NON-RECURRING ACTIVITY**
9 **FOR ITS OWN DIRECT CUSTOMER. WOULD THAT CHARGE**
10 **NECESSARILY BE THE SAME THAT GTE CHARGES ITS OWN**
11 **CUSTOMER?**

12 **A. No. In developing their NRCs, ILECs often include the costs of sales and**
13 **marketing activities which are not directly attributable to establishing service to**
14 **a customer and setting up the necessary customer records. Instead, these costs**
15 **are associated with marketing additional "value-added" services. ICG and other**
16 **competitors will be responsible for and will incur their own costs to market**
17 **value-added services to their customers. Therefore, to the extent that costs for**
18 **these types of sales and marketing activities have been included in GTE's**
19 **NRCs, ICG and other competitors should receive a discount to exclude these**
20 **costs.**

VI. TRANSPORT AND TERMINATION

Q. WHAT PRICING METHODOLOGY OR METHODOLOGIES ARE APPROPRIATE FOR ESTABLISHING TRANSPORT AND TERMINATION CHARGES?

A. Under Section 252(d)(2) of the 1996 Act, the terms and conditions for transport and termination of traffic are just and reasonable if (1) they provide for the mutual and reciprocal recovery of costs, and (2) costs are determined on the basis of a reasonable approximation of the additional costs of terminating calls. The Act does not preclude arrangements that waive mutual recovery, such as bill-and-keep arrangements (Section 252(d)(2)(B)). Indeed, the FCC in its First Report and Order stated that bill-and-keep is an appropriate reciprocal compensation mechanism where traffic exchanged between the two carriers is balanced and the network functions are equivalent. (I am informed that, at least for purposes of an interim agreement, ICG and GTE agreed to utilize a version of bill-and-keep.)

Where bill-and-keep is not adopted by parties or required by the state Commission, TSLRIC would be the appropriate costing methodology under the Act for estimating such charges.

Both approaches -- bill and keep, and TSLRIC-based charges -- promote competition by ensuring that the ILECs, with their greater market power, do not charge excessive rates for termination and transportation. However, where

1 traffic is balanced, bill-and-keep is more efficient because it avoids the
2 administrative costs associated with traffic measurement.

3 **Q. HAVE OTHER STATES ADOPTED BILL-AND-KEEP**
4 **ARRANGEMENTS?**

5 **A.** Yes. Washington adopted bill-and-keep for reciprocal compensation as an
6 interim measure. Arizona, Florida, California, Connecticut and Oregon have
7 also adopted bill-and-keep for specified periods of one to two (1-2) years.
8 Other states, such as Delaware, are considering bill-and-keep in the
9 establishment of interim rules on local competition.

10 **Q. IF A BILL-AND-KEEP IS NOT EMPLOYED, HOW SHOULD**
11 **COMPENSATION BE DETERMINED?**

12 **A.** In a bill-and-keep mechanism is not employed, charges should be determined in
13 accordance with TELRIC, as discussed above. Where TELRIC studies are not
14 yet available, I recommend rates be established using the default proxies
15 established in the First Report and Order. Specifically, the FCC set a range of
16 0.2 to 0.4 cents per minute where traffic is terminated at the end office, and an
17 additional charge not to exceed 0.15 cents per minute where the traffic is
18 terminated at the tandem.

19 **VII. DEVELOPMENT OF COST-BASED RATES IN**
20 **THE ABSENCE OF GTE DATA**

21 **Q. HAS GTE PROVIDED TELRIC STUDIES TO USE TO DEVELOP**
22 **COST-BASED PRICES FOR UNBUNDLED NETWORK ELEMENTS?**

1 A. No. GTE has not provided ICG with cost-studies in this docket which could be
2 used to determine reliable TELRIC estimates for purposes of this arbitration.

3 Q. **WHAT SOURCE OF DATA WOULD YOU USE?**

4 A. I used TELRIC estimates developed by Hatfield Associates, Inc. (Hatfield
5 Model) to set rates for these elements on an interim basis. The Hatfield Model
6 is a widely known model of network costs. In addition, the model is based on
7 publicly available data, which allows it to be subject to detailed review and
8 analysis, and updated when and where appropriate.

9 Q. **DOES THE HATFIELD MODEL PERMIT THE CALCULATION OF**
10 **TELRICS THAT ARE CONSISTENT WITH YOUR PROPOSED**
11 **APPROACH?**

12 A. Yes. The model uses a TELRIC methodology that is forward-looking, and
13 includes the entire demand for each network element. The TELRIC measure
14 used in the model is based on the costs of an efficient, cost-minimizing entrant
15 into the local service market. (That is, the costs of assets that are optimally
16 configured, sized and operated.) The model assumes (1) a high quality
17 network that incorporates copper distribution loops with copper and fiber
18 feeder, digital switching, SS7 signaling and all fiber interoffice transport; (2)
19 network capacity sufficient to serve all narrow band switched and dedicated
20 local demand, intra-ATA toll and access service demand in the region
21 examined; and (3) the provision of all basic network elements needed for local
22 service. In addition, the model reflects ILEC specific geographic and

1 demographic features that may affect cost. We relied upon Hatfield Version
2 2.2, Release 2. (As noted, I am evaluating the recently available Version 3.1.)
3 A summary of TSLRIC pricing rules and standards employed in the model is
4 provided in Exhibit 3 hereto.

5 **Q. GENERALLY, HOW IS THE HATFIELD MODEL CONDUCTED?**

6 **A.** The Hatfield Model is primarily an engineering model, which is used to design
7 a local network subject to various rules and constraints. The network is
8 designed to meet demands for local and toll services, including both switched
9 and dedicated access. The end product of this version of the Hatfield Model is
10 cost by network element.

11 One of the strengths of the Hatfield Model is its reliance on the detailed
12 census block data. This information can be drawn upon to obtain not only cost
13 estimates at the census block group, but can also be aggregated to obtain cost
14 estimates at the wire center level, the LATA, the state level, across regions and
15 nationwide. In addition, other aggregations, such as by "density zones" are also
16 possible. Finally, these data are based on census blocks nationwide, which
17 permits direct comparisons of costs across companies within a state, as well as
18 across states.

19 **Q. ARE THERE ANY CHARACTERISTICS SPECIFIC TO THE**
20 **HATFIELD MODEL THAT DISTINGUISH IT FROM ILEC**
21 **CONDUCTED TELRIC STUDIES WITH WHICH YOU ARE**
22 **FAMILIAR?**

1 A. Yes. As indicated, the Hatfield Model represents an attempt to construct the
2 cost of a local network for the provision of local and toll narrowband services.
3 In this manner, the model focuses on the minimum cost, most efficient network
4 for that limited purpose, rather than the cost incurred based upon the
5 infrastructure currently in place by the ILECs for whatever combination of
6 commercial interests may be driving that infrastructure. (Hatfield Model, pp.
7 1-2.) For instance, while the Hatfield Model assumes fiber facilities are used in
8 both the interoffice and feeder network, it is premised on only copper facilities
9 used in the loop distribution system. (Id., page 16.) In this manner, the
10 costing procedures in the Hatfield Model do not require cost allocations to deal
11 with those network facilities which are not needed to provide local service, but
12 which are necessary to provide various strategic services such as high-speed
13 data or video. (It should be noted that this method yields a cost estimate that
14 approaches the stand alone cost rather than an incremental cost. To that
15 degree, costs from the Hatfield Model may be overstated.) Since the existing
16 infrastructure will reflect network facilities which were designed to facilitate
17 the provision of these non-local services, it will likely exaggerate the cost of
18 providing local service.

19 The Hatfield Model is driven by current demand levels for the entire
20 volume of local and toll services. The network is sized to meet total local and
21 toll requirements for business and residential customers (including second line
22 residential demands), plus the growth of these services over time. In this

1 manner, a network is modeled that is efficiently sized to meet the demands of
2 these customers, but not the demands for other strategic services whose
3 involvement is both risky and possibly distant. Spare capacity is required in this
4 analysis, but not to meet potential strategic service demands.

5 As noted, the Hatfield Model draws from the census block data base. This
6 sets it apart from the typical ILEC TSLRIC study, which tends to be both state
7 and purpose specific. By that, I mean that the cost studies are developed
8 individually for each state and based upon the specific requirements at hand.
9 Cost studies may be developed at the wire center level, at other times by
10 exchange, or at other times utilizing statewide averages. Therefore,
11 comparisons of costs across these studies, as well as across space and time, are
12 most difficult. With the Hatfield Model, such comparisons are both possible
13 and, in fact, are promoted by the study authors.

14 **Q. HAVE YOU ANALYZED THE HATFIELD MODEL AND ITS**
15 **UNDERLYING ASSUMPTIONS?**

16 **A.** Yes. I have reviewed the model and its assumptions in order to gain a
17 complete understanding of its construction and its operations. In this manner, I
18 have been able to identify the differences between the Hatfield Model's
19 approach to obtaining cost estimates and those typically used by ILECs in their
20 study procedures. As indicated earlier, GTE has not provided any
21 TELRIC/TSLRIC information to this point.

1 **Q. HOW DO THE COST ESTIMATES PRODUCED BY THE HATFIELD**
2 **MODEL COMPARE WITH THE FCC PROXIES?**

3 **a. As noted, the Hatfield Model assigns a portion of joint and common costs to**
4 **each network element. Even with this, Hatfield Version 2.2 produces cost**
5 **estimates which are below the FCC estimates for loops and typically for other**
6 **elements as well.**

7 **Q. HAVE YOU DEVELOPED ESTIMATES OF THE COST OF THE**
8 **UNBUNDLED LOOP FOR GTE-FLORIDA USING THE HATFIELD**
9 **MODEL?**

10 **A. Yes. I have run the Hatfield Model to develop loop cost estimates for the**
11 **Florida operations of GTE. The results of this run are presented in Exhibit 2.**
12 **These results were developed using the default assumptions built into the**
13 **Hatfield Model for all outside plant engineering, miscellaneous expense, input**
14 **price, and other economic categories.**

15 However, the GTE run represents the costs of serving only those Census
16 Block Groups (CBGs) served within that company's service territory. Thus,
17 the GTE Hatfield "workfile," or input data file, includes only the CBG-level
18 data needed to construct local loops originating from GTE's existing wire
19 centers. Second, the ARMIS 43-08 data in the GTE workfile, which includes
20 such cost drivers as number of access lines, DEMs, and call attempts, is GTE
21 specific. Third, GTE-specific ARMIS 43-03 investment and expense data by
22 USOA account is also used to develop GTE-specific Hatfield results.

1 Generally, this data is used to develop expense factors which are applied to
2 Hatfield's investment output to estimate annual operating expenses.

3 Finally, the Hatfield run presented in Exhibit 2 is based upon certain data,
4 namely, the location of GTE wire centers, extracted from the Local Exchange
5 Routing Guide (LERG) database produced by BellCore.

6 **Q. IN THE EVENT THAT THE NECESSARY DATA TO EFFICIENTLY**
7 **ESTIMATE AN APPROPRIATE MARK-UP IS NOT AVAILABLE,**
8 **WHAT ARE YOUR RECOMMENDATIONS?**

9 **A.** Since the information necessary is within the control of GTE, it is my
10 recommendation that a default mark-up be established that increases the
11 likelihood that the necessary information would become available. Simply
12 stated, I would recommend that no mark-up be established unless or until the
13 information necessary to construct the appropriate mark-up has been made
14 available for review.

15 **Q. YOU NOTED THAT GTE DID NOT PROVIDE ITS TSLRIC/TELRIC**
16 **FOR YOUR REVIEW. IF THAT WERE TO BE MADE AVAILABLE**
17 **ON A TIMELY BASIS, WOULD YOU USE THE RESULTS OF THAT**
18 **ANALYSIS IN PLACE OF THE HATFIELD MODEL?**

19 **A.** I have seen no such data in this proceeding. If and when GTE presents that
20 information, I will comment at that time. At this juncture, I offer no
21 observation.

VIII. TELEPHONE NUMBER PORTABILITY

Q. WHAT GUIDELINES SHOULD INCUMBENT LECs AND STATE COMMISSIONS FOLLOW WHEN ESTABLISHING INTERIM NUMBER PORTABILITY RATES?

A. I recommend that the Guidelines established by the FCC be followed. The FCC, in its First Report and Order in CC Docket No. 95-116 ("TNP Order"), (In the Matter of Telephone Number Portability, First Report and Order and Further Notice of Proposed Rulemaking, 11 F.C.C. Rcd. 8352 (1996).) noted that customers would be reluctant to change service providers in the absence of service provider number portability, resulting in depressed demand for services provided by new entrants. (*Id.* ¶ 31.) The FCC required incumbent LECs to provide interim number portability pursuant to currently available methods, and established a schedule for the implementation of long-term number portability consistent with FCC-adopted performance criteria. The FCC, however, went beyond merely requiring the implementation of number portability. The FCC adopted pricing requirements designed to ensure that the costs of currently available measures are borne by all telecommunications carriers on a competitively neutral basis.

Q. HOW HAS THE FCC DEFINED "COMPETITIVELY NEUTRAL"?

A. The FCC explained in its TNP Order that it interpret[s] "on a competitively neutral basis" to mean that the cost of number portability borne by each carrier does not affect significantly

1 any carrier's ability to compete with other
2 carriers
3 for customers in the marketplace. (TNP
4 Order, ¶ 131.)
5

6 **Q. WHAT CRITERIA DID THE FCC PROVIDE FOR SETTING RATE**
7 **LEVELS FOR INTERIM NUMBER PORTABILITY?**

8 **A.** Congress, the FCC noted, by requiring "competitively neutral" recovery, (47
9 U.S.C. § 251(e)(2).) directed the FCC to make cost recovery secondary to
10 promoting entry. The FCC noted that regulators should depart from cost
11 causation principles if necessary to permit new entrants to compete with
12 incumbent LECs. (TNP Order, ¶ 131.) Accordingly, the FCC articulated two
13 guidelines the State commissions must follow in establishing or approving an
14 interim number portability cost recovery mechanism.

- 15 • The mechanism should not give one service provider an appreciable,
16 incremental cost advantage over another service provider when both
17 compete for a specific subscriber. (Id., ¶ 132.)
- 18 • The mechanism should not have a disparate effect on the ability of
19 competing service providers to earn normal returns on their investment.
20 (Id., ¶ 135.)

21 The FCC explained further that a cost recovery mechanism based upon the
22 relative market shares of an incumbent LEC and its competitors (e.g., based on
23 revenues or lines) would be consistent with its criteria:

24 This approach does not disparately affect the incremental cost of winning a
25 specific customer or group of customers, because a LEC with a small share of

1 the market's revenue would pay a percentage of the incremental cost of number
2 portability that will be small enough to have no appreciable affect on the new
3 entrant's ability to compete for that customer.

4 **Q. DOES ANY ASPECT OF THE GTE PROPOSAL FOR INTERIM**
5 **NUMBER PORTABILITY CHARGES VIOLATE THE FCC'S**
6 **"COMPETITIVELY NEUTRAL" REQUIREMENTS?**

7 **A.** Yes. GTE proposes a non-recurring charge for interim number portability
8 which appears to violate the first guideline. The FCC explained that a cost
9 recovery mechanism that imposes the entire incremental cost of currently
10 available number portability would violate this criterion. (TNP Order, ¶ 134.)
11 The imposition of a non-recurring charge on a new entrant that is designed to
12 recover all of GTE's non-recurring costs when a customer moves to ICG and
13 decides to retain its number is inconsistent with the FCC's "competitively
14 neutral" guidelines.

15 **Q. WHAT IS YOUR RECOMMENDATION REGARDING CHARGES FOR**
16 **TELEPHONE NUMBER PORTABILITY?**

17 **A.** The Arbitrator should require GTE to limit the charge to a level that is
18 consistent with the "competitively neutral" mandates of the FCC. In general,
19 this requires that the charge be something less than the full incremental cost
20 (i.e., less than 100 percent of the reasonably determined measure of the cost of
21 provision). The FCC discusses four methods for assessing the "percent" or
22 proportion of the cost borne by the various market participants which it

1 considered consistent with the "competitively neutral" guidelines. (First Report
2 and Order, ¶ 136.) The FCC found that any of these methods for assessing the
3 percentage of costs to each market participant satisfied the two criteria for
4 competitive neutrality. These methods are based on different measures of
5 market participation, such as number of lines or net revenues, and should yield
6 a percentage assessment consistent with the competitive neutrality guidelines.

7 **Q. WHAT IS THE APPROPRIATE APPROACH TO DETERMINING THE**
8 **RESALE DISCOUNT FOR GTE?**

9 **A.** The Telecommunications Act of 1996 (the 1996 Act) requires incumbent local
10 exchange carriers (ILECs) such as GTE "to offer for resale at wholesale rates
11 any telecommunications service that the carrier provides a retail subscribers..."
12 (Section 251(c)(4)).

13 The appropriate discount to be applied to retail rates should be calculated
14 based on an avoided cost analysis using reliable GTE data, in conformance with
15 the Federal Communications Commission's (FCC's) Order.

16 **Q. IS IT IMPORTANT THAT THE DISCOUNT RATE REFLECT ONLY**
17 **THE WHOLESALE FUNCTION IN THE PROVISION OF RETAIL**
18 **SERVICES?**

19 **A.** Yes. If the wholesale discount is set too low, it will discourage resellers from
20 entering the market and deny customers the immediate benefits of resale
21 competition. On the other hand, if the wholesale discount is set too high, it
22 will improperly promote resale competition and discourage facilities-based

1 competition. This is important because facilities-based competition is critical to
2 the ultimate success of competition in the local telephone service market. If
3 facilities-based competition is discouraged in favor of resale competition, the
4 ILECs would develop a monopoly over wholesale services which may require
5 some form of regulation.

6 **Q. PLEASE EXPLAIN THE FCC APPROACH TO ESTIMATING THE**
7 **WHOLESALE RATE FOR RESALE OF RETAIL SERVICES?**

8 **A.** The Telecommunications Act of 1996 requires that the wholesale rates charged
9 to resellers be based on retail rates less the costs that will be avoided when
10 providing wholesale service. In its Order issued on August 8, 1996 in CC
11 Docket NO. 96-98 (the August 8, 1996 Order), the FCC determined that
12 avoided costs are those costs that an ILEC would no longer incur if it ceased
13 retail service and instead provided all service through resellers. (§911) The
14 FCC found that avoided costs should include direct costs, indirect or shared
15 costs, and a contribution or mark-up. (§912-913) In response to the position
16 taken by some parties, the FCC determined that retail discounts may not reflect
17 non-cost or policy considerations. (§914) The FCC did not require the use of
18 either embedded or incremental costs, but instead suggested that the method
19 should be consistent with the manner in which retail rates were set. (§915)

20 **Q. HAVE YOU PERFORMED AN INDEPENDENT ANALYSIS OF**
21 **AVOIDED COSTS FOR GTE-FL?**

1 A. No. I have reviewed GTE data in other jurisdictions, but at this time, I have
2 not undertaken an independent analysis of GTE-FL's avoided costs.

3 **Q. ARE YOU AWARE THAT THE FLORIDA PC HAS ORDERED A 13.04**
4 **PERCENT DISCOUNT RATE IN THE AT&T/MCI AND THE SPRINT**
5 **ARBITRATIONS?**

6 A. Yes. It is my understanding that the Florida PSC has approved a single
7 wholesale discount rate (for both business and residential) of 13.04 percent,
8 which the Commission believes is consistent with the Act. (Order No. PSC-97-
9 0064-FOF-TP, Docket Nos. 960847-TP and 960980-TP, page 77. Absent an
10 independent analysis, I cannot state the extent to which that rate does or does
11 not conform to the requirements of the Act and of the FCC's provisions in the
12 First Report and Order. I will provide the results of an independent analysis
13 verification in supplemental testimony.

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


15 A. Yes, it does.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the **Direct Testimony and Exhibits of Marvin H. Kahn On Behalf of ICG Telecom Group, Inc.** has been furnished by hand delivery(*) or U.S. Mail to the following parties of record this **18th day of March, 1997:**

***Martha Brown
Florida Public Service Commission
Division of Legal Services
2540 Shumard Oak Boulevard
Room 390M
Tallahassee, Florida 32399-0850**

**Anthony Gillman
GTE Florida Incorporated
Post Office Box 110, MC 7
Tampa, Florida 32301**


**Joseph A. McGlothlin
Vicki Gordon Kaufman
McWhirter, Reeves, McGlothlin,
Davidson, Rief & Bekas, P.A.
117 South Gadsden Street
Tallahassee, Florida 32301
Telephone: (904) 222-2525**

Attorneys for ICG Telecom Group, Inc.

Exhibit 1

MARVIN H. KAHN

Dr. Kahn is a principal in Exeter Associates, Inc. He is an economist specializing in public utility regulation, antitrust and energy analysis.

Dr. Kahn has extensive experience in cost, rate and regulatory matters pertaining to postal service, broadcast, energy utilities and telephone companies. He has been retained by private and public clients in various jurisdictions in the U.S. and Canada. The clients served include private intervenors, state and city attorneys, consumer counsels, state utility commissions, the FCC and the NRRJ. He has prepared studies and reports on competition in the regulated sector; state and national regulatory policy; energy supply, demand and conservation; alternative electric generation technologies; and labor market analysis. He has given expert testimony on telephone utility, energy utility and postal matters in 21 regulatory jurisdictions in this country and Canada, and before committees of federal and state legislatures.

Education:

B.A. Business Administration, 1963
Ohio Northern University

Ph.D. Economics, 1974
Washington University

Previous Employment:

- 1977-1980 - Senior Economist, J.W. Wilson & Associates, Inc., Washington, D.C.
- 1975-1977 - Economist, MITRE Corporation, McLean, Virginia, Department of Energy Planning and Analysis.
- 1975 - Economist, Institute for Defense Analysis, Arlington, Virginia, Program Analysis and Evaluation, Cost Analysis Group.
- 1974 - Staff Economist, Ad Hoc Committee on the Domestic and International Monetary Effect of Energy and Natural Resource Pricing, U.S. House of Representatives, Committee on Banking and Currency, Washington, DC.

Selected Publications and Reports:

An Economic and Rate-making Assessment of Issues Regarding Intra-LATA Competition for Telecommunications Services, Exeter Associates, Inc., September 1993.

The Pennsylvania Telecommunications Infrastructure, Exeter Associates, Inc., March 24, 1992, (Co-author).

Report on the Status of Intrastate Incentive Regulation in the United States, Exeter Associates, Inc., March 1992, (Co-author).

Market and Regulatory Effects of the Elimination of the Manufacturing Restriction on the Bell Operating Companies, Exeter Associates, Inc., November 1989, (Co-author).

Assessment of Issues Related to the MFJ Information Services Restrictions, Exeter Associates, Inc., November 1989, (Co-author).

An Analysis of the Open Network Architecture (ONA) Costing and Tariff Plans Filed by the Regional Bell Holding Companies, National Regulatory Research Institute, October 1988, (Co-author).

A Review and Evaluation of the Load Forecasts of Houston Light & Power Company and Central Power & Light Company: Past and Present, Exeter Associates, Inc., 1985, (Co-author).

Study of the Pricing Precedents in Public Utility Industries, Exeter Associates, Inc., November 1983, (Co-author).

Competition, Contribution and Cross Subsidy: An Examination of AT&T Costing and Pricing Procedures, Exeter Associates, Inc., August 1981.

Product and Market Diversification of Regulated Utilities: An Assessment of Competitive, Market and Regulatory Implications, Exeter Associates, Inc., May 1981.

A Study of Jurisdictional Separations to Compare AT&T's Interstate Settlements Information Systems with the Separations Manual and Division of Revenues Process, J.W. Wilson & Associates, Inc., September 1980, (Co-author).

Competition and Growth: An Economic Analysis of the Domestic Market for Private Branch Exchanges, J.W. Wilson & Associates, Inc., September 1978, (Co-author).

"Separations Analysis of New Jersey Bell Telephone Company," J.W. Wilson & Associates, Inc., July 1978.

"Conservation and Utility Pricing Policies," paper presented at Engineering Foundation Conference on Economic Impacts of Energy Conservation, sponsored by Committee on Science and Technology, U.S. House of Representatives, July 1978.

"An Economic Assessment of Market Potential for Advanced Intermediate and Peaking Electric Generating Technologies," MITRE Corporation, 1978, (Co-author).

Public Policy and Power Plant Siting, MITRE Corporation, March 1977.

Commercialization Case Study: The Light Water Reactor, MITRE Corporation, December 1976.

Fuel Choice vs. Fuel Use: An Economic Analysis of Residential Electricity Demand, MITRE Technical Report, 1976. Paper presented at NSF Workshop on Long Run Energy Demands, June 1976.

Long Run Energy Demands, MITRE Technical Report, 1976.

Electric Utility Financial Problems and Potential Solutions, MITRE Technical Report, April 1976.

Implications of Ownership Patterns on Financing and Development of Western Coal Resources, MITRE Technical Report, May 1976.

"Some Short Run Dynamics of Residential Electricity Consumption," presented at the NSF Workshop on Electric Utility Financial Problems and Potential Solutions, August 1975.

Energy Security and the Domestic Economy: Impact on Prices, Employment and Consumption, Ad Hoc Committee on the Domestic and International Monetary Effect of Energy and Natural Resource Pricing, 93rd Congress, 2nd Session, 1974.

"Layoff Behavior in Manufacturing Industries," (unpublished dissertation), Washington University, St. Louis, Missouri, 1974.

"The Homestead Provision: Its Costs and Those of Some Alternatives," unpublished working paper, Haney for Governor Committee, 1974.

"Extending the Tennessee Sales Tax: Estimates of its Revenue Potential, Distributional Effects, and Cyclical Sensitivity," unpublished working paper, Haney for Governor Committee, 1974.

Expert Testimony

Presented by Marvin H. Kahn

Before State Commissions

Alabama Public Service Commission, Docket No. 25625; testified on the application of TSLRIC/TELRIC principles in the pricing of unbundled network elements.

Alabama Public Service Commission, Docket No. 17743; testified on separations and affiliated relations.

Alabama Public Service Commission, Docket No. 19983; testified on price cap regulation, local competition and universal service.

Alaska Public Utility Commission, Docket U-78-65; testified on cost of service and rate design of competitive service.

Arizona Corporation Commission, Docket Nos. U-3021-96-448, U-3245-96-448, E-1051-96-448; testified on the application of TSLRIC/TELRIC principles in the pricing of unbundled network elements.

Arizona Corporation Commission, Docket No. E101-91-004; testified on telephone rate design.

Arkansas Public Utility Commission, Docket 83-045-U; testified on access charges, impact of divestiture on revenue requirements and revenue sources, and rate design.

California Public Utilities Commission, Application No. 96-03-007; testified on regulatory policy for certification of a separate subsidiary under Section 272 of the Telecommunications Act of 1996.

California Public Utilities Commission, Case No. 10001; testified on cost of service and rate design for Centrex service.

California Public Utilities Commission, Docket No. R.95-01-020; testified on discrimination and shared and common cost identification, and Universal Service Fund mechanics.

California Public Utilities Commission, Docket No. R.95-04-043; testified on pricing flexibility and local competition rules.

California Public Utilities Commission, Docket No. 93-04-003; testified on costing and pricing principles for unbundled network elements.

- Colorado Public Utilities Commission, I&S Docket No. 1720; testified on utility rate design.
- Delaware Public Service Commission, Docket No. 89-24T; testified on customer specific pricing of communication services.
- Delaware Public Service Commission, Docket No. 91-35T; testified on pricing of Centrex services.
- Delaware Public Service Commission, Docket No. 93-47; testified on Rate Design.
- Public Service Commission of the District of Columbia, Formal Case No. 777; testified on telephone utility costs of service and rate design.
- Public Service Commission of the District of Columbia, Formal Case No. 827; testified on rate design.
- Public Service Commission of the District of Columbia, Formal Case No. 828; testified on regulatory principles and structure regarding competitive services.
- Public Service Commission of the District of Columbia, Formal Case No. 828-II; testified on regulatory principles and structure regarding competitive services.
- Public Service Commission of the District of Columbia, Formal Case No. 814, Phase III; competitive status of various services and cost support for pricing competitive services.
- Public Service Commission of the District of Columbia, Formal Case No. 926; rate design.
- Florida Public Service Commission, Docket No. 960916-TP; testified on the application of TSLRIC/TELRIC principles in the pricing of unbundled network elements.
- Florida Public Service Commission, Docket No. 860984-TP; testified on market for interexchange services, pricing of access services and cost methodologies.
- Florida Public Service Commission, Docket No. 880069-TL; testified on regulatory policy and depreciation practices.
- Georgia Public Service Commission, Docket No. 3765-U; testified on Centrex Costs and Pricing Policies.
- Georgia Public Service Commission, Docket No. 3882-U; testified on Alternative Regulatory Structures.
- Georgia Public Service Commission, Docket No. 3893-U; testified on Depreciation Policy.

Georgia Public Service Commission, Docket No. 3905-U; testified on incentive regulation.

Georgia Public Service Commission, Docket No. 3914-U; testified on EAS.

Georgia Public Service Commission, Docket No. 4018-U; testified on design and structure of an ONA policy.

Georgia Public Service Commission, Docket No. 4232-U; testified on N11 Service arrangements.

Indiana Public Service Commission, Cause No. 35181; testified on telephone utility rate structures, unbundling of services and implications of FCC Registration Program.

Indiana Public Service Commission, Cause No. 36732; testified on telecommunication cost of services and rate design.

Illinois Commerce Commission, Docket No. 89-0033; testified on regulatory structure and policy and cost study methodology for competitive services.

Illinois Commerce Commission, Docket No. 92-0448; testified on regulatory structure and policy.

Illinois Commerce Commission, Docket No. 93-0319, testified on comparable service requirements to promote gas supply competition.

Kentucky Public Service Commission, Case No. 96-467; testified on the application of TSLRIC/TELRIC principles in the pricing of unbundled network elements.

Kentucky Public Service Commission, Case No. 285; testified on LMS policy.

Kentucky Public Service Commission, Case No. 90-256; testified on telephone rate design.

Kentucky Public Service Commission, Case No. 10109; testified on Regulatory Policy.

Kentucky Public Service Commission, Administrative Case No. 323; testified on intraLATA toll competition.

Kentucky Public Service Commission, Case No. 92-297; testified on competitive and ratemaking implications of an extended area policy.

Kentucky Public Service Commission, Case No. 94-121; testified on appropriate method of regulation.

Kentucky Public Service Commission, Case No. 355; testified on local competition rules.

Louisiana Public Service Commission Docket No. U-17949-(A); testified on negative attrition and alternative regulatory structures.

Louisiana Public Service Commission, Docket No. U-17949-(B); testified on toll competition issues.

Louisiana Public Service Commission, Docket No. U-17949-(D); testified on alternative regulatory structures.

Louisiana Public Service Commission, Docket No. U-17949-(E); testified on total factor productivity, economic depreciation, and an economic analysis of construction programs.

Louisiana Public Service Commission, Docket No. U-18976; testified on cellular service.

Louisiana Public Service Commission, Docket No. U-17957; testified on AOS policy.

Louisiana Public Service Commission, Docket No. U-20710; testified on competitive service pricing.

Louisiana Public Service Commission, Docket No. U-20925; testified on alternative regulatory structures.

Maine Public Utilities Commission, Docket No. 92-345, Phase I; testified on regulatory policy and structure, and incentive regulation.

Maine Public Public Utilities Commission, Docket No. 92-345, Phase II; testified on Staff Plan for alternative regulation for Central Maine Power.

Maryland Public Service Commission, Case No. 7467; testified on jurisdictional separations.

Maryland Public Service Commission, Case No. 7435; testified on affiliated relations and utility rate design.

Maryland Public Service Commission, Case No. 7788; testified on the regulatory principles and structure regarding interexchange communications carriers.

Maryland Public Service Commission, Case No. 7851; testified on telephone utility rate design.

Maryland Public Service Commission, Case No. 7902; testified on category cost of service study methodologies.

Massachusetts Department of Public Utilities, DPU No. 19843; testified on affiliated relations, Western Electric pricing.

Michigan Public Service Commission, Case No. U-5197, et al.; testified on Western Electric costs and pricing.

Michigan Public Service Commission, Case No. U-6002; testified on separations.

Nevada Public Service Commission, Docket No. 91-7026; testified on rate design.

New Mexico Public Service Commission, Case No. 96-307-TC; testified on the application of TSLRIC/TELRIC principles in the pricing of unbundled network elements.

New York Public Service Commission, Case No. 27710/27995; testified on costs and rates of local coin service.

New York Public Service Commission, Case No. 27995; testified on category costs of service utility rate design and deregulation.

New York Public Service Commission, Case No. 28264; testified on category costs of service, costs of local service, and design and structure of local exchange rates.

New York Public Service Commission, Case No. 29469; testified on competition and regulation of cellular services.

Ohio Public Utilities Commission, Case No. 79-1184-TP-AIR; testified on rate design and rate structure.

Ohio Public Utilities Commission, Case No. 83-300-TP-AIR; testified on rate design and rate structure.

Ohio Public Utilities Commission, Case No. 83-464-TP-COI; testified on regulatory structure and access charges.

Ohio Public Utilities Commission, Case No. 84-435-TP-AIR; prepared analysis of rate design.

Pennsylvania Public Utility Commission, R.I.D. No. 289, et al.; testified on utility cost of service methodologies and rate design for competitive telecommunications service offerings.

Pennsylvania Public Utility Commission, Docket R-811512; provided telephone utility cost of service study, testified on rate design.

Pennsylvania Public Utility Commission, Docket R-811819; testified on telephone utility cost of service and rate structure.

Pennsylvania Public Utility Commission, Docket R-832316; testified on access charges, impact of divestiture on revenue requirements and revenue sources, and rate design.

Pennsylvania Public Utility Commission, Docket No. P-830452; testified on the impacts of divestiture on operating company operations and carrier access charges.

Pennsylvania Public Utility Commission, Docket No. R-842779; testified on telephone rate design and stand alone costing procedures.

Pennsylvania Public Utility Commission, Docket No. R-850044; testified on telephone rate design.

Pennsylvania Public Utility Commission, Docket No. R-850170; testified on policy issues regarding public, semipublic and privately owned coin stations and services.

Pennsylvania Public Utility Commission, Docket No. R-850229; testified on rate design.

Pennsylvania Public Utility Commission, Docket No. 860923; rate design and depreciation practices.

Pennsylvania Public Utility Commission, Docket No. R-930715; testified on regulatory structure, productivity growth and utility costs.

Pennsylvania Public Utility Commission, Docket No. 940587; testified on total service long run costs and revenue-cost comparisons of competitive services.

Pennsylvania Public Utility Commission, Docket No. 951005; testified on alternative regulatory structures for small telephone companies.

Pennsylvania Public Utility Commission, Docket No. 963556; testified on rate design for services and network elements.

Rhode Island Public Utilities Commission, Docket No. 1475; testified on rate design and rate structure.

Rhode Island Public Utilities Commission, Docket 1631 (Phase I); testified on revenue requirements and merits of company cost of service studies.

Rhode Island Public Utilities Commission, Docket 1631 (Phase II); provided telephone utility cost of service study.

Rhode Island Utilities Commission, Dockets 1560R, 1631, and 1654; testified on utility cost of service and rate design.

Rhode Island Public Utilities Commission, Docket 1687; testified on rate design and structure of local and toll rates.

Rhode Island Public Utilities Commission, Docket 1698; testified on rate design.

Rhode Island Public Utilities Commission, Docket 1878; testified on rate design.

South Carolina Public Service Commission, Docket 79-305-C; testified on cost of service, rate design, separations and affiliated relationships.

South Carolina Public Service Commission, Docket 82-291-C; testified on telephone utility cost of service methodologies and rate structure.

Texas Public Utility Commission, Docket No. 16473; testified on the application of TSLRIC/TELRIC principles in the pricing of unbundled network elements.

Texas Public Utility Commission, Docket Nos. 16189, 16196, 16226, 16285, 16290; testified on the application of TSLRIC/TELRIC principles in the pricing of unbundled network elements.

Texas Public Utility Commission, Docket No. 8585; testified on cost study methodology and pricing of competitive services.

Virginia Corporation Commission, Docket PUC 920029; testified on incentive regulation, utility productivity, utility construction programs.

Virginia Corporation Commission, Docket PUC 930039; testified on productivity growth, construction programs and incentive regulatory plans.

Washington Utilities and Transportation Commission, Case No. U-75-54; testified on cost of service methodologies for competitive telecommunications service offerings.

Washington Utilities and Transportation Commission, Cause Nos. U-86-34, 81-1; testified on the establishment of rules and procedures regarding the detaching of utility production services.

West Virginia Public Service Commission, Case No. 84-747-T-42T; testified on rate design, access charge structures and affiliated relationships.

Before U.S. Postal Commission

Docket MC79-3; testified on cost of service and rate design for second-class mail.

Before Legislatures

Committee on Commerce, U.S. Senate, Subcommittee on Communications; expert witness testifying for Subcommittee Staff on U.S. Department of Transportation Study on Impacts of Daylight Savings Time Act.

Committee on Banking and Currency, U.S. House of Representatives, Ad Hoc Committee on the Domestic and International Monetary Effect of Energy and Natural Resource Pricing; appeared as Staff witness on inflationary and unemployment effects of the oil embargo, and on utility pricing policy proposals.

Committee on Consumer Affairs, Pennsylvania House of Representatives, appeared on behalf of the Office of Consumer Advocate, testified on regulatory policy regarding telecommunications.

Other

District Court of Lancaster County, Nebraska, in Re: Norstan Communications vs. State of Nebraska, Docket No. 355; testified on the market for telecommunications services and the effect of emerging competition.

U.S. District Court for the District of Columbia, in RE: US. vs. AT&T et al., C.A. No. 74-1698; testified on Western Electric PBX Pricing.

U.S. District Court for the Southern District of Florida, in Re: Eugene Steele d/b/a Yacht Buyers Group vs. Morgan Yacht, et al., Case No. 82-2757-CTU-JE; testified on economic estimate of damages.

U.S. District Court for the District of Maryland, in Re: Fred Menke's Car Store, Inc. and Fred R. Menke, Sr. vs. Volvo North America Corporation, C.A. No. H86-1150; testified on economic estimate of damages.

U.S. District Court for the Eastern District of Pennsylvania, in Re: Design Sales Associates, Inc. vs. Pitcon Industries, Inc., C.A. No. 87-0805; testified on economic estimate of damages

GTE - FLORIDA

THE HATFIELD MODEL
UNBUNDLED LOOP COST RESULTS FOR GTE

<u>Statewide Average</u>	\$11.44
<u>Three Density Zone Results (lines/mi²)</u>	
0-200	\$25.63
200-850	13.31
>850	9.96
<u>Six Density Zone Results (lines/mi²)</u>	
0-5	\$71.04
5-200	24.71
200-650	14.07
650-850	11.02
850-2,550	10.19
>2,550	9.81
Source: Hatfield Model, Version 2.2, Release 2.	

Model Description

Hatfield Model
Version 2.2, Release 2

Hatfield Associates, Inc.
International Telecommunications Consultants
737 29th Street, Suite 200
Boulder, Colorado 80303

September 4, 1996

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I INTRODUCTION

A. OVERVIEW

The Hatfield Model has been developed by Hatfield Associates, Inc. (HAI), of Boulder, Colorado, at the request of AT&T and MCI. Its purposes are: 1) to estimate the forward-looking economic cost of unbundled network elements referenced in § 252(d)(1)(A) and (B) of the Telecommunications Act of 1996 based on Total Element Long Run Incremental Cost (TELRIC) principles,¹ and 2) in a separate calculation using consistent procedures and input data, to estimate the forward-looking economic cost of the basic local telephone service that is the target of universal service funding mechanisms.²

B. EVOLUTION OF THE HATFIELD MODEL

The original version of the Hatfield Model was developed to produce estimates of the TELRIC of basic local telephone service as part of an examination of the cost of universal service. This original model was a "greenfield" model in that it assumed all network facilities would be built without consideration given to the location of existing wire centers or transmission routes. When the original Benchmark Cost Model (BCM1)³ became available, HAI revised the original Hatfield Model to incorporate certain loop investment data produced by BCM1. As a result, the Hatfield Model became a "scorched node" model that developed

¹ TELRIC is the term used by the Federal Communications Commission to refer to the total service long run incremental cost (TELRIC) of unbundled network elements.

² The definition of basic universal service used in the model includes the following functional components:

- single-line, single-party access to the first point of switching in a local exchange network;
- usage within a local exchange area;
- touch tone capability;
- a white pages directory listing; and
- access to 911 services, operator services, directory assistance, and telecommunications relay service for the hearing-impaired.

Excluded from this definition are many other local telephone company services, such as toll calling, interexchange carrier access, custom calling and CLASSSM features, and private line services, although the existence of such services is taken into account in developing the cost estimates for unbundled elements.

³ The Benchmark Cost Model is a model of basic local telephone service developed by MCI, NYNEX, Sprint, and U S WEST.

efficient, forward-looking network investments and costs for basic universal service based on existing wire center locations. Thus, this new version of the Hatfield Model combined results from BCM1's loop modeling (based on actual population distributions) with the extensive wire center and interoffice calculations from the earlier Hatfield Model.

Early in 1996, an expanded version of earlier Hatfield Models, referred to as the Hatfield Model, Version 2.2, Release 1, was developed to estimate the costs for unbundled network elements. It was submitted to the Federal Communications Commission (FCC) in CC Docket No. 96-98 on May 16 and 30, 1996, accompanied by descriptive documentation.⁴ On July 3, 1996, this model was placed into the record of CC Docket No. 96-45 to assist the Commission in determining the economic costs of universal service.⁵

The Hatfield Model, Version 2.2, Release 2 (hereafter HM2.2.2), described in this document, estimates the efficient, forward-looking economic cost of both unbundled network elements and basic local telephone service. This release incorporates a number of enhancements over earlier versions.⁶ HM2.2.2 derives certain of its inputs and methods from the BCM-PLUS model. The BCM-PLUS model is a derivative of BCM1 that has been developed for and is copyrighted by MCI Telecommunications Corporation.⁷ Furthermore, because populated data workfiles now accompany HM2.2.2, Release 2 executes more quickly than Release 1, and without required user intervention.

The Hatfield Model comprises several workbook files in Microsoft Excel 7.0 for Windows 95 or Windows NT. An automated front end interface permits the user to select the study area to be modeled and to enter any desired user-adjustable input assumptions. The entire model will then execute without any required user intervention.⁸ Although AT&T and MCI typically have run HM2.2.2

⁴ See, Appendix E of the Comments of AT&T in CC Docket No. 96-98, In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, and Appendix D of AT&T's Reply Comments. In the same proceeding, MCI submitted results based on an earlier "greenfield" version of the Model as Attachment 1 to its Comments.

⁵ Ex parte submission of L. Sewicki, MCI.

⁶ Appendix A to this documentation contains a summary of the differences between Release 1 and Release 2 of Version 2.2 of the Hatfield Model.

⁷ On July 3, 1996, Sprint Corporation and U S WEST presented version 2 of the BCM (BCM2) to the FCC. NYNEX and MCI are not sponsors of BCM2. A careful review by HAI indicates that all of BCM2's relevant enhancements over BCM1 are already present in the Hatfield Model. Furthermore, the Hatfield Model has important attributes and capabilities that are not available in the BCM2.

⁸ Documentation of this automated user interface is provided in Appendix B.

for 49 continental U.S. study areas (Bell Operating Companies "BOCs" plus Southern New England Telephone Company), it may be run for any Tier 1 study area.⁹

C. PURPOSE OF THIS DOCUMENT

This document describes: 1) the structure and operation of HM2 2.2, and 2) inputs to the model, emphasizing those that can be changed by the user and their default values. It should be emphasized that the model provides a large number of inputs that can be altered by the user. However, the default values for these inputs are believed to be appropriate based on the experience and engineering judgment of HAI personnel and other subject matter experts.

II. STRUCTURE OF THE MODEL

A. GENERAL NETWORK COMPONENTS DESCRIPTION

This section describes generally the network components modeled in HM2 2.2. Figures 1, 2 and 3 depict the relationships among the network components discussed in the following sections.

⁹ AT&T has retained telecommunications consultants from the Deloitte & Touche Consulting Group (and not Deloitte & Touche, LLP as might have been inferred from the prior reference to "Deloitte & Touche" in footnote 7 of AT&T's August 9, 1996 *Further Comments* in CC Docket No. 96-45), to provide additional Hatfield support. Deloitte & Touche Consulting Group personnel have: (1) provided analytical support to Hatfield and AT&T personnel; (2) assisted with data entry, results interpretation, and version and release testing; and (3) worked to improve the Hatfield Model's user interfaces, as well as to identify other areas for improvement with regard to the operation of the model.

1. Loop description

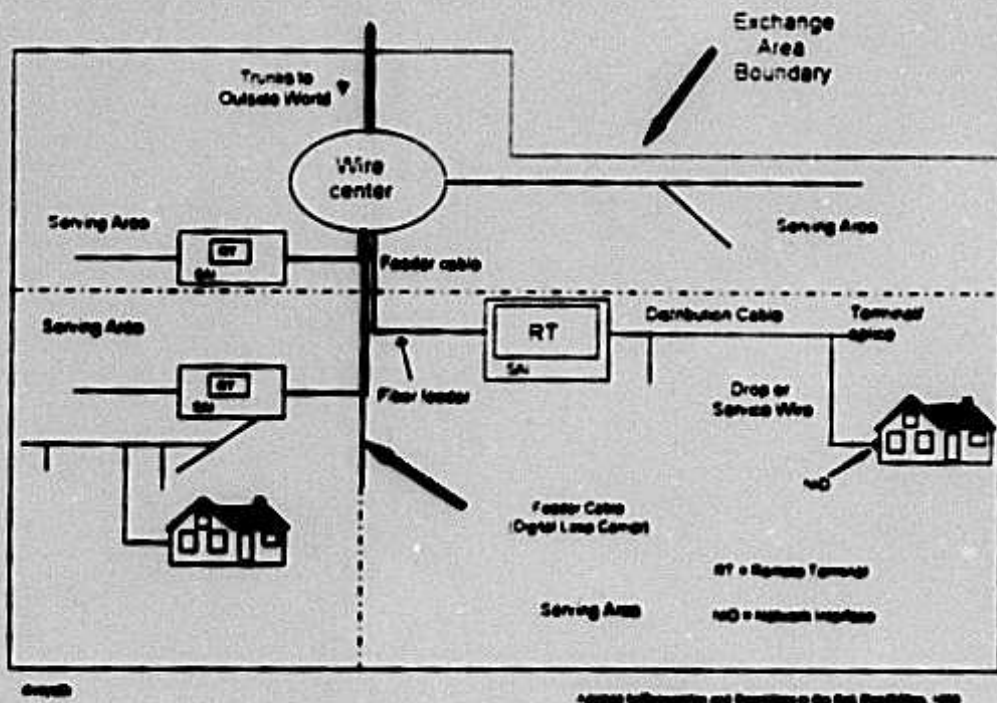


Figure 1 Loop components

a) General loop description

The local loop begins at a physical demarcation frame within the central office building (wire center). Copper cable feeder facilities terminate on the vertical side of the main distributing frame (MDF) in the wire center. Fiber optic feeder cable serving integrated digital loop carrier terminates on a fiber distribution frame in the wire center. At its distant end, the local loop terminates at the Network Interface Device (NID) at the customer's premises.

Loop cables are supported by "structures." These "structures" may be underground conduit, poles, or trenches for buried cable. Underground cable is distinguished from buried cable in that underground cable is placed in conduit, while buried cable comes into direct contact with soil¹⁰

¹⁰ While the conduit supporting underground cable is placed in a trench, buried cable may either be placed in a trench or be directly plowed into the earth.

b) Local Loop Components**(1) NID**

The demarcation point between the local carrier's network and the customer's inside wiring is known as the Network Interface Device (NID). This device terminates the drop wire and is an access point that may be used to isolate trouble between the carrier's network and the customer's premises wiring.

(2) Drop

A drop wire extends from the NID at the customer's premises to the block terminal at the distribution cable that runs along the street or the lot line.

(3) Block Terminal

The block terminal is the interface between the drop and the distribution cable. With aerial distribution cable, the block terminal is attached to a pole in the subscriber's backyard or at the edge of a road. If the distribution cable is buried, then the block terminal is contained within a pedestal.

(4) Distribution Cable

Distribution cable runs from each of the block terminals to the Serving Area Interface (SAI), also called a "cross box" or Serving Area Concept (SAC) box or connection. Distribution cable connects the feeder cable with all customer premises within a Census Block Group (CBG). The model assumes that each CBG contains one SAI, and that the SAI is placed one quarter of the way into the CBG. Distribution structure components may consist of poles, trenches and conduit. Manholes normally are not used in distribution facilities.

(5) Feeder facilities

Feeder cable may be copper wires or optical fibers. Feeder cables extend from the wire center to the SAIs. The Hatfield Model assumes that there is a standard feeder distance beyond which optical feeder cable will be installed and Digital Loop Carrier (DLC) equipment will be used to serve subscribers.

Feeder structure components also include poles, trenches and conduit. Manholes are also normally installed in conjunction with underground feeder cable. Manhole spacing is a function of population density and the type of feeder cable used. Manholes installed for underground fiber cable are normally farther apart than are manholes used with copper cables because the lightness and flexibility of fiber cable permits it to be pulled over longer lengths than copper cable. The costs of structure components are normally shared among at least three utilities, e.g., electric utilities, local exchange companies (LECs) and cable television (CATV) operators.

2. Interoffice network description

This section describes generally network components at the wire center and interoffice level. Figures 2 and 3 illustrate the relationships among the components described below.

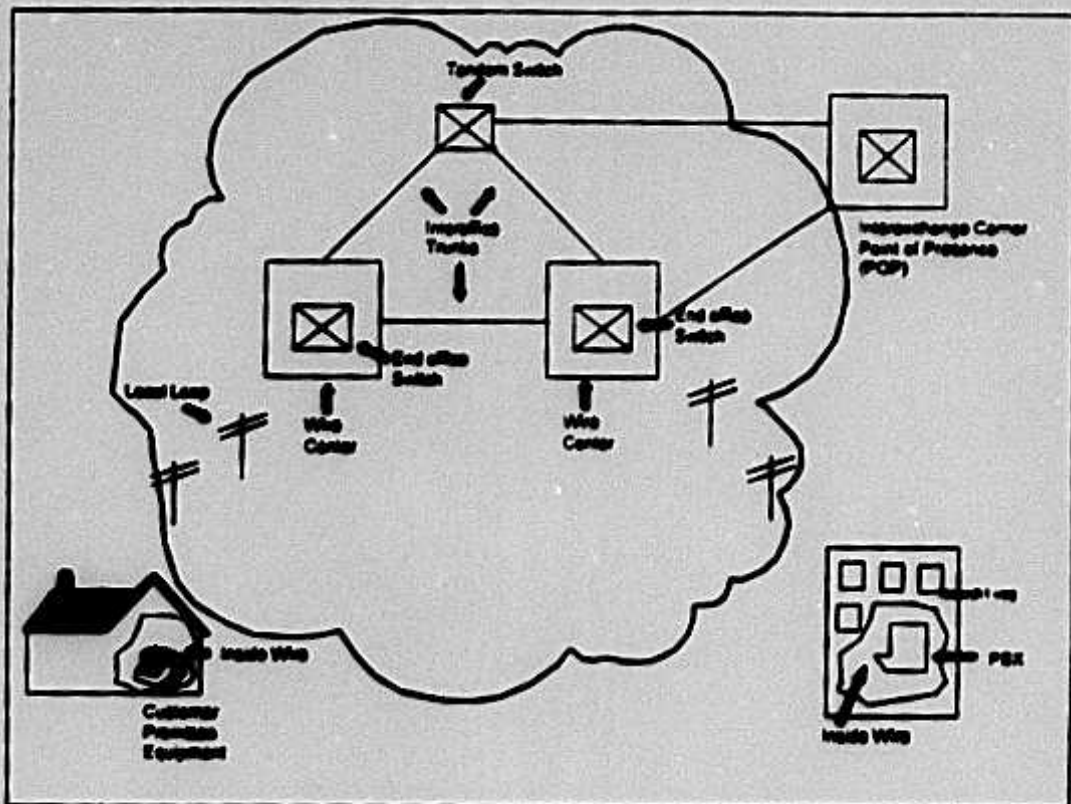


Figure 2 Interoffice network

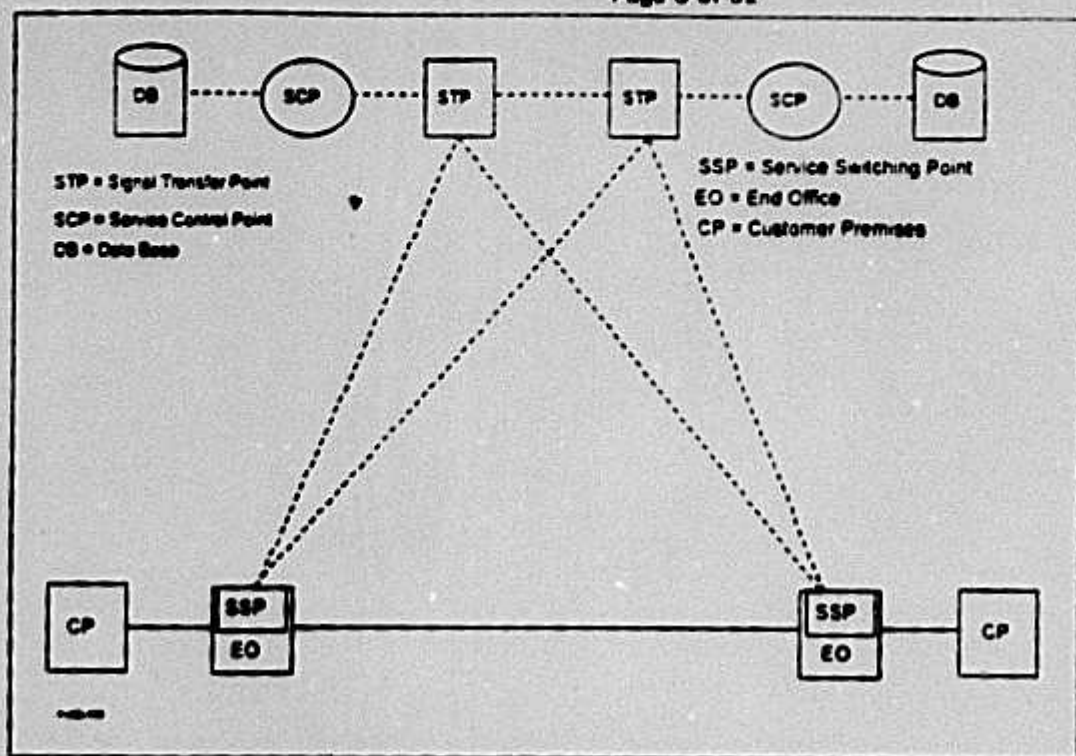


Figure 3 Signaling network components

a) Wire center

The wire center is a location from which local feeder routes emanate. A wire center normally contains at least one End Office (EO) switch and also may contain a tandem office, a Signal Transfer Point (STP), an operator tandem, or any combination of these facilities. Wire center physical facilities include a building, power and air conditioning systems, separate rooms housing switches, transmission equipment, distributing frames and entrance facilities for interoffice and loop cables.

b) End office switch

The end office switch provides dial tone to the switched access lines it serves. It also provides connections to other end offices via direct trunks, to tandem switches via tandem trunks, and to operator tandems via operator trunks. The model computes the numbers of trunks for each route according to input traffic assumptions and the breakdown of business, residential, and public access lines served by each end office switch.

c) Tandem switch

Tandem switches interconnect end office switches via tandem trunks. These trunks provide an alternate route for traffic between end offices when direct routes are unavailable. The tandem also may route access traffic between end offices and interexchange carriers' (IXC's) points of presence (POPs). Tandem switching functions often are performed by switches that also perform end office functions.

d) Signal transfer point

STPs route signaling messages between switching and control entities in a Signaling System 7 (SS7) network via signaling links between STPs and SS7-compatible end offices and tandems (called Service Switching Points "SSPs") as well as Service Control Points (SCPs). STPs are equipped in mated pairs, with at least one pair in each LATA.

e) Service switching points

SSPs are SS7-compatible end office or tandem switches. They communicate with each other and with SCPs through signaling links, which are 56 kbps dedicated circuits connecting SSPs with the mated STP pair serving the LATA.

f) Service control points

SCPs are databases residing in an SS7 network that contain various types of information such as IXC identification or routing instructions for 800 numbers in regional 800 databases and customer line information in Line Information Databases (LIDB).

B. OVERVIEW OF MODEL ORGANIZATION

Figure 4 shows the relationships among the various modules contained within HDM2.2.2. An overview of each component module follows.

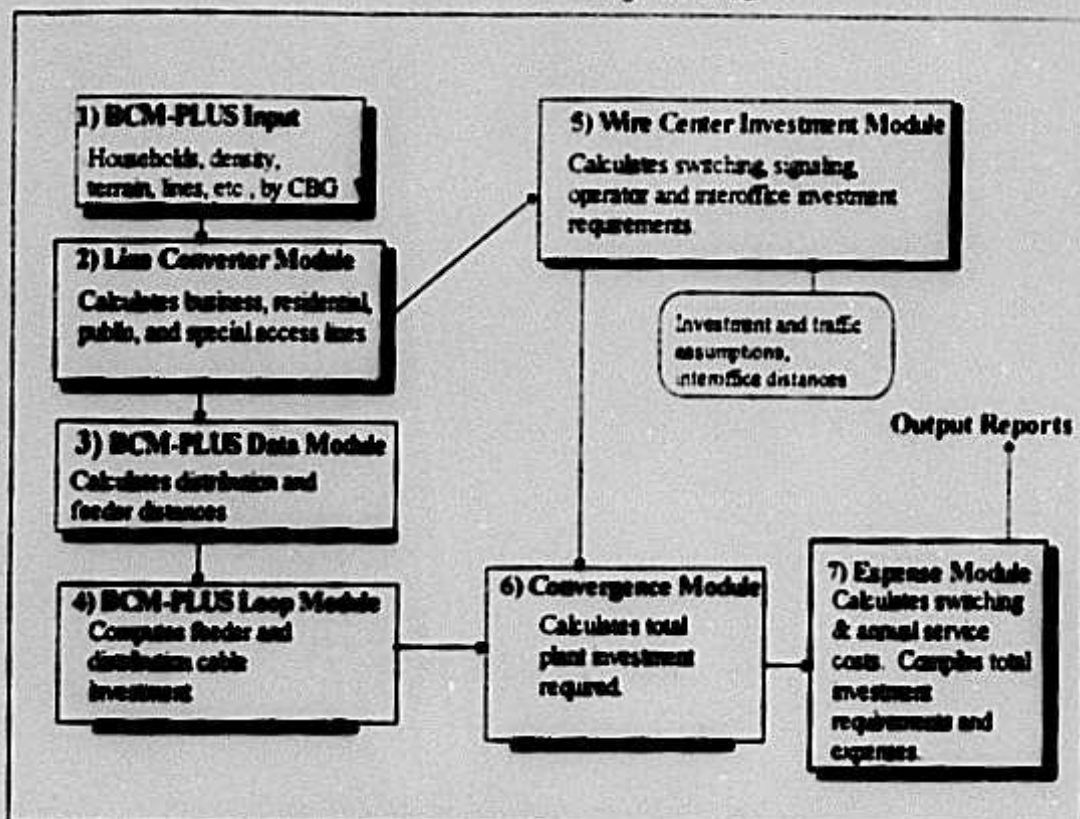


Figure 4 Hatfield Model Organization Flow Chart

1. BCM-PLUS loop input data file

The BCM-PLUS input data for the model generally consist of the original BCM state-by-state worksheets filed with the FCC.¹¹ The input household counts in each CBG (which in BCM1 were derived from 1990 Census Bureau data) have been replaced with 1995 household counts estimated from more recent Census Bureau data. As the following section discusses, HM2 2.2 modifies these BCM-PLUS data in several significant ways.

2. Line Converter Module

The model calculates all network costs on a per line basis, thus it must first determine the total access lines of all types within each CBG. The Line Converter Module transforms the Census data included in the BCM-PLUS input data files (which contain only household counts for each CBG) into total line counts by

¹¹ These data are for all states except Alaska. While the pertinent data for Alaska are included with BCM2, the BCM2 sponsors have placed more restrictive terms in the BCM2 license agreement that prohibit the use of these data for modeling use here.

customer type. The Line Converter Module performs this function while recognizing that residential subscriber penetration is less than 100%, that some residences contain second lines, and that business, public, and special access lines need also to be added. The module adds these latter line types based on other of its input data that indicate the number of business employees in each CBG. These line number calculations, which are performed on a CBG by CBG basis, are also required to accord with the number of lines that the incumbent LEC (ILEC) reports for the study area in ARMIS.

3. BCM-PLUS Data Module

The Data Module computes the distribution and feeder cable lengths necessary to serve each CBG and determines facilities placement difficulty according to geological parameters included in the BCM-PLUS input data.

4. BCM-PLUS Loop Module

The Loop Module estimates cable investments in each CBG according to the distribution and feeder lengths calculated in the Data Module. The module selects either fiber or copper feeder cable according to a user-adjustable parameter that specifies the feeder distance beyond which fiber is to be installed. The module then determines the size of copper or fiber cable required to serve each CBG according to user-adjustable maximum engineered fill levels for each population density range. Once the module has determined the required types and sizes of cable, it computes the total investment in feeder and distribution cables.¹²

5. Wire Center Module

The Wire Center Module computes investment in wire centers, switching (including end offices, tandems, and operator tandems), signaling, and interoffice transmission facilities. It uses line totals by type across all CBGs served by the wire center, along with user-adjustable traffic inputs, to estimate required switching capacities.

The model determines switching and interoffice capacity sufficient to serve all demand in the service area studied. HM2 2.2 derives its switch investment estimates by using data on typical per-line prices paid by BOCs, GTE and other independents,¹³ and data from Table 2.10 of the FCC's *Statistics of Communications Common Carriers*, which provides the average number of access lines served by existing LEC switches.

¹² A later module, the Convergence Module, adds investment for placement and "structure" (conduit, poles, trenching, and manholes), as well as other components, including SAs, terminals, splices, subscriber drops and NIDs.

¹³ See *U.S. Central Office Equipment Market -- 1994*, McGraw-Hill.

6. Convergence Module

The Convergence Module combines output of the Loop Module (loop cable investments) with that of the Wire Center Module (per-line wire center and interoffice investments). The Convergence Module also adds investment in SAIs, buried, underground and aerial cable placement, terminals and splices, drop wires, NIDs, and structure components including poles, conduit, and manholes. Output from this module contains total investment for all plant categories by density range.

7. Expense Module

The Expense Module uses output from the Convergence Module to produce monthly costs of Unbundled Network Elements (UNEs) and basic local service. These costs include the annual user cost of capital for network investment (e.g., depreciation, return, and tax on return), network operating and maintenance expenses, and other per-line expenses incurred by ILECs in the provision of local service and UNEs. This module uses investment, revenue and expense data relationships that are available from ILEC ARMIS reports and allows the user to set different economic lives for various plant categories as well as adjust capital structure parameters.

C. MODULE DESCRIPTIONS

1. BCM-PLUS Input Data File

BCM-PLUS includes input data files organized by state. Each state file contains a list of that state's CBGs. CBGs are assumed to be served from the nearest existing wire center.¹⁴ Each CBG appears as a separate record in a Microsoft Excel 7.0 spreadsheet, and each record includes a set of geometric parameters describing the physical relationship (distance and direction) between the center of the CBG and the wire center serving it. The data also contain certain geological parameters associated with the CBG that indicate bedrock depth, bedrock hardness, and soil type.¹⁵ The input data file also contains the estimated number of households in each CBG as of 1995.

¹⁴ Because wire centers are associated with specific telephone companies, the model may be run on a company-specific basis.

¹⁵ Studies of the effects of these parameters on the estimate of placement difficulty show that the parameters affect overall results only slightly. The HM2 2.2 Convergence Module produces much more accurate estimates of placement investment with user-adjustable inputs than did the original BCM with its undocumented input assumptions. As noted in the text, however, HM2 2.2 increases feeder and distribution cable lengths in the presence of shallow bedrock or rocky soil types for routing of facilities around areas with difficult placement conditions.

2. Line converter module

a) Overview

HM2 2.2 engineers loop facilities for residence, business, public and special access lines. As shown in Figure 5, the Line Converter Module calculates total access line counts for each CBG, as well as overall line totals for use in the BCM-PLUS Data Module and the Wire Center Investment Module. The Line Converter Module replaces the household count in each CBG with estimated total access lines, including business, public, special access, and first and second residential lines. This allows the BCM-PLUS Loop Module to calculate the sizes of feeder and distribution cables required to serve the existing demand.

b) Description of inputs and assumptions

The Line Converter module uses access line demand data from the Operating Data Reports, ARMIS 43-08, submitted to the FCC annually by all Tier 1 LECs.¹⁶ HM2 2.2 thus incorporates the following data.

- Residential access lines, both analog and digital. These totals measure all residential switched access lines, including flat rate (1FR) and measured rate (1MR) service.¹⁷
- Business access lines, including analog single line, analog multiline and digital. These totals include flat rate business (1FB) and measured rate business (1MB) single lines, PBX trunks, Centrex lines, hotel/motel long distance trunks and multi-line semi-public lines.¹⁸
- Special access lines, including analog and digital. These totals include dedicated lines connecting end users' premises to an IXC POP, but do not include intraLATA private lines.¹⁹
- Public access lines, which include lines associated with coin (public and semi-public) phones, but exclude customer owned pay telephone lines.²⁰

¹⁶ See, Reporting Requirements for Certain Class A and Tier 1 Telephone Companies (Parts 31, 43, 67 and 69 of the FCC's Rules), CC Docket No. 86-182, 2 FCC Rcd 5770 (1987) (ARMIS Order), modified on recon., 3 FCC Rcd 6375 (1988). Tier 1 LECs are those with more than \$100 million in annual revenues from regulated services. This includes over 50 carriers.

¹⁷ Revision of ARMIS USOA Report (FCC Report 43-02) for Tier 1 Telephone Companies and Annual Report Form M, AAD 92-46, DA 92-1405, released October 16, 1992, Appendix C, at FCC Report 43-08 - Report Definition for Table S-3, page 2.

¹⁸ *Id.* at 1-2.

¹⁹ *Id.* at 2-3.

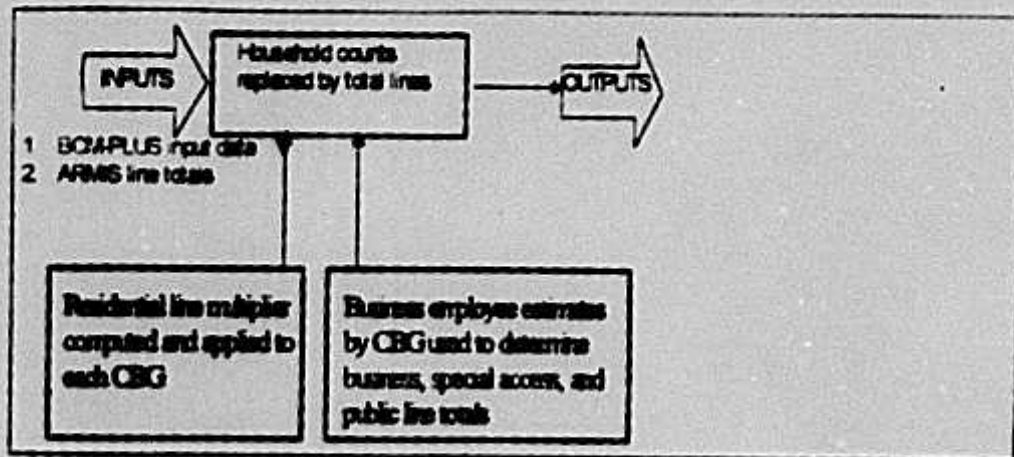


Figure 5 Line Converter Module

c) Explanation of calculations

In order to estimate loop plant investment properly, the model must consider the demand for all services, e.g., business, first and second residential, special access and public access lines, within each CBG. Presumably, these service-specific demand data are known to the ILECs at a wire center or finer level. But because the ILECs have declared these data to be proprietary, absent Commission directive they are not available for incorporation into HM2.2.²¹

The Line Converter Module uses ARMS access line data to assist in estimating total line counts per CBG. To compute residential lines in each CBG, the module multiplies the household count by the ratio of total reported residential access lines to total households. This accounts for total household penetration and multiple residential lines via a single average factor. The module similarly computes business lines in each CBG by multiplying the number of business employees in each CBG by the ratio of total reported business lines to total employees in the study area. Special access and public line calculations also are based on business employee counts because both services are closely associated with businesses.

²⁰ *Id.* at 2.

²¹ Some BOCs, notably the Southwestern Bell companies, formerly published this information for use by their interexchange carrier customers, but the practice apparently has been discontinued. See, Southwestern Bell, *Interexchange Customer Information Handbook*, Volume IV (End Office Profile), 1987.

d) Description of module outputs and connection to next module

The primary output from the Line Converter Module is the Input Data File -- with household counts in each CBG replaced by total residential, business, special access and public lines. The other data in the Input Data File pass through the module unchanged for eventual use by both the BCM-PLUS Data Module and the Wire Center Module.

3. BCM-PLUS Data module

a) Overview

The BCM-PLUS Data Module uses Line Converter Module output to calculate feeder, subfeeder, and distribution cable lengths. The BCM-PLUS Data Module uses the distance between each CBG and its serving wire center, and the area of each CBG, to estimate feeder and distribution cable lengths. In areas of increased placement difficulty, generally those CBGs with shallow bedrock (within one foot of the surface) or having rocky (e.g., "bouldery") soil types, the Data Module increases the calculated feeder and distribution distances to allow for routing of facilities around these rocky conditions.

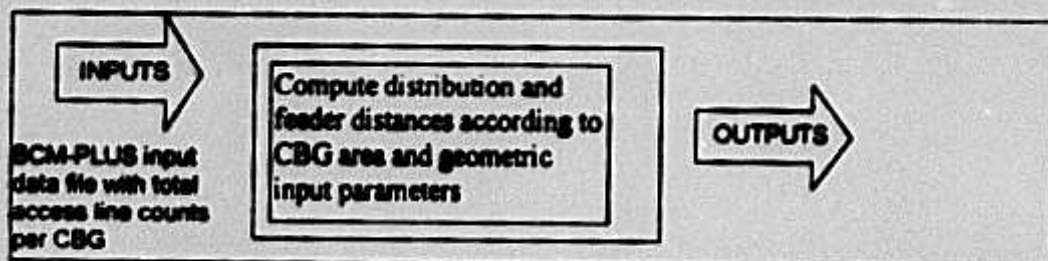


Figure 6 Data Module

b) Description of inputs and assumptions

The Data Module bases its loop length calculations on the following assumptions.

- Feeder cable extends from the wire center to an SAI located midway between the edge and the center of the CBG.
- There are four main feeder routes that leave each wire center, with sub-feeder routes placed at 90 degree angles from the main feeder routes.
- Customer premises are spaced uniformly across a CBG.
- Distribution cables extend from the SAI within the CBG to terminals serving several customers' premises.

- A variable number of equal-length distribution cables serve each CBG. The area of the CBG determines the length of each cable, and the CBG line density determines the number of cables.

A more detailed description of the model's feeder route design is contained in the documentation to Release 1.²²

c) **Explanation of calculations**

Distribution Distance -- BCM-PLUS uses geometric relationships to calculate distribution distances. The distribution distance is the average distance between a customer premises and the SAI. The module calculates the average distribution distance within a CBG to equal 0.625 times the length of one side of the CBG.

SAI placement -- The Data Module adds sufficient feeder cable to place the SAI at a point midway between the CBG boundary and its center. This approach comports with telephone company outside plant engineering practices.

d) **Outputs**

The output of the BCM-PLUS Data Module includes total line counts per CBG, along with feeder and distribution cable lengths. Other parameters include "cable multipliers" used in a previous version to estimate combined placement investment. Because HM2.2.2 calculates separately cable placement and structure investments, these values are not used by BCM-PLUS.

4. **BCM-PLUS Loop Module**

This section discusses inputs and calculations in the BCM-PLUS Loop Module.

a) **Module overview**

The BCM-PLUS Loop Module estimates loop cable facilities investment for HM2.2.2. The Loop Module employs a "bottoms-up" network design process that uses forward-looking loop plant engineering and planning practices, publicly-available information on component prices, and least-cost cable sizing algorithms to estimate the outside plant investment appropriate to a TELRIC-based analysis.

²²

See, note 4, *infra*.

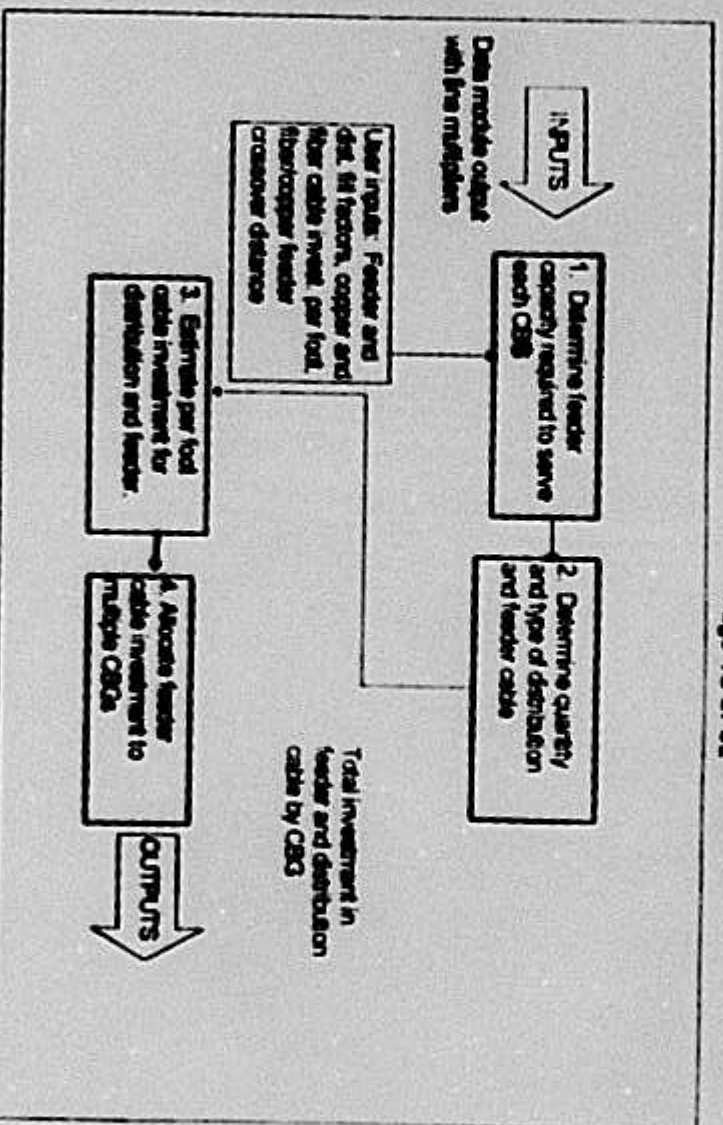


Figure 7 BCM-PLUS Loop Module

b) Description of inputs and assumptions

Inputs to the Loop Module include the per-foot investment cost for copper and fiber cable, the distance at which fiber feeder cable is installed, the number of DS-0s that can be carried on a single fiber, and the number of fibers required to feed a DLC remote terminal. There are separate per-unit investment tables for distribution, copper feeder, and fiber feeder cables. These tables show the assumed per-foot investment for cables having different cross sections. The default numbers in these tables assume discounted cable materials prices, along with per-unit costs for installation, engineering, and delivery.

c) Inputs derived from the Data Module

The following outputs from the Data Module are used as inputs by the Loop Module.

Feeder and Distribution Distances -- These are the feeder, sub-feeder and distribution lengths calculated for each CBG. The main feeder distance (called the "B" distance in the model) for each CBG is expressed as the incremental distance from the CBG to the CBG served by that feeder that is the next closest to the wire center (the "B segment" length). The formula used to develop B segment length is to first match the CBG with all others served by the same wire center and within the same quadrant (i.e., on the same main feeder route). The module then

calculates the B segment length for each CBG by subtracting from its total B length the total B length associated with the next CBG closer to the wire center. Segmentation of the main feeder in this way allows the Loop Module to simulate the tapering of cable facilities along the feeder route.

