GTE'S RESPONSE TO ACSI'S ARBITRATION PETITION

DOCUMENT NUMBER-DATE
11240 OCT 21 98
FPSC-RECORDS/REPORTING

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SECTION I

RESPONSE

TAB 1

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by American Communications Services, Inc., and its local exchange operating subsidiaries, for Arbitration with GTE Florida Incorporated pursuant to the Telecommunications Act of 1996	Docket No. 961169-TP Filed: October 21, 1996
In re: Petition of Sprint Communications Company Limited Partnership for Arbitration of Proposed Interconnection Agreement with GTE Florida Incorporated Pursuant to the Telecommunications Act of 1996	Docket No. 961173-TP

GTE FLORIDA INCORPORATED'S BRIEF IN RESPONSE TO REQUEST FOR ARBITRATION BY AMERICAN COMMUNICATIONS SERVICES, INC.

GTE Florida Incorporated (GTE) respectfully submits this Response Memorandum ("Response") to the Commission in support of GTE's legal and factual presentation on the issues presented for arbitration by American Communications Services, Inc. (ACSI) pursuant to section 252 of the Telecommunications Act of 1996. GTE's full Response to the Petition for Arbitration consists of this Memorandum; a matrix of issues for arbitration (Section I, Tab 3); the prepared direct testimony of Messrs. McLeod, Trimble, Steele, Doane, Cantrell, Menard, Munsell and Duncan and attachments thereto (Section III); a glossary (Section II); a legal report setting forth the reasons why the Act, if incorrectly applied to GTE, would result in an unconstitutional taking of property without just compensation (Section I, Tab 4); and a copy of the Order of the U.S. Court of Appeals which stayed critical provisions of the FCC's First Report and Order purporting to implement the Telecommunications Act of 1996 (Section I, Tab 2). GTE also relies upon

the detailed cost study being submitted to the Commission by GTE in support of its positions in the arbitrations of interconnection agreements.

I. INTRODUCTION

The Telecommunications Act of 1996 (the "Act"), if properly applied, holds out great promise to usher in an era of facilities-based competition in the local exchange telephone market. Congress required incumbent local exchange carriers ("ILECs"), such as GTE, to permit access to their networks by new entrants who request interconnection, unbundling of the network, and the sale of retail services at wholesale rates. In order to implement the access by competitors, Congress created a market-based negotiation process between the parties to arrive at the rates terms and conditions of interconnection agreements between each ILEC and each requesting carrier. Congress chose the States (through their public utility commissions) to assist the negotiation process through State-sponsored arbitrations of discrete issues on which the parties cannot reach a negotiated agreement. In addition to providing access to the local network, Congress intended to ensure that ILECs recover their costs, earn a reasonable profit on their investments and continue to be viable competitors.

That promise would be frustrated, however, if the requesting carriers were permitted to emerge from the negotiating process with provisions that impose unfair or unrealistic obligations on the ILECs, or with prices that fail to compensate the ILECs for the provisioning of their network elements and services to alternative local exchange carriers ("ALECs") without just and reasonable compensation. Such a result would frustrate

competition, for the ILEC would be harmed by the imposition of unfair and costly burdens. Congress did not intend that the ILECs would have to absorb substantial interconnection costs or subsidize their competitors. Likewise, Congress did not relegate ILECs to mere service providers who must conform to the dictates of individual ALECs.

This arbitration was initiated by ACSI -- a new entrant -- after a short round of negotiation sessions to address terms of connection with GTE in this state. ACSI seeks arbitration not of all issues that might be addressed in the ultimate interconnection agreement, but rather of a small handful of discrete issues which will assist the parties in completing their agreement. GTE promotes the resolution of those issues promptly by this Commission, so that the parties may thereafter return to negotiate their agreement on those and the remaining terms and conditions.

Part II of this Brief sets out the scope and limitations of this Commission's responsibilities, as prescribed by the Telecommunications Act. This context will be helpful to the panel in choosing how to address those issues that it must address within the statutory time period. In Part III, this brief discusses the critical issues of pricing, including the manner in which GTE's cost study supports the pricing that GTE witnesses present for adoption by the Commission. Part III also discusses the recent Order of the U.S. Court of Appeals for the Eighth Circuit, which stays the FCC's versions of pricing rules and prevents ACSI from relying upon the FCC's default proxy rates in lieu of presenting cost studies to support the rates it wants. Part IV provides an overview of the individual pricing and technical issues that the Commission must resolve.