The model also computes a "subfeeder" distance (called the "A" distance within the model) which is the distance from the main feeder route to the SAI in CBGs that are not astride the main feeder route.

d) User Specified Inputs

Because the Loop Module simulates the "bottoms up" development of a network, it requires several inputs specifying the type and purchase price for copper distribution cable and copper and fiber feeder cable, as well as maximum engineered cable fill factors that vary by density range. Because the actual prices paid for these components may vary from carrier to carrier, these values may be adjusted, if appropriate, by the user. The model, however, contains HAI's best estimates as default values for cable investment per foot and cable fill factors. These default values for fill factors and cable investment per foot are as follows:

Density (lines/sq. mi.)	Feeder fill	Distribution fill
0 - 5	0.65	0.50
25 - 200	0.75	0.55
200 - 650	0.80	0.60
650 - 850	0.80	0.65
850 - 2550	0.80	0.70
> 2550	0.80	0.75

Fiber feeder cable investment per foot (including engineering, delivery and installation)	
Fiber cable size(strands)	Investment per foot
12	\$2 90
18	\$3 20
24	\$3 50
36	\$4 10
48	\$4 70
60	\$5 30
72	\$5 90
96	\$7 10
144	\$9 50
216	\$13 10

Copper feeder cable investment per foot (including engineering, delivery and installation)	
Pairs in sheath	Investment per foot
100	\$2 50
200	\$4 25
400	\$7 75
600	\$11 25
900	\$16 50
1200	\$21 75
1800	\$32 25
2400	\$42 75
3000	\$53 25
3600	\$63 75
4200	\$74 25

Distribution cable investment per foot (including engineering, delivery and installation)	
Copper cable sizes	Investment per foot
25	\$1.19
50	\$1.63
100	\$2.50
200	\$4.25
400	\$7.75
600	\$11.25
900	\$16.50
1200	\$21.75
1800	\$32.25
2400	\$42.75
3600	\$63.75

Other user inputs are discussed in the feeder plant section below.

e) Distribution plant

This section examines components of the distribution facilities. The model assumes that all distribution cables serving a CBG are of equal length. The number of distribution cables per CBG varies by density range as shown below.

Density (lines/sq. mi.)	Number of cables
0 - 5	2
5 - 200	4
200 - 650	4
650 - 850	4
850 - 2,550	6
> 2550	8

The larger number of cables serving higher density CBGs reflects the fact that households will tend to be distributed more uniformly across densely populated CBGs than across less dense CBGs. In addition, customer premises plot sizes will be smaller. Lower numbers of cables serving lower density CBGs reflect the fact that customer premises will either be concentrated along a few roads, or clustered in towns rather than being distributed uniformly.

Mix of aerial and underground plant for distribution -- Distribution cables typically connect with the feeder network at one or more SAJs and run along streets within a defined area. Distribution plant may be aerial (carried on poles), underground (placed in conduit), or buried (plowed directly in the ground or placed in a trench without conduit). The proportions of aerial, underground and buried cable are user-adjustable variables set in the Convergence Module.

Unit Costs for Distribution Cable -- The default cable investment figures shown in the preceding table include discounted materials prices, engineering, delivery to the site, and placement or installation.²³ These costs are added to other loop investments in the Convergence Module, described later.)

Fill Factors for Distribution Cable -- The Loop Module permits users to input values specifying the maximum engineered level of plant utilization or "fill" for distribution and feeder cable.²⁴ Engineered cable fills are always less than 100% in practice, with some spare pairs necessary to accommodate unforeseen growth, breakage and line administration.

The effective fill factors achieved by the Hatfield Model are even lower than the engineered fill factors because the model requires that the next larger available cable size be installed to accommodate the engineered fill.

f) Feeder plant

Feeder cables extend along any of four routes from the wire center to one or more points where they are cross-connected to the distribution network. Depending on required feeder capacity, distance or economics may dictate that feeder be provisioned using various sizes of copper cabling, or fiber cables in conjunction with DLC systems. The Loop Module assumes that a CBG will be served with fiber-fed DLC equipment whenever the feeder length exceeds a user-adjustable threshold value (the default is 9,000 feet), otherwise it assumes copper feeder cable.

The user may specify the number of fibers assigned per DLC remote terminal. The default value is four. Similarly, the number of equivalent voice circuits (DS-0s) that may be carried on this fiber may be set by the user. The default value is 2016, or 3 DS-3s.

²³ Placement investment consists of pulling underground cable through conduit and mounting aerial cable on poles. It should not be confused with the actual "structure" investment in poles, conduit and manholes, or in the installation of structure components.

²⁴ A cable fill factor represents the ratio of working lines (measured in terms of voice grade equivalent channels or copper wire pairs) to minimum installed line capacity.

data inputs overall line counts obtained from the Line Converter Module and interoffice distances for the calculation of transmission facilities investment.²³

There are many user-adjustable input assumptions in the Wire Center module. The following sections discuss these assumptions, and Appendix C includes additional tables showing all of the default values for the module's input parameters.

c) Traffic assumptions

Many of the calculations in the Wire Center module rely on traffic assumptions suggested in Bellcore documents.²⁴ These inputs, which the user may alter, assume 1.3 busy hour call attempts (BHCA) per residential line and 3.5 BHCA per business line. Total busy hour usage is then determined based on published Dial Equipment Minutes (DEM) information. Other inputs, which may be changed by the user, specify the fraction of traffic that is interoffice, the fraction of traffic that flows to operator services, the local fraction of overall traffic, as well as breakdowns between direct-routed and tandem-routed local, intraLATA toll, and access traffic. Appendix C contains tables showing the default settings for these parameters.

d) Explanation of calculations

The following sections describe the calculations used to generate investments associated with switching, wire centers, interoffice transport, signaling and operator systems functions.

(1) Switching investment calculations

The Module places at least one end office switch in each wire center. It sizes the switches placed in the wire center by adding up all the switched lines in the CBGs served by the wire center, then compares this line total to the maximum allowable switch line size. This parameter is user-adjustable, but its default setting is at 100,000 lines with a fill factor of 0.80, yielding a maximum effective switch line size of 80,000. By default, the model will equip the wire center with a single switch if the number of switched access lines served by the wire center is no greater than 80,000. If a wire center serves 90,000 lines, the model will compute

²³ The HM2.2.2 includes a set of interoffice distance calculations produced from wire center location information from Bellcore's Local Exchange Routing Guide (LERG). Because AT&T has now gained a site license for use of these data, users of the Hatfield Model no longer need to obtain their own copies of the LERG.

²⁴ Bell Communications Research, *LATA Switching Systems Generic Requirements, Section 17: Traffic Capacity and Environment*, TR-TSY-000517, Issue 3, March 1989.

the investment required for two 45,000 line switches.²⁷ The wire center module also compares the BHCA produced by the mix of lines served by each switch with a user-adjustable processor capacity (default set at a maximum of 600,000 BHCA) to determine whether the switch is line-limited or processor real-time-limited.

Once the model determines the end office switch line size, it calculates the required investment per line from an investment function that relates per-line switching investment to switch line size. The data defining this function were obtained from a publicly-available study of the central office equipment market published annually by McGraw-Hill.²⁸ This study shows the average investment per new line of digital switching paid by BOCs to be \$102, and by independents to be \$235, in 1995.²⁹ The model combined these figures with average BOC (11,200) and independent (2,761) switch line sizes derived from data published in the FCC's *Statistics of Communications Common Carriers*, along with information on much larger switches obtained from switch manufacturers to develop the complete investment function.³⁰ The above per-line investment figures are for the entire end office switch, including trunk ports. These investment figures are then reduced by \$16 per line to remove trunk port investment that will be accounted for in the module's trunk calculations. Figure 9 shows the resulting investment curve

²⁷ If multiple switches are required in the wire center, they are sized equally to allow for maximum growth on both switches.

²⁸ Northern Business Information study: *U.S. Central Office Equipment Market - 1995*, McGraw-Hill.

²⁹ These per-line average prices represent investments over all types of switching, including remote switching systems, hosts, and stand-alone end office switches. Through this scaling, the switching investment curve thus represents automatically the cost of the average profile of remote, host, and stand-alone applications of end office switches.

³⁰ Federal Communications Commission, *Statistics of Communications Common Carriers*, Tables 2.3 and 2.4, 1994 edition.

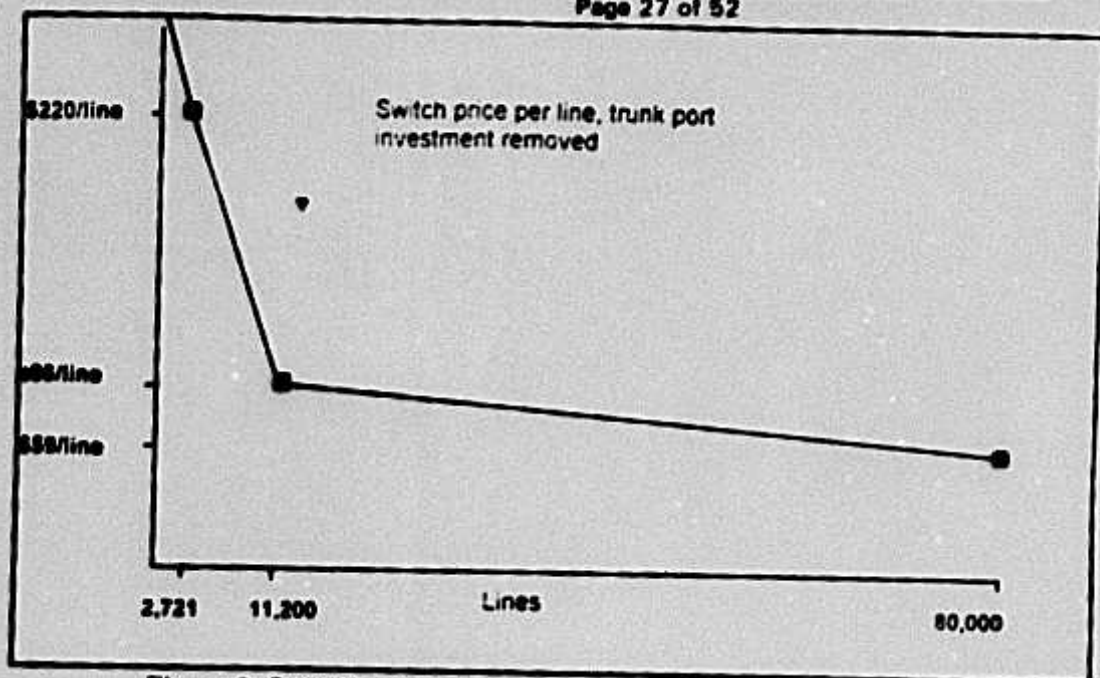


Figure 9 Switching investment curve

The wire center module uses existing tandem and end office wire center locations for computing interoffice transmission investments. A preprocessing step, relying on licensed LERG data, produces end office-to-tandem, end office-to-STP, tandem-to-STP, and STP-to-STP distances in a table that then is used by the module to estimate interoffice transmission facility investments. The module computes investments for end office and tandem "A" signaling links, "C" signaling links between the STPs in a mated pair, and it estimates investments in "D" signaling link segments that an interconnecting carrier such as an IXC may lease from the ILEC.

Tandem and operator tandem switching investments are computed according to assumptions contained in an AT&T report on interexchange capacity expansion costs filed with the FCC.¹¹ The investment calculation assigns a price to switch "common equipment," switching matrix and control structure, and adds to these amounts the investment in trunk interfaces. The numbers of trunks and their related investments, are derived from the transport calculations described below. The module recognizes that a significant fraction of local tandems also perform end office switching functions, and the inputs allow the user to vary the sharing of tandem common equipment with end office use. The default sharing value is 40%.

¹¹ AT&T, "An Updated study of AT&T's Competitors' Capacity to Absorb Rapid Demand Growth," filed with the FCC in CC Docket No. 79-252, April 24, 1995 ("AT&T Capacity Cost Study").

Wire center investments required to support end office and tandem switches are based on assumptions regarding the size of room required to house a switch (for end offices, this size varies according to the line sizes of the switch), construction costs, lot sizes, land acquisition costs and investment in power systems and distributing frames. The default values are shown in Appendix C.

The model computes required wire center investments separately for each switch. For wire centers housing multiple end office switches, the wire center investment calculation adds switch rooms to house each additional switch. Tandem wire center calculations assume the maximum switch room size, and further assume the tandem will reside in a wire center that contains at least one end office switch.

(2) Transport calculations

The traffic and routing assumptions listed above, along with the total mix of access lines served by each switch, form the basis for the model's transport calculations. The model determines the overall breakdown of traffic per subscriber according to the traffic assumptions and computes the numbers of trunks required to carry this traffic. These calculations are based on the fractions of total traffic assumed for interoffice, local direct routing, local tandem routing, intraLATA direct and tandem routing and access direct and tandem routing. These traffic fractions are applied to the total traffic generated in each wire center according to the mix of business and residential lines and appropriate per-line offered load assumptions. These trunk loading assumptions include a user-adjustable maximum trunk utilization of 27.5 CCS in the busy hour.³²

The distance preprocessing calculations estimate interoffice distances using existing wire center and tandem locations. The calculation assumes rectilinear routing between end offices and tandems, and between switches and STPs. The resulting distances are greater than if they were calculated as airline mileage.

Average direct-route distances for local, intraLATA and access traffic are set as user-definable inputs. It is not possible to compute these values from wire center locations because existing exchange area definitions determine whether routes will carry local, intraLATA toll, or access traffic. In addition, the locations of IXC POPs may not be publicly available. Because of these factors, the default distances for direct transport are 10 miles for local routes, 25 miles for intraLATA routes, and 15 miles for access routes. The user may alter these values.

³²

The 27.5 CCS value is based on an AT&T estimate of maximum per trunk utilization. See, AT&T Capacity Cost Study.

The model contains explicit transport facilities investment calculations to produce both termination and per-mile investments, each expressed per DS-0 (a 64 kbps voice-equivalent circuit). The assumptions underlying these calculations include the facilities capacity expressed at a default SONET transmission rate of OC-12, multiplexer installed price per end, regenerator spacing and investment, buried/underground/aerial composition, manhole spacing and investment, pole spacing and investment, along with ancillary investments such as splicing, optical patch panels, and "pigtail" (short connectorized fibers between strands in the cable and the optical patch panel) investment. Interoffice investment calculations also include a "sharing" factor that accounts for the sharing of structure used by feeder and interoffice facilities. This eliminates double-counting of structure between feeder and interoffice routes. The amount of sharing, expressed as a percentage of interoffice route miles, is a user-adjustable input. The default value is 25%.

(3) Tandem switch calculations

The module scales the investment in tandem switch common equipment according to the total number of tandem trunks computed for the study area. By doing so, it thus avoids equipping maximum-capacity tandems whenever a LATA is served by multiple tandems. The calculations also recognize that a significant fraction of tandems in practice are "Class 4/5" offices that serve both tandem and end office functions. A sharing fraction may be set by the user to reflect the incidence of such dual-purpose switches.

(4) Signaling network calculations

The Wire Center Module uses the preprocessed interoffice distances to compute signaling link investment for end office and tandem A links, C links between the STPs in a mated pair, and D link segments. The investment per link-mile is the same as the computed per-DS-0 investment described above.

The model always equips at least two signaling links per switch. It also computes required SS7 message traffic according to the call type and traffic assumptions described earlier. User inputs define the number and length of ISDN User Part (ISUP) messages required for interoffice call control. Default values are six messages per interoffice call attempt with twenty-five octets per message. These values are those assumed in the AT&T Capacity Cost Study.

Other inputs define the number and length of Transaction Capabilities Application Part (TCAP) messages required for database lookups, along with the percentage of calls requiring TCAP message generation. Default values, also obtained from the AT&T Capacity Cost Study, are two messages per transaction, at 100 octets per message, and 10% of all calls requiring TCAP generation. If the message traffic from a given switch exceeds the link capacity (also user-adjustable and set at 56 kbps and 40% occupancy as default values), the model will add links

to carry the computed message load. The total link distance calculation includes all the links required by a given switch.

STP capacity is expressed as the total number of signaling links each STP in a mated pair can terminate (default value is 720 with an 80% fill factor). The maximum investment per STP pair is set at \$5 million, and may be changed by the user. These default values derive from the AT&T Capacity Cost Study. The STP calculation scales this investment based on the number of links the model requires to be engineered for the study area.

SCP investment is expressed in terms of dollars of investment per transaction per second. The transaction calculation is based on the fraction of calls requiring TCAP message generation. The total TCAP message rate in each LATA is then used to determine the total SCP investment. The default SCP investment is \$20,000 per transaction per second and is based on a number reported in the AT&T Capacity Cost Study.

(5) Operator systems calculations

Operator tandem and trunk requirements are based on the operator traffic fraction inserted by the user into the model and on the overall maximum trunk occupancy value of 27.5 CCS discussed above. Operator tandem investment assumptions are the same as for local tandems.

Operator positions are assumed to be based on current personal computer terminal technology. The default operator position investment is \$3500. The Model includes assumptions for maximum operator "occupancy" expressed in CCS. The default assumption is that each position can be in service 27.5/36 of the busy hour. This value is related to the maximum trunk occupancy assumption described above. Also, because many operator services traditionally handled by human operators may now be served by announcement sets and voice response systems, the model includes a "human intervention" factor that reflects the fraction of calls that require human operator assistance. The default factor is 10, which is believed to be a conservative estimate. (A factor of ten implies that one out of ten calls will require human intervention).

6. Convergence module

The Convergence Module combines the loop cable investments produced by BCM-PLUS with the wire center, switching, transport, signaling and operator systems investments calculated by the Wire Center Investment Module. The output of the Convergence Module is the complete collection of network investments stated by density range for use by the Expense module.

The module adds structure investment to the loop cable investments produced by the Loop Module based directly on the number of sheath miles of cable to be installed. The previous version of the Hatfield Model relied on BCM estimates of loop structure components which were calculated by applying "cable multipliers" to loop cable investment. The cable multipliers produced estimates of structure that varied directly with cable investment. In some cases, the structure estimates per unit length were unacceptably low. The multiplier approach also improperly made structure investment a function of cable materials price discounts.

In Release 2, the Convergence Module includes user-defined inputs for conduit investment, pole investment and spacing, manhole investment and spacing, trenching and direct burial investment, and breakdowns of aerial, buried, and underground cable. Although the Loop Module cable investment inputs include values for aerial and underground cable, where buried cable is required the Convergence Module adds an incremental amount per foot to represent the increased investment in armoring that is characteristic of cable intended to be directly buried. The default assumptions, which vary by density range, appear in Appendix C. There are separate sets of default inputs for distribution, copper feeder and fiber feeder facilities."

The following tables display the default values for structure type:

Distribution Structure			
Density Range	Aerial Fraction	Buried Fraction	Underground Fraction
0 - 5	0.50	0.50	-
5 - 200	0.50	0.50	-
200 - 650	0.50	0.50	-
650 - 850	0.50	0.50	-
850 - 2550	0.40	0.50	0.10
> 2550	0.65	0.05	0.30

11

The HM2 2.2 Convergence Module still performs certain loop-related calculations. These were originally included in this module to correct deficiencies in the initial BCM loop calculations. HAJ has chosen to keep these additional calculations in the Convergence Module even after the incorporation of BCM-PLUS into HM2 2.2.

Copper Feeder Structure			
Density	Aerial Fraction	Buried Fraction	Underground Fraction
0 - 5	0.50	0.45	0.05
5 - 200	0.50	0.45	0.05
200 - 650	0.50	0.45	0.05
650 - 850	0.40	0.40	0.20
850 - 2550	0.10	0.10	0.80
> 2550	0.05	0.05	0.90

Fiber Feeder Structure			
Density Range	Aerial Fraction	Buried Fraction	Underground Fraction
0 - 5	0.35	0.60	0.05
5 - 200	0.35	0.60	0.05
200 - 650	0.35	0.60	0.05
650 - 850	0.20	0.60	0.20
850 - 2550	0.10	0.10	0.80
> 2550	0.05	0.05	0.90

The Convergence Module adds several components to the loop cable investments produced by the Loop Module: NIDs, SAIs, terminals and subscriber drops. The drop and terminal/splice values are added for each line directly. The model computes one NID per household and one NID for every four (a user-adjustable value) business lines. The default per-unit investments are \$30 for the NID (obtained from discussions with subject matter experts), \$40 for the drop (taken from the New England Telephone Incremental Cost Study²⁴), and \$35 for the terminal and splice.

The SAI investments depend on whether copper or fiber feeder cable feeds a particular CBG. If the feeder cable is copper, the SAI is a simple cross-connect arrangement. This arrangement's investment is obtained from a table listing SAI installed prices by total lines served. For optical feeder cable, the SAI consists of an optical patch panel for connecting the cable to the remote terminal, along with an associated cross-connect for connecting the subscriber loops to the analog side of the remote terminal. Investment assumptions for both types of SAIs include engineering, a housing, and site preparation, along with common equipment and

²⁴ NYNEX, 1993 New Hampshire Incremental Cost Study

per-line investments in channel units. A separate fill factor applies to the number of lines served by each set of common equipment.

Structure investment (*i.e.*, poles, conduit, trenches, and manholes) generally are shared among utilities, typically LECs, CATV operators, electric utilities, and others, including competitive access providers (CAPs) and IXC's. To the extent that several utilities may place cables in common trenches, conduits or on common poles, it is appropriate to share the costs of these structure items among them. Because the Convergence Module reports investments in different structure separately to the Expense Module, the user may select the fraction of each type of distribution and feeder structure investment that should be assigned to local telephone service.

The Convergence Module also adds investment for integrated DLC equipment. Inputs include site and power, common equipment, and per-line investment in channel units. The module allows two types of DLC equipment as described in the Release 1 documentation: TR-303-compatible SLC®-2000 equipment, used in all but the lowest density zone, and proprietary equipment manufactured by Advanced Fibre Communications, a California company, in the 0-5 lines per square mile range.

The Convergence Module produces investments in the following categories for each of the six density ranges:

- Distribution (aerial, buried, and underground copper cable and associated structure)
- Concentration (DLC remote terminal and associated investment in power, site preparation, and housing)
- Feeder (aerial, buried and underground fiber and copper feeder cable and associated structure)
- Switching (end office and tandem switching investment)
- Wire center (end office and tandem wire center investment)
- Operator services (operator tandem switching, tandem wire center, trunks and operator positions)
- Transport (common and dedicated)
- STPs
- SCPs
- Signaling links
- NID, drop, terminal and splice, and SAI

In addition, the Convergence Module output sheet summarizes line and trunk counts, and passes other parameters, such as tandem routing fractions and DEMs, to the Expense Module. Line counts include residential, business, special access and public access lines, and the module also reports households in each density range.

7. Expense Module

a) Overview

The Expense Module provides per-line and per-month cost summaries for each unbundled network element defined by the model, and for basic universal service. It does so by calculating capital carrying cost, operating expenses, network operation expenses, and attributable support expenses for each of eleven UNEs plus public telephone terminal equipment.

The Expense Module uses the output of the Convergence Module to capitalize the investments needed for each UNE and the per-line investments for basic universal service. The module requires investment, revenue and expense data reported by individual LECs in their annual ARMIS reports. The Module's other required inputs are capital structure parameters (e.g., debt/equity ratio, costs of debt and equity) as well as the total network investment produced by the Convergence Module.

The Expense Module uses ARMIS data to calculate several expense-to-investment ratios to be applied to the investments in different plant categories as computed by the model. It also uses estimates of LEC revenues, tax rates, costs of debt and equity and economic service lives for various types of network equipment.

This section describes the inputs and assumptions of the Expense Module, including ARMIS data, capital structure parameters and expense factors built into the module. It also explains the calculations used to determine capital costs and operating expenses.

Hatfield Model

Version 2.2, Release 2

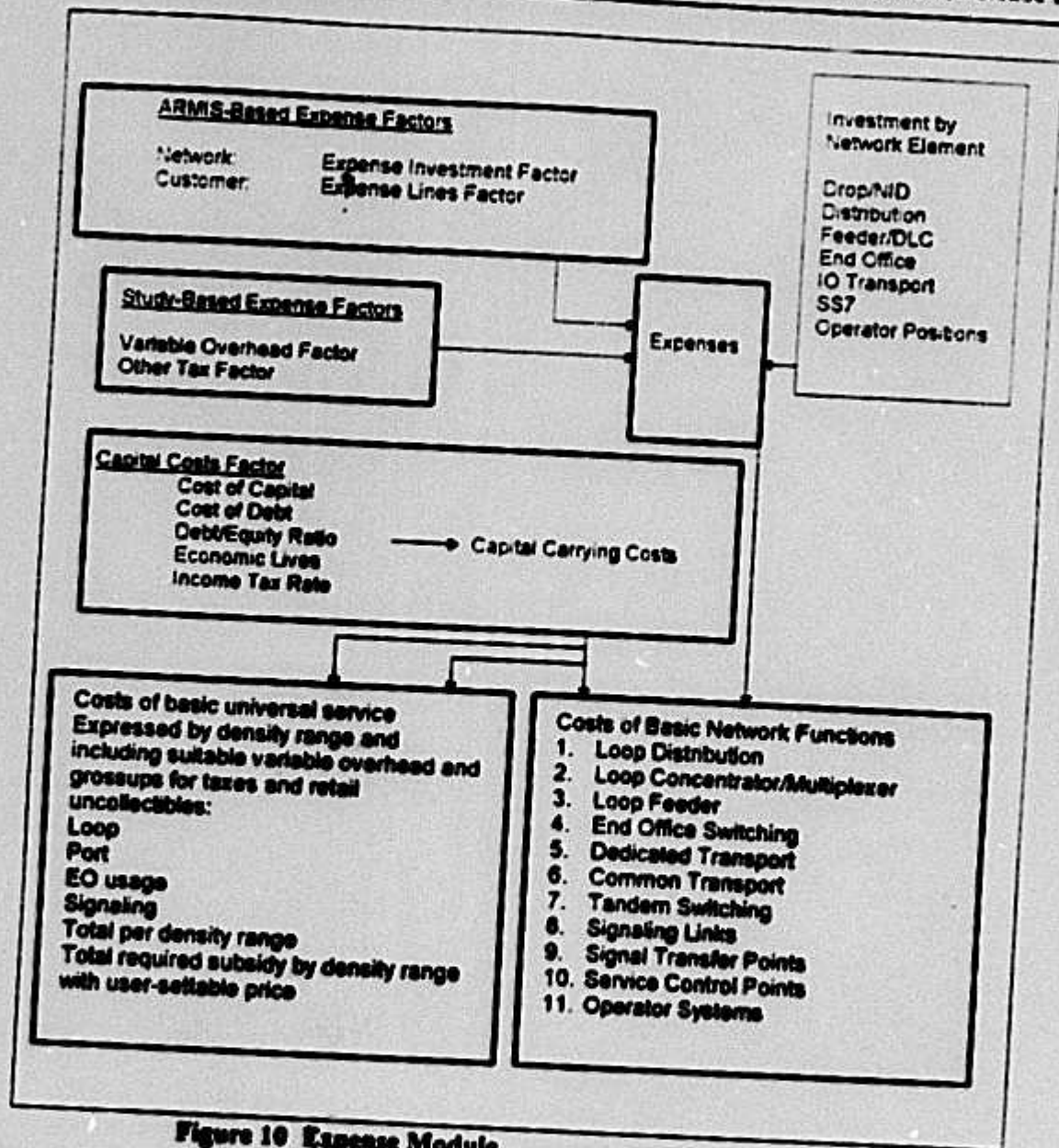


Figure 10 Expense Module

b) Description of inputs and assumptions

(1) ARMIS data

The ARMIS data used in the Expense Module include investment and operating expenses and revenues for a given local carrier and state. These data are used to derive the total investments, expenses and revenues for each UNE. The

investment, expense and revenue categories are listed below, and described in detail in the Calculations section

- (a) plant specific operations
 - end office and tandem switching -- digital switching, operator systems
 - transmission -- circuit equipment, transmission
 - information origination and termination -- public telephone, terminal equipment
 - cable and wire facilities -- poles, cable, conduit
- (b) plant non-specific operations
 - provisioning
 - power
 - plant operations
 - network administration
 - testing
 - general support equipment -- land, buildings, vehicles, furniture, office and other equipment

In addition, ARMIS data include local network service revenues by the following categories:

- access revenue -- end user, switched and special access revenue
- basic service revenue
- long distance network revenue

(c) Capital structure parameters

The Expense Module requires capital structure parameters to calculate the carrier's Weighted Average Cost of Capital (WACC), which is a discount factor used to calculate capitalized costs of UNEs and basic local service. Parameters required are for the carrier's debt/equity ratio, cost of debt, and cost of equity

(d) Factors built into the expense module

The module uses a number of ratios and factors to calculate monthly per-line loop and annual switching costs. These factors are explained in detail in the Calculations section.

(e) Other user inputs

Operating expenses are derived from historic expense factors which are calculated from balance sheet and expense account information reported in carriers' ARJIS reports. These expense factors are applied to the investments developed by the Hatfield Model to determine associated operating expense amounts.

Certain expenses, particularly those for network maintenance, are strongly related to their associated capital investments. The Expense Module estimates these expenses using factors computed from the carrier's ARJIS reports. Other expenses, such as network operations, vary directly with the number of lines provisioned rather than with capital investment. Expenses for these elements are scaled by the number of access lines supported. Uncollectibles expense is calculated as a percentage of revenues.

(3)

Network-Related Expenses and Expense Factors

The Expense Module assigns network-related expenses to each of eleven UNEs, plus public telephone terminal equipment. The module also assigns the UNE.

These network and non-network operating expenses are added to annual capital costs to determine the total economic cost of each UNE. Each network-related expense is described below.

Network Support -- This category includes the expenses associated with motor vehicles, aircraft, special purpose vehicles, garage and other work equipment.

Central Office Switching -- This includes end office and tandem switching, as well as equipment expenses.

Central Office Transmission -- This includes circuit equipment expenses associated with transport investment.

Cable and Wire -- This category includes expenses associated with poles, serial cable, underground/buried cable and conduit systems. This expense varies directly with capital investment.

Network Operations -- The Network Operations category includes power, provisioning, engineering and network administration expenses.

The Expense Module uses specific forward-looking expense factors for digital switching and for central office transmission. These values derive from the New England Telephone Incremental Cost Study. The module similarly computes forward-looking Network Operations expenses based on corresponding ARJIS-reported expenses. Because total Network Operations expense is strongly line-

annual and monthly network costs, as well as basic local service costs per household.

(1) *Unbundled Network Elements outputs*

The Hatfield Model produces cost estimates for eleven UNEs, plus public telephone terminal equipment. These UNEs represent an unbundling of the local exchange network into discrete functions, which can be used singly or in any combination to furnish services. The UNEs are described below and their inter-relationships are illustrated in Figure 11.

Loop Distribution -- The individual communications channel originating from the DLC remote terminal or SAI and terminating at the customer's premises. In the Hatfield Model, this UNE also includes the investments in NID, drop and terminal/splice.

Loop Concentrator/Multiplexer -- The DLC remote terminal at which individual subscriber traffic is multiplexed and connected to loop distribution for termination at the customer's premises. The Hatfield Model includes DLC equipment and SAI investment in this UNE.

Loop Feeder -- The facilities on which subscriber traffic is carried from the line side of the end office switch to the DLC remote terminal or SAI. The UNE includes copper feeder and fiber feeder cable, plus associated structure investments (poles, conduit, etc.).

End Office Switching -- The facility connecting lines to lines, or lines to trunks. The end office represents the first point of switching. As modeled in the Hatfield Model, this UNE includes the end office switching machine investments and associated wire center costs, including distributing frames, power, land and building investments.

Operator Systems -- The systems that process and record special toll calls, public telephone toll calls, and other types of calls requiring operator assistance, as well as Directory Assistance. The investments identified in the Hatfield Model for the Operator Systems UNE include the operator position equipment, operator tandem (including required subscriber databases), wire center and operator trunks.

Dedicated Transport -- The full-period, bandwidth-specific interoffice transmission path between LEC wire centers or between LEC wire centers and an EXC POP. It provides the ability to offer individual and/or multiplexed switched and special services circuits between switches. Interoffice transport investments that provide dedicated transport are assigned to this UNE.

Common Transport -- A trunk between two switching systems on which traffic is commingled to include LEC traffic as well as traffic to and from other local or interexchange carriers. These trunks may originate at an end office and terminate at a tandem switch or at another end office. Interoffice transport investments that provide common transport are assigned to this UNE.

Tandem Switching -- The facility that provides the function of connecting trunks to trunks for the purpose of completing interoffice calls. Similar types of investments as are included in the End Office Switching UNE are also reflected in the Tandem Switching UNE.

Signaling Links -- Transmission facilities in a signaling network that carry all out-of-band signaling traffic between end office and tandem switches and STPs, between STPs, and between STPs and SCPs. Signaling link investment developed by the Hatfield Model and assigned to this UNE.

Signal Transfer Point -- This facility provides the function of routing TCAP and ISUP messages between network nodes (end offices, tandems and SCPs). The model estimates STP investment and assigns it to this UNE.

Service Control Point -- The node in the signaling network to which requests for call handling information (e.g., translations for local number portability) are directed and processed. The SCP contains service logic and customer specific information required to process individual requests. The model estimates SCP investment and assigns it to this UNE.

(2) Universal Service Fund Outputs

The calculation of costs for basic local service is based on the costs of the UNEs constituting this service. These are the loop, local portions of end office and tandem switching, transport facilities for local traffic, and the local portions of signaling investment. No operator services or SCP investments are included. In addition, these UNE cost elements are adjusted to accommodate other items such as retail uncollectibles rather than wholesale uncollectibles. Finally, certain retail expenses required by basic local service, such as billing and bill inquiry, directory listings, number portability costs, etc. are added.

For illustrative purposes, the USF sheet in the expense module compares the monthly cost per line in each density range to a user-adjustable "affordable" monthly price for local service (which include the End User Common Line charge). If the cost exceeds the "affordable" price, the model accumulates the total required annual subsidy at the stated price level according to the number of households in each density range.

Hatfield Model

Version 2.2, Release 2

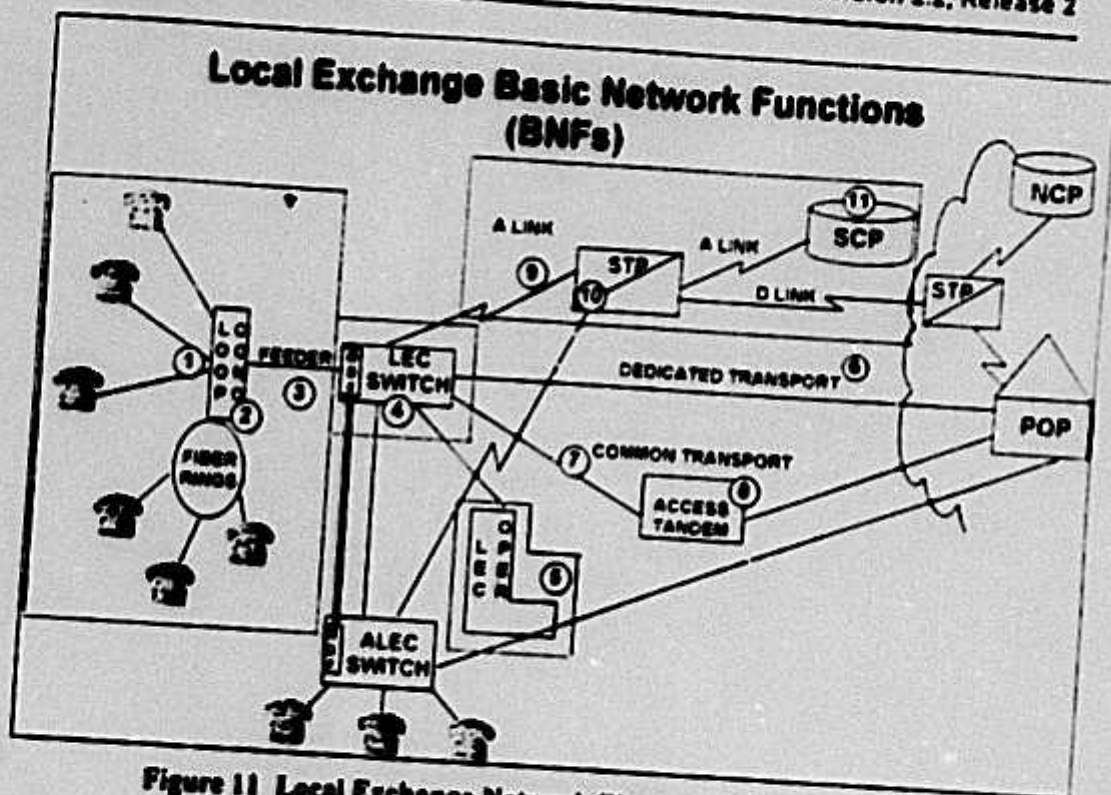


Figure 11 Local Exchange Network Elements

III. SUMMARY

In its Version 2.2, Release 2 formulation, the Hatfield Model estimates reliably and consistently both the forward-looking economic cost of unbundled local exchange network elements and the forward-looking economic cost of basic local telephone service. Because both of these calculations are performed in adherence to TELRIC/TSRJC principles, Hatfield Model cost estimates provide an accurate basis for the efficient pricing of unbundled network elements and the calculation of efficient universal service funding requirements.

HM2.2.2's methodology is transparent, and it uses public source data for its inputs. These default input values represent the developers' best judgments of efficient, forward-looking engineering and economic practices. But, because many of these inputs are adjustable, users of HM2.2.2 can use the model's automated interface to model directly and simply any desired alternative scenario.

Appendix A

**Summary of Changes Between Releases 1 and 2
of the Hatfield Model, Version 2.2**

This document describes changes made to the Hatfield Model Version 2.2 between Release 1 and Release 2. The discussions refer specifically to changes incorporated in Release 2 that modify the updated Release 1 version as filed publicly with the FCC on May 30, 1996.

A Benchmark Cost Model (BCM) derivative work called BCM-PLUS has been developed for and copyrighted by MCI Telecommunications Corporation and incorporated into the Release 2 version of the Hatfield Model (which, in this description, is known as HM2.2.2, for Hatfield Model Version 2.2 Release 2). HM2.2.2 also includes an automated user interface with dialog boxes that allow the user to change options and adjust inputs. The interface automates the running of the model as well.

BCM-PLUS Modules

Data module

1. Input and output sheets include an additional column containing business line counts per census block group (CBG).
2. Feeder and distribution distances are increased by 20% in the presence of rocky terrain to accommodate routing of facilities around difficult placement conditions.
3. Feeder length calculation modified to place SAI inside CBG by one-fourth the length of a CBG side.

Loop module

1. The distance at which fiber feeder is assumed is now user-adjustable. In the original BCM, the model assumed fiber feeder cables for total loop lengths of 12,000 ft or greater. In the new version, the calculation is based on total feeder length, and the threshold distance may be adjusted by the user to any value. The default setting is 9,000 ft.

2. The DS-0 capacity per fiber is now adjustable with a default value of 2016 (equivalent to 3 DS-3s). In the original version, the model included a fixed capacity of 672 DS-0s (1 DS-3) per fiber.
3. The number of fibers required per digital loop carrier remote terminal is now adjustable. The default setting is four fibers, which is the same as the value fixed in the original BCM.
4. Lookup tables for optical feeder cable investment now allow user adjustment of cable sizes. The default maximum cable size is now 216 fibers. In the first BCM version, the maximum cross sections for optical and copper fiber and distribution cables were fixed. Also, fiber and copper cable investments per unit length have been adjusted to include engineering, delivery, and installation in addition to material investment. The original BCM did not include installation, engineering, and delivery in this table. The default distribution cable investment table now includes 25-pair cable.
5. The module now computes varying numbers of distribution cables according to density range to accommodate different population distributions in high and low density ranges.
6. Density ranges are now expressed in terms of lines per square mile instead of households per square mile.

Hatfield Model modules

Line Multiplier (new Line Converter) Module:

1. The original Line Multiplier Module used user-specified line multipliers that varied by density range to estimate total residential, business, special access, and public lines. The new Line Converter module applies uniform multipliers to all CBGs to compute residential access lines in each density zone. The business, special access, and public line calculations are based on data that estimate the number of business employees in each CBG. All line totals are computed to match those shown in the ILEC's most recent ARMIS 43-08 reports.
2. The input data contains estimated 1995 household counts per CBG in place of the 1990 counts in the original BCM data.
3. The module computes CBG density in terms of lines, instead of households, per square mile.

Wire Center Investment Module

- 1 The module removes previous double-counting of trunk ports by reducing the input per-line switching investment by \$16 per line, because the model separately calculates the investment in trunk ports for the switches in each wire center and adds the total trunk port investment to the total switching investment in each wire center
 - 2 STP size is now scaled by the number of A links in the study area, the model previously equipped maximum-capacity STPs in all cases
 - 3 The module now computes Signaling System 7 C and D link investments, where it previously calculated only A link investments
 - 4 The transmission facilities investment, expressed as investment per DS-0-mile, is now calculated explicitly for each of the following routes:
 - common (tandem)
 - local direct
 - intra LATA direct
 - IXC switched access direct
 - special access
- The calculations allow separate user assumptions for optical patch panels, optical multiplexers, regenerator investment and spacing, installation costs, mix of buried/underground/aerial plant, and manhole and pole spacing and installation
- 5 The module eliminates double counting of structure costs typically shared between interoffice and feeder facilities
 - 6 The model now contains reconciled usage calculations between the Expense Module and Wire Center Investment Module
 - 7 Operator services positions may now be remote from the operator tandem. The user may select the distance, the default value is zero
 - 8 The module now includes tandem-to-POP switched access direct transport facilities
 - 9 The end office capacity limits now include entries for switch traffic, they previously included line and processor real-time limits. There are also separate holding time multipliers for business and residence lines to allow users to compute the effects of increased holding time on costs

10. The module now uses pre-processed interoffice distance data derived from end office, tandem, and STP locations listed in the Local Exchange Routing Guide. This facilitates the running of the model.

Convergence Module

1. The module now separately computes structure costs for aerial, buried, and underground facilities, including poles, conduit, trenching, and manholes. The model independently treats underground and buried cable. The new version eliminates previous double counting of terminals and splices. All structure factors, including the mix of aerial, buried, and underground distribution and feeder facilities are user definable.
2. Digital loop carrier investment is now computed from "ground up." The calculation includes site, housing, power, engineering, common equipment (including multiplexing at the wire center), and line cards.
3. The new version corrects a previous calculation error in local direct and local tandem trunk investment.
4. Default settings eliminate optical multiplexers from the Serving Area Interface. Sufficient fiber capacity exists to allow dedicated fibers to serve each remote terminal, as is consistent with current practices.

Expense Module

1. The module allows economic lives of up to 50 years to be input, (previous maximum permitted life was 32 years).
2. Consistent with the new structure calculations and incorporation of separate underground and buried facilities inputs, the model now calculates separate expense factors for the following network components:
 - Aerial cable
 - Underground cable
 - Buried cable
 - Poles
 - Manholes
 - Conduit

Previously, only aerial and underground factors were calculated.
3. Double counting of D.L.C. terminations and end office line circuits is eliminated.

- 4 Trunk port costs can now be estimated per DS-0 or per minute
- 5 Default user inputs for cost of debt, equity, and debt/equity ratio have been changed.
- 6 Separate uncollectibles rates for retail and carrier-to-carrier are specified.
- 7 The module eliminates a previous triple counting of NID (other terminal equipment) investment
- 8 Drops are now computed per household rather than per line basis
- 9 Dedicated trunking calculations have been reconciled between the Expense Module and the Wire Center Investment Module.
10. IXC switched access and local interconnection unit costs have been added to a new "Cost Detail" worksheet in the Expense Module.
11. NID expenses are now based on ARMIS-reported regulated expense per line (other terminal account), they previously included all "other terminal" expenses and, as a result, overstated NID maintenance expenses
12. A user-definable carrier-to-carrier customer service expense has been added. Its default value is set at \$1.56/line/year -- based on ARMIS 43-04 data on current ILEC expense in serving IXC's access accounts
13. The new version includes a NID monthly cost calculation in the "Cost Detail" worksheet.
14. Structure sharing fractions have been expanded to allow the user to set independent parameters for aerial, buried, and underground distribution and feeder structure. Default values are 0.33 for all categories
15. The module now contains a Universal Service Module with the following features:
 - Network cost built up from UNEs
 - Network Operations factored to reflect local service only
 - Local number portability costs have been added as a user input, with a default setting of \$0.25 per line per month.

Appendix B

Instruction Manual

Hatfield Model Version 2.2, Release 2

Automated Interface

I. GETTING STARTED

A. SYSTEM REQUIREMENTS

The Hatfield Model (HM) Automated Interface requires the following minimum PC system components to run properly:

- Pentium 133 MHz processor or higher
- 128 MB RAM or more
- CD-ROM drive
- Microsoft Windows 95 or Windows NT operating system
- Microsoft Excel version 7.0

B. TERMINOLOGY

The following terminology is used in this documentation when referring to the Hatfield Model and its components:

- HM Modules:* The HM Modules are the six functional Excel files which comprise the HM. They are Line Converter, Data Master, Loop Master, Wire Center, Convergence, and Expense
- HM Interface:* The user interface to the Hatfield model, which is contained in the Excel file HM_Interface.xls. (Figure 1 shows what the HM Interface looks like.)
- Workfile:* A workfile is an Excel file created by the HM which contains state-specific HM data and output, and can reflect user-specified input parameters. Although the workfile is created by the HM, the user must provide a filename.
- Data Template:* The data template is a special workfile which contains the default inputs for each state. Data templates use a filename convention which looks like: AZ_rdoc__tmpit.xls. Data templates should not be modified by HM users.

C. DIRECTORY STRUCTURE

The HM Interface assumes a basic directory structure as follows:

- HM modules should be stored in C:\hatfield\modules
- HM data templates should be stored in C:\hatfield\templates

The HM Interface allows users to specify which directories the HM components reside in by selecting 'HM Tools/Set Up Paths and Directories', but it is recommended that the default settings be used.

CD-ROM users should ensure that the paths and filenames point to the appropriate CD-ROM drive (e.g., D:\).

II. RUNNING THE HATFIELD MODEL

D. CREATING A NEW WORKFILE

- Select 'HM Tools/New HM Workfile ...'
- Select the appropriate state from the dialog box
- Select 'HM Tools/Save HM Workfile ...' to give the workfile a unique name
- Press 'GO!'
- Save Expense Module when HM is done calculating
- Select 'HM Tools/Close HM Workfile ...' when finished

E. MODIFYING AN EXISTING WORKFILE

Once a workfile has been created, it can be modified to reflect different input parameters. To modify an existing workfile:

- Select 'HM Tools/Open HM Workfile ...'
- Modify inputs as necessary, using process described below
- Press 'GO!'
- Save Expense Module when HM is done calculating
- Select 'HM Tools/Close HM Workfile ...' when finished

F. CHANGING USER INPUTS

The HM contains several hundred user-adjustable parameters, each of which can be easily modified using the HM Interface. To change a user input, open the appropriate workfile, and select the desired category of inputs from the 'HM Inputs' menu. A dialog box will appear, in which alternative inputs may be specified. (See Figure 2.) If the workfile is saved, the alternative inputs will be saved with it. However, default inputs can always be restored by clicking the 'Reset Defaults' button on the input dialog box.

G. TROUBLESHOOTING

- If the HM Interface displays 'Cannot find file ...' errors, ensure that the paths and filenames are correctly specified in the 'HM Tools/Set Paths and Filenames ...' menu.
- In the unlikely event that the HM crashes, it is always best to restart.

Figure 1: HM Interface

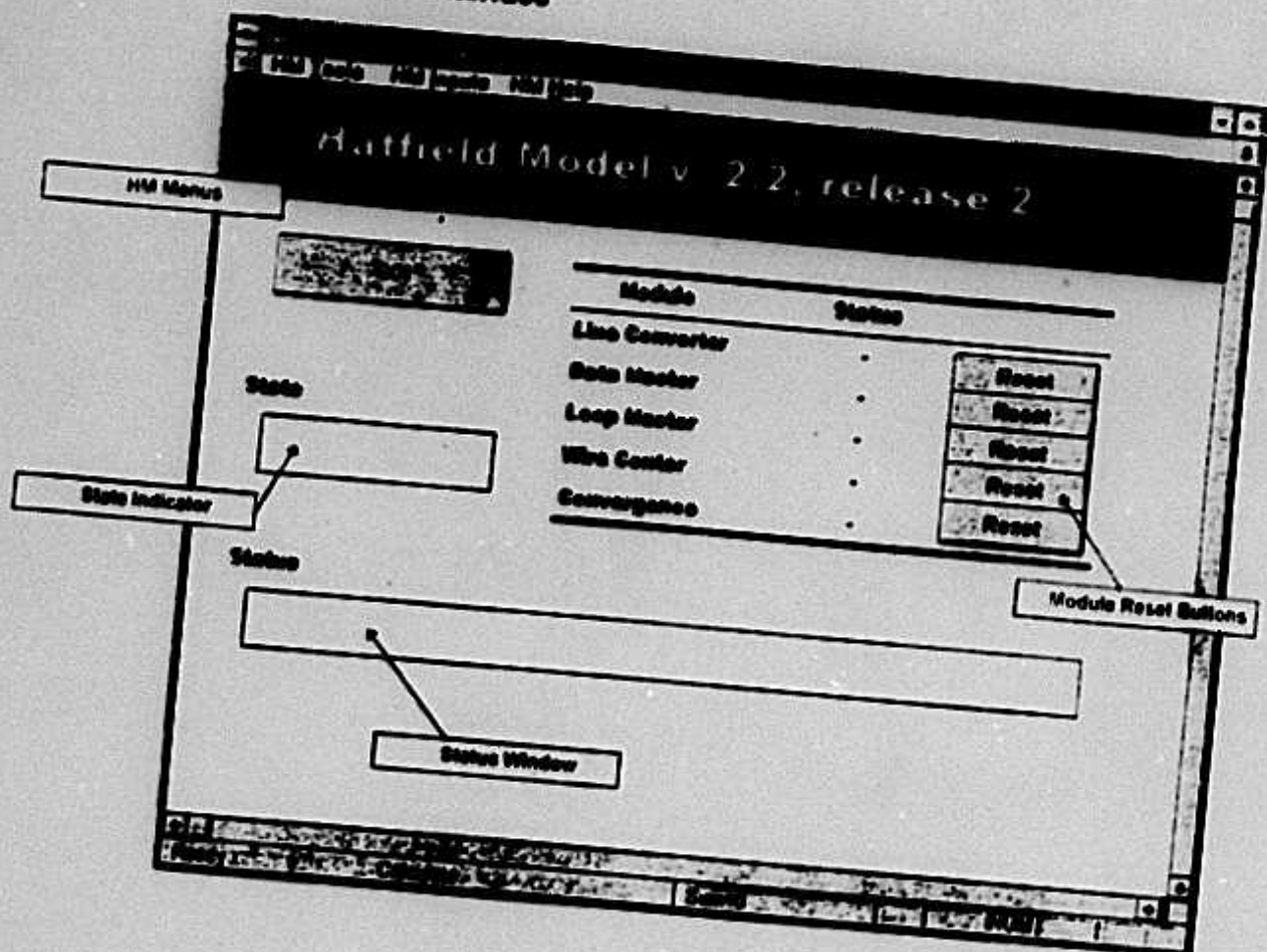


Figure 2: Sample User Input Dialog Box

Distribution cable size		Distribution cable length	
		upper	lower
0		\$2,500.00	\$2,500.00
100		\$2,700.00	\$2,700.00
200		\$2,900.00	\$2,900.00
400		\$3,100.00	\$3,100.00
600		\$3,300.00	\$3,300.00
800		\$3,500.00	\$3,500.00
1000		\$3,700.00	\$3,700.00
1200		\$3,900.00	\$3,900.00
1400		\$4,100.00	\$4,100.00
1600		\$4,300.00	\$4,300.00
1800		\$4,500.00	\$4,500.00

**INTERCONNECTION AGREEMENT UNDER SECTIONS 251 AND 252
OF THE TELECOMMUNICATIONS ACT OF 1996**

Dated as of _____, 199

by and between

GTE TELEPHONE OPERATIONS

and

ICG TELECOM GROUP, INC.

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Exhibit B ICG/GTE Fiber Meet

Common Line Charges and cross-connection charges are included in the referenced loop rates.

**INTERCONNECTION AGREEMENT UNDER SECTIONS 251 AND 252
OF THE TELECOMMUNICATIONS ACT OF 1996**

This Interconnection Agreement under Sections 251 and 252 of the Telecommunications Act of 1996 ("Agreement"), is effective as of the ____ day of ____, 1996 (the "Effective Date"), by and between GTE Telephone Operations, a division of GTE Telephone Operations, 600 Hidden Ridge, Irving, TX 75015-2092, on behalf of GTE ("GTE") and ICG Telecom Group, Inc., a Colorado corporation with offices at 9605 E. Maroon Circle, Suite 100, Englewood, CO 80112 ("ICG").

WHEREAS, the Parties desire to interconnect their networks at mutually agreed upon points of interconnection to provide Telephone Exchange Services (as defined below) and Exchange Access Services (as defined below) to their respective business and residential Customers,

WHEREAS, the Parties are entering into this Agreement to set forth the respective obligations of the Parties and the terms and conditions under which the Parties will interconnect their networks and provide other services as required by the Act (as defined below) and additional services as set forth herein,

NOW, THEREFORE, in consideration of the mutual provisions contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ICG and GTE hereby agree as follows:

1.0 DEFINITIONS

As used in this Agreement, the following terms shall have the meanings specified below in this Section 1.0.

1.1 "Act" means the Communications Act of 1934 (47 U.S.C. 151 et seq.), as amended by the Telecommunications Act of 1996, and as from time to time interpreted in the duly authorized rules and regulations of the FCC or the Commission having authority to interpret the Act within its state of jurisdiction.

1.2 "ADSL" or "Asymmetrical Digital Subscriber Line" means a transmission technology which transmits an asymmetrical digital signal using one of a variety of line codes.

1.3 "affiliate" is As Defined in the Act.

1.4 "Agreement for Switched Access Meet Point Billing" means the Agreement for Switched Access Meet Point Billing between the Parties to be executed within thirty (30) days of the Effective Date.

1.5 "As Defined in the Act" means as specifically defined by the Act and as from time to time interpreted in the duly authorized rules and regulations of the FCC or the Commission.

1.6 "As Described in the Act" means as described in or required by the Act and as from time to time interpreted in the duly authorized rules and regulations of the FCC or the Commission.

1.7 "Automatic Number Identification" or "ANI" means a Feature Group D signaling parameter which refers to the number transmitted through a network identifying the billing number of the calling party.

1.8 "BLV/BLVI Traffic" means an operator service call in which the caller inquires as to the busy status of or requests an interruption of a call on another Customer's Telephone Exchange Service line.

1.9 "Bona Fide Request" means the process described on Exhibit A that prescribes the terms and conditions relating to a Party's request that the other Party provide an Interconnection or Network Element not otherwise provided by the terms of this Agreement.

1.10 "Calling Party Number" or "CPN" is a Common Channel Interoffice Signaling ("CCIS") parameter which refers to the number transmitted through a network identifying the calling party.

1.11 "Central Office Switch" means a switch used to provide Telecommunications Services, including, but not limited to:

(a) "End Office Switches" which are used to terminate Customer station Loops for the purpose of interconnection to each other and to trunks; and

(b) "Tandem Office Switches" or "Tandems" which are used to connect and switch trunk circuits between and among other Central Office Switches.

A Central Office Switch may also be employed as a combination End Office/Tandem Office Switch.

1.12 "CCS" means one hundred (100) call seconds.

1.13 "CLASS Features" means certain CCIS-based features available to Customers including, but not limited to: Automatic Call Back; Call Trace; Caller Identification and related blocking features; Distinctive Ringing/Call Waiting; Selective Call Forward; and Selective Call

Rejection.

1.14 "Collocation" means an arrangement whereby one Party's (the "Collocating Party") facilities are terminated in its equipment necessary for Interconnection or for access to Network Elements on an unbundled basis which has been installed and maintained at the premises of a second Party (the "Housing Party"). For purposes of Collocation, the "premises" of a Housing Party is limited to an occupied structure or portion thereof in which such Housing Party has the exclusive right of occupancy. Collocation may be "physical" or "virtual." In "Physical Collocation," the Collocating Party installs and maintains its own equipment in the Housing Party's premises. In "Virtual Collocation," the Housing Party installs and maintains the Collocating Party's equipment in the Housing Party's premises.

1.15 "Commission" or "PUC" means the Public Utilities Commission.

1.16 "Common Channel Interoffice Signaling" or "CCIS" means the signaling system, developed for use between switching systems with stored-program control, in which all of the signaling information for one or more groups of trunks is transmitted over a dedicated high-speed data link rather than on a per-trunk basis and, unless otherwise agreed by the Parties, the CCIS used by the Parties shall be SS7.

1.17 "Cross Connection" means a connection provided pursuant to Collocation at the Digital Signal Cross Connect, Main Distribution Frame or other suitable frame or panel between (i) the Collocating Party's equipment and (ii) the equipment or facilities of the Housing Party.

1.18 "Customer" means a third-party residence or business that subscribes to Telecommunications Services provided by either of the Parties.

1.19 "Dialing Parity" is As Defined in the Act. As used in this Agreement, Dialing Parity refers to both Local Dialing Parity and Toll Dialing Parity. "Local Dialing Parity" means the ability of Telephone Exchange Service Customers of one LEC to place local calls to Telephone Exchange Service Customers of another LEC, without the use of any access code and with no unreasonable dialing delay.

1.20 "Digital Signal Level" means one of several transmission rates in the time-division multiplex hierarchy.

1.21 "Digital Signal Level 0" or "DS0" means the 64 kbps zero-level signal in the time-division multiplex hierarchy.

1.22 "Digital Signal Level 1" or "DS1" means the 1.544 Mbps first-level signal in the time-division multiplex hierarchy. In the time-division multiplexing hierarchy of the telephone network, DS1 is the initial level of multiplexing.

1.23 "Digital Signal Level 3" or "DS3" means the 44.736 Mbps third-level in the time-division multiplex hierarchy. In the time-division multiplexing hierarchy of the telephone network, DS3 is defined as the third level of multiplexing.

1.24 "Exchange Message Record" or "EMR" means the standard used for exchange of Telecommunications message information among Telecommunications providers for billable, non-billable, sample, settlement and study data. EMR format is contained in Bellcore Practice BR-010-200-010 CRIS Exchange Message Record.

1.25 "Exchange Access" is As Defined in the Act.

1.26 "Exchange Area" means an area, defined by the Commission, for which a distinct local rate schedule is in effect.

1.27 "FCC" means the Federal Communications Commission.

1.28 "Fiber-Meet" means an Interconnection architecture method whereby the Parties physically Interconnect their networks via an optical fiber interface (as opposed to an electrical interface) at a mutually agreed upon location.

1.29 "HDSL" or "High-Bit Rate Digital Subscriber Line" means a transmission technology which transmits up to a DS1-level signal, using any one of the following line codes: 2 Binary / 1 Quaternary ("2B1Q"), Carrierless AM/PM, Discrete Multitone ("DMT"), or 3 Binary / 1 Octet ("3B1O").

1.30 "Incumbent Local Exchange Carrier" or "ILEC" is As Defined in the Act.

1.31 "Information Service Traffic" means Local Traffic or IntraLATA Toll Traffic which originates on a Telephone Exchange Service line and which is addressed to an information service provided over a Party's information services platform (e.g., 976).

1.32 "Integrated Digital Loop Carrier" means a subscriber loop carrier system that is twenty-four (24) local Loop transmission paths combined into a 1.544 Mbps digital signal which integrates within the switch at a DS1 level.

1.33 "Interconnection" is As Described in the Act.

1.34 "Interexchange Carrier" or "IXC" means a carrier that provides, directly or indirectly, interLATA or intraLATA Telephone Toll Services.

1.35 "Interim Telecommunications Number Portability" or "INP" is As Described in

the Act.

1.36 "InterLATA" is As Defined in the Act.

1.37 "Integrated Services Digital Network" or "ISDN" means a switched network service that provides end-to-end digital connectivity for the simultaneous transmission of voice and data. Basic Rate Interface-ISDN (BRI-ISDN) provides for a digital transmission of two 64 kbps bearer channels and one 16 kbps data channel (2B+D).

1.38 "IntraLATA Toll Traffic" means all intraLATA calls other than Local Traffic calls.

1.39 "Local Access and Transport Area" or "LATA" is As Defined in the Act.

1.40 "Local Traffic" means local service area calls as defined by the Commission.

1.41 "Local Exchange Carrier" or "LEC" is As Defined in the Act.

1.42 "Local Loop Transmission" or "loop" means the entire transmission path which extends from the network interface or demarcation point at a Customer's premises to the Main Distribution Frame or other designated frame or panel in a Party's Central Office which serves the Customer. Loops are defined by the electrical interface rather than the type of facility used.

1.43 "losses" means any and all losses, costs (including court costs), claims, damages (including fines, penalties, and criminal or civil judgments and settlements), injuries, liabilities and expenses (including attorneys' fees).

1.44 "Main Distribution Frame" means the distribution frame of the Party providing the Loop used to interconnect cable pairs and line and trunk equipment terminals on a switching system.

1.45 "Meet-Point Billing" means the process whereby each Party bills the appropriate tariffed rate for its portion of a jointly provided Switched Exchange Access Service as agreed to in the Agreement for Switched Access Meet Point Billing.

1.46 "Network Element" is As Defined in the Act.

1.47 "North American Numbering Plan" or "NANP" means the numbering plan used in the United States that also serves Canada, Bermuda, Puerto Rico and certain Caribbean Islands. The NANP format is a 10-digit number that consists of a 3-digit NPA code (commonly referred to as the area code), followed by a 3-digit NXX code and 4-digit line number.

1.48 "Number Portability" is As Defined in the Act.

1.49 "NXX" means the three-digit code which appears as the first three digits of a seven digit telephone number.

1.50 "Party" means either GTE or ICG, and "Parties" means GTE and ICG.

1.51 "Port" means a termination on a Central Office Switch that permits Customers to send or receive Telecommunications over the public switched network, but does not include switch features or switching functionality.

1.52 "Rate Center" means the specific geographic point which has been designated by a given LEC as being associated with a particular NPA-NXX code which has been assigned to the LEC for its provision of Telephone Exchange Service. The Rate Center is the finite geographic point identified by a specific V&H coordinate, which is used by that LEC to measure, for billing purposes, distance sensitive transmission services associated with the specific Rate Center; provided, that a Rate Center cannot exceed the boundaries of an Exchange Area as defined by the Commission.

1.53 "Reciprocal Compensation" is As Described in the Act.

1.54 "Routing Point" means a location which a LEC has designated on its own network as the homing (routing) point for inbound traffic to one or more of its NPA-NXX codes. The Routing Point is also used to calculate mileage measurements for the distance-sensitive transport element charges of Switched Exchange Access Services. Pursuant to Bell Communications Research, Inc. ("Bellcore") Practice BR 795-100-100 (the "Bellcore Practice"), the Routing Point (referred to as the "Rating Point" in such Bellcore Practice) may be an End Office Switch location, or a ALEC Consortium Point of Interconnection." Pursuant to such Bellcore Practice, each ALEC Consortium Point of Interconnection" shall be designated by a common language location identifier (CLI) code with (x)KD in positions 9, 10, 11, where (x) may be any alphanumeric A-Z or 0-9. The Routing Point must be located within the LATA in which the corresponding NPA-NXX is located. However, Routing Points associated with each NPA-NXX need not be the same as the corresponding Rate Center, nor must there be a unique and separate Routing Point corresponding to each unique and separate Rate Center; provided only that the Routing Point associated with a given NPA-NXX must be located in the same LATA as the Rate Center associated with the NPA-NXX.

1.55 "Service Control Point" or "SCP" means a Signaling End Point that acts as a database to provide information to another signaling end point (i.e., Service Switching Point or another SCP) for processing or routing certain types of network calls. A query/response mechanism is typically used in communicating with an SCP.

1.56 "Signaling End Point" or "SEP" means a signaling point, other than an STP, which serves as a source or a repository for CCIS messages.

1.57 "Signaling Transfer Point" or "STP" means a signaling point that performs message routing functions and provides information for the routing of messages between SEPs. An STP transmits, receives and processes CCIS messages.

1.58 "Switched Exchange Access Service" means the offering of transmission or switching services to Telecommunications Carriers for the purpose of the origination or termination of Telephone Toll Service. Switched Exchange Access Services include: Feature Group A, Feature Group B, Feature Group D, 800/888 access, and 900 access and their successors or similar Switched Exchange Access Services.

1.59 "Synchronous Optical Network" or "SONET" means an optical interface standard that allows inter-networking of transmission products from multiple vendors. The base rate is 51.84 Mbps (OC-1/STS-1) and higher rates are direct multiples of the base rate, up to 13.22 Gpbs.

1.60 "Technically Feasible Point" is As Described in the Act.

1.61 "Telecommunications" is As Defined in the Act.

1.62 "Telecommunications Act" means the Telecommunications Act of 1996 and any rules and regulations promulgated thereunder.

1.63 "Telecommunications Carrier" is As Defined in the Act.

1.64 "Telecommunications Service" is As Defined in the Act.

1.65 "Telephone Exchange Service" is As Defined in the Act.

1.66 "Telephone Toll Service" is As Defined in the Act.

1.67 "Wire Center" means an occupied structure or portion thereof in which a Party has the exclusive right of occupancy and which serves as a Routing Point for Switched Exchange Access Service.

2.0 INTERPRETATION AND CONSTRUCTION

All references to Sections, Exhibits and Schedules shall be deemed to be references to Sections of, and Exhibits and Schedules to, this Agreement unless the context shall otherwise require. The headings of the Sections are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement. Unless the context shall otherwise require, any reference to any agreement, other instrument (including GTE or other third party offerings, guides or practices), statute, regulation, rule or tariff is to such agreement, instrument, statute, regulation, rule or tariff as amended and supplemented from time to time (and, in the case of a statute, regulation, rule or tariff, to any successor provision). In the event of a conflict or discrepancy between the provisions of this Agreement and the Act, or the definitions contained herein and the definitions contained in the Act, the provisions and definitions of the Act shall govern.

3.0 IMPLEMENTATION SCHEDULE AND INTERCONNECTION ACTIVATION DATES

Subject to the terms and conditions of this Agreement, Interconnection of the Parties' facilities and equipment pursuant to Section 4.0 for the transmission and routing of Telephone Exchange Service traffic and Exchange Access traffic shall be established on or before the corresponding "Interconnection Activation Date" shown for each such LATA on Schedule 3.0. Schedule 3.0 may be revised and supplemented from time to time upon the mutual agreement of the Parties to reflect the Interconnection of additional LATAs pursuant to Section 4.4 by attaching one or more supplementary schedules to such schedule.

SECTION 251(c) PROVISIONS

4.0 INTERCONNECTION PURSUANT TO SECTION 251(c)(2)

4.1 Scope. Section 4.0 describes the physical architecture for Interconnection of the Parties' facilities and equipment for the transmission and routing of Telephone Exchange Service traffic and Exchange Access traffic between the respective business and residential Customers of the Parties pursuant to Section 251(c)(2) of the Act. Each Party shall make available to the other Party the same Interconnection methods on the same rates, terms and conditions. Sections 5.0 and 6.0 prescribe the specific logical trunk groups (and traffic routing parameters) which will be configured over the physical connections described in this Section 4.0 related to the transmission and routing of Telephone Exchange Service traffic and Exchange Access traffic, respectively. Other trunk groups, as described in this Agreement, may be configured using this architecture.

4.2 Interconnection Points and Methods.

4.2.1 In each LATA identified on Schedule 3.0, ICG and GTE shall Interconnect their networks at the correspondingly identified GTE and ICG Wire Centers on Schedule 3.0 for the transmission and routing within that LATA of Telephone Exchange Service traffic and Exchange Access traffic pursuant to Section 251(c)(2) of the Act.

4.2.2 Interconnection in each LATA shall be accomplished through either (i) a Fiber Meet as provided in Section 4.3, (ii) Collocation as provided in Section 12.0 or (iii) any other Interconnection method to which the Parties may agree in advance of the applicable Interconnection Activation Date for a given LATA.

4.3 Fiber Meet.

4.3.1 If the Parties Interconnect their networks pursuant to a Fiber-Meet, the Parties shall jointly engineer and operate a single Synchronous Optical Network ("SONET") transmission system. The Parties shall jointly determine and agree upon the specific Optical Line Terminating Multiplexor ("OLTM") equipment to be utilized at each end of the SONET transmission system. If the Parties cannot agree on the OLTM, the following decision criteria shall apply to the selection of the OLTM:

(a) First, the type of OLTM equipment utilized by both Parties within the LATA. Where more than one type of OLTM equipment is used in common by the Parties within the LATA, the Parties shall choose from among the common types of OLTM equipment according to the method described in subsection (c) below;

(b) Second, the type of OLTM equipment utilized by both Parties anywhere outside the LATA. Where more than one type of OLTM equipment is used in common by the Parties outside the LATA, the Parties shall choose from among the common types of OLTM equipment according to the method described in subsection (c) below; and

(c) Third, the Party first selecting the OLTM equipment shall be determined by lot and the choice to select such OLTM equipment shall thereafter alternate between the Parties.

4.3.2 GTE shall, wholly at its own expense, procure, install and maintain the agreed upon OLTM equipment in the GTE Interconnection Wire Center ("AIWC") identified for each LATA set forth on Schedule 3.0, in capacity sufficient to provision and maintain all logical trunk groups prescribed by Sections 5.0 and 6.0.

4.3.3 ICG shall, wholly at its own expense, procure, install and maintain the agreed upon OLTM equipment in the ICG Interconnection Wire Center ("IWC") identified for

that LATA in Schedule 3.0, in capacity sufficient to provision and maintain all logical trunk groups prescribed by Sections 5.0 and 6.0.

4.3.4 GTE shall designate a manhole or other suitable entry-way immediately outside the AIWC as a Fiber-Meet entry point, and shall make all necessary preparations to receive, and to allow and enable ICG to deliver, fiber optic facilities into that manhole with sufficient spare length to reach the OLT equipment in the AIWC. ICG shall deliver and maintain such strands wholly at its own expense.

4.3.5 ICG shall designate a manhole or other suitable entry-way immediately outside the IWC as a Fiber-Meet entry point, and shall make all necessary preparations to receive, and to allow and enable GTE to deliver, fiber optic facilities into that manhole with sufficient spare length to reach the OLT equipment in the IWC. GTE shall deliver and maintain such strands wholly at its own expense.

4.3.6 ICG shall pull the fiber optic strands from the ICG-designated manhole/entry-way into the IWC and through appropriate internal conduits ICG utilizes for fiber optic facilities and shall connect the GTE strands to the OLT equipment ICG has installed in the IWC.

4.3.7 GTE shall pull the fiber optic strands from the GTE-designated manhole/entry-way into the AIWC and through appropriate internal conduits GTE utilizes for fiber optic facilities and shall connect the ICG strands to the OLT equipment GTE has installed in the AIWC.

4.3.8 Each Party shall use its best efforts to ensure that fiber received from the other Party will enter that Party's Wire Center through a point separate from that through which the Party's own fiber exited.

4.3.9 Unless otherwise mutually agreed, this SONE transmission system shall be configured as illustrated in Exhibit B, and engineered, installed, and maintained as described in this Section 4.0 and in the Grooming Plan (as defined in Section 8.1).

4.3.10 Interconnection shall be at least equal in quality to that provided by the Parties to themselves or any subsidiary, Affiliate or third party. For purposes of this Section 4.3.10, "equal in quality" means the same or equivalent interface specifications, installation and repair intervals.

4.3.11 Each Party shall ensure that each Tandem connection permits the completion of traffic to all End Offices which subtend that Tandem. Pursuant to Section 5.0, each Party shall establish and maintain separate trunk groups connected to each Tandem of the other Party which serves, or is sub-tended by End Offices which serve, such other Party's

Customers within the Exchange Areas served by such Tandem Switches.

4.3.12 For Fiber-Meet arrangements, each Party will be responsible for providing its own transport facilities to the Fiber-Meet in accordance with the Grooming Plan.

4.4 Interconnection in Additional LATAs.

4.4.1 If ICG determines to offer Telephone Exchange Services in any other LATA in which GTE also offers Telephone Exchange Services, ICG shall provide written notice to GTE of the need to establish Interconnection in such LATA pursuant to this Agreement.

4.4.2 The notice provided in Section 4.4.1 shall include (i) the initial Routing Point ICG has designated in the new LATA; (ii) ICG's requested Interconnection Activation Date; and (iii) a non-binding forecast of ICG's trunking requirements.

4.4.3 Unless otherwise agreed by the Parties, the Parties shall designate the Wire Center ICG has identified as its initial Routing Point in the LATA as the IWC in that LATA and shall designate the GTE Tandem Office Wire Center within the LATA nearest to the IWC (as measured in airline miles utilizing the V&H coordinates method) as the AIWC in that LATA.

4.4.4 Unless otherwise agreed by the Parties, the Interconnection Activation Date in each new LATA shall be the earlier of (i) the date mutually agreed by the Parties and (ii) the date that is one hundred and fifty (150) days after the date on which ICG delivered notice to GTE pursuant to Section 4.4.1. Within ten (10) business days of GTE's receipt of ICG's notice, GTE and ICG shall confirm the AIWC, IWC and the Interconnection Activation Date for the new LATA by attaching a supplementary schedule to Schedule 3.0.

4.5 Technical Specifications.

4.5.1 ICG and GTE shall work cooperatively to install and maintain a reliable network. ICG and GTE shall exchange appropriate information (e.g., maintenance contact numbers, network information, information required to comply with law enforcement and other security agencies of the government and such other information as the Parties shall mutually agree) to achieve this desired reliability.

4.5.2 ICG and GTE shall work cooperatively to apply sound network management principles by invoking network management controls to alleviate and or prevent congestion.

4.5.3 The following publications describe the practices, procedures, specifications and interfaces generally utilized by GTE and are listed herein to assist the Parties in meeting their respective responsibilities related to Electrical Optical Interfaces:

(a) Bellcore Technical Publication TR-INS-000342, High Capacity Digital Special Access Service, Transmission Parameter Limits and Interface Combinations, and

4.6 Use of Bona Fide Request Process.

If a Party requests an Interconnection or an Interconnection method not expressly set forth in or contemplated by this Agreement, such Party shall request such Interconnection or such method from the other Party by submitting to such other Party a Bona Fide Request.

5.0 TRANSMISSION AND ROUTING OF TELEPHONE EXCHANGE SERVICE TRAFFIC PURSUANT TO SECTION 251(C)(2)

5.1 Scope of Traffic.

Section 5.0 prescribes parameters for trunk groups (the "Local IntralATA Trunks") to be effected over the Interconnections specified in Section 4.0 for the transmission and routing of Local Traffic and IntralATA Toll Traffic between the Parties' respective Telephone Exchange Service Customers.

5.2 Switching System Hierarchy.

5.2.1 For purposes of this Section 5.0, each of the following Central Office Switches shall be designated as a "Primary Switch":

- (a) Each access Tandem GTE operates in the LATA;
- (b) The initial switch ICG employs to provide Telephone Exchange Service in the LATA;
- (c) Any access Tandem ICG may establish for provision of Exchange Access in the LATA; and
- (d) Any additional switch ICG may subsequently employ to provide Telephone Exchange Service in the LATA which ICG may at its sole option designate as a Primary Switch; provided that the total number of ICG Primary Switches for a LATA may not exceed the total number of GTE's Primary Switches for that LATA. To the extent ICG chooses to designate any additional switch as a Primary Switch, it shall

provide notice to GTE of such designation at least ninety (90) days in advance of the date on which ICG activates such switch as a Primary Switch

5.2.2 Each Central Office Switch operated by the Parties which is not designated as a Primary Switch pursuant to Section 5.2.1 shall be designated as a "Secondary Switch"

5.2.3 For purposes of ICG routing traffic to GTE, sub-tending arrangements between GTE Primary Switches and GTE Secondary Switches shall be the same as the access Tandem End Office sub-tending arrangements which GTE maintains for those switches. For purposes of GTE routing traffic to ICG, sub-tending arrangements between ICG Primary Switches and ICG Secondary Switches shall be the same as the access Tandem End Office sub-tending arrangements which ICG maintains for those switches.

5.3 Trunk Group Architecture and Traffic Routing.

The Parties shall jointly engineer and configure Local Intral-ATA Trunks over the physical Interconnection arrangements as follows:

5.3.1 Subject to Section 5.3.3, each Party shall initially configure a two-way trunk group as a direct transmission path between each ICG Primary Switch and each GTE Primary Switch.

5.3.2 Notwithstanding anything to the contrary in this Section 5.0, if the two-way traffic volumes between any two Central Office Switches (whether Primary-Primary, Primary-Secondary or Secondary-Secondary) at any time exceeds the CCS busy hour equivalent of one DS1, the Parties shall within sixty (60) days after such occurrence add trunks or establish new direct trunk groups consistent with the grades of service and quality parameters set forth in the Grooming Plan.

5.3.3 Either Party may unilaterally elect, by providing notice to the other Party not less than seventy-five (75) days in advance of an applicable Interconnection Activation Date, to employ 1-way trunk groups for an interim period (the "1-Way Trunk Period") not to exceed one hundred and twenty (120) days after the Interconnection Activation Date; provided that the Parties shall transition all 1-way trunks established under this Section 5.3.3 to two-way trunks on or before the last day of such 1-Way Trunk Period.