II. THE ACT REQUIRES THE COMMISSION TO LIMIT HIS DETERMINATION TO THE OPEN ISSUES SUBMITTED BY THE PARTIES

ACSI has submitted seven issues to arbitration. Under the Telecommunications Act, the Commission is to resolve those seven issues only, and has until June 24, 1997, 270 days from the date on which ACSI submitted its request for negotiation, to issue its decision.[1]

Congress relied upon market-oriented negotiations between the parties to achieve the terms and conditions of interconnection. The arbitration mechanism is merely an aid to negotiation; it neither begins nor ends the process whereby the parties themselves produce a contract. Rather, the parties take limited open issues to arbitration, and after arbitration they return to negotiate their full contract. This is proven by the terms of the Act itself.

First, Congress made clear that the Commission's authority to resolve issues is limited to the issues presented to him by the parties for arbitration. The Act provides:

> The State commission shall limit its consideration of any petition under paragraph (1) (and any response thereto) to the issues set forth in the petition and in the response, if any, ...

47 U.S.C. § 252(b)(4)(A) (emphasis added). Thus, the Commission is not to write the parties' contract for them, and is not to resolve issues the parties may allude to but have

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[1] In Florida, ACSI never gave GTE a formal request for negotiations, as it is required to do under the Act. Therefore, its Petition should be dismissed. First, ACSI failed even to request negotiations. Second, in the alternative, it did not permit 135 days to pass after it first mentioned Florida in connection with its contract negotiations for two other states where it had requested negotiation.

not properly pleaded as an issue for arbitration. Beyond the issues that the parties expressly present for arbitration, the Commission has no jurisdiction.

Second, Congress made clear that the nine-month deadline imposed on the Commission is a deadline to resolve the issues presented for arbitration; the completion of the contract negotiations and adoption of the contract is to occur thereafter. The Act states:

> The State commission shall resolve each issue set forth in the petition and the response, if any, by imposing appropriate conditions as required to implement subsection [252](c)] upon the parties to the agreement, and shall conclude the resolution of any unresolved issues not later than 9 months after the date on which the local exchange carrier received the request under this section.

47 U.S.C. § 252(b)(4)(C).

After the issues are resolved, the parties are to complete their agreement in accordance with the Commission's decisions and then submit their agreement to the Commission for approval under section 252(e) of the Act.

ACSI and GTE have worked together to resolve many issues and will continue these discussions. GTE has and will continue to engage in good faith negotiations with ACSI.

While pricing and costing are the main issues raised by this arbitration, there are a few other related issues that still remain open between the parties. To assist the Commission in resolving all seven open issues, GTE has included in its Response a matrix detailing the respective positions of the parties.

Exhibit A to ACSI's Petition for Arbitration identifies categories of additional topics which ACSI states, and GTE agrees, are issues on which the parties have reached an agreement in principle. Since these issues are not in dispute, ACSI's request for arbitration of these issues is improper. ACSI's Exhibit A, by its own admission, does not contain "issue[s] set forth in the petition and the response" as contemplated in Section 252 (b)(4)(c). ACSI lists them as issues that are resolved, but await contract language. GTE and ACSI should negotiate that language outside of the arbitration room, and the arbitration should be limited to review of the seven issues set forth in ACSI's Petition.[2]

III. THE PRICING PROVISIONS ESTABLISHED BY THE FCC'S FIRST REPORT AND ORDER HAVE BEEN STAYED, AND THIS COMMISSION MAY NOT APPLY THE FCC'S DEFAULT PROXY RATES FOR ANY PURPOSE

A number of state commissions and ILECs, including GTE, petitioned the Eighth Circuit to review the FCC's First Report and Order, and moved to stay the FCC's regulations pending resolution of the merits of the petitions for review. The central contentions of the Stay motions were that (i) the FCC lacked the authority to impose pricing methodologies and default proxy rates for intrastate telephone service and (ii) the FCC's methodologies and proxy rates were arbitrary and effected a taking.