5.4 Signaling.

5.4.1 Where available, CCIS signaling shall be used by the Parties to set up calls between the Parties' Telephone Exchange Service networks. If CCIS signaling is unavailable, MF (Multi-Frequency) signaling shall be used by the Parties. Each Party shall charge the other Party equal and reciprocal rates for CCIS signaling in accordance with applicable tariffs. During the term of this Agreement neither Party shall charge the other Party additional usage-sensitive rates for SS7 queries made for Local Traffic.

5.4.2 The following list of publications describe the practices, procedures and specifications generally utilized by GTE for signaling purposes and are listed herein to assist the Parties in meeting their respective Interconnection responsibilities related to Signaling:

- (a) Bellcore Special Report SR-ISV-002275, BOC Notes on the LEC Networks - Signaling

5.4.3 The Parties will cooperate on the exchange of Transactional Capabilities Application Part (TCAP) messages to facilitate interoperability of CCIS-based features between their respective networks, including all CLASS features and functions, to the extent each Party offers such features and functions to its Customers. All CCIS signaling parameters will be provided including, without limitation, calling party number (CPN), originating line information (OLI), calling party category and charge number.

5.4.4 Where available and upon the request of the other Party, each Party shall cooperate to ensure that its trunk groups are configured utilizing the B8ZS ESF protocol for 64 kbps clear channel transmission to allow for ISDN interoperability between the Parties' respective networks.

5.5 Grades of Service.

The Parties shall initially engineer and shall jointly monitor and enhance all trunk groups consistent with the Grooming Plan.

5.6 Measurement and Billing.

5.6.1 For billing purposes, each Party shall pass Calling Party Number (CPN) information on each call carried over the Local/IntraLATA Trunks; provided that all calls exchanged without CPN information shall be billed as either Local Traffic or IntraLATA Toll Traffic in direct proportion to the minutes of calls exchanged with CPN information.

5.6.2 Measurement of billing minutes shall be in actual conversation seconds.

5.7 Reciprocal Compensation Arrangements -- SECTION 251(b)(5).

5.7.1 Reciprocal Compensation applies for transport and termination of Local Traffic billable by GTE or ICG which a Telephone Exchange Service Customer originates on GTE's or ICG's network for termination on the other Party's network.

5.7.2 The Parties shall compensate each other for transport and termination of Local Traffic at the rate provided in the Pricing Schedule.

5.7.3 The Reciprocal Compensation arrangements set forth in this Agreement are not applicable to Switched Exchange Access Service. All Switched Exchange Access Service and all IntralATA Toll Traffic shall continue to be governed by the terms and conditions of the applicable federal and state tariffs.

5.7.4 Each Party shall charge the other Party its effective tariffed intralATA FGD switched access rates for the transport and termination of all IntralATA Toll Traffic.

5.7.5 Compensation for transport and termination of all traffic which has been subject to performance of INP by one Party for the other Party pursuant to Section 13.0 shall be as specified in Section 13.5.

6.0 TRANSMISSION AND ROUTING OF EXCHANGE ACCESS TRAFFIC PURSUANT TO 251(C)(2)

6.1 Scope of Traffic.

Section 6.0 prescribes parameters for certain trunk groups ("Access Toll Connecting Trunks") to be established over the Interconnections specified in Section 4.0 for the transmission and routing of Exchange Access traffic between ICG Telephone Exchange Service Customers and Interexchange Carriers.

6.2 Trunk Group Architecture and Traffic Routing.

6.2.1 The Parties shall jointly establish Access Toll Connecting Trunks by which they will jointly provide Tandem-transported Switched Exchange Access Services to Interexchange Carriers to enable such Interexchange Carriers to originate and terminate traffic from and to ICG's Customers.

6.2.2 Access Toll Connecting Trunks shall be used solely for the transmission and routing of Exchange Access to allow ICG's Customers to connect to or be connected to the interexchange trunks of any Interexchange Carrier which is connected to an GTE access Tandem, provided that ICG may use the Access Toll Connecting Trunks to tra... and route overflow

Local Traffic and IntraLATA Toll Traffic from the Local IntraLATA Trunks, provided further, that such overflow Local Traffic and IntraLATA Toll Traffic shall be billed at GTE's switched access rates.

6.2.3 The Access Toll Connecting Trunks shall be two-way trunks connecting an End Office Switch ICG utilizes to provide Telephone Exchange Service and Switched Exchange Access in a given LATA to an access Tandem Switch GTE utilizes to provide Exchange Access in such LATA.

6.2.4 The Parties shall jointly determine which GTE access Tandem(s) will be sub-tenanted by each ICG End Office Switch. Except as otherwise agreed by the Parties or as required by the FCC or the Commission, each ICG End Office Switch shall subtenant each access Tandem in each LATA identified on Schedule 3.0, as currently required. However, the Parties shall work towards a resolution of technical issues that, consistent with then existing FCC requirements, allows each ICG End Office Switch to subtenant the access Tandem nearest to the Routing Point associated with the NXX codes assigned to that End Office Switch and shall not require that a single ICG End Office Switch subtenant multiple access Tandems, even in those cases where such End Office Switch serves multiple Rate Centers.

6.2.5 Only those valid NXX codes served by an End Office may be accessed through a direct connection to that End Office.

6.3 Meet-Point Billing Arrangements.

Meet-Point Billing arrangements between the Parties for jointly provided Switched Exchange Access Services on Access Toll Connecting Trunks will be governed by the terms and conditions of the Agreement For Switched Access Meet Point Billing and shall be billed at each Party's applicable switched access rates.

7.0 TRANSPORT AND TERMINATION OF OTHER TYPES OF TRAFFIC

7.1 Information Services Traffic.

7.1.1 Each Party shall route Information Service Traffic which originates on its own network to the appropriate information services platform(s) connected to the other Party's network over the Local/IntraLATA Trunks.

7.1.2 The Party ("Originating Party") on whose network the Information Services Traffic originated shall provide an electronic file transfer or monthly magnetic tape containing recorded call detail information to the Party ("Terminating Party") to whose information platform the Information Services Traffic terminated.

7.1.3 The Terminating Party shall provide to the Originating Party via electronic file transfer or magnetic tape all necessary information to rate the Information Services Traffic to the Originating Party's Customers pursuant to the Terminating Party's agreements with each information provider.

7.1.4 The Originating Party shall bill and collect such information provider charges and remit the amounts collected to the Terminating Party, less:

(a) The Information Services Billing and Collection fee set forth on the Pricing Schedule; and

(b) An uncollectibles reserve calculated based on the uncollectibles reserve in the Terminating Party's billing and collection agreement with the applicable information provider; and

(c) Customer adjustments provided by the Originating Party.

The Originating Party shall provide to the Terminating Party sufficient information regarding uncollectibles and Customer adjustments. The Terminating Party shall pass through the adjustments to the information provider. Final resolution regarding all disputed adjustments shall be solely between the Originating Party and the information provider.

7.1.5 Nothing in this Agreement shall restrict either Party from offering to its Exchange Service Customers the ability to block the completion of Information Service Traffic.

7.2 BLV/BLVI Traffic.

7.2.1 Busy Line Verification ("BLV") is performed when one Party's Customer requests assistance from the operator bureau to determine if the called line is in use, however, the operator bureau will not complete the call for the Customer initiating the BLV inquiry. Only one BLV attempt will be made per Customer operator bureau call, and a charge shall apply whether or not the called party releases the line.

7.2.2 Busy Line Verification Interrupt ("BLVI") is performed when one Party's operator bureau interrupts a telephone call in progress after BLV has occurred. The operator bureau will interrupt the busy line and inform the called party that there is a call waiting. The operator bureau will only interrupt the call and will not complete the telephone call of the Customer initiating the BLVI request. The operator bureau will make only one BLVI attempt per Customer operator telephone call and the applicable charge applies whether or not the called party releases the line.

7.2.3 Each Party's operator bureau shall accept BLV and BLVI inquiries from

the operator bureau of the other Party in order to allow transparent provision of BLV/BLVI Traffic between the Parties' networks.

7.2.4 Each Party shall route BLV/BLVI Traffic inquiries over separate direct trunks (and not the Local/IntralATA Trunks) established between the Parties' respective operator bureaus. Unless otherwise mutually agreed, the Parties shall configure BLV/BLVI trunks over the Interconnection architecture defined in Section 4.0, consistent with the Grooming Plan. Each Party shall compensate the other Party for BLV/BLVI Traffic as set forth on the Pricing Schedule.

7.3 Transit Service.

7.3.1 In addition to the Interconnection and other services provided to ICG by GTE under this Agreement that are required under the Act, GTE agrees that it shall also provide Transit Service to ICG on the terms and conditions set forth in this Section 7.3.

7.3.2 "Transit Service" means the delivery of certain traffic between ICG and a third party LEC or ILEC by GTE over the Local/IntralATA Trunks. The following traffic types will be delivered: (i) Local Traffic and IntralATA Toll Traffic originated from ICG to such third party LEC or ILEC and (ii) IntralATA Toll Traffic originated from such third party LEC or ILEC and terminated to ICG where GTE carries such traffic pursuant to the Commission's Originating Responsibility Plan/Secondary Carrier Option (ORP/SCO) or other similar plan.

7.3.3 The Parties shall compensate each other for Transit Service as follows:

(a) ICG shall pay GTE for Local Traffic and IntralATA Toll Traffic ICG originates over the Transit Service at the rate specified in the Pricing Schedule plus any additional charges or costs such terminating third party LEC or ILEC imposes or levies on GTE for the delivery or termination of such traffic, including any switched access charges; and

(b) GTE shall pay ICG for IntralATA Toll Traffic terminated to ICG from such third party LEC or ILEC (where GTE delivers such traffic pursuant to the Commission's ORP/SCO or other similar plan) at ICG's applicable switched access rates.

7.3.4 While the Parties agree that it is the responsibility of each third party LEC or ILEC to enter into arrangements to deliver Local Traffic to ICG, they acknowledge that such arrangements are not currently in place and an interim arrangement is necessary to ensure traffic completion. Accordingly, until the earlier of (i) the date on which either Party has entered into an arrangement with such third party LEC or ILEC to deliver Local Traffic to ICG and (ii) one-hundred and eighty (180) days after the Interconnection Activation Date, GTE will deliver and ICG will terminate Local Traffic originated from such third party LEC or ILEC without

charge to one another. If an arrangement is not entered into by the 180th day, either Party may block such Local Traffic.

7.3.5 GTE expects that all networks involved in transit traffic will deliver each call to each involved network with CCIS and the appropriate Transactional Capabilities Application Part ("TCAP") message to facilitate full interoperability and billing functions. In all cases, ICG is responsible to follow the Exchange Message Record ("EMR") standard and exchange records with both GTE and the terminating LEC or ILEC to facilitate the billing process to the originating network.

7.3.6 For purposes of this Section 7.3, GTE agrees that it shall make available to ICG, at ICG's sole option, any transiting arrangement GTE's offers to another LEC at the same rates, terms and conditions provided to such other LEC.

7.4 Wireless Traffic.

The Parties agree to use good faith efforts to negotiate and enter into a separate agreement within sixty (60) days of the Effective Date regarding compensation for the origination and termination of Wireless Service Provider (as defined in Bellcore General Requirements GR-145-CORE) ("WSP") traffic. Such agreement shall generally require the Parties to allocate revenues received from and allocate termination charges paid to WSPs where GTE and ICG each provide some portion of the WSP access arrangement over each Party's own facilities. The Parties agree to renegotiate such agreement when the Commission grants Local Exchange Carrier authority to a WSP or when the Commission or the FCC issues a final ruling affecting compensation or interconnection between LECs and WSPs. Until such an agreement has been executed, GTE will transit WSP traffic at the rates and on the terms and conditions set forth in Section 7.3.

8.0 GROOMING PLAN AND OPERATION, INSTALLATION, MAINTENANCE, TESTING AND REPAIR

8.1 Grooming Plan. On or before _____, 1996, ICG and GTE shall jointly develop a grooming plan (the "Grooming Plan") for the initial LATAs, as agreed upon by the Parties, which shall define and detail, *inter alia*,

(a) standards to ensure that Interconnection trunk groups experience a grade of service, availability and quality in accord with all appropriate relevant industry-accepted quality, reliability and availability standards;

(b) the respective duties and responsibilities of the Parties with respect to the administration and maintenance of the Interconnections specified in Section 4.0 and the trunk groups, including but not limited to standards and procedures for notification and discoveries of trunk disconnects;

- (c) disaster recovery provision escalations; and
- (d) such other matters as the Parties may agree

8.2 Operation and Maintenance. Each Party shall be solely responsible for the installation, operation and maintenance of equipment and facilities provided by it for Interconnection, subject to compatibility and cooperative testing and monitoring and the specific operation and maintenance provisions for equipment and facilities used to provide Interconnection. Operation and maintenance of equipment in Virtual Collocation shall be governed by applicable tariff.

8.3 Installation, Maintenance, Testing and Repair.

GTE's standard intervals for its comparable Exchange Access Services will be used for Interconnection as specified in the GTE Dedicated and Switched Common Service Switched Access and Exchange Interval Guide. ICG shall meet the same intervals for comparable installations, maintenance, joint testing, and repair of its facilities and services associated with or used in conjunction with Interconnection or shall notify GTE of its inability to do so and shall negotiate such intervals in good faith.

9.0 UNBUNDLED ACCESS -- SECTION 251(C)(3)

Access to the Network Elements shall be mutual. Each Party shall, upon request of the other Party and to the extent technically feasible, provide to such requesting Party access to its Network Elements for the provision of the requesting Party's Telecommunications Service. A Party requesting access to a Network Element shall provide the other Party with access to the same Network Elements in its own network. Any request for access to a Network Element that is not already available at the time of such request or expressly contemplated by this Agreement shall be governed by Section 9.5.

9.1 Local Loop Transmission Types.

Subject to Section 9.4, GTE shall allow ICG to access the following Loop types (in addition to those Loops available under applicable tariffs) unbundled from local switching and local transport in accordance with the terms and conditions set forth in this Section 9.0:

9.1.1 "2-Wire Analog Voice Grade Loop" or "Analog 2W," which supports analog transmission of 300-3000 Hz, repeat loop start, loop reverse battery, or ground start seizure and disconnect in one direction (toward the End Office Switch), and repeat ringing in the other direction (toward the Customer). Analog 2W includes Loops sufficient for the provision of PBX trunks, pay telephone lines and electronic key system lines. Analog 2W will be provided in

accordance with the specifications, interfaces, and parameters described in Technical Reference _____, GTE Unbundled Analog Loops.

9.1.2 "4-Wire Analog Voice Grade Loop" or "Analog 4W," which supports transmission of voice grade signals using separate transmit and receive paths and terminates in a 4-wire electrical interface. Analog 4W will be provided in accordance with the specifications, interfaces, and parameters described in Technical Reference _____, GTE Unbundled Analog Loops.

9.1.3 "2-Wire ISDN Digital Grade Link" or "BRI-ISDN," which supports digital transmission of two 64 kbps bearer channels and one 16 kbps data channel. BRI-ISDN is a 2B+D Basic Rate Interface-Integrated Services Digital Network (BRI-ISDN) Loop which will meet national ISDN standards and conform to Technical Reference _____, GTE Unbundled Digital Loops (including ISDN).

9.1.4 "2-Wire ADSL-Compatible Loop" or "ADSL 2W" is a transmission path which facilitates the transmission of up to a 6 Mbps digital signal downstream (toward the Customer) and up to a 640 kbps digital signal upstream (away from the Customer) while simultaneously carrying an analog voice signal. An ADSL 2W is provided over a 2-Wire, non-loaded twisted copper pair provisioned using revised resistance design guidelines and meeting ANSI Standard T1.413-1995-007R2. An ADSL 2W terminates in a 2-wire electrical interface at the Customer premises and at the GTE Central Office frame. ADSL technology can only be deployed over Loops which extend less than 18 Kft. from GTE's Central Office. ADSL compatible Loops are only available where existing copper facilities can meet the ANSI T1.413-1995-007R2 specifications.

9.1.5 "2-Wire HDSL-Compatible Loop" or "HDSL 2W" is a transmission path which facilitates the transmission of a 768 kbps digital signal over a 2-Wire, non-loaded twisted copper pair meeting the specifications in ANSI T1E1 Committee Technical Report Number 28. HDSL-compatible Loops are available only where existing copper facilities can meet the T1E1 Technical Report Number 28 specifications.

9.1.6 "4-Wire HDSL-Compatible Loop" or "HDSL 4W" is a transmission path which facilitates the transmission of a 1.544 Mbps digital signal over two 2-Wire, non-loaded twisted copper pairs meeting the specifications in ANSI T1E1 Committee Technical Report Number 28. HDSL-compatible Loops are available only where existing copper facilities can meet the T1E1 Technical Report Number 28 specifications.

9.1.7 ICG may procure Loops from GTE either (i) at the rates set forth in the Pricing Schedule and on the terms and conditions specified herein or (ii) at the rates and on the terms and conditions set forth in applicable tariffs.

9.2 Port Types.

GTE shall make available to ICG unbundled Ports in accordance with the terms and conditions of and at the rates specified in applicable state tariffs.

9.3 Private Lines and Special Access.

GTE shall make available to ICG private lines and special access services in accordance with the terms and conditions of and at the rates specified in applicable tariffs. ICG may also use private lines and special access services to access Customers served by End Offices where ICG is not Collocated and for transport between Central Offices where ICG is Collocated.

9.4 Limitations on Unbundled Access.

9.4.1 ICG may not cross-connect an GTE-provided Loop to an GTE-provided Port, but instead shall purchase a network access line under applicable tariffs.

9.4.2 GTE shall only be required to make available Loops and Ports where such Loops and Ports are available. As used in this Section 9.4.2, "available" means that such Loops and Ports exist at the applicable plant; provided, however, that except as provided in Section 19.4.5 or with respect to a Network Element that is the subject of an authorized Bona Fide Request, in no event shall GTE be required to build any facilities to make such facilities "available."

9.4.3 ICG shall access GTE's unbundled Network Elements via Collocation in accordance with Section 12.0 at the GTE Wire Center where those elements exist and each Loop or Port shall be delivered to ICG's Collocation by means of a cross-connection which, in the case of Loops, is included in the rates set forth in the Pricing Schedule.

9.4.4 GTE shall provide ICG access to its unbundled Loops at each of GTE's Wire Centers. In addition, if ICG requests one or more Loops serviced by Integrated Digital Loop Carrier or Remote Switching technology deployed as a Loop concentrator, GTE shall, where available, move the requested Loop(s) to a spare, existing physical Loop at no charge to ICG. If, however, no spare physical Loop is available, GTE shall within forty-eight (48) hours of ICG's request notify ICG of the lack of available facilities. ICG may then at its discretion make a Bona Fide Request for GTE to provide the unbundled Loop through the demultiplexing of the integrated digitized Loop(s). ICG may also make a Bona Fide Request for access to unbundled Loops at the Loop concentration site point. Notwithstanding anything to the contrary in this Agreement, the provisioning intervals set forth in Section 9.6 and the Performance Interval Dates and Performance Criteria set forth in Section 26.1 shall not apply to unbundled Loops provided under this Section 9.4.4.

9.4.5 If ICG orders a Loop type and the distance requested on such Loop exceeds the transmission characteristics as referenced in the corresponding Technical Reference specified below, distance extensions may be required and additional rates and charges shall apply as set forth on the Pricing Schedule.

Loop Type	Technical Reference Limitation
Electronic Key Line	2.5 miles
ISDN	Bellcore TA-NWT-000393
HDSL 2W	TIE1 Technical Report Number 28
HDSL 4W	TIE1 Technical Report Number 28
ADSL 2W	ANSI T1.413-1995 Specification

9.4.6 Notwithstanding anything to the contrary in this Agreement, GTE may only request unbundled Loops from ICG for use by GTE or its Affiliates.

9.5 Availability of Other Network Elements on an Unbundled Basis.

9.5.1 GTE shall, upon request of ICG, and to the extent technically feasible, provide to ICG access to its Network Elements for the provision of ICG's Telecommunications Service. Any request by ICG for access to an GTE Network Element that is not already available shall be treated as a Bona Fide Request. ICG shall provide GTE access to its Network Elements as mutually agreed by the Parties or as required by the Commission or the FCC; provided that GTE agrees to submit to ICG a Bona Fide Request for any Network Element GTE may require.

9.5.2 A Network Element obtained by one Party from the other Party under this Section 9.5 may be used in combination with the facilities of the requesting Party only to provide a Telecommunications Service, including the billing, collection, transmission and routing of such Telecommunications Service.

9.5.3 Notwithstanding anything to the contrary in this Section 9.5, a Party shall not be required to provide a proprietary Network Element to the other Party under this Section 9.5 except as required by the Commission or the FCC.

9.6 Provisioning of Unbundled Loops.

The following coordination procedures shall apply for conversions of "live" Telephone Exchange Services to unbundled Network Elements:

9.6.1 ICG shall request unbundled Loops from GTE by delivering to GTE a valid electronic transmittal Service Order (a "Service Order") using the GTE electronic ordering system (as defined in the Unbundling Product Guide) or another mutually agreed upon system. Within forty-eight (48) hours of GTE's receipt of a Service Order, GTE shall provide ICG the firm order commitment ("FOC") date according to the applicable Performance Interval Dates set forth in Section 26.1 by which the Loop(s) covered by such Service Order will be installed.

9.6.2 GTE agrees to coordinate with ICG at least forty-eight hours prior to the due date a scheduled conversion date and time (the "Scheduled Conversion Time") in the "AM" (12:00 midnight to 12:00 noon) or "PM" (12:00 noon to 12:00 midnight) (as applicable, the "Conversion Window").

9.6.3 Not less than one hour prior to the Scheduled Conversion Time, either Party may contact the other Party and unilaterally designate a new Scheduled Conversion Time (the "New Conversion Time"). If the New Conversion Time is within the Conversion Window, no charges shall be assessed on or waived by either Party. If, however, the New Conversion Time is outside of the Conversion Window, the Party requesting such New Conversion Time shall be subject to the following:

If GTE requests the New Conversion Time, twenty-five percent (25%) of the applicable Line Connection Charge shall be waived; and

If ICG requests the New Conversion Time, ICG shall be assessed a charge equal to twenty-five percent (25%) of the Line Connection Charge in addition to the Line Connection Charge that will be incurred for the New Conversion Time.

9.6.4 GTE shall test for ICG dial-tone ("Dial Tone Test") on ICG's Virtual Collocated-digital Loop carrier during a window not greater than forty-eight (48) hours but not less than eight (8) hours prior to the Scheduled Conversion Time (or New Scheduled Time as applicable). GTE shall perform the Dial Tone Test on ICG's Virtual Collocated-digital Loop carrier at no charge until June 1, 1997. Thereafter, ICG may request GTE to perform such Dial Tone Test on a time and materials basis at GTE's then current rates. GTE shall not perform any Dial Tone Test on any ICG Physically Collocated digital Loop carrier.

9.6.5 Except as otherwise agreed by the Parties for a specific conversion, the Parties agree that the time interval expected from disconnection of "live" Telephone Exchange Service to the connection of an unbundled Network Element at the ICG Collocation interface point will be sixty (60) minutes or less. If a conversion interval exceeds sixty (60) minutes and such delay is caused solely by GTE (and not by a contributing Delaying Event (as defined in Section 26.4)), GTE shall waive the applicable Line Connection Charge for such element. If ICG has ordered INP with the installation of a Loop, GTE will coordinate the implementation of

INP with the Loop conversion during the sixty (60) minute interval at no additional charge.

9.6.6 If ICG requests or approves an GTE technician to perform services in excess of or not otherwise contemplated by the Line Connection Service, GTE may charge ICG for any additional and reasonable labor charges to perform such services.

9.6.7 GTE shall provide ICG with electronic ordering interfaces as described in the Unbundling Product Guide of GTE.

9.6.8 GTE shall charge ICG the non-recurring and monthly recurring rates for unbundled elements (including but not limited to the monthly recurring rates for these specific Network Elements, service coordination fee, and cross connect charges) as specified in the Pricing Schedule.

9.7 Maintenance of Unbundled Network Elements.

9.7.1 If (i) ICG reports to GTE a Customer trouble, (ii) ICG requests a dispatch, (iii) GTE dispatches a technician, and (iv) such trouble was not caused by GTE's facilities or equipment, then ICG shall pay GTE a trip charge of \$ _____.00 per trouble dispatch and time charges of \$ _____ per quarter-hour.

9.7.2 If (i) GTE reports to ICG a Customer trouble, (ii) GTE requests a dispatch, (iii) ICG dispatches a technician, and (iv) such trouble was not caused by ICG's facilities or equipment, then GTE shall pay ICG a trip charge of \$ _____ per trouble dispatch and time charges of \$ _____ per quarter-hour.

10.0 RESALE -- SECTION 251(c)(4) AND 251(b)(1)

10.1 Availability of Wholesale Rates for Resale.

GTE shall offer to ICG for resale at wholesale rates GTE's local exchange telecommunications services as described in Section 251(c)(4) of the Act on such terms and conditions as the Parties may agree in a separate agreement governing such resale.

10.2 Availability of Retail Rates for Resale.

Each Party shall make available its Telecommunications Services for resale at retail rates to the other Party in accordance with Section 251(b)(1) of the Act.

11.0 NOTICE OF CHANGES -- SECTION 251(c)(5)

If a Party makes a change in its network which it believes will materially affect the interoperability of its network with the other Party, the Party making the change shall provide at least ninety (90) days' advance written notice of such change to the other Party or within such other time period as determined by the FCC or the Commission and their respective rules and regulations.

12.0 COLLOCATION -- SECTION 251(c)(6)

12.1 GTE shall provide to ICG Physical Collocation of equipment necessary for Interconnection (pursuant to Section 4.0) or for access to unbundled Network Elements (pursuant to Section 9.0), except that GTE may provide for Virtual Collocation of such equipment if GTE demonstrates to the Commission that Physical Collocation is not practical for technical reasons or because of space limitations, as provided in Section 251(c)(6) of the Act. GTE shall provide such Collocation for the purpose of Interconnection or access to unbundled Network Elements, except as otherwise mutually agreed to in writing by the Parties or as required by the FCC or the appropriate Commission, subject to applicable federal and state tariffs.

12.2 Although not required to do so by Section 251(c)(6) of the Act, by this Agreement, ICG agrees to provide to GTE upon GTE's Bona Fide Request, Collocation (at ICG's option, either Physical or Virtual) of equipment for purposes of Interconnection (pursuant to Section 4.0) on a non-discriminatory basis and at the same rates, terms and conditions as GTE provides to ICG.

12.3 Where ICG is Virtually Collocated on the Effective Date in a premises that was initially prepared for Physical Collocation, ICG may elect to (i) retain its Virtual Collocation in that premises and expand that Virtual Collocation according to current procedures and applicable tariffs, or (ii) revert to Physical Collocation, in which case ICG shall coordinate with GTE for rearrangement of its equipment (transmission and IDLC) and circuits, for which GTE shall impose no conversion charge. All applicable Physical Collocation recurring charges shall apply.

12.4 Where ICG is Virtually Collocated in a premises which was initially prepared for Virtual Collocation, ICG may elect to (i) retain its Virtual Collocation in that premises and expand that Virtual Collocation according to current procedures and applicable tariffs, or (ii) unless it is not practical for technical reasons or because of space limitations, convert its Virtual Collocation to Physical Collocation at such premises in which case ICG shall coordinate the construction and rearrangement with GTE of its equipment (transmission and IDLC) and circuits for which ICG shall pay GTE at applicable tariff rates. In addition, all applicable Physical Collocation recurring charges shall apply.

12.5 For both Physical Collocation and Virtual Collocation, the Collocating Party

shall provide its own or GTE leased transport facilities and terminate those transport facilities in equipment located in its Physical Collocation space at the Housing Party's premises as described in applicable tariffs or contracts and purchase Cross Connection to services or facilities as described in applicable tariffs or contracts.

12.6 Physical Collocation is provided solely for the purpose of Interconnection with the services of the Housing Party and shall not be used to connect directly with the services of other Telecommunications Carriers.

SECTION 251(b) PROVISIONS

13.0 NUMBER PORTABILITY -- SECTION 251(b)(2)

13.1 Scope.

13.1.1 The Parties shall provide Number Portability on a reciprocal basis to each other in accordance with rules and regulations as from time to time prescribed by the FCC and the Commission.

13.1.2 Until Number Portability is implemented by the industry pursuant to regulations issued by the FCC or the Commission, the Parties agree to provide Interim Telecommunications Number Portability to each other through remote call forwarding, direct inward dialing trunks and NXX migration.

13.1.3 GTE shall provide to ICG its Interim Telecommunications Number Portability offering until such time as the FCC or Commission provides for an orderly transition process to Number Portability. Upon implementation of Number Portability pursuant to FCC regulation, both Parties agree to conform and provide such Number Portability offering.

13.2 Procedures for Providing INP Through Remote Call Forwarding.

ICG and GTE will provide INP through remote call forwarding as follows:

13.2.1 A Customer of one Party ("Party A") elects to become a Customer of the other Party ("Party B"). The Customer elects to utilize the original telephone number(s) corresponding to the Telephone Exchange Service(s) it previously received from Party A, in conjunction with the Telephone Exchange Service(s) it will now receive from Party B. Upon receipt of a signed letter of agency from the Customer (and an associated service order) assigning the number to Party B, Party A will implement an arrangement whereby all calls to the original telephone number(s) will be forwarded to a new telephone number(s) designated by Party B. Party A will route the forwarded traffic to Party B over the appropriate Local/IntralATA Trunks as if the call had originated on Party A's network.

13.2.2 Party B will become the customer of record for the original Party A telephone numbers subject to the INP arrangements. Party A shall use its reasonable efforts to consolidate into as few billing statements as possible for all collect, calling card, and 3rd-number billed calls associated with those numbers, with sub-account detail by retained number. At Party B's sole discretion, such billing statement shall be delivered to Party B in an agreed-upon format via either electronic file transfer, daily magnetic tape, or monthly magnetic tape.

13.2.3 Party A will update its Line Information Database ("LIDB") listings for retained numbers, and restrict or cancel calling cards associated with those forwarded numbers as directed by Party B.

13.2.4 Within two (2) business days of receiving notification from the Customer, Party B shall notify Party A of the Customer's termination of service with Party B, and shall further notify Party A as to that Customer's instructions regarding its telephone number(s). Party A will reinstate service to that Customer, cancel the INP arrangements for that Customer's telephone number(s), or redirect the INP arrangement to another INP-participating LEC pursuant to the Customer's instructions at that time.

13.3 Procedures for Providing INP Through Direct Inward Dial Trunks.

Upon request, GTE shall provide to ICG INP via direct inward dial trunks pursuant to applicable tariffs.

13.4 Procedures for Providing INP Through NXX Migration.

Where either Party has activated an entire NXX for a single Customer, or activated a substantial portion of an NXX for a single Customer with the remaining numbers in that NXX either reserved for future use or otherwise unused, if such Customer chooses to receive service from the other Party, the first Party shall cooperate with the second Party to have the entire NXX reassigned in the LERG (and associated industry databases, routing tables, etc.) to an End Office operated by the second Party. Such transfer will be accomplished with appropriate coordination between the Parties and subject to appropriate industry lead times for movements of NXXs from one switch to another.

13.5 Receipt of Terminating Compensation on Traffic to INP'ed Numbers.

The Parties agree that, under INP, terminating compensation on calls to INP'ed numbers should be received by each Customer's chosen LEC as if each call to the Customer had been originally addressed by the caller to a telephone number bearing an NPA-NXX directly assigned to the Customer's chosen LEC. In order to accomplish this objective where INP is employed, the Parties shall utilize the process set forth in this Section 13.5 whereby terminating compensation

on calls subject to INP will be passed from the Party (the "Performing Party") which performs the INP to the other Party (the "Receiving Party") for whose Customer the INP is provided.

13.5.1 The Parties shall individually and collectively track and quantify INP traffic between their networks based on the CPN of each call by identifying CPNs which are INP'd numbers. The Receiving Party shall charge the Performing Party for each minute of INP traffic at the INP Traffic Rate specified in Section 13.5.3 in lieu of any other compensation charges for terminating such traffic.

13.5.2 By the Interconnection Activation Date in each LATA, the Parties shall jointly estimate for the prospective year, based on historic data of all traffic in the LATA, the percentages of such traffic that if dialed to telephone numbers bearing NPA-XXXs directly assigned to a Receiving Party (as opposed to the INP'd number) would have been subject to (i) Reciprocal Compensation ("Recip Traffic"), (ii) intrastate FGD charges ("Intra Traffic"), (iii) interstate FGD charges ("Inter Traffic"), or (iv) handled as Local Traffic under transiting arrangements between the Parties ("Transit Traffic"). On the date which is six (6) months after the Interconnection Activation Date, and thereafter on each succeeding six (6) month anniversary of such Interconnection Activation Date, the Parties shall establish new INP traffic percentages to be applied in the prospective six (6)-month period, based on actual INP traffic percentages from the preceding six (6)-month period.

13.5.3 The INP Traffic Rate shall be equal to the sum of:

(Recip Traffic percentage times the Reciprocal Compensation Rate set forth in the Pricing Schedule) plus (Intra Traffic percentage times GTE's effective intrastate FGD rates) plus (Inter Traffic percentage times GTE's effective interstate FGD rates).

A rate of zero shall be applied to the Transit Traffic percentage on the assumption that some portion of such Transit Traffic would otherwise be subject to other compensation arrangements and to account for a reasonable level of uncollectibles on terminating compensation. Interstate and intrastate FGD rates shall be calculated utilizing the effective interstate and intrastate carrier common line (CCL) rates, residual interconnection charge (RIC) rate elements, local switching (LS) rate elements, one-half the local transport termination (LTT) rate elements, and one-half the local transport facility (LTF) rate elements (assuming a five (5)-mile LTF).

14.0 DIALING PARITY -- SECTION 251(b)(3)

The Parties shall provide Local Dialing Parity to each other as required under Section 251(b)(3) of the Act.

15.0 ACCESS TO RIGHTS-OF-WAY -- SECTION 251(b)(4)

Each Party shall provide the other Party access to the poles, ducts, rights-of-way and conduits it owns or controls at reciprocal rates, terms and conditions, provided that such rates, terms and conditions (i) shall be at least as favorable as those contained in GTE's tariffs and (ii) are consistent with Section 224 of the Act.

16.0 DATABASE ACCESS

In accordance with Section 271 of the Act, GTE shall provide ICG with interfaces to access GTE's databases and associated signaling necessary for the routing and completion of ICG's traffic. Access to such databases, and the appropriate interfaces, shall be made available to ICG via a Bona Fide Request.

17.0 REFERRAL ANNOUNCEMENT

When a Customer changes its service provider from GTE to ICG, or from ICG to GTE, and does not retain its original telephone number, the Party formerly providing service to such Customer shall provide a referral announcement ("Referral Announcement") on the abandoned telephone number which provides details on the Customer's new number. Referral Announcements shall be provided reciprocally, free of charge to either the other Party or the Customer, for a period of not less than four (4) months after the date the Customer changes its telephone number in the case of business Customers and not less than sixty (60) days after the date the Customer changes its telephone number in the case of residential Customers. However, if either Party provides Referral Announcements for a period longer than the above respective periods when its Customers change their telephone numbers, such Party shall provide the same level of service to Customers of the other Party.

18.0 OTHER SERVICES

ICG and GTE shall provide other services to each other as required under the Act on such terms and conditions as the Parties may agree in separate agreements governing (i) 911 and E911 services and (ii) directory assistance services and operator call completion services.

GENERAL PROVISIONS

19.0 GENERAL RESPONSIBILITIES OF THE PARTIES

19.1 Each of GTE and ICG shall use its best efforts to comply with the Implementation Schedule.

19.2 The Parties shall exchange technical descriptions and forecasts of their Interconnection and traffic requirements in sufficient detail necessary to establish the Interconnections required to assure traffic completion to and from all Customers in their respective designated service areas. ICG, for the purpose of ubiquitous connectivity, network diversity and alternate routing, shall connect to at least one Tandem Office Switch for the receipt completion of traffic to any GTE End Office Switches.

19.3 Thirty (30) days after the Effective Date and each month prior to the first anniversary hereof, each Party shall, in addition to the forecasts required under Section 19.4, provide the other Party with a rolling, six (6) calendar month, non-binding forecast of its traffic and volume requirements for the services and Network Elements provided under this Agreement in the form and in such detail as agreed by the Parties. On or before the first anniversary hereof, the Parties shall meet to discuss whether to continue such rolling six (6) month forecasts or to provide for a different interval in which non-binding forecasts should be exchanged between the Parties. If the Parties are unable to agree on such different interval of forecasting, the Parties shall continue to exchange such rolling six (6) month forecasts every month until the Parties agree otherwise. Notwithstanding Section 28.5.1, the Parties agree that each forecast provided under this Section 19.3 shall be deemed "Proprietary Information" under Section 28.5.

19.4

19.4.1 The Parties shall work towards the development of joint forecasting responsibilities for traffic utilization over the Local/Intral ATA Trunks and Access Toll Connecting Trunks. Orders for trunks that exceed forecasted quantities for forecasted locations will be accommodated as facilities and/or equipment are available. Intercompany forecast information shall be provided by the Parties to each other at the same intervals as set forth in Section 19.3 and shall include:

(a) Yearly forecasted trunk quantities (which include measurement that reflect actual Tandem local Interconnection and meet-point trunks and Tandem-subtending local Interconnection End Office equivalent trunk requirements) for a minimum of three (3) (current and plus-1 and plus-2) years;

(b) The use of Common Language Location Identified (CLLI-MSG), which are described in Bellcore documents BR 795-100-100 and BR 795-400-100; and

(c) A description of major network projects anticipated for the following six (6) months. Major network projects include trunking or network rearrangements, shifts in anticipated traffic patterns, or other activities that are expected to significantly increase or decrease trunking demand during the next forecasting period.

Notwithstanding Section 28.5.1, the Parties agree that each forecast provided under this

Section 19.4.1 shall be deemed "Proprietary Information" under Section 28.5.

19.4.2 If differences in semi-annual forecasts of the Parties vary by more than twenty-four (24) additional DS0 two-way trunks for each Local Intral ATA Trunks and Access Toll Connecting Trunks, the Parties shall meet to reconcile the forecast to within twenty-four (24) DS0 trunks.

19.4.3 If a trunk group is under seventy-five percent (75%) CCS capacity on a monthly average basis for each month during any six (6) month period, either Party may issue an order to resize the trunk group, provided such trunk group shall be left with not less than twenty-five percent (25%) excess capacity. In all cases, Grade of Service objectives identified in the Grooming Plan shall be maintained.

19.4.4 Each Party shall provide to the other Party a specified point of contact for planning, forecasting and trunk servicing purposes.

19.4.5 If either Party delivers a forecast or request to the other Party which requires such other Party to incur a capital expenditure (to meet the specific need of the requesting Party, as opposed to an expenditure designed to be integrated into the receiving Party's overall network planning, expansion, upgrades or buildout) or allocate an atypical amount of resources to provide an Interconnection or additional trunking facilities, the Parties may, but shall not be obligated to, negotiate and enter into a special service arrangement. Each special service arrangement shall be in writing and contain those terms and conditions as agreed by the Parties, including provisions regarding price, performance penalties and maintenance of the confidentiality of such arrangement. The Parties acknowledge that, absent an executed special service arrangement to the contrary, nothing in this Section 19.4.5 shall expand or reduce a Party's obligations under this Agreement or obligate a Party to construct facilities that are not otherwise available.

19.5 Each Party is individually responsible to provide facilities within its network which are necessary for routing, transporting, measuring, and billing traffic from the other Party's network and for delivering such traffic to the other Party's network in the standard format compatible with GTE's network and to terminate the traffic it receives in that standard format to the proper address on its network. Such facility shall be designed based upon the description and forecasts provided under Sections 19.2, 19.3 and 19.4. The Parties are each solely responsible for participation in and compliance with national network plans, including The National Network Security Plan and The Emergency Preparedness Plan.

19.6

19.6.1 Each Party may use protective network traffic management controls such as 7-digit and 10-digit code gaps on traffic toward the other Party's network, when required to

protect the public switched network from congestion due to facility failures, switch congestion or failure or focused overload. Each Party shall immediately notify the other Party of any protective control action planned or executed.

19.6.2 Where the capability exists, originating or terminating traffic reroutes may be implemented by either Party to temporarily relieve network congestion due to facility failures or abnormal calling patterns. Reroutes shall not be used to circumvent normal trunk servicing. Expansive controls shall be used only when mutually agreed to by the Parties.

19.6.3 The Parties shall cooperate and share pre-planning information regarding cross-network call-ins expected to generate large or focused temporary increases in call volumes, to prevent or mitigate the impact of these events on the public switched network.

19.6.4 Neither Party shall use any service related to or using any of the services provided in this Agreement in any manner that interferes with third parties in the use of their service, prevents third parties from using their service, impairs the quality of service to other carriers or to either Party's Customers; causes electrical hazards to either Party's personnel, damage to either Party's equipment or malfunction of either Party's billing equipment (individually and collectively, a "Network Harm"). If a Network Harm shall occur or if a Party reasonably determines that a Network Harm is imminent, such Party shall, where practicable, notify the other Party that temporary discontinuance or refusal of service may be required, provided, however, wherever prior notice is not practicable, such Party may temporarily discontinue or refuse service forthwith, if such action is reasonable under the circumstances. In case of such temporary discontinuance or refusal, such Party shall

- (a) Promptly notify the other Party of such temporary discontinuance or refusal;
- (b) Afford the other Party the opportunity to correct the situation which gave rise to such temporary discontinuance or refusal; and
- (c) Inform the other Party of its right to bring a complaint to the Commission or FCC.

19.7 The Parties agree to exchange reports, records and/or data as provided herein to facilitate the proper billing of traffic. Not more than twice per calendar year, either Party may at its sole cost and expense perform an audit of the reports, records and/or data of the other Party on no fewer than ten (10) days written notice to the other Party. Such audit shall be conducted by an independent auditor acceptable to both Parties and shall be conducted on the premises of the Party being audited during normal business hours. If any audit confirms any undercharge, then the Party being audited shall immediately compensate the other Party for such undercharge, together with interest at the rate specified in Section 28.10.5 from the date on which such

undercharge originated. Each Party shall maintain reports, records and data relevant to the billing of any services that are the subject matter of this Agreement for a period of not less than eighteen (18) months after creation thereof.

19.8 Each Party is solely responsible for the services it provides to its Customers and to other Telecommunications Carriers.

19.9 The Parties shall work cooperatively to minimize fraud associated with third-number billed calls, calling card calls, and any other services related to this Agreement.

19.10 Each Party is responsible for administering NXX codes assigned to it.

19.11 Each Party is responsible for obtaining Local Exchange Routing Guide ("LERG") listings of CLLI codes assigned to its switches.

19.12 Each Party shall use the LERG published by Bellcore or its successor for obtaining routing information and shall provide all required information to Bellcore for maintaining the LERG in a timely manner.

19.13 Each Party shall program and update its own Central Office Switches and network systems to recognize and route traffic to and from the other Party's assigned NXX codes. Except as mutually agreed or as otherwise expressly defined in this Agreement, neither Party shall impose any fees or charges on the other Party for such activities.

19.14 Each Party shall provide, in its tariffs and contracts with its Customers that relate to any Telecommunications Service or Network Element provided or contemplated under this Agreement, that in no case shall such Party or any of its agents, contractors or others retained by such parties be liable to any Customer or third party for (i) any Loss relating to or arising out of this Agreement, whether in contract or tort, that exceeds the amount such Party would have charged the applicable Customer for the service(s) or function(s) that gave rise to such Loss, and (ii) any Consequential Damages (as defined in Section 25.3 below).

19.15 Each Party is responsible for obtaining transport facilities sufficient to handle traffic between its network and the other Party's network. Each Party may provide the facilities itself, order them through a third party, or order them from the other Party.

19.16 Each Party is responsible for requesting Interconnection to the other Party's Common Channel Interoffice Signaling ("CCIS") network, where SS7 signaling on the trunk group(s) is desired. Each Party shall connect to a pair of access STPs in each LATA where traffic will be exchanged or shall arrange for signaling connectivity through a third party provider which is connected to the other Party's signaling network. The Parties shall establish Interconnection at the STP, and other points, as necessary and as jointly agreed to by the Parties.

19.17 At all times during the term of this Agreement, each Party shall keep and maintain in force at each Party's expense all insurance required by law, general liability insurance and workers' compensation insurance. Upon request from the other Party, each Party shall provide to the other Party evidence of such insurance (which may be provided through a program of self-insurance).

20.0 TERM AND TERMINATION

20.1 The initial term of this Agreement shall be three (3) years (the "Term") which shall commence on the Effective Date. Absent the receipt by one Party of written notice from the other Party at least sixty (60) days prior to the expiration of the Term to the effect that such Party does not intend to extend the Term of this Agreement, this Agreement shall automatically renew and remain in full force and effect on and after the expiration of the Term until terminated by either Party pursuant to Section 20.3.

20.2 Subject to Section 28.18, either Party may terminate this Agreement if the other Party (i) fails to pay any amount when due hereunder (excluding Disputed Amounts pursuant to Section 28.10) and fails to cure such nonpayment within sixty (60) days after receipt of written notice thereof; or (ii) fails to perform any other material obligation required to be performed by it pursuant to this Agreement and fails to cure such material nonperformance within forty-five (45) days after written notice thereof.

20.3 If pursuant to Section 20.1 this Agreement continues in full force and effect after the expiration of the Term, either Party may terminate this Agreement ninety (90) days after delivering written notice to the other Party of its intention to terminate this Agreement; provided that the Party receiving such termination notice may elect by giving written notice ("Continuation Notice") to the terminating Party within ten (10) days of its receipt of the termination notice to have this Agreement continue in full force and effect until such time as a successor agreement between the Parties is entered into; provided, however, that upon delivery of such Continuation Notice, the Parties shall renegotiate the rates, fees and charges contained herein and such revised rates, fees and charges shall apply from and after the ninetieth (90th) day after receipt of such notice of intent to terminate. If the Parties fail to agree on revised rates, fees and charges, the applicable tariffed rates shall apply on and after such ninetieth (90th) day until the Parties reach agreement or a successor agreement is executed by the Parties. Neither Party shall have any liability to the other Party for termination of this Agreement pursuant to this Section 20.3 other than to pay to the other Party any amounts owed under this Agreement.

20.4 Upon termination or expiration of this Agreement in accordance with this Section 20.0:

- (a) each Party shall comply immediately with its obligations set forth in

Section 28.5.3.

(b) each Party shall remove any Collocated equipment that is used solely to perform its obligations under this Agreement from the other Party's Central Office within thirty (30) days of the effective date of termination or expiration of this Agreement.

(c) each Party shall promptly pay all amounts (including any late payment charges) owed under this Agreement.

20.5 Except as set forth in Section 26.5, no remedy set forth in this Agreement is intended to be exclusive and each and every remedy shall be cumulative and in addition to any other rights or remedies now or hereafter existing under applicable law or otherwise.

21.0 DISCLAIMER OF REPRESENTATIONS AND WARRANTIES

EXCEPT AS EXPRESSLY PROVIDED UNDER THIS AGREEMENT OR ANY APPLICABLE TARIFF, IF ANY, NO PARTY MAKES OR RECEIVES ANY WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE SERVICES, FUNCTIONS AND PRODUCTS IT PROVIDES UNDER OR THOSE CONTEMPLATED BY THIS AGREEMENT AND THE PARTIES DISCLAIM THE IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR OF FITNESS FOR A PARTICULAR PURPOSE.

22.0 CANCELLATION CHARGES

Cancellation charges are charges associated with canceling a service order after the order is placed but before service begins. Except for cancellation charges set forth in applicable tariffs, for "make ready" costs incurred by a Party at the direction of the other Party, as specified herein or as agreed to by the Parties, cancellation charges shall not be imposed upon, or payable by, either Party.

23.0 NON-SEVERABILITY

23.1 The services, arrangements, Interconnection, Network Elements, terms and conditions of this Agreement were mutually negotiated by the Parties as a total arrangement and are intended to be non-severable, subject only to Sections 27.0 and 28.13.

23.2 Nothing in this Agreement shall be construed as requiring or permitting either Party to contravene any mandatory requirement of federal or state law, or any regulations or orders adopted pursuant to such law.

24.0 INDEMNIFICATION

24.1 Except as provided in Section 24.4, each Party (the "Indemnifying Party") shall defend and indemnify the other Party (the "Indemnified Party") and hold such Indemnified Party harmless against any Loss to a third party arising out of the negligence or willful misconduct by such Indemnifying Party, its agents, its Customers, contractors, or others retained by such parties, in connection with its provision of services or functions under this Agreement.

24.2 Each Party ("Indemnified Party") shall be indemnified, defended and held harmless by the other Party ("Indemnifying Party") against any Loss arising from such Indemnifying Party's use of services offered under this Agreement, involving:

(a) Claims for libel, slander, invasion of privacy, or infringement of copyright arising from the Indemnifying Party's own communications or the communications of such Indemnifying Party's Customers, or

(b) Claims for patent, trademark, copyright infringement or other infringement of intellectual property rights, arising from the Indemnifying Party's acts, combining or using the service furnished by the Indemnified Party in connection with facilities or equipment furnished by the Indemnifying Party or its Customers, agents, subcontractors or others retained by such parties.

24.3 Each Party shall indemnify and hold the other Party harmless from any and all penalties imposed upon the other Party for any noncompliance with the Communications Law Enforcement Act of 1994 ("CALEA") and shall at the non-compliant Party's sole cost and expense, modify or replace any equipment, facilities or services provided to the other Party under this Agreement to ensure that such equipment, facilities and services fully comply with CALEA.

24.4 In the case of any Loss alleged or made by a Customer of either Party, the Party ("Indemnifying Party") whose Customer alleged or made such Loss shall defend and indemnify the other Party (the "Indemnified Party") and hold such Indemnified Party harmless against any or all of such Loss alleged by each and every Customer.

24.5 The Indemnifying Party agrees to defend any suit brought against the Indemnified Party for any Loss identified in this Section 24.0. The Indemnified Party agrees to notify the Indemnifying Party promptly in writing of any written claims, lawsuits, or demand for which such Indemnifying Party is or may be responsible and of which the Indemnified Party has knowledge and to cooperate in every reasonable way to facilitate defense or settlement of claims.

The Indemnifying Party shall have the exclusive right to control and conduct the defense and settlement of any such actions or claims subject to consultation with the Indemnified Party. The Indemnifying Party shall not be liable for any settlement by the Indemnified Party unless such Indemnifying Party has approved such settlement in advance and agrees to be bound by the agreement incorporating such settlement.

25.0 LIMITATION OF LIABILITY

25.1 Each Party shall be responsible only for service(s) and facility(ies) which are provided by that Party, its authorized agents, subcontractors, or others retained by such parties, and neither Party shall bear any responsibility for the services and facilities provided by the other Party, its agents, subcontractors, or others retained by such parties.

25.2 Except for indemnity obligations under Section 24.0, each Party's liability to the other Party for any Loss relating to or arising out of any negligent act or omission in its performance of this Agreement, whether in contract or in tort, shall be limited to the total amount that is or would have been charged to the other Party by such negligent or breaching Party for the service(s) or function(s) not performed or improperly performed.

25.3 In no event shall either Party have any liability whatsoever to the other Party for any indirect, special, consequential, incidental or punitive damages, including but not limited to loss of anticipated profits or revenue or other economic loss in connection with or arising from anything said, omitted or done hereunder (collectively, "Consequential Damages"), even if the other Party has been advised of the possibility of such damages, provided, that the foregoing shall not limit a Party's obligation under Section 24.1 to indemnify, defend and hold the other Party harmless against any amounts payable to a third party, including any losses, costs, fines, penalties, criminal or civil judgments or settlements, expenses (including attorneys' fees) and Consequential Damages of such third party.

26.0 LIQUIDATED DAMAGES FOR SPECIFIED ACTIVITIES

26.1 Certain Definitions. When used in this Section 26.0, the following terms shall have the meanings indicated:

26.1.1 "Specified Performance Breach" means the failure by GTE to meet the Performance Criteria for any Specified Activity for a period of three (3) consecutive calendar months.

26.1.2 "Specified Activity" means any of the following activities:

- (i) the installation by GTE of unbundled Loops for ICG ("Unbundled Loop Installation");
- (ii) GTE's provision of Interim Telecommunications Number Portability ("INP Provisioning"); or
- (iii) the repair of out of service problems for ICG ("Out of Service Repairs").

26.1.3 "Performance Criteria" means, with respect to each calendar month during the term of this Agreement, the performance by GTE during such month of each Specified Activity shown below within the time interval shown in at least eighty percent (80%) of the covered instances:

SPECIFIED ACTIVITY	PERFORMANCE INTERVAL DATE
(i) <u>Unbundled Loop Installation</u>	
1-10 Loops per Service Order	5 days from GTE's Receipt of valid Service Order
11-20 Loops per Service Order	10 days from GTE's Receipt of valid Service Order
21+ Loops per Service Order	to be Negotiated
(ii) <u>INP Provisioning</u>	
1-10 Numbers per Service Order	5 days from GTE's Receipt of valid Service Order
11-20 Numbers per Service Order	10 days from GTE's Receipt of valid Service Order
21+ Numbers per Service Order	to be Negotiated
(iii) <u>Out-of-Service Repairs</u>	Less than 24 hours from GTE's Receipt of Notification of Out-of-Service Condition

26.2 Specified Performance Breach. In recognition of the (1) loss of Customer opportunities, revenues and goodwill which ICG might sustain in the event of a Specified Performance Breach; (2) the uncertainty, in the event of such a Specified Performance Breach, of ICG having available to it customer opportunities similar to those opportunities currently available to ICG; and (3) the difficulty of accurately ascertaining the amount of damages ICG would sustain in the event of such a Specified Performance Breach, GTE agrees to pay ICG, subject to Section 26.4, damages as set forth in Section 26.3 in the event of the occurrence of a Specified Performance Breach.

26.3 Liquidated Damages. The damages payable by GTE to ICG as a result of a

Specified Performance Breach shall be \$_____ for each Specified Performance Breach; collectively, the "Liquidated Damages"; ICG and GTE agree and acknowledge that (a) the Liquidated Damages are not a penalty and have been determined based upon the facts and circumstances of ICG and GTE at the time of the negotiation and entering into of this Agreement, with due regard given to the performance expectations of each Party; (b) the Liquidated Damages constitute a reasonable approximation of the damages ICG would sustain if its damages were readily ascertainable; and (c) ICG shall not be required to provide any proof of the Liquidated Damages.

26.4 Limitations. In no event shall GTE be liable to pay the Liquidated Damages if GTE's failure to meet or exceed any of the Performance Criteria is caused, directly or indirectly, by a Delaying Event. A "Delaying Event" means (a) a failure by ICG to perform any of its obligations set forth in this Agreement (including, without limitation, the Implementation Schedule and the Crowing Plan); (b) any delay, act or failure to act by a Customer, agent or subcontractor of ICG or (c) any Force Majeure Event. If a Delaying Event (i) prevents GTE from performing a Specified Activity, then such Specified Activity shall be excluded from the calculation of GTE's compliance with the Performance Criteria, or (ii) only suspends GTE's ability to timely perform the Specified Activity, the applicable time frame in which GTE's compliance with the Performance Criteria is measured shall be extended on an hour-for-hour or day-for-day basis, as applicable, equal to the duration of the Delaying Event.

26.5 Sole Remedy. The Liquidated Damages shall be the sole and exclusive remedy of ICG under this Agreement for GTE's breach of the Performance Criteria and a Specified Performance Breach as described in this Section 26.0.

26.6 Records. GTE shall maintain complete and accurate records, on a monthly basis, of its performance under this Agreement of each Specified Activity and its compliance with the Performance Criteria. GTE shall provide to ICG such records in a self-reporting format on a monthly basis. Notwithstanding Section 28.5.1, the Parties agree that such records shall be deemed "Proprietary Information" under Section 28.5.

27.0 REGULATORY APPROVAL.

The Parties understand and agree that this Agreement will be filed with the Commission and may thereafter be filed with the FCC. The Parties covenant and agree that this Agreement is satisfactory to them as an agreement under Section 251 of the Act. Each Party covenants and agrees to fully support approval of this Agreement by the Commission or the FCC under Section 252 of the Act without modification. If the Commission or the FCC rejects any portion of this Agreement, the Parties agree to meet and negotiate in good faith to arrive at a mutually acceptable modification of the rejected portion; provided that such rejected portion shall not affect the validity of the remainder of this Agreement. The Parties acknowledge that nothing in this Agreement shall limit a Party's ability, independent of such Party's agreement to support and

participate in the approval of this Agreement, to assert public policy issues relating to the Act

28.0 MISCELLANEOUS

28.1 Authorization.

28.1.1 GTE Telephone Operations, is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full power and authority to execute and deliver this Agreement and to perform the obligations hereunder on behalf of GTE.

28.1.2 ICG is a corporation duly organized, validly existing and in good standing under the laws of the State of Colorado and has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder

28.2 Compliance. Each Party shall comply with all applicable federal, state, and local laws, rules, and regulations applicable to its performance under this Agreement.

28.3 Independent Contractor. Each Party shall perform services hereunder as an independent contractor and nothing herein shall be construed as creating any other relationship between the Parties. Each Party and each Party's contractor shall be solely responsible for the withholding or payment of all applicable federal, state and local income taxes, social security taxes and other payroll taxes with respect to their employees, as well as any taxes, contributions or other obligations imposed by applicable state unemployment or workers' compensation acts. Each Party has sole authority and responsibility to hire, fire and otherwise control its employees.

28.4 Force Majeure. Neither Party shall be liable for any delay or failure in performance of any part of this Agreement from any cause beyond its control and without its fault or negligence including, without limitation, acts of nature, acts of civil or military authority, government regulations, embargoes, epidemics, terrorist acts, riots, insurrections, fires, explosions, earthquakes, nuclear accidents, floods, work stoppages, equipment failure, power blackouts, volcanic action, other major environmental disturbances, unusually severe weather conditions, inability to secure products or services of other persons or transportation facilities or acts or omissions of transportation carriers (individually or collectively, a "Force Majeure Event").

28.5 Confidentiality.

28.5.1 Any information such as specifications, drawings, sketches, business information, forecasts, models, samples, data, computer programs and other software and documentation of one Party (a "Disclosing Party") that is furnished or made available or otherwise disclosed to the other Party or any of such other Party's employees, contractors, agents or Affiliates (its "Representatives" and with a Party, a "Receiving Party") pursuant to this Agreement ("Proprietary Information") shall be deemed the property of the Disclosing Party. Proprietary Information, if written, shall be marked "Confidential" or "Proprietary" or by other similar notice, and, if oral or visual, shall be identified as confidential or proprietary prior to disclosure of the actual Proprietary Information to enable the Receiving Party to determine whether it will accept such Proprietary Information and, if accepted, shall be confirmed in writing as confidential by the Disclosing Party to the Receiving Party within ten (10) days after disclosure. Unless Proprietary Information was previously known by the Receiving Party free of any obligation to keep it confidential, or has been or is subsequently made public by an act not attributable to the Receiving Party, or is explicitly agreed in writing not to be regarded as confidential, it (a) shall be held in confidence by each Receiving Party, (b) shall be disclosed to only those Representatives who have a need for it in connection with the provision of services required to fulfill this Agreement and shall be used only for such purposes; and (c) may be used for other purposes only upon such terms and conditions as may be mutually agreed to in advance of use in writing by the Parties. Notwithstanding the foregoing sentence, a Receiving Party shall be entitled to disclose or provide Proprietary Information to the Commission or the FCC or as required by any governmental authority or applicable law only in accordance with Section 28.5.2.

28.5.2 (a) If a Receiving Party desires to disclose or provide to the Commission or the FCC any Proprietary Information of the Disclosing Party, such Receiving Party shall, prior to and as a condition of such disclosure, (i) provide the Disclosing Party with written notice and the form of such proposed disclosure as soon as possible but in any event early enough to allow the Disclosing Party to protect its interests in the Proprietary Information to be disclosed and (ii) attempt to obtain in accordance with the applicable procedures of the intended recipient of such Proprietary Information an order, appropriate protective relief or other reliable assurance that confidential treatment shall be accorded to such Proprietary Information.

(b) If a Receiving Party is required by any governmental authority or by applicable law to disclose any Proprietary Information, then such Receiving Party shall provide the Disclosing Party with written notice of such requirement as soon as possible and prior to such disclosure. The Disclosing Party may then either seek appropriate protective relief from all or part of such requirement or, if it fails to successfully do so, it shall be deemed to have waived the Receiving Party's compliance with this Section 28.5 with respect to all or part of such requirement. The Receiving Party shall use all commercially reasonable efforts to cooperate with the Disclosing Party in attempting to obtain any protective relief which such Disclosing Party chooses to obtain.

28.5.3 In the event of the expiration or termination of this Agreement for any reason whatsoever, each Party shall return to the other Party or destroy all Proprietary Information and other documents, work papers and other material (including all copies thereof) obtained from the other Party in connection with this Agreement and shall use all reasonable efforts, including instructing its employees and others who have had access to such information, to keep confidential and not to use any such information, unless such information is now, or is hereafter disclosed, through no act, omission or fault of such Party, in any manner making it available to the general public.

28.6 Governing Law. For all claims under this Agreement that are based upon issues within the jurisdiction (primary or otherwise) of the FCC, the exclusive jurisdiction and remedy for all such claims shall be as provided for by the FCC and the Act. For all claims under this Agreement that are based upon issues within the jurisdiction (primary or otherwise) of the Commission, the exclusive jurisdiction for all such claims shall be with such Commission, and the exclusive remedy for such claims shall be as provided for by such Commission. In all other respects, this Agreement shall be governed by the domestic laws of the state of Colorado without reference to conflict of law provisions.

28.7 Taxes. Each Party purchasing services hereunder shall pay or otherwise be responsible for all federal, state, or local sales, use, excise, gross receipts, transaction or similar taxes, fees or surcharges levied against or upon such purchasing Party (or the providing Party when such providing Party is permitted to pass along to the purchasing Party such taxes, fees or surcharges), except for any tax on either Party's corporate existence, status or income. Whenever possible, these amounts shall be billed as a separate item on the invoice. To the extent a sale is claimed to be for resale tax exemption, the purchasing Party shall furnish the providing Party a proper resale tax exemption certificate as authorized or required by statute or regulation by the jurisdiction providing said resale tax exemption. Failure to timely provide said resale tax exemption certificate will result in no exemption being available to the purchasing Party.

28.8 Non-Assignment. Neither Party may assign or transfer (whether by operation of law or otherwise) this Agreement (or any rights or obligations hereunder) to a third party without the prior written consent of the other Party; provided that each Party may assign this Agreement to a corporate Affiliate or an entity under its common control or an entity acquiring all or substantially all of its assets or equity by providing prior written notice to the other Party of such assignment or transfer. Any attempted assignment or transfer that is not permitted is void ab initio. Without limiting the generality of the foregoing, this Agreement shall be binding upon and shall inure to the benefit of the Parties' respective successors and assigns.

28.9 Non-Waiver. Failure of either Party to insist on performance of any term or condition of this Agreement or to exercise any right or privilege hereunder shall not be construed

as a continuing or future waiver of such term, condition, right or privilege

28.10 Disputed Amounts.

28.10.1 If any portion of an amount due to a Party (the "Billing Party") under this Agreement is subject to a bona fide dispute between the Parties, the Party billed (the "Non-Paying Party") shall within sixty (60) days of its receipt of the invoice containing such disputed amount give notice to the Billing Party of the amounts it disputes ("Disputed Amounts") and include in such notice the specific details and reasons for disputing each item. The Non-Paying Party shall pay when due (i) all undisputed amounts to the Billing Party and (ii) all Disputed Amounts into an interest bearing escrow account with a third party escrow agent mutually agreed upon by the Parties.

28.10.2 If the Parties are unable to resolve the issues related to the Disputed Amounts in the normal course of business within sixty (60) days after delivery to the Billing Party of notice of the Disputed Amounts, each of the Parties shall appoint a designated representative who has authority to settle the dispute and who is at a higher level of management than the persons with direct responsibility for administration of this Agreement. The designated representatives shall meet as often as they reasonably deem necessary in order to discuss the dispute and negotiate in good faith in an effort to resolve such dispute. The specific format for such discussions will be left to the discretion of the designated representatives, however, all reasonable requests for relevant information made by one Party to the other Party shall be honored.

28.10.3 If the Parties are unable to resolve issues related to the Disputed Amounts within forty-five (45) days after the Parties' appointment of designated representatives pursuant to Section 28.10.2, then either Party may file a complaint with the Commission or the FCC to resolve such issues or proceed with any other remedy pursuant to law or equity. The Commission or the FCC may direct release of any or all funds (including any accrued interest) in the escrow account, plus applicable late fees, to be paid to either Party.

28.10.4 The Parties agree that all negotiations pursuant to this Section 28.10 shall remain confidential and shall be treated as compromise and settlement negotiations for purposes of the Federal Rules of Evidence and state rules of evidence; provided, however, that a Party may disclose the substance of such negotiations to the FCC or the Commission pursuant to Section 28.5.2(a) for purposes other than to determine liability.

28.10.5 Any undisputed amounts not paid when due shall accrue interest from the date such amounts were due at the lesser of (i) one and one-half percent (1-1/2%) per month and (ii) the highest rate of interest that may be charged under applicable law.

28.10.6 Notwithstanding anything to the contrary in this Section 28.10, each

Party shall have the right to contest any amounts paid to the other Party hereunder for a period of six (6) months after such amounts were paid. The Party contesting such amounts shall deliver written notice to such other Party within six (6) months of its payment and include in such notice the specific details and reasons for disputing such amounts. If the Parties are unable to resolve such contested amounts in the normal course of business within thirty (30) days after delivery of notice of the contested amounts, such dispute shall be handled in accordance with Section 28.18.

28.11 Notices. Notices given by one Party to the other Party under this Agreement shall be in writing and shall be (a) delivered personally, (b) delivered by express delivery service, (c) mailed, certified mail or first class U.S. mail postage prepaid, return receipt requested or (d) delivered by telecopy to the following addresses of the Parties:

To ICG:

ICG Telecom Group, Inc.
9605 E. Maroon Circle
Suite 100
Englewood, CO 80112
Attn: Vice President and General Counsel
Facsimile: (303) 799-6985

with a copy to:

ICG Telecom Group, Inc.
9605 E. Maroon Circle
Suite 100
Englewood, CO 80112
Attn: Government Affairs Department
Facsimile: (303) 595-4940

To GTE:

GTE Telephone Operations
600 Hidden Ridge
P.O. Box 152092
Irving, TX 75015-2092
Facsimile: (312) 335-2927

with a copy to:

or to such other address as either Party shall designate by proper notice. Notices will be deemed given as of the earlier of (i) the date of actual receipt, (ii) the next business day when notice is sent via express mail or personal delivery, (iii) three (3) days after mailing in the case of first class or certified U.S. mail or (iv) on the date set forth on the confirmation in the case of telecopy.

28.12 Publicity and Use of Trademarks or Service Marks. Neither Party nor its subcontractors or agents shall use the other Party's trademarks, service marks, logos or other proprietary trade dress in any advertising, press releases, publicity matters or other promotional materials without such Party's prior written consent.

28.13 Section 252(i) Obligations. If either Party enters into an agreement (the "Other Agreement") approved by the Commission pursuant to Section 252 of the Act which provides for the provision of arrangements covered in this Agreement to another requesting Telecommunications Carrier, including itself or its Affiliate, such Party shall make available to the other Party such arrangements upon the same rates, terms and conditions as those provided in the Other Agreement. At its sole option, the other Party may avail itself of either (i) the Other Agreement in its entirety or (ii) the prices, terms and conditions of the Other Agreement that directly relate to any of the following duties as a whole:

- (1) Interconnection - Section 251(c)(2) of the Act (Section 4.0 and 5.0 of this Agreement); or
- (2) Exchange Access - Section 251(c)(2) of the Act (Section 6.0 of this Agreement); or
- (3) Unbundled Access - Section 251(c)(3) of the Act (Section 9.0 of this Agreement); or
- (4) Resale - Section 251(c)(4) of the Act (Section 10.0 of this Agreement); or
- (5) Collocation - Section 251(c)(6) of the Act (Section 12.0 of this Agreement); or
- (6) Number Portability - Section 251(b)(2) of the Act (Section 13.0 of this Agreement); or
- (7) Access to Rights-of-Way - Section 251(b)(4) of the Act (Section 15.0 of this Agreement).

28.14 Joint Work Product. This Agreement is the joint work product of the Parties and has been negotiated by the Parties and their respective counsel and shall be fairly interpreted in accordance with its terms and, in the event of any ambiguities, no inferences shall be drawn

against either Party.

28.15 No Third Party Beneficiaries; Disclaimer of Agency. This Agreement is for the sole benefit of the Parties and their permitted assigns, and nothing herein express or implied shall create or be construed to create any third-party beneficiary rights hereunder. Except for provisions herein expressly authorizing a Party to act for another, nothing in this Agreement shall constitute a Party as a legal representative or agent of the other Party, nor shall a Party have the right or authority to assume, create or incur any liability or any obligation of any kind, express or implied, against or in the name or on behalf of the other Party unless otherwise expressly permitted by such other Party. Except as otherwise expressly provided in this Agreement, no Party undertakes to perform any obligation of the other Party, whether regulatory or contractual, or to assume any responsibility for the management of the other Party's business.

28.16 No License. No license under patents, copyrights or any other intellectual property right (other than the limited license to use consistent with the terms, conditions and restrictions of this Agreement) is granted by either Party or shall be implied or arise by estoppel with respect to any transactions contemplated under this Agreement.

28.17 Technology Upgrades. Nothing in this Agreement shall limit GTE's ability to upgrade its network through the incorporation of new equipment, new software or otherwise. GTE shall provide ICG written notice at least six (6) months prior to the incorporation of any such upgrades in GTE's network which will materially impact ICG's service. ICG shall be solely responsible for the cost and effort of accommodating such changes in its own network.

28.18 Dispute Escalation and Resolution. Except as otherwise provided herein, any dispute, controversy or claim (individually and collectively, a "Dispute") arising under this Agreement shall be resolved in accordance with the procedures set forth in this Section 28.18. In the event of a Dispute between the Parties relating to this Agreement and upon the written request of either Party, each of the Parties shall appoint a designated representative who has authority to settle the Dispute and who is at a higher level of management than the persons with direct responsibility for administration of this Agreement. The designated representatives shall meet as often as they reasonably deem necessary in order to discuss the Dispute and negotiate in good faith in an effort to resolve such Dispute. The specific format for such discussions will be left to the discretion of the designated representatives, however, all reasonable requests for relevant information made by one Party to the other Party shall be honored. If the Parties are unable to resolve issues related to a Dispute within thirty (30) days after the Parties' appointment of designated representatives as set forth above, then either Party may file a complaint with the Commission in accordance with the procedures applicable to the resolution of disputes among carriers in the State of Ohio.

28.19 Survival. The Parties' obligations under this Agreement which by their nature are intended to continue beyond the termination or expiration of this Agreement shall survive the

termination or expiration of this Agreement, including without limitation, Sections 19.7, 19.14, 20.4, 21.0, 22.0, 24.0, 25.0, 28.5, 28.7, 28.10, 28.12, 28.16 and 28.18.

28.20 Scope of Agreement. This Agreement is intended to describe and enable specific Interconnection and access to unbundled Network Elements and compensation arrangements between the Parties. This Agreement does not obligate either Party to provide arrangements not specifically provided herein.

28.21 Entire Agreement. The terms contained in this Agreement and any Schedules, Exhibits, tariffs and other documents or instruments referred to herein, which are incorporated into this Agreement by this reference, constitute the entire agreement between the Parties with respect to the subject matter hereof, superseding all prior understandings, proposals and other communications, oral or written. Neither Party shall be bound by any preprinted terms additional to or different from those in this Agreement that may appear subsequently in the other Party's form documents, purchase orders, quotations, acknowledgments, invoices or other communications. This Agreement may only be modified by a writing signed by an officer of each Party.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of this ____ day of _____, 1996.

ICG TELECOM, INC.

GTE TELEPHONE OPERATIONS

600 Hidden Ridge
P.O. Box 152092
Irving, TX 75-15-2092

By: _____
Printed: Gary D. Bunjer
Title: President-Telecom Group

By: _____
Printed:
Title:

SCHEDULE 3.0
IMPLEMENTATION SCHEDULE

LATA	GTE Interconnection Wire Center	ICG Interconnection Wire Center	Interconnection Activation Date
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PRICING SCHEDULE

I. Reciprocal Compensation

Rate = \$ _____ per minute

II. Information Services Billing & Collection

Fee = \$ _____ per message

III. BLV/BLVI Traffic

Rate = \$ _____ per Busy Line Verification
 \$ _____ per Busy Line Verification Interrupt
 (in addition to \$ _____ for Busy Line Verification)

IV. Transiting

Rate = \$ _____ per minute

V. Unbundled Network Elements

A. Unbundled Loop Rates¹

Loop Type	Monthly Rates		
	Access Area ¹		
	B	C	D
Analog 2W	\$	\$	\$
Analog 4W	\$	\$	\$
ADSL 2W/HDSL 2W	\$	\$	\$
ADSL 4W/HDSL 4W	\$	\$	\$
BRI ISDN	\$	\$	\$
PBX Ground Start Coin	\$	\$	\$
Coin	\$	\$	\$
Electronic Key Line	\$	\$	\$

¹ "Access Area" is as defined in GTE's applicable tariffs for business and residential Exchange Line Services.

B Non-Recurring Charges

1. Unbundled Loops

Date of Acceptance of Service Order	Service Order Charge ²	Line Connection Charge ³
Prior to 6/1/97	\$	\$
On or after 6/1/97	\$	\$

2. Number Portability

Date of Acceptance of Service Order	Service Order Charge ²	Initial Line Connection Charge ³	Charge for Subsequent Additional Call Path Connections ⁴
Prior to 6/1/97	\$	\$	\$
On or after 6/1/97	\$	\$	\$

C. Additional Loop Conditioning Charges⁵

- ² The Service Order Charge is a per occasion charge applicable to any number of Loops ordered for the same location and same Customer account.
- ³ The Line Connection Charge applies to each Loop purchase.
- ⁴ The Service Order charge is a per occasion charge applicable per ported account per Customer location.
- ⁵ The Line Connection Charge applies to each ported number. If Number Portability is purchased with the Loop, the Initial Line Connection Charge shall be waived. The Initial Line Connection Charge includes porting the initial number with up to ninety (90) call paths.
- ⁶ The Charge for Subsequent Additional Call Path Connections is applied when purchasing up to an additional ninety (90) paths for an individual ported number. This charge also applies to any changes to the number of call paths on a ported number.
- ⁷ The Additional Loop Conditioning Charges are applicable only if the distance requested on an ordered Loop exceeds such Loop's corresponding transmission characteristics as set forth in Section 9.4.5.

Loop Type	Additional Charges per Loop
Electronic Key Line	Rates based on cost
ISDN	\$ _____ per month per Loop
HDSL 2W	Rates based on cost
HDSL 4W	Rates based on cost
ADSL 2W	Rates based on cost

VI Interim Telecommunications Number Portability

A Up to twenty (20) call paths per ported number:

Rate = \$ _____ per ported number per month.

B Twenty-one (21) to ninety (90) call paths per ported number

Rate = \$ _____ per each additional call path over twenty (20) per month

C Ninety-one (91) or more call paths per ported number: Individual case basis

EXHIBIT A

BONA FIDE REQUEST

1. Each Party shall promptly consider and analyze access to a new Interconnection or unbundled Network Element with the submission of a Bona Fide Request hereunder.
2. A Bona Fide Request shall be submitted in writing and shall include a technical description of each requested Interconnection or Network Element.
3. The requesting Party may cancel a Bona Fide Request at any time, but shall pay the other Party's reasonable and demonstrable costs of processing and/or implementing the Bona Fide Request up to the date of cancellation.
4. Within ten (10) business days of its receipt, the receiving Party shall acknowledge receipt of the Bona Fide Request.
5. Except under extraordinary circumstances, within thirty (30) days of its receipt of a Bona Fide Request, the receiving Party shall provide to the requesting Party a preliminary analysis of such Interconnection or Network Element that is the subject of the Bona Fide Request. The preliminary analysis shall confirm that the receiving Party will offer the requested Interconnection or access to the Network Element or will provide a detailed explanation as to why such Interconnection or access to such Network Element is not technically feasible and/or that the request does not qualify as a Network Element or Interconnection that is required to be provided under the Act.
6. If the receiving Party determines that the Interconnection or Network Element that is the subject of the Bona Fide Request is technically feasible and otherwise qualifies under the Act, it shall promptly proceed with developing such Interconnection or Network Element upon receipt of written authorization from the requesting Party. When it receives such authorization, the receiving Party shall promptly develop the requested services, determine their availability, calculate the applicable prices and establish installation intervals.
7. Unless the Parties otherwise agree, the Interconnection or Network Element that is the subject of a Bona Fide Request must be priced in accordance with Section 252(d)(1) of the Act.