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[2] If, however, ACSI's position is that no agreement has been reached as to these issues, GTE reserves the right to amend, supplement, and refine this Response.

The FCC's First Report and Order was due to become effective on September 28, 1996. On September 27, the Eighth Circuit granted a Temporary Stay pending oral argument, which was held on October 3.[3]

On October 15, 1996, the Eighth Circuit "stay[ed] the operation and effect" of the "pricing provisions" and the "pick and choose" rule contained in the First Report and Order.[4] (Order at 8.) The Court's Stay extended to every portion of the FCC's pricing rules, and was founded on the Court's conclusion that GTE was likely to prevail on the merits because the FCC had no intra-state pricing authority and GTE and others would suffer irreparable injury without a Stay.[5]

The Court determined that a Stay was necessary because petitioners had demonstrated that they "will likely succeed on the merits of their appeals based on their argument that, under the Act, the FCC is without jurisdiction to establish pricing regulations regarding intrastate telephone service." (Order at 16 (emphasis added).) The Court reached its conclusion by finding that "nowhere in section 251 is the FCC specifically

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[3] Order Setting Hearing and Imposing Temporary Stay (Sept. 27, 1996) at 3 ("the effective date of the [FCC's] First Report and Order . . . is hereby temporarily stayed until the order resolving the Stay motions is filed").

[4] See Order Granting Stay Pending Judicial Review, Nos. 96-3321 et al. (Oct. 15, 1996) (the "Order") at 8. A copy of the Court's Order is attached.

[5] The Eighth Circuit's Stay extended to the pricing rules of the FCC's First Report and Order: Subpart F ("Pricing Of Elements", 47 C.F.R. §§ 51.501 - 51.515); Subpart G ("Resale", 47 C.F.R. §§ 51.601 - 51.617); Subpart H ("Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic", 47 C.F.R. §§ 51.701 - 51.717); Subpart I ("Procedures for Implementation of Section 252 of the Act, 47 C.F.R. § 51.809); and the proxy range for line ports used in the delivery of basic residential and business exchange services established in the FCC's Order on Reconsideration, dated Sept. 27, 1996. See Order at 9 n.3, 21 n.8.

authorized to issue rules on pricing" and that "Congress intended to grant the state commissions the authority over pricing of local telephone service, either by approving or disapproving the agreements negotiated by the parties, or, when the parties cannot agree, through compulsory arbitration, thereby preserving what historically has been the States' role." (Id. at 14 (emphasis added).) Furthermore, the Court expressed "serious doubts" that the FCC's interpretation of the Act constituted the "straightforward or unambiguous" grant of authority necessary to qualify as an exception to Section 2(b) of the Communications Act of 1934, which restricts the FCC's authority to interstate matters, not intrastate matters. The Court further concluded that the FCC's "roundabout construction of the statute" conflicts with "what, at first blush, appears to be a rather clear and direct indication . . . that the state commissions should establish prices." Id. at 15 (emphasis added).

The Eighth Circuit – in no uncertain terms – has stayed the pricing provisions of the First Report and Order. That means that the pricing provisions have no current legal effect.[6] Accordingly, the FCC's pricing provisions may not be enforced by anyone – including the FCC, this State, the Commission, and any party to this arbitration. Until further Order of the Court, the FCC's pricing rules should be treated as if they never existed. Indeed, to treat the FCC's pricing rules in any other manner would run directly

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[6] Reports in the trade press indicate that the FCC is suggesting that the states can still use the FCC proxy rates if the states adopt the FCC's record in an arbitration proceeding. Such a suggestion, if true, should be taken and then dismissed for exactly what it is -- an effort to do an end-run around the serious problems of constitutional dimension which gave rise to the Stay in the first place. Moreover, the testimony of Trimble unequivocally demonstrates that the FCC record does not rise to the level of competent and substantial evidence in the first instance.

contrary to the policy underlying stays of administrative actions, as expressed over fifty years ago in Scripps-Howard Radio, Inc. v. FCC: "an appellate court should be able to prevent irreparable injury to the parties or to the public resulting from the premature enforcement of a determination which may later be found to have been wrong." 316 U.S. 4, 9 (1942) (Frankfurter, J.).[7]

The Eighth Circuit's well-reasoned, thorough opinion leaves no doubt that the FCC's pricing rules cut squarely against the regime envisioned by Congress for conducting arbitrations. The Court concluded that the FCC's pricing provisions would prevent "free negotiations" between parties, would artificially fix the results at unjustifiably low prices, and would prevent the very case-specific, individualized decision making required under the Act.

The Eighth Circuit's decision staying the First Report and Order is binding on this and every Commission and State nationwide. The Eighth Circuit was selected at random pursuant to the "lottery statute," 28 U.S.C. § 2112(a), as the only Court of Appeals to hear the multiple petitions for review that were filed after the publication of the First Report and Order. Pursuant to the "lottery statute," no other court will be authorized to consider a review of the First Report and Order.

The consequences of the Court's ruling are clear. First, the Commission may not rely on any aspect of the pricing rules, including the FCC's default proxy rates and pricing

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[7] Scripps-Howard continues, stating that a stayed order cannot be applied because "[i]f the administrative agency has committed errors of law for the correction of which the legislature has provided appropriate resort to the courts, such judicial review would be an idle ceremony if the situation were irreparably changed before the correction could be made." 316 U.S. at 10.

methodologies. Second, the Order does not disturb the Commission's statutory duty to hold localized, case-specific determinations, applying the Act and State law, to establish "just and reasonable" rates for interconnection with GTE's network. Third, the Order only makes more compelling the case for relying on GTE's proposed rates for unbundled network elements and resold services, which are supported by extensive cost studies and economic testimony now in the record. Fourth, the Eighth Circuit's Order now requires that the Commission set aside the FCC's default proxy rates and arbitrate all "open issues" based upon the parties' evidence of cost. As explained, those rates should be GTE's proposed rates.

IV. THE PRICING AND TECHNICAL ISSUES PRESENTED BY THE PARTIES IN THIS ARBITRATION SHOULD BE RESOLVED IN FAVOR OF GTE'S POSITION IN ORDER TO PRESERVE AND ENHANCE COMPETITION

A. GTE's Pricing Proposals Are Properly Based Upon M-ECPR And Carry Out the Purposes of the Act In Enhancing Competition

1. Issue in Dispute

ACSI's Position: ACSI has requested GTE set the prices for unbundled network elements and network element combinations at TELRIC consistent with *FCC Rule §51.505*. It asserts that prior to the filing of the petition, GTE has not provided necessary cost information from which to calculate TELRIC costs. In the absence of cost data from GTE, ACSI proffers rates, based on publicly available data for the dominant ILEC in each state (generally the RBOC) and the Hatfield Model. ACSI also seeks application of the

FCC's default proxy rates. At the same time, ACSI agrees that rates should be based on the ILEC's best cost information. Petition at 7.

GTE's Position: The FCC Rules on pricing have been stayed and cannot be used by this Commission. The FCC's default proxy rates also cannot be applied, as explained above and in the testimony of Mr. Trimble. The Hatfield model and results that ACSI presents are not a valid measurement for GTE.

The Act recognizes that pricing must cover all of the ILECs costs including a reasonable share of joint and common costs. Even the FCC agrees that a TELRIC methodology does not recognize such costs. GTE has presented its cost study to the Commission and will serve it upon ACSI with this Response (subject to a confidentiality agreement to be arranged). GTE's proposal is consistent with the Act and recognizes a reasonable share of joint and common costs. The proper rates for the pricing issues presented in this arbitration are supported by the cost study, and are presented in GTE's Response and supporting testimony.