8. As soon as feasible, but not more than ninety (90) days after its receipt of authorization to proceed with developing an Interconnection or Network Element that is the subject of a Bona Fide Request, the receiving Party shall provide to the requesting Party a Bona Fide Request quote which will include, at a minimum, a description of each Network Element, the availability, the applicable rates and the installation intervals.

9. Within thirty (30) days of its receipt of a Bona Fide Request quote, the requesting Party must either confirm its order for an Interconnection or Network Element that is the subject of a Bona Fide Request pursuant to a Bona Fide Request quote or seek arbitration by the Commission pursuant to Section 252 of the Act.

10. If a Party to a Bona Fide Request believes that the other Party is not requesting, negotiating or processing a Bona Fide Request in good faith, or disputes a determination, or price or cost quote, such Party may seek mediation or arbitration by the Commission pursuant to Section 252 of the Act.

ICG EXHIBIT NO. 1

**OCTOBER 10, 1996 ICG LETTER TO
GTE**

**ICG**

COMMUNICATIONS, INC.

October 10, 1996

Mr. John Honsbarger
GTE Telephone Operations
201 N. Illinois Street
Suite 554
Indianapolis, IN 46204

Re: Interconnection Negotiations

Dear Mr. Honsbarger:

Pursuant to our conversation this morning, ICG herein identifies additional states for which interconnection agreements with GTE are desired. The following list of states is inclusive as of the above date, however, ICG reserves the right to request agreements for other states as ICG's business plan warrants.

Alabama
California
Florida
Indiana
Kentucky
North Carolina
Ohio
Oklahoma
Texas

Also per our discussion, enclosed herewith are a hard copy of ICG's proposed agreement and the draft agreement on diskette in MS Word.

I look forward to our next meeting in Dallas.

Sincerely,

Cindy Z. Schonhaut *JS*
Vice President
Government Affairs

ICG EXHIBIT NO. 2

ICG DRAFT INTERCONNECTION AGREEMENT

ICG EXHIBIT NO. 3

GTE DRAFT INTERCONNECTION AGREEMENT

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INTERCONNECTION, RESALE AND UNBUNDLING AGREEMENT

BETWEEN

GTE _____ INCORPORATED

AND

ICG TELECOM GROUP, INC

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This Interconnection, Resale and Unbundling Agreement (the "Agreement"), is made effective as of _____, 199____, by and between GTE _____ Incorporated, with its address for purposes of this Agreement at 600 Hidden Ridge Drive, Irving, Texas 75038 ("GTE"), and ICG Telecom Group, Inc., in its capacity as a certified provider of local dial-tone service ("ICG"), with its address for this Agreement at 9605 East Maroon Circle, Englewood, Colorado 80112, (GTE and ICG being referred to collectively as the "Parties" and individually as a "Party"). This Agreement covers services in the state of _____ only (the "State").

WHEREAS, interconnection between competing Local Exchange Carriers ("LECs") is necessary and desirable for the mutual exchange and termination of traffic originating on each LEC's network; and

WHEREAS, the Parties desire to exchange such traffic and related signaling in a technically and economically efficient manner at defined and mutually agreed upon points of interconnection; and

WHEREAS, the Parties wish to enter into an agreement to interconnect their respective telecommunications networks on terms that are fair and equitable to both Parties; and

WHEREAS, Section 251 of the Telecommunications Act of 1996 (the "Act") imposes specific obligations on LECs with respect to the interconnection of their networks, resale of their telecommunications services, access to their poles, ducts, conduits and rights-of-way and, in certain cases, the offering of certain unbundled network elements and physical collocation of equipment in LEC premises;

NOW, THEREFORE, in consideration of the mutual provisions contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, GTE and ICG hereby covenant and agree as follows:

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ARTICLE I SCOPE AND INTENT OF AGREEMENT

Pursuant to this Agreement, the Parties will extend certain arrangements to one another within each area in which they both operate within the State for purposes of interconnection and the exchange of traffic between their respective end user customers, and reciprocal access to poles, ducts, conduits and rights-of-way. This Agreement also governs the purchase by ICG of certain telecommunications services provided by GTE in its franchise areas for resale by ICG, the purchase by ICG of certain unbundled network elements from GTE, and the terms and conditions of the collocation of certain equipment of ICG in the premises of GTE. This Agreement is an integrated package that reflects a balancing of interests critical to the Parties. This Agreement will be submitted to the _____ (the "Commission") for approval. The Parties agree that their entrance into this Agreement is without prejudice to any positions they may have taken previously, or may take in the future, in any legislative, regulatory, judicial or other public forum addressing any matters, including matters related to the same types of arrangements covered in this Agreement. ICG agrees to negotiate reciprocal terms and conditions with GTE based on this Agreement.

The services and facilities to be provided to ICG by GTE in satisfaction of this Agreement may be provided pursuant to GTE tariffs and then current practices. Should a tariff be filed, by GTE, including any modifications resulting from other Commission proceedings, federal court review or other judicial action, such modifications will be deemed to automatically supersede any rates and terms and conditions of this Agreement. GTE will notify ICG before such a tariff becomes effective, and ICG may provide input on such proposed tariff. GTE may request that the Commission order the rates and/or terms of this Agreement that are in conflict with its tariff be grandfathered. GTE and ICG shall use their best efforts to obtain approval of this contract by any regulatory body having jurisdiction over this Agreement.

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ARTICLE II DEFINITIONS

1. **General Definitions.** Except as otherwise specified herein, the following definitions shall apply to all Articles and Appendices contained in this Agreement. Additional definitions that are specific to the matters covered in a particular Article may appear in that Article. To the extent that there may be any conflict between a definition set forth in this Article II and any definition in a specific Article or Appendix, the definition set forth in the specific Article or Appendix shall control with respect to that Article or Appendix.
- 1.1 **"Access Service Request" (ASR)** means an industry standard form used by the Parties to add, establish, change or disconnect trunks for the purposes of interconnection.
- 1.2 **"Act"** means the Telecommunications Act of 1996, Public Law 104-104 of the 104th United States Congress effective February 8, 1996.
- 1.3 **"Affiliate"** of a Party means a person, corporation or other legal entity that, directly or indirectly, owns or controls a Party, or is owned or controlled by, or is under common ownership or control with a Party.
- 1.4 **"AMA"** means the Automated Message Accounting structure inherent in switch technology that initially records telecommunication message information. AMA format is contained in the Automated Message Accounting document, published by Bellcore as GR-1100-CORE which defines the industry standard for message recording.
- 1.5 **"Applicable Law"** shall mean all laws, statutes, common law, regulations, ordinances, codes, rules, guidelines, orders, permits, and approvals of any Governmental Authority, which apply or relate to the subject matter of this Agreement.
- 1.6 **"Automatic Location Identification/Data Management System (ALI/DMS)"** means the emergency services (E911/911) database containing customer location information (including name, address, telephone number, and sometimes special information from the local service provider) used to process subscriber access records into Automatic Location Identification (ALI) records. From this database, records are forwarded to GTE's ALI Gateway for downloading by local ALI database systems to be available for retrieval in response to ANI from a 9-1-1 call. Also, from this database, GTE will upload to

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its selective routers the selective router ALI (SR/ALI) which is used to determine to which Public Safety Answering Point ("PSAP") to route the call."

- 1.7 **"Automatic Number Identification" or "ANI"** refers to the number transmitted through the network identifying the calling party.
- 1.8 **"Bellcore"** means an organization owned jointly by the Bell regional holding companies and that may in the future be owned partially or totally by other persons, that conducts research and development projects for its owners, including development of new telecommunications services. Bellcore also provides certain centralized technical and management services for the regional holding companies and also provides generic requirements for the telecommunications industry for products, services and technologies.
- 1.9 **"Bill-and-Keep Arrangement"** means a compensation arrangement whereby the Parties do not render bills to each other for the termination of traffic specified in this Agreement and whereby LECs and ICGs terminate local exchange traffic originating from end-users served by the networks of other LECs or ICGs without explicit charging among or between said carriers for such traffic exchange.
- 1.10 **"Business Day"** shall mean Monday through Friday, except for holidays on which the U.S. mail is not delivered.
- 1.11 **"Central Office Switch"** means a switch used to provide telecommunications services including (i) **"End Office Switches"** which are Class 5 switches from which end user Exchange Services are directly connected and offered, and (ii) **"Tandem Office Switches"** which are Class 4 switches which are used to connect and switch trunk circuits between and among central office switches. Central office switches may be employed as combination end office/tandem office switches (combination Class 5/Class 4).
- 1.12 **"Centralized Message Distribution System" (CMDS)** means the billing record and clearing house transport system that the Regional Bell Operating Companies ("RBOCs") and other incumbent LECs use to efficiently exchange out collects and in collects as well as Carrier Access Billing System ("CABS") records.
- 1.13 **"CLLI codes"** means Common Language Location Identifier Codes.
- 1.14 **"Commercial Mobile Radio Services" (CMRS)** means a radio communication service between mobile stations or receivers and land stations, or by mobile

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stations communicating among themselves that is provided for profit and that makes interconnected service available to the public or to such classes of eligible users as to be effectively available to a substantial portion of the public.

- 1.15 **"Commission"** means the Commission.
- 1.16 **"Common Channel Signaling" or "CCS"** means a high-speed specialized packet-switched communications network that is separate (out-of-band) from the public packet-switched and message networks. CCS carries addressed signaling messages for individual trunk circuits and/or database-related services between Signaling Points in the CCS network using SS7 signaling protocol.
- 1.17 **"Competitive Local Exchange Carrier" (CLEC)** means any company or person authorized to provide local exchange services in competition with an ILEC.
- 1.18 **"Conduit"** means a tube or protection device that may be used to house communication or electrical cables. Conduit may be used underground or above ground and may contain one or more inner ducts.
- 1.19 **"Customer Usage Data"** means that the local telecommunications services usage data of a ICG customer, measured in minutes, sub-minute increments, message units, or otherwise, that is recorded by GTE and forwarded to ICG.
- 1.20 **"DS-1"** is a digital signal rate of 1.544 Mbps.
- 1.21 **"DS-3"** is a digital signal rate of 44.736 Mbps.
- 1.22 **"Electronic File Transfer"** refers to a system or process which utilizes an electronic format and protocol to send/receive data files.
- 1.23 **"EMR"** means the Exchange Message Record System used among GTE's systems for exchanging telecommunications message information among ICGs for billable, non-billable, sample, settlement and study data. EMR format is contained in BR-010-200-010 CRIS Exchange Message Record, published by Bellcore and which defines the industry standard for exchange message records.
- 1.24 **"E-911 Service"** is a method of routing 911 calls to a PSAP that uses customer location data in the ALI/DMS to determine the PSAP to which a call should be routed. E-9-1-1 service includes the forwarding of the caller's

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Automatic Number Identification (ANI) to the PSAP where the ANI is used to retrieve and display the Automatic Location Identification (ALI) on a terminal screen at the answering Attendant's position. It usually includes selective routing.

- 1.25 **"Exchange Service"** refers to all basic access line services, or any other services offered to end users which provide end users with a telephonic connection to, and a unique telephone number address on, the public switched telecommunications network ("PSTN"), and which enable such end users to place or receive calls to all other stations on the PSTN.
- 1.26 **"EIS" or "Expanded Interconnection Service"** means a service that provides interconnecting carriers with the capability to terminate basic fiber optic transmission facilities, including optical terminating equipment and multiplexers, at GTE's wire centers and access tandems and interconnect those facilities with the facilities of GTE. Microwave is available on a case-by-case basis where feasible.
- 1.27 **"FCC"** means the Federal Communications Commission.
- 1.28 **"Guide"** means the GTE Customer Guide for CLEC Establishment of Services - Resale and Unbundling, which contains GTE's operating procedures for ordering, provisioning, trouble reporting and repair for resold services and unbundled elements. A copy of the Guide has been provided to ICG.
- 1.29 **"Incumbent Local Exchange Carrier" (ILEC)** means any local exchange carrier that was as of February 8, 1996, deemed to be a member of the Exchange Carrier Association as set forth in 47 C.F.R. §69.601(b) of the FCC's regulations.
- 1.30 **"Integrated Services Digital Network" (ISDN)** means a switched network service providing end-to-end digital connectivity for the simultaneous transmission of voice and data.
- 1.31 **"Interconnection"** means the physical connection of separate pieces of equipment, transmission facilities, etc., within, between and among networks, for the transmission and routing of Exchange Service and Exchange Access. The architecture of interconnection may include collocation and/or mid-span meet arrangements.
- 1.32 **"Interim Number Portability (INP)"** means the delivery of LNP capabilities, from a customer standpoint in terms of call completion, with as little impairment

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restriction, or interference (and the other Party shall likewise be excused from performance of its obligations on a day-to-day basis until the delay, restriction or interference has ceased); *provided however*, that the Party so affected shall use diligent efforts to avoid or remove such causes of nonperformance and both Parties shall proceed whenever such causes are removed or cease.

16. Good Faith Performance. In the performance of their obligations under this Agreement, the Parties shall act in good faith. In situations in which notice, consent, approval or similar action by a Party is permitted or required by any provision of this Agreement, such action shall not be unreasonably delayed, withheld or conditioned.
17. Governing Law. This Agreement shall be governed by and construed in accordance with the domestic laws of the state where the Services are provided or the facilities reside and shall be subject to the exclusive jurisdiction of the courts therein.
18. Headings. The headings in this Agreement are inserted for convenience and identification only and shall not be considered in the interpretation of this Agreement.
19. Independent Contractor Relationship. The persons provided by each Party shall be solely that Party's employees and shall be under the sole and exclusive direction and control of that Party. They shall not be considered employees of the other Party for any purpose. Each Party shall remain an independent contractor with respect to the other and shall be responsible for compliance with all laws, rules and regulations involving, but not limited to, employment of labor, hours of labor, health and safety, working conditions and payment of wages. Each Party shall also be responsible for payment of taxes, including federal, state and municipal taxes, chargeable or assessed with respect to its employees, such as Social Security, unemployment, workers' compensation, disability insurance, and federal and state withholding. Each Party shall indemnify the other for any loss, damage, liability, claim, demand, or penalty that may be sustained by reason of its failure to comply with this provision.
- 19.1 Law Enforcement Interface.
 - 19.1.1 Except to the extent not available in connection with GTE's operation of its own business, GTE shall provide seven day a week/twenty-four hour a day installation and information retrieval pertaining to emergency traps, assistance involving emergency traces and

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emergency information retrieval on customer invoked CLASS services, including, without limitation, call traces requested by ICG.

19.1.2 GTE agrees to work jointly with ICG in security matters to support law enforcement agency requirements for taps, traces, court orders, etc. Charges for providing such services for ICG Customers will be billed to ICG.

19.1.3 GTE will, in non emergency situations, inform the requesting law enforcement agencies that the end-user to be wire tapped, traced, etc. is a ICG Customer and shall refer them to ICG.

20. Liability and Indemnity.

20.1 Indemnification. Each Party agrees to release, indemnify, defend, and hold harmless the other Party from all losses, claims, demands, damages, expenses, suits, or other actions, or any liability whatsoever, including, but not limited to, costs and attorney's fees, whether suffered, made, instituted, or asserted by any other party or person, for invasion of privacy, personal injury to or death of any person or persons, or for losses, damages, or destruction of property, whether or not owned by others, proximately caused by the indemnifying Party's negligence or willful misconduct, regardless of form of action. The indemnified Party agrees to notify the other Party promptly, in writing, of any written claims, lawsuits, or demands for which it is claimed that the indemnifying Party is responsible under this Section and to cooperate in every reasonable way to facilitate defense or settlement of claims. The indemnifying Party shall have complete control over defense of the case and over the terms of any proposed settlement or compromise thereof. The indemnifying Party shall not be liable under this Section for settlement by the indemnified Party or any claim, lawsuit, or demand, if the indemnifying Party has not approved the settlement in advance, unless the indemnifying Party has had the defense of the claim, lawsuit, or demand tendered to it in writing and has failed to assume such defense. In the event of such failure to assume defense, the indemnifying Party shall be liable for any reasonable settlement made by the indemnified Party without approval of the indemnifying Party.

20.2 End User and Content-Related Claims. Each Party agrees to release, indemnify, defend, and hold harmless the other Party, its affiliates, and any third-party provider or operator of facilities involved in the provision of Services, unbundled network elements or facilities under this Agreement (collectively, the "Indemnified Parties") from all losses, claims, demands, damages, expenses, suits, or other actions, or any liability whatsoever, including, but not limited to,

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costs and attorney's fees, suffered, made, instituted, or asserted by either Party's end users against an Indemnified Party arising from Services, unbundled network elements or facilities. Each Party further agrees to release, indemnify, defend, and hold harmless the Indemnified Parties from all losses, claims, demands, damages, expenses, suits, or other actions, or any liability whatsoever, including, but not limited to, costs and attorney's fees, suffered, made, instituted, or asserted by any third party against an Indemnified Party arising from or in any way related to actual or alleged defamation, libel, slander, interference with or misappropriation of proprietary or creative right, or any other injury to any person or property arising out of content transmitted by the indemnifying Party or such party's end users, or any other act or omission of the indemnifying Party or such party's end users.

- 20.3 **DISCLAIMER.** EXCEPT AS SPECIFICALLY PROVIDED TO THE CONTRARY IN THIS AGREEMENT, PROVIDER MAKES NO REPRESENTATIONS OR WARRANTIES TO CUSTOMER CONCERNING THE SPECIFIC QUALITY OF ANY SERVICES, UNBUNDLED NETWORK ELEMENTS OR FACILITIES PROVIDED UNDER THIS AGREEMENT. PROVIDER DISCLAIMS, WITHOUT LIMITATION, ANY WARRANTY OR GUARANTEE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR FROM USAGES OF TRADE.

- 20.4 **Limitation of Liability.** Provider's liability, whether in contract, tort or otherwise, shall be limited to direct damages, which shall not exceed the pro rata portion of the monthly charges for the Services, Unbundled Network Elements or facilities for the time period during which the Services, Unbundled Network Elements or facilities provided pursuant to this Agreement are inoperative, not to exceed in total Provider's monthly charge to Customer. Under no circumstance shall Provider be responsible or liable for indirect, incidental, or consequential damages, including, but not limited to, economic loss or lost business or profits, damages arising from the use or performance of equipment or software, or the loss of use of software or equipment, or accessories attached thereto, delay, error, or loss of data. In connection with this limitation of liability, the Parties recognize that Provider may, from time to time, provide advice, make recommendations, or supply other analysis related to the Services, unbundled network elements or facilities described in this Agreement, and, while Provider shall use diligent efforts in this regard, Customer acknowledges and agrees that this limitation of liability shall apply to provision of such advice, recommendations, and analysis.

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- 20.5 **Intellectual Property.** Neither Party shall have any obligation to defend, indemnify or hold harmless, or acquire any license or right for the benefit of, or owe any other obligation or have any liability to, the other based on or arising from any claim, demand, or proceeding by any third party alleging or asserting that the use of any circuit, apparatus, or system, or the use of any software, or the performance of any service or method, or the provision or use of any facilities by either Party under this Agreement constitutes direct or contributory infringement, or misuse or misappropriation of any patent, copyright, trademark, trade secret, or any other proprietary or intellectual property right of any third party.
- 21 **Multiple Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall together constitute but one and the same document
- 22 **No Offer.** This Agreement will be effective only upon execution and delivery by both Parties and approval by the Commission in accordance with Section 252 of the Act.
- 23 **No Third Party Beneficiaries.** Except as may be specifically set forth in this Agreement, this Agreement does not provide and shall not be construed to provide third parties with any remedy, claim, liability, reimbursement, cause of action, or other right or privilege.
- 24 **Notices.** Any notice to a Party required or permitted under this Agreement shall be in writing and shall be deemed to have been received on the date of service if served personally, on the date receipt is acknowledged in writing by the recipient if delivered by regular U.S. mail, or on the date stated on the receipt if delivered by certified or registered mail or by a courier service that obtains a written receipt. Upon prior immediate oral agreement of the parties' designated recipients identified below, notice may also be provided by facsimile, electronic messaging system or by posting to a GTE service notification internet web page, which shall be effective on the next Business Day following the date of receipt in legible form so long as receipt of the form was prior to 5:00 PM of that day (it being agreed that the burden of proof of receipt is on the sender and will not be met by a transmission report generated by the senders facsimile machine or return e-mail receipt generated by sender's computer). "Business Day" shall mean Monday through Friday, except for holidays on which the U. S. mail is not delivered. Any notice shall be delivered using one of the alternatives mentioned in this section and shall be directed to the applicable address indicated below or such address as the

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Party to be notified has designated by giving notice in compliance with this section.

If to GTE

GTE _____ Incorporated
Attention: _____
600 Hidden Ridge, HQ _____
Irving, Texas 75038
Facsimile number: _____
Internet Address: _____

If to ICG

Attention: _____

Facsimile number: _____
Internet Address: _____

25. Protection.

25.1 **Impairment of Service.** The characteristics and methods of operation of any circuits, facilities or equipment of either Party connected with the services, facilities or equipment of the other Party pursuant to this Agreement shall not interfere with or impair service over any facilities of the other Party, its affiliated companies, or its connecting and concurring carriers involved in its services, cause damage to their plant, violate any applicable law or regulation regarding the invasion of privacy of any communications carried over the Party's facilities or create hazards to the employees of either Party or to the public (each hereinafter referred to as an "Impairment of Service").

25.2 **Resolution.** If either Party causes an Impairment in Service, the Party whose network or service is being impaired (the "Impaired Party") shall promptly notify the Party causing the Impairment of Service (the "Impairing Party") of the nature and location of the problem and that, unless promptly rectified, a temporary discontinuance of the use of any circuit, facility or equipment may be required. The Impairing Party and the Impaired Party agree to work together to attempt to promptly resolve the Impairment of Service. If the Impairing Party is unable to promptly remedy the Impairment of Service, then the Impaired Party may at its option temporarily discontinue the use of the affected circuit, facility or equipment.

26. **Publicity.** Any news release, public announcement, advertising, or any form of publicity pertaining to this Agreement, provision of services, unbundled network

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elements or facilities pursuant to it, or association of the Parties with respect to provision of the services described in this Agreement shall be subject to prior written approval of both GTE and ICG.

27. Regulatory Agency Control. This Agreement shall at all times be subject to changes, modifications, orders, and rulings by the Federal Communications Commission and/or the applicable state utility regulatory commission to the extent the substance of this Agreement is or becomes subject to the jurisdiction of such agency. If this Agreement or changes or modifications, thereto, are subject to advance approval of a regulatory agency, the "effective date" of the Agreement for purposes of this Agreement shall be (10) Business Days after such approval. Such date (i.e., ten Business Days after the Parties receive the written notice of approval) shall become the "effective date" of this Agreement and appendices for all purposes.
28. Regulatory Matters.
- 28.1 GTE shall be responsible for obtaining and keeping in effect all FCC, state regulatory commission, franchise authority and other regulatory approvals that may be required in connection with the performance of its obligations under this Agreement. ICG shall be responsible for obtaining and keeping in effect all FCC, state regulatory commission, franchise authority and other regulatory approvals that may be required in connection with its offering of services to ICG Customers contemplated by this Agreement. ICG shall reasonably cooperate with GTE in obtaining and maintaining any required approvals for which GTE is responsible, and GTE shall reasonably cooperate with ICG in obtaining and maintaining any required approvals for which ICG is responsible.
29. Rule of Construction. No rule of construction requiring interpretation against the drafting party hereof shall apply in the interpretation of this Agreement.
30. Section References. Except as otherwise specified, references within an Article of this Agreement to a Section refer to Sections within that same Article.
31. Service Standards.
- 31.1 The parties shall meet applicable quality of local service standards imposed by the Commission and will provide a level of services to each other under this Agreement in compliance with the nondiscrimination requirements of the Act.

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- 31.2 The Parties agree to implement mutually agreed upon standards to measure the quality of Local Service and Unbundled Network Elements supplied by GTE with respect to pre-ordering, order/provisioning, maintenance and billing
- 31.3 GTE shall provide ICG with forty-five (45) days notice of any new or changed feature, functionality or price pertaining to pre-ordering, ordering/provisioning, maintenance and billing for "Services" necessary to ensure that ICG can provide retail local exchange services which are at least equal in quality to comparable GTE retail local exchange services. Notice may be provided by facsimile, electronic messaging system or by posting to a GTE service notification internet web page.
- 31.4 The parties will alert each other to any network events that can result or have resulted in service interruption, blocked calls, and/or changes in network performance. GTE will treat ICG in a nondiscriminatory manner equal to GTE's established business practice, e.g., GTE provide reasonable notice to ICG of any network event resulting in blocked calls or lost features.
32. Severability. If any provision of this Agreement is held by a court or regulatory agency of competent jurisdiction to be unenforceable, the rest of the Agreement shall remain in full force and effect and shall not be affected unless removal of that provision results, in the opinion of either Party, in a material change to this Agreement. If a material change as described in this paragraph occurs as a result of action by a court or regulatory agency, the Parties shall negotiate in good faith for replacement language. If replacement language cannot be agreed upon within a reasonable period, either Party may terminate this Agreement without penalty or liability for such termination upon written notice to the other Party.
33. Subcontractors. Provider may enter into subcontracts with third parties or affiliates for the performance of any of Provider's duties or obligations under this Agreement.
34. Subsequent Law. The terms and conditions of this Agreement shall be subject to any and all applicable laws, rules, regulations or guidelines that subsequently may be prescribed by any federal, state or local governmental authority. To the extent required by any such subsequently prescribed law, rule, regulation or guideline, the parties agree to modify, in writing, the affected term(s) and condition(s) of this Agreement to bring them into compliance with such law, rule, regulation or guideline.

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35. **Taxes.** Any state or local excise, sales, or use taxes (excluding any taxes levied on income) resulting from the performance of this Agreement shall be borne by the Party upon which the obligation for payment is imposed under applicable law, even if the obligation to collect and remit such taxes is placed upon the other Party. The collecting Party shall charge and collect from the obligated Party, and the obligated Party agrees to pay to the collecting Party, all applicable taxes, except to the extent that the obligated Party notifies the collecting Party and provides to the collecting Party appropriate documentation that qualifies the obligated Party for a full or partial exemption. Any such taxes shall be shown as separate items on applicable billing documents between the Parties. The obligated Party may contest the same in good faith, at its own expense, and shall be entitled to the benefit of any refund or recovery, provided that such Party shall not permit any lien to exist on any asset of the other Party by reason of the contest. The collecting Party shall cooperate in any such contest by the other Party.
36. **Trademarks and Trade Names.** Except as specifically set out in this Agreement, nothing in this Agreement shall grant, suggest, or imply any authority for one Party to use the name, trademarks, service marks, or trade names of the other for any purpose whatsoever.
37. **Waiver.** The failure of either Party to insist upon the performance of any provision of this Agreement, or to exercise any right or privilege granted to it under this Agreement, shall not be construed as a waiver of such provision or any provisions of this Agreement, and the same shall continue in full force and effect.
38. **TBD Prices.** Numerous provisions in this Agreement and its Attachments refer to pricing principles. If a provision references prices in an Attachment and there are no corresponding prices in such Attachment, such price shall be considered "To Be Determined" (TBD). With respect to all TBD prices, prior to ICG ordering any such TBD item, the Parties shall meet and confer to establish a price. If the parties are unable to reach agreement on a price for such item, an interim price shall be set for such item that is equal to the price for the nearest analogous item for which a price has been established (for example, if there is not an established price for a non recurring charge (NRC) for a specific network element, the parties would use the NRC for the most analogous retail service for which there is an established price). Any interim prices so set shall be subject to modification by any subsequent decision of the Commission. If an interim price is different from the rate subsequently established by the Commission, any underpayment shall be paid by ICG, and

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any overpayment shall be refunded by GTE to ICG, within 45 days after the establishment of the price by the Commission.

39. Rate Modification. The Parties acknowledge that certain proceedings may affect the pricing and terms of the Agreement and, accordingly, agree as follows with respect to modification of the rates initially provided for herein:
- 39.1 True-Up to Generally Applicable Rates. The Parties shall true-up compensation for the transport and termination of Local Traffic once the Commission approves GTE's Transport and Termination rates which may be under review in cost analysis proceedings in the State considering the cost of GTE services on a generally applicable basis (the "Commission Approved Rate"), such that each Party shall receive the level of compensation it would have received had the Commission Approved Rates been in effect as of the effective date of this Agreement. This true-up, when made, shall include the period beginning on the effective date of this Agreement and ending on the date GTE's Commission Approved Rates are implemented. If the Commission Approved Rate is appealed or otherwise challenged, then the true-up provided for hereunder shall nevertheless be made unless the Commission Approved Rate is stayed or otherwise does not become effective as a result of any action by the Commission, the FCC or a court of competent jurisdiction. The true-up, including the payment of the amounts due thereunder, shall be completed within forty-five (45) days of the date GTE's Commission Approved Rates are implemented pursuant to Commission order or the order of any appellate authority or order of court, if appealed or challenged. If the true-up is effectuated but the Commission Approved Rate is later modified as the result of appeal or judicial review, then the true-up shall be reversed and the Parties will true-up to the rate resulting from appeal or judicial review.
- 39.2 Option to Reopen Agreement. GTE and ICG agree that for all prices other than those addressed by the foregoing true-up provisions, after six (6) months or more after the effective date of this Agreement, that either Party may require in writing that negotiations be reopened in relation to the pricing contained in this Agreement for interconnection, network elements and resold services. Upon receipt of such request to reopen negotiations as permitted herein, the Parties will negotiate in good faith for a maximum time period of forty-five (45) days. If at the end of 45 days closure is not obtained on the permitted pricing issues open for renegotiation, either Party may petition the Commission to resolve the dispute under the Commission's pricing authority granted by the Telecommunications Act of 1996 and to determine the final rates for each of the pricing items in controversy. The Parties expressly agree that the arbitration rights as provided for under the Telecommunications Act of 1996 are

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expressly retained by the Parties and may be exercised hereunder. The pricing contained in this Agreement shall remain in place and in effect until such time as the Parties reach closure on any replacement prices under this provision or final rates are in effect at the conclusion of the Commission's proceedings including exhaustion of all appellate remedies under Section 252(e)(6) of the Act. In the event either GTE or ICG exercises the foregoing option, replacement prices or final rates under this provision shall be made effective as of the date of the notice to reopen this Agreement. The Parties will perform a true-up, with any compensation owed to be remitted to the other Party as set forth in this provision. GTE and ICG further agree that the nonprice terms and conditions of this Agreement were based on the legal status and requirements in effect at the time the Agreement was executed. Any modifications to those requirements as a result of federal court review or other judicial action will supersede to the extent applicable any terms and conditions of this Agreement.

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ARTICLE IV INTERCONNECTION AND TRANSPORT AND TERMINATION OF TRAFFIC

1. Services Covered by This Article

- 1.1 Types of Services This Article governs the provision of internetwork facilities (i.e., physical interconnection services and facilities), meet point billing by GTT to ICG or by ICG to GTE and the transport and termination of Local Traffic between GTE and ICG. The services and facilities described in this Article shall be referred to in this Article IV as the "Services."
- 1.2 Service Locations for Interconnection Services and Facilities Appendix A, Service Matrix, attached to this Agreement and made a part hereof, sets forth the Services and each location in the State where a Service shall be provided (the "Service Locations") and the Point of Interconnection ("POI") for such Services.
- 1.3 Additional Services or Service Locations If, during the term of this Agreement, the parties determine that additional services are needed in the State, or existing Services will be offered in new locations in the State, the Parties shall execute an amendment to this Agreement substantially in the form of Appendix B attached to this Agreement and made a part hereof, incorporating the additional locations and/or any additional terms necessary for the additional services. Upon the effective date of the amendment, and continuing through the remaining term of this Agreement, the new services shall be deemed part of the Services provided pursuant to this Article and/or the new locations shall be deemed part of the Service Locations.

Billing and Rates

- 2.1 Rates and Charges Customer agrees to pay to Provider the rates and charges for the Services set forth in the applicable appendices to this Agreement. ~~GTE's~~ rates and charges are set forth in Appendix C attached to this Agreement and made a part hereof.
- 2.2 Billing Provider shall render to Customer a bill for interconnection services on a current basis. Charges for physical facilities and other nonusage sensitive charges shall be billed in advance, except for charges and credits associated with the initial or final bills. Usage sensitive charges, such as charges for termination of Local Traffic, shall be billed in arrears. ~~Until such time as the parties implement combined (single) trunk groups pursuant to section 4.3.3.1)~~

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of this Article. Charges for traffic that has been, for whatever reason, routed over a jurisdictionally inappropriate trunk group (e.g., local traffic carried over trunks used for Switched Access Traffic) shall reflect the appropriate compensation arrangement for the appropriate jurisdiction and shall be handled as a post-billing adjustment to bills rendered. Additional matters relating to billing are included in Appendix G attached to this Agreement and made a part hereof.

3. Transport and Termination of Traffic

3.1 Types of Traffic. The Parties shall reciprocally terminate Local Traffic originating on each other's networks utilizing either direct or indirect network interconnections as provided in this Article IV. To this end, the Parties agree that there will be interoperability between their networks. Only traffic originated by or terminating to the Parties' end user customers is to be exchanged. ICG may send cellular traffic or traffic of any third party upon notice to and concurrence by GTE prior to any change in traffic distribution, such cellular traffic or traffic of any third party to be considered ICG traffic for purposes of compensation.

3.2 Audits. Either Party may conduct an audit of the other Party's books and records, no more frequently than once per twelve (12) month period, to verify the other Party's compliance with provisions of this Article IV. Any audit shall be performed as follows: (i) following at least thirty (30) days' prior written notice to the audited Party; (ii) subject to the reasonable scheduling requirements and limitations of the audited Party; (iii) at the auditing Party's sole cost and expense; (iv) of a reasonable scope and duration; (v) in a manner so as not to interfere with the audited Party's business operations; and (vi) in compliance with the audited Party's security rules.

3.3 Compensation For Exchange Of Traffic

3.3.1 Mutual Compensation. The Parties shall compensate each other for the exchange of Local Traffic in accordance with Section 3.3.2 of this Article. Charges for the transport and termination of intraLATA toll and interexchange traffic shall be in accordance with the Parties' respective intrastate or interstate access tariffs, as appropriate. Optional extended area service (EAS), where applicable, will be classified as toll traffic. Mandatory EAS will be classified as local traffic.

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3.3.2 Bill-and-Keep. The Parties shall assume that Local Traffic is roughly balanced between the parties unless traffic studies indicate otherwise. Accordingly, the Parties agree to use a Bill-and-Keep Arrangement with respect to termination of Local Traffic only. Either Party may request that a traffic study be performed no more frequently than once a quarter. Should such traffic study indicate, in the aggregate, that either Party is terminating more than 60 percent of the Parties' total terminated minutes for Local Traffic, either Party may request that mutual compensation commence pursuant to the rules set forth in Appendix C of this Agreement for all minutes of use exchanged. Nothing in this section 3.3.2 shall be interpreted to (i) change compensation set forth in this Agreement for traffic or services other than Local Traffic, including but not limited to internetwork facilities, access traffic or wireless traffic, or (ii) allow either Party to aggregate traffic other than Local Traffic for the purpose of compensation under the Bill-and-Keep Arrangement described in this section 3.3.2, except as set forth in section 3.1 above.

3.3.3 Sharing of Access Charges on Calls to Ported Numbers. Until permanent number portability is implemented, the parties agree that switched access termination to a ported number will be billed by the party providing interim number portability and that the party billing the switched access will share the switched access revenue with the other party. After permanent number portability is implemented, the parties agree to renegotiate sharing of access charges to ported numbers in accordance with permanent number portability requirements. In lieu of actual measurements of minutes and/exchange of billing records for this traffic the parties agree to compensate each other on the following basis: The party providing the ported number will pay the other party \$_____ per line per month for each ported business line and \$_____ per line per month for each ported residential line.

- (a) The number of lines/talk paths per ported number that are subject to compensation will be determined at the time the end user customer's local service is changed from one party to the other. The number of lines per number eligible for the shared revenue arrangement described in this section will be limited to the number of lines in service on the date of conversion plus a 10% growth margin. After conversion the number of lines per number available for

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compensation can only be increased by mutual consent of the parties.

- (b) The Parties agree that the compensation rate in paragraph 3.3.3 may change as a result of changes in access rates, traffic volume or for other reasons and agree to renegotiate the rate if a significant event occurs. At a minimum, the parties agree to reevaluate the rate on an annual basis.
- (c) The Parties agree that terminating switched access calls ported via interim number portability may appear to the receiving party to be a local call and that the implementation of reciprocal compensation for terminating local calls may result in overcompensation for ported switched access calls. Therefore, the Parties agree to renegotiate the terminating shared access compensation rate if reciprocal compensation for local calls is implemented.

3.3.4 Reciprocal Compensation Arrangements for Call Termination
Reciprocal compensation arrangements for call termination shall be as provided in Appendix L attached hereto.

3.4 Tandem Switching Services The Parties will provide tandem switching for traffic between the Parties end offices subtending each other's access tandem, as well as for traffic between the Parties and any third party which is interconnected to the Parties' access tandems.

3.4.1 The originating Party will compensate the tandem Party for each minute of originated tandem switched traffic which terminates to third Party (e.g. other CLEC, ILEC, or wireless service provider). The applicable rate for this charge is identified in Appendix C.

3.4.2 The originating Party also assumes responsibility for compensation to the company which terminates the call.

3.4.3 Services Provided Tandem switching services provided pursuant to this section 3.4 shall include the following:

- (a) signaling;
- (b) screening and routing;

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- (c) recording;
- (d) access to AIN functionality, in accordance with the terms and conditions of Article IV and Article VI of this Agreement.
- (e) access to operator services and directory assistance, in accordance with the terms and conditions of Article V and Article VII of this Agreement.
- (f) support of all trunk interconnections;
- (g) access to PSAPs, in accordance with the terms and conditions of Article VII of this Agreement; and
- (h) transit of traffic to and from third parties in accordance with the terms and conditions of this section.

3.5 Inter-Tandem Switching. The Parties will only use inter-tandem switching for the transport and termination of traffic originating on each other's network at and after such time as either (i) ICG has agreed to and fully implemented an existing intraLATA toll compensation mechanism such as IntraLATA Terminating Access Compensation (ITAC) or a functional equivalent thereof or (ii) generally accepted industry signaling standards and AMA record standards support the recognition of multiple tandem switching events.

4. Direct Network Interconnection

4.1 Network Interconnection Architecture. ICG may interconnect with GTE at any of the minimum technically feasible points required by the FCC. Interconnection at additional points will be reviewed on an individual case basis. Where the Parties mutually agree following a ~~case-by-case~~ request to directly interconnect their respective networks, interconnection will be as specified in the following subsections. The POIs shall be set forth in Appendix A attached to this Agreement and made a part hereof. Based on the configuration, the installation timeline will vary considerably, however, GTE will work with ICG in all circumstances to install POIs within 120 calendar days absent extenuating circumstances. Inter-network connection and protocol must be based on industry standards developed consistent with Section 256 of the Telecommunications Act of 1996.

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4.1.1

Subject to mutual agreement, the Parties may use the following types of network facility interconnection, using such interface media as are (i) appropriate to support the type of interconnection requested and (ii) available at the facility at which interconnection is requested. For each POI set forth in Appendix A, the Parties shall specify the type of interconnection used at that POI

- (a) A Mid-Span Fiber Meet within an existing GTE exchange area whereby the Parties mutually agree to jointly plan and engineer their facility meet-point at a designated manhole or junction location. The meet point is the demarcation between ownership of the fiber transmission facility. Each party is individually responsible for its incurred costs in establishing this arrangement.
- (b) A Virtual EIS or physical collocation arrangement at a GTE wire center subject to the rates, terms, and conditions contained in GTE's applicable tariffs.
- (c) A special access arrangement ~~and/or switched transport~~ terminating at a GTE wire center subject to the rates, terms, and conditions contained in GTE's applicable tariffs. These facilities will meet the standards set forth in such tariffs.

4.1.2 Virtual EIS and physical collocation arrangements are governed by appropriate GTE tariffs. Except as provided in Article IX, section 1.3

4.1.3 ICG will designate at least one POI on GTE's network within each GTE local calling area for the routing of local traffic. ~~Interexchange traffic will be routed via one POI per LATA.~~ Recording and billing of traffic shall be as provided in section 3.5 of this Article.

4.2 Compensation. The Parties agree to the following compensation for internetwork facilities, depending on facility type.

4.2.1 **Mid-Span Fiber Meet:** GTE will charge special access (flat rated) transport from the applicable intrastate access tariff and will rate charges between the POI and GTE's interconnection switch. Charges will be reduced to reflect the proportionate share of the facility that is used for transport of traffic originated by GTE. ICG will charge flat rated transport to GTE for ICG facilities used by GTE.

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ICG will apply charges based on the lesser of, (i) the airline mileage from the POI to the ICG switch, or (ii) the airline mileage from the GTE switch to the serving area boundary

- 4.2.2 Virtual EIS or Physical Collocation GTE will charge Virtual EIS or physical collocation rates from the applicable GTE tariff. ICG will charge GTE flat rated transport to reflect the proportionate share of the facility that is used for transport of traffic originated by GTE. ICG will apply charges based on the lesser of, (i) the airline mileage from the POI to the ICG switch, or (ii) two (2) times the airline mileage from the GTE switch to the serving area boundary.

- 4.2.3 ~~Special Access and/or Switched Access~~ Special Access ~~and/or Switched Access~~ rates from the applicable GTE intrastate access tariff. Charges will be reduced to reflect the proportionate share of the facility that is used for transport of traffic originated by GTE.

4.3 Trunking Requirements

- 4.3.1 The Parties agree to establish trunk groups of sufficient capacity from the interconnecting facilities such that trunking is available to any switching center designated by either Party, including end offices, tandems, 911 routing switches, and directory assistance/operator service switches. The Parties will mutually agree where one-way or two-way trunking will be available.

- 4.3.2 ICG shall make available to GTE trunks over which GTE shall terminate to end users of ICG-provided Exchange Services, Local Traffic and intraLATA toll or optional EAS traffic originated from end users of GTE-provided Exchange Service.

- 4.3.3 ICG and GTE shall, where applicable, make reciprocally available, by mutual agreement, the required trunk groups to handle different traffic types. ~~Until such time as the parties implement combined (single) trunk groups,~~ ICG and GTE will support the provisioning of trunk groups that carry combined or separate Local Traffic and intraLATA toll and optional EAS traffic. GTE requires separate trunk groups from ICG to terminate interLATA calls and to provide Switched Access Service to IXCs.

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- 4.3.4** Until such time as the Parties implement combined (single) trunk groups, the following shall apply:
- 4.3.4.1** Each Party agrees to route traffic only over the proper jurisdictional trunk group.
 - 4.3.4.2** Each Party shall only deliver traffic over the local interconnection trunk groups to the other Party's access tandem for those publicly dialable NXX Codes served by end offices that directly subtend the access tandem or to those wireless service providers that directly subtend the access tandem.
 - 4.3.4.3** Neither party shall route Switched Access Service traffic over local interconnection trunks, ~~or local traffic over Switched Access Service trunks~~.
- 4.3.5** ICG and GTE will reciprocally provide PLU factors to each other on a quarterly basis to identify the proper jurisdiction of each call type that is carried over the required trunks.
- 4.3.6** Reciprocal traffic exchange arrangement trunk connections shall be made at a DS-1 or multiple DS-1 level, DS-3, (SONET where technically available) and shall be jointly-engineered to an objective P.01 grade of service.
- 4.3.7** ICG and GTE agree to use diligent efforts to develop and agree on a Joint Interconnection Grooming Plan prescribing standards to ensure that the reciprocal traffic exchange arrangement trunk groups are maintained at consistent P 01 or better grades of service. Such plan shall also include mutually-agreed upon default standards for the configuration of all segregated trunk groups.
- 4.3.8** Signaling System 7 (SS7) Common Channel Signaling will be used to the extent that such technology is available.
- 4.3.9** The Parties agree to offer and provide to each other B8ZS Extended Superframe Format ("ESF") facilities, where available, capable of voice and data traffic transmission.
- 4.3.10** The Parties will support intercompany 64kbps clear channel where available.

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- 4.4 Network Redesigns Initiated by GTE. GTE will not charge ICG when GTE initiates its own network redesigns/reconfigurations.
5. Indirect Network Interconnection. Neither Party shall deliver traffic destined to terminate at the other Party's end office via another LEC's end office. In addition, except as provided in 3.5 above, neither Party shall deliver traffic destined to terminate at an end office subtending the other Party's access tandem via another LEC's access tandem. Either Party may deliver traffic destined to terminate at the other Party's end office via another LEC's tandem provided that the Parties have established compensation agreement(s) specific to this arrangement.
6. Number Resources.
- 6.1 Number Assignment. Nothing in this Agreement shall be construed to, in any manner, limit or otherwise adversely impact ICG's right to employ or to request and be assigned any NANP number resources including, but not limited to, Central Office (NXX) Codes pursuant to the Central Office Code Assignment Guidelines. Any request for numbering resources by ICG shall be made directly to the NANP Number Plan Administrator. Except with respect to those areas in which GTE is the NANP Number Plan Administrator, GTE shall not be responsible for the requesting or assignment of number resources to ICG. The Parties agree that disputes arising from numbering assignment shall be arbitrated by the NANP Number Plan Administrator. ICG shall not request number resources to be assigned to any GTE switching entity.
- 6.2 Rate Centers. For purposes of compensation between the Parties and the ability of GTE to appropriately apply its toll tariff to its end user customers, ICG shall adopt the Rate Center areas and Rate Center points that the Commission has approved for the incumbent LEC and shall assign whole NPA-NXX codes to each Rate Center.
- 6.3 Routing Points. ICG will also designate a Routing Point for each assigned NXX code. ICG may designate one location within each Rate Center as a Routing Point for the NPA-NXX associated with that Rate Center; alternatively ICG may designate a single location within one Rate Center to serve as the Routing Point for all the NPA-NXXs associated with that Rate Center and with one or more other Rate Centers served by ICG within an existing GTE exchange area. ICG shall use diligent efforts to designate at least one Routing Point in GTE's exchange area for all NPA-NXXs associated with GTE's Rate Centers.

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- 6.4 Code and Numbers Administration. The Parties will comply with code administration requirements as prescribed by the FCC, the Commission, and accepted industry guidelines. Where GTE is the NANP Number Plan Administrator, GTE will administer number resources, and charge for such administration in accord with applicable rules and regulations. GTE will administer numbering resources in a competitively neutral manner, and process requests for NXX codes in a timely manner and in accord with industry standards. The Parties shall execute a nondisclosure agreement to protect ICG proprietary information that may be submitted to GTE in connection with GTE's responsibilities as NANP Number Plan Administrator.
- 6.5 Programming Switches. It shall be the responsibility of each Party to program and update its own switches and network systems pursuant to the Local Exchange Routing Guide ("LERG") guidelines to recognize and route traffic to the other Party's assigned NXX codes at all times. Neither Party shall impose any fees or charges whatsoever on the other Party for such activities.
7. Interim Number Portability (INP). Each Party shall provide the other Party with INP for the purpose of allowing end user customers to change service-providing Parties without changing their telephone number. GTE shall provide its INP to ICG using remote call forwarding ("RCF"). The GTE rates for INP service using RCF are set out in Appendix D attached to this Agreement and made a part hereof. If ICG wishes to use Direct Inward Dialing ("DID") to provide INP to its end users, ICG may purchase DID service from GTE at the wholesale rate set out in Appendix E attached to this Agreement and made a part hereof. ICG shall provide INP to GTE at the rates specified for ICG in Appendix D.
8. Meet-Point Billing.
- 8.1 Meet-Point Arrangements.
- 8.1.1 ICG may establish Meet-Point Billing ("MPB") arrangements with GTE in order to provide Switched Access Services to third parties via a GTE access tandem in accordance with the MPB guidelines adopted by and contained in the Ordering and Billing Forum's MECAB and MECOD documents, except as modified herein.
- 8.1.2 Except in instances of capacity limitations, GTE shall permit and enable ICG to sub-let the GTE access tandem(s) nearest to the ICG Rating Point(s) associated with the NPA-NXX(s) to/from which the Switched Access Services are homed. In instances of capacity

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limitation at a given access tandem, ICG shall be allowed to subten the next-nearest GTE access tandem in which sufficient capacity is available.

- 8.1.3 Interconnection for the MPB arrangement shall occur at the POI.
- 8.1.4 Common Channel Signaling shall be utilized in conjunction with MPB arrangements to the extent such signaling is resident in the GTE access tandem switch.
- 8.1.5 ICG and GTE will use diligent efforts, individually and collectively, to maintain provisions in their respective federal and state access tariffs, and/or provisions within the National Exchange Carrier Association ("NECA") Tariff No. 4, or any successor tariff, sufficient to reflect this MPB arrangement, including MPB percentages.
- 8.1.6 As detailed in the MECAB document, ICG and GTE will, in a timely fashion, exchange all information necessary to accurately, reliably and promptly bill third parties for Switched Access Services traffic jointly handled by ICG and GTE via the meet-point arrangement. Information shall be exchanged in Electronic Message Record ("EMR") format, on magnetic tape or via a mutually acceptable electronic file transfer protocol.
- 8.1.7 ICG and GTE shall work cooperatively to coordinate rendering of Meet-Point bills to customers, and shall reciprocally provide each other usage data and related information at the appropriate charge.

8.2 Compensation.

- 8.2.1 Initially, billing to third parties for the Switched Access Services jointly provided by ICG and GTE via the MPB arrangement shall be according to the multiple-bill/single-tariff method.
- 8.2.2 Subsequently, ICG and GTE may mutually agree to implement one of the following options for billing to third parties for the Switched Access Services jointly provided by ICG and GTE via the MPB arrangement: single-bill/single tariff method, single-bill/multiple tariff method, ~~multiple-bill/single tariff method~~, or to continue the multiple-bill/single tariff method. Should ICG prefer to change among these billing methods, ICG shall notify GTE of such a request in writing, ninety (90) days in advance of the date on which such change is

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desired to be implemented, such changes then may be made in accordance with MECAB guidelines and if GTE mutually agrees, the change will be made.

9 Common Channel Signaling

- 9.1 Service Description. The Parties will provide Common Channel Signaling ("CCS") to one another via Signaling System 7 ("SS7") network interconnection, where and as available, in the manner specified in FCC Order 95-187, in conjunction with all traffic exchange trunk groups. SS7 signaling and transport services shall be provided by GTE in accordance with the terms and conditions of this section 9 of this Article and Appendix H attached to this Agreement and made a part hereof. The Parties will cooperate on the exchange of all appropriate SS7 messages for local and intraLATA call set-up signaling, including ISUP and Transaction Capabilities Application Part ("TCAP") messages to facilitate full interoperability of all CLASS Features and functions between their respective networks. Any other SS7 message services to be provided using TCAP messages (such as data base queries) will be jointly negotiated and agreed upon.
- 9.2 Signaling Parameters. All SS7 signaling parameters will be provided in conjunction with traffic exchange trunk groups, where and as available. These parameters include Automatic Number Identification ("ANI"), Calling Party Number ("CPN"), Privacy Indicator, calling party category information, originating line information, charge number, etc. Also included are all parameters relating to network signaling information, such as Carrier Information Parameter ("CIP"), wherever such information is needed for call routing or billing. GTE will provide SS7 via GR-394-SS7 and/or GR-317-SS7 format(s).
- 9.3 Privacy Indicators. Each Party will honor all privacy indicators as required under applicable law.
- 9.4 Connection Through STP. ICG must interconnect with the GTE STP(s) serving the LATA in which the traffic exchange trunk groups are interconnected. Additionally, all interconnection to GTE's 800/888 database and GTE's LIDB shall, consistent with this section and Appendix H attached hereto, take place only through appropriate STP pairs.
- 9.5 Third Party Signaling Providers. ICG may choose a third-party SS7 signaling provider to transport messages to and from the GTE SS7 network. In that event, that third-party provider must present a letter of agency to GTE, prior to

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the testing of the interconnection, authorizing the third party to act on behalf of ICG in transporting SS7 messages to and from GTE. The third-party provider must interconnect with the GTE STP(s) serving the LATA in which the traffic exchange trunk groups are interconnected.

- 9.6 **Multi-Frequency Signaling.** In the case where CCS is not available, in band Multi-Frequency ("MF"), wink start, E & M channel associated signaling with ANI will be provided by the Parties. Network signaling information, such as CIC/OZZ, will be provided wherever such information is needed for call routing or billing.
10. **Service Quality and Performance.** Each Party shall provide Services under this Article to the other Party that are equal in quality to that the Party provides to itself, its Affiliates or any other entity. "Equal in quality" shall mean that the Service will meet the same technical criteria and performance standards that the providing Party uses within its own network for the same Service at the same location under the same terms and conditions.
11. **Network Outages.** GTE shall work with ICG to establish reciprocal responsibilities for network outages and reporting (e.g. Each Party shall be responsible for network outage as a result of termination of its equipment in GTE wire center or access tandem. Each Party shall be responsible for notifying GTE of significant outages which could impact or degrade GTE switches and services.)
12. **Technical Descriptions and Forecasts.** GTE and ICG will periodically exchange technical descriptions and forecasts of their interconnection and traffic requirements in sufficient detail to assure traffic completion to and from all customers within the appropriate calling areas.

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ARTICLE V RESALE OF SERVICES

1. General. The purpose of this Article V is to define the Exchange Services and related Vertical Features and other Services (collectively referred to for purposes of this Article V as the "Services") that may be purchased from GTE and resold by ICG and the terms and conditions applicable to such resold Services. Except as specifically provided otherwise in this Agreement, provisioning of Exchange Services for resale will be governed by the GTE Customer Guide for ~~the~~ Establishment of Services - Resale and Unbundling (the "Guide"), which Guide may be amended from time to time by GTE as needed. GTE shall provide reasonable advance notification to ICG of any changes to the Guide. GTE will make available to ICG for resale any Telecommunications Service that GTE currently offers, or may offer hereafter, on a retail basis to subscribers that are not telecommunications carriers, except as qualified by section 2.2 below.
2. Terms and Conditions.
 - 2.1 Quality and Performance. GTE shall provide Services to ICG that are equal in quality and performance standards to the same Services provided by GTE to its own end user customers.
 - 2.2 Restrictions on Resale. The following restrictions shall apply to the resale of retail services by ICG.
 - 2.2.1 ICG shall not resell to one class of customers a service that is offered by GTE only to another class of customers in accordance with State requirements.
 - 2.2.2 ICG shall not resell any GTE promotional offerings.
 - 2.2.3 ICG shall only resell "grandfathered" services as described in 5.5.
 - 2.2.4 Public pay telephone lines.
 - 2.2.5 Semi-public pay telephone lines.
 - 2.3 Resale to Other Carriers. Services available for resale may not be used by ICG to provide access to the local network as an alternative to tariffed switched and special access by other carriers, including, but not limited to,

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interexchange carriers, wireless carriers, competitive access providers, or other retail telecommunications providers.

3. Ordering and Billing.

- 3.1 Local Service Request. Orders for resale of Services will be placed utilizing a standard Local Service Request ("LSR") form. GTE will continue to participate in industry forums for developing service order/disconnect order formats and will incorporate appropriate industry standards. A complete and accurate LSR (containing the requisite end user information as described in the Guide) must be provided by ICG before a request can be processed.
- 3.2 Certificate of Operating Authority. When ordering, ICG must represent and warrant to GTE that it is a certified provider of local dial-tone service. ICG will provide a copy of its Certificate of Operating Authority or other evidence of its status to GTE upon request.
- 3.3 Letter of Authorization. A Letter of Authorization ("LOA") will be required before resold Services will be provided in cases in which the subscriber currently receives Exchange Service from GTE or from a local service provider other than ICG. Such LOA may be a blanket LOA or such other form as agreed upon between GTE and ICG, provided, however, that ICG complies with the requirements for a signed LOA from the end user as specified in Section 3.4 when requesting information from GTE end user customer accounts.
- 3.4 Services Ordered. ICG shall specify each specific GTE Service ordered for each ICG end user customer, including requests for same existing service. GTE will not release information to ICG on GTE end user customer accounts unless ICG first provides to GTE a written LOA, signed by the end user customer, authorizing the release of such information to ICG.
- 3.5 Directory Assistance Listings. GTE shall include a ICG customer listing in its Directory Assistance database as part of the Local Service Request ("LSR") process. GTE will honor ICG Customer's preferences for listing status, including non-published and unlisted, as noted on the LSR and will enter the listing in the GTE database which is used to perform Directory Assistance functions as it appears on the LSR.
- 3.6 Nonrecurring Charges. ICG shall be responsible for the payment of all nonrecurring charges ("NRCs"), applicable to resold Services. NRCs applicable to each of the Services available for resale are listed in Appendix E.

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- 3.7 **Transfers Between ICG and Another Reseller of GTE Services.** GTE will provide a displacement/out service report to CLEC whenever an end user leaves CLEC and procures service from another Local Service Provider ("LSP"). When a ICG end user changes to another local service provider, GTE will notify ICG when such activity occurs the day after completion or within 48 hours of such disconnect. GTE will provide notification to ICG of ICG's end user changes in long distance carriers through the normal outPIC process.
- 3.8 **Responsibility for Payment.** All charges for Services provided for resale under this Agreement will be billed to ICG, including all applicable taxes and surcharges, as well as the End User Common Line ("EUCL") Charge from GTOC Tariff FCC No. 1. ICG is responsible for payment of charges billed, regardless of any billing arrangement or situation between ICG and its end user customer.
- 3.9 **Fraud.** ICG assumes responsibility for all fraud associated with its end user customers and accounts. GTE shall have no responsibility for, nor is it required to investigate or make adjustments to ICG's account in cases of fraud. The Parties agree that they shall cooperate with one another to resolve cases of fraud. The Parties' fraud minimization procedures are to be cost effective and implemented so as not to unduly burden or harm one Party as compared to the other.
- 3.10 **Local Calling Detail.** Except for those Services and in those areas where measured rate local service is available to end users, monthly billing to ICG does not include local calling detail. However, ICG may request and GTE shall consider to develop the capabilities to provide local calling detail in those areas where measured local service is not available for a mutually agreeable charge.
- 3.11 **Customer Contact and Referral.** Each party will provide the other party with an 800-number for referral of inquiries from such other party's end user customers about such other party's products and services. Each party will refer to the other party all inquiries or other calls from the other party's end user customers. In all such contacts with the other party's customers, each party shall refrain from marketing its products and services in any manner.
- 3.12 **Procedures.** An overview of the procedures for preordering, ordering, provisioning and billing for resold services are outlined in Appendix G, attached hereto and made a part hereof.
- 3.13 **TLN and LIDB.** For resale services, GTE's service order will generate updates to the TLN and LIDB for calling card, collect, and third party number calls.

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4. Maintenance.

- 4.1 Maintenance, Testing and Repair.** GTE will provide repair and maintenance services to ICG and its end user customers for resold Services in accordance with the same standards and charges used for such services provided to GTE end user customers. GTE will not initiate a maintenance call or take action in response to a trouble report from a ICG end user until such time as trouble is reported to GTE by ICG. ICG must provide to GTE all end user information necessary for the installation, repair and servicing of any facilities used for resold Services according to the procedures described in the Guide.
- 4.2 Specifics and Procedures for Maintenance.** An overview of the procedures for maintenance of resold services and additional matters agreed to by the Parties concerning maintenance are set forth in Appendix G.

5. Services Available for Resale.

- 5.1 Description of Local Exchange Services Available for Resale.** Resold basic Exchange Service includes, but is not limited to, the following elements:
- (a) Voice Grade Local Exchange Access Line - includes a telephone number and dial tone.
 - (b) Local Calling - at local usage measured rates if applicable to the end user customer.
 - (c) Access to long distance carriers
 - (d) Access to GTE Operator Services
 - (e) Access to GTE Directory Assistance
 - (f) E-911 Emergency Dialing
 - (g) Access to Special Access Codes - e.g., 800, 888, 900
 - (h) AIN Services
 - (i) Listing of telephone number in appropriate "white pages" directory, and
 - (j) Copy of "White Pages" and "Yellow Pages" directories for the appropriate GTE service area

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- 5.2 **List of Services Available for Resale.** The Services listed on Appendix E, attached hereto and made a part of this Agreement, are available for resale by ICG. Subject to the limitations on resale enumerated in this Article, any new services that GTE offers in the future at retail to customers who are not telecommunications carriers shall also be available to ICG for resale. GTE will make wholesale offerings available for all new services at the same time the retail service becomes available. GTE will provide notification of proposed new retail telecommunications services or modifications to existing retail services provided hereunder forty-five (45) days prior to the expected date of regulatory approval. In the event that services are introduced with less than 45 days notice to the regulatory authority, GTE will provide notification at the same time it determines to introduce the new or modified service hereunder. Additional regulations, terms and conditions relating to the Services listed on Appendix E can be found in the appropriate intrastate local, toll and access tariffs referenced in the third column of the rate list attached as Appendix E and in Article VIII of this Agreement. Terms, conditions and other matters concerning rate applications, technical parameters, provisioning capability, definitions and feature interactions contained in such tariffs are applicable to the Services offered under this Agreement and are incorporated herein by reference.
- 5.3
- 5.4 **Nonrecurring Charges.** Charges associated with the installation of new services or features or changes to existing services or features are identified in Appendix E. No discount applies to nonrecurring charges.
- 5.5 **Grandfathered Services.** Services identified in GTE Tariffs as grandfathered in any manner are available for resale only to end user customers that already have such grandfathered service. An existing end user customer may not move a grandfathered service to a new service location.
- 5.6 **Contract Services.** Existing contract services are not available for resale at wholesale rates. GTE will offer only new contract services for resale.
- 5.7 **Access.** GTE retains all revenue due from other carriers for access to GTE facilities, including both switched and special access charges.
- 5.8 **Operator Services (OS) and Directory Assistance (DA).** Where GTE provides access to GTE Operator Services for local and toll assistance (for example, call completion, busy line verification and emergency interruption) and Directory Assistance (e.g., 411 calls routed to GTE's DA operator centers) as an element of Exchange Services offered for resale, ICG will be billed in accordance with Appendix E. GTE will provide its existing OS and DA to a ICG at the same

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quality and in a nondiscriminatory manner as the service GTE's end users receive.

- 5.9 **Branding.** Where GTE provides GTE will make available to ICG, upon such request, Operator Assisted Services (OS) and Directory Assistance (DA) as qualified below and at mutually agreed time frames. ICG will be billed in accordance with Appendix E.

5.9.1 For both resale and as an unbundled element, GTE will offer rebranded OS and DA with the ICG brand. GTE will provide such rebranding on a switch-by-switch basis, subject to capability and capacity limitations. GTE will provide a schedule of completion of the remaining switches based on GTE's switch customized routing schedule. Upon receipt of an order for rebranding, GTE will implement within 90 days when technically capable.

5.9.2 For those offices that ICG has requested GTE to rebrand OS and DA, ICG shall continue exclusively to use GTE rebranded OS and DA for the duration of the Agreement. To the extent the costs of these services are not covered by the underlying element charge, ICG agrees to reimburse GTE for ICG's appropriate share of GTE's total costs to implement rebranding of OS and DA on a nonrecurring basis.

5.9.3 During the period between the execution of this Agreement and the technical availability of rebranding for ICG, GTE will, if allowed by state laws and regulations and is technically feasible, unbrand its OS and DA that are handled by live operators. During this same period, ICG agrees to withdraw its request for branding of OS and DA for calls that are handled by automated systems until these systems are capable of rebranding.

- 10 **Customized Routing** Upon availability, GTE agrees to provide customized routing for the following types of calls:

0-
0+Local
0+411
1+411
0+HNPA-555-1212 (intraLATA, only when intraLATA
presubscription is not available)

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**1-HNPA 555-1212 (intral ATA, only when intralATA
presubscription is not available)**

- 5.10.1 GTE will provide ICG a list of switches (with location detail) that can provide customized routing using line class codes or similar method (regardless of current capacity limitations). ICG will return a list of these switches ranked in priority order. GTE will return to ICG a schedule for customized routing in the switches with existing capabilities and capacity.**
- 5.10.2 For GTE switches that do not have the capability or capacity for customized routing by using line class codes or similar method, GTE will pursue with its switch vendors the development of alternative methods. GTE will provide to ICG an implementation plan for these switches based on its findings from its vendors.**
- 5.10.3 To the extent that the costs of these alternative methods are not covered by the underlying element charge, ICG agrees to reimburse GTE for ICG's appropriate share of GTE's total costs to implement customized routing.**
- 5.10.4 Subject to the above provisions, GTE will choose the method of implementing customized routing of OS and DA calls.**

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ARTICLE VI UNBUNDLED NETWORK ELEMENTS

1. **General.** The purpose of this Article VI is to define the unbundled network elements that may be leased by ICG from GTE. Unless otherwise specified in this Agreement, provisioning of unbundled network arrangements will be in accordance with the GTE Customer Guide for ICG Establishment of Services - Resale and Unbundling (the "Guide"). Additional procedures for preordering, ordering, provisioning and billing of unbundled network elements are outlined in Appendix G.
2. **Unbundled Network Elements.**
 - 2.1 **Categories.** There are several separate categories of Network Components that shall be provided as unbundled network elements by GTE:
 - (a) Network Interface Device or NID
 - (b) Loop Elements
 - (c) Port Elements (provides access to switched-based services and functions)
 - (d) Transport Elements
 - (e) Signaling Elements
 - (f) Call-Related Databases
 - (g) Data Switching
 - (h) Digital Cross Connect System (DCS)
 - 2.2 **Prices.** Individual unbundled network elements and prices are identified on Appendix F attached to this Agreement and made a part hereof, or under the appropriate GTE tariff as referenced in this Article. Nonrecurring charges relating to unbundled elements are also listed on Appendix F. The port element consists of two components, termination and usage (i.e. minutes of use).

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- 2.3 **Interconnection to Unbundled Elements.** ICG may lease and interconnect to whichever of these unbundled network elements ICG chooses, and subject to technical feasibility, may combine these unbundled elements with any facilities or services that ICG may itself provide:
- 2.3.1 Interconnection shall be achieved via expanded interconnection/ collocation arrangements ICG shall maintain at the wire center at which the unbundled services are resident.
 - 2.3.2 Each loop or port element shall be delivered to the ICG collocation arrangement over a loop/port connector applicable to the unbundled services through other tariffed or contracted options.
 - 2.3.3 ICG shall combine unbundled network elements with its own facilities. To the extent ICG purchases and combines GTE network element(s) hereunder in such a way as to replicate a GTE retail service(s), the price for such combined network element(s) shall replicate GTE's resale prices. ICG may not combine such network elements to provide solely interexchange service or solely access service to an interexchange carrier.
- 2.4 **Service Quality.** To the degree possible, all service attributes, grades-of-service and installation, maintenance and repair intervals which apply to the bundled service will apply to unbundled network elements. Notwithstanding the foregoing, GTE shall not be responsible for impacts on service attributes, grades of service, etc., resulting from ICG's specific use of or modification to any unbundled network element.
3. **Network Interface Device.**
- 3.1 **Direct Connection.** ICG shall be permitted to connect its own Loop directly to GTE's Network Interface Device or NID in cases in which ICG uses its own facilities to provide local service to an end user formerly served by GTE, as long as such direct connection does not adversely affect GTE's network. In order to minimize any such adverse effects, ICG shall follow the procedures in Sections 3.1.1 and 3.1.2 below.
 - 3.1.1 When connecting its own loop facility directly to GTE's NID for a residence or business customer, ICG must make a clean cut on the GTE drop wire at the NID so that no bare wire is exposed. ICG shall not remove or disconnect GTE's drop wire from the NID or take any

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~~the~~ action that might cause GTE's drop wire to be left lying on the ground.

- 3.1.2 At multi-tenant customer locations, ICG must remove the jumper wire from the distribution block (i.e. the NID) to the GTE cable termination block. If ICG cannot gain access to the cable termination block, ICG must make a clean cut at the closest point to the cable termination block. At ICG's request and discretion, GTE will determine the cable pair to be removed at the NID in multi-tenant locations. ICG will compensate GTE for the trip charge necessary to identify the cable pair to be removed.
- 3.1.3 GTE agrees to offer NIDs for lease to ICG but not for sale. ICG may remove GTE identification from any NID which it connects to a ICG loop, but ICG may not place its own identification on such NID.
- 3.2 **NID to NID Connection.** Rather than connecting its loop directly to GTE's NID, ICG may also elect to install its own NID and effect a NID to NID connection to gain access to the end user's inside wiring.
- 3.3 **Removal of Cable Pairs.** Removal of existing cable pairs required for ICG to terminate service is the responsibility of ICG.
- 3.4 **Maintenance.** When the ICG provides its own loop and connects directly to GTE's NID, GTE does not have the capability to perform remote maintenance. ICG can perform routine maintenance via its loop and inform GTE once the trouble has been isolated to the NID and GTE will repair (or replace) the NID, or, at the ICG's option, it can make a NID to NID connection, using the GTE NID only to gain access to the inside wire at the customer location.
- 4. **Loop Elements.**
 - 4.1 **Service Description.** A "Loop" is an unbundled component of Exchange Service. In general, it is the transmission facility (or channel or group of channels on such facility) which extends from a Main Distribution Frame ("MDF") or functionally comparable piece of equipment in a GTE end office or wire center to a demarcation or connector block in/at a subscriber's premises. Traditionally, Loops were provisioned as 2-wire or 4-wire copper pairs running from the end office MDF to the customer premises. However, a loop may be provided via other media, including radio frequencies, as a channel on a high capacity feeder/distribution facility which may, in turn, be distributed from a

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node location to the subscriber premises via a copper or coaxial drop facility, etc.

4.2 Categories of Loops. There are three general categories of loops:

4.2.1 "2-wire analog voice grade" loops will support analog transmission of 300-3000 Hz, repeat loop start or ground start seizure and disconnect in one direction (toward the end office switch), and repeat ringing in the other direction (toward the end user). This loop is commonly used for local dial tone service;

4.2.2 "4-wire analog voice grade" loops conform to the characteristics of a 2-wire voice grade loop and, in addition, can support the simultaneous independent transmission of information in both directions;

4.2.3 "DS-3" loops will support the transmission of isochronous bipolar serial data at a rate of 44.736 Mbps. This DS-3 type of loop provides the equivalent of 28 DS-1 channels.

4.3 Loops for Digital Services. ICG may also lease 2-wire or 4-wire Loops that have been conditioned to transmit the digital signals needed to provide services such as ISDN, ADSL, HDSL and DS-1 level signals, subject to the limitations indicated in Sections 4.6 and 4.7. The price for such conditioned Loops shall be the price for the basic 2-wire or 4-wire loop, as applicable, that is listed in Appendix F, plus the applicable charge for the special conditioning as provided for in the appropriate GTE intrastate special access tariff. Prices for DS-3 grade Loops are the prices set forth in the appropriate GTE intrastate special access tariff.

4.4 Features, Functions, Attributes. To the degree possible, all transport-based features, functions, service attributes, grades-of-service, installation, maintenance and repair intervals that apply to the bundled services will apply to unbundled loops.

4.4.1 GTE will not perform routine testing of the unbundled loop for maintenance purposes. ICG will be required to provision a loop testing device either in its central office, Network Control Center or in its collocation arrangement to test the unbundled loop. GTE will perform repair and maintenance once trouble is identified by ICG.

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- 4.4.2 All Loop facilities furnished by GTE on the premises of ICG's end users and up to the network interface or functional equivalent are the property of GTE. GTE must have access to all such facilities for network management purposes. GTE employees and agents may enter said premises at any reasonable hour to test and inspect such facilities in connection with such purposes or, upon termination or cancellation of the Loop facility, to remove such facility.
- 4.4.3 GTE will provide loop transmission characteristics to ICG end users which are equal to those provided to GTE end users.
- 4.4.4 If ICG leases loops which are conditioned to transmit digital signals, as a part of that conditioning, GTE will test the loop and provide recorded test results to ICG. In maintenance and repair cases, if loop tests are taken, GTE will provide any recorded readings to ICG at time the trouble ticket is closed in the same manner as GTE provides to itself and its end users.
- 4.4.5 GTE will design its loop feeder network within industry designed parameters.
- 4.5 **Digital Loop Carrier.** Where GTE utilizes integrated digital loop carrier ("IDLC") technology to provision the Loop element, GTE will take the necessary affirmative steps to provide unbundled Loops. The basic Loop provided will support voice grade services. Loop capabilities beyond voice grade (i.e., ISDN, ADSL, etc.) will be provided under the terms and conditions, and at the prices indicated in Section 4.3.
- 4.5.1 GTE will permit ICG to collocate digital loop carriers and associated equipment in conjunction with collocation arrangements ICG maintains at a GTE wire center for the purpose of interconnecting to unbundled Loop elements.
- 4.6 **Unbundled Loop Facility Certification.**
- 4.6.1 Before deploying any service enhancing copper cable technology (e.g., HDSL, ISDN, etc.) over unbundled 2-wire analog voice grade

¹ See Bellcore TR-TSY-000008, Digital Interface Between the SLC-96 Digital Loop Carrier System and Local Digital Switch and TR-TSY-000303, Integrated Digital Loop Carrier (IDLC) Requirements, Objectives and Interface.

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loops leased from GTE, ICG shall notify GTE of such intentions to enable GTE to assess the loop transport facilities to determine whether there are any existing copper cable loop transport technologies (e.g., analog carrier, etc.) deployed within the same cable sheath that would be interfered with if ICG deployed the proposed service enhancing copper cable technology. If there are existing copper cable loop transport technologies already deployed within the same cable sheath, or if GTE already has existing near term (within 18 months of the date of facility certification) plans to deploy copper cable loop transport technologies that would be interfered with as described above, GTE will so inform ICG and ICG shall not be permitted to deploy such service enhancing copper cable technologies. GTE will charge ICG the applicable engineering time and labor costs to perform the certification.

- 4.6.2 If ICG fails to notify GTE of its plans to deploy service enhancing copper cable technology and obtain prior certification from GTE of the facilities, if ICG's deployment of such technology is determined to have caused interference with existing or planned copper cable loop transport technologies deployed by GTE in the same cable sheath, ICG will immediately remove such service enhancing copper cable technology and shall reimburse GTE for all incurred expense related to this interference.

4.7 Unbundled Loop Facility Notification

- 4.7.1 GTE reserves the right to deploy within its network at its sole discretion any and all copper cable loop transport technologies. If GTE plans to deploy copper cable loop transport technology within a cable sheath in which such technology was not previously deployed, GTE will provide notice to ICG of such planned deployment, indicating all service enhancing copper cable technologies that would cause interference with the technology to be deployed, or that would be interfered with by the deployment of such technology. Such notice will be provided at least ninety (90) days in advance of the planned deployment. If ICG has deployed any technologies within the same cable sheath that would interfere with, or be interfered with, by the technology GTE plans to deploy, the parties will work together to resolve the situation.

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- 4.8.1** GTE will provide as separate items the loop distribution, loop concentrator and loop feeder on a case-by-case basis pursuant to a bona fide request, ~~when technically feasible and when ICG pays the cost of such separate provision.~~
- 4.8.1.1** GTE shall provide subloops elements from the mandated point of termination ("MPOT") to an existing GTE point of demarcation at the wire center/central office
- 4.8.2** GTE will design and construct loop access facilities (including loop feeders and loop concentration/multiplexing systems) in accordance with standard industry practices as reflected in applicable tariffs and/or as agreed to by GTE and ICG.
- 4.8.3** Transport for loop concentrators/multiplexers services not supported by embedded technologies will be provided pursuant to applicable tariffs or as individually agreed upon by GTE and ICG. The Parties understand that embedded loop concentrators/multiplexers are not necessarily capable of providing advanced and/or digital services.
- 4.8.4** GTE will provide ICG end users with loop transmission characteristics equal to that provided to GTE end users.

5. Port Elements.

- 5.1** Service Description. "Port" is an unbundled component of Exchange Service that provides for the interconnection of individual loops to the switching components of GTE's network. In general, it is a line card and associated peripheral equipment on GTE end office switch that serves as the hardware termination for the end user's Exchange Service on that switch and generates dial tone and provides the end user access to the public switched telecommunications network. Each port is typically associated with one (or more) telephone number(s), which serve as the end user's network address.
- 5.2** Types of Ports. There are two basic types of port services, line-side and trunk-side, each of which provide certain types of functions.
- 5.2.1** Line-side Ports provide the following types of functions:
- On-hook and off-hook detection
 - Dial tone

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of functioning, quality, reliability, and convenience as possible and from a carrier standpoint in terms of compensation, through the use of existing and available call routing, forwarding, and addressing capabilities.

- 1.33 **"ISUP"** means a part of the SS7 protocol that defines call setup messages and call takedown messages
- 1.34 **"IXC" or "Interexchange Carrier"** means a telecommunications service provider authorized by the FCC to provide interstate long distance communications services between LATAs and are authorized by the State to provide inter- and/or intraLATA long distance communications services within the State.
- 1.35 **"Line Information Data Base (LIDB)"** means one or all, as the context may require, of the Line Information databases owned individually by GTE and other entities which provide, among other things, calling card validation functionality for telephone line number cards issued by GTE and other entities. A LIDB also contains validation data for collect and third number-billed calls, which include billed number screening.
- 1.36 **"Line Side"** refers to an end office switch connection that has been programmed to treat the circuit as a local line connected to an ordinary telephone station set. Line side connections offer only those transmission and signaling features appropriate for a connection between an end office and an ordinary telephone set.
- 1.37 **"Local Exchange Carrier" or "LEC"** means any company certified by the Commission to provide local exchange telecommunications service. This includes the Parties to this Agreement.
- 1.38 **"Local Exchange Routing Guide" or "LERG"** means the Bellcore reference customarily used to identify NPA-NXX routing and homing information, as well as network element and equipment designation.
- 1.39 **"Local Number Portability (LNP)"** means the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another.
- 1.40 **"Local Traffic"** means traffic that is originated by an end user of one Party and terminates to the end user of the other Party within GTE's then current local serving area, including mandatory local calling scope arrangements. A

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mandatory local calling scope arrangement is an arrangement that provides end users a local calling scope beyond their basic exchange serving area. Local Traffic does not include optional local calling scopes (i.e., optional rate packages that permit the end user to choose a local calling scope beyond their basic exchange serving area for an additional fee), referred to hereafter as "optional EAS."

- 1.41 **"MDF" or "Main Distribution Frame"** means the distribution frame used to interconnect cable pairs and line trunk equipment terminating on a switching system.
- 1.42 **"Meet-Point Billing" or "MPB"** refers to an arrangement whereby two LECs jointly provide the transport element of a switched access service to one of the LEC's end office switches, with each LEC receiving an appropriate share of the transport element revenues as defined by their effective access tariffs.
- 1.43 **"MECAB"** refers to the *Multiple Exchange Carrier Access Billing* ("MECAB") document prepared by the Billing Committee of the Ordering and Billing Forum ("OBF"), which functions under the auspices of the Carrier Liaison Committee ("CLC") of the Alliance for Telecommunications Industry Solutions ("ATIS"). The MECAB document, published by Bellcore as Special Report SR-BDS-000983, contains the recommended guidelines for the billing of an access service provided by two or more LECs, or by one LEC in two or more states within a single LATA.
- 1.44 **"MECOD"** refers to the *Multiple Exchange Carriers Ordering and Design* ("MECOD") *Guidelines for Access Services - Industry Support Interface*, a document developed by the Ordering/Provisioning Committee under the auspices of the Ordering and Billing Forum ("OBF"), which functions under the auspices of the Carrier Liaison Committee ("CLC") of the Alliance for Telecommunications Industry Solutions ("ATIS"). The MECOD document, published by Bellcore as Special Report SR-STS-002643, establish methods for processing orders for access service which is to be provided by two or more LECs.
- 1.45 **"Mid-Span Fiber Meet"** means an interconnection architecture whereby two carriers' fiber transmission facilities meet at a mutually agreed-upon POI.
- 1.46 **"NANP"** means the "North American Numbering Plan", the system of telephone numbering employed in the United States, Canada, and the Caribbean countries that employ NPA 809.

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- 1.47 **"Network Element"** means a facility or equipment used in the provision of a telecommunications service. Network Element includes features, functions, and capabilities that are provided by means of such facility or equipment, including subscriber numbers, databases, signaling systems, and information sufficient for billing and collection or used in the transmission, routing, or other provision of a telecommunications service.
- 1.48 **"NID" or "Network Interface Device"** means the point of demarcation between the end user's inside wiring and GTE's facilities.
- 1.49 **"Numbering Plan Area" or "NPA"** is also sometimes referred to as an area code. This is the three digit indicator which is defined by the "A", "B", and "C" digits of each 10-digit telephone number within the NANP. Each NPA contains 800 possible NXX Codes. There are two general categories of NPA, **"Geographic NPAs"** and **"Non-Geographic NPAs"**. A Geographic NPA is associated with a defined geographic area, and all telephone numbers bearing such NPA are associated with services provided within that geographic area. A Non-Geographic NPA, also known as a **"Service Access Code"** or **"SAC Code"** is typically associated with a specialized telecommunications service which may be provided across multiple geographic NPA areas. 800, 900, 700, and 888 are examples of Non-Geographic NPAs.
- 1.50 **"NXX", "NXX Code", "Central Office Code" or "CO Code"** is the three digit switch entity indicator which is defined by the "D", "E", and "F" digits of a 10-digit telephone number within the NANP. Each NXX Code contains 10,000 station numbers. Historically, entire NXX code blocks have been assigned to specific individual local exchange end office switches.
- 1.51 **"911 Service"** means a universal telephone number which gives the public direct access to the PSAP. Basic 911 service collects 911 calls from one or more local exchange switches that serve a geographic area. The calls are then sent to the correct authority designated to receive such calls.
- 1.52 **"POI"** means Point of Interconnection.
- 1.53 **"Pole Attachment"** has the meaning as set forth in Article X and Appendix I of this Agreement.
- 1.54 **"Provider"** means GTE and **"Customer"** means ICG with respect to those services performed by GTE pursuant to Article IV and any services for resale or unbundled network elements provided by GTE pursuant to Articles V and VI.

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ICG shall be referred to as Provider and GTE shall be referred to as Customer with respect to those services performed by ICG pursuant to Article IV.

- 1.55 **"Public Safety Answering Point" or "PSAP"** means an answering location for 9-1-1 calls originating in a given area. A PSAP may be designated as Primary or Secondary, which refers to the order in which calls are directed for answering. Primary PSAPs respond first, Secondary PSAPs receive calls on a transfer basis only, and generally serve as a centralized answering location for a particular type of emergency call. PSAPs are staffed by employees of Emergency Response Agencies ("ERAs") such as police, fire or emergency medical agencies or by employees of a common bureau serving a group of such entities.
- 1.56 **"Rate Center"** means the specific geographic point and corresponding geographic area that are associated with one or more particular NPA-NXX Codes that have been assigned to a LEC for its provision of Exchange Services. The geographic point is identified by a specific V&H coordinate that is used to calculate distance-sensitive end user traffic to/from the particular NPA-NXXs associated with the specific Rate Center.
- 1.57 **"Real Time"** means interactive system-to-system communications and response (note: the speed of interaction of the systems will necessarily depend upon accuracy of input and network capabilities), with the reporting on, or the recording of, the event as simultaneous with the occurrence of the event as the actual system permits.
- 1.58 **"Right-of-way" or "ROW"** means the right to use the land or other property of another party to place poles, conduits, cables, other structures and equipment, or to provide passage to access such structures and equipment. A ROW may run under, on, or above public or private property (including air space above public or private property) and may include the right to use discrete space in buildings, building complexes, or other locations.
- 1.59 **"Routing Point"** denotes a location that a LEC has designated on its network as the homing (routing) point for traffic that terminates to Exchange Services provided by the LEC that bear a certain NPA-NXX designation. The Routing Point is used to calculate airline mileage for the distance-sensitive transport element charges of Switched Access Services. Pursuant to Bellcore Practice BR795-100-100, the Routing Point may be an end office location, or a "LEC Consortium Point of Interconnection." The Routing Point must be in the same LATA as the associated NPA-NXX.

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- 1.60 **"Service Control Point" or "SCP"** is the node in the signaling network to which informational requests for service handling, such as routing, are directed and processed. The SCP is a real time database system that, based on a query from the SSP, performs subscriber or application-specific service logic, and then sends instructions back to the SSP on how to continue call processing.
- 1.61 **"Service Switching Point" or "SSP"** means a Signaling Point that can launch queries to databases and receive/interpret responses used to provide specific customer services.
- 1.62 **"Signaling Point" or "SP"** means a node in the CCS network that originates and/or receives signaling messages, or transfers signaling messages from one signaling link to another, or both.
- 1.63 **"Signaling System 7" or "SS7"** means the signaling protocol, Version 7, of the CCS network, based upon American National Standards Institute ("ANSI") standards.
- 1.64 **"Signal Transfer Point" or "STP"** means a packet switch in the CCS network that is used to route signaling messages among SSPs, SCPs and other STPs in order to set up calls and to query databases for advanced services. GTE's network includes mated pairs of local and regional STPs. STPs are provided in pairs for redundancy. GTE STPs conform to ANSI T1.111-8 standards.
- 1.65 **"Subsidiary" of a Party** means a corporation or other legal entity that is majority owned by such Party.
- 1.66 **"Synchronous Optical Network" or "SONET"** means synchronous electrical ("STS") or optical channel ("OC") connections between LECs.
- 1.67 **"Switched Access Service"** means the offering of facilities for the purpose of the origination or termination of traffic to or from Exchange Service customers in a given area pursuant to a switched access tariff. Switched Access Services include: Feature Group A, Feature Group B, Feature Group C, Feature Group D, 800 access and 900 access services.
- 1.68 **"Telecommunications Services"** means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.

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- 1.69 **"Trunk Side"** refers to a central office switch connection that is capable of, and has been programmed to treat the circuit as, connecting to another switching entity, for example, to a private branch exchange ("PBX") or another central office switch. Trunk side connections offer those transmission and signaling features appropriate for the connection of switching entities and cannot be used for the direct connection of ordinary telephone station sets.
- 1.70 **Undefined Terms:** The Parties acknowledge that terms may appear in this Agreement which are not defined and agree that any such terms shall be construed in accordance with their customary usage in the telecommunications industry as of the effective date of this Agreement.
- 1.71 **"Vertical Features" (including "CLASS Features")** means vertical services and switch functionalities provided by GTE, including: Automatic Call Back, Automatic Recall, Call Forwarding Busy Line/Don't Answer, Call Forwarding Don't Answer, Call Forwarding Variable, Call Forwarding - Busy Line, Call Trace, Call Waiting, Call Number Delivery Blocking Per Call, Calling Number Blocking Per Line, Cancel Call Waiting, Distinctive Ringing/Call Waiting, Incoming Call Line Identification Delivery, Selective Call Forward, Selective Call Rejection, Speed Calling, and Three Way Calling/Call Transfer.
- 1.72 **"Wire Center"** means a building or space within a building that serves as an aggregation point on a LEC's network, where transmission facilities and circuits are connected or switched. "Wire center" can also denote a building in which one or more Central Offices, used for the provision of exchange services and access services, are located.

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ARTICLE III GENERAL PROVISIONS

1. **Scope of General Provisions** Except as may otherwise be set forth in a particular Article or Appendix of this Agreement, in which case the provisions of such Article or Appendix shall control, these General Provisions apply to all Articles and Appendices of this Agreement.
2. **Term and Termination**
 - 2.1 **Term** Subject to the termination provisions contained in this Agreement, the term of this Agreement shall be two (2) years from the effective date referenced in the first paragraph of this Agreement and shall continue in effect for consecutive one (1) year terms until either Party gives the other Party at least ninety (90) calendar days' written notice of termination, which termination shall be effective at the end of the then-current term. In the event notice is given less than 90 days prior to the end of the current term, this Agreement shall remain in effect for 90 days after such notice is received, provided, that in no case shall the term be extended beyond 90 days after the end of the current term.
 - 2.2 **Post-Termination Arrangements** Except in the case of termination as a result of either Party's default or a termination upon sale, for service arrangements made available under this Agreement and existing at the time of termination, those arrangements may continue without interruption under (a) a new arrangement voluntarily executed by the Parties; (b) standard terms and conditions approved and made generally effective by the Commission, if any; (c) tariff terms and conditions made generally available to all competitive local exchange carriers; or (d) any rights under section 252(i) of the Act.
 - 2.3 **Termination Upon Default** Either Party may terminate this Agreement in whole or in part in the event of a default by the other Party, *provided however*, that the non-defaulting Party notifies the defaulting party in writing of the alleged default and that the defaulting Party does not cure the alleged default within sixty (60) calendar days of receipt of written notice thereof. Default is defined to include:
 - (a) A Party's insolvency or the initiation of bankruptcy or receivership proceedings by or against the Party; or

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- (b) A Party's refusal or failure in any material respect properly to perform its obligations under this Agreement, or the violation any of the material terms or conditions of this Agreement.

- 2.4 **Termination Upon Sale.** Notwithstanding anything to the contrary contained herein, a Party may terminate this Agreement as to a specific operating area or portion thereof of such Party if such Party sells or otherwise transfers the area or portion thereof. The Party shall provide the other Party with at least ninety (90) calendar days' prior written notice of such termination, which shall be effective on the date specified in the notice. Notwithstanding termination of this Agreement as to a specific operating area, this Agreement shall remain in full force and effect in the remaining operating areas.
- 2.5 **Liability upon Termination.** Termination of this Agreement, or any part hereof, for any cause shall not release either Party from any liability which at the time of termination had already accrued to the other Party or which thereafter accrues in any respect to any act or omission occurring prior to the termination or from an obligation which is expressly stated in this Agreement to survive termination.
3. **Amendments.** Any amendment, modification, or supplement to this Agreement must be in writing and signed by an authorized representative of each Party. The term "this Agreement" shall include future amendments, modifications, and supplements.
4. **Assignment.** Any assignment by either Party of any right, obligation, or duty, in whole or in part, or of any interest, without the written consent of the other Party shall be void, except that either Party may assign all of its rights, and delegate its obligations, liabilities and duties under this Agreement, either in whole or in part, to any entity that is, or that was immediately preceding such assignment, a Subsidiary or Affiliate of that Party without consent, but with written notification. The effectiveness of an assignment shall be conditioned upon the assignee's written assumption of the rights, obligations, and duties of the assigning Party.
5. **Authority.** Each person whose signature appears on this Agreement represents and warrants that he or she has authority to bind the Party on whose behalf he or she has executed this Agreement.
6. **Billing and Payment.** Except as provided elsewhere in this Agreement and where applicable, in conformance with MECAB and MECOD guidelines, ICG

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and GTE agree to exchange all information to accurately, reliably, and properly bill for features, functions and services rendered under this Agreement

- 6.1 **Dispute.** If Customer disputes a billing statement, Customer shall notify Provider in writing regarding the nature and the basis of the dispute within thirty (30) calendar days of the statement date or the dispute shall be waived. Provider and Customer shall diligently work toward resolution of all billing issues.
- 6.2 **Late Payment Charge.** If any undisputed amount due on the billing statement is not received by Provider on the payment due date, Provider may charge, and Customer agrees to pay, interest on the past due balance at a rate equal to the lesser of one and one-half percent (1½%) per month or the maximum nonusurious rate of interest under applicable law. Late payment charges shall be included on the next statement.
- 6.3 **Taxes.** Provider shall charge and collect from Customer, and Customer agrees to pay to Provider, appropriate federal, state, and local taxes, except to the extent Customer notifies Provider and provides to Provider appropriate documentation that Customer qualifies for a full or partial exemption.
- 6.4 **Due Date.** Payment is due 30 calendar days from the bill date or 20 calendar days from receipt of bill whichever is later.
- 6.5 **Audit Rights.** ICG shall have a right to audit all bills rendered by GTE pursuant to this Agreement, verifying the accuracy of items, including but not limited to, the services being provided on a wholesale basis pursuant to this Agreement, usage recording and provisioning, and nonrecurring charges on terms agreed to by the Parties.
7. **Binding Effect.** This Agreement shall be binding on and inure to the benefit of the respective successors and permitted assigns of the Parties.
8. **Compliance with Laws and Regulations.** Each Party shall comply with all federal, state, and local statutes, regulations, rules, ordinances, judicial decisions, and administrative rulings applicable to its performance under this Agreement.
9. **Confidential Information.**
- 9.1 **Identification.** Either Party may disclose to the other proprietary or confidential customer, technical, or business information in written, graphic, oral or other

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tangible or intangible forms ("Confidential Information"). In order for information to be considered Confidential Information under this Agreement, it must be marked "Confidential" or "Proprietary," or bear a marking of similar import. Orally or visually disclosed information shall be deemed Confidential Information only if contemporaneously identified as such and reduced to writing and delivered to the other Party with a statement or marking of confidentiality within thirty (30) calendar days after oral or visual disclosure.

Notwithstanding the foregoing, all orders for Services or network elements placed by ICG pursuant to this Agreement, and information that would constitute customer proprietary network information of ICG end user customers pursuant to the Act and the rules and regulations of the FCC, as well as recorded usage information with respect to ICG end users, whether disclosed by ICG to GTE or otherwise acquired by GTE in the course of its performance under this Agreement, shall be deemed Confidential Information of ICG for all purposes under this Agreement whether or not specifically marked or designated as confidential or proprietary.

9.2 Handling. In order to protect such Confidential Information from improper disclosure, each Party agrees:

- (a) That all Confidential Information shall be and shall remain the exclusive property of the source;
- (b) To limit access to such Confidential Information to authorized employees who have a need to know the Confidential Information for performance of this Agreement;
- (c) To keep such Confidential Information confidential and to use the same level of care to prevent disclosure or unauthorized use of the received Confidential Information as it exercises in protecting its own Confidential Information of a similar nature;
- (d) Not to copy, publish, or disclose such Confidential Information to others or authorize anyone else to copy, publish, or disclose such Confidential Information to others without the prior written approval of the source;
- (e) To return promptly any copies of such Confidential Information to the source at its request; and

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- (f) To use such Confidential Information only for purposes of fulfilling work or services performed hereunder and for other purposes only upon such terms as may be agreed upon between the Parties in writing.

- 9.3 **Exceptions.** These obligations shall not apply to any Confidential Information that was legally in the recipient's possession prior to receipt from the source, was received in good faith from a third party not subject to a confidential obligation to the source, now is or later becomes publicly known through no breach of confidential obligation by the recipient, was developed by the recipient without the developing persons having access to any of the Confidential Information received in confidence from the source, or that is required to be disclosed pursuant to subpoena or other process issued by a court or administrative agency having appropriate jurisdiction, provided, however, that the recipient shall give prior notice to the source and shall reasonably cooperate if the source deems it necessary to seek protective arrangements.
- 9.4 **Survival.** The obligation of confidentiality and use with respect to Confidential Information disclosed by one Party to the other shall survive any termination of this Agreement for a period of three (3) years from the date of the initial disclosure of the Confidential Information.
10. **Consent.** Where consent, approval, or mutual agreement is required of a Party, it shall not be unreasonably withheld or delayed.
11. **Cooperation on Fraud Minimization.** ICG assumes responsibility for all fraud associated with its end user customers and accounts. GTE shall have no responsibility, is not required to investigate and is not required to make any adjustments to ICG's account in cases of fraud. The Parties agree that they shall cooperate with one another to resolve cases of fraud. The Parties' fraud minimization procedures are to be cost effective and implemented so as not to unduly burden or harm one Party as compared to the other.
12. **Dispute Resolution.**
- 12.1 **Alternative to Litigation.** Except as provided under Section 252 of the Act with respect to the approval of this Agreement by the Commission, the Parties desire to resolve disputes arising out of this Agreement without litigation. Accordingly, except for action seeking a temporary restraining order or an injunction related to the purposes of this Agreement, or suit to compel compliance with this dispute resolution process, the Parties agree to use the following alternative dispute resolution procedures as their sole remedy with

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respect to any controversy or claim arising out of or relating to this Agreement or its breach.

- 12.2 **Negotiations.** At the written request of a Party, each Party will appoint a knowledgeable, responsible representative to meet and negotiate in good faith to resolve any dispute arising under this Agreement. The Parties intend that these negotiations be conducted by non-lawyer, business representatives. The location, format, frequency, duration, and conclusion of these discussions shall be left to the discretion of the representatives. Upon agreement, the representatives may utilize other alternative dispute resolution procedures such as mediation to assist in the negotiations. Discussions and correspondence among the representatives for purposes of these negotiations shall be treated as confidential information developed for purposes of settlement, exempt from discovery and production, which shall not be admissible in the arbitration described below or in any lawsuit without the concurrence of all Parties. Documents identified in or provided with such communications, which are not prepared for purposes of the negotiations, are not so exempted and may, if otherwise admissible, be admitted in evidence in the arbitration or lawsuit.
- 12.3 **Arbitration.** If the negotiations do not resolve the dispute within sixty (60) days of the initial written request, the dispute shall be submitted to binding arbitration by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. A Party may demand such arbitration in accordance with the procedures set out in those rules. Discovery shall be controlled by the arbitrator and shall be permitted to the extent set out in this section. Each Party may submit in writing to a Party, and that Party shall so respond to, a maximum of any combination of thirty-five (35) (none of which may have subparts) of the following: interrogatories, demands to produce documents, or requests for admission. Each Party is also entitled to take the oral deposition of one individual of another Party. Additional discovery may be permitted upon mutual agreement of the Parties. The arbitration hearing shall be commenced within sixty (60) days of the demand for arbitration. The arbitration shall be held in a mutually agreeable city. The arbitrator shall control the scheduling so as to process the matter expeditiously. The Parties may submit written briefs. The arbitrator shall rule on the dispute by issuing a written opinion within thirty (30) days after the close of hearings. The times specified in this section may be extended upon mutual agreement of the Parties or by the arbitrator upon a showing of good cause. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction.

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- 12.4 **Expedited Arbitration Procedures** If the issue to be resolved through the negotiations referenced in Section 12.2 directly and materially affects service to either Party's end user customers, then the period of resolution of the dispute through negotiations before the dispute is to be submitted to binding arbitration shall be five (5) Business Days. Once such a service affecting dispute is submitted to arbitration, the arbitration shall be conducted pursuant to the expedited procedures rules of the Commercial Arbitration Rules of the American Arbitration Association (i.e., rules 53 through 57).
- 12.5 **Costs** Each Party shall bear its own costs of these procedures. A Party seeking discovery shall reimburse the responding Party the costs of production of documents (including search time and reproduction costs). The Parties shall equally split the fees of the arbitration and the arbitrator.
- 12.6 **Continuous Service** GTE shall continue providing services to ICG during the pendency of any dispute resolution procedure, and ICG shall continue to perform its obligations (including making payments) in accordance with this Agreement.
13. **Entire Agreement** This Agreement constitutes the entire agreement of the Parties pertaining to the subject matter of this Agreement and supersedes all prior agreements, negotiations, proposals, and representations, whether written or oral, and all contemporaneous oral agreements, negotiations, proposals, and representations concerning such subject matter. No representations, understandings, agreements, or warranties, expressed or implied, have been made or relied upon in the making of this Agreement other than those specifically set forth herein.
14. **Expenses** Except as specifically set out in this Agreement, each Party shall be solely responsible for its own expenses involved in all activities related to the subject of this Agreement.
15. **Force Majeure** In the event performance of this Agreement, or any obligation hereunder, is either directly or indirectly prevented, restricted, or interfered with by reason of fire, flood, earthquake or like acts of God, wars, revolution, civil commotion, explosion, acts of public enemy, embargo, acts of the government in its sovereign capacity, labor difficulties, including without limitation, strikes, slowdowns, picketing, or boycotts, unavailability of equipment from vendor, changes requested by Customer, or any other circumstances beyond the reasonable control and without the fault or negligence of the Party affected, the Party affected, upon giving prompt notice to the other party, shall be excused from such performance on a day-to-day basis to the extent of such prevention.

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Digit reception and interpretation (dial pulse or dual tone multi frequency [DTMF] or SS7 signalling, where available)
Network call routing to the called telephone number
Audible ringing and power ringing
Automatic message accounting (AMA) recording
Disconnect detection
Use of GTE switch based services and functions
Vertical features

5.2.2 Trunk-side Ports provide the following types of functions.

Digit pulsing (DP), dual tone multi frequency (DTMF) and multi frequency (MF) or SS7 signalling, where available
Digit reception and interpretation
Network routing toward terminating telephone number
Answer detection and supervision signaling
Use of GTE switch based services and functions
Vertical features

5.3 Ports Available as Unbundled Network Elements There are four types of Ports available as unbundled network elements.

- 5.3.1 "2-wire analog line" Port is a line side switch connection employed to provide basic residential and business type Exchange Service.
- 5.3.2 "2-wire ISDN digital line" Port is a Basic Rate Interface (BRI) line side switch connection employed to provide ISDN Exchange Services.
- 5.3.3 "DS-1 digital trunk" Port is a direct inward dialing (DID) trunk side switch connection employed to provide the equivalent of 24 analog incoming trunk type Exchange Services.
- 5.3.4 "4-wire ISDN digital DS-1 trunk" Port is a Primary Rate Interface (PRI) trunk side switch connection employed to provide the ISDN Exchange Services

5.4 Port Prices. Prices for 2-wire analog and DS-1 Ports are listed in Appendix F. 2-wire ISDN line side Ports and 4-wire ISDN trunk side Ports shall be provided at a price agreed to by the Parties.

5.5 Future Interfaces. GTE will make available as unbundled network elements any interfaces that are deployed within its switches and which it provides to its

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own end user customers. GTE will interface with ICG using standard industry interfaces and support future interfaces that are deployed within the GTE switch.

- 5.6 Switch Features and Functionality. As provided in section 2.2 of this Article VI, the port element consists of two components: (i) termination (i.e., access to the switch), and (ii) usage. GTE's unbundled local switch contains features and functions inherent to the particular switching platform used (e.g., DMS, 5ESS, GTD5). GTE will only provide switch features of which the particular switch is capable. However, GTE will not offer individual core switch functions and features on an *a la carte* basis.

- 5.7 GTE will provide tandem switching capability at GTE access tandems for traffic between ICG and GTE end offices subtending the GTE access tandem and for traffic between ICG and non-GTE end offices subtending GTE access tandems. GTE will provide the features and functions that are centralized in tandem switches including but not limited to call recording, the routing of calls to operator services when technically feasible, and signaling conversion features.

6. Transport Elements

- 6.1 Service Description. Transport is an unbundled component of Exchange Service. In general, it is the transmission facility (or channel or group of channels on such facility) which extends from a Main Distribution Frame (MDF) or functionally comparable piece of equipment in a GTE end office or access tandem to either (i) another MDF or functionally comparable piece of equipment in a GTE end office or access tandem, or (ii) a meet point with transport facilities of ICG or another carrier. Transport may be provided over a variety of media, including, but not limited to, copper cables, radio frequencies or channels on a high capacity facility.

- 6.2 Categories/Types. Unbundled transport is provided under rates, terms and conditions of the applicable GTE special access tariff or local private line tariff.

7. SS7 Transport and Signaling. SS7 signaling and transport services in support of ICG's local exchange services shall be provided in accordance with the terms and conditions of Appendix G attached to this Agreement and made a part hereof.

- 1 GTE will provide interconnection with its SS7 at the STPs but not at other points.

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8. **LIDB Services.** Access to GTE's LIDB shall be provided in accordance with the rates, terms and conditions of GTE's switched access tariff, GTOC Tariff FCC No. 1, Section 8.
9. **Database 800/888 Services.** Access to GTE's 800/888 database shall be provided in accordance with the rates, terms and conditions of GTE's switched access tariff, GTOC Tariff FCC No. 1, Section 8.
10. **Data Switching**
 - 10.1 **Access.** GTE will provide unbundled access to GTE data switches to ICG at the user network interface ("UNI") and network to network interface ("NNI") level subject to mutual agreement on technical standards.
 - 10.2 **Nondiscrimination.** Data switching features and functionalities provided to ICG will be without discrimination with respect to the way GTE provides them to GTE end users. In the event of overflow or congestion conditions on the data switching network, ICG's data traffic carried on GTE facilities will be equal priority to GTE data traffic.
 - 10.3 **Interface.** To the extent a standard interface is available in a GTE switch, it will be made available to ICG.
 - 10.4 **Testing, Monitoring, Administration and Maintenance.** Testing, monitoring, administration and maintenance will be performed by GTE in a nondiscriminatory manner.
11. **Digital Cross Connect System (DCS)**
 - 11.1 **Access.** GTE will provide unbundled access to the DCS element, which shall provide automated cross-connection (with CNC), facility grooming, bridging (MJU-digital), point to multipoint connections (DMB-analog), broadcast and automated facility test capabilities. These functionalities will be provided consistent with that which is provided to GTE end users. ICG shall submit a service order to GTE specifying these functionalities.
 - 11.2 **Optional Characteristics.** The DCS element may include multiplexing, format conversion, signaling conversion and manual cross connection wiring.
 - 11.3 **Alternate Provisioning.** Where no automated DCS capability exists, the cross connection function will be provided manually through the combination of DSX patch panels and D4 banks or DS0 (or higher capacity) equipment.

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15. Advance Notification of Network and Technology Changes. GTE will establish quarterly reviews of network and technology plans and will notify ICG six (6) months in advance of changes that would impact ICG's provision of services.
16. Provisioning Intervals. GTE agrees to provide unbundled network elements in a timely manner considering the need and volume of requests, pursuant to agreed upon service provisioning intervals.

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ARTICLE VII

ADDITIONAL SERVICES AND COORDINATED SERVICE ARRANGEMENTS

1. **Transfer of Service Announcements.** When an end user customer transfers service from GTE to ICG, or from ICG to GTE, and does not retain its original telephone number, the Party formerly providing service to the end user will provide, upon request, a referral announcement on the original telephone number. This announcement will provide the new number of the customer. This announcement will be provided under the same terms and conditions as GTE end users receive.
2. **Coordinated Repair Calls.** The Parties will employ the following procedures for handling misdirected repair calls:
 - 2.1 The Parties will educate their respective customers as to the correct telephone numbers to call to access their respective repair or customer care centers.
 - 2.2 To the extent that the correct provider of service to the customer is identifiable, the Parties will refer customers that make misdirected repair calls to the other Party to the telephone number provided by the provider of service to that customer. Such referrals will be made in a courteous manner and at no charge to the other Party. Communications with end users of the other Party during such misdirected calls other than referral to the correct number are prohibited.
 - 2.3 The Parties will provide their respective repair/customer care contact numbers to one another on a reciprocal basis.
3. **911/E911 Arrangements.**
 - 3.1 **Description of Service.** ICG will install a minimum of two dedicated trunks to GTE's 911/E911 selective routers (i.e., 911 tandem offices) that serve the areas in which ICG provides Exchange Services, for the provision of 911/E911 services and for access to all subtending PSAPs. The dedicated trunks shall be, at minimum, DSO level trunks configured as a 2-wire analog interface or as part of a digital (1.544 Mbps) interface. '9-1-1 Selective Router' is a CAMA-type trunk connection to a 9-1-1 Selective Router employed to accept ANI and voice for routing the call to the correct PSAP. Either configuration shall use CAMA type signaling with multifrequency (MF) tones that will deliver ANI with the voice portion of the call. GTE will provide ICG with the appropriate CLLI codes and switch types of the central offices in the 911 selective router serving area. If an ICG central office serves end users in an area served by more than

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one GTE 911/E911 selective router, ICG will install a minimum of two dedicated trunks in accordance with this section to each of such 911/E911 selective routers.

- 3.2 Transport If ICG desires to obtain transport from GTE to the GTE 911 selective routers, ICG may purchase such transport from GTE at the rates set forth in GTE's intrastate switched access tariff or in GTE's intrastate special access tariff where GTE has facilities for such transport

- 3.3 Cooperation and Level of Performance The Parties agree to provide access to 911/E911 in a manner that is transparent to the end user. The Parties will work together to facilitate the prompt, reliable and efficient interconnection of ICG's systems to the 911/E911 platforms, with a level of performance that will provide the same grade of service as that which GTE provides to its own end users. To this end, GTE will provide documentation to ICG showing which central offices are served by which 911 selective routers, and GTE will provide maps of NXX overlays, NXX boundaries, and GTE's network maps to identify diverse routing for purposes of 911 service provisioning. Such maps (if available) shall be to the same level of detail as are used by GTE network design engineers. GTE will provide reports to identify which GTE databases cover which 911 districts.

GTE plans to provide ICG notification of any pending tandem moves, NAP splits, or scheduled maintenance outages in advance via its data base management centers and agrees to negotiate the procedures to mutual satisfaction.

- 3.4 Updates to MSAG It shall be the responsibility of ICG to ensure that the address of each of its end users is included in the Master Street Address Guide (MSAG). Where GTE is the lead telco, GTE will accept address records provided on ICG's Local Service Request ("LSR") or via a separate feed established by ICG pursuant to Section 7 of this Article. GTE and ICG will work together to develop the process by which LSR errors out of the MSAG will be handled, with appropriate cost recovery to GTE. Where GTE is not the lead telco, GTE has no action and ICG must establish a separate relationship with the lead telco to submit records for MSAG validation. Where GTE is the lead telco, it will have a copy of the MSAG and will provide a copy to ICG upon request.
- 3.5 Updates to Database The 911/E911 database will be updated with ICG's end user 911/E911 information. If ICG provides its update data to GTE as frequently as does GTE's internal systems, the update process will be as

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timely. In any case, GTE will not update the ALI database any later than one working day subsequent to receipt of data from ICG

3.6 Compensation

- (a) In situations in which GTE is responsible for maintenance of the 911/E911 database and can be compensated for maintaining ICG's information by the 911 district, GTE will seek such compensation from the 911 district. GTE will seek compensation from ICG only if and to the extent that GTE is unable to obtain such compensation from the 911 district. GTE shall charge ICG a portion the cost of the shared 911/selective router
- (b) Compensation to GTE for provision of services it provides ICG hereunder shall be according to reasonable rates developed by GTE and agreed upon by ICG.

3.7 PSAP Routing. GTE will identify and be responsible for any special routing arrangements when it provides the switching to the PSAP.

3.8 Emergency Backup Numbers. When available under the 911 District contract, GTE must identify any arrangements for emergency backup number in case of massive trunk failures.

3.9 Liability. GTE will not be liable for errors with respect to 911/E911 services except for its gross negligence as addressed in applicable tariffs.

4. Information Services Traffic

4.1 Routing. Each Party shall route traffic for information services (e.g. 900, 976, N11, weather lines, sports lines, etc.) that originates on its network to the appropriate information services platforms connected to the other Party's network over the Local/IntraLATA trunks.

4.2 Recording. The Party on whose network the information services traffic originated (the "Originating Party") shall provide the recorded call detail information to the Party to whose information platform the information services traffic terminated (the "Terminating Party").

4.3 Rating. The Terminating Party shall provide to the Originating Party all rating information necessary to bill the information services traffic to the Originating Party's end users pursuant to the Terminating Party's agreement(s) with each information provider.

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- 4.4 **Billing and Collection.** The Originating party shall bill and collect such information service charges and shall remit the amounts collected to the Terminating Party less:
- (a) a mutually agreed upon fee for providing billing and collection of the information service charges; and
 - (b) any uncollectibles reserve, which shall be calculated based on the uncollectibles reserve in the Terminating Party's billing and collection agreement with the applicable information services provider; and
 - (c) any customer adjustment provided by the Originating Party.
- 4.5 **Blocking.** Nothing in this Agreement shall restrict either Party from offering to its end user customers the ability to block the completion of information service traffic.
5. **Directory Assistance (DA) and Operator Services (OS).** Where ICG is providing local service with its own switch, upon ICG's request GTE will provide to ICG rebranded or unbranded directory assistance services and/or operator services pursuant to separate contracts to be negotiated in good faith between the Parties. If ICG so requests directory assistance services and/or operator services, such contracts shall provide for the following:
- 5.1 **Directory Assistance Calls.** GTE directory assistance centers shall provide number and addresses to ICG end users in the same manner that number and addresses are provided to GTE end users. If information is provided by an automated response unit ("ARU"), such information shall be repeated twice in the same manner in which it is provided to GTE end users. Where available, GTE will provide call completion to ICG end users in the same manner that call completion is provided to GTE end users. GTE will provide its existing services to ICG end users consistent with the service provided to GTE end users.
- [Note: call completion available in TX, MO and AR 7/1/96; call completion is not, and will not be, available in IA, NM and AZ.]
- 5.2 **Operator Services Calls.** GTE operator services provided to ICG end users shall be provided in the same manner GTE operator services are provided to GTE end users. In accordance with GTE practices and at GTE rates, GTE will offer to ICG end users collect, person-to-person, station-to-station calling, third party billing, emergency call assistance, TLN calling card services, credit for calls, time and charges, notification of the length of call, and real time rating.

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GTE operators shall also have the ability to quote ICG rates upon request but only if there is appropriate cost recovery to GTE and to the extent it can be provided within the technical limitations of GTE's switches. GTE will provide its existing services to ICG end users consistent with the service GTE provides to its own end users.

6. Directory Assistance Listings Information. ICG shall provide and GTE shall include listings for ICG end users in the same geographic area as GTE provides directory assistance for GTE end users via the LSR process.

- 6.1 GTE shall include in its directory assistance database all directory assistance listing information, which consists of name and address ("DA Listing Information") for all ICG customers.

GTE shall provide to ICG, at ICG's request, for purposes of ICG providing ICG-branded directory assistance services to its local customers, within sixty (60) days after an order for such tape is received, all published DA listings via magnetic tape. The rates for these listings are in Attachment F. Changes to the DA Listing Information shall be updated on a daily basis through the same means used to transmit the initial list. DA Listing Information provided shall indicate whether the customer is a residence or business customer.

- 6.2 The Parties will not release Subscriber List Information ("SLI") that includes the other parties' information to third parties without the other parties' written approval. The parties will inform each other if they desire to release the other parties' customer SLI to the third party, in which case, the parties shall provide the other party's SLI at the same time as their own SLI is provided to the third party. The parties shall charge each other no more than the direct costs of compiling such information. The parties shall be responsible for billing the third party.

- 6.3 The Parties will work together to identify and develop procedures for database error corrections.

7. Directory Listings and Directory Distribution. Subject to execution and pursuant to the terms of Appendix K between ICG and GTE (the "Directories Agreement"), GTE shall offer the following to ICG:

Directory Listings (White Pages)
Directory Listings (Yellow Pages)
Listing Information
Directory Distribution

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Critical Customer Contact Information Promotional, Marketing or Description of Services Materials

8. **Busy Line Verification and Busy Line Verification Interrupt**. Each Party shall establish procedures whereby its operator assistance bureau will coordinate with the operator assistance bureau of the other Party to provide Busy Line Verification ("BLV") and Busy Line Verification and Interrupt ("BLVI") services on calls between their respective end users. Each Party shall route BLV and BLVI inquiries over separate inward operator services trunks. Each Party's operator assistance bureau will only verify and/or interrupt the call and will not complete the call of the end user initiating the BLV or BLVI. Each Party shall charge the other for the BLV and BLVI services at the rates contained in Appendix E, or if there is no applicable rate listed in Appendix E, at the rates in their respective tariffs.
9. **SAG**. GTE will provide to ICG upon request the Street Address Guide containing by address the serving CLLI. Two companion files will be provided with the SAG which lists all services and features at all LSOs, and lists services and features that are available in a specific LSO. Any charge will be reasonable and mutually agreeable.
10. **Dialing Format Changes**. GTE will provide reasonable notification to ICG of changes to local dialing format, i.e., 7 to 10 digit, by end office.
11. ICG shall pay GTE for access to GTE's Operations Support System functions according to procedures the Parties mutually develop.

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ARTICLE VIII GENERAL RULES GOVERNING RESOLD SERVICES AND UNBUNDLED ELEMENTS

1. General. General regulations, terms and conditions governing rate applications, technical parameters, service availability, definitions and feature interactions, as described in the appropriate GTE intrastate local, toll and access tariffs, as referenced in the third column of Appendix E (the "GTE Retail Tariff"), apply to retail services made available by GTE to ICG for resale and unbundled network elements provided by GTE to ICG, when appropriate, unless otherwise specified in this Agreement. As applied to services or network elements offered under this Agreement, the term "Customer" contained in the GTE Retail Tariff shall be deemed to mean "ICG" as defined in this Agreement.
2. Liability of GTE.
 - 2.1 Inapplicability of Tariff Liability. GTE's general liability, as described in the GTE Retail Tariff, does not extend to ICG's customers or any other third party. Liability of GTE to ICG resulting from any and all causes arising out of services, facilities, network elements or any other items relating to this Agreement shall be governed by the liability provisions contained in this Agreement and no other liability whatsoever shall attach to GTE. GTE shall be liable for the individual services, facilities or elements that it separately provides to ICG and shall not be liable for the integration of components combined by ICG.
 - 2.2 ICG Tariffs or Contracts. ICG shall, in its tariffs or other contracts for services provided to its end users using services, facilities or network elements obtained from GTE, provide that in no case shall GTE be liable to ICG's end users or any third parties for any indirect, special or consequential damages, including, but not limited to, economic loss or lost business or profits, whether foreseeable or not, and regardless of notification by ICG of the possibility of such damages and ICG shall indemnify and hold GTE harmless from any and all claims, demands, causes of action and liabilities based on any reason whatsoever from its customers as provided in this Agreement. Nothing in this Agreement shall be deemed to create a third party beneficiary relationship with ICG's end users.
 - 2.3 No Liability for Errors. GTE is not liable for mistakes that appear in GTE's listings, 811 and other information databases, or for incorrect referrals of end users to ICG for any ongoing ICG service, sales or repair inquiries, and with

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respect to such mistakes or incorrect referrals, ICG shall indemnify and hold GTE harmless from any and all claims, demands, causes of action and liabilities whatsoever, including costs, expenses and reasonable attorney's fees incurred on account thereof, by third parties, including ICG's end users or employees. For purposes of this Section 2, mistakes and incorrect referrals shall not include matters arising out of the willful misconduct of GTE or its employees or agents.

3. Unauthorized Changes

3.1 Procedures. If ICG submits an order for resold services or unbundled elements under this Agreement in order to provide service to an end user that at the time the order is submitted is obtaining its local services from GTE or another LEC using GTE resold services or unbundled elements, and the end user notifies GTE that the end user did not authorize ICG to provide local exchange services to the end user, ICG must provide GTE with written documentation of authorization from that end user within three (3) Business Days of notification by GTE. If ICG cannot provide written documentation of authorization within such time frame, ICG must within three (3) Business Days thereafter:

- (a) notify GTE to change the end user back to the LEC providing service to the end user before the change to ICG was made; and
- (b) provide any end user information and billing records ICG has obtained relating to the end user to the LEC previously serving the end user; and
- (c) notify the end user and GTE that the change back to the previous LEC has been made; and
- (d) pay GTE fifty dollars (\$50.00) per affected line to compensate GTE for switching the end user back to the original LEC.

3.2 Option to Restrict Changes Without Evidence of Authorization. ICG's or GTE's end users may request GTE to permit changes of their provider of local exchange services only upon end user password-based notification to GTE that the end user wishes to change the end user's provider of local exchange services. In such a situation, GTE will not change an end user's provider of local exchange services without such password based notification.

4. Impact of Payment of Charges on Service. ICG is solely responsible for the payment of all charges for all services, facilities and elements furnished under this Agreement, including, but not limited to, calls originated or accepted at its

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or its end users' service locations. If ICG fails to pay when due any and all charges billed to ICG under this Agreement, including any late payment charges (collectively, "Unpaid Charges"), and any or all such charges remain unpaid more than forty-five (45) days after the due date of such Unpaid Charges excepting previously disputed charges for which ICG may withhold payment, GTE shall notify ICG in writing that it must pay all Unpaid Charges to GTE within seven (7) Business Days. If ICG disputes the billed charges, it shall, within said seven (7) day period, inform GTE in writing of which portion of the Unpaid Charges it disputes, including the specific details and reasons for the dispute, unless such reasons have been previously provided, and shall immediately pay to GTE all undisputed charges. If ICG and GTE are unable, within thirty (30) days thereafter, to resolve issues related to the disputed charges, then either ICG or GTE may file a complaint with the Commission to resolve those issues. Upon resolution of any dispute hereunder, if ICG owes payment it shall make such payment to GTE with any late payment charge under Article III.7.2 from the original payment due date. If ICG owes no payment, but has previously paid GTE such disputed payment, then GTE shall credit such payment including any late payment charges. If ICG fails to pay any undisputed Unpaid Charges, ICG shall, at its sole expense, within five (5) Business Days notify its end users that their service may be disconnected for ICG's failure to pay Unpaid Charges, and that its end users must select a new provider of local exchange services. If ICG fails to provide such notification or any of ICG's end users fail to select a new provider of services within the applicable time period, GTE will provide local exchange services to ICG's end users under GTE's applicable end user tariff at the then current charges for the services being provided. In this circumstance, otherwise applicable service establishment charges will not apply to ICG's end user, but will be assessed to ICG. GTE may discontinue service to ICG upon failure to pay undisputed charges as provided in this Section 7, and shall have no liability to ICG or ICG's end users in the event of such disconnection.

5. Unlawful Use of Service. Services, facilities or unbundled elements provided by GTE pursuant to this Agreement shall not be used by ICG or its end users for any purpose in violation of law. ICG, and not GTE, shall be responsible to ensure that ICG and its end users use of services, facilities or unbundled elements provided hereunder comply at all times with all applicable laws. GTE may refuse to furnish service to ICG or to connect particular services, facilities or unbundled elements provided under this Agreement to ICG or, as appropriate, ICG's end user when (i) an order is issued by a court of competent jurisdiction finding that probable cause exists to believe that the use made or to be made of the service, facilities or unbundled elements is prohibited by law or (ii) GTE is notified in writing by a law enforcement agency acting within its

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ARTICLE IX COLLOCATION

1. **Physical Collocation.** GTE shall provide to ICG physical collocation of equipment pursuant to 47 CFR § 51.323 necessary for interconnection or for access to unbundled network elements, provided that GTE may provide virtual collocation in place of physical collocation, or in some cases deny a particular collocation request entirely, if GTE demonstrates that physical collocation, or perhaps even virtual collocation, is not practical because of technical reasons or space limitations, as provided in Section 251(c)(6) of the Act. GTE will work with ICG to install collocation arrangements within 120 calendar days absent extenuating circumstances. GTE will provide such collocation for purposes of interconnection or access to unbundled network elements pursuant to the terms and conditions in the applicable federal and state EIS tariffs. Where GTE owns or controls pathways (i.e., entrance facilities, cable vaults, equipment rooms, telephone closets) GTE will make available subject to terms of collocation. In addition, GTE agrees that the terms and conditions set forth in this section shall apply to physical collocation provided to ICG.
- 1.1 **Space Planning.** In addition to such provisions for space planning and reservation as may be set forth in the applicable GTE federal and state EIS tariffs, the parties agree to the following terms and conditions.
 - 1.1.1 GTE has the right to reserve space within its central offices for its own use based on a 5-year planning horizon.
 - 1.1.2 GTE will notify ICG if it plans to build an addition to a central office where ICG has collocated facilities, if such addition would result in a material increase of space available for collocation.
 - 1.1.3 Should ICG submit to GTE a two-year forecast for space planning for collocated facilities in a central office, GTE will, in good faith, consider and discuss such forecast with ICG when considering space planning or utilization decisions for such central office; provided, however that any final space planning or utilization decision shall be made by GTE in its sole discretion in light of GTE requirements.
 - 1.1.4 Subject to technical feasibility and space limitations, GTE will make available at applicable federal and state EIS tariffs such intraoffice

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facilities as may be necessary to accommodate projected volumes of ICG traffic.

- 1.2 **Connection to Customer Loops and Ports** Facilities for cross-connection to unbundled loops and ports shall be provided under the applicable GTE federal tariff for Special Access Cross Connect, until such time as a local tariff applicable to the facilities used for such cross-connection is filed.
- 1.3 **Connection to Other Collocated Carriers** Subject to technical feasibility and space limitations, ICG may interconnect with other carriers collocated at a GTE central office at which ICG has collocated facilities; provided, however, that ICG and such other carriers must be collocated at the GTE central office for the primary purpose of interconnecting with GTE or accessing GTE's unbundled network elements. If ICG wants to interconnect with other carriers collocated at a GTE central office, ICG must provide GTE with thirty days' prior written notice, during which time GTE may elect to provide the facilities necessary to accomplish such interconnection. ICG and the other collocated carriers may provide the necessary interconnection facilities only if GTE elects not to provide such facilities or fails to so elect within the thirty day notice period. If GTE elects to provide interconnection facilities under this section, GTE will provide this cross connection under the GTE federal tariff for Special Access Cross Connect, until such time as a local tariff applicable to the facilities used for such interconnection facilities is filed.
- 1.4 **Choice of Vendor** ICG may use the vendor of its choice to install, maintain and repair equipment within ICG's collocated space. Access by the employees, agents or contractors of such vendor shall be subject to the same restrictions on access by employees, agents or contractors of ICG imposed under the applicable GTE federal and state EIS tariffs, including but not limited to certification and approval by GTE.
- 1.5 **Monitoring** Subject to technical feasibility and space limitations, ICG may extend its own facilities for remote monitoring of its collocated equipment to its collocated space. ICG may request that GTE provide the facilities necessary for such remote monitoring, at which time GTE and ICG will negotiate in good faith the price, terms and conditions of remote monitoring by GTE.
- 1.6 **Phone Service** Upon ordering collocated space, ICG may order that its collocation cage be provided with plain old telephone service (POTS) commencing at such time as GTE has completed construction of the collocated space. ICG shall pay separately for any ordered POTS service.

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- 1.7 **Intraoffice Diversity.** At ICG's request, GTE will provide diversity for ingress/egress fiber and power cables where such diversity is available and subject to technical feasibility and space limitations.
- 1.8 **ICG Proprietary Information.** GTE will protect all ICG proprietary information to the extent required under non-disclosure agreements existing as of the date GTE completes construction of a physical collocation space at ICG's request.
- 1.9 **Notification of Modifications.** GTE will notify ICG of modifications to collocation space in accord with the terms of applicable GTE state and federal EIS tariffs. Additionally, GTE shall notify ICG when major upgrades are made to the power plants supporting ICG's collocation space. The following shall constitute such major upgrades:
- (a) replacement of a rectifier;
 - (b) addition or replacement of a new fusing module;
 - (c) addition or replacement of a power distribution unit frame; or
 - (d) addition or replacement of modular rectifiers.
- 1.10 **Drawings.** When ICG orders collocated space, GTE and ICG will hold a GTE/Customer meeting in accord with applicable GTE state and federal EIS tariffs. At such meeting, GTE will provide such drawings of GTE's central office facility as may be necessary to adequately depict ICG's proposed collocation space.
- 1.11 **Construction of Space.** GTE will construct ICG's collocation space in accord with the terms and conditions set forth in the applicable GTE state and federal EIS tariff. Additionally, GTE agrees to the following terms and conditions regarding construction of collocated space:
- 1.11.1 Space will be constructed in 100 square foot increments, and shall be designed so as to prevent unauthorized access.
 - 1.11.2 A standard 100 square foot cage shall have the following standard features:
 - (a) eight-foot high, nine gauge chain link panels;

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- (b) three of the panels listed at (a) above shall measure eight by ten feet, the fourth panel shall measure eight by seven feet,
- (c) the door to the cage shall measure eight by three feet and shall also consist of nine gauge chain link,
- (d) the cage shall be provided with one padlock set, with GTE retaining one master key,
- (e) one ac electrical outlet,
- (f) one charger circuit system,
- (g) one electrical sub-panel,
- (h) such additional lighting as may be necessary,
- (i) one fire detection requirement evaluation,
- (j) grounding for the cage consistent with COEI.

- 1.11.3 Modifications to the standard configuration set forth in section 7 can be made on an individual case basis. If modifications are agreed upon and made by the Parties, GTE will work with ICG to implement such additional modifications as may be necessary to ensure that ICG's collocated space is protected from unauthorized access.
- 1.11.4 At such time as construction of ICG's collocation space is approximately 50 percent completed, GTE will give ICG notification, and such notification shall include scheduled completion and turnover dates.
- 1.11.5 Upon completion of construction of collocated space, GTE will conduct a walk through of the collocated space with ICG. Should ICG note any deviations from the plan agreed upon by GTE and ICG at the customer meeting, and if such deviations were not requested by ICG or not required by law, GTE shall correct such deviations at its own expense within 5 days.

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- 1.12 Connection Equipment.** ICG may provision equipment for the connection of ICG termination equipment to GTE equipment using either of the following methods:
- 1.12.1** ICG may extend an electrical or optical cable from the terminal within ICG's collocation cage and terminate that cable at GTE's network.
 - 1.12.2** ICG may install a patch panel within its collocation cage and then hand the cabling to GTE to extend to and have GTE terminate that cable at GTE's network.
- 1.13 Access to ICG Collocation Space.** The terms and conditions of access to ICG's collocation space shall be as set forth in applicable GTE state and federal EIS tariffs. Additionally, GTE agrees that the following terms and conditions shall apply to access:
- 1.13.1** GTE shall implement adequate measures to control access to collocation cages.
 - 1.13.2** Collocation space shall comply with all applicable fire and safety codes.
 - 1.13.3** Doors with removable hinges or inadequate strength shall be monitored by an alarm connected to a manned site. All other alarms monitoring ICG collocation space provided by GTE shall also be connected to a manned site. ICG may, at its option, provide its own intrusion alarms for its collocated space.
 - 1.13.4** GTE shall control janitorial access to collocation cages, and restrict such access to approved and certified employees, agents or contractors.
 - 1.13.5** GTE shall establish procedures for access to collocation cages by GTE and non-GTE emergency personnel, and shall not allow access by security guards unless such access comports with this section and is otherwise allowed under applicable GTE state and federal EIS tariffs.
 - 1.13.6** GTE shall retain a master key to ICG's collocation space for use only in event of emergency as detailed in applicable GTE state and federal tariffs. At ICG's option, the Parties shall review key control procedures no more frequently than once in any twelve month

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period. At any time, ICG may elect to change keys if it suspects key control has been lost, provided, however, that GTE will be provided with a master key in accord with this section.

- 1 13.7 Not more frequently than once a year, ICG may audit the security and access procedures and equipment applicable to its collocated space and the central office housing the collocation space. Access by personnel necessary to conduct such an audit shall be limited as set forth in applicable GTE state and federal EIS tariffs. Should ICG identify deficiencies in security and access procedures and equipment as a result of such audit, the cost, terms and conditions of the correction of such deficiencies shall be negotiated in good faith between the parties.
2. Virtual Collocation. Subject to Section 7 of this Article, GTE will provide virtual collocation for purposes of interconnection or access to unbundled network elements pursuant to the terms and conditions in the applicable GTE federal and state EIS tariffs. In addition, GTE agrees that the terms and conditions set forth in this Section 7 shall apply to virtual collocation provided to ICG.
- 2.1 Existing Virtual Collocation. If, on the effective date of this Agreement, ICG is virtually collocated in a GTE premise, ICG may (i) elect to retain its virtual collocation arrangement in that premise or (ii) unless it is not practical for technical reasons or because of space limitations, convert its virtual collocation arrangement at that premise to physical collocation. If ICG elects the latter option, ICG's request shall be treated as a new physical collocation request and ICG shall pay GTE at the applicable tariff rates for construction and rearrangement of ICG's equipment as well as all applicable tariffed physical collocation recurring charges.
- 2.2 Conversion from Physical to Virtual. Unless it is not practical for technical reasons or because of space limitations, ICG may convert a physical collocation arrangement to a virtual collocation arrangement. ICG's request to do so shall be treated as a new virtual collocation request and ICG shall pay GTE at the applicable tariff rates for construction and rearrangement of ICG's equipment as well as all applicable tariffed virtual collocation recurring charges. If ICG elects to change to a virtual collocation arrangement pursuant to this section, GTE will not refund previous payments for physical collocation received from ICG.
- 2.3 Vendors. Choice of vendors for equipment used for virtual collocation shall be under the terms and conditions set forth in the applicable GTE federal and

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state EIS tariff. Upon request by ICG, GTE shall provide a list of locally qualified vendors approved the type of equipment to be collocated

- 2.4 Inspection. Upon provision of virtual collocation by GTE, the Parties shall agree on a mutually acceptable schedule whereby ICG may inspect the equipment in its virtual collocation space.

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ARTICLE X ACCESS TO POLES, DUCTS, CONDUITS AND RIGHTS-OF-WAY

To the extent required by the Act, GTE and CLEC shall each afford to the other access to the poles, ducts, conduits and rights of way it owns or controls on terms, conditions and prices comparable to those offered to any other entity pursuant to each Parties tariffs and/or standard agreements. Accordingly, GTE and CLEC shall execute pole attachment and conduit occupancy agreements in the form set forth in Appendices I and J

IN WITNESS WHEREOF, each Party has executed this Agreement to be effective as of the date first above written.

GTE

CLEC

By _____

By _____

Name _____

Name _____

Title _____

Title _____

Date _____

Date _____

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APPENDIX A SERVICE MATRIX

Service Location
(identified by tandem
serving area)

POI
(identified by CLLI code)

Services
(identified by _____)

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**APPENDIX B
INTERCONNECTION, TELECOMMUNICATIONS SERVICES
AND FACILITIES AGREEMENT**

BETWEEN

GTE _____ INCORPORATED

AMENDMENT NO _____

THIS AMENDMENT (herein so called) is made effective as of _____, 199____, by and between GTE _____ Incorporated ("GTE") and _____ ("CLEC"). GTE and CLEC are sometimes referred to herein collectively as the "Parties" and individually as a "Party." Either GTE or CLEC may be referred to as "Provider" or "Customer" as the context requires.

WHEREAS, Provider is providing to Customer and Customer is purchasing from Provider those Services described in that certain Interconnection, Telecommunications Services and Facilities Agreement for the State of _____ by and between GTE and CLEC dated effective as of _____, 199____ (the "Agreement"); and

WHEREAS, the Parties desire to amend the Agreement as provided in this Amendment.

NOW, THEREFORE, in consideration of the terms and conditions contained in this Amendment, the Parties agree as follows:

1.

2. **Additional Services [if applicable]**

2.1 Provider agrees to provide to Customer and Customer agrees to purchase from Provider the following services under the terms and conditions set forth in the Agreement and within the service attachment listed below and attached to this Amendment:

Service Attachment _____ - _____

2.2 As of the effective date of this Amendment, and continuing through the remaining term of the Agreement, _____ is made a part of the

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Services provided under the Agreement and Service Attachment _____ shall be deemed to be a Service Attachment to the Agreement.

- 2.3 As of the effective date of this Amendment, and continuing through the remaining term of the Agreement, Appendix A Service Matrix, to the Agreement is hereby deleted and Appendix A Service Matrix, to this Amendment is hereby inserted in lieu thereof to reflect the additional Services and related Service Locations.

3 Service Locations (if applicable)

- 3.1 Provider agrees to provide to Customer and Customer agrees to purchase from Provider the following Services in the following locations:

Service Location (identified by tandem serving area)	POI (identified by CLLI code)	Services (identified by Service Attachment Number)
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- 3.2 As of the effective date of this Amendment, the locations set forth in Section 2 above shall be deemed Service Locations under the Agreement.
- 3.3 As of the effective date of this Amendment, and continuing through the remaining term of the Agreement, Appendix A Service Matrix, to the Agreement is hereby deleted and Appendix A Service Matrix, to this Amendment is hereby inserted in lieu thereof to reflect additional Service Locations.

4 Interpretation

All capitalized terms used but not defined herein shall have the meanings ascribed to such terms in the Agreement.

5 Effect

Except as modified herein, the Agreement shall remain in full force and effect.

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6 Authority

Each person whose signature appears below represents and warrants that he or she has the authority to bind the Party on whose behalf he or she has executed this Amendment.

7 Multiple Counterparts

This Amendment may be executed in multiple counterparts, each of which shall be deemed an original, and all of which shall constitute but one and the same instrument.

8 No Offer

Submission of this Amendment for examination or signature does not constitute an offer by Provider for the provision of the products or services described herein. This Amendment will be effective only upon execution by both Provider and Customer.

IN WITNESS WHEREOF, the Parties have executed this Amendment on the date or dates written below effective as of the date first above written.

GTE _____ INCORPORATED

By _____

Name _____

Title _____

Date _____

By _____

Name _____

Title _____

Date _____

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**APPENDIX C
RATES AND CHARGES FOR
TRANSPORT AND TERMINATION OF TRAFFIC**

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**APPENDIX D
RATES AND CHARGES FOR LOCAL NUMBER PORTABILITY USING RCF**

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APPENDIX E SERVICES AVAILABLE FOR RESALE

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APPENDIX F PRICES FOR UNBUNDLED ELEMENTS

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APPENDIX G SERVICE ORDERING, PROVISIONING, BILLING AND MAINTENANCE

1. Service Ordering, Service Provisioning, and Billing Systems Generally. The following describes the operations support systems that GTE will use and the related functions that are available in the short term to CLEC for ordering, provisioning and billing for resold services, interconnection facilities and services and unbundled network elements.
- 1.1 Operations Support Systems for Trunk-Side Interconnection
 - 1.1.1 CLEC will be able to order trunk-side interconnection services and facilities from GTE through a direct electronic interface over the GTE Network Data Mover ("NDM") in a nondiscriminatory manner. Orders for trunk-side interconnection will be initiated by an Access Service Request ("ASR") sent electronically by CLEC over the NDM. ASRs for trunk-side interconnection will be entered electronically into GTE's Carrier Access Management System ("CAMS") to validate the request, identify any errors, and resolve any errors back to CLEC. CAMS is a family of GTE systems comprised primarily of EXACT/TUF, SOG/SOP, and CABS.
 - 1.1.2 The use of CAMS to support CLEC's requests for trunk-side interconnection will operate in the following manner: GTE will route the ASR through its data center to one of two National Access Ordering Centers ("NAOC"). The ASR will be entered electronically into the EXACT/TUF system for validation and correction of errors. Errors will be referred back to CLEC. CLEC then will correct any errors that GTE has identified and resubmit the request to GTE electronically through a supplemental ASR, without penalty or charge (e.g., order modification charge) to CLEC. Similarly, errors committed by GTE subsequent to the receipt of a valid ASR from CLEC will be expeditiously identified and corrected by GTE without the need for CLEC's submission of a supplemental ASR. GTE then will translate the ASR into a service order for provisioning and billing. In order to convert the ASR into a service order, GTE personnel must apply the necessary elements to provision the service and include the billable elements necessary for GTE to bill CLEC for the services provided. This application also requires a determination of the access tandem to end office relationships with the service requested.

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1.1.3 At the next system level, translated service orders will be distributed electronically through the SOG/SOP systems to several destinations. The SOG/SOP system will begin the actual provisioning of the service for CLEC. Other GTE provisioning systems are CNAS and ACES. The GTE Database Administrative Group ("DBA") and the Special Services Control Center ("SSCC") will be the two most important destinations at this level. The DBA location will identify codes for the appropriate GTE switch in order to provide the functions required by the ASR. The SSCC will provide the engineering for the facilities over which the services will be handled. Information from these two groups (and others) then will be transmitted electronically to GTE's field service personnel (Customer Zone Technicians or "CZTs") who will establish the trunks and facilities, thus connecting the GTE facilities to a connecting company, if one is required, and to CLEC. GTE's CZTs also will contact CLEC directly to perform testing, and upon acceptance by CLEC, will make the necessary entries into the GTE system to complete the order. The completed orders then will pass to GTE's Carrier Access Billing System ("CABS") which will generate the bill to CLEC. The billing process under CABS requires coordination with several other systems.

1.1.4 Billing for transport and termination services cannot be accomplished without call records from GTE's central office switches. Records of usage will be generated at GTE's end office switches or the access tandems. Call usage records will be transmitted electronically from GTE's switches through GTE's Billing Intermediate Processor ("BIP"). This system will collect the call records, perform limited manipulations to the record and transfer them to a centralized data center where they will be processed through the Universal Measurement System ("UMS") to determine the validity and accuracy of the records. UMS also will sort the records and send them to the CABS billing system, from which GTE will produce a bill and send it to CLEC.

1.2 Operations Support Systems for Resold Services and Unbundled Elements

1.2.1 CLEC will also be able to order services for resale and unbundled network elements, as well as interim number portability, directly from GTE through an electronic interface. To initiate an order for these services or elements, CLEC will submit a Local Service Request ("LSR") from its data center to GTE's Data Center using the same electronic NDM interface used for trunk-side interconnection. For

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new entrants that elect not to interface electronically. GTE will accommodate submission of LSR orders by facsimile, E-mail, Internet or a dial NDM arrangement. An LSR is very similar to an ASR, except that it will be used exclusively for line-side interconnection requests. GTE will transfer LSRs to GTE's NOMC centralized service order processing center electronically.

- 1.2.2 Most LSRs will be used either to transfer an existing GTE customer to CLEC or to request service for a new customer who is not an existing GTE customer. Depending on the situation, different information will be required on the LSR. LSRs for a conversion of a GTE local customer to CLEC must include information relating to all existing, new and disconnected services for that customer, including the customer's name, type of service desired, location of service and features or options the customer desires. The CLEC will be able to obtain this customer information after GTE has received the customer's written consent as specified in Article V 3.4. For service to a new customer who is not an existing GTE customer, the LSR must contain the customer's name, service address, service type, services, options, features and ALEC data. If known, the LSR should include the telephone number and due date/desired due date.
- 1.2.3 While CLEC would have its own customer information and the SAG/GTE products on tape from GTE, CLEC would not have the due date or new telephone number for new customers since that information is contained in GTE's systems. Therefore, a process is required to provide this information to CLEC. GTE itself does not have uniform access to this information electronically. Until there is agreement on electronic interfaces, CLEC has agreed that an 800 number is the method that will be used. The 800 telephone number will connect CLEC directly to GTE's NOMC service representatives. At a minimum, the GTE NOMC shall provide order processing support five days a week (M-F) from 8 AM - 5 PM for each time zone in which GTE has a local presence, or as made available to GTE's end users. When CLEC receives a request for basic services from a new local service customer, CLEC will call GTE's NOMC through the 800 number, and, while the new customer is on hold, GTE will provide the due date for service and the new telephone number for that customer. At the same time, CLEC will give GTE the new customer's name, service address and type of requested service (i.e., R1, B1). GTE will enter that information into its SORCES or SOLAR service ordering systems to be held in suspense until CLEC

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sends the confirming LSR. CLEC will then return to its customer holding on the line and provide the due date and new telephone number.

- 1.2.4 After concluding the telephone call with the new customer, CLEC will complete a confirming LSR for the new service and send it electronically to GTE's data center for processing. Upon receipt, GTE will match the LSR with the service order suspended in GTE's system, and if there is a match, GTE will process the LSR. After the LSR is processed, GTE will transmit confirmation electronically to CLEC through the NDM that the LSR has been processed, providing a record of the telephone number and due date. CLEC will be required to submit the confirming LSR by 12:00 p.m. each day local time, as defined by the location of the service address. If CLEC fails to submit the LSR in a timely manner, the suspended LSR will be considered in jeopardy, at which time GTE will assign a new due date upon receipt of the delayed LSR for such customer requests and notify CLEC of the change.
- 1.2.5 Number assignments and due date schedules for services other than single line service will be assigned within approximately twenty-four (24) hours after GTE's receipt of the LSR using the standard Firm Order Confirmation ("FOC") report sent electronically to CLEC over the NDM, thereby providing a record of the newly established due date. An exception would be a multi-line hunt group, for which the pilot number will be provided via the 800 number process. The other numbers then will be provided through the normal electronic confirmation process.
- 1.2.6 The processing of specifically requested telephone numbers (called "vanity numbers") is as follows. GTE will work with CLEC on a real time interface to process vanity numbers while CLEC's customer is still on the line. If a number solution can be established expeditiously, it will be done while the customer is still on the line. If extensive time will be required to find a solution, GTE service representatives will work with CLEC representatives off line as GTE would for its own customers. For all of this, the basic tariff guidelines for providing telephone numbers will be followed.
- 1.2.7 Once the order for line-side interconnection service is established, it is moved for provisioning to the next system level. Here, GTE will validate and process the LSR to establish an account for CLEC and, if GTE continues to provide some residual services to the customer,

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GTE will maintain a GTE account. In GTE's system, GTE's account is called the Residual Account and CLEC's account is referred to as the ALEC Account. If any engineering for the service is necessary, the account would be distributed to the SSCC. Otherwise, it will be distributed for facility assignment.

- 1.2.8 With the account established and any engineering and facility assignment complete, GTE then will transmit electronically a record to GTE's CZT field personnel if physical interconnection or similar activity is required. The CZTs will provision the service and then electronically confirm such provision in the SOLAR/SORCES system when completed. The accounts then will be transmitted to GTE's Customer Billing Services System ("CBSS"). GTE shall provide to CLEC a service completion report. Call records for actual service provided to CLEC's customers on GTE facilities will be transmitted from GTE's switches through some usage rating systems (BIP, UMS), screened and eventually delivered to CBSS for the generation of bills.
- 1.2.9 CBSS is a different system than CABS, and it is the one that GTE will utilize to produce the required bills for resold services, unbundled elements and local number portability. CBSS will create a bill to CLEC for resold services and unbundled elements along with a summary bill master. Daily unrated records for intraLATA toll usage and local usage (incollect usage data will be provided on rated basis) on CLEC's accounts will be generated and transmitted electronically to CLEC. CBSS is the same system that generates GTE's own end user bill for GTE local and residual services. GTE will provide mechanized bills in EDI format, using industry standard EMR. Appropriate detailed edits and error correction, as required, will be performed. GTE will provide subordinate account detail with summary bills available either via proper, magnetic tape or EDI, to provide for record verification.
- 1.2.10 State or sub-state level billing will include up to ten (10) summary bill accounts.
- 1.2.11 GTE accepts CLEC's control reports and agrees to utilize industry standard return codes for unbillable messages. Transmission will occur via the NDM. Tape data will conform to Attachment "A" of the LRDR. Data will be delivered Monday through Friday except for Holidays as agreed. Data packages will be tracked by invoice.

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sequencing criteria. GTE contacts will be provided for sending/receiving usage files.

- 1.2.12 Usage interface testing will be used between GTE and CLEC. GTE agrees to transmit test files via CONNECT Direct. Periodic review of control procedures will be performed.
- 1.2.13 GTE will retain data backup for 45 days. To the extent this retention is exclusively for CLEC, CLEC shall reimburse GTE for all expenses related to this retention.
- 1.2.14 GTE and CLEC will establish a team to develop a mutually agreeable level of bill certification for local resale. GTE will work to facilitate that accurate bills will be rendered. Contingent on a mutually agreeable level of Bill Certification for local resale, GTE will participate in an annual supplier quality certification review.
- 1.2.15 In addition to the LSR delivery process, CLEC will distribute directory assistance and directory listing information (together sometimes referred to hereafter as "DA/DL information") to GTE's Data Center over the NDM. GTE will sort the data containing this information and process it to GTE's directory publication company and its directory assistance bureaus.
- 1.2.16 Charges and credits for PIC changes will appear on the wholesale bill. As CLEC places a request for a PIC change via LSR, the billing will be made on CLEC account associated with each individual end user. GTE will process all PIC changes from IXCs that are received for CLEC end users (that do not have a PIC freeze) by rejecting back to the IXC with the CLEC OCN. Detail is provided so that CLEC can identify the specific charges for rebilling to their end user.
- 1.2.17 GTE will provide a displacement/out service report to CLEC whenever an end user leaves CLEC and procures service from another Local Service Provider ("LSP"). When a CLEC end user changes to another local service provider, GTE will notify CLEC when such activity occurs the day after completion or within 48 hours of such disconnect. GTE will provide notification to CLEC of CLEC end user changes in long distance carriers through the normal outPIC process.
- 1.2.18 Alternate Billed Calls. The parties will enter into a separate agreement for the distribution of intraLATA CMDS incollect

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messages and/or selected local measured service messages. This agreement will specify frequency of data transmission, format of the data, transmission medium, and also applicable compensation/rates and terms and conditions.

- 1.2.19 **Backbilling.** GTE shall bill CLEC on a timely basis. In no case shall GTE bill CLEC for previously unbilled charges that are for more than one year prior to the current bill date except for charges resulting from resolution of an audit pursuant to Article III.7.5.

- 1.3 **Standards for Service Ordering, Provisioning and Billing.** GTE will provide the services described in sections 1.1 and 1.2 in a non-discriminatory manner. With respect to CLEC end users, GTE shall adhere to the same quality standards applicable to GTE's end users.

2. Maintenance Systems.

2.1 General Overview

- 2.1.1 The maintenance operations support systems which GTE will use for CLEC are essentially the same as those GTE uses to provide its own local repair service. If CLEC requires maintenance for its local service customers, CLEC will initiate a request for repair (sometimes referred to as a "trouble report") by calling GTE's Customer Care Repair Center. During this call, GTE service representatives will verify that the end-user is a CLEC customer and will then obtain the necessary information from CLEC to process the trouble report. While the CLEC representatives are still on the line, GTE personnel will perform an initial analysis of the problem and remote line testing for resale services. If engineered services are involved, the call will be made to the GTE SSCC for handling. If no engineering is required and the line testing reveals that the trouble can be repaired remotely, GTE personnel will correct the problem and close the trouble report while CLEC representatives are still on the line. If on-line resolution is not possible, GTE personnel will provide CLEC representatives a commitment time for repair and a trouble ticket number, and the GTE personnel then will enter the trouble ticket into the GTE service dispatch queue. CLEC's repair service commitment times will be within the same intervals as GTE provides to its own end users. Maintenance and repair of GTE facilities is the responsibility of GTE and will be performed at no incremental charge to CLEC. If, as a result of a CLEC-initiated trouble report, trouble is

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found to be the responsibility of CLEC (e.g., premise wire) GTE will charge the CLEC for trouble isolation.

- 2.1.2 Repair calls to the SSCC for engineered services will be processed in essentially the same manner as those by the GTE Customer Care Center. GTE personnel will analyze the problem, provide the CLEC representative with a commitment time while they are still on the line and then place the trouble ticket in the dispatch queue.
- 2.1.3 GTE then will process all CLEC trouble reports in the dispatch queue along with GTE trouble reports in the order they were filed (first in, first out), with priority given to out-of-service conditions. If, at any time, GTE would determine that a commitment time given to CLEC becomes in jeopardy, GTE service representatives will contact CLEC by telephone to advise of the jeopardy condition and provide a new commitment time.
- 2.1.4 Trouble reports in the dispatch queue will be transmitted electronically to GTE CZT service technicians who will repair the service problems and clear the trouble reports. For cleared CLEC trouble reports, GTE service technicians will make a telephone call to CLEC directly to clear the trouble ticket. GTE service technicians will make the confirmation call to the telephone number provided by CLEC. If CLEC is unable to process the call or places the GTE technician on hold, the call will be terminated. To avoid disconnect, CLEC may develop an answering system, such as voice mail, to handle the confirmation calls expeditiously.
- 2.1.5 GTE will not provide to CLEC "on-line" access to GTE's maintenance support systems to "status" trouble tickets and close them except by special request on a per event basis. GTE will not provide to CLEC real time testing capability on CLEC end user services. GTE will not provide to CLEC an interface for network surveillance (performance monitoring).
- 2.1.6 GTE will resolve repair requests by or for CLEC local service customers using GTE's existing repair system in parity with repair requests by GTE end users. GTE will respond to service requests for CLEC using the same time parameters and procedures that GTE uses. CLEC then would call GTE's Customer Care Center or SSCC while the customers were on hold.

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- 3 **Electronic Bonding** The Parties shall work cooperatively in the implementation of electronic gateway access to GTE operational support systems functions in the long-term in accordance with established industry standards. CLEC shall compensate GTE for the full costs including but not limited to design, development, testing, implementation and deployment for access to GTE's Operational Support System functions. Where multiple parties request use of GTE's operation support systems, cost recovery for such electronic interface systems shall be allocated among all requesting users.

- 4 **GTE Initiated Electronic System Redesigns** GTE will not charge CLEC when GTE initiates its own electronic system redesigns/reconfigurations.

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APPENDIX H SS7 SERVICES

ARTICLE 1. DEFINITIONS

In addition to the definitions contained elsewhere in the Agreement to which this Appendix H is attached and made a part, for purposes of this Appendix H the following terms shall have the following meanings

- 1.1 **"A" Link**: An access signaling link that connects SPs and/or SSPs to STPs
- 1.2 **"B" Link**: A bridge signaling link that connects two (2) sets or pairs of STPs, not the STPs within a mated pair, but on the same hierarchical level
- 1.3 **Compatibility Testing**: Certification testing performed by representatives of GTE and CLEC to ensure proper interconnection of CCS network facilities for accurate transmission of system signals and messages. This certification testing shall be performed in accordance with the following ANSI documents:
 - T1.234 Telecommunications - Signaling System Number 7 (SS7) - MTP Levels 2 and 3 Compatibility Testing (ATIS)
 - T1.235 Telecommunications - Signaling System Number 7 (SS7) - SCCP Class 0 Compatibility Testing (ATIS)
 - T1.236 Telecommunications - Signaling System Number 7 (SS7) - ISDN User Part Compatibility Testing (ATIS)
- 1.4 **Service**: The service described in Article 2 of this Appendix.
- 1.5 **Signaling Link**: An end-to-end high-capacity data link (56 kbps) that transmits supervision and control signals from one network SS7 node to another in a CCS network. The link type identifies the functionality of the signaling link sets. The two link types associated with the Service are "A" Links and "B" Links.
- 1.6 **Signaling Point Code (SPC)**: A code that identifies the Signaling Point address in the CCS network. Signaling Point Codes consist of three (3) segments of three (3) digits each, identifying the network ID, network cluster, and cluster member, respectively.
- 1.7 **Signaling Point of Interface (SPOI)**: The point at which GTE hands off signaling information to CLEC.