2. GTE Properly Calculated Pricing of Interconnection and Unbundled Elements

a. M-ECPR is the correct method to determine GTE's costs

The proper method for pricing interconnection and unbundled network elements begins with the market-determined efficient-component pricing rule. Under M-ECPR pricing,[6] the Commission would establish prices for unbundled elements that would reflect

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[6] M-ECPR is the identical methodology that GTE submitted to the FCC in connection with the Interconnection Docket 96-98. It has been designated "M-ECPR" here to avoid any possible confusion because the FCC's version of ECPR bore no relationship to the version submitted by GTE. In short, M-ECPR is not the simplistic,

all of GTE's true forward-looking costs. In addition, any price set by the Commission should further reflect any costs to GTE of actually unbundling the network element.

Because M-ECPR is a forward-looking market-based model, however, it fails to capture all of GTE's true network costs. First, GTE will not have an opportunity to recover all of its forward-looking costs through M-ECPR, as it would with regulated rates absent competitive entry. That means there will be "stranded costs" -- defined as revenues under regulation less revenues under competition (on a present value basis). Second, GTE will not earn a fair rate of return on its historic investments in the very network with which ACSI now seeks interconnection.

Both the shortfall in forward-looking costs and historic costs presents a significant but ***separate*** issue for this Commission. As explained more fully in the attached Economic Report (Section III, Part III), a separate charge is necessary to allow GTE to recover these costs. Without a full recovery of all of its forward-looking and historic costs, GTE would be forced to fund the transition from regulation to competition, and subsidize not only ACSI's, but all other ALECs' entry into the market. Such a situation would effect an unconstitutional taking of GTE's property without just compensation.

b. GTE's approach properly accounts for joint and common costs

GTE's cost studies provide ample evidence of GTE's substantial joint and common costs. Indeed, these cost studies demonstrate that the Company's joint and common costs are about 35-50% of the Company's total annual revenues. This result is not surprising,

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strawman version of ECPR that the FCC created and then destroyed in its First Report and Order.

given GTE's significant economies of scale. In fact, the FCC itself recognized that GTE's network enjoys significant economies of scale and scope.[9] ACSI wants the benefits of these economies, but it is unwilling to pay for them.

c. With the Stay in place, and ACSI agreeing that rates are properly to be set using GTE cost study, the Commission should adopt GTE's proposed rates

In its Petition for Arbitration, ACSI noted that it has not had the opportunity to examine GTE's cost studies so instead requests rates based on the best publicly available information. GTE contends that this approach is flawed and the Commission instead should utilize the rates based on the cost studies provided by GTE in connection with this arbitration. GTE's rates are supported by expert testimony; GTE's rates are State-specific and are backed up by extensive State-specific cost studies; and GTE's rates are fully consistent with the Act's requirement to determine just and reasonable rates that reflect GTE's costs.

In light of the Stay, there can be no justification for the use of the FCC's default proxy rates, and this Commission would be proceeding at its own peril if it relied upon those rates. Nor is there any evidentiary support in the record of this arbitration that could conceivably justify the methodology suggested by the FCC or the default proxy rates.

GTE urges the Commission to adopt its pricing methodology -- the Market-Determined Efficient Component-Pricing Rule ("M-ECPR") -- which will achieve all the

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[9] See, e.g., First Report and Order at ¶ 679 ("As a result of the availability to competitors of the incumbent LECs' unbundled network elements at their economic cost, consumers will be able to reap the benefits of the incumbent LECs' economies of scale and scope . . . .").

Commission's goals. M-ECPR is a market-based method for determining GTE's share of forward-looking joint and common costs that should be allocated to prices for its unbundled network elements. This model does not permit GTE to charge a price for an unbundled element that exceeds the market price.

ACSI's reliance on the Hatfield Model is completely misplaced and the Commission should not rely on ACSI's proffer in any respect. First, as noted by ACSI, the inputs to the model are based on non-GTE inputs; this makes the results produced irrelevant. The costs differences between the RBOC inputs used and GTE's actual cost position substantially understates the GTE rates required to cover costs. Second, the Hatfield Model is based on totally unrealistic network replacement assumptions and does not reflect reality. Indeed, the Hatfield Model assumes a network that will never be built or transport a single call. Third, the Model is not validated and the inputs utilized are inappropriate. Fourth, the Model's results do not comport with other industry models that are based on firm specific data.

B. ACSI is Not Entitled to "Most Favored Nation" Treatment on Individual Contract Terms and Conditions

1. Issue in Dispute

ACSI's Position: The "most favored nations" clause must be part of the agreement.