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ARTICLE 2. SERVICE DESCRIPTION

- 2.1 Provision Subject to the terms and conditions of this Appendix, GTE agrees to provide the Service to CLEC.
- 2.2 Interconnection This Agreement is for CLEC's interconnection with GTE at GTE's _____ STPs to support local exchange services. CLEC shall not submit signaling messages in support of interexchange services.
- 2.3 Service The "Service" consists of the following:
- (a) Interconnection of GTE's CCS/SS7 network to CLEC's CCS/SS7 network is via an "A" Link connection between CLEC's SP or SSP and GTE's STP. The "A" Link connection is made by a dedicated 56 kbps channel between the SP or SSP and the STP. Any connection from an SSP or an SP to an STP pair will have a link to each individual STP (i.e., two (2) links). CLEC and GTE shall mutually agree upon the location of the SPOI.
 - (b) Interconnection of GTE's CCS/SS7 network to CLEC's CCS/SS7 network via a "B" Link connection between CLEC's STPs and GTE's STPs. The "B" Link connection is a dedicated 56 kbps channel. Connections between two (2) pairs of STPs will have four (4) connections, i.e., one (1) link from each individual STP to each individual STP. CLEC and GTE shall mutually agree upon the location of the SPOI.
 - (c) Local and IntraLATA call set-up signaling, allowing CLEC to use the out-of-band trunk signaling provided by GTE's CCS/SS7 network to carry its calls on the IntraLATA toll network.
 - (d) The Service shall include access to: (1) all switching systems served by a given STP which have been converted to SS7 signaling, including switching systems owned by other local service providers; (2) databases directly connected to a given STP, with the exception of 800/888 databases which can be accessed through any STP; (3) other local service provider STPs on an IntraLATA basis; and (4) other third party local service provider STPs on an IntraLATA basis.
 - (e) It is the responsibility of CLEC to populate the "privacy indicator" portion of all SS7 signaling messages forwarded to GTE's network. GTE agrees to deliver the information forwarded by CLEC in the SS7 signaling message. The CLEC, by entering into this Agreement, agrees to deliver "privacy indicator" information forwarded by GTE in its signaling message.

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- (f) CLEC acknowledges that call set-up times may be greater when CLEC employs intermediate access tandems (IATs) in its network.
- (g) If selected on the order form attached to this Appendix, the Service shall also include IXC call set-up signaling service (ISUP) as described in Article 2.4 of this Appendix. Additional charges as set forth in Exhibit A shall apply.

2.4 ISUP Service Charge. This is an optional service that allows CLEC to utilize SS7 signaling to an SS7 capable interexchange carrier (IXC) for Feature Group D access service and other intraLATA interexchange services. The ISUP service is a monthly charge.

- (a) The rate for ISUP signaling is per connection in situations when GTE does not provide any underlying call messages for the CLEC on GTE's network trunks. The rate for ISUP signaling is shown in Exhibit A.
- (b) Where GTE has a mated pair of STPs and has CCS/SS7 interconnection facilities to an IXC within the same LATA, for interexchange telecommunications services, GTE shall provide call set-up signaling between CLEC and the IXC.
- (c) CLEC agrees to provide to GTE such information as deemed necessary by GTE for network planning in connection with this offering and as may be requested by GTE from time to time.
- (d) CLEC must provide the Signaling Point Codes of the IXCs for which it is providing call setup via GTE's SS7 signaling network, so that GTE screening and translation tables can be updated.

2.5 Technical Specifications. The technical specifications for the Services described above are defined in Bellcore TR-TSV-000905. GTE will provide SS7 via OR-394-SS7 and/or OR-317-SS7 format(s).

2.6 Other Services. If CLEC desires to order SS7-related services other than the Service, such services will be governed by separate agreements.

2.7 Applicable Traffic. The Service applies to the traffic of CLEC and its subsuming LECs only. CLEC must provide GTE with thirty (30) calendar days' written notice and a letter of agency before the traffic of any party other than CLEC or its subsuming LECs may be transmitted through CLEC's facilities on to GTE's SS7 network.

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ARTICLE 3. MANNER OF PROVISIONING

- 3.1 Link Facilities. The link facilities to GTE STPs in the same LATA can be either:
- (a) "A" Link sets from CLEC's SP or SSP. A minimum of two (2) links is required, one (1) from the SP or SSP to each STP, or,
 - (b) "B" Link sets from CLEC's STPs that are connected to GTE's mated pairs of STPs. A minimum of four (4) links is required between the two (2) pairs of STPs.
- 3.2 Port Termination. An STP port termination is required for each 56 kbps access link utilized for the Service. STP locations are set forth in the National Exchange Carrier Association, Inc. (NECA) Tariff, F.C.C. No. 4.
- 3.3 Signaling Point Codes. GTE shall install all applicable Signaling Point codes for each signaling link at each of GTE's interconnecting STPs.
- 3.4 Protocol. GTE shall provision the Service in accordance with ANSI T1.226 Telecommunications - Operations, Administration, Maintenance, and Provisioning (OAM&P) - Management of functions for Signaling System No. 7 (SS7) Network Interconnections (ATIS) with the exception of references to OMAP protocol elements. The Service cannot be established until Compatibility Testing has been successfully completed between CLEC and GTE.
- 3.5 56 kbps Channel. Unless CLEC elects to provide such links, GTE shall provide two (2) or four (4) 56 kbps circuits as link facilities at rates set forth in Article 4 herein. If approved by GTE, CLEC may utilize a 56 kbps channel of an intraLATA DS1 (1.544 mbps) facility, which is in place at the time of ordering, as an "A" Link or a "B" Link, for the STP access connection between the SPOI and GTE's STP. **WHEN THIS OPTION IS CHOSEN, CLEC UNDERSTANDS AND ACCEPTS THAT THE SERVICE PERFORMANCE STANDARDS AS OUTLINED IN BELLCORE DOCUMENT TR-TSV-000006 MAY NOT BE MET IN THE PROVISION OF THE TOTAL SERVICE.** If such a channel is not utilized, CLEC must order DS1 (1.544 Mbps) service.
- 3.6 Multiplexing. Where technically required, GTE shall provide multiplexing arrangements to CLEC at no charge.

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- 3.7 **Diversity** Where technically feasible and not unreasonably economically burdensome, GTE agrees to allow interoffice and intraoffice diversity

ARTICLE 4. RATES AND CHARGES

- 4.1 **Payment.** CLEC agrees to pay to GTE for the Service at the rates and charges set forth in Exhibit A attached to this Appendix and made a part hereof
- 4.2 **Period.** Subject to Article 4.3 below, the rates and charges shall remain in effect and are firm for a period of twelve (12) months from the effective date of this Appendix. Thereafter, GTE shall give CLEC sixty (60) calendar days' notice of any price change. If the new prices are not acceptable to CLEC, CLEC may terminate this Appendix upon thirty (30) calendar days' advance written notice without penalties for either Party.
- 4.3 **Rate Basis.** The rates are based upon rates and charges reflected in GTE's approved CCS/SS7 interconnection tariffs. To the extent that tariff rates are adjusted, rates and charges for similar rate elements in this Appendix will be adjusted accordingly on the date the new tariff rates become effective. If a state or federal regulatory agency requires, or GTE elects, to offer the Service by tariff, the tariff shall supersede this Appendix. If the Service becomes tariffed, CLEC has the right to terminate this Appendix upon sixty (60) calendar days' advance written notice effective on the effective date of such tariff, without penalty to either Party.
- 4.4 **Mileage.** Mileage is calculated on the airline distance between the locations involved, using the V&H coordinates method, as set forth in the National Exchange Carrier Association, Inc. Tariff, F.C.C. No. 4.
- 4.5 **Rates and Charges.** Rates and charges for each component of the Service are described as follows:
- (a) "A" Link connection - Charges for the "A" Link connection to GTE's CCS/SS7 network consist of the STP port termination charges.
 - (1) The STP port termination charges are for the termination of a 56 kbps channel at each STP from CLEC's SSP or SP.
 - (2) CLEC will lease facilities between its SSPs/SPs and GTE's STPs.
 - (b) "B" Link connection - Charges for the "B" Link connection to GTE's CCS/SS7 network consist of the STP port termination charges.

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- (1) The STP port termination charges are for the termination of a 56 kbps channel at each STP from CLEC's STPs
 - (2) CLEC and GTE shall mutually agree upon the rates for "B" Link interconnections within thirty (30) calendar days of the execution of this Agreement
 - (c) STP Interconnection nonrecurring charge - STP interconnection nonrecurring charge shall apply for each "A" Link and "B" Link interconnection to GTE's SS7 network
- 4.6 **Rearrangement.** Charges for rearrangement of the Service that are not specifically addressed will be determined by GTE on an individual case basis
- 4.7 **Applicable Traffic.** The rates apply only to the traffic of CLEC and its subtending LECs. Any traffic from any other party will be subject to additional charges.

ARTICLE 5. ORDERING THE SERVICE

- 5.1 **Order.** To order the Service, CLEC shall submit a completed CCS/SS7 Order Form to GTE. The Order Forms are attached to this Appendix as Exhibit B. CLEC may change its Service order by submitting a new Order Form which shall be effective when executed by both Parties. Service shall be implemented for CLEC thirty (30) calendar days after the execution of this Agreement by both Parties.
- 5.2 **Port Terminations.** GTE shall reserve STP port terminations only upon receipt of a fully executed copy of this Agreement and the Order Form referred to in this Appendix. GTE shall reserve ports on a first come, first served basis. Should CLEC fail to use a port within sixty (60) days of availability, GTE may reassign the port and, CLEC must resubmit an Order Form for interconnection.

ARTICLE 6. RESPONSIBILITIES OF GTE

- 6.1 **Managing the Network.** GTE is responsible for managing the network provided by GTE as part of the Service and applying protective controls which it can invoke as a result of occurrences including, but not limited to, failure or overload of GTE or CLEC facilities due to natural disasters, mass calling or national security demands.

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- 6.2 **Performance Standards** GTE is responsible for meeting service performance standards as outlined in Bellcore TR-TSV-000905 except as otherwise provided herein.
- 6.3 **Invoice** GTE shall include with the monthly invoice such data GTE and CLEC mutually agree is necessary for CLEC to verify the accuracy of the billing it receives from GTE for the Service.

ARTICLE 7. RESPONSIBILITIES OF CLEC

- 7.1 **Signaling Link** CLEC shall provision the signaling links from its premises to the SPOIs in a manner technically compatible to the GTE network.
- 7.2 **Privacy Indicator** CLEC shall populate the "privacy indicator" portion of the CCS/SS7 initial address message forwarded to GTE's network for call processing.
- 7.3 **Accuracy of Information** CLEC shall verify the accuracy of information provided by CLEC concerning the Service ordered by CLEC.
- 7.4 **Forecast** CLEC shall furnish to GTE, at the time the Service is ordered and annually thereafter, an updated three year forecast of usage for the 56 kbps channel and the STP port termination for each STP pair. The forecast shall include total annual volume and busy hour busy month volume. GTE shall utilize the forecast in its own efforts to project further facility requirements.
- 7.5 **Changes** CLEC agrees to inform GTE in writing at least thirty (30) days in advance of any change in its use of the Service that alters by ten percent (10%) or more for any thirty (30) day period the volume of signaling transactions to be forwarded to GTE's CCS/SS7 network. CLEC will provide the reason for the change in volume by individual SS7 service.

ARTICLE 8. SIGNALING POINT CODES

- 8.1 **Interconnection** CLEC may utilize either the GTE CCS/SS7 network SPC or its own SPC for interconnection purposes when interconnecting its SPs or SSPs at the "A" Link level. CLEC shall utilize its own SPC when interconnecting its STP at the "B" Link level. CLEC agrees to obtain its own initial SPC if it has short or long range plans to provide its own STPs.

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- 8.2 **SPC** When the SPC is utilized, GTE shall be responsible for CLEC code assignment. When CLEC obtains its own SPC, CLEC shall be responsible for code assignments and shall be responsible for notifying GTE and other CCS/SS7 network providers of such assignments.
- 8.3 **SPC Change** Due to the complexities and potential CLEC signaling network downtime required for changing working SPCs, CLEC agrees to give GTE a written notice of an SPC change as soon as possible but no later than thirty (30) days prior to the effective date of the SPC change.

ARTICLE 9. MONTHLY BILLING

Billing statements shall be rendered monthly by GTE to CLEC. The monthly charge shall be the total of all monthly rate element charges associated with the Service. Payment to GTE for bills rendered to CLEC shall be due thirty (30) calendar days after receipt of the invoice and CLEC agrees to pay all billed amounts. Beginning the day after the due date of the bill, interest charges of twelve per cent (12%) per annum or the maximum allowed by law, whichever is less, shall be added to CLEC's bill. Payments shall be applied to the oldest outstanding amounts first.

ARTICLE 10. LIABILITY AND INDEMNIFICATION

- 10.1 **Release from Liability.** Each Party releases the other from any liability for loss or damage arising out of errors, interruptions, defects, failures, delays, or malfunctions of the Service, including any and all associated equipment and data processing systems, not caused by gross negligence or willful misconduct. Any losses or damages for which either Party is held liable under this Agreement shall in no event exceed the amount of the charges for the Service during the period beginning at the time notice of the error, interruption, defect, failure, or malfunction is received, to the time Service is restored.
- 10.2 **Limitation of Liability.** IN ADDITION TO THE LIMITATION OF LIABILITY SET FORTH AT SECTION 19.4 OF ARTICLE III OF THE AGREEMENT, NEITHER PARTY SHALL BE LIABLE FOR ANY LOSS OF REVENUE OR PROFIT OR FOR ANY LOSS OR DAMAGE ARISING OUT OF THIS AGREEMENT OR OUT OF THE USE OF THE CCS OR ANY OF THE SERVICES PROVIDED UNDER THIS AGREEMENT THAT IS SUFFERED BY THE OTHER PARTY, WHETHER ARISING IN CONTRACT, TORT (INCLUDING WITHOUT LIMITATION NEGLIGENCE OR STRICT LIABILITY) OR OTHERWISE AND WHETHER OR NOT INFORMED OF THE POSSIBILITY OF SUCH DAMAGES.

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IN ADVANCE. NEITHER PARTY SHALL BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

- 10.3 **Third Parties.** Each Party agrees to release, defend, indemnify, and hold harmless the other Party from and against any and all losses, damages, or other liability, including reasonable attorneys' fees, that it may incur as a result of claims, demands, wrongful death actions, or other suits brought by third parties, arising out of the use of the Service and resulting from the gross negligence or willful misconduct by the indemnifying Party, its employees, agents, or contractors in the performance of this Agreement. In addition, to the extent that the Parties' interests do not conflict, CLEC shall defend GTE against all end users' claims just as if CLEC had provided such service to its end users with its own employees. In any event, CLEC shall assert its tariff limitation of liability for the benefit of both GTE and CLEC.
- 10.4 **Infringement.** Each Party agrees to release, defend, indemnify, and hold harmless the other Party from and against any claim, demands or suit that asserts any infringement or invasion of privacy or confidentiality of any person(s), caused or claimed to be caused, directly or indirectly, by the indemnifying Party's employees or equipment associated with provision of the Service. This includes, but is not limited to, suits arising from disclosure of any customer-specific information associated with either the originating or terminating numbers used to provision the Service.
- 10.5 **No Warranties.** IN ADDITION TO THE DISCLAIMER SET FORTH AT SECTION 19.3 OF ARTICLE III OF THE AGREEMENT, NEITHER GTE NOR CLEC MAKES ANY REPRESENTATIONS OR WARRANTIES TO THE OTHER OR TO ANY THIRD PARTY CONCERNING THE SPECIFIC QUALITY OF ANY SERVICES PROVIDED UNDER OR IN CONNECTION WITH THIS APPENDIX, THAT THE SERVICES PROVIDED UNDER THIS APPENDIX WILL BE ERROR FREE OR THAT THE FACILITIES WILL OPERATE WITHOUT INTERRUPTION. GTE AND SPRINT DISCLAIM, WITHOUT LIMITATION, ANY WARRANTY OR GUARANTEE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR FROM USAGES OF TRADE.

ARTICLE 11. RESERVATION OF RIGHTS

- 11.1 **Rights Reserved.** By entering into this Appendix to the Agreement, neither Party waives, releases or compromises any rights it may have to argue, in any federal or state regulatory proceeding (or in any judicial appeal following such a proceeding), in support of, or in opposition to any position, including but not

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limited to (a) Accounting for deregulated (or detariffed) data base services, (b) removal from regulated accounts of expenses and investment associated with deregulated (or detariffed) data base services, and (c) any other issue pertinent to regulation or deregulation of costs which were, are now, or may in the future be, associated with the provisions of data base services. Each Party expressly reserves all its rights in connection with such matters

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EXHIBIT A

RATES AND CHARGES

for Interconnection at
GTE's _____ STP

	Rate Element	Rates & Charges	
		Nonrecurring	Monthly
1.	STP Port Termination for an "a" Link Per Port		
2.	STP Port Termination for a "B" Link Per Port		
3.	56 Kbps Digital Facility Dedicated Switched Access Transport Per Airline Mile		
4.	56 Kbps Dedicated Switched Access Line		
5.	1.544 Mbps (DS1) High Capacity Digital Facility Dedicated Switched Access Transport Per Airline Mile		
6.	1.544 Mbps (DS1) Dedicated Switched Access Line		
7.	Facility Charge for "B" Links		
8.	ISUP Charge per Interconnection		
8.1	For ISUP Service an additional SCP charge shall apply per interconnection.		

APPENDIX I

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POLE ATTACHMENT AGREEMENT

1. Parties

This agreement (Agreement) is between GTE _____ Incorporated, a State of _____ corporation having its principal office at _____ ("GTE" or "Licensor"), and _____ a corporation of the State of _____ having its principal office at _____ ("Licensee")

2. Definitions

- 2.1 "GTE's poles" or "GTE pole(s)" means a pole or poles solely owned by GTE, jointly owned by GTE and another entity, and space on poles obtained by GTE through arrangements with the owner(s) thereof.
- 2.2 "Telecommunications Services" means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.
- 2.3 "Cable Television Services" means the transmission to subscribers of off-the-air pickup of broadcast signals or the transmission, without separate charge, of locally originated closed circuit television to the subscribers of off-the-air service.
- 2.4 "Attachments" means the equipment reasonably required by Licensee to provide its [Telecommunications Services OR Cable Television Services] that is placed on GTE's poles.
- 2.5 "Make-Ready Work" means all work, including, but not limited to, rearrangement, removal, or transfer of existing attachments, placement, repair, or replacement of poles, or any other changes required to accommodate the Licensee's Attachments on a pole.
- 2.6 "Hazardous Materials" means (i) any substance, material or waste now or hereafter defined or characterized as hazardous, extremely hazardous, toxic or dangerous within the meaning of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, or any similar law, ordinance, statute, rule or regulation of any governmental body or authority, (ii) any substance, material or waste now or hereafter classified as a contaminant or pollutant under any law, ordinance, statute, rule or regulation of any governmental body or authority or (iii) any other substance, material or waste, the manufacture, processing, distribution, use, treatment, storage,

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placement, disposal, removal or transportation of which is now or hereafter subject to regulation under any law, ordinance, statute, rule or regulation of any governmental body or authority.

- 2.7 **"Attachment Fee"** means the fee assessed per pole and paid by Licensee to place Attachments on GTE's poles.

3 **Purpose**

Licensee represents to GTE that Licensee has a need to occupy, place and maintain Attachments on GTE's poles for the purpose of providing Telecommunications Services. GTE agrees to permit Licensee to occupy, place and maintain its Attachments on such GTE poles as GTE may allow pursuant to the terms of this Agreement. Where GTE owns or controls facilities it will make access available on a nondiscriminatory basis.

4 **Grant of License**

GTE grants to Licensee and Licensee accepts from GTE a non-exclusive revocable license to occupy, place and maintain in a designated space on specified GTE poles Licensee's Attachments on the terms and conditions set forth herein. Licensee shall have no further right, title, or other interest in connection with GTE's poles. GTE shall have the right to grant, renew or extend privileges to others not parties to this Agreement to occupy, place or maintain Attachments on or otherwise use any or all GTE poles. Nothing herein is intended to, nor should it be construed to require GTE to construct or modify any facilities not needed for its own service requirements, except as may be expressly required by law. GTE grants this license in reliance on the representation of Licensee that Licensee intends to provide Telecommunications Services with the Attachments covered by this Agreement.

5 **Term**

This Agreement shall continue in effect until terminated in accordance with the provisions provided herein.

6 **Pole Attachment Requests (PARs)**

- 6.1 Upon execution of this Agreement, Licensee shall have the right to submit a written Pole Attachment Request ("PAR") to GTE specifying the GTE poles on which it desires to place its Facilities. Each PAR shall be in a form specified by GTE, which form may be revised from time to time by GTE at its sole

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discretion. PARs received by GTE shall be processed on a first come, first served basis. To the extent possible, GTE will advise Licensee of any other PAR received that covers all or part of the poles included in Licensee's PAR. GTE will determine the availability of space for Licensee's Facilities on the GTE pole(s) specified in the PAR within thirty (30) business days of the date the PAR is received. Upon approval of the PAR, GTE shall return a copy thereof to Licensee bearing an endorsement acknowledging GTE's authorization. All of Licensee's Facilities placed on GTE's pole(s) pursuant to an approved PAR shall become subject to all of the terms and conditions of this Agreement. Licensee may submit subsequent PARs as needed for approval by GTE. All of Licensee's Facilities shall be placed in innerduct unless otherwise approved by GTE. No facilities of any kind shall be placed on any GTE pole(s) identified in a PAR until that PAR has been approved by GTE.

- 6.2 Licensee shall pay GTE a fee for processing a PAR to compensate GTE for the general administrative costs as well as the actual engineering costs reasonably incurred. The fee for engineering costs shall be computed by multiplying the fully loaded hourly rate for an engineer times the number of hours reasonably required by each engineer to inspect the GTE poles included in the PAR. GTE will provide an engineering cost estimate prior to approval of actual work. GTE will then charge its then-current rates for administrative and engineering costs, as may be changed from time to time by GTE to remain consistent with prevailing costs.
- 6.3 Upon receiving an approved PAR, Licensee shall have the right, subject to the terms of this Agreement, to place and maintain Licensee's Facilities described in the PAR on the GTE pole(s) identified therein.
- 6.4 In the event Make-Ready Work is necessary to accommodate Licensee's Facilities, GTE shall notify Licensee of such fact and provide Licensee with an estimate of the total cost of such Make-Ready Work. Within fifteen (15) days after receiving such notice from GTE, Licensee shall notify GTE either (1) that Licensee shall pay all of the costs actually incurred to perform the Make-Ready Work and shall pay the total estimated amount to GTE at least ten (10) days prior to the date the Make-Ready Work is to begin or (2) that it desires to cancel its PAR.
- 6.5 Nothing herein shall confer any right upon Licensee to place power cables or related power equipment on GTE pole(s). Licensee shall place equipment of this nature in its own pull boxes or on adjacent non-GTE poles.

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- 6.6 The parties agree that GTE should utilize a 2-year planning horizon to reserve space for its future use with documented plans

7. **Availability of Pole Prints**

Existing pole prints will be made available for viewing by Licensee for the purpose of pre-order planning at the GTE area engineering offices during normal business hours, subject to reasonable advance notification. While a formal written request will not be required in connection with the first request by Licensee to view pole prints, GTE reserves the right to refuse subsequent viewing requests if Licensee has demonstrated that it does not have a good faith intention to submit a firm PAR. If the availability of specific point-to-point poles can be determined at the time of viewing pole prints, maps reflecting such point-to-point poles shall be made available for copying. In making pole prints available, GTE will be making no express or implied warranty regarding their accuracy other than that they are the same pole prints used by GTE in its day-to-day operations. If GTE receives a request for Licensee from copies of pole prints in conjunction with a firm PAR for space previously determined to be available, GTE will provide Licensee with copies of the relevant pole prints at the time the PAR is approved. Licensee shall pay to GTE a fee for making such copies available sufficient to cover the general administrative costs incurred.

8. **Authority to Place Attachments**

- 8.1 Before Licensee places any of Licensee's Facilities on GTE's poles pursuant to an approved PAR, Licensee shall submit evidence satisfactory to GTE of its authority to maintain the Facilities to be placed on GTE's poles within the public streets, highways and other thoroughfares or on private property. Licensee shall be solely responsible for obtaining all licenses, authorizations, permits and consents from federal, state and municipal authorities or private property owners that may be required to place and maintain Licensee's Facilities on GTE's poles.
- 8.2 GTE shall not attempt to prevent or delay the granting of any rights of way, easements, licenses, authorizations, permits and consents from federal, state and municipal authorities or private property owners that may be required for Licensee to place its Attachments on GTE's poles.
- 8.3 If any right of way, easement, license, authorization, permit or consent obtained by Licensee is subsequently revoked or denied for any reason, Licensee's permission to attach to GTE's poles shall terminate immediately and Licensee shall promptly remove its Attachments. Should Licensee fail to

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remove its Attachments within ninety (90) days of receiving notice to do so from GTE, GTE shall have the option to remove all such Attachments and store them in a public warehouse or elsewhere at the expense of and for the account of Licensee without GTE being deemed guilty of trespass or conversion, and without GTE becoming liable for any loss or damages to Licensee occasioned thereby. All costs incurred by GTE to remove Licensee's Attachments shall be reimbursed to GTE by Licensee upon demand by GTE.

- 8.4 Upon notice from GTE to Licensee that the cessation of the use of any one or more of GTE's poles is necessary for reasons of safety or has been requested or directed by any federal, state or municipal authority, or private property owner, permission to attach to such pole or poles shall terminate immediately and Licensee promptly shall remove its Attachments. Should Licensee fail to remove its Attachments within ninety (90) days of receiving notice to do so from GTE, GTE shall have the option to remove all such Attachments and store them in a public warehouse or elsewhere at the expense of and for the account of Licensee without GTE being deemed guilty of trespass or conversion, and without GTE becoming liable for any loss or damages to Licensee occasioned thereby. All costs incurred by GTE to remove Licensee's Attachments shall be reimbursed to GTE by Licensee upon demand by GTE.

9. Placement of Attachments

Licensee shall, at its own expense, place and maintain and replace its Attachments on GTE's poles in accordance with (i) such requirements and specifications as GTE shall from time to time prescribe in writing, (ii) in compliance with any rules or orders now in effect or that hereafter may be issued by any regulatory agency or other authority having jurisdiction, and (iii) all currently applicable requirements and specifications of the National Electrical Safety Code, most current edition. Licensee agrees to comply, at its sole risk and expense, with all specifications included in Exhibits ___ through ___ hereto, as may be revised from time to time by GTE. Audits will be allowed once a pole attachment request (PAR) is approved for a specific request. GTE will provide an escort at CLEC's expense if GTE believes it is required.

10. Failure of Licensee to Place Attachments

Once Licensee has obtained an approved PAR, Licensee shall have ninety (90) days from the date the PAR is approved to begin the placement of its Attachments on the GTE poles covered by the PAR. If Licensee has not begun placing its Attachments within that ninety (90) day period, Licensee shall so advise GTE with a written explanation for the delay. If Licensee fails to advise GTE of its delay, with a written explanation therefor, or if Licensee fails to act

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in good faith by not making a bona fide effort to begin placing its Attachments within the ninety (90) days prescribed by this Section, the previously approved PAR shall be deemed rescinded by GTE and Licensee shall have no further right to place Attachments pursuant to that PAR.

11 Attachment Fees

- 11.1 Licensee shall pay to GTE an Attachment Fee, as specified in Exhibit ___ hereto, for each GTE pole upon which Licensee obtains authorization to place an Attachment. The Attachment Fee shall be nondiscriminatory and competitively neutral, and may be increased by GTE only upon mutual agreement of the parties from time to time in accordance with the then applicable law.
- 11.2 Attachments Fees shall become due and payable on the date a PAR is approved by GTE for all GTE poles identified in that PAR on a pro rata basis - until the end of the then current year and thereafter on an annual basis within thirty (30) days of the date of a statement from GTE specifying the fees to be paid. Any payment after thirty (30) days shall bear interest at the rate of eighteen percent (18%) per annum or the maximum rate allowed by law.
- 11.3 GTE shall maintain an inventory of the total number of GTE poles occupied by Licensee based upon the cumulative number of poles specified in all PARs authorized by this Agreement. It shall be Licensee's sole responsibility to notify GTE of any and all removals of Attachments from GTE's poles. Such notice shall be provided to GTE at least thirty (30) days prior to the removal of the Attachments. Each Notice of Removal shall be in a form specified by Licensor and may be revised from time to time at Licensor's sole discretion. Licensee shall remain liable for an Attachment Fee on each GTE pole included in all approved PARs until a notice of removal has been received by GTE. GTE may, at its option, conduct a physical inventory of Licensee's Attachments for purposes of determining the Attachment Fees to be paid by Licensee under this section.
- 11.4 GTE and Licensee further agree that because GTE's Attachment Fee is established in accordance with existing federal or state law, whichever is applicable, should such law later be adjudicated as unconstitutional or otherwise unlawful, GTE will reformulate its Attachment Fee accordingly. In the event the reformulated Attachment Fee is higher than the fee assessed at the inception of this Agreement, Licensee shall pay to GTE the higher Attachment Fees from the time the reformulated Attachment Fee is in effect.

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12 Modifications, Additions or Replacements to Existing Attachments

- 12.1** Licensee shall not modify, add to or replace facilities on any pre-existing Attachment on a GTE pole without first notifying GTE in writing of the intended modification, addition or replacement at least thirty (30) days prior to the date the activity is scheduled to begin. The required notification shall include (1) the date the activity is scheduled to begin, (2) a description of the planned modification, addition or replacement, (3) a representation that the modification, addition or replacement will not require any space other than the space previously designated for Licensee's Attachments, and (4) a representation that the modification, addition or replacement will not impair the structural integrity of the poles involved.
- 12.2** Should GTE determine that the modification, addition or replacement specified by Licensee in its notice will require more space than that allocated to Licensee or will require the reinforcement of, replacement of or an addition of support equipment to the poles involved in order to accommodate Licensee's modification, addition or replacement, GTE will so notify Licensee, whereupon Licensee will be required to submit a PAR in compliance with this Agreement in order to obtain authorization for the modification, addition or replacement of its Facilities.
- 12.3** Access to GTE's poles for repairs, modifications, additions, or replacements required in emergency situations shall be governed by the provisions of Section 20 this Agreement.
- 12.4** Should CLEC request GTE to expand capacity or purchase additional plant, CLEC agrees to pay all costs.

13. Charges for Unauthorized Attachments.

- 13.1** It is agreed that a charge equal to five (5) times the amount of the then current Attachment Fee shall be paid by Licensee to GTE for each unauthorized Attachment to a GTE pole. Such payment shall be deemed liquidated damages and not a penalty. Licensee also shall pay GTE an Attachment Fee for each unauthorized Attachment accruing from the date the unauthorized Attachment was first placed on the GTE pole. In the event that the date the unauthorized Attachment was first placed on a GTE pole cannot be determined, such date shall be deemed the date of the last physical inventory made in accordance with this Agreement or, if no physical inventory has been conducted, the date the first PAR from Licensee was approved in accordance with this Agreement. Licensee also shall pay to GTE all costs incurred by GTE to rearrange any unauthorized Attachment(s) of Licensee in order to

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accommodate the Attachment(s) of another party whose Attachment(s) would not have required a rearrangement but for the presence of Licensee's unauthorized Attachment(s). Licensee shall also pay to GTE all costs incurred by GTE to reinforce, replace or modify a GTE pole, which reinforcement, replacement or modification was required as a result of the unauthorized Attachment of Licensee. The Attachment Fee referenced in this subsection shall be determined in the same manner as such fee would have been determined if the attachment had been authorized by GTE.

- 13.2 For purposes of this section, an unauthorized Attachment shall include, but not be limited to:

- 13.2.1 An Attachment to a GTE pole which pole is not identified in any PAR approved in accordance with this Agreement;
- 13.2.2 An Attachment that occupies more space than that allocated to Licensee by GTE;
- 13.2.3 An Attachment that is not placed in accordance with the provisions of this Agreement or the appropriate PAR issued pursuant to this Agreement;
- 13.2.4 An addition or modification by Licensee to its pre-existing Attachment(s) that impairs the structural integrity of the involved GTE pole(s).
- 13.2.5 An Attachment that consists of facilities owned or controlled by, and for the use of a party other than Licensee.

14. Surveys and Inspections of Pole Attachments.

- 14.1 The total number and exact location of Licensee's Attachments on GTE's poles may be determined, at GTE's discretion, through a survey by GTE. If so requested, Licensee and/or any other entity owning or jointly owning the poles with GTE may participate in the survey and share in the costs of the survey. If the survey reveals one or more unauthorized attachments by Licensee, Licensee shall reimburse GTE for such attachments and for all expenses incurred in conducting the survey.
- 14.2 Apart from surveys conducted in accordance with this section, GTE shall have the right to inspect any Attachment of Licensee on GTE's poles as conditions may warrant. If the survey reveals one or more unauthorized attachments by Licensee, Licensee shall reimburse GTE for all expenses incurred in

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conducting the survey. No joint survey or inspection, or lack thereof, by GTE shall operate to relieve Licensee of any responsibility, obligation or liability assumed under this Agreement.

15 Notice of Modification or Alteration of Poles by GTE

15.1 In the event GTE plans to modify or alter any GTE poles upon which Licensee has placed Facilities, GTE shall provide Licensee notice of the proposed modification or alteration at least ninety (90) days prior to the time the proposed modification or alteration is scheduled to take place. Should Licensee decide to modify or alter Licensee's Facilities on the GTE poles to be modified or altered by GTE, Licensee shall so notify GTE in writing. In such event, Licensee shall bear a proportionate share of the total costs incurred by GTE to make the GTE poles accessible. Licensee's proportionate share of the total cost shall be based on the ratio of the amount of new space occupied by Licensee to the total amount of new space occupied by all of the parties joining in the modification. Licensee is not responsible for any costs of GTE's modifications or alterations of its poles.

15.2 In the event GTE is required to move the location of or replaces any GTE pole(s) for reasons beyond its control, Licensee concurrently shall relocate Licensee's Attachments. Licensee shall be solely responsible for the costs of the relocation of Licensee's Attachments.

16 Disclaimer of Warranties

EXCEPT AS SPECIFICALLY SET FORTH IN THIS AGREEMENT, GTE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

17. Default and Remedies

17.1 The occurrence of any one of the following shall be deemed a Material Default by Licensee under this Agreement:

17.1.1 Failure by Licensee to pay any fee or other sum required to be paid under the terms of this Agreement and such default continues for a period of five (5) days after written notice thereof to Licensee.

17.1.2 Failure by Licensee to perform or observe any other term, condition, covenant, obligation or provision of this Agreement and such default continues for a period of thirty (30) days after written notice thereof.

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from GTE (provided that if such default is not curable within such thirty (30) day period, the period will be extended if Licensee commences to cure such default within such thirty (30) day period and proceeds diligently thereafter to effect such cure).

- 17.1.3 The filing of any tax or mechanic's lien against GTE's poles which is not bonded or discharged within thirty (30) days of the date Licensee receives notice that such lien has been filed.
 - 17.1.4 Licensee's voluntary or involuntary bankruptcy.
 - 17.1.5 Licensee's knowing use or maintenance of its Attachments in violation of any law or regulation, or in aid of any unlawful act or undertaking.
 - 17.1.6 If any authorization which may be required of the Licensee by any governmental or private authority for the placement, operation or maintenance of Licensee's Attachments is denied or revoked.
- 17.2 In the event of a Material Default, GTE, without any further notice to the Licensee (except where expressly provided for below or required by applicable law) may do any one or more of the following:
- 17.2.1 Perform, on behalf and at the expense of Licensee, any obligation of Licensee under this Agreement which Licensee has failed to perform and of which GTE shall have given Licensee notice, the cost of which performance shall be paid by Licensee to GTE upon demand.
 - 17.2.2 Terminate this Agreement by giving notice of such termination to Licensee and remove Licensee's Attachments and store them in a public warehouse or elsewhere at the expense of and for the account of Licensee without GTE being deemed guilty of trespass or conversion, and without GTE becoming liable for any loss or damages to Licensee occasioned thereby; or
 - 17.2.3 Exercise any other legal or equitable right or remedy which GTE may have.
- 17.3 Any costs and expenses incurred by GTE (including, without limitation, reasonable attorneys' fees) in enforcing this Agreement shall be repaid to GTE by Licensee upon demand.

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- 17.4 Upon termination of this Agreement by GTE, Licensee shall remain liable to GTE for any and all fees, other payments and damages which may be due or sustained prior to such termination, all reasonable costs, fees and expenses including, without limitation, reasonable attorneys' fees incurred by GTE in pursuit of its remedies hereunder, and additional liquidated damages which shall be an amount equal to one full year of Pole Attachment fees.
- 17.5 All rights and remedies of GTE set forth in this Agreement shall be cumulative and none shall exclude any other right or remedy, now or hereafter allowed by or available under any statute, ordinance, rule of court, or the common law either at law or in equity, or both.
- 18 Indemnification
- 18.1 Licensee shall compensate GTE for the full actual loss, damage or destruction of GTE's property that in any way arises from or is related to this Agreement or activities undertaken pursuant to this Agreement (including, without limitation, the installation, construction, operation or maintenance of Licensee's Attachments).
- 18.2 Licensee will further indemnify, defend and hold harmless GTE and GTE's agents, officers, employees and assigns, from any and all losses, damages, costs, expenses (including, without limitation, reasonable attorneys' fees), statutory fines or penalties, actions or claims for personal injury (including death), damage to property, or other damage or financial loss of whatever nature in any way arising out of or connected with this Agreement or activities undertaken pursuant to this Agreement (including, without limitation, the installation, construction, operation or maintenance of Licensee's Attachments), except to the extent caused by the negligence or willful misconduct on the part of GTE or GTE's agents, officers, employees and assigns. Licensee expressly assumes all liability for actions brought against GTE and GTE's agents, officers, employees and assigns, by Licensee's agents, officers or employees and Licensee expressly waives any immunity from the enforcement of this indemnification provision that might otherwise be provided by workers' compensation law or by other state or federal laws.
- 18.3 Without limiting any of the foregoing, Licensee assumes all risk of, and agrees to relieve GTE of any and all liability for, loss or damage (and the consequences of loss or damage) to any Attachments placed on GTE's poles and any other financial loss sustained by Licensee, whether caused by fire, extended coverage perils, or other casualty, except to the extent caused by the negligence or willful misconduct on the part of GTE or GTE's agents, officers, employees and assigns.

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- 18.4 Without limiting the foregoing, Licensee expressly agrees to indemnify, defend and hold harmless GTE and GTE's agents, officers, employees and assigns from any and all claims asserted by customers of Licensee in any way arising out of or in connection with this Agreement or Licensee's Attachments, except to the extent caused by the negligence or willful misconduct on the part of GTE or GTE's agents, officers, employees and assigns
- 18.5 Notwithstanding anything to the contrary in this Agreement, Licensee further shall indemnify and hold harmless GTE, its agents, officers, employees and assigns from and against any claims, liabilities, losses, damages, fines, penalties and costs (including, without limitation, reasonable attorneys' fees) whether foreseen or unforeseen, which the indemnified parties suffer or incur because of: (i) any discharge of Hazardous Waste resulting from acts or omissions of Licensee or the Licensee's predecessor in interest, (ii) acts or omissions of the Licensee, its agents, employees, contractors or representatives in connection with any cleanup required by law, or (iii) failure of Licensee to comply with Environmental, Safety and Health Laws
- 18.6 In no event shall GTE be liable to Licensee for any special, consequential or indirect damages (including, without limitation, lost revenues and lost profits) arising out of this Agreement or any obligation arising hereunder, whether in an action for or arising out of breach of contract, tort or otherwise.
- 18.7 Licensee shall indemnify, protect and hold harmless Licensor from and against any and all claims for libel and slander, copyright and/or patent infringement arising directly or indirectly by reason of installation of Licensee's equipment on Licensor's poles pursuant to this Agreement.
19. Insurance.
- 19.1 Licensee shall indemnify, protect and hold harmless Licensor and other joint users of said poles from and against any and all loss, costs, claims, demands, damage and/or expense arising out of any demand, claim, suit or judgment for damages to property and injury to or death of persons, including the officers, agents and employees of either party hereto and other joint users of said poles, including payment made under any Workmen's Compensation Law or under any plan for employees disability and death benefits, which may arise out of or be caused by the presence or use of Licensee's Attachments or by proximity of the respective cables, wires, apparatus and appliances of the parties hereto or other joint users of said poles or arising out of any act or omission or alleged act or omission of Licensee, including any claims and demands of customers of Licensee or others, and irrespective of any fault,

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failure, negligence or alleged negligence on the part of Licensor or of any other joint user of said poles.

- 19.2 Licensee shall carry insurance, at its sole cost and expense, to protect the parties hereto and other joint users of said poles from and against any and all such claims and demands and from and against any and all actions, judgments, costs, expenses and liabilities of every name and nature which may arise or result, directly or indirectly, from or by reason of the acts or omissions of Licensee hereunder and irrespective of any fault, failure, negligence or alleged negligence on the part of Licensor or of any other joint user of said poles. The amounts of such insurance against liability due to personal injury to or death of persons shall be \$500,000 as to any one person and \$1,000,000 as to any one accident. The amounts of such insurance against liability due to property damage shall be \$500,000 as to each accident and \$500,000 aggregate. Licensee shall also carry such insurance as will fully protect both it and Licensor from all claims under any Workmen's Compensation Laws that may be applicable.
- 19.3 All insurance required shall remain in force for the entire life of this Agreement. The company or companies issuing such insurance shall be approved by Licensor, and Licensor shall be named as an additional insured in each of such policies. Licensee shall submit to Licensor certificates by each such company to the effect that it has insured Licensee, Licensor and other joint users for all liabilities of Licensee, Licensor and other joint users under this Agreement and that it will not cancel or change any policy of insurance issued to Licensee except for thirty (30) days notice to Licensor, and, on request, shall submit to Licensor any such policies of insurance for its approval. If renewal insurance premiums are not paid by Licensee prior to said 30-day notice, Licensor shall have the right to pay said premiums and be reimbursed by Licensee upon demand. Licensee shall promptly advise an authorized representative of Licensor of all claims relating to damage to property or injury to or death of persons, arising or alleged to have arisen in any manner by, or directly or indirectly associated with, the presence or use of Licensee's equipment.
- 19.4 Licensee shall furnish bond or satisfactory evidence of contractual insurance coverage, the terms of which shall be subject to Licensor's approval, in the amount of ten thousand dollars (\$10,000) to guarantee the payment of any sums which may become due to Licensor for rentals, inspections or for work performed by Licensor for the benefit of Licensee under this Agreement, including the removal of Licensee's equipment pursuant to any of the provisions hereof. All bonds must specify that the Licensor be notified thirty (30) days prior to the expiration or cancellation of the policy.

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20. Emergency Restoration Procedures

In the event of an emergency, restoration procedures may be affected by the presence of Licensee's Attachments. While GTE shall not be responsible for the repair of damaged Attachments of Licensee (except by mutual written agreement), GTE shall nonetheless control access to its poles if the restoration is to be achieved in an orderly fashion.

- 20.1** Where GTE and Licensee are involved in emergency restorations, access to GTE's poles will be controlled by GTE's Maintenance District Manager or his/her on-site representative according to the following guidelines

20.1.1 Service Disruptions/Outages

- (a) While exercising its right to first access, GTE shall make all reasonable efforts to grant access to as many other entities with Attachments as is reasonably safe.
- (b) Where simultaneous access is not possible, access will be granted by GTE on a first come, first served basis.

20.1.2 Service Affecting Emergencies

- (a) While exercising its right to first access, GTE shall make all reasonable efforts to grant access to as many other entities with Attachments as is reasonably safe.
- (b) Where GTE is unable to grant simultaneous access to all other entities with Attachments, access will be granted according to the level of damage to the Attachments of each entity and the likelihood that a given level of damage will result in service disruption. Where the likelihood that a service disruption will result is not clearly discernible, access will be on a first come, first served basis.

- 20.2** Without limiting any other indemnification or hold harmless provisions of this Agreement, Licensee agrees that any decision by GTE regarding access to Attachments, or any action or failure to act by GTE, under this Section shall not be the basis for any claim by Licensee against GTE for any damage to Licensee's Attachments or disruption of Licensee's services, or any other direct or indirect damages of any kind whatsoever incurred by Licensee.

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21. Damage Suspected to Licensee's Facilities Only

- 21.1 In the event Licensee receives information that Licensee's Attachments are damaged, Licensee shall notify GTE of said damage at [TELEPHONE NUMBER]. This is a 24-hour, 7 days per week notification number. Licensee shall provide GTE all information known to it regarding the damage to Licensee's Attachments.
- 21.2 In the event GTE receives notice that Licensee's Facilities are damaged, GTE will notify Licensee of said damage by telephone at the Licensee's emergency telephone number. GTE shall provide Licensee all information known to it regarding the damage to Licensee's Attachments.
- 21.3 After the giving of such notice by either Licensee or GTE, Licensee shall be authorized to perform emergency restoration maintenance activities in connection with Licensee's Attachments, subject to the provisions of this Agreement.
- 21.4 Without limiting any other indemnification or hold harmless provisions of this Agreement, Licensee agrees that any decision by GTE regarding access to Licensee's Attachments, or any action or failure to act by GTE, appropriately or inappropriately, under this Section shall not be the basis for any claim by Licensee against GTE for any damage to Licensee's Attachments or disruption of Licensee's services, or any other direct or indirect damages of any kind whatsoever incurred by Licensee and Licensee shall indemnify and hold Licenser harmless from any such claim.

22. Abandonment.

Nothing in this Agreement shall prevent or be construed to prevent GTE from abandoning, selling, assigning or otherwise disposing of any poles or other GTE property used for Licensee's Attachments; provided, however, that GTE shall condition any such sale, assignment or other disposition subject to the rights granted to Licensee pursuant to this Agreement. GTE shall promptly notify Licensee of any proposed sale, assignment or other disposition of any poles or other GTE property used for Licensee's Attachments.

23. Notices.

Any written notice to be given to a party to this Agreement shall be in writing and given or made by means of telegram, facsimile transmission, certified or registered mail, express mail or other overnight delivery service, or hand

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delivery, proper postage or other charges prepaid, and addressed or directed to the respective parties as follows

To Licensee

To GTE

GTE _____ Incorporated

Any notice given by personal delivery shall be deemed to have been given on the day of actual delivery and, if given by registered or certified mail, return receipt requested, on the date of receipt thereof and, if given by facsimile transmission, on the day of transmittal thereof if given during the normal business hours of the recipient and on the next business day if not given during normal business hours.

24. Non-Waiver of Terms and Conditions

No course of dealing, course of performance or failure to enforce any of term, right, condition or other provision of this Agreement shall constitute or be construed as a waiver of any term, right or condition or other provision of this Agreement.

25. Dispute Resolution

25.1 Except in the case of (i) a suit, action or proceeding by GTE to compel Licensee to comply with its obligations to indemnify GTE pursuant to this Agreement or (ii) a suit, action or proceeding to compel either party to comply with the dispute resolution procedures set forth in this section, the parties agree to use the following procedure to resolve any dispute, controversy or claim arising out of or relating to this Agreement or its breach.

25.2 At the written request of a party, each party shall designate a knowledgeable, responsible representative to meet and negotiate in good faith to resolve any dispute, controversy or claim arising under this Agreement. The parties intend that these negotiations be conducted by non-lawyer, business representatives. The substance of the negotiations shall be left to the discretion of the representatives. Upon mutual agreement, the representatives may utilize other alternative dispute resolution procedures such as mediation to assist in the negotiations. Discussions and correspondence between the representatives for purposes of these negotiations shall be treated as confidential, undertaken

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for purposes of settlement, shall be exempt from discovery and production, and shall not be admissible in the arbitration described below or in any subsequent lawsuit without the concurrence of all parties. Documents identified in or provided during such negotiations, which are not prepared for purposes of the negotiations, shall not be so exempt and may, if otherwise admissible, be admitted as evidence in any subsequent proceeding.

- 25.3 If a resolution of the dispute, controversy or claim is not reached within one hundred eighty (180) days of the initial written request, the dispute, controversy or claim shall be submitted to binding arbitration by a single arbitrator pursuant to the rules of the American Arbitration Association (AAA) except as hereinafter provided. Discovery in any proceeding before the AAA shall be controlled by the arbitrator and shall be permitted to the extent set forth in this section. Parties may exchange, in any combination, up to thirty-five (35) (none of which may contain subparts) written interrogatories, demands to produce documents and requests for admission. Each party may also take the oral deposition of one (1) witness. Additional discovery may be permitted upon mutual agreement of the parties. The arbitration hearing shall be commenced within sixty (60) days of the demand for arbitration and shall be held in a mutually agreeable city. The arbitrator shall rule on the dispute, controversy or claim by issuing a written opinion within thirty (30) days after the close of hearings. The times specified in this section may be extended upon mutual agreement of the parties or by the arbitrator upon a showing of good cause. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction.

- 25.4 Each party shall bear its own costs, including attorneys' fees, incurred in connection with any of the foregoing procedures. A party seeking discovery shall reimburse the responding party the cost of reproducing documents (to include search time and reproduction time costs). The fees associated with any arbitration, including the fees of the arbitrator, shall be divided equally between the parties.

26. **Compliance With Laws.**

Notwithstanding anything to the contrary in this Agreement, Licensee shall ensure that any and all activities it undertakes pursuant to this Agreement shall comply with all applicable laws, including, without limitation, all applicable provisions of (i) workers' compensation laws, (ii) unemployment compensation laws, (iii) the Federal Social Security Law, (iv) the Fair Labor Standards Act, and (v) all laws, regulations, rules, guidelines, policies, orders, permits and approvals of any governmental authority relating to environmental matters and/or occupational safety.

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27. Force Majeure

Except for payment of the Attachment Fees and other amounts payable under this Agreement, neither party shall have any liability for its delays or its failure in performance due to fire, flood, explosion, pest damage, power failures, strikes or labor disputes, acts of God, the Elements, war, civil disturbances, acts of civil or military authorities or the public enemy, inability to secure raw materials, transportation facilities, fuel or energy shortages, or other cause beyond its control.

28. Assignment

28.1 The rights and obligations of Licensee under this Agreement shall not be assigned, transferred or sub-licensed, in whole or in part, without the prior written consent of GTE. An assignment, transfer or sub-license of this Agreement by Licensee shall not relieve Licensee of its obligations under this Agreement. Any assignment attempted without the prior written consent of GTE shall be void.

28.2 GTE shall have the right to assign this Agreement and to assign its rights and delegate its obligations and liabilities under this Agreement, either in whole or in part. GTE shall provide notice to Licensee of any assignment which shall state the effective date thereof. Upon the effective date and to the extent of the assignment, GTE shall be released and discharged from all obligations and liabilities under this Agreement.

28.3 Neither this Agreement nor any term or provision hereof, nor any inclusion by reference shall be construed as being for the benefit of any person or entity not a signatory hereto.

28.4 This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

29. Applicable Law

This Agreement, and the rights and obligations contained in it, shall be governed and construed under the laws of the State of _____ without regard to its conflicts of laws provisions.

30. Subsequent Law

The terms and conditions of this Agreement shall be subject to any and all applicable laws, rules, regulations or guidelines that subsequently may be

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prescribed by any federal, state or local governmental authority. To the extent required by any such subsequently prescribed law, rule, regulation or guideline, the parties agree to modify, in writing, the affected term(s) and condition(s) of this Agreement to bring them into compliance with such law, rule, regulation or guideline. Should any term of this Agreement be determined by a court or other entity with competent jurisdiction to be unenforceable, all other terms of this Agreement shall remain in full force and effect.

31. Headings

All headings contained in this Agreement are for convenience only and are not intended to affect the meaning or interpretation of any part of this Agreement.

32. Entire Agreement

The terms and conditions of this Agreement supersede all prior oral or written understandings between the parties and constitute the entire agreement between them concerning the subject matter of this Agreement. There are no understandings or representations, express or implied, not expressly set forth in this Agreement. This Agreement shall not be modified or amended except by a writing signed by the party to be charged.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement through their authorized representatives.

For GTE:

For Licensee:

GTE

(Signature of Authorized Agent)
(Printed Name of Authorized Agent)
(Title)
(Date)

(Signature of Officer)
(Printed Name of Officer)
(Title)
(Date)

ATTEST:

Corporate Seal (If Applicable)

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APPENDIX J CONDUIT OCCUPANCY AGREEMENT

1. Parties

This agreement (Agreement) is between GTE _____ Incorporated, a State of _____ corporation having its principal office at _____ ("GTE"), and _____, a corporation of the State of _____, having its principal office at _____ ("Licensee")

2. Definitions

- 2.1 "GTE's conduit(s)" or "GTE conduit(s)" means any reinforced passage or opening in, on, under/over or through the ground capable of containing communications facilities.
- 2.2 "Telecommunications Services" means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.
- 2.3 "Cable Television Services" means the transmission to subscribers of off-the-air pickup of broadcast signals or the transmission, without separate charge, of locally originated closed circuit television to the subscribers of off-the-air service.
- 2.4 "Innerduct", unless otherwise specified or approved by Licensor (at Licensor's sole discretion), shall mean a single enclosed raceway 1" or 1-1/4" in diameter (as the case may be and at Licensor's sole discretion), placed within duct and used for housing of communications facilities.
- 2.5 "Licensee's Facilities" or "Facilities" means all facilities, including, but not limited to, cables, equipment and associated hardware, owned and utilized by the Licensee which occupy an innerduct.
- 2.6 "Make-Ready Work" means all work, including, but not limited to, rearrangement, removal, or transfer of existing facilities, placement, repair, or replacement of duct or innerduct, or any other changes required to accommodate the Licensee's Facilities in a conduit.
- 2.7 "Manholes" and "handholes" mean subsurface enclosures which personnel may enter and use for the purpose of installing, operating and maintaining communications facilities.

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2.8 **"Hazardous Materials"** means (i) any substance, material or waste now or hereafter defined or characterized as hazardous, extremely hazardous, toxic or dangerous within the meaning of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, or any similar law, ordinance, statute, rule or regulation of any governmental body or authority, (ii) any substance, material or waste now or hereafter classified as a contaminant or pollutant under any law, ordinance, statute, rule or regulation of any governmental body or authority or (iii) any other substance, material or waste, the manufacture, processing, distribution, use, treatment, storage, placement, disposal, removal or transportation of which is now or hereafter subject to regulation under any law, ordinance, statute, rule or regulation of any governmental body or authority.

2.9 **"Occupancy Fee"** means the fee paid by Licensee to GTE assessed per linear foot of innerduct occupied by Licensee's Facilities in GTE's conduit(s).

3. **Purpose.**

Licensee represents to GTE that Licensee has a need to occupy, place and maintain communications facilities within GTE's conduit(s) for the purpose of providing Telecommunications Service. GTE agrees to permit Licensee to occupy, place and maintain communications facilities within GTE's conduit(s) as GTE may allow pursuant to the terms of this Agreement. Where GTE owns or controls facilities, it will make access available on a nondiscriminatory basis.

4. **Grant of License.**

GTE grants to Licensee and Licensee accepts from GTE a non-exclusive revocable license to occupy, place and maintain in a designated space in specified GTE conduits Licensee's Facilities on the terms and conditions set forth herein. Licensee shall have no further right, title, or other interest in connection with GTE's conduit(s). GTE shall have the right to grant, renew or extend privileges to others not parties to this Agreement to occupy, place and maintain facilities in or otherwise use any or all of GTE's conduit(s). Nothing herein is intended to, nor should it be construed to require GTE to construct or modify any facilities not needed for its own service requirements. GTE grants this license in reliance on the representation of Licensee that Licensee intends to provide Telecommunications Service with Licensee's Facilities covered by this Agreement.

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5. Term.

This Agreement shall continue in effect until terminated in accordance with the provisions provided herein

6. Conduit Occupancy Requests

- 6.1 Upon execution of this Agreement, Licensee shall have the right to submit a written Conduit Occupancy Request ("COR") to GTE specifying the GTE conduits in which it desires to place its Facilities. Each COR shall be in a form specified by GTE, which form may be revised from time to time by GTE at its sole discretion. CORs received by GTE shall be processed on a first come, first served basis. To the extent possible, GTE will advise Licensee of any other COR received that covers all or part of the conduit included in Licensee's COR. GTE will determine the availability of space for Licensee's Facilities in the GTE conduit(s) specified in the COR within thirty (30) business days of the date the COR is received. Upon approval of the COR, GTE shall return a copy thereof to Licensee bearing an endorsement acknowledging GTE's authorization. All of Licensee's Facilities placed in GTE's conduit(s) pursuant to an approved COR shall become subject to all of the terms and conditions of this Agreement. Licensee may submit subsequent CORs as needed for approval by GTE. All of Licensee's Facilities shall be placed in innerduct unless otherwise approved by GTE. No facilities of any kind shall be placed in any GTE conduit(s) identified in a COR until that COR has been approved by GTE.
- 6.2 Licensee shall pay GTE a fee for processing a COR to compensate GTE for the general administrative costs as well as the actual engineering costs reasonably incurred. The fee for engineering costs shall be computed by multiplying the fully loaded hourly rate for an engineer times the number of hours reasonably required by each engineer to inspect the GTE poles included in the COR. GTE will provide an engineering cost estimate prior to approval of actual work. GTE will then charge its then-current rates for administrative and engineering costs, as may be changed from time to time by GTE to remain consistent with prevailing costs.
- 6.3 Upon receiving an approved COR, Licensee shall have the right, subject to the terms of this Agreement, to place and maintain Licensee's Facilities described in the COR in the innerducts of the GTE conduit(s) identified therein.
- 6.4 In the event Make-Ready Work is necessary to accommodate Licensee's Facilities, GTE shall notify Licensee of such fact and provide Licensee with an estimate of the total cost of such Make-Ready Work. Within fifteen (15) days

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after receiving such notice from GTE. Licensee shall notify GTE either (1) that Licensee shall pay all of the costs actually incurred to perform the Make-Ready Work and shall pay the total estimated amount to GTE at least ten (10) days prior to the date the Make-Ready Work is to begin or (2) that it desires to cancel its COR.

- 6.5 Nothing herein shall confer any right upon Licensee to place power cables or related power equipment in GTE conduit(s) or Manholes. Licensee shall place equipment of this nature in its own pull boxes outside of GTE's conduit(s) or Manholes, or on adjacent non-GTE poles. Cable connectors or splicing devices shall not be used by Licensee in GTE's conduit(s) or innerducts.

- 6.6 The parties agree that GTE should utilize a 2-year planning horizon to reserve space for its future use with documented plans.

7. Availability of Conduit Maps

Existing conduit maps will be made available for viewing by Licensee for the purpose of pre-order planning at the GTE area engineering offices during normal business hours, subject to reasonable advance notification. While a formal written request will not be required in connection with the first request by Licensee to view conduit maps, GTE reserves the right to refuse subsequent viewing requests if Licensee has demonstrated that it does not have a good faith intention to submit a firm COR. If the availability of specific point-to-point conduits can be determined at the time of viewing conduit maps, maps reflecting such point-to-point conduits shall be made available for copying. In making conduit maps available, GTE will be making no express or implied warranty regarding their accuracy other than that they are the same conduit maps used by GTE in its day-to-day operations. If GTE receives a request for Licensee for copies of conduit maps in conjunction with a firm COR for space previously determined to be available, GTE will provide Licensee with copies of the relevant conduit maps at the time the COR is approved. Licensee shall pay to GTE a fee for making such copies available sufficient to cover the general administrative costs incurred.

8. Availability of Information Regarding Space In Conduits

GTE will provide information regarding the availability of conduit space within ninety (90) business days of a written request by Licensee. Because GTE will endeavor to determine available space as quickly as possible, a shorter interval may be experienced for requests of a limited scope where physical field verification is not necessary. In the event the ninety (90) business day time frame cannot be met, GTE shall so advise Licensee within ten (10)

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business days of the request and shall seek a mutually satisfactory alternative response date. No express or implied warranty regarding the availability of space shall be made in the absence of a physical field verification.

9 Authority to Place Licensee's Facilities

- 9.1 Before Licensee places any of Licensee's Facilities in GTE's conduit(s) pursuant to an approved COR, Licensee shall submit evidence satisfactory to GTE of its authority to maintain the Facilities to be placed in GTE's conduit(s) within the public streets, highways and other thoroughfares or on private property. Licensee shall be solely responsible for obtaining all licenses, authorizations, permits and consents from federal, state and municipal authorities or private property owners that may be required to place and maintain Licensee's Facilities in GTE's conduit(s).**
- 9.2 GTE shall attempt to prevent or delay the granting of any rights of way, easements, licenses, authorizations, permits and consents from any federal, state or municipal authorities, or private property owners that may be required by Licensee to place Licensee's Facilities in GTE's conduit(s).**
- 9.3 If any right of way, easement, license, authorization, permit or consent obtained by Licensee is subsequently revoked or denied for any reason, Licensee's permission to occupy GTE's conduit(s) shall terminate immediately and Licensee shall promptly remove Licensee's Facilities. Should Licensee fail to remove Licensee's Facilities within thirty (30) days of receiving notice to do so from GTE, GTE shall have the option to remove Licensee's Facilities and store them in a public warehouse or elsewhere at the expense of and for the account of Licensee without GTE being deemed guilty of trespass or conversion, and without GTE becoming liable for any loss or damages to Licensee occasioned thereby. All costs incurred by GTE to remove Licensee's Facilities shall be reimbursed to GTE by Licensee upon demand.**
- 9.4 Upon notice from GTE to Licensee that the cessation of the use of any portion of GTE's conduit(s) has been ordered or directed by any federal, state or municipal authority, or private property owner, Licensee's permission to occupy such GTE conduit(s) shall terminate immediately and Licensee promptly shall remove Licensee's Facilities. Should Licensee fail to remove Licensee's Facilities within thirty (30) days of receiving notice to do so from GTE, GTE shall have the option to remove Licensee's Facilities and store them in a public warehouse or elsewhere at the expense of and for the account of Licensee without GTE being deemed guilty of trespass or conversion, and without GTE becoming liable for any loss or damages to Licensee occasioned thereby. All**

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costs incurred by GTE to remove Licensee's Facilities shall be reimbursed to GTE by Licensee upon demand by GTE

10 Placement of Licensee's Facilities

Licensee shall, at its sole expense, place and maintain Licensee's Facilities in GTE's conduit(s) in accordance with (i) such requirements and specifications as GTE shall from time to time prescribe in writing, (ii) all rules or orders now in effect or that hereafter may be issued by any regulatory agency or other authority having jurisdiction, and (iii) all currently applicable requirements and specifications of the National Electrical Safety Code, and the applicable rules and regulations of the Occupational Safety And Health Act. Licensee agrees to comply, at its sole risk and expense, with all specifications included in Exhibits __ through __ hereto, as may be revised from time to time by GTE. Audits will be allowed once a conduit occupancy request (COR) is approved for a specific request. GTE will provide an escort at CLEC's expense if GTE believes it is required.

11 Failure of Licensee to Occupy Conduit Space

Once Licensee has obtained an approved COR, Licensee shall have ninety (90) from the date the COR is approved to begin the placement of Licensee's Facilities in the GTE conduit(s) covered by the COR. If Licensee has not begun placing Licensee's Facilities within that ninety (90) day period, Licensee shall so advise GTE with a written explanation for the delay. If Licensee fails to advise GTE of its delay, with a written explanation therefor, or if Licensee fails to act in good faith by not making a bona fide effort to begin placing its Facilities within the ninety (90) days prescribed by this Section 11, the previously approved COR shall be deemed rescinded by GTE and Licensee shall have no further right to place Licensee's Facilities pursuant to that COR.

12. Occupancy Fees

12.1 Licensee shall pay to GTE an Occupancy Fee, as specified in Exhibit __ hereto, for each linear foot of innerduct occupied by Licensee's Facilities in GTE's conduit(s). If Licensee's Facilities occupy more than one innerduct, a separate Occupancy Fee shall be paid by Licensee for each innerduct occupied. The Occupancy Fee shall be nondiscriminatory and competitively neutral, and may be increased as permitted by law upon sixty (60) days written notice to Licensee.

12.2 Occupancy Fees shall become due and payable on the date a COR is approved by GTE for all GTE innerducts identified in that COR on a pro rata

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basis until the end of the current year and thereafter on an annual basis within thirty (30) days of the receipt of a statement from GTE specifying the fees to be paid. Any payment after thirty (30) days shall bear interest at the rate of eighteen percent (18%) per annum or the maximum rate allowed by law, whichever is less.

- 12.3 GTE shall maintain an inventory of the total linear footage of innerduct occupied by Licensee's Facilities in GTE's conduit(s) based upon the cumulative linear footage per innerduct from all CORs approved by GTE. GTE may, at its option, conduct a physical inventory of Licensee's Facilities for purposes of determining the Occupancy Fees to be paid by Licensee under this section. It shall be Licensee's sole responsibility to notify GTE of any and all removals of Licensee's Facilities from GTE's conduit(s). Written notice of such removals (unless they are covered by Section 18 of this Agreement) shall be provided to GTE at least thirty (30) days prior to the removal. Each Notice of Removal shall be in a form specified by GTE. Licensee shall remain liable for all Occupancy Fees until Licensee's Facilities have been physically removed from GTE's conduits.

- 12.4 GTE and Licensee further agree that because GTE's Attachment Fee is established in accordance with existing federal or state law, whichever is applicable, should such law later be adjudicated as unconstitutional or otherwise unlawful, GTE will reformulate its Attachment Fee accordingly. In the event the reformulated Attachment Fee is higher than the fee assessed at the inception of this Agreement, Licensee shall pay to GTE the higher Attachment Fees from the time the reformulated Attachment Fee is in effect.

13. Modifications, Additions or Replacements of Licensee's Facilities.

- 13.1 Licensee shall not modify, add to or replace Licensee's Facilities in any GTE conduit(s) without first notifying GTE in writing of the intended modification, addition or replacement at least thirty (30) days prior to the date the activity is scheduled to begin. The required notification shall include: (1) the date the activity is scheduled to begin, (2) a description of the planned modification, addition or replacement, (3) a representation that the modification, addition or replacement will not require any space other than the space previously designated for Licensee's Facilities, and (4) a representation that the modification, addition or replacement will not impair the structural integrity of the GTE conduit(s) involved.
- 13.2 Should GTE determine that the modification, addition or replacement specified by Licensee in its notice will require more space than that allocated to Licensee or will require any modification, replacement or reinforcement of the

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GTE conduit(s) involved in order to accommodate Licensee's modification, addition or replacement, GTE will so notify Licensee, whereupon Licensee shall be required to submit a COR in compliance with this Agreement in order to obtain authorization for the modification, addition or replacement of Licensee's Facilities

- 13.3 Access to GTE's conduit(s) for repairs, modifications, additions, or replacements required in emergency situations shall be governed by the provisions of Section 21 of this Agreement

- 13.4 Should CLEC request GTE expand capacity or purchase additional plant, CLEC agrees to pay all cost.

14 **Charges for Unauthorized Occupancy of GTE Conduit**

- 14.1 It is agreed that a charge equal to five (5) times the amount of the then current Occupancy Fee shall be paid by Licensee to GTE for each unauthorized occupancy of GTE's conduit(s) by Licensee. Such payment shall be deemed liquidated damages and not a penalty. Licensee also shall pay GTE an Occupancy Fee for each unauthorized occupancy accruing from the date the unauthorized occupancy first began. In the event that the date the unauthorized occupancy first began cannot be determined, such date shall be deemed the date of the last physical inventory made in accordance with this Agreement or, if no physical inventory has been conducted, the date the first COR from Licensee was approved in accordance with this Agreement. Licensee also shall pay to GTE all costs incurred by GTE to rearrange Licensee's Facilities that are unauthorized if such rearrangement is required to safeguard GTE's facilities or to accommodate the facilities of another party whose facilities would not have required a rearrangement but for the presence of Licensee's unauthorized facilities. Licensee also shall pay to GTE all costs incurred by GTE to reinforce, replace or modify any GTE conduit(s), which reinforcement, replacement or modification is required as a result of the unauthorized occupancy by Licensee. The Occupancy Fee referenced in this subsection 12.1 shall be determined in the same manner as such a fee would have been determined if the occupancy had been authorized by GTE.

- 14.2 For purposes of this section, an unauthorized occupancy shall include, but not be limited to:

- 14.2.1 The presence of Licensee's Facilities in any GTE conduit which conduit is not identified in any COR approved in accordance with this Agreement;

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- 14.2.2 The presence of Licensee's Facilities in any GTE conduit that occupies more space than that allocated to Licensee by GTE.
- 14.2.3 Licensee's Facilities that are not placed in accordance with the provisions of this Agreement or the appropriate COR issued pursuant to this Agreement.
- 14.2.4 An addition or modification by Licensee to its pre-existing Facilities in any GTE conduit that impairs the structural integrity of that GTE conduit.
- 14.2.5 The presence of facilities in GTE's conduit(s) placed by Licensee that are owned or controlled by and for the use of a party other than Licensee.

15. Surveys and Inspections of Licensee's Facilities

- 15.1 The total linear footage per innerduct and exact location of Licensee's Facilities in GTE's conduit(s) may be determined, at GTE's discretion, through a survey to be made not more than once per calendar year by GTE. If so requested, Licensee may participate in the survey. The costs incurred by GTE to conduct the survey shall be reimbursed to GTE by Licensee upon demand by GTE only if Licensee chooses to participate in the survey or, the survey reveals unauthorized Attachments or placement of facilities by CLEC. If the facilities of more than one participating Licensee are included in the same survey, each such Licensee shall contribute a proportionate share of the costs reimbursed to GTE.
- 15.2 Apart from surveys conducted in accordance with this section, GTE shall have the right to inspect any facilities of Licensee in any GTE conduit(s) as conditions may warrant upon written notice to Licensee. Licensee shall, upon demand by GTE, reimburse GTE all costs incurred to conduct its inspection only if Licensee chooses to participate in the survey or, the survey reveals unauthorized Attachments by CLEC. No joint survey or inspection, or lack thereof, by GTE shall operate to relieve Licensee of any responsibility, obligation or liability assumed under this Agreement.

16. Modification or Alteration GTE Conduits. [Reference V.C. 1]

- 16.1 In the event GTE plans to modify or alter any GTE conduit(s) that house Licensee's Facilities, GTE shall provide Licensee notice of the proposed modification or alteration at least ninety (90) days prior to the time the proposed modification or alteration is scheduled to take place. Should

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Licensee decide to modify or alter Licensee's Facilities in the GTE conduit(s) to be modified or altered by GTE, Licensee shall so notify GTE in writing. In such event, Licensee shall bear a proportionate share of the total costs incurred by GTE to make the GTE conduit(s) accessible. Licensee's proportionate share of the total cost shall be based on the ratio of the amount of new space occupied by Licensee to the total amount of new space occupied by all of the parties joining in the modification. Licensee is not responsible for any costs of GTE's modification or alteration of its conduits.

- 16.2 In the event GTE moves, replaces or changes the location, alignment or grade of GTE's conduit(s) ("relocation") for reasons beyond GTE's control, Licensee concurrently shall relocate Licensee's Facilities. Licensee shall be solely responsible for the costs of the relocation of Licensee's Facilities.

- 16.3 Manhole breakouts by CLEC, where a precast knock-out exists, will be allowed subject to review by GTE.

17. **Disclaimer of Warranties.**

EXCEPT AS SPECIFICALLY SET FORTH IN THIS AGREEMENT, GTE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

18. **Default and Remedies.**

- 18.1 The occurrence of any one of the following shall be deemed a Material Default by Licensee under this Agreement:

18.1.1 Failure by Licensee to pay any fee or other sum required to be paid under the terms of this Agreement and such default continues for a period of five (5) days after written notice thereof to Licensee;

18.1.2 Failure by Licensee to perform or observe any other term, condition, covenant, obligation or provision of this Agreement and such default continues for a period of thirty (30) days after written notice thereof from GTE (provided that if such default is not curable within such thirty (30) day period, the period will be extended if Licensee commences to cure such default within such thirty (30) day period and proceeds diligently thereafter to effect such cure);

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- 18.1.3 The filing of any tax or mechanic's lien against any GTE conduit(s) which is not bonded or discharged within thirty (30) days of the date Licensee receives notice that such lien has been filed.
 - 18.1.4 Licensee's voluntary or involuntary bankruptcy.
 - 18.1.5 Licensee's knowing use or maintenance of Licensee's Facilities in violation of any law or regulation, or in aid of any unlawful act or undertaking.
 - 18.1.6 If any authorization which may be required of the Licensee by any governmental or private authority for the placement, operation or maintenance of Licensee's Facilities is denied or revoked.
- 18.2 In the event of a Material Default, GTE, without any further notice to the Licensee (except where expressly provided for below or required by applicable law) may do any one or more of the following
- 18.2.1 Perform, on behalf and at the expense of Licensee, any obligation of Licensee under this Agreement which Licensee has failed to perform and of which GTE shall have given Licensee notice, the cost of which performance shall be paid by Licensee to GTE upon demand.
 - 18.2.2 Terminate this Agreement by giving notice of such termination to Licensee and remove Licensee's Facilities and store them in a public warehouse or elsewhere at the expense of and for the account of Licensee without GTE being deemed guilty of trespass or conversion, and without GTE becoming liable for any loss or damages to Licensee occasioned thereby; or
 - 18.2.3 Exercise any other legal or equitable right or remedy which GTE may have.
- 18.3 Any costs and expenses incurred by GTE (including, without limitation, reasonable attorneys' fees) in enforcing this Agreement shall be paid to GTE by Licensee upon demand.
- 18.4 Upon termination of this Agreement by GTE, Licensee shall remain liable to GTE for any and all fees, other payments and damages which may be due or sustained prior to such termination, all reasonable costs, fees and expenses, including, without limitation, reasonable attorneys' fees incurred by GTE in pursuit of its remedies hereunder, and additional liquidated damages which shall be an amount equal to one full year of Occupancy Fees.

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- 18.5 All rights and remedies of GTE set forth in this Agreement shall be cumulative and none shall exclude any other right or remedy, now or hereafter allowed by or available under any statute, ordinance, rule of court, or the common law, either at law or in equity, or both
- 19 Indemnification
- 19.1 Licensee shall compensate GTE for the full actual loss, damage or destruction of GTE's property that in any way arises from or is related to this Agreement or activities undertaken pursuant to this Agreement (including, without limitation, the installation, construction, operation or maintenance of Licensee's Facilities)
- 19.2 Licensee will further indemnify, defend and hold harmless GTE and GTE's agents, officers, employees and assigns, from any and all losses, damages, costs, expenses (including, without limitation, reasonable attorneys' fees), statutory fines or penalties, actions or claims for personal injury (including death), damage to property, or other damage or financial loss of whatever nature in any way arising out of or connected with this Agreement or activities undertaken pursuant to this Agreement (including, without limitation, the installation, construction, operation or maintenance of Licensee's Facilities), except to the extent caused by the negligence or willful misconduct on the part of GTE or GTE's agents, officers, employees and assigns. Licensee expressly assumes all liability for actions brought against GTE and GTE's agents, officers, employees and assigns, by Licensee's agents, officers or employees and Licensee expressly waives any immunity from the enforcement of this indemnification provision that might otherwise be provided by workers' compensation law or by other state or federal laws.
- 19.3 Without limiting any of the foregoing, Licensee assumes all risk of, and agrees to relieve GTE of any and all liability for, loss or damage (and the consequences of loss or damage) to any of Licensee's Facilities placed in any GTE conduit(s) and any other financial loss sustained by Licensee, whether caused by fire, extended coverage perils, or other casualty, except to the extent caused by the negligence or willful misconduct on the part of GTE or GTE's agents, officers, employees and assigns.
- 19.4 Without limiting the foregoing, Licensee expressly agrees to indemnify, defend and hold harmless GTE and GTE's agents, officers, employees and assigns from any and all claims asserted by customers of Licensee in any way arising out of or in connection with this Agreement or Licensee's Attachments, except to the extent caused by the negligence or willful misconduct on the part of GTE or GTE's agents, officers, employees and assigns.

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- 19.5 Notwithstanding anything to the contrary in this Agreement, Licensee further shall indemnify and hold harmless GTE, its agents, officers, employees and assigns from and against any claims, liabilities, losses, damages, fines, penalties and costs (including, without limitation, reasonable attorneys' fees) whether foreseen or unforeseen, which the indemnified parties suffer or incur because of (i) any discharge of Hazardous Waste resulting from acts or omissions of Licensee or the Licensee's predecessor in interest (ii) acts or omissions of the Licensee, its agents, employees, contractors or representatives in connection with any cleanup required by law, or (iii) failure of Licensee to comply with Environmental, Safety and Health Laws
- 19.6 In no event shall GTE be liable to Licensee for any special, consequential or indirect damages (including, without limitation, lost revenues and lost profits) arising out of this Agreement or any obligation arising hereunder, whether in an action for or arising out of breach of contract, tort or otherwise
- 19.7 Licensee shall indemnify, protect and hold harmless GTE from and against any and all claims for libel and slander, copyright and/or patent infringement arising directly or indirectly by reason of installation of Licensee's equipment in Licensor's cable ducts pursuant to this Agreement
20. Insurance
- 20.1 Licensee shall carry insurance, at its sole cost and expense, sufficient to cover its indemnification obligations as set forth in Section 19 of this Agreement. Such insurance shall include, but not be limited to, coverage against liability due to personal injury or death of persons in the amount of \$500,000 as to any one person and \$1,000,000 as to any one accident; coverage against liability due to property damage in the amount of \$500,000 as to each accident and \$500,000 aggregate; and coverage necessary to fully protect both it and GTE from all claims under any worker's compensation laws that may be applicable.
- 20.2 All insurance required of Licensee under this Agreement shall remain in force for the entire life of this Agreement. The company or companies issuing such insurance shall be approved by GTE and GTE shall be named as an additional insured in each such policy. Licensee shall submit to GTE certificates by each insurer to the effect that the insurer has insured Licensee for all potential liabilities of Licensee under this Agreement, and that it will not cancel or change any policy of insurance issued to Licensee except upon thirty (30) days notice to GTE. In the event Licensee's insurance coverage is to be canceled by reason of non-payment of premiums due, GTE shall have the option of paying any amount due and Licensee shall forthwith reimburse GTE the full amount paid by GTE.

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- 20.3 Licensee shall promptly advise GTE in writing of any and all claims for damages, including, but not limited to, damage to property or injury to or death of persons, allegedly arising out of or in any manner related, directly or indirectly, to the presence or use of Licensee's Facilities
- 20.4 Licensee shall furnish bond or satisfactory evidence of contractual insurance coverage, the terms of which shall be subject to GTE's approval, in the amount of ten thousand dollars (\$10,000) to guarantee the payment of any sums which may become due to GTE for rentals, inspections or for work performed by GTE for the benefit of Licensee under this Agreement, including the removal of Licensee's equipment pursuant to any of the provisions hereof. All bonds must specify that the GTE be notified thirty (30) days prior to the expiration or cancellation of the policy.

21. Emergency Restoration Procedures

In the event of an emergency, restoration procedures may be affected by the presence of Licensee's Facilities in GTE's conduit(s). While GTE shall not be responsible for the repair of Licensee's Facilities that are damaged (except by mutual written agreement), GTE shall nonetheless control access to its conduits and innerducts if the restoration is to be achieved in an orderly fashion.

- 21.1 Where GTE and Licensee are involved in emergency restorations, access to GTE's conduit(s) will be controlled by GTE's Maintenance District Manager or his/her on-site representative according to the following guidelines:

21.1.1 Service Disruptions/Outages

- (a) In the event of service disruptions and/or outages, while exercising its right to first access, GTE shall make all reasonable efforts to grant access to as many other entities with facilities in GTE's conduit(s) as is reasonably safe.
- (b) Where simultaneous access is not possible, access will be granted by GTE on a first come, first served basis.

21.1.2 Service Affecting Emergencies

- (a) In the event of service affecting emergencies not resulting in service disruptions or outages, while exercising its right to first access, GTE shall make all reasonable efforts to

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grant access to as many other entities with facilities in GTE's conduit(s) as is reasonably safe

- (b) Where GTE is unable to grant simultaneous access to all other entities with facilities in GTE's conduit(s), access will be granted according to the level of damage to the facilities of each entity and the likelihood that a given level of damage will result in service disruption. Where the likelihood that a service disruption will result is not clearly discernible, access will be on a first come, first served basis

- 21.2 Without limiting any other indemnification or hold harmless provisions of this Agreement, Licensee agrees that any decision by GTE regarding access to Licensee's Facilities, or any action or failure to act by GTE under this Section 19 shall not constitute a basis for any claim by Licensee against GTE for any damage to Licensee's Facilities or disruption of Licensee's services, or any other direct or indirect damages of any kind whatsoever incurred by Licensee.

22. Damage Suspected to Licensee's Facilities Only.

- 22.1 In the event Licensee receives information that Licensee's Facilities are damaged, Licensee shall notify GTE of said damage at [TELEPHONE NUMBER]. This is a 24-hour, 7 days per week notification number. Licensee shall provide GTE all information known to it regarding the damage to Licensee's Facilities.
- 22.2 In the event GTE receives notice that Licensee's Facilities are damaged, GTE will notify Licensee of said damage by telephone at the Licensee's emergency telephone number. GTE shall provide Licensee all information known to it regarding the damage to Licensee's Facilities.
- 22.3 After the giving of such notice by either Licensee or GTE, Licensee shall be authorized to perform emergency restoration maintenance activities in connection with Licensee's Facilities, subject to the provisions of this Agreement.
- 22.4 Without limiting any other indemnification or hold harmless provisions of this Agreement, Licensee agrees that any decision by GTE regarding access to Licensee's facilities, or any action or failure to act by GTE, appropriately or inappropriately, under this Section shall not be the basis for any claim by Licensee against GTE for any damage to Licensee's Facilities or disruption of Licensee's services, or any other direct or indirect damages of any kind

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whatsoever incurred by Licensee and Licensee shall indemnify and hold GTE harmless from any such claim.

23 Access to GTE's Manholes/Handholes

23.1 GTE will allow Licensee to audit manholes/handholes that are included in any COR submitted to GTE to confirm usability. Licensee shall give GTE at least fourteen (14) days advance written notice of its desire to audit and shall obtain all authorizations from appropriate authorities required to open the manholes/handholes. GTE shall have the right to have a GTE employee or agent present when its manholes/handholes are being opened. Such GTE employee or agent shall have the authority to suspend Licensee's activities in and around GTE's manholes/handholes if, in the sole discretion of said employee or agent, any hazardous conditions arise or any unsafe practices are being followed by Licensee's employees, agents, or contractors. Licensee agrees to reimburse GTE the cost of having GTE's employee or agent present. Such charge shall be GTE's fully loaded labor rates then in effect.

23.2 For purposes other than to audit usability, GTE's manholes/handholes shall be opened only as permitted by GTE and only after Licensee has obtained all necessary authorizations from appropriate authorities to open manholes/handholes and conduct work operations therein. GTE shall have the right to have a GTE employee or agent present at any site at which its manholes/handholes are being opened. Such GTE employee or agent shall have the authority to suspend Licensee's work operations in and around GTE's manholes/handholes if, in the sole discretion of said employee or agent, any hazardous conditions arise or any unsafe practices are being followed by Licensee's employees, agents, or contractors. Licensee agrees to reimburse GTE the cost of having GTE's employee or agent present. Such charge shall be GTE's fully loaded labor rates then in effect. The presence of GTE's authorized employee or agent shall not relieve Licensee of its responsibility to conduct all of its work operations in and around GTE's conduit(s) in a safe and workmanlike manner, in accordance with the terms of this Agreement.

24. Abandonment.

Nothing in this Agreement shall prevent or be construed to prevent GTE from abandoning, selling, assigning or otherwise disposing of any GTE conduit(s) or other GTE property used in connection with Licensee's Facilities; provided, however, that GTE shall condition any such sale, assignment or other disposition subject to the rights granted to Licensee pursuant to this Agreement. GTE shall promptly notify Licensee of any proposed sale,

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assignment or other disposition of any GTE conduit(s) or other GTE property used in connection with Licensee's Facilities

25 Notices

Any written notice to be given to a party to this Agreement shall be in writing and given or made by means of telegram, facsimile transmission, certified or registered mail, express mail or other overnight delivery service, or hand delivery, proper postage or other charges prepaid, and addressed or directed to the respective parties as follows:

To Licensee:

To GTE:

GTE _____ Incorporated

Any notice given by personal delivery shall be deemed to have been given on the day of actual delivery and, if given by registered or certified mail, return receipt requested, on the date of receipt thereof and, if given by facsimile transmission, on the day of transmittal thereof if given during the normal business hours of the recipient and on the next business day if not given during normal business hours.

26 Non-Waiver of Terms and Conditions

No course of dealing, course of performance or failure to enforce any of term, right, condition or other provision of this Agreement shall constitute or be construed as a waiver of any term, right or condition or other provision of this Agreement.

27. Dispute Resolution

- 27.1 Except in the case of (i) a suit, action or proceeding by GTE to compel Licensee to comply with its obligations to indemnify GTE pursuant to this Agreement or (ii) a suit, action or proceeding to compel either party to comply with the dispute resolution procedures set forth in this section, the parties agree to use the following procedure to resolve any dispute, controversy or claim arising out of or relating to this Agreement or its breach.

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- 27.2 At the written request of a party, each party shall designate a knowledgeable responsible representative to meet and negotiate in good faith to resolve any dispute, controversy or claim arising under this Agreement. The parties intend that these negotiations be conducted by non-lawyer, business representatives. The substance of the negotiations shall be left to the discretion of the representatives. Upon mutual agreement, the representatives may utilize other alternative dispute resolution procedures such as mediation to assist in the negotiations. Discussions and correspondence between the representatives for purposes of these negotiations shall be treated as confidential, undertaken for purposes of settlement, shall be exempt from discovery and production, and shall not be admissible in the arbitration described below or in any subsequent lawsuit without the concurrence of all parties. Documents identified in or provided during such negotiations, which are not prepared for purposes of the negotiations, shall not be so exempt and may, if otherwise admissible, be admitted as evidence in any subsequent proceeding.
- 27.3 If a resolution of the dispute, controversy or claim is not reached within sixty (60) days of the initial written request, the dispute, controversy or claim shall be submitted to binding arbitration by a single arbitrator pursuant to the rules of the American Arbitration Association (AAA), except as hereinafter provided. Discovery in any proceeding before the AAA shall be controlled by the arbitrator and shall be permitted to the extent set forth in this section. Parties may exchange, in any combination, up to thirty-five (35) (none of which may contain subparts) written interrogatories, demands to produce documents and requests for admission. Each party may also take the oral deposition of one (1) witness. Additional discovery may be permitted upon mutual agreement of the parties. The arbitration hearing shall be commenced within sixty (60) days of the demand for arbitration and shall be held in a mutually agreeable city. The arbitrator shall rule on the dispute, controversy or claim by issuing a written opinion within thirty (30) days after the close of hearings. The times specified in this section may be extended upon mutual agreement of the parties or by the arbitrator upon a showing of good cause. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction.
- 27.4 Each party shall bear its own costs, including attorneys' fees, incurred in connection with any of the foregoing procedures. A party seeking discovery shall reimburse the responding party the cost of reproducing documents (to include search time and reproduction time costs). The fees associated with any arbitration, including the fees of the arbitrator, shall be divided equally between the parties.

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28 Compliance With Laws

Notwithstanding anything to the contrary in this Agreement, Licensee shall ensure that any and all activities it undertakes pursuant to this Agreement shall comply with all applicable laws, including, without limitation, all applicable provisions of (i) workers' compensation laws, (ii) unemployment compensation laws, (iii) the Federal Social Security Law, (iv) the Fair Labor Standards Act and (v) all laws, regulations, rules, guidelines, policies, orders, permits and approvals of any governmental authority relating to environmental matters and/or occupational safety.

29 Force Majeure

Except for payment of the Occupancy Fees and other amounts payable under this Agreement, neither party shall have any liability for its delays or its failure in performance due to fire, flood, explosion, pest damage, power failures, strikes or labor disputes, acts of God, the Elements, war, civil disturbances, acts of civil or military authorities or the public enemy, inability to secure raw materials, transportation facilities, fuel or energy shortages, or other cause beyond its control.

30. Assignment

30.1 The rights and obligations of Licensee under this Agreement shall not be assigned, transferred or sub-licensed, in whole or in part, without the prior written consent of GTE. An assignment, transfer or sub-license of this Agreement by Licensee shall not relieve Licensee of its obligations under this Agreement. Any assignment attempted without the prior written consent of GTE shall be void.

30.2 GTE shall have the right to assign this Agreement and to assign its rights and delegate its obligations and liabilities under this Agreement, either in whole or in part. GTE shall provide notice to Licensee of any assignment which shall state the effective date thereof. Upon the effective date and to the extent of the assignment, GTE shall be released and discharged from all obligations and liabilities under this Agreement.

30.3 Neither this Agreement nor any term or provision hereof, nor any inclusion by reference shall be construed as being for the benefit of any person or entity not a signatory hereto.

30.4 This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

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31 Applicable Law

This Agreement, and the rights and obligations contained in it, shall be governed and construed under the laws of the State of _____ without regard to its conflicts of laws provisions

32 Subsequent Law

The terms and conditions of this Agreement shall be subject to any and all applicable laws, rules, regulations or guidelines that subsequently may be prescribed by any federal, state or local governmental authority. To the extent required by any such subsequently prescribed law, rule, regulation or guideline, the parties agree to modify, in writing, the affected term(s) and condition(s) of this Agreement to bring them into compliance with such law, rule, regulation or guideline. Should any term of this Agreement be determined by a court or other entity with competent jurisdiction to be unenforceable, all other terms of this Agreement shall remain in full force and effect.

33 Headings

All headings contained in this Agreement are for convenience only and are not intended to affect the meaning or interpretation of any part of this Agreement

34 Entire Agreement

The terms and conditions of this Agreement supersede all prior oral or written understandings between the parties and constitute the entire agreement between them concerning the subject matter of this Agreement. There are no understandings or representations, express or implied, not expressly set forth in this Agreement. This Agreement shall not be modified or amended except by a writing signed by the party to be charged.

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement through their authorized representatives

For GTE

For Licensee

GTE

(Signature of Authorized Agent)
(Printed Name of Authorized Agent)
(Title)
(Date)

(Signature of Officer)
(Printed Name of Officer)
(Title)
(Date)

ATTEST:

Corporate Seal (If Applicable)

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APPENDIX K DIRECTORIES AGREEMENT

This Telephone Directories Agreement (the "Agreement") is made effective as of _____, 1997, by and between the GTE telephone operating companies listed on Exhibit A (referred to individually and collectively as "GTE"), with their address for purposes of this Agreement at 600 Hidden Ridge, Irving, Texas 75038, and _____ ("Provider"), with its address for this Agreement at _____ (GTE and Provider being referred to collectively as the "Parties" and individually as a "Party").

ARTICLE 1 SCOPE

- 1.1 This Agreement applies to GTE-published white and Yellow Page directories associated with GTE exchanges in the states listed on Exhibit B attached hereto and made a part hereof (collectively, the "States" and individually, a "State").

ARTICLE 2 LISTINGS

- 2.1 Provider agrees to supply GTE, on a regularly scheduled basis, at no charge, and in a mutually agreed upon format (e.g., OBF developed), all listing information for Provider's subscribers who wish to be listed in the white pages of the GTE published directory for that subscriber area. Listing information will consist of names, addresses (including city, state and ZIP code) and telephone numbers. GTE will provide confirmation of receipt of Provider's service orders to Provider on a daily basis.
- 2.2 GTE shall employ Provider's listing information for the production and distribution of GTE-published white and yellow page directories. GTE's use for other purposes will require separate agreements.
- 2.3 Listing inclusion in a given directory will be in accordance with directory configuration, scope, and schedules and such determinations will be made at the sole discretion of GTE.
- 2.4 Provider's business subscribers will receive a single standard listing at no charge in the corresponding Yellow Pages under the classified heading that most accurately reflects the primary nature of their respective businesses, and

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GTE will supply Provider with a list of authorized classified headings. Provider agrees to supply GTE with a classified heading assignment for every subscriber who wishes to receive said listing.

- 2.5 Other listings that are made available to GTE customers (e.g., additional, alternate, foreign, nonpublished and nonlisted) will be made available to Provider's customers on the same rates, terms and conditions as GTE customers. Other types of white page directory listings, such as enhanced or vanity listings, may be made available at a later date, and if offered by Publisher, will be offered to Provider's subscribers on terms consistent with this Article 2.5.
- 2.6 GTE (Publisher) will not license, sell or otherwise transfer any list containing Subscriber Listing information to any third party without Provider's prior consent, which consent will not be unreasonably withheld. GTE will charge Provider a reasonable service bureau extraction fee for all third party transactions and Provider will be free to establish its own fees for direct billing to third parties.

ARTICLE 3 INFORMATION PAGES

- 3.1 GTE will list in the Information Pages the Provider's critical customer contact numbers (e.g., business office, repair service, and billing). Provider will supply this information to GTE no later than established close dates. Provider will be given the close dates on an annual basis, as changes in close dates occur, or upon request of Provider. The manner of presentation and scope of such information will be determined at the sole discretion of GTE in a manner consistent with the presentation of information concerning GTE's telephone contact numbers.
- 3.2 GTE will list in the Information Pages Provider's subscribers who provide services of an emergency nature in an official capacity (e.g., police and fire). Provider will supply this information to GTE no later than the established close dates. Provider will be given the close dates on an annual basis, as changes in close dates occur, or upon request of Provider. The manner of presentation and scope of such information will be determined at the sole discretion of GTE in a manner consistent with the presentation of information concerning GTE customer emergency numbers.
- 3.3 GTE will also offer Provider the opportunity to purchase in the Information Pages of each telephone directory up to four (4) additional customer call guide page(s) to discuss Provider's products and services. Provider agrees to pay a

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price for the additional page(s) to be determined by GTE Directories, provided that such price shall be nondiscriminatory to GTE and Provider

- 3.4 Prior to publication, Provider will receive final "ok to print" proof copies for their review and approval. Provider will be given a reasonable period of time to review and approve the proof copies and communicate its approval to GTE

ARTICLE 4 DISTRIBUTION

- 4.1 Upon directory publication GTE will arrange for the distribution of the directory to Provider's service subscribers in the directory coverage area at no charge. Provider's service subscribers will receive directories at the same time, and at the same level of quality as GTE's service subscribers.
- 4.2 After directory publication and over the life of the directory GTE will arrange for the distribution of the directory to all Provider's new subscribers who previously did not have dialtone and those existing subscribers of Provider needing replacement or additional directories. Provider will pay GTE fees for all secondary or additional directory distributions made under this Section 4.2.
- 4.3 Provider will supply GTE in a timely manner with all required subscriber mailing information including non-listed and non-published subscriber mailing information, to enable GTE to perform its distribution responsibilities.
- 4.4 GTE will make available to Provider's service subscribers directory recycling services under the same terms and conditions that GTE makes such services available to its own local service customers.

ARTICLE 5. TERM

- 5.1 Term. Subject to the termination provisions contained in this Agreement, the term of this Agreement shall be two (2) years from the effective date referenced above. Thereafter, this Agreement shall remain in effect until either Party gives the other Party at least one hundred twenty (120) days' prior written notice of termination, which termination shall be effective on the date specified in the notice, subject to the survival provisions set forth in Section 5.4.
- 5.2 Termination by State. This Agreement may be terminated on a State-by-State basis in accordance with the procedure set forth in Section 5.1.

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Notwithstanding termination of this Agreement in one or more States, this Agreement shall remain in full force and effect in the remaining States

- 5.3 Termination upon Sale Notwithstanding anything to the contrary contained herein, GTE may terminate this Agreement as to a specific GTE exchange in the event that GTE sells or otherwise transfers the exchange to a non-affiliate. GTE shall provide Provider with at least ninety (90) days' prior written notice of such termination, which shall be effective on the date specified in the notice. Notwithstanding termination of this Agreement as to a specific exchange, this Agreement shall remain in full force and effect in the remaining exchanges.
- 5.4 Survival Notwithstanding the termination of this Agreement in a State, the Parties' obligations with respect to any directories whose annual publication cycle has begun prior to the effective date of termination shall survive such termination. For example, if a Party terminates this Agreement in State A effective as of June 30, 1997, the Parties' survival obligations shall apply as follows:

<u>Exchange</u>	<u>Beginning of Publication Cycle*</u>	<u>Expiration of Obligations</u>
1	January 1, 1997	December 31, 1997
2	June 1, 1997	May 31, 1998
3	August 1, 1997	June 30, 1997

- * A publication cycle begins the day following the listing activity close date for the current year's publication.

ARTICLE 6 CONFIDENTIAL INFORMATION

- 6.1 Identification Either Party may disclose to the other proprietary or confidential customer, technical, or business information in written, graphic, oral or other tangible or intangible forms ("Confidential Information"). In order for information to be considered Confidential Information under this Agreement, it must be marked "Confidential" or "Proprietary," or bear a marking of similar import. Orally disclosed information shall be deemed Confidential Information only if contemporaneously identified as such and reduced to writing and delivered to the other Party with a statement or marking of confidentiality within twenty (20) calendar days after oral disclosure.
- 6.2 Handling In order to protect such Confidential Information from improper disclosure, each Party agrees:

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- (a) That all Confidential Information shall be and shall remain the exclusive property of the source
- (b) To limit access to such Confidential Information to authorized employees who have a need to know the Confidential Information for performance of this Agreement.
- (c) To keep such Confidential Information confidential and to use the same level of care to prevent disclosure or unauthorized use of the received Confidential Information as it exercises in protecting its own Confidential Information of a similar nature
- (d) Not to copy, publish, or disclose such Confidential Information to others or authorize anyone else to copy, publish, or disclose such Confidential Information to others without the prior written approval of the source
- (e) To return promptly any copies of such Confidential Information to the source at its request
- (f) To use such Confidential Information only for purposes of fulfilling work or services performed hereunder and for other purposes only upon such terms as may be agreed upon between the Parties in writing

6.3 Exceptions. These obligations shall not apply to any Confidential Information that was legally in the recipient's possession prior to receipt from the source, was received in good faith from a third party not subject to a confidential obligation to the source, now is or later becomes publicly known through no breach of confidential obligation by the recipient, was developed by the recipient without the developing persons having access to any of the Confidential Information received in confidence from the source, or that is required to be disclosed pursuant to subpoena or other process issued by a court or administrative agency having appropriate jurisdiction, provided, however, that the recipient shall give prior notice to the source and shall reasonably cooperate if the source deems it necessary to seek protective arrangements.

6.4 Survival. The obligation of confidentiality and use with respect to Confidential Information disclosed by one Party to the other shall survive any termination of this Agreement for a period of three years from the date of the initial disclosure of the Confidential Information.

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ARTICLE 7 INDEMNIFICATION

- 7.1 **Indemnification** Each Party agrees to release, indemnify, defend, and hold harmless the other Party from all losses, claims, demands, damages, expenses, suits, or other actions, or any liability whatsoever, including, but not limited to, costs and attorney's fees, whether suffered, made, instituted, or asserted by any other party or person, for invasion of privacy, personal injury to or death of any person or persons, or for losses, damages, or destruction of property, whether or not owned by others, proximately caused by the indemnifying Party's negligence or willful misconduct, regardless of form of action.
- 7.2 **DISCLAIMER** EXCEPT AS SPECIFICALLY PROVIDED TO THE CONTRARY IN THIS AGREEMENT, GTE AND PROVIDER MAKE NO REPRESENTATIONS OR WARRANTIES CONCERNING THE SPECIFIC QUALITY OF ANY SERVICES PROVIDED UNDER THIS AGREEMENT. GTE AND PROVIDER DISCLAIM, WITHOUT LIMITATION, ANY WARRANTY OR GUARANTEE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR FROM USAGES OF TRADE.
- 7.3 **LIMITATION OF LIABILITY** GTE'S AND PROVIDER'S LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, SHALL BE LIMITED TO DIRECT DAMAGES. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, UNDER NO CIRCUMSTANCE SHALL GTE BE RESPONSIBLE OR LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES.

ARTICLE 8. DISPUTE RESOLUTION

- 8.1 **Alternative to Litigation** The Parties desire to resolve disputes arising out of this Agreement without litigation. Accordingly, except for action seeking a temporary restraining order or an injunction related to the purposes of this Agreement, or suit to compel compliance with this dispute resolution process, the Parties agree to use the following alternative dispute resolution procedure as their sole remedy with respect to any controversy or claim arising out of or relating to this Agreement or its breach.
- 8.2 **Negotiations** At the written request of a Party, each Party will appoint a knowledgeable, responsible representative to meet and negotiate in good faith to resolve any dispute arising under this Agreement. The Parties intend that

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these negotiations be conducted by non-lawyer, business representatives. The location, format, frequency, duration, and conclusion of these discussions shall be left to the discretion of the representatives. Upon agreement, the representatives may utilize other alternative dispute resolution procedures such as mediation to assist in the negotiations. Discussions and correspondence among the representatives for purposes of these negotiations shall be treated as confidential information developed for purposes of settlement, exempt from discovery and production, which shall not be admissible in the arbitration described below or in any lawsuit without the concurrence of all Parties. Documents identified in or provided with such communications, which are not prepared for purposes of the negotiations, are not so exempted and may, if otherwise admissible, be admitted in evidence in the arbitration or lawsuit.

- 8.3 Arbitration. If the negotiations do not resolve the dispute within sixty (60) days of the initial written request, the dispute shall be submitted to binding arbitration by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. A Party may demand such arbitration in accordance with the procedures set out in those rules. Discovery shall be controlled by the arbitrator and shall be permitted to the extent set out in this section. Each Party may submit in writing to a Party, and that Party shall so respond to, a maximum of any combination of thirty-five (35) (none of which may have subparts) of the following: interrogatories, demands to produce documents, or requests for admission. Each Party is also entitled to take oral depositions of no more than three (3) individuals of another Party. Additional discovery may be permitted upon mutual agreement of the Parties. The arbitration hearing shall be commenced within sixty (60) days of the demand for arbitration. The arbitration shall be held in Dallas, Texas. The arbitrator shall control the scheduling so as to process the matter expeditiously. The Parties may submit written briefs. The arbitrator shall rule on the dispute by issuing a written opinion within thirty (30) days after the close of hearings. The times specified in this section may be extended upon mutual agreement of the Parties or by the arbitrator upon a showing of good cause. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction. Arbitration under this paragraph shall be governed by the United States Arbitration Act, 9 U.S.C. §§ 1-16.

- 8.4 Costs. Each Party shall bear its own costs of these procedures. A Party seeking discovery shall reimburse the responding Party the costs of production of documents (including search time and reproduction costs). The Parties shall equally split the fees of the arbitration and the arbitrator.

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ARTICLE 9 MISCELLANEOUS

- 9.1 **Amendments** Any amendment, modification, or supplement to this Agreement must be in writing and signed by an authorized representative of each Party. The term "this Agreement" shall include future amendments, modifications, and supplements.
- 9.2 **Assignment** Any assignment by either Party of any right, obligation, or duty, in whole or in part, or of any interest, without the written consent of the other Party shall be void, except that either Party may assign all of its rights, obligations, and duties to any legal entity that is a subsidiary or affiliate of that Party without consent, but with written notification. The effectiveness of an assignment shall be conditioned upon the assignee's assumption of the rights, obligations, and duties of the assigning Party.
- 9.3 **Authority** Each person whose signature appears below represents and warrants that he or she has authority to bind the Party on whose behalf he or she has executed this Agreement.
- 9.4 **Binding Effect** This Agreement shall be binding on and inure to the benefit of the respective successors and permitted assigns of the Parties.
- 9.5 **Compliance with Law** Each Party shall comply with all federal, state, and local statutes, regulations, rules, ordinances, judicial decisions, and administrative rulings applicable to its performance as described in this Agreement.
- 9.6 **Consent** Where consent, approval, or mutual agreement is required of a Party, it shall not be unreasonably withheld or delayed.
- 9.7 **Default** If either Party refuses or fails in any material respect properly to perform its obligations under this Agreement, or violates any of the material terms or conditions of this Agreement, such refusal, failure, or violation shall constitute a default. In such event, the non-defaulting Party may so notify the other Party in writing of the default and allow that Party a period of thirty (30) calendar days to cure such default. If the defaulting Party does not cure such default within said thirty (30) calendar days, the non-defaulting Party shall have the right to terminate this Agreement upon written notice to the other Party, in addition to exercising any other remedies permitted under this Agreement or applicable law.
- 9.8 **Entire Agreement** This Agreement constitutes the entire agreement of the Parties pertaining to the subject matter of this Agreement and supersedes all

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prior agreements, negotiations, proposals, and representations, whether written or oral, and all contemporaneous oral agreements, negotiations, proposals, and representations concerning such subject matter. No representations, understandings, agreements, or warranties, expressed or implied, have been made or relied upon in the making of this Agreement other than those specifically set forth herein.

- 9.9 **Expenses.** Except as specifically set out in this Agreement, each Party shall be solely responsible for its own expenses involved in all activities related to the subject of this Agreement.
- 9.10 **Force Majeure.** In the event performance of this Agreement, or any obligation hereunder, is prevented, restricted, or interfered with by reason of acts of God, wars, revolution, civil commotion, acts of public enemy, embargo, acts of the government in its sovereign capacity, labor difficulties, including without limitation, strikes, slowdowns, picketing, or boycotts, unavailability of equipment from vendor, changes requested by Provider, or any other circumstances beyond the reasonable control and without the fault or negligence of the Party affected, the Party affected, upon giving prompt notice to the other party, shall be excused from such performance on a day-to-day basis to the extent of such prevention, restriction, or interference (and the other Party shall likewise be excused from performance of its obligations on a day-to-day basis until the delay, restriction or interference has ceased); provided, however, that the Party so affected shall use diligent efforts to avoid or remove such causes of nonperformance and both Parties shall proceed whenever such causes are removed or cease.
- 9.11 **Governing Law.** This Agreement shall be governed by and construed in accordance with the domestic laws of the state of Texas.
- 9.12 **Headings.** The headings in this Agreement are inserted for convenience and identification only and shall not be considered in the interpretation of this Agreement.
- 9.13 **Independent Contractor Relationship.** The persons provided by each Party shall be solely that Party's employees and shall be under the sole and exclusive direction and control of that Party. They shall not be considered employees of the other Party for any purpose. Each Party shall remain an independent contractor with respect to the other and shall be responsible for compliance with all laws, rules and regulations involving, but not limited to, employment of labor, hours of labor, health and safety, working conditions and payment of wages. Each Party shall also be responsible for payment of taxes, including federal, state and municipal taxes, chargeable or assessed with

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respect to its employees, such as Social Security, unemployment, workers' compensation, disability insurance, and federal and state withholding. Each Party shall indemnify the other for any loss, damage, liability, claim, demand, or penalty that may be sustained by reason of its failure to comply with this provision.

- 9.14 **Multiple Counterparts.** This Agreement may be executed multiple counterparts, each of which shall be deemed an original, but all of which shall together constitute but one and the same document.
- 9.15 **No Offer.** Submission of this Agreement for examination or signature does not constitute an offer by GTE for the provision of the products or services described herein. This Agreement will be effective only upon execution and delivery by both GTE and Provider.
- 9.16 **Notices.** Any notice to a Party required or permitted under this Agreement shall be in writing and shall be deemed to have been received on the date of service if served personally on the date receipt is acknowledged in writing by the recipient if delivered by regular mail, or on the date stated on the receipt if delivered by certified or registered mail or by a courier service that obtains a written receipt. Notice may also be provided by facsimile, which shall be effective on the next Business Day following the date of transmission. "**Business Day**" shall mean Monday through Friday, GTE/Provider holidays excepted. Any notice shall be delivered using one of the alternatives mentioned in this section and shall be directed to the applicable address indicated below or such address as the Party to be notified has designated by giving notice in compliance with this section.

If to GTE:

GTE Telephone Operations
Attention: Allan M. Peters
600 Hidden Ridge, HQE02B62
Irving, Texas 75038
Facsimile number: 972/716-7899

If to Provider:

- 9.17 **Publicity.** Any news release, public announcement, advertising, or any form of publicity pertaining to this Agreement, provision of services pursuant to it, or association of the Parties with respect to provision of the services described in

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this Agreement shall be subject to prior written approval of both GTE and Provider

- 9.18 **Regulatory Agency Control** This Agreement shall at all times be subject to changes, modifications, orders, and rulings by the Federal Communications Commission and/or the applicable state utility regulatory commission to the extent the substance of this Agreement is or becomes subject to the jurisdiction of such agency. If this Agreement is subject to advance approval of a regulatory agency, this Agreement shall not become effective until fifteen (15) Business Days after receipt by the Parties of written notice of such approval. "Business Day" shall mean Monday through Friday, GTE/Provider holidays excepted. If the regulatory agency accepts this Agreement in part and rejects it in part, or makes a material modification to the Agreement as a condition of its approval, either Party may cancel this Agreement without penalty or liability upon written notice to the other Party. Each Party agrees to cooperate with each other and with any regulatory agency to obtain regulatory approval. During the term of this Agreement, each Party agrees to continue to cooperate with each other and with any regulatory agency so that the benefits of this Agreement may be achieved.
- 9.19 **Severability** If any provision of this Agreement is held by a court or regulatory body of competent jurisdiction to be unenforceable, the rest of the Agreement shall remain in full force and effect and shall not be affected unless removal of that provision results in a material change to this Agreement. In such a case, the Parties shall negotiate in good faith for replacement language. If replacement language cannot be agreed upon, either Party may terminate this Agreement.
- 9.20 **Subcontractors** GTE may enter into subcontracts with third parties or GTE affiliates for the performance of any of GTE's duties or obligations under this Agreement.
- 9.21 **Tariffs** To the extent this Agreement is inconsistent with the terms of any applicable GTE tariff, the terms and conditions of any such tariff shall supersede the terms of this Agreement and shall apply to the provision of the service by GTE to Provider. Each Party agrees to cooperate with each other and with any regulatory agency to obtain regulatory approval. During the term of this Agreement, each Party agrees to continue to cooperate with each other and with any regulatory agency so that the benefits of this Agreement may be achieved.
- 9.22 **Trademarks and Trade Names** Except as specifically set out in this Agreement, nothing in this Agreement shall grant, suggest, or imply any

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authority for one Party to use the name, trademarks, service marks, or trade names of the other for any purpose whatsoever. Provider does not acquire any right to use, and shall not use, the name "GTE," the GTE logo, or any other GTE trademark or service mark. Except to the extent necessary to perform the obligations under Section 3.1 and elsewhere in this Agreement, GTE does not acquire any right to use, and should not use, Provider's name, Provider's logo, or any other Provider trademark or service mark.

- 9.23 Waiver. The failure of either Party to insist upon the performance of any provision of this Agreement, or to exercise any right or privilege granted to it under this Agreement, shall not be construed as a waiver of such provision or any provisions of this Agreement, and the same shall continue in full force and effect.

IN WITNESS WHEREOF, each Party has executed this Agreement to be effective as of the date first above written.

GTE

Provider

By _____

By _____

Name _____

Name _____

Title _____

Title _____

Date _____

Date _____

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EXHIBIT A

GTE Telephone Operating Companies

1/14/97

GTE Alaska Incorporated

GTE Arkansas Incorporated, successor by merger with
Contel of Arkansas, Inc. d/b/a GTE Arkansas

GTE California Incorporated, successor by merger with
GTEL
Contel of California, Inc.

GTE Florida Incorporated

* GTE Communications Corporation

GTE Hawaiian Telephone Company Incorporated

* The Micronesian Telecommunications Corporation

GTE Midwest Incorporated, successor by merger with:

Contel of Iowa, Inc. d/b/a GTE Iowa

Contel of Kansas, Inc. d/b/a Contel System of Arkansas, d/b/a GTE Systems of
Arkansas, d/b/a Contel System of Iowa, d/b/a GTE Systems of Iowa

Contel of Missouri, Inc. d/b/a GTE Missouri

Contel System of Missouri, Inc. d/b/a GTE Systems of Missouri

The Kansas State Telephone Company, d/b/a Contel of Eastern Missouri,

d/b/a

GTE of Eastern Missouri

GTE North Incorporated, formerly Contel North Incorporated, successor to:

Contel of Illinois, Inc. d/b/a GTE Illinois

Contel of Indiana, Inc. d/b/a GTE Indiana

Contel of Pennsylvania, Inc. d/b/a GTE Pennsylvania

GTE Northwest Incorporated, successor by merger with:

Contel of the Northwest, Inc. d/b/a GTE Systems of the Northwest

* GTE West Coast Incorporated

GTE South Incorporated, successor by merger with:

Contel of Kentucky, Inc. d/b/a GTE Kentucky

Contel of North Carolina, Inc. d/b/a GTE North Carolina

Contel of South Carolina, Inc. d/b/a GTE South Carolina

Contel of Virginia, Inc. d/b/a GTE Virginia

GTE Southwest Incorporated, successor by merger with:

Contel of Texas, Inc. d/b/a GTE Texas

Contel of the West Inc. d/b/a GTE West

Contel of Minnesota, Inc. d/b/a GTE Minnesota

Contel of the South, Inc. d/b/a GTE Systems of the South

* = Subsidiary of Company whose name appears above in bold type.

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EXHIBIT B

STATES

Alabama
Alaska
Arizona
Arkansas
California
Florida
Hawaii
Idaho
Illinois
Indiana
Iowa
Kentucky
Michigan
Minnesota

Missouri
Nebraska
Nevada
New Mexico
North Carolina
Ohio
Oklahoma
Oregon
Pennsylvania
South Carolina
Texas
Virginia
Washington
Wisconsin

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APPENDIX L RECIPROCAL COMPENSATION FOR CALL TERMINATION

1. This document describes the reciprocal compensation arrangements between CLEC and GTE for Local Tariff, Toll and Switched Access Services. The Parties shall compensate each other for transport and termination of such traffic at the rates provided in Appendix C and/or the appropriate Parties' Switched Access Tariff.
2. Compensation for Call Termination
 - A. Reciprocal compensation does not apply in a resale environment.
 - B. The following compensation terms shall apply in all cases where CLEC purchases GTE's unbundled Local Switching
 1. For local intra-switch calls between lines connected to GTE's switch where CLEC has purchased GTE's unbundled Local Switching, the Parties agree to impose no call termination charges on each other. GTE's Local Switching charge will apply as described below where the call is:
 - (a) Originated by CLEC's customer and completed to a GTE customer.
 - (1) (For use of the local switch): Local Switching charge at the originating office will apply to CLEC.
 - (b) Originated by CLEC's customer and completed to the customer of a third party LEC (not affiliated with CLEC) using GTE's unbundled Local Switching.
 - (1) (For use of the local switch): Local Switching charge at the originating office will apply to CLEC.
 - (c) Originated by CLEC's customer and completed to another CLEC's customer using GTE's unbundled Local Switching.
 - (1) (For use of the local switch): Local Switching charge at the originating office will apply to CLEC.

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- (d) Originated by a GTE customer and terminated to CLEC's customer using GTE's unbundled Local Switching

- (1) No Local Switching charge will apply

- (e) Originated by the customer of a third party LEC (not affiliated with CLEC) using GTE's unbundled Local Switching and terminated to CLEC's customers using GTE's unbundled Local Switching

- (1) No Local Switching charge will apply to CLEC

2. For Local inner-switch calls where CLEC has purchased GTE's unbundled Local Switching

GTE's charges will apply to CLEC described below where the call is

- (a) Originated from CLEC's end-user customer using GTE's unbundled Local Switching and completed to a GTE customer.

- (1) (For use of the local switch) Local Switching charge at the originating office

- (2) A mileage-based transport charge will apply when CLEC uses GTE's transport.

- (3) (For call termination): Charges for local interconnection/call termination, when applicable

- (b) Originated from CLEC's customer using GTE's unbundled Local Switching and completed to a third party LEC (not affiliated with CLEC) customer using GTE's unbundled Local Switching

- (1) (For use of the local switch) Local Switching charge at the originating office.

- (2) A mileage-based transport charge will apply when CLEC uses GTE's transport.

- (c) Originated from CLEC's customer using GTE's unbundled Local Switching and completed to the interconnected network of a third party LEC (not affiliated with CLEC).

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- (1) (For use of the local switch) Local Switching charge at the originating office
- (2) A mileage-based transport charge will apply when CLEC uses GTE's transport, and mileage shall be measured between the originating office and the POI of the third party's network
- (d) Originated from CLEC's customer using GTE's unbundled Local Switching and completed to CLEC's customer using GTE's unbundled Local Switching
 - (1) (For use of the local switch) Local Switching charge at the originating office
 - (2) A mileage-based transport charge will apply when CLEC uses GTE's transport
 - (3) (For use of the local switch) Local Switching charge at the terminating office
- (d) Originated by a GTE customer and terminated to CLEC's customer using GTE's unbundled Local Switching
 - (1) (For use at local switch) Local Switching Charge at the terminating office.
 - (2) (For call termination): CLEC shall charge GTE for local interconnection/call termination, when applicable.
- (f) Originated by a customer of a third-party LEC (not affiliated with CLEC) using GTE's unbundled Local Switching and terminated to CLEC's customer using GTE's unbundled Local Switching.
 - (1) (For use of the local switch): Local Switching charge at the terminating office.
- (g) Originated by a customer of the interconnected network of a third-party LEC (not affiliated with CLEC) and terminated to CLEC's customer using GTE's unbundled Local Switching.

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- (1) (For use of the local switch) Local Switching charge at the terminating office
- 3 **For intraLATA toll calls where CLEC has purchased GTE's unbundled Local Switching charges per Unbundled Network Element pricing shall apply as follows**
 - (a) **Originated by CLEC's customer and completed to a GTE customer**
 - (1) (For use of the local switch) Local Switching charge plus RIC and CCLC (Residual Interconnection Charge) at the originating office
 - (2) Shared transport charge between the two offices will apply when CLEC uses GTE's transport
 - (3) (For call termination) End Office Switching charge at the terminating office (Switched Access Rate)
 - (4) RIC and CCLC at the terminating office.
 - (b) **Originated by CLEC's customer and completed to the customer of a third-party LEC (not affiliated with CLEC) using GTE's unbundled Local Switching in a distant end office.**
 - (1) (For use of the local switch) Local Switching charge plus RIC and CCLC at the originating office.
 - (2) Shared transport charge between the two offices will apply when CLEC uses GTE's transport.
 - (c) **Originated by CLEC customer and completed to the network of a third-party LEC (not affiliated with CLEC) interconnected with GTE's network**
 - (1) (For use of the local switch) Local Switching charge, plus RIC and CCLC, at the originating office.
 - (2) Common transport charge will apply when CLEC uses GTE's transport, and mileage shall be measured between the originating office and the POI of the third party's network.
 - (3) Tandem Switching, where applicable.

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- (d) **Originated by CLEC's customer and completed by another of CLEC's customers being served through GTE's unbundled Local Switching in a distant office**
 - (1) **(For use of the local switch) Local Switching charge plus RIC and CCLC at the originating office**
 - (2) **Shared transport charge between the two offices will apply when CLEC uses GTE's transport**
 - (3) **(For use of the local switch) Local Switching charge plus RIC and CCLC at the terminating office**
 - (e) **Originated by a GTE customer and terminated to CLEC's customer using GTE's unbundled Local Switching**
 - (1) **(For use of the local switch) Local Switching charge plus RIC and CCLC at the terminating office**
 - (2) **(For call termination) CLEC will charge GTE Local Switching at the terminating office (Switched Access Rate)**
 - (3) **(For call termination) CLEC will charge GTE NIC and CCLC at the terminating office**
 - (f) **Originated by the customer of a third-party LEC (not affiliated with CLEC) using GTE's unbundled Local Switching in a distant end office and terminated to CLEC's customer using GTE's unbundled Local Switching**
 - (1) **(For use of the local switch) Local Switching charge plus RIC and CCLC at the terminating office**
 - (g) **Originated by a customer of the network of a third-party LEC (not affiliated with CLEC) interconnected with GTE's network and terminated to CLEC's customer using GTE's unbundled Local Switching**
 - (1) **(For use of the local switch): Local Switching charge plus RIC and CCLC at the terminating office**
4. **For intrastate Switched Access calls where CLEC's is using GTE's unbundled Local Switching for calls originated from or terminated to an IXC for completion:**

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- (c) For calls terminating to CLEC's end-user customer from CLEC's own IXC switch (or that of an affiliate) for completion
 - (1) (For use of the local switch) Local Switching charge at the terminating office
 - (2) Terminating RIC and CCLC
 - (3) GTE will charge CLEC's IXC (affiliate) the following Switched Access elements on a meet-point basis:
 - a Local Transport;
 - b Tandem Switching
 - (4) GTE will charge CLEC's IXC (affiliate) for the following Switched Access elements on a meet-point basis:
 - a Terminating RIC and CCLC
 - b Local Switching
- (d) For calls terminating to CLEC's customer from an IXC switch not affiliated with CLEC
 - (1) (For use of the local switch) Local Switching charge at the terminating office
 - (2) Terminating RIC and CCLC
 - (3) GTE shall charge the IXC for the following terminating Switched Access on a meet-point basis:
 - a Local Transport;
 - b Tandem Switching
 - (4) GTE will charge IXC for the following Switched Access elements on a meet-point basis:
 - a Terminating RIC and CCLC;
 - b Local Switching

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- 5** For interstate Switched Access calls where CLEC is using GTE's unbundled Local Switching for calls originated from or terminated to an IXC for completion:
- (a) For calls originated from CLEC's customer to CLEC's own IXC switch (or that of an affiliate) for completion
 - (1) (For use of the local switch) Local Switching charge at the originating office.
 - (2) Originating Residual Interconnection Charge (RIC) and CCL.
 - (3) GTE shall charge CLEC's IXC affiliate for the following originating Switched Access on a meet-point basis:
 - a. Local Transport;
 - b. Tandem Switching.
 - (4) CLEC will charge CLEC's IXC affiliate the following Switched Access elements on a meet-point basis:
 - a. Originating RIC;
 - b. Originating CCLC;
 - c. Local Switching.
 - (b) For calls originated from CLEC's customer to an IXC's switch not affiliated to CLEC.
 - (1) (For use of the local switch): Local Switching charge at the terminating office.
 - (2) Originating RIC and CCLC.
 - (3) GTE shall charge the IXC for the following originating Switched Access on a meet-point basis:
 - a. Local Transport;]
 - b. Tandem Switching.

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- (4) CLEC will charge IXC the following Switched Access elements on a meet-point basis:
 - a. Originating RIC.
 - b. Originating CCLC.
 - c. Local Switching
- (c) For calls terminating to CLEC's customer for CLEC's own IXC switch (or that of an affiliate) for completion.
 - (1) (For use of the local switch) Local Switching charge at the terminating office.
 - (2) Terminating RIC and CCL.
 - (3) GTE will charge CLEC's IXC (affiliate) the following Switched Access elements on a meet-point basis:
 - a. Local Transport.
 - b. Tandem Switching
 - (4) CLEC will charge CLEC's IXC affiliate the following Switched Access elements on a meet-point basis:
 - a. Terminating RIC.
 - b. Terminating CCLC.
 - c. Local Switching.
- (d) For calls terminating to CLEC's customer from an IXC switch not affiliated with CLEC.
 - (1) (For use of the local switch) Local Switching charge at the terminating office.
 - (2) Terminating RIC and CCL.
 - (3) GTE will charge the non-affiliated IXC for the following terminating Switched Access on a meet-point basis:

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- a **Local Transport.**
 - b **Tandem Switching**
- (4) **CLEC will charge IXC the following Switched Access elements on a meet-point basis**
- a **Terminating RIC.**
 - b **Terminating CCLC.**
 - c **Local Switching**

ICG EXHIBIT NO. 4
INTERIM AGREEMENT

INTERCONNECTION AGREEMENT

BETWEEN

GTE FLORIDA INCORPORATED

AND

ICG TELECOM GROUP, INC.

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This Interconnection Agreement (the "Agreement"), is made effective as of _____, 199__, by and between GTE Florida Incorporated, with its address for purposes of this Agreement at 600 Hidden Ridge Dr. Irving TX, 75038 ("GTE"), and ICG Telecom Group, Inc., ("ICG") with its address for this Agreement at 9605 East Maroon Circle, Englewood, Colorado 80112. GTE and ICG being referred to collectively as "the Parties" and individually as a "Party"). This Agreement covers services in the state of Florida ("State").

Whereas, GTE is an incumbent local exchange telecommunications company ("ILEC"), authorized to provide telecommunications in the state of "Florida"; and

Whereas, ICG is a certified competitive local exchange telecommunications company which is authorized to provide local telecommunication services in the state of "Florida"; and

WHEREAS, interconnection between competing Local Exchange Carriers ("LECs") is necessary and desirable for the mutual exchange and termination of traffic originating on each LEC's network; and

WHEREAS, the Parties desire to exchange such traffic and related signaling in a technically and economically efficient manner at defined and mutually agreed upon points of interconnection; and

WHEREAS, the Parties wish to enter into an agreement to interconnect their respective telecommunications networks on terms that are fair and equitable to both Parties; and

WHEREAS, the Parties agree that this Interim Interconnect Agreement is the first step in an effort to comply with the requirements of Section 251 of the Telecommunications Act of 1996.

WHEREAS, this is an interim Agreement, the Parties will continue to negotiate pursuant to the Telecommunications Act of 1996, any applicable state laws, and, as effective, the applicable FCC and state regulations until they have reached an agreement addressing all elements of said Act, laws, and regulations;

NOW, THEREFORE, in consideration of the mutual provisions contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, GTE and ICG hereby covenant and agree as follows:

ARTICLE I
SCOPE AND INTENT OF AGREEMENT

Pursuant to this Agreement, the Parties will extend certain arrangements to one another within each area in which they both operate within the State for purposes of interconnection and the exchange of traffic between their respective networks.

This Agreement will be submitted to the Florida Public Service Commission (the "Commission"), and the Parties will specifically request that the Commission refrain from taking any action to modify, suspend or otherwise delay implementation of this Agreement. For the term of this Agreement, the Parties shall not advocate before any legislative, regulatory, judicial or other public forum that any terms of this Agreement between the Parties be modified, suspended or eliminated. Notwithstanding this mutual commitment, the Parties agree that their entrance into this Agreement is without prejudice to any positions they may have taken previously, or may take in the future, in any legislative, regulatory, judicial or other public forum addressing any matters, including matters related to the same types of arrangements covered in this Agreement. The Parties have agreed to the provisions of this agreement in the interests of addressing expedient business interests, and the terms and conditions herein are without prejudice to any position either party may take in the future and are not to be considered as precedent for any future agreement.

ARTICLE II DEFINITIONS

1. General Definitions

Except as otherwise specified herein, the following definitions shall apply to all Articles contained in this Agreement. Additional definitions that are specific to the matters covered in a particular Article may appear in that Article. In the event of a conflict or discrepancy between the provisions of this Agreement or the definitions contained herein and the Act, or the regulations of the FCC or the regulations of a Commission within its state of jurisdiction, the provisions and definitions of the Act or such regulations shall govern.

- 1.1 "Act" means the Communications Act of 1934 (47 U.S.C. §§ 151 et. seq.), as amended by the Telecommunications Act of 1996, and as from time-to-time interpreted in the regulations, as effective, of the FCC or a Commission within its state of jurisdiction
- 1.2 An "Affiliate" is as defined in the Act.
- 1.3 "Bellcore" means an organization owned jointly by the Bell regional holding companies or any entity that assumes the functions performed by Bellcore. Bellcore provides certain centralized technical and management services for the regional holding companies and also provides generic requirements for the telecommunications industry for products, services and technologies.
- 1.4 "Bill-and-Keep Arrangement" means a compensation arrangement whereby the Parties do not render bills to each other for the termination of traffic specified in this Agreement
- 1.5 "Business Day" shall mean Monday through Friday, except for holidays on which the U.S. mail is not delivered.
- 1.6 "Centralized Message Distribution System" ("CMDS") is the transport system that is used to exchange outcollect and Carrier Access Billing System ("CABS") access messages among each other and other parties connected to CMDS
- 1.7 "Centum Call Seconds" is a unit of telephone traffic numerically equal to 100 call seconds.
- 1.8 "Charge Number" is a ("CCIS") signaling parameter which refers to the number transmitted through the network identifying the billing number of the calling party
- 1.9 "CELLcodes" means Common Language Location Identifier Codes

- 1.10 **"Commission"** means the applicable state regulatory body.
- 1.11 **"Common Channel Interoffice Signaling" or "CCIS"** means a high-speed specialized packet-switched communications network that is separate (out-of-band) from the public packet-switched and message networks. CCIS carries addressed signaling messages for individual trunk circuits and/or database-related services between Signaling Points in the CCIS network using SS7 signaling protocol.
- 1.12 A **"Controlled Entity"** of a Party means a person, corporation or other legal entity that, directly or indirectly, owns or controls a Party, or is owned or controlled by, or is under common ownership or control with a Party. For purposes of this definition, the term "own" means to have a majority ownership interest in, or have voting control of a majority of the ownership interests in, such corporation or other legal entity.
- 1.13 **"Control Office"** is an exchange carrier center or office designated as its company's single point of contact for the provisioning and maintenance of its portion of interconnection arrangements.
- 1.14 **"Cross Connection"** means an intra-wire center channel connecting the parties' separate pieces of telecommunications equipment.
- 1.15 **"DS1"** is a digital signal rate of 1.544 Mbps.
- 1.16 **"DS3"** is a digital signal rate of 44.736 Mbps.
- 1.17 **"Economic Centum Call Seconds" (ECCS)** is the designed or engineered CCS load carried by the last and least efficient trunk in a high usage trunk group and at which point traffic overflows to the alternate route.
- 1.18 **"Electronic File Transfer"** refers to any system/process which utilizes an electronic format and protocol to send/receive data files.
- 1.19 **"EAS" (Extended Area Service)** means the mandatory extension of the toll free local serving area to include nearby exchange areas at the same basic service rates. EAS may include routes between exchanges of more than one LEC (Also, see "Optional EAS").
- 1.20 **"Exchange Message Record" or "EMR"** means the standard used for exchange of telecommunications message information among LECs for billable, unbillable, sample, settlement and study data. EMR format is contained in BR-010-200-010 CRIS Exchange Message Record, a Bellcore document that defines industry standards for exchange message records.

switches, with each LEC receiving an appropriate share of the transport element revenues as defined by their effective access tariffs.

- 1.32 **"MECAB"** refers to the *Multiple Exchange Carrier Access Billing* ("MECAB") document prepared by the Billing Committee of the Ordering and Billing Forum ("OBF"), which functions under the auspices of the Carrier Liaison Committee ("CLC") of the Alliance for Telecommunications Industry Solutions ("ATIS"). The MECAB document, published by Bellcore as Special Report SR-BDS-000983, contains the recommended guidelines for the billing of an access service provided by two or more LECs, or by one LEC in two or more states within a single LATA.
- 1.33 **"MECOD"** refers to the *Multiple Exchange Carriers Ordering and Design* ("MECOD") *Guidelines for Access Services - Industry Support Interface*, a document developed by the Ordering/Provisioning Committee under the auspices of the Ordering and Billing Forum ("OBF"), which functions under the auspices of the Carrier Liaison Committee ("CLC") of the Alliance for Telecommunications Industry Solutions ("ATIS"). The MECOD document, published by Bellcore as Special Report SR-STS-002643, establish methods for processing orders for access service which is to be provided by two or more LECs.
- 1.34 **"Mid-Span Fiber Meet"** means an Interconnection architecture whereby two carriers' fiber transmission facilities meet at a mutually agreed-upon POI.
- 1.35 **"NANP"** means the *"North American Numbering Plan"*, the system of telephone numbering employed in the United States, Canada, and the Caribbean countries that employ NPA 809.
- 1.36 **"Numbering Plan Area"** or **"NPA"** is also sometimes referred to as an area code. This is the three digit indicator which is defined by the "A", "B", and "C" digits of each 10-digit telephone number within the NANP. There are two general categories of NPA, **"Geographic NPAs"** and **"Non-Geographic NPAs"**. A Geographic NPA is associated with a defined geographic area, and all telephone numbers bearing such NPA are associated with services provided within that geographic area. A Non-Geographic NPA, also known as a **"Service Access Code"** or **"SAC Code"** is typically associated with a specialized telecommunications service which may be provided across multiple geographic NPA areas. 800, 900, 700, and 888 are examples of Non-Geographic NPAs.
- 1.37 **"NXX", "NXX Code", "Central Office Code"** or **"CO Code"** is the three digit switch entity indicator which is defined by the "D", "E", and "F" digits of a 10-digit telephone number within the NANP. Each NXX Code contains 10,000 station numbers. Historically, entire NXX code blocks have been assigned to specific individual local exchange end office switches.

- 1.38 **"OPTIONAL EAS"** is an option offered to telephone subscribers either to pay for calls to specific (nearby) end offices based on toll tariff rates, or to pay a higher local service rate and be able to call the end offices on a toll-free basis.
- 1.39 **"Point of Interconnection" or "POI"** denotes the physical equipment interface that establishes the technical interface, the test point and the point of operational responsibility hand-off between ICG and GTE for the local interconnection of their networks. The splice point at a Mid-Span Fiber Meet is not a POI.
- 1.40 **"Provider"** means GTE and **"Customer"** means ICG with respect to those services performed by GTE pursuant to Article IV and V. ICG shall be referred to as Provider and GTE shall be referred to as Customer with respect to those services performed by ICG.
- 1.41 **"PSAP"** means Public Safety Answering Points.
- 1.42 **"Rate Center"** means the specific geographic point and corresponding geographic area that are associated with one or more particular NPA-NXX Codes that have been assigned to a LEC for its provision of Exchange Services. The geographic point is identified by a specific V&H coordinate that is used to calculate distance-sensitive end user traffic to/from the particular NPA-NXXs associated with the specific Rate Center.
- 1.43 **"Routing Point"** denotes a location that a LEC has designated on its network as the homing (routing) point for traffic that terminates to Exchange Services provided by the LEC that bear a certain NPA-NXX designation. The Routing Point is used to calculate airline mileage for the distance-sensitive transport element charges of Switched Access Services. Pursuant to Balcer Practice BR795-100-100, the Routing Point may be an end office location, or a "LEC Consortium Point of Interconnection." The Routing Point must be in the same LATA as the associated NPA-NXX.
- 1.44 **"Signaling System 7" or "SS7"** means the signaling protocol, Version 7, of the CCIS network, based upon American National Standards Institute ("ANSI") standards.
- 1.45 **"Signal Transfer Point" or "STP"** means a packet switch in the CCIS network that is used to route signaling messages among SSPs, SPs, SCPs and other STPs in order to set up calls and to query databases for advanced services. STPs are provided in pairs for redundancy.
- 1.46 **"Synchronous Optical Network" or "SONET"** means synchronous electrical ("STS") or optical channel ("OC") connections.
- 1.47 **"Switched Access Service"** means the offering of facilities for the purpose of the origination or termination of traffic to or from Exchange Service customers in a given

area pursuant to a switched access tariff. Switched Access Services include: Feature Group A, Feature Group B, Feature Group D, 700, 800, 888, and 900 access services.

- 1.48 **"Wire Center"** means a building or space within a building that serves as an aggregation point on a LEC's network, where transmission facilities and circuits are connected or switched.

ARTICLE III GENERAL PROVISIONS

1. **Scope of General Provisions.** Except as may otherwise be set forth in a particular Article or Appendix of this Agreement, in which case the provisions of such Article or Appendix shall take precedence, these General Provisions apply to all Articles and Appendices of this Agreement.
2. **Term and Termination.**
 - 2.1 **Term.** Subject to the termination provisions contained in this Agreement, the term of this Agreement shall be one year from the date the first access service request (ASR) from ICG or from another facility provider ordering on behalf of ICG, but no sooner than five Business Days after the Parties receive written notice of approval by the Commission and shall continue in effect for consecutive one (1) year terms until either Party gives the other Party at least ninety (90) calendar days' written notice of termination, which termination shall be effective at the end of the then-current term.
 - 2.2 **Post-Termination Arrangements.** Except in the case of termination as a result of either Party's default or a termination upon sale, for service arrangements made available under this Agreement and existing at the time of termination, those arrangements may continue without interruption under (a) a new arrangement voluntarily executed by the Parties (The interconnection arrangements in this Agreement shall remain in place until the Parties are able to reach and implement a new interconnection agreement); (b) standard terms and conditions approved and made generally effective by the Commission, if any; or (c) tariff terms and conditions made generally available to all local exchange carriers.
 - 2.3 **Termination Upon Default.** Either Party may terminate this Agreement in whole or in part in the event of a default by the other Party; *provided however*, that the non-defaulting Party notifies the defaulting party in writing of the alleged default and that the defaulting Party does not cure the alleged default within thirty (30) calendar days of receipt of written notice thereof. Default is defined to include:
 - (a) A Party's insolvency or the initiation of bankruptcy or receivership proceedings by or against the Party; or
 - (b) A Party's refusal or failure in any material respect properly to perform its obligations under this Agreement, or the violation by any Party of the material terms or conditions of this Agreement.

- 2.4 **Termination Upon Sale.** Notwithstanding anything to the contrary contained herein, a Party may terminate this Agreement as to a specific operating area or portion thereof of such Party if such Party sells or otherwise transfers the area or portion thereof or if such Party ceases to operate within a specific operating area or portion thereof. The Party shall provide the other Party with at least ninety (90) calendar days' prior written notice of such termination, which shall be effective on the date specified in the notice. Notwithstanding termination of this Agreement as to a specific operating area, this Agreement shall remain in full force and effect in the remaining operating areas. The provisions of this paragraph shall not become effective until one year after the execution of this agreement.
- 2.5 **Liability upon Termination.** Termination of this Agreement, or any part hereof, for any cause shall not release either Party from any liability which at the time of termination had already accrued to the other Party or which thereafter accrues in any respect to any act or omission occurring prior to the termination or from an obligation which is expressly stated in this Agreement to survive termination.
3. **Amendments.** Any amendment, modification, or supplement to this Agreement must be in writing and signed by an authorized representative of each Party. The term "this Agreement" shall include future amendments, modifications, and supplements.
4. **Assignment** Any assignment by either Party of any right, obligation, or duty, in whole or in part, or of any interest, without the written consent of the other Party shall be void, except that either Party may assign all of its rights, and delegate its obligations, liabilities and duties under this Agreement, either in whole or in part, to any entity that is, or that was immediately preceding such assignment, a Controlled Entity of that Party without consent, but with written notification. The effectiveness of an assignment shall be conditioned upon the assignee's written assumption of the rights, obligations, and duties of the assigning Party.
5. **Authority.** Each person whose signature appears on this Agreement represents and warrants that he or she has authority to bind the Party on whose behalf he or she has executed this Agreement.
6. **Billing and Payment.**
- 6.1 **Dispute.** If Customer disputes a billing statement, Customer shall notify Provider in writing regarding the nature and the basis of the dispute within 180 calendar days of the statement date or the dispute shall be waived. Provider and Customer shall diligently work toward resolution of all billing issues.

- 6.2 **Late Payment Charge.** If any undisputed amount due on the billing statement is not received by Provider on the payment due date, Provider may charge, and Customer agrees to pay, interest on the past due balance at a rate equal to the lesser of one and one-half percent (1½%) per month or the maximum nonusurious rate of interest under applicable law. Late payment charges shall be included on the next statement.
- 6.3 **Taxes.** Provider shall charge and collect from Customer, and Customer agrees to pay to Provider, appropriate federal, state, and local taxes, except to the extent Customer notifies Provider and provides to Provider appropriate documentation that Customer qualifies for a full or partial exemption.
7. **Binding Effect.** This Agreement shall be binding on and inure to the benefit of the respective successors and permitted assigns of the Parties.
8. **Compliance with Laws and Regulations.** Each Party shall comply with all federal, state, and local statutes, regulations, rules, ordinances, judicial decisions, and administrative rulings applicable to its performance under this Agreement.
9. **Confidential Information.**
- 9.1 **Identification.** Either Party may disclose to the other proprietary or confidential customer, technical, or business information in written, graphic, oral or other tangible or intangible forms ("Confidential Information"). In order for information to be considered Confidential Information under this Agreement, it must be marked "Confidential" or "Proprietary," or bear a marking of similar import. Orally disclosed information shall be deemed Confidential Information only if contemporaneously identified as such with an opportunity for the receiving party to decline the receipt of such information and reduced to writing and delivered to the other Party with a statement or marking of confidentiality within twenty (20) calendar days after oral disclosure.
- 9.2 **Handling.** In order to protect such Confidential Information from improper disclosure, each Party agrees:
- (a) That all Confidential Information shall be and shall remain the exclusive property of the source;
 - (b) To limit access to such Confidential Information to authorized employees who have a need to know the Confidential Information for performance of this Agreement;

- (c) To keep such Confidential Information confidential and to use the same level of care to prevent disclosure or unauthorized use of the received Confidential Information as it exercises in protecting its own Confidential Information of a similar nature;
- (d) Not to copy, publish, or disclose such Confidential Information to others or authorize anyone else to copy, publish, or disclose such Confidential Information to others without the prior written approval of the source;
- (e) To return promptly any copies of such Confidential Information to the source at its request; and
- (f) To use such Confidential Information only for purposes of fulfilling work or services performed hereunder and for other purposes only upon such terms as may be agreed upon between the Parties in writing.

9.3 Exceptions. Unless otherwise agreed, the obligations of confidentiality and non-use set forth in this Agreement do not apply to such Proprietary Information as:

- (i) was at the time of receipt already known to the receiving Party free of any obligation to keep it confidential evidenced by written records prepared prior to delivery by the disclosing Party; or
- (ii) is or becomes publicly known through no wrongful act of the receiving Party; or
- (iii) is rightfully received from a third person having no direct or indirect secrecy or confidentiality obligation to the disclosing Party with respect to such information; or
- (iv) is independently developed by an employee, agent, or contractor of the receiving Party which individual is not involved in any manner with the provision of services pursuant to the Agreement and does not have any direct or indirect access to the Proprietary Information; or
- (v) is disclosed to a third person by the disclosing Party without similar restrictions on such third person's rights; or
- (vi) is approved for release by written authorization of the disclosing Party; or
- (vii) is required to be made public by the receiving Party pursuant to applicable law or regulation provided that the receiving Party shall give sufficient

notice of the requirement to the disclosing Party to enable the disclosing Party to seek protective orders.

- 9.4 If a Receiving Party desires to disclose or provide to the Commission or the FCC or any governmental agency with authority over this Agreement any Proprietary Information of the Disclosing Party, such Receiving Party shall, as a condition of such disclosure, (i) provide the Disclosing Party with written notice and the form of such proposed disclosure as soon as possible but in any event early enough to allow the Disclosing Party to protect its interests in the Proprietary Information to be disclosed and (ii) attempt to obtain in accordance with the applicable procedures of the intended recipient of such Proprietary Information an order, appropriate protective relief or other reliable assurance that confidential treatment shall be accorded to such Proprietary Information.
- 9.5 Survival. The obligation of confidentiality and use with respect to Confidential Information disclosed by one Party to the other shall survive for a period of three (3) years from the date of the initial disclosure of the Confidential Information notwithstanding any termination of this Agreement.
10. Consent. Where consent, approval, or mutual agreement is required of a Party, it shall not be unreasonably withheld or delayed.
11. Cooperation on Fraud Minimization. The Parties shall cooperate with one another to investigate, minimize and take corrective action in cases of fraud. The Parties' fraud minimization procedures are to be cost effective and implemented so as not to unreasonably burden or harm one Party as compared to the other. At a minimum, such cooperation shall include, when permitted by law or regulation, providing the other Party, upon reasonable request, information concerning end users who terminate services to that Party without paying all outstanding charges, when that Party is notified that such end user seeks service from the other Party. If required, it shall be the responsibility of the Party seeking the information to secure the end user's permission (in the format required by law) to obtain the information.

Although in most circumstances the end user's current telephone number may be retained by the end user when switching local service providers, if an end user has past due charges associated with the account, for which payment arrangements have not been made with one Party, the end user's previous telephone number will not be made available to the other Party if the end user has an outstanding balance of 60 days or more. Once this outstanding balance is paid the end user's previous telephone number will be made available to the other Party.

12. Dispute Resolution

- 12.1 **Alternative to Litigation.** Except as provided under Section 252 of the Act with respect to the approval of this Agreement by the Commission, the Parties desire to resolve disputes arising out of this Agreement without litigation. Accordingly, except for action seeking a temporary restraining order or an injunction related to the purposes of this Agreement, or suit to compel compliance with this dispute resolution process, the Parties agree to use the following alternative dispute resolution procedure as their sole remedy with respect to any controversy or claim arising out of or relating to this Agreement or its breach.
- 12.2 **Negotiations.** At the written request of a Party, each Party will appoint a knowledgeable, responsible representative to meet and negotiate in good faith to resolve any dispute arising under this Agreement. The Parties intend that these negotiations be conducted by non-lawyer, business representatives. The location, format, frequency, duration, and conclusion of these discussions shall be left to the discretion of the representatives. Upon agreement, the representatives may utilize other alternative dispute resolution procedures such as mediation to assist in the negotiations. Discussions and correspondence among the representatives for purposes of these negotiations shall be treated as confidential information developed for purposes of settlement, exempt from discovery and production, which shall not be admissible in the arbitration described below or in any lawsuit without the concurrence of all Parties. Documents identified in or provided with such communications, which are not prepared for purposes of the negotiations, are not so exempted and may, if otherwise admissible, be admitted in evidence in the arbitration or lawsuit.
- 12.3 **Arbitration.** If the negotiations do not resolve the dispute within thirty (30) days of the initial written request, the dispute shall be submitted to binding arbitration by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. A Party may demand such arbitration in accordance with the procedures set out in those rules. Discovery shall be controlled by the arbitrator and shall be permitted to the extent set out in this section, except that the scope of discovery can be enlarged by the arbitrator upon a showing of good cause by either or both Parties. Each Party may submit in writing to a Party, and that Party shall so respond to, a maximum of any combination of thirty-five (35) (none of which may have subparts) of the following: interrogatories, demands to produce documents, or requests for admission. Each Party is also entitled to take the oral deposition of one individual of another Party. Additional discovery may be permitted upon mutual agreement of the Parties. The arbitration hearing shall be commenced within thirty (30) days of the demand for arbitration. The arbitration shall be held in Tampa, Florida. The arbitrator shall control the scheduling so as to process the matter expeditiously. The Parties may submit written briefs. The arbitrator shall rule on the dispute by issuing a written opinion within thirty (30) days after the close of

hearings that include findings of fact and conclusions of law and renders a decision based upon such findings and conclusions. The times specified in this section may be extended upon mutual agreement of the Parties or by the arbitrator upon a showing of good cause. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction.

- 12.4 Costs. Each Party shall bear its own costs of these procedures. A Party seeking discovery shall reimburse the responding Party the reasonable direct cost of production of documents (including search time and reproduction costs). The Parties shall equally split the fees of the arbitration and the arbitrator.
13. Entire Agreement. This Agreement constitutes the entire agreement of the Parties pertaining to the subject matter of this Agreement and supersedes all prior agreements, negotiations, proposals, and representations, whether written or oral, and all contemporaneous oral agreements, negotiations, proposals, and representations concerning such subject matter. No representations, understandings, agreements, or warranties, expressed or implied, have been made or relied upon in the making of this Agreement other than those specifically set forth herein.
14. Expenses. Except as specifically set out in this Agreement, each Party shall be solely responsible for its own expenses involved in all activities related to the subject of this Agreement.
15. Force Majeure. In the event performance of this Agreement, or any obligation hereunder, is either directly or indirectly prevented, restricted, or interfered with by reason of fire, flood, earthquake or like acts of God, wars, revolution, civil commotion, explosion, acts of public enemy, embargo, acts of the government in its sovereign capacity, labor difficulties, including without limitation, strikes, slowdowns, picketing, or boycotts, unavailability of equipment from vendor, changes requested by Customer, or any other circumstances beyond the reasonable control and without the fault or negligence of the Party affected, the Party affected, upon giving prompt notice to the other party, shall be excused from such performance on a day-to-day basis to the extent of such prevention, restriction, or interference (and the other Party shall likewise be excused from performance of its obligations on a day-to-day basis until the delay, restriction or interference has ceased); *provided however*, that the Party so affected shall use diligent efforts to avoid or remove such causes of nonperformance and both Parties shall proceed whenever such causes are removed or cease.
16. Governing Law. This Agreement shall be governed by and construed in accordance with the domestic laws of the state where the services are provided or the facilities reside and shall be subject to the exclusive jurisdiction of the courts

therein, except as otherwise provided in Section 12 and except as may otherwise be provided by applicable law.

17. **Headings.** The headings in this Agreement are inserted for convenience and identification only and shall not be considered in the interpretation of this Agreement.
18. **Independent Contractor Relationship.** The persons provided by each Party shall be under the sole and exclusive direction and control of that Party. They shall not be considered employees of the other Party for any purpose. Each Party shall remain an independent contractor with respect to the other and shall be responsible for compliance with all laws, rules and regulations involving, but not limited to, employment of labor, hours of labor, health and safety, working conditions and payment of wages. Each Party shall also be responsible for payment of taxes, including federal, state and municipal taxes, chargeable or assessed with respect to its employees, such as Social Security, unemployment, workers' compensation, disability insurance, and federal and state withholding. Each Party shall indemnify the other for any loss, damage, liability, claim, demand, or penalty that may be sustained by reason of its failure to comply with this provision.
19. **Liability and Indemnity.**
 - 19.1 **Indemnification.** Each Party agrees to release, indemnify, defend, and hold harmless the other Party, its Affiliates, and agents from all losses, claims, demands, damages, expenses, suits, or other actions, or any liability whatsoever, including, but not limited to, costs and attorney's fees, whether suffered, made, instituted, or asserted by any other party or person, for invasion of privacy, personal injury to or death of any person or persons, or for losses, damages, or destruction of property, whether or not owned by others, proximately caused by the indemnifying Party's negligence or willful misconduct, regardless of form of action.
 - 19.2 **End User and Content-Related Claims.** Customer agrees to release, indemnify, defend, and hold harmless Provider, its Affiliates, and agents (and any other entity to whom GTE is under a contractual obligation of indemnification) (collectively, the "Indemnified Parties") from all losses, claims, demands, damages, expenses, suits, or other actions, or any liability whatsoever, including, but not limited to, costs and attorney's fees, suffered, made, instituted, or asserted by Customer's end users against an Indemnified Party arising from services, unbundled network elements or facilities except where caused by the indemnified Party's gross negligence or willful misconduct. Customer further agrees to release, indemnify, defend, and hold harmless the Indemnified Parties from all losses, claims,

demands, damages, expenses, suits, or other actions, or any liability whatsoever, including, but not limited to, costs and attorney's fees, suffered, made, instituted, or asserted by any third party against an Indemnified Party arising from or in any way related to actual or alleged defamation, libel, slander, interference with or misappropriation of proprietary or creative right, or any other injury to any person or property arising out of content transmitted by Customer or Customer's end users, or any other act or omission of Customer or Customer's end users except where caused by the indemnified Party's gross negligence or willful misconduct.

- 19.3 **DISCLAIMER.** EXCEPT AS SPECIFICALLY PROVIDED TO THE CONTRARY IN THIS AGREEMENT, PROVIDER MAKES NO REPRESENTATIONS OR WARRANTIES TO CUSTOMER CONCERNING THE SPECIFIC QUALITY OF ANY SERVICES, OR FACILITIES PROVIDED UNDER THIS AGREEMENT. PROVIDER DISCLAIMS, WITHOUT LIMITATION, ANY WARRANTY OR GUARANTEE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR FROM USAGES OF TRADE.

- 19.4 **Limitation of Liability.** Provider's liability, shall be limited to direct damages, which shall not exceed the pro rata portion of the monthly charges for the Services or Facilities for the time period during which the Services or Facilities provided pursuant to this Agreement are inoperative, not to exceed in total Provider's monthly charge to Customer. Under no circumstance shall Provider be responsible or liable for indirect, incidental, or consequential damages, including, but not limited to, economic loss or lost business or profits, damages arising from the use or performance of equipment or software, or the loss of use of software or equipment, or accessories attached thereto, delay, error, or loss of data. In connection with this limitation of liability, the Parties recognize that Provider may, from time to time, provide advice, make recommendations, or supply other analysis related to the Services, unbundled network elements or facilities described in this Agreement, and, while Provider shall use diligent efforts in this regard, Customer acknowledges and agrees that this limitation of liability shall apply to provision of such advice, recommendations, and analysis.

- 19.5 **Intellectual Property.** Neither Party shall have any obligation to defend, indemnify or hold harmless, or acquire any license or right for the benefit of, or owe any other obligation or have any liability to, the other based on or arising from any claim, demand, or proceeding by any third party alleging or asserting that the use of any circuit, apparatus, or system, or the use of any software, or the performance of any service or method, or the provision or use of any facilities by either Party under this Agreement constitutes direct or contributory infringement.

or misuse or misappropriation of any patent, copyright, trademark, trade secret, or any other proprietary or intellectual property right of any third party.