GTE's Position: GTE strongly opposes the inclusion of any MFN clause in any GTE-ALEC contract. Each agreement negotiated is a process of give and take. A party desiring to obtain the terms of another agreement must abide by the entire agreement. Otherwise, the Act's provisions encouraging negotiations would be meaningless. The

Eighth Circuit has stayed the terms of the FCC's Order which permitted the use of Most Favored Nations clauses.

2. The Eighth Circuit Has Ruled That The Most Favored Nations Clause Is Improper

ACSI's position is essentially the same as the position taken by the FCC in its First Report and Order. The FCC's "pick and choose" rule would allow a competitive local exchange carrier to "cherry pick" favorable provisions from a variety of different agreements, without regard to the arbitration or negotiation of the agreement.

In their recent challenge to the FCC's Order, GTE and other parties sought a Stay of the FCC's "pick and choose" rule would cause irreparable injury. The FCC's "pick and choose" rule went well beyond the provision of the Act that requires ILECs to make available interconnection, services or network elements on the same terms and conditions as those provided under other agreements approved under the Act. See 47 U.S.C. § 252(i). The Court held that the FCC's "pick and choose" rule would cause irreparable injury by "further undercut[ting] any agreements that are actually negotiated or arbitrated." (Order at 17.)

In its recent opinion, the Eighth Circuit accurately described GTE's position on the destabilizing impact of MFN clauses in these circumstances:

> The petitioners' objection is that the rule would permit the carriers seeking entry into a local market to "pick and choose" the lowest-priced individual elements and services they need from among all of the prior approved agreements between that LEC and other carriers, taking one element and its price from one agreement and another element and its price from a different approved agreement. Moreover, if an LEC and Carrier A, for example, reach an approved agreement, and then the LEC and a subsequent entrant, Carrier B, agree in their agreement to a lower price for

> one of the elements or services provided for in the LEC's agreement with Carrier A, Carrier A will be able to demand that its agreement be modified to reflect the lower cost negotiated in the agreement with Carrier B. Consequently, the petitioners assert that the congressional preference for negotiated agreements would be undermined because an agreement would never be finally binding, and the whole methodology for negotiated and arbitrated agreements would be thereby destabilized.

(Order at 12).

While GTE is willing to offer any ALEC the same entire contract as any other ALEC, ACSI's insistence on being given the right to substitute any of the more favorable terms that may be contained in another GTE-ALEC agreement severely inhibits GTE from negotiating individual provisions with ACSI.

C. GTE's Position on the Pricing of Number Portability is Proper

1. Issue in Dispute

ACSI's Position: New entrants' share of costs is too high. ACSI's contribution to the costs of interim number portability should be limited to an amount based upon its size relative to GTE and other carriers the Commission determines must contribute.

GTE's Position: GTE should recover its total costs for providing interim number portability. New entrants can allocate or recover their costs as they choose. GTE's costs for interim number portability should be determined based on the network in place today, and allowing for capital, transport and termination, and opportunity and investment costs. The specific rates presented by GTE should be adopted.

2. GTE's Cost For Interim Number Portability Should Be Based on the Network In Place and Allow for Capital, Transport and Termination, and Opportunity and Investment Cost

The Act requires all local exchange carriers to provide number portability to the extent "technically feasible." Until the implementation of long-term number portability, there are several methods available to provide interim number portability ("INP"), and GTE has negotiated with ALECs over methods and pricing of INP.

GTE's position with regard to INP is consistent with FCC regulations and the additional requirements imposed on INP by various State commissions.

All INP methods impose costs on the service provider that is providing INP. These costs can be classified as follows:

- **Switching Costs**: These costs are incurred when the service provider reroutes the call (call forwarding and route indexing), changes the dialed digits (digit substitution) and adds digits (pseudo NPA code addition). Additional switching costs may be incurred where end offices exhaust their software capacity to provide these forwarding, indexing and digit manipulation functions.

- **Transport Costs**: Service providers offering INP will incur the cost of transporting all ported calls from switch to switch. Many times, such transport may occur