20. **Multiple Counterparts.** This Agreement may be executed multiple counterparts, each of which shall be deemed an original, but all of which shall together constitute but one and the same document.
21. **No Offer.** Submission of this Agreement for examination or signature does not constitute an offer by Provider for the provision of the products or services described herein. This Agreement will be effective only upon execution and delivery by both Parties.
22. **Notices.** Any notice to a Party required or permitted under this Agreement shall be in writing and shall be deemed to have been received on the date of service if served personally, on the date receipt is acknowledged in writing by the recipient if delivered by regular U.S. mail, or on the date stated on the receipt if delivered by certified or registered mail or by a courier service that obtains a written receipt. Notice may also be provided by facsimile, which shall be effective on the next Business Day following the date of transmission. Any notice shall be delivered using one of the alternatives mentioned in this section and shall be directed to the applicable address indicated below or such address as the Party to be notified has designated by giving notice in compliance with this section.

If to GTE FLORIDA INCORPORATED:

Attention: Ms. Beverly Menard
Region Director
- Regulatory & Industry Affairs
GTE Telephone Operations - Florida
P.O. Box 110
One Tampa City Center
Tampa, FL 33601-0110
Facsimile number: (813) 223 - 4888

If to ICG:

Attention: General Counsel
ICG Telecom Group, Inc.
9605 East Maroon Circle
Englewood, Colorado 80112
Facsimile number: 303 - 799 - 6985

23. Protection.

23.1 Impairment of Service. The characteristics and methods of operation of any circuits, facilities or equipment of either Party connected with the services, facilities or equipment of the other Party pursuant to this Agreement shall not interfere with or impair service over any facilities of the other Party, its affiliated companies, or its connecting and concurring carriers involved in its services, cause damage to their plant, violate any applicable law or regulation regarding the invasion of privacy of any communications carried over the Party's facilities or create hazards to the employees of either Party or to the public (each hereinafter referred to as an "Impairment of Service").

23.2 Resolution. If either Party causes an Impairment in Service, the Party whose network or service is being impaired (the "Impaired Party") shall promptly notify the Party causing the Impairment of Service (the "Impairing Party") of the nature and location of the problem and that, unless promptly rectified, a temporary discontinuance of the use of any circuit, facility or equipment may be required. The Impairing Party and the Impaired Party agree to work together to attempt to promptly resolve the Impairment of Service. If the Impairing Party is unable to promptly remedy the Impairment of Service, then the Impaired Party may at its option temporarily discontinue the use of the affected circuit, facility or equipment.

24. **Publicity.** Any news release, public announcement, advertising, or any form of publicity pertaining to this Agreement, provision of services or facilities pursuant to it, or association of the Parties with respect to provision of the services described in this Agreement shall be subject to prior written approval of both Parties. This paragraph shall apply only to services provided by GTE to ICG, and shall not apply to services offered by ICG to its end user customers.
25. **Regulatory Agency Control.** The parties agree to promptly take all appropriate steps to submit this agreement to any regulatory agency to which the agreement must be submitted for approval or to become effective. This Agreement shall at all times be subject to changes, modifications, orders, and rulings by the Federal Communications Commission and/or the applicable state utility regulatory commission to the extent the substance of this Agreement is or becomes subject to the jurisdiction of such agency. If any such modification renders the Agreement inoperable or creates any ambiguity or requirement for further amendment to the Agreement, the Parties will negotiate in good faith to agree upon any necessary amendments to the Agreement. The Parties will begin to effectuate all the terms of this Agreement with the first access service request (ASR) from ICG or from another alternate facility provider ordering on behalf of ICG, but will not begin to flow traffic until five Business Days after this Agreement is effective in accordance with the rules of the Commission. GTE and ICG will begin to exchange traffic at the request of ICG but not sooner than permitted by the Commission.
26. **Rule of Construction.** No rule of construction requiring interpretation against the drafting party hereof shall apply in the interpretation of this Agreement.
27. **Section References.** Except as otherwise specified, references within an Article of this Agreement to a Section refer to Sections within that same Article.
28. **Severability.** If any provision of this Agreement is held by a court or regulatory agency of competent jurisdiction to be unenforceable, the rest of the Agreement shall remain in full force and effect and shall not be affected unless removal of that provision results, in the opinion of either Party, in a material change to this Agreement. If a material change as described in this paragraph occurs as a result of action by a court or regulatory agency, the Parties shall negotiate in good faith for replacement language. If replacement language cannot be agreed upon within a reasonable period, either Party may terminate this Agreement without penalty or liability for such termination upon written notice to the other Party.
29. **Subcontractors.** Provider may enter into subcontracts with third parties or Affiliates for the performance of any of Provider's duties or obligations under this Agreement.

30. **Subsequent Law.** The terms and conditions of this Agreement shall be subject to any and all applicable laws, rules, regulations or guidelines that subsequently may be prescribed by any federal, state or local governmental authority. To the extent required by any such subsequently prescribed law, rule, regulation or guideline, the parties agree to modify, in writing, the affected term(s) and condition(s) of this Agreement to bring them into compliance with such law, rule, regulation or guideline.
31. **Trademarks and Trade Names.** Except as specifically set out in this Agreement, nothing in this Agreement shall grant, suggest, or imply any authority for one Party to use the name, trademarks, service marks, or trade names of the other for any purpose whatsoever.
32. **Waiver.** The failure of either Party to insist upon the performance of any provision of this Agreement, or to exercise any right or privilege granted to it under this Agreement, shall not be construed as a waiver of such provision or any provisions of this Agreement, and the same shall continue in full force and effect.

ARTICLE IV
INTERCONNECTION FOR TRANSPORT AND TERMINATION OF TRAFFIC

1. TECHNICAL PROVISIONS

- 1.1 This Agreement covers the initial tandem-level interconnection between the Parties. The Parties also agree to negotiate in good faith subject to the Telecommunications Act on the provision of unbundled loops.**
- 1.2 Connection At All GTE Tandems Within Each LATA:**
 - 1.2.1 ICG will connect with each and every GTE access tandem in the LATAs in which it originates traffic and interconnects with GTE.**
 - 1.2.2 ICG will establish Local Interconnection Trunk groups to each and every GTE tandem for which ICG has local exchange customers within the Local Calling Area of the GTE customers served by that tandem. For all other GTE tandems within any LATA in which ICG originates traffic, ICG will establish feature group trunks to each such tandem.**
- 1.3 ICG and GTE agree to interconnect their networks through facilities between the ICG switches and the corresponding GTE access tandems set forth in Appendix A. Logical trunk groups will be established referencing the appropriate ICG Routing Point and GTE access tandem. Nothing in this section restricts either Party from ordering and establishing further access tandem trunk groups in addition to the initial combinations described on Appendix A.**
- 1.4 Single POI Model: For each GTE access tandem where ICG and GTE interconnect for the exchange of local and intral ATA toll and meet point Switched Access traffic, ICG and GTE agree that there will be a single POI located at the designated DSX within the GTE Wire Center.**
- 1.5 Sizing and Structure of Interconnection Facilities: The Parties will mutually agree on the appropriate sizing for facilities based on the standards set forth in Section XII below. The interconnection facilities provided by each Party at the tandem level shall be superframe with Alternate Mark Inversion Line Code and superframe Format Framing ("AMI") at either DS-1 or DS-3 level, according to mutual forecasts and sound engineering practice, as mutually agreed to by the Parties during planning-forecasting meetings.**

- 1.6 **Two-Way Trunks:** Interconnection will be provided via two-way trunks. Separate two-way trunks will be established to exchange 1) local and intraLATA toll and 2) meet point Switched Access traffic.
- 1.7 **Signaling Protocol:** The Parties will interconnect their networks at the tandem level using SS7 signaling as defined in GR-317 and GR-394, including ISDN User Part ("ISUP") for trunk signaling and Transaction Capabilities Application Part ("TCAP") for CCIS-based features.
- 1.8 **Interconnection Facilities:** Unless expressly agreed to otherwise, the Parties will use fiber transmission facilities to physically interconnect their networks.
2. **MEET-POINT TRUNKING ARRANGEMENTS**
- 2.1 Two-way trunks may be established to enable ICG and GTE to jointly provide FGB and FGD Switched Access Services via a GTE access tandem switch.
- 2.2 ICG may use meet point trunks to send and receive FGB and FGD calls from Switched Access customers connected to GTE's access tandem.
- 2.3 ICG will interconnect two-way trunk groups at each and every GTE access tandem under which ICG's NXXs home using DS-1 and DS-3 trunking separate from the trunking used for Local Interconnection Trunk Groups.
- 2.4 In the case of Switched Access Services provided through GTE's access tandem, GTE will not offer blocking capability for interexchange carrier traffic delivered to GTE's tandem for completion on ICG's network. GTE and ICG understand and agree that meet point trunking arrangements are available and functional only to/from Switched Access customers who directly connect with the tandems that ICG subtends in each LATA. In no event will GTE be required to route such traffic through more than one tandem for connection to/from Switched Access customers. GTE shall have no responsibility to ensure that any Switched Access customer will accept traffic ICG directs to the Switched Access customer. However, GTE will provide reasonable assistance to ICG to establish contact with providers of toll service switched through GTE's access tandems.
- 2.5 Common channel interoffice signaling shall be utilized in conjunction with meet point trunks.
- 2.6 The Parties will provide CCIS to one another in conjunction with all two-way trunk groups subject to the rates, terms and conditions specified in the Parties' respective access tariffs (if applicable). ICG may establish CCIS interconnections either directly or through a third-party, provided such third-party is interconnected

with GTE. The Parties will cooperate in the exchange of TCAP messages to facilitate full inter-operability of CCIS-based features between their respective networks including all CLASS features and functions, to the extent each carrier offers such features and functions to its own end users.¹ The Parties will provide all CCIS signaling including Charge Number, originating line information ("OLI"), etc. For terminating FGD, GTE will pass Calling Party Number (CPN) if it receives CPN from FGD carriers. All privacy indicators will be honored. Where available, network signaling information such as Transit Network Selection ("TNS") parameter (CCIS platform) and Carrier Identification Code/OZZ (CIC/OZZ) information (non-CCIS environment) will be provided by the Parties wherever such information is needed for call routing or billing. The Parties will follow all OBF adopted standards pertaining to TNS and CIC/OZZ codes.

- 2.7 All originating Toll Free Service calls for which GTE performs the Service Switching Point ("SSP") function (e.g. performs the database query) shall be delivered by ICG using GR-394 format over the meet-point trunk group. Carrier Code "0110" and Circuit Code of "08" shall be used for all such calls.
- 2.8 All originating Toll Free Service calls for which ICG performs the SSP function, if delivered to GTE, shall be delivered by ICG using GR-394 format over the meet-point trunk group for calls destined to IXCs, or shall be delivered by ICG using GR-317 format over the Local Interconnection Trunk Group for calls destined to end offices that directly subtend GTE access tandems.
- 2.9 Originating FGB calls delivered to GTE's tandem shall use GR-317 signaling format unless the associated FGB carrier employs GR-394 signaling for its FGB traffic at the serving GTE access tandem.
- 2.10 ICG and GTE shall use their best efforts to negotiate the terms and conditions for meet-point billing, including, but not limited to, the meet-point billing options, bill period, and exchange of usage and billing data, and to sign such an agreement within a reasonable time from the effective date of this agreement. For any meet-point billing traffic exchanged by the Parties prior to execution and approval of the meet-point billing agreement ("prior traffic"), the Parties agree that the terms of the meet-point billing agreement shall apply to such prior traffic. The Parties will compensate each other for such prior traffic in accordance with the terms of the meet-point billing agreement.

¹ This Agreement does not relate to the purchase and sale of any end user features or functions.

- 2.11 The Parties will use best efforts to install meet-point local interconnection trunks. Orders between the Parties to establish, add, change or disconnect trunks shall be processed by use of GTE's Access Service Request ("ASR") process as described in GTE's applicable tariffs. Intervals for the installation of local interconnections trunks shall be no greater than the installation intervals provided by GTE for feature group access trunks.
- 2.12 Billing to interexchange carriers (including any future interexchange entities operated by GTE or its affiliates) for the Switched Access Services jointly provided by GTE and ICG via the meet-point billing arrangement shall be according to the multiple bill/multiple-tariff method. However, upon mutual agreement, the Parties may enter into a single bill arrangement. Switched Access charges to third parties shall be calculated utilizing the rates specified in GTE and ICG respective federal and state access tariffs, in conjunction with the appropriate meet-point bill percentages specified for each meet-point arrangement either in those tariffs, in the National Exchange Carrier Association (NECA) No. 4 tariff or any functional successor to the NECA No. 4 tariff.
- 2.13 MPB will apply to all traffic bearing the 800, 888 or any other non-geographic NPA which may be likewise designated for such traffic in the future, where the responsible party is an IXC. In those situations where the responsible party for such traffic is other than GTE, full switched access rates will be charged to the responsible LEC or CLC.

3 LOCAL INTERCONNECTION TRUNK ARRANGEMENT

3.1 Description

The Parties shall reciprocally terminate local exchange traffic and intraLATA toll calls between each other's networks, as follows:

- 3.1.1 The Parties shall make available to each other two-way trunks for the reciprocal exchange of local exchange traffic and intraLATA toll traffic ("Local Interconnection Trunks/Trunk Groups")
- 3.1.2 The Parties will provide CCIS to one another in conjunction with all two-way trunk groups subject to the rates, terms and conditions specified in the parties' respective access tariffs (if applicable). ICG may establish CCIS interconnections either directly or through a third party, provided such third party is interconnected with GTE. In that event, that third-party provider must present a letter of agency to GTE, prior to the testing of the interconnection, authorizing the third party to act on behalf of ICG in transporting SS7 messages to and from GTE. The Parties will cooperate in the exchange of TCAP messages to facilitate full interoperability

of CCIS-based features between their respective networks, including all CLASS features and functions, to the extent each carrier offers such features and functions to its own end users¹. All CCIS parameters will be provided including CPN. All privacy indicators will be honored.

- 3.1.3 ICG may opt at any time to terminate to GTE some or all local exchange traffic and intraLATA toll traffic originating on its network, together with Switched Access traffic, via FGD or FGB Switched Access Services, subject to the rates, terms and conditions specified in GTE's standard intrastate access tariffs.
- 3.1.4 Neither Party shall terminate Switched Access over Local Interconnection Trunks.
- 3.1.5 ICG shall only deliver traffic over the Local Interconnection Trunk Groups to a GTE access tandem for those publicly dialable NPA NXX codes served by end offices that subtend the access tandem or to those wireless service providers connected to the access tandem. ICG may not route traffic to a GTE access tandem destined for an NXX which subtends another tandem.
- 3.1.6 So long as ICG is employing a single switching entity in a LATA which is serving NXX codes in that LATA, GTE will be allowed to deliver all traffic destined for ICG at any of the POIs in that LATA set forth in Appendix A attached. When ICG deploys a second switching element in a LATA which serves NXX codes in that LATA, GTE will immediately deliver traffic destined for ICG in accordance with the end office serving arrangements in the Local Exchange Routing Guide.

In no case shall GTE be required to deliver calls destined to terminate at a ICG end office via another LEC's or CLC's end office or tandem, except in the case of GTE end offices which subtend a tandem provided by another company.
- 3.1.7 Where ICG delivers over the Local Interconnection Trunk group miscellaneous non-local calls (i.e., time, weather, Mass Calling Codes) destined for GTE, it shall deliver such traffic in accordance with the serving arrangements defined in the LERG.

¹ This Agreement does not relate to the purchase and sale of any such end user features or functions.

3.1.8 N11 codes (i.e. 411, 611, 911) shall not be sent between ICG and GTE's network over the Local Interconnection Trunk Groups.

3.1.9 **Alternate Billed Messages:** Each Party agrees to provide the other Party billing, collecting and remitting services on alternate billed messages in accordance with accepted industry standards.

3.1.9.1 Each Party will provide to the other the EMR standard formatted record for billing of messages to their end users. The records will be exchanged by way of the Party's CMDS host, the Collect And Third Numbers Settlement (CATS) arrangement or directly between the Parties via a tape or transmission.

3.1.9.2 Each Party agrees to remit to the other Party the revenue value of each alternate billed message less a billing and collection fee as reflected in Attachment C.

3.1.9.3 Unbillable messages will be the liability of the originating company. The billing company must return the unbillable messages to the originating company pursuant to CMDS and EMR standard guidelines.

3.1.9.4 Uncollectible messages will be the liability of the billing company.

3.1.10 **Information Services Traffic.**

3.1.10.1 **Routing.** Each Party shall route IntraLATA traffic for information services (e.g. 900, 976, N11, weather lines, sports lines, etc.) that originates on its network to the appropriate information services platforms connected to the other Party's network over the IntraLATA trunks.

3.1.10.2 **Recording.** The Party on whose network the information services traffic originated (the "Originating Party") shall provide the recorded call detail information to the Party to whose information platform the information services traffic terminated (the "Terminating Party").

3.1.10.3 **Blocking.** Nothing in this Agreement shall restrict either Party from offering to its end user customers the ability to block the completion of information service traffic.

3.1.11 For the purpose of providing end-to-end ISDN capabilities between the customer of ICG and GTE, ICG will provide GTE an initial forecast of 64 Kbps Clear

Channel Capability ("64K CCC") trunk quantities by the effective date of this Agreement, consistent with the forecasting agreements between the Parties. Upon receipt of this forecast, the Parties will begin joint planning for the engineering, procurement, and installation of the segregated 64K CCC Local Interconnection Trunk Groups, and the associated B8ZS ESF facilities, for the sole purpose of transmitting 64K CCC data calls between ICG and GTE. Where additional equipment is required, such equipment would be obtained, engineered, and installed on the same basis and with the same intervals as any similar growth job for IXC, CLC, or GTE internal customer demand for 64K CCC trunks.

3.1.12 The Parties agree to exchange traffic of third-parties other than IXCs between the Parties over the Local Interconnection Trunk Groups. This transit function is an arrangement whereby either Party may provide switching and transport to third party traffic through its tandem and then interchange that traffic with the other Party's connecting end office. The Parties recognize that traffic belongs to the originating Company. Neither Party shall identify transit traffic as that belonging to the Party providing the transit traffic service. Both Parties recognize the need to execute a separate agreement between the originating and terminating companies. The Party performing the transit switching shall identify the originating third Party for whom transit switching is provided to the terminating third Party. Upon request from the receiving Party and if technically feasible, the Party providing the transit switching shall block traffic from the designated third parties. The Parties also agree to provide the necessary record in an Electronic Message Record (EMR) format to facilitate billing between the receiving and originating parties.

3.1.13 The Parties will not charge each other for any call that they originate to any wireless provider NPA NXXs that are shown in the LERG as being resident in either a GTE or ICG access tandem or the wireless provider's Mobile Telephone Service Office ("MTSO") which directly subtend the access tandem. However, the Parties agree to renegotiate this arrangement for local exchange traffic from third party wireless service providers when such providers are granted authority to provide exchange service by the Commission or either the FCC or the Commission orders GTE to provide wireless interconnection with the compensation terms other than are currently set forth in GTE's existing wireless interconnection contracts.

3.2 Compensation for Call Termination

Notwithstanding the following, the Parties agree to further negotiate to amend this Agreement with regard to compensation for the termination of local calls (as described in this section) in accordance with any further and final FCC and/or Commission decision(s) regarding compensation for local and/or toll

call termination between LECs and CLCs. The Parties agree to compensation for traffic interchange as set forth below.

3.2.1 The following compensation rates shall apply for the exchange of local traffic carried from ICG to GTE via GTE access tandems and traffic carried from GTE to ICG:

3.2.1.1 Mutual Compensation: Subject to section 3.2.1.2 of this Agreement, the Parties shall compensate each other for the exchange of Local Traffic in accordance with Appendix C attached to this Agreement and made a part hereof. Charges for the transport and termination of intraLATA toll, optional EAS arrangements and interexchange traffic shall be in accordance with the Parties' respective intrastate or interstate access tariffs, as appropriate.

3.2.1.2 Bill-and-Keep. The Parties shall assume that Local Traffic is roughly balanced between the parties unless traffic studies indicate otherwise. Accordingly, the Parties agree to use a Bill-and-Keep Arrangement with respect to termination of Local Traffic only. Either Party may request that a traffic study be performed no more frequently than once a quarter. Should such traffic study indicate that either Party is terminating more than 60 percent of the Parties' total terminated minutes for Local Traffic, either Party may request that mutual compensation commence pursuant to section 3.2.1.1 of this Agreement. Furthermore, regardless of the results of any traffic study or the request of or failure to request a traffic study by either or both Parties, either Party may terminate the Bill-and-Keep Arrangement established pursuant to this section with twelve months notice. Nothing in this section 3.2.1.2 shall be interpreted to (i) change compensation set forth in this Agreement for traffic or services other than Local Traffic, including but not limited to internetwork facilities, access traffic or wireless traffic, or (ii) allow either Party to aggregate traffic other than Local Traffic for the purpose of compensation under the Bill-and-Keep Arrangement described in this section 3.2.1.2.

3.2.1.3 Transit Rate: When ICG uses a GTE access tandem to originate a call to a third party LEC, another CLC, a wireless service provider or another ICG end office, ICG shall compensate GTE in accordance with Appendix C attached to this Agreement and made a part hereof. GTE shall pay a transit rate in accordance with Appendix C attached to this Agreement when GTE originates a call and uses a ICG switch to get to a third party LEC, another CLC, a wireless service provider or another GTE access tandem. If ICG receives a call through GTE's access

tandem that originates from another CLC, LEC, or wireless provider, ICG will not charge GTE any rate elements for this call, regardless of whether the call is local or toll. ICG will not route calls through GTE's access tandems to any other CLC, LEC or wireless provider with which GTE has not entered into an interconnection agreement. If such call are nonetheless so routed, GTE will not complete such calls.

- 3.2.5 For intraLATA Toll Free Service calls where such service is provided by one of the Parties, the compensation set forth in Sections V 3.2, above shall be charged by the Party originating the call rather than the Party terminating the call. In addition, the Parties shall negotiate and agree upon charges to compensate the originating Party for performing the Automatic Message Accounting ("AMA") function and transferring AMA records to the other Party. The Party which performs the database dip shall charge the originating Party for that service and send the originating Party an AMA record such that the originating Party can bill the provider of the toll free service.
- 3.2.6 Measurement of minutes of use over Local Interconnection Trunk groups shall be in actual conversation seconds. The total conversation seconds over each individual Local Interconnection Trunk Group will be totaled for the entire monthly bill-round and then rounded to the next whole minute.
- 3.2.7 Each Party will provide to the other, within 20 calendar days after the end of each quarter (commencing with the first full quarter after the effective date of this Agreement) a usage report with the following information regarding traffic delivered over the Local Interconnection Trunk arrangements:
 - 3.2.7.1 Total traffic volume described in terms of minutes and messages and by call type (local, toll and other) delivered to each other over the Local Interconnection Trunk Groups;
 - 3.2.7.2 the PLU and;
 - 3.2.7.3 The parties will bill each other on a monthly basis and will agree upon the appropriate PLU to apply during the initial three month period.
- 3.2.8 Late Payment Charge If any undisputed amount due on the billing statement is not received by Provider on the payment due date, Provider may charge, and Customer agrees to pay, interest on the past due balance at a rate equal to the lesser of one and one-half percent (1½%) per month or the maximum nonusurious rate of interest under applicable law. Late payment charges shall be included on the next statement.

3.3 Compensation for Use of Facilities for Local Interconnection

The Parties agree to the following compensation for internetwork facilities, depending on facility type.

- 3.3.1 **Mid-Span Fiber Meet:** GTE will charge special access (flat rated) transport from the applicable intrastate access tariff and will rate charges between the POI and GTE's interconnection switch. Charges will be reduced to reflect the proportionate share of the facility that is used for transport of traffic originated by GTE. ICG will charge flat rated transport to GTE for ICG facilities used by GTE. ICG will apply charges based on the lesser of; (i) the airline mileage from the POI to the ICG switch; or (ii) two (2) times the airline mileage from the GTE switch to the serving area boundary.
- 3.3.2 **Virtual EIS:** GTE will charge Virtual EIS rates from the applicable GTE tariff. ICG will charge GTE flat rated transport to reflect the proportionate share of the facility that is used for transport of traffic originated by GTE. ICG will apply charges based on the lesser of; (i) the airline mileage from the POI to the ICG switch; or (ii) two (2) times the airline mileage from the GTE switch to the serving area boundary.
- 3.3.3 **Physical Collocation:** GTE shall provide to ICG physical collocation of equipment necessary for interconnection or for access to unbundled network elements pursuant to the terms and conditions in the applicable GTE federal and state collocation tariffs. Provided however, nothing contained in this Agreement in any way affects ICG's right to challenge any provision of the tariff before an appropriate regulatory body pursuant to the procedures of that body.
- 3.3.4 **Special Access:** The facilities shall be provisioned using either GTE facilities or jointly owned facilities for the purpose of establishing the Local Interconnection Trunk Groups as agreed to by both Parties. If the special access facilities are solely provided by GTE, GTE will charge special access rates from the applicable GTE intrastate access tariff and ICG will charge GTE flat rated transport to reflect the proportionate share of the special access facility that is used for transport of traffic originated by GTE. Should the facilities be jointly provisioned ICG will be responsible for the cost of the special access facilities obtained from any third party. GTE will be responsible for the cost of the special access facilities within GTE's special access service area. The Parties may mutually agree to a different method of billing than described above.
- 3.3.5 If the Parties mutually agree on an interconnection facilities arrangement that is not contemplated by Paragraph 3.3.1, 3.3.2, 3.3.3 or 3.3.4 above, the Parties agree

to negotiate a compensation arrangement for such facilities and to amend this Agreement accordingly.

4. Maintenance of Service

A Maintenance of service charge applies whenever either Party requests the dispatch of the other Party's personnel for purposes of performing maintenance activity on the interconnection trunks, and any of the following conditions exist:

- 4.1 No trouble is found in the interconnection trunks; or
- 4.2 The trouble condition results from equipment, facilities or systems not provided by the Party whose personnel were dispatched; or
- 4.3 Trouble clearance did not otherwise require a dispatch, and upon dispatch requested for repair verification, the interconnection trunk does not exceed Maintenance Limits.

If a Maintenance of Service initial charge has been applied and trouble is subsequently found in the facilities of the Party whose personnel were dispatched, the charge will be canceled.

Billing for Maintenance of Service shall be categorized and billed pursuant to the terms of GTE's tariff, and ICG's applicable tariff.

5. End User Repair Call Referrals

- 5.1 In answering repair calls, neither Party shall make disparaging remarks about each other, nor shall they use these repair calls as the basis for internal referrals or to solicit customers to market services. Either Party may respond with factual information in answering customer questions.
- 5.2 ICG and GTE will provide their respective numbers to one another.

6. Busy Line Verification and Interrupt

6.1 Description

- 6.1.1 Each Party shall establish procedures whereby its operator bureau will coordinate with the operator bureau of the other Party in order to provide Busy Line Verification ("BLV") and Busy Line Verification and Interrupt ("BLVI") services on calls between their respective end users. ICG will use its best efforts to implement this service in the first

quarter of 1997. Until ICG implements this service, GTE's operators will inform GTE's customers that the number requested cannot be verified.

6.1.2 **BL.V and BL.VI inquiries between operator bureaus shall be routing using network-route access codes published in the LERG over separate trunks.**

6.2 Compensation

Each Party shall charge the other Party for BL.V and BL.VI at the rates contained in their respective tariffs.

**ARTICLE V
OPERATOR SERVICES, DIRECTORY ASSISTANCE
AND
WHITE PAGE LISTINGS**

1. **Confidentiality of White Page Listings:** GTE will accord ICG directory listings information the same level of confidentiality which GTE accords its own directory listing information, and GTE shall ensure that access to ICG customer proprietary confidential directory information will be limited solely to those employees who immediately supervise or are directly involved in the processing and publishing of listings and directory delivery. GTE will not use the directory listings information provided by ICG for the marketing of telecommunications services unless specifically authorized by ICG.
2. **Directory Assistance (DA) and Operator Services:** Where ICG is providing local service with its own switch, upon ICG's request GTE will provide to ICG GTE directory assistance services and/or operator services pursuant to separate contracts to be negotiated in good faith between the Parties. If ICG so requests directory assistance services and/or operator services, such contracts shall provide for the following:
 - 2.1 **Directory Assistance Calls:** GTE directory assistance centers shall provide number and addresses to ICG end users at GTE rates in the same manner that number and addresses are provided to GTE end users. If information is provided by an automated response unit ("ARU"), such information shall be repeated twice in the same manner in which it is provided to GTE end users. Where available, GTE will provide call completion to ICG end users at GTE rates in the same manner that call completion is provided to GTE end users. GTE will provide its existing services to ICG end users consistent with the service provided to GTE end users.
 - 2.2 **Operator Services Calls:** GTE operator services provided to ICG end users shall be provided in the same manner GTE operator services are provided to GTE end users. In accordance with GTE practices and at GTE rates, GTE will offer to ICG end users collect, person-to-person, station-to-station calling, third party billing, emergency call assistance, T1N calling card services, credit for calls, time and charges, notification of the length of call, and real time rating. GTE will not provide the ability to quote ICG rates. GTE will provide its existing services to ICG end users consistent with the service provided to GTE end users.
3. **Directory Assistance Listings:** GTE shall accept listings for ICG end users in the same geographic area as GTE provides directory assistance for GTE end users. ICG agrees to supply GTE, on a regularly scheduled basis and in the format utilized by

GTE (*i.e.*, a separate feed from the LSR process), with such listings. Updating priority of GTE directory assistance data base with ICG end user listings will occur consistent with updating with GTE end user listings.

4. **Directory Listings and Directory Distribution.** ICG and GTE shall execute a separate agreement between ICG and GTE (the "Directories Agreement" for any non-interim arrangement, however, for the term of this interim agreement GTE shall offer the following to ICG:
 - 4.1 **Directory Listings (White Pages).** ICG's end users' primary listings shall be included in the appropriate GTE white pages directory at no charge to ICG or ICG's end users. Foreign listings will be charged to ICG at tariffed or mandated discount rates.
 - 4.2 **Directory Listings (Yellow Pages).** ICG's business end users' listings also will receive a single standard listing in all appropriate GTE "yellow pages" or classified directories under the classified heading that most accurately reflects the nature of the end user's business at no charge to ICG or ICG's business end users for this listing. GTE will supply ICG with a list of authorized classified headings. ICG agrees to supply GTE, on a regularly scheduled basis and in the format utilized by GTE, with a classified heading assignment for each ICG end user who wishes to receive this listing.
 - 4.3 **Listing Information.** ICG agrees to supply GTE, on a regularly scheduled basis and in the format utilized by GTE, all listing information for ICG end users who wish to be listed in the white pages of the GTE published directory for that subscriber area. Listing information will consist of names, addresses (including city and ZIP code) and telephone numbers. GTE shall employ the listing information for the production of GTE-published white and yellow page directories and for other reasonable purposes. Listing inclusion in a given directory will be in accordance with directory configuration, scope, and schedules established by GTE.
 - 4.4 **Directory Distributions** GTE will not charge ICG or ICG's end users for annual distribution of directories. GTE will charge ICG for secondary distribution of directories, including distribution to new ICG end users, at the same rate GTE is charged for such secondary distribution. Currently, GTE is charged \$2.49 per directory volume for secondary distribution. ICG will supply GTE in a timely manner with all required subscriber mailing information including non-listed and non-published subscriber mailing information, to enable GTE to perform its distribution responsibilities.
 - 4.5 **Critical Customer Contact Information** GTE will list in the information pages of the appropriate white pages directories ICG's critical customer contact numbers (*i.e.*,

business office, repair service, billing) at no charge to ICG in accordance with the terms and conditions in the Directories Agreement. GTE shall list Competitive Local Exchange Carrier critical customer contact information on an alphabetical basis.

ARTICLE VI
RESPONSIBILITIES OF THE PARTIES

1. **ICG and GTE agree to exchange such reports and/or data as provided in this Agreement in Article V 3.2.5 to facilitate the proper billing of traffic. Either Party may request an audit of such usage reports on no fewer than 10 business days' written notice and any audit shall be accomplished during normal business hours at the office of the Party being audited.**

Such audit must be performed by a mutually agreed-to independent auditor paid for by the Party requesting the audit and may include review of the data described in Article V 3.2, above. Such audits shall be requested within six months of having received the PLU factor and usage reports from the other Party.

2. **ICG and GTE will review engineering requirements on a quarterly basis and establish forecasts for trunk and facilities utilization (in accordance with XI of this Agreement). GTE and ICG will work together to begin providing these forecasts by the effective date of this Agreement. New trunk groups will be implemented as dictated by engineering requirements for either GTE or ICG.**
3. **ICG and GTE shall share responsibility for all Control Office functions for Local Interconnection Trunks and Trunk Groups, and all meet-point trunks and trunk groups and both Parties shall share the overall coordination, installation, and maintenance responsibilities for these trunks and trunk groups.**
4. **ICG and GTE shall:**
 - 4.1 **Provide trained personnel with adequate and compatible test equipment to work with each other's technicians on the installation and maintenance of the trunk and trunk groups.**
 - 4.2 **Notify each other when there is any change affecting the service requested, including the due date.**
 - 4.3 **Coordinate and schedule testing activities of their own personnel, and others as applicable, to ensure its interconnection trunks/trunk groups are installed per the interconnection order, meet agreed-upon acceptance test requirements, and are placed in service by the due date.**

- 4.4 Perform sectionalization to determine if trouble is located in its facility or its portion of the interconnection trunks prior to referring the trouble to each other.
- 4.5 Advise each other's Control Office if there is an equipment failure which may affect the interconnection trunks.
- 4.6 Provide each other with a trouble reporting number that is readily accessible and available 24 hours/7 days a week.
- 4.7 Provide to each other test-line numbers and access to test lines.

5. Bilateral Procedure

The Parties shall jointly review and implement a bilateral procedure regarding technical and operational interfaces. The Parties will use their best good-faith efforts to finalize such procedure within 90 days of the effective date of this Agreement.

- 6. ICG and GTE will provide their respective billing contact numbers to one another.

ARTICLE VII
TRUNK FORECASTING

1. The Parties shall work towards the development of joint forecasting responsibilities for traffic utilization over trunk groups. Orders for trunks that exceed forecasted quantities for forecasted locations will be accommodated as facilities and or equipment are available. Intercompany forecast information must be provided by the Parties to each other twice a year. The semi-annual forecasts shall include:
 - 1.1 Yearly forecasted trunk quantities (which include measurements that reflect actual tandem Local Interconnection Trunks and meet point trunks) for a minimum of three (current and plus-1 and plus-2) years;
 - 1.2 The use of Common Language Location Identifier (CLLI) and Common Language Codes (CLCI-MSG), which are described in Bellcore documents BR 795-100-100 and BR 795-400-100; and
 - 1.3 A description of major network projects anticipated for the following six months.
2. If differences in semi-annual forecasts of the Parties vary by more than twenty-four (24) trunks, or ten percent of previous equivalent trunk forecast, the Parties shall meet to attempt to reconcile the forecast to within these parameters. If the Parties are unable to reach such reconciliation, the Local Interconnection Trunk groups will be provisioned to the higher forecast.
3. If a trunk group is under 75 percent of CCS capacity on a monthly average basis for each month of any six month period, either Party may issue an order to resize the trunk group, which shall be left with not less than 25 percent excess capacity. In all cases, grade of service objectives identified in Article VIII below shall be maintained.
4. Each Party shall provide a specified point of contact for planning, forecasting and trunk servicing purposes.
5. The Parties agree to mutually evaluate the deployment and use of diverse routes for the purpose of network survivability.

ARTICLE VIII
GRADE OF SERVICE

A blocking standard of one half of one percent (.005) during the average busy hour for final trunk groups between an ICG end office and a GTE access tandem carrying meet- point traffic shall be maintained. All other final trunk groups are to be engineered with a blocking standard of one percent (.01).

ARTICLE IX
TRUNK SERVICING

1. Orders between the Parties to establish, add, change or disconnect trunks shall be processed by use of an Access Service Request ("ASR").
2. As discussed in this Agreement, both Parties will jointly manage the capacity of Local Interconnection Trunk Groups. GTE will sent ICG a Trunk Group Service Request ("TGSR") to trigger changes GTE desires to the Local Interconnection Trunk Groups based on GTE's capacity assessment. ICG will issue an ASR to GTE:
 - 2.1 Within 10 business days after receipt of the TGSR, upon review of and in response to GTE's TGSR, or
 - 2.2 At any time as a result of ICG's own capacity management assessment, to begin the provisioning process.
3. Orders that comprise a major project shall be submitted at the same time, and their implementation shall be jointly planned and coordinated.
4. ICG will be responsible for engineering its network on its side of the POI. GTE will be responsible for engineering the POI and its network on its side of the POI.
5. The Parties recognize their joint responsibility for efficient local interconnection trunk routing to Tandem and End Offices, and agree to use the following criteria to help determine when direct End Office local interconnection trunks should be established:
 - 5.1 Primary high usage trunk groups will be established between End Offices when the traffic offered to a specific End Office exceeds 355 centum call seconds. Parties may agree to establish high usage trunks at a lower threshold level.
 - 5.2 Primary high usage trunk groups will be engineered using an economic centum call second standard of 15.
 - 5.3 Modular trunking will be used with the module size of 24 trunks.

ARTICLE X
TROUBLE REPORTS

ICG and GTE will cooperatively plan and implement coordinated repair procedures for the meet point and Local Interconnection Trunks and facilities to ensure trouble reports are resolved in a timely and appropriate manner.

ARTICLE XI NETWORK MANAGEMENT

1. Protective Controls

Either Party may use protective network traffic management controls such as 7-digit and 10-digit code gaps on traffic toward each other's network, when required to protect the public switched network from congestion due to facility failures, switch congestion or failure overload. ICG and GTE will immediately notify each other of any protective control action planned or executed.

2. Expansive Controls

Where the capability exists originating or terminating traffic reroutes may be implemented by either Party to temporarily relieve network congestion due to facility failures or abnormal calling patterns. Reroutes will not be used to circumvent normal trunk servicing. Expansive controls will only be used when mutually agreed to by the Parties.

3. Mass Calling

ICG and GTE shall cooperate and share pre-planning information regarding cross-network call-ins expected to generate large or focused temporary increases in call volumes, to prevent or mitigate the impact of these events on the public switched network.

4. Separate Trunk Groups for High Usage Customers

ICG and GTE shall cooperate to establish separate trunk groups for the completion of calls to telephone numbers assigned to high usage customers such as Internet service providers.

ARTICLE XII
SERVICE PROVIDER NUMBER PORTABILITY

Each Party shall provide the other Party with service provider number portability for the purpose of allowing end user customers to change service-providing Parties without changing their telephone number. GTE shall provide its Service Provider Number Portability Service("SPNP") to ICG using remote call forwarding ("RCF"). The GTE rates for SPNP service using RCF are set out in Appendix C attached to this Agreement and made a part hereof. If ICG wishes to use Direct Inward Dialing ("DID") to provide SPNP to its end users, ICG may purchase DID service from GTE at GTE's retail tariff rates or GTE's market wholesale rate if available. ICG shall provide SPNP service to GTE in the manner and at the rates specified for ICG in Appendix C.

INTERCONNECTION AGREEMENT

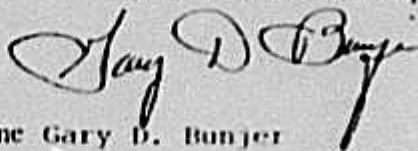
IN WITNESS WHEREOF, each Party has executed this Agreement to be effective as of the date first above written.

GTE , INCORPORATED

ICG Telecom Group, Inc.

By

By



Name

Name Gary D. Bunjer

Title

Title Executive Vice President
Corporate Operations

Date

Date January 10, 1997

APPENDIX A SERVICE MATRIX

<u>ICG Service Location (by tandem serving area)</u>	<u>GTE Facility</u>	<u>LATA</u>	<u>POI (identified by U.S.A. code)</u>
TBD		TBD	
	TAMPFLXA01T	952	TBD

- POI and Facility to be mutually agreed to by GTE and ICG

Compensation for Local Traffic that is routed to a GTE end offices that homes off of a third party tandem ("Indirect Local Traffic") shall be treated in the same manner as if that GTE end office homed off of a GTE tandem. It is expected that the transit tandem provider shall provide the appropriate AMA call records.

APPENDIX B

SERVICE ORDERING, PROVISIONING, BILLING AND MAINTENANCE

1. **Service Ordering, Service Provisioning, and Billing Systems Generally.** The following describes the operations support systems that GTE will use and the related functions that are available in the short term to ICG for ordering, provisioning and billing for resold services, interconnection facilities and services and unbundled network elements. 1
Operations Support Systems for Trunk-Side Interconnection
 - 1.1.1 ICG will be able to order trunk-side interconnection services and facilities from GTE through a direct electronic interface over the GTE Network Data Mover ("NDM") in a nondiscriminatory manner. Orders for trunk-side interconnection will be initiated by an Access Service Request ("ASR") sent electronically by ICG over the NDM. ASRs for trunk-side interconnection will be entered electronically into GTE's Carrier Access Management System ("CAMS") to validate the request, identify any errors, and resolve any errors back to ICG. CAMS is a family of GTE systems comprised primarily of EXACT/TUF, SOG/SOP, and CABS.
 - 1.1.2 The use of CAMS to support ICG's requests for trunk-side interconnection will operate in the following manner: GTE will route the ASR through its data center to one of two National Access Ordering Centers ("NAOC"). The ASR will be entered electronically into the EXACT/TUF system for validation and correction of errors. Errors will be referred back to ICG. ICG then will correct any errors that GTE has identified and resubmit the request to GTE electronically through a supplemental ASR. GTE then will translate the ASR into a service order for provisioning and billing. In order to convert the ASR into a service order, GTE personnel must apply the necessary elements to provision the service and include the billable elements necessary for GTE to bill ICG for the services provided. This application also requires a determination of the access tandem to end office relationships with the service requested.
 - 1.1.3 At the next system level, translated service orders will be distributed electronically through the SOG/SOP systems to several destinations. The SOG/SOP system will begin the actual provisioning of the service for ICG. Other GTE provisioning systems are CNAS and ACES. The GTE Database Administrative Group ("DBA") and the Special Services Control Center ("SSCC") will be the two most important destinations at this level. The DBA location will identify codes for the appropriate GTE switch in order to provide the functions required by the ASR. The SSCC will provide the engineering for the facilities over which the services will be handled. Information from these two groups (and others) then will be transmitted electronically to GTE's field service

personnel (Customer Zone Technicians or "CZTs") who will establish the trunks and facilities, thus connecting the GTE facilities to a connecting company, if one is required, and to ICG. GTE's CZTs also will contact ICG directly to perform testing, and upon acceptance by ICG, will make the necessary entries into the GTE system to complete the order. The completed orders then will pass to GTE's Carrier Access Billing System ("CABS") which will generate the bill to ICG. The billing process under CABS requires coordination with several other systems.

- 1.1.4 **Billing for transport and termination services cannot be accomplished without call records from GTE's central office switches. Records of usage will be generated at GTE's end office switches or the access tandems. Call usage records will be transmitted electronically from GTE's switches through GTE's Billing Intermediate Processor ("BIP"). This system will collect the call records, perform limited manipulations to the record and transfer them to a centralized data center where they will be processed through the Universal Measurement System ("UMS") to determine the validity and accuracy of the records. UMS also will sort the records and send them to the CABS billing system, from which GTE will produce a bill and send it to ICG.**

1.2 Operations Support Systems for Resold Services and Unbundled Elements

- 1.2.1 **ICG will also be able to order services for resale and unbundled network elements, as well as interim number portability, directly from GTE through an electronic interface. To initiate an order for these services or elements, ICG will submit a Local Service Request ("LSR") from its data center to GTE's Data Center using the same electronic NDM interface used for trunk-side interconnection. For new entrants that elect not to interface electronically, GTE will accommodate submission of LSR orders by facsimile, E-mail, internet or a dial NDM arrangement. An LSR is very similar to an ASR, except that it will be used exclusively for line-side interconnection requests. GTE will transfer LSRs to GTE's NOMC centralized service order processing center electronically.**
- 1.2.2 **Most LSRs will be used either to transfer an existing GTE customer to ICG or to request service for a new customer who is not an existing GTE customer. Depending on the situation, different information will be required on the LSR. LSRs for a conversion of a GTE local customer to ICG must include information relating to all existing, new and disconnected services for that customer, including the customer's name, type of service desired, location of service and features or options the customer desires. For service to a new customer who is not an existing GTE customer, the LSR must contain the customer's name, service address, service type, services, options, features and ALFC data. If known, the LSR should include the telephone number and due date/desired due date.**

- 1.2.3 While ICG would have its own customer information and the SAG/GTE products on tape from GTE, ICG would not have the due date or new telephone number for new customers since that information is contained in GTE's systems. Therefore, a process is required to provide this information to ICG. GTE itself does not have uniform access to this information electronically. Until there is agreement on electronic interfaces, ICG has agreed that an 800 number is the method that will be used. The 800 telephone number will connect ICG directly to GTE's NOMC service representatives. When ICG receives a request for basic services from a new local service customer, ICG will call GTE's NOMC through the 800 number, and, while the new customer is on hold, GTE will provide the due date for service and the new telephone number for that customer. At the same time, ICG will give GTE the new customer's name, service address and type of requested service (i.e., RI, BI). GTE will enter that information into its SORCES or SOLAR service ordering systems to be held in suspense until ICG sends the confirming LSR. ICG will then return to its customer holding on the line and provide the due date and new telephone number.
- 1.2.4 After concluding the telephone call with the new customer, ICG will complete a confirming LSR for the new service and send it electronically to GTE's data center for processing. Upon receipt, GTE will match the LSR with the service order suspended in GTE's system, and if there is a match, GTE will process the LSR. After the LSR is processed, GTE will transmit confirmation electronically to ICG through the NDM that the LSR has been processed, providing a record of the telephone number and due date. ICG will be required to submit the confirming LSR by 12:00 p.m. each day local time, as defined by the location of the service address. If ICG fails to submit the LSR in a timely manner, the suspended LSR will be considered in jeopardy, at which time GTE will assign a new due date upon receipt of the delayed LSR for such customer requests and notify ICG of the change.
- 1.2.5 Number assignments and due date schedules for services other than single line service will be assigned within approximately twenty-four (24) hours after GTE's receipt of the LSR using the standard Firm Order Confirmation ("FOC") report sent electronically to ICG over the NDM, thereby providing a record of the newly established due date. An exception would be a multi-line hunt group, for which, the pilot number will be provided via the 800 number process. The other numbers then will be provided through the normal electronic confirmation process.
- 1.2.6 The processing of specifically requested telephone numbers (called "vanity numbers") is as follows. GTE will work with ICG on a real time interface to process vanity numbers while ICG's customer is still on the line. If a number solution can be established expeditiously, it will be done while the customer is still on the line. If extensive time will be required to find a solution, GTE service

representatives will work with ICG representatives off line as GTE would for its own customers. For all of this, the basic tariff guidelines for providing telephone numbers will be followed.

- 1.2.7 Once the order for line-side interconnection service is established, it is moved for provisioning to the next system level. Here, GTE will validate and process the LSR to establish an account for ICG and, if GTE continues to provide some residual services to the customer, GTE will maintain a GTE account. In GTE's system, GTE's account is called the Residual Account and ICG's account is referred to as the ALEC Account. If any engineering for the service is necessary, the account would be distributed to the SSCC. Otherwise, it will be distributed for facility assignment.
- 1.2.8 With the account established and any engineering and facility assignment complete, GTE then will transmit electronically a record to GTE's CZT field personnel if physical interconnection or similar activity is required. The CZT's will provision the service and then electronically confirm such provision in the SOLAR/SORCES system when completed. The accounts then will be transmitted to GTE's Customer Billing Services System ("CBSS"). GTE shall provide to ICG a service completion report. Call records for actual service provided to ICG's customers on GTE facilities will be transmitted from GTE's switches through some usage rating systems (BIP, UMS), screened and eventually delivered to CBSS for the generation of bills.
- 1.2.9 CBSS is a different system than CABS, and it is the one that GTE will utilize to produce the required bills for resold services, unbundled elements and local number portability. CBSS will create a bill to ICG for resold services and unbundled elements along with a summary bill master. Daily unrated records for intralATA toll usage and local usage (incollect usage data will be provided on rated basis) on ICG's accounts will be generated and transmitted electronically to ICG. CBSS is the same system that generates GTE's own end user bill for GTE local and residual services. GTE will provide mechanized bills in EDI format, using industry standard EMR. Appropriate detailed edits and error correction, as required, will be performed.
- 1.2.10 State or sub-state level billing will include up to ten (10) summary bill accounts.
- 1.2.11 GTE accepts ICG's control reports and agrees to utilize industry standard return codes for unbillable messages. Transmission will occur via the NDM. Tape data will conform to Attachment "A" of the LRDTR. Data will be delivered Monday through Friday except for Holidays as agreed. Data packages will be tracked by invoice sequencing criteria. GTE contacts will be provided for sending/receiving usage files.

- 1.2.12 Usage interface testing will be used between GTE and ICG. GTE agrees to transmit test files via CONNECT: Direct. Periodic review of control procedures will be performed.
- 1.2.13 GTE will retain data backup for 45 days. ICG shall reimburse GTE for all expenses related to this retention.
- 1.2.14 GTE and ICG will establish a team to develop a mutually agreeable level of bill certification for local resale. GTE will work to facilitate that accurate bills will be rendered. Contingent on a mutually agreeable level of Bill Certification for local resale, GTE will participate in an annual supplier quality certification review.
- 1.2.15 In addition to the LSR delivery process, ICG will distribute directory assistance and directory listing information (together sometimes referred to hereafter as "DA/DL information") to GTE's Data Center over the NDM. GTE will sort the data containing this information and process it to GTE's directory publication company and its directory assistance bureaus.
- 1.2.16 Charges and credits for PIC changes will appear on the wholesale bill. As ICG places a request for a PIC change via LSR, the billing will be made on ICG account associated with each individual end user. Detail is provided so that ICG can identify the specific charges for rebilling to their end user.
- 1.2.17 GTE will provide a displacement/out service report to ICG whenever an end user leaves ICG and procures service from another Local Service Provider ("LSP"). GTE will provide notification to ICG of ICG end user changes in long distance carriers through the normal outPIC process.
- 1.3 Standards for Service Ordering, Provisioning and Billing GTE will provide the services described in sections 1.1 and 1.2 in a non-discriminatory manner. With respect to ICG end users, GTE shall adhere to the same quality standards applicable to GTE's end users.

Maintenance Systems

2.1 General Overview

- 2.1.1 The maintenance operations support systems which GTE will use for ICG are essentially the same as those GTE uses to provide its own local repair service. If ICG requires maintenance for its local service customers, ICG will initiate a request for repair (sometimes referred to as a "trouble report") by calling GTE's Customer Care Repair Center. During this call, GTE service representatives will verify that the end-user is an ICG customer and will then obtain the necessary information from ICG to process the trouble report. While the ICG representatives are still on the line, GTE personnel will perform an initial analysis of the problem and remote line testing for resale services. If engineered services are involved, the call will be made to the GTE SSCC for handling. If no engineering is required and the line testing reveals that the trouble can be repaired remotely, GTE personnel will correct the problem and close the trouble report while ICG representatives are still on the line. If on-line resolution is not possible, GTE personnel will provide ICG representatives a commitment time for repair and a trouble ticket number, and the GTE personnel then will enter the trouble ticket into the GTE service dispatch queue. ICG's repair service commitment times will be within the same intervals as GTE provides to its own end users.
- 2.1.2 Repair calls to the SSCC for engineered services will be processed in essentially the same manner as those by the GTE Customer Care Center. GTE personnel will analyze the problem, provide the ICG representative with a commitment time while they are still on the line, and then place the trouble ticket in the dispatch queue.
- 2.1.3 GTE then will process all ICG trouble reports in the dispatch queue along with GTE trouble reports in the order they were filed (first in, first out), with priority given to out-of-service conditions. If, at any time, GTE would determine that a commitment time given to ICG becomes in jeopardy, GTE service representatives will contact ICG by telephone to advise of the jeopardy condition and provide a new commitment time.
- 2.1.4 Trouble reports in the dispatch queue will be transmitted electronically to GTE CZI service technicians who will repair the service problems and clear the trouble reports. For cleared ICG trouble reports, GTE service technicians will make a telephone call to ICG directly to clear the trouble ticket. GTE service technicians will make the confirmation call to the telephone number provided by ICG. If ICG is unable to process the call or places the GTE technician on hold, the call will be terminated. To avoid disconnect, ICG may develop an answering system, such as voice mail, to handle the confirmation calls expeditiously.
- 2.1.5 GTE will not provide to ICG "on-line" access to GTE's maintenance support systems to "status" trouble tickets and close them except by special request on a per event

basis. GTE will not provide to ICG real time testing capability on ICG end user services. GTE will not provide to ICG an interface for network surveillance (performance monitoring).

- 2.1.6 GTE will resolve repair requests by or for ICG local service customers using GTE's existing repair system in parity with repair requests by GTE end users. GTE will respond to service requests for ICG using the same time parameters and procedures that GTE uses. ICG then would call GTE's Customer Care Center or SSCC while the customers were on hold.
3. **Electronic Bonding.** The Parties shall work cooperatively in the implementation of electronic gateway access to GTE operational support systems functions in the long-term in accordance with established industry standards. ICG shall compensate GTE for the full costs, including but not limited to design, development, testing, implementation and deployment, for access to GTE operational support system functions.

APPENDIX C
RATES - COMPENSATION
Florida

LOCAL TERMINATION	\$ 0.0107432 /MOU
TANDEM SWITCHING	\$ 0.0009512 /MOU
SERVICE PROVIDER NUMBER PORTABILITY	MONTHLY NRC
Per Number Ported	\$ 5.10 \$ 10.50
Per Additional Path	\$ 3.10

Note: The SPNP NRC is associated with a single customer order. An order may contain more than one ported number.

ICG EXHIBIT NO. 5

MATRIX

ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

ISSUE	ICG POSITION	GTE POSITION	FCC RULES
RESALE			
1	<p>ICG requests that the resale discount be based on the avoided cost methodology outlined by the FCC.</p> <p>There should be retroactive adjustment of resale discounts.</p>	<p>In states where the Commission has approved an agreement and a effective contract exists, as a result of arbitration, the rates in that agreement shall be offered to ICG. This will be done under the condition that a true up shall take place once the Commission approves GTE's rates which may be under review in cost analysis proceedings in the State. A true up shall take place if the Commission Approved Rates are later modified as the result of appeal or judicial review.</p> <p>In states where the Commission has yet to approve and make effective a contract as a result of arbitration, the rates shall be those rates that GTE proposed in the arbitration process. When the Commission approves rates, these rates shall be the rates effective in the agreement between ICG and GTE. These rates shall be further subject a true up if they are later modified as the result of appeal or judicial review.</p>	<p>See 47 CFR §§ 51.603, 51.809 and 47 U.S.C. §§ 251(c)(1), (c)(4), 252(i). ICG believes that these rules and statutes favor ICG by requiring that resale be available, inter alia, on non-discriminatory terms.</p>

ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

2	<p>ICG requests availability of all resale services offered to any CLEC in each state. ICG additionally requests resale of all CLASS features, E911, all voice-mail related features, all AIN-based features, all promotional offerings, and public pay phone lines</p>	<p>GTE will make available to ICG for resale any Telecommunications Service that GTE currently offers, or may offer hereafter, on a retail basis to subscribers that are not telecommunications carriers, except as qualified in the following:</p> <p>ICG shall not resell to one class of customers a service that is offered by GTE only to another class of customers in accordance with State mandated requirements.</p> <p>Services identified in GTE Tariffs as Grandfathered in any manner are available for resale only to end user customers that already have such Grandfathered service. An existing end user customer may not move a Grandfathered service to a new service location.</p> <p>Promotional offerings under 90 days may be resold but the promotional discount will not apply.</p> <ul style="list-style-type: none"> Public and Semi-public pay telephone line will not be resold unless mandated by the state. <p>Access to E911, where available, is not a retail service. Access is provided as part of basic service and part of the basic service available for resale.</p> <p>Voice mail is by definition not a "Telecommunications Service" and as such voice mail is not available for resale under the Telecommunications Act of 1996. GTE, however, will consider offering any non-telecommunications service through a CLEC Market Response Process. This process would be handled through ICG's Carrier Account Management Team.</p>	<p>FCC Order at 9 876 re payphone lines must be available for resale. FCC Order at 9 968 re resellers must have the same right to resell grandfathered services as the LEC. Accord. 47 CFR § 51.615. See generally 47 U.S.C. §§ 251(b)(1), (c)(4).</p>
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ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

5	<p>ICG request that the LOA signed by their prospective customer be one of their design (i.e. LOA not required to be on customer's letter head.</p>	<p>GTE requires that a letter of authorization be provided for the conversion or establishment of a customer. The authorization stipulates that the end user has authorized ICG to be their service provider or to obtain CSR information on an account. See issue 4 related to obtaining CSR information on an account. GTE will consider the use of a blanket LOA process associated with the ordering of resale and unbundled local services based on a mutual agreement and upon certification of the processes. In the event of a discrepancy or dispute, a copy of the end user's signed LOA will be required. GTE does not dictate the form of the LOA but the following information is required on the form used by ICG:</p> <p>Statement of Authorization:</p> <p>Date of Authorization:</p> <p>End User Name:</p> <p>End User Service Address:</p> <p>End User Mailing Address:</p> <p>Telephone Number(s) Authorized:</p> <p>End User Signature:</p> <p>Agent (ICG) Name:</p> <p>Agent (ICG) Address:</p> <p>Agent (ICG) Telephone Number:</p>	<p>See generally 47 U.S.C. §§ 201(b), 202, 251(b)(1), (c)(4). See also 47 U.S.C. §§ 251(c)(2)(3), and FCC Order at ¶¶ 217, 224-225, 312. ILECs have the duty to provide service to CLECs in the same manner they provide services to themselves.</p>
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ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

4	<p>ICG requests that GTE upon receipt of a Faxed customer signed LOA giving ICG the authority to have access to the customers CPNI and to make changes in the customer's account provide ICG with the customers local service record and if requested change the customer from their current provider to ICG provided resold service.</p>	<p>GTE will require an end-user signed LOA to be provided prior to GTE's release of end users' service records. GTE will provide the customers service record of GTE's end user after receipt of the LOA attached to a completed "customer service record request" form (any example of this form can be found in the Pre-ordering Requirements section of GTE's Customer Guide).</p> <p>GTE will provide end user change over where mandated by commission order. GTE will, upon receipt of an LSR requesting total transfer of all of the customer's service functions and features of a GTE end user, referencing a specific "customer service record request" and GTE's receipt of that referenced "customer service request" and attached LOA signed by the customer, change all of the customer's service, (functions and features) from GTE as the service provider to ICG as the service provider. GTE will also provide the customers service record information to ICG.</p>	Id.
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ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

5	ICG request that CPNI be fully current, complete, including PIC and 3rd party info, be provided by the next business day after request. We further request that CPNI inquiries not be disclosed to GTE's retail sales force.	<p>Upon fax receipt of a LOA and Customer Service Record form (CSR) for a GTE end user, GTE will return using fax the end user name, address, product and current services available for resale, and directory listing information as reflected on the GTE account record. This includes information in the remarks section of the CSR e.g. directions to the house, best time to contact etc. It will not, however, include customer credit information. GTE will also provide at the request of ICG the customers PIC information.</p> <p>GTE will provide the Operating Company Number of the end user's ALEC provider, should the ICG's LOA and CSR be misdirected to GTE. GTE will not complete the CSR when the local exchange provider is not GTE.</p> <p>CPNI inquiries shall not be disclosed to any party, GTE or otherwise.</p>	Id.
6	Requested CPNI shall be provided in a timely non-discriminatory manner.	GTE agrees to provide transmission of CSR information in a timely manner. Prior to committing to specific response times, GTE will need a forecast from ICG to allow for proper sizing of our work center. GTE's goal shall be to provide response to a request for CSR information by the close of business on the business day following receipt of request (if said request is received prior to 5:00 PM).	Id.
7	ICG requests that the CPNI be provided electronically.	<p>GTE will return the completed CSR using fax until the capability is deployed</p> <p>to electronically transmit the information to ICG using the GTE secure integrated gateway.</p>	Id.
7A	ICG believes that all CPNI should be available when ICG presents a signed LOA	Thus far, GTE has indicated that it will make available only the CPNI specifically described in Items 5-7 above. (This is ICG's characterization of GTE's position.)	Id.

ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

8	<p>ICG requests that GTE provide Local Call Detail for service billing in a timely manner and contractual language that provides for discounts or no charges should the billing detail be provided late. Provisions should be made if billing data GTE provides is late or in error.</p>	<p>Except for those Services and in those areas where measured rate local service is available to end users, monthly billing to ICG will not include local calling detail. Where local call detail is to be provided GTE agrees that both GTE and ICG will develop a reciprocal call record transfer process that is timely and provides compensation for both parties in the event call record data is lost or late.</p> <p>ICG may request and GTE shall consider to develop the capabilities to provide local calling detail in those areas where measured local service is not available for a mutually agreeable charge.</p> <p>Customer Usage Data consists of the following:</p> <p>Call Attempts</p> <p>Completed Calls</p> <ul style="list-style-type: none"> • Use of CLASS/LASS/Custom Features <p>Calls to information providers reached via GTE facilities and contracted by GTE.</p> <ul style="list-style-type: none"> • Calls to DA where GTE provides such service to an ICG customer • Calls completed via GTE provided OS where GTE provides such service to ICG local customer. <p>For GTE provided CENTRANET service, station level detail for calls outside the CENTRANET group.</p>	10.
8 (Cont.)		<p>Records shall include complete call detail and complete timing information.</p> <p>GTE offers a file transfer using ConnectMail. GTE Offers ConnectMail via both dedicated (NDM) and dial up options.</p>	

ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

9	ICG requests an escalation procedure to the officer level, with specified escalation criteria.	This request is being considered by GTE's Carrier Markets Department.	Id.
10	ICG requests that GTE remove the language from its contract requiring Certification. ICG has notified the Commission that, as an AAV, it intends to provide local service.	GTE is not required to provide services for resale to companies that are not a certified provider of telecommunications service. Therefore, ICG must warrant to GTE that it is a certified provider of telecommunications service and document its certificate of Operating Authority on GTE's customers profile.	CY. 47 CFR § 51.301(c)(4) (conditioning negotiation on certification is bad faith negotiation).
11	ICG disagrees with any requirement for them to notify the displaced reseller.	When GTE receives an order from ICG for services under this Agreement and GTE is currently providing the same services to another local service provider for the same end user, GTE shall notify the end user's outgoing local service provider of record within 48 hours after completion of the order. GTE will also notify ICG using the same process when another local service provider replaces ICG as the end user's local service provider. ICG is not required by GTE to notify the outgoing ALEC of any ICG order activity	See 47 CFR § 51.605(b). ILEC cannot impose unreasonable restrictions on resellers. Requiring a reseller to notify a displaced reseller is unreasonable. Accord: 47 USC §§ 251(b)(1), (c)(4).
12	ICG requests assurances that LDB updates be made on a nondiscriminatory basis.	Effective as of the date of an end user's subscription to ICG service, GTE will remove the GTE telephone line number based information including, but not limited to, calling card number from its LDB. These updates shall take place in the same time frame as do update for GTE customers on a nondiscriminatory basis upon completion of the conversion LSR.	PCC Order 9970, stating LEC services to reseller must equal services to themselves.
INTERCONNECTION			

ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

14	ICG requests positive verification of timely opening of ICG telephone codes.	GTE updates its databases and routes traffic according to the LERG. Once the LERG reflects ICG's NXX's GTE will route traffic to those NXXs. The deployment of NXX's is not a new issue with CLECs, yet there has been historically no requirement for a confirmation process. GTE does not believe that confirmation of the opening up of NXXs should be a one way requirement for GTE, and that if confirmation is required, that an appropriate industry-wide process be developed. GTE would be willing to work with ICG within the Industry Forums on this issue.	47 USC §§ 251(c)(2)(A). Opening of NXXs in the LERG is fundamental to routing traffic.
15	ICG proposes to continue the technical and financial interconnection arrangements as in the ICG-GTE interim agreements.	The financial arrangements associated with interconnection shall follow the same path as do all of the other rates. GTE believes that continuation of the technical interconnection arrangements as a negotiable item.	47 USC §§ 251(c)(2), 252(d)(2), (b)(i). See generally, 47 CFR § 51.713. 47 CFR § 51.305(c) provides that previous successful interconnection is substantial evidence interconnection is feasible. See also 47 CFR § 51.305(d).
16	ICG proposes that GTE provide all signaling codes required to route to and through GTE end office and tandem switches, including class of service codes.	Upon the establishment of ICG end office to GTE tandem arrangements GTE agrees to provide based on these specific arrangements the required QZZ end office/tandem routing codes for each specific arrangement.	47 USC § 251(c)(2)(A) - interconnection for routing of traffic.
NETWORK ELEMENTS			
17	ICG proposes that network elements be priced based on GTE's TELRIC costs as approximated in the Hatfield model.	See Issue #1.	See sources at item 1. Also 47 USC § 252(i).

ICG/GTE INTERCONNECTION NEGOTIATIONS ISSUE MATRIX

18	ICG requests that GTE provide "Extended Demarcation Point" service i.e. ICG has a T-1 facility on an unbundled network basis into a building the "inside wire maintenance would be provided by GTE from the T-1 entry point to the customer location in the building.	The service concept of "Extended Demarcation Point" is not a "Telecommunications Service" and therefore not a service that GTE is required to provide under the requirement of the Telecommunications Act of 1996. However, GTE will consider offering Non-Mandated Services through a CLEC Market Response Process. The GTE Point of Contact is Carrier Account Management.	
19	ICG seeks to be able to order all unbundled network elements made available to others. Elements available should include 2 wire, 4 wire, DS1, and DS3 loops, NIDs, interoffice transport, line side ports, trunk side ports, and local switching.	<p>GTE will make available to ICG the same network elements as GTE offers to anyone as they become available. These elements are currently as follows:</p> <p>Network Interface Device or NID</p> <p>Loop Elements</p> <p>2-wire analog voice grade</p> <p>4-wire analog voice grade</p> <ul style="list-style-type: none"> • DS-3 (with electronics) <p>Loops for Digital Services (ISDN, ADSL, HDSL and DS-1) will be provided by using a 2 or 4-wire loop as applicable and special conditioning.</p>	<p>47 CFR § 25.103(i). 47 CFR § 51.319 specifies unbundled elements. FCC Order at ¶ 312, saying ILEC must provide unbundled elements according to same standards RBOC supplies services to itself. This standard is incorporated in 47 CFR § 51.311(b). 47 CFR § 51.311(a) requires that access to unbundled elements be nondiscriminatory. See also 47 CFR § 51.313.</p>

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<p>19 (Cont.)</p>		<p>Port Elements</p> <p>Line side Port - On-hook and off-hook detection, dial tone, digit reception and interpretation (dial pulse or MTMF or SS7 signaling where available), network call routing to the called telephone number, audible ringing and power ringing, automatic message accounting (AMA) recording, disconnect detection, use of GTE switch based services and functions and vertical features.</p> <p>Trunk-side Port - digit pulsing DTMF and MF or SS7 signaling where available, Digit reception and interpretation, network routing toward terminating telephone number, answer detection and supervision signaling, use of GTE switch based services and functions and vertical features.</p> <p>Transport Elements</p> <p>Signaling Elements</p> <p>Call-Related Databases</p> <p>Data Switching</p> <p>Digital Cross Connect System (DCS)</p>	
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20	<p>ICG requests that they have the ability to order a network element and connect it to special access services without restriction.</p> <p>e.g. (T-1) as a local loop and connect it directly a Special Access DS-3 facility in one GTE office which then may go to another GTE office where ICG is collocated?</p>	<p>ICG may request network elements to be connected to special access services without restriction.</p> <p>ICG will have the ability to order a local loop (T-1) and connect it directly to a Special Access DS-3 facility in one GTE office which goes to another GTE office where an ICG collocation node has been established. In this example ICG must provide the connecting facility assignment of the DS1/DS3 transport facility in order for GTE to terminate the T-1.</p>	<p>47 CFR § 51.315 requires ILECs to allow and facilitate the combination of network elements. 47 CFR § 51.309 requires a ILEC to refrain from imposing restrictions on the use of unbundled elements in a manner that prevents a service from being offered.</p>
21	<p>ICG request information on how GTE plans to keep records on combined network elements.</p>	<p>All loop services will be assigned a GTE CKT ID. Non-voice grade loops will be engineered and a CKT design record provided to ICG. Ported elements are assigned a TN, and are non engineered.</p>	<p>See generally 47 USC § 251(c)(2).</p>
22	<p>ICG seeks an efficient, cost-based method to migrate special access arrangements and trunking arrangements to unbundled network element arrangements.</p>	<p>Request being considered by Carrier Markets.</p>	<p>Id. See also sources cited in item 20.</p>
OTHER			

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24	ICG requests a full description of the methods of access and the services and options available to ICG. In particular, ICG requests that a description of the churning process be contained in the contract.	<p>A full description of ICG's electronic interface options are contained in the GTE ALEC Handbook. If you can access the Internet from an ICG workstation you can interface with the GTE Secure Integrated Gateway System (SIG) once security passwords are obtained. SIG provides dial up or dedicated access to GTE OSS functions for pre ordering, and repair. Ordering is via fax, or existing access (e.g. ASB) electronic interface NDM. The development of EDI for ordering is underway with deployment dependent upon completion of industry standards. EDI 811 is currently available for the return of the GTE bill.</p> <p>The conversion of a GTE retail end user to ICG resale service does not result in the disconnection and reconnection of service. GTE does not process an out order and there should be no opportunity for the conversion order to result in the service being taken out of service. The addition of contract language to address the above is acceptable.</p>	Section 51.319(g) requires access to OSS functions. Section 251(b)(1) and Section 251(c)(4) impose the duty not to impose unreasonable or discriminatory limitations on resale. 47 CFR § 51.603 requires resale to be made available on reasonable terms.
25	ICG proposes to consider any reasonable process for minimizing local exchange fraud but would exclude this topic from a public agreement.	<p>GTE proposes the following language:</p> <p>"Although in most circumstances the end user's current telephone number may be retained by the end user when switching local service providers, if an end user service has been temporarily disconnected for non-payment, the end user's previous telephone number will not be made available to ICG until the end user's outstanding balance has been paid."</p>	
26	ICG requests a unified account team at GTE to handle all interconnection, resale, and access issues.	Request under review of carrier interests	See sources cited in item 2.

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27	ICG seeks access to the same methods, options, features, and functionality of Operational Support Systems provided to any other interconnector or reseller.	GTE shall offer to ICG the same methods, options, features, and functionality of Operational Support Systems access provided to any other interconnector or reseller under the same terms and conditions.	47 CFR § 51.319(m)
28	ICG seeks notification from GTE on at least 45 days notice of any feature, functionality, product or pricing changes or additions.	GTE will provide notification of proposed new retail telecommunications services to, or modifications or discontinuance of, existing retail services forty-five days prior to the expected date of regulatory approval of the new or modified service, or discontinuation of a service. In the event that services are introduced or discontinued with less than 45 days' notice to the regulatory authority, GTE will notify ICG at the same time it determines to introduce the new or modified service or discontinued the service. This notification may be provided via an internet web page application.	
13	ICG seeks resale service quality standards at least as high as provided to any other reseller and as high as provided to GTE's own customers.	<p>GTE and ICG shall meet applicable quality of local service standards imposed by the Commission and will provide a level of services to each other under this Agreement in compliance with the nondiscrimination requirements of the Act. GTE will treat ICG in a nondiscriminatory manner equal to GTE's established business practice with respect to its own end users.</p> <p>GTE agrees to implement mutually agreed upon standards to measure the quality of Local Service and Unbundled Network Elements supplied by GTE with respect to pre-ordering, order/provisioning, maintenance and billing.</p>	47 CFR § 51.603 requires service to resellers to be nondiscriminatory (§ 51.603(a)) and of a service level equal to what GTE provides its own end users (§ 51.603(b)).

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25	ICG seeks to negotiate service quality standards for unbundled network elements.	GTE agrees to provide unbundled network elements in a timely manner considering the need and volume of requests. GTE will provide unbundled network elements in a non-discriminatory manner and shall provide power to such elements on the same basis as GTE provides to itself. Additionally, GTE agrees to implement mutually agreed upon standards to measure the quality of Unbundled Network Elements supplied by GTE with respect to pre-ordering, order/provisioning, maintenance and billing.	See 47 CFR § 51.311, discussing nondiscrimination but not explicitly addressing specific standards.
29	GTE services or customer contacts provided on behalf of ICG will be nonbranded or branded as ICG, at ICG's choice.	When a GTE representative goes to a customer premise on behalf of ICG, in the event the representative has contact with the customer, the representative will indicate to the customer that he or she works for GTE but is at the customer premise on behalf of ICG regarding ICG service. If the customer is not at the premise at the time that the technical representative is at the premise, GTE agrees to deliver only generic material or documents to the customer, and the representative will write ICG's name on the document or material left for the customer. GTE's treatment of customer contacts on behalf of ICG shall be the same as with any other CLEC.	
30	ICG requests that GTE offer access to the poles, ducts, conduits and rights of way it owns or controls.	To the extent required by the Act, GTE and ICG shall each afford to the other access to the poles, ducts, conduits and rights of way it owns or controls on terms, conditions and prices comparable to those offered to any other entity pursuant to each Parties tariffs and/or standard agreements.	47 USC § 251(b)(4).

Note: With the exception of item 7A above, ICG and GTE both contributed to the statement of their respective positions in

Items 1-30. From here on, ICG is giving its characterization of both its own and GTE's position.

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31	Service arrangements made available under the agreement and existing at the time of termination should continue without interruption under the prices, terms, and conditions of the Agreement until a new Agreement is reached. This is essential to prevent customers from needlessly having service terminated at the end of the Agreement term. New customers and services may be subject to different rates, terms, and conditions.	The Parties may agree to continue, on a month to month term, the interconnection arrangements in the agreement until the parties are able to reach and execute a new interconnection agreement; or on standard terms and conditions approved and made generally effective by the Commission, if any; or on tariffed terms and conditions made generally available to all local exchange carriers.	
32	The Agreement must be binding on any successor or assignee of any portion of GTE's operating territory.	The Agreement should be terminated as to any portion of its local exchange operations that GTE sells.	
33	ICG should have approximately one year (360 days) to raise billing disputes under Section 6.1 once ICG has paid a GTE bill.	The period of time to determine an error in a billing statement should be 30 days.	
34	Either Party can disclose to a governmental agency with authority over the Agreement any proprietary information of the other Party so long as (i) the other Party is given notice of the proposed disclosure as soon as possible but in any event early enough to protect its interests in the proprietary information; and (ii) the disclosing Party submits the information in accordance with the applicable confidentiality procedures of the agency.	There should be no disclosure of any confidential information to any government agency.	CFR 47 CFR § 51.301(c)(1) (bad faith to demand nondisclosure requiring confidentiality for information relevant to arbitration or requested by a relevant agency).
35	There should be recourse to someone at least at the vice president level under the dispute resolution procedures.	It is sufficient to merely provide that each Party will appoint a knowledgeable, responsible representative to meet and negotiate.	
36	Five oral depositions should be allowed in binding arbitration under the Agreement.	There should be only one deposition.	

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37	If negotiations do not resolve a dispute within thirty (30) days, either Party may demand arbitration. Either Party may also demand that the arbitration hearing commences within thirty (30) days of the demand for arbitration.	Parties should have to wait 60 days after requesting dispute resolution before requesting arbitration and at least an additional 60 days before the arbitration hearing commences.	
38	Each Party will be responsible for its own losses when both parties are either grossly negligent and/or engage in willful misconduct. Further, the scope of the indemnification need to be limited to transactions arising out of the Agreement.	A Party should not lose its right to indemnity if it has been grossly negligent or engaged in willful misconduct.	
39	A Party is not insulated from liability against its own gross negligence or willful misconduct.	Limitations of liability should protect a Party that is grossly negligent.	
40	If one Party sells the other a service, the selling Party should be presumed to have the necessary licenses to use any patents or other intellectual property needed to provide the service, and the selling Party must protect the purchasing Party against intellectual property claims of a third party relating to the purchased service.	The seller of the services should have no responsibility in the event a third party seek intellectual property fees or royalties from the purchaser of the services.	
41	If any provisions of the Agreement is held by a court or regulatory agency of competent jurisdiction to be unenforceable, the rest of the Agreement shall remain in full force and effect. The Parties shall negotiate in good faith for a replacement provision, and if they can't agree, refer the matter to mediation, arbitration, or a similar process.	If a material provision of the Agreement is ruled invalid, and the Parties don't agree on a replacement provision, either Party may terminate the Agreement.	

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42	A rule of construction should reflect whether in fact the Agreement was negotiated as a mutual work product, is based on a negotiated agreement, or is based on the unilateral draft of one of the parties.	Even an agreement based on a draft developed entirely by one Party shouldn't be construed against that Party.	
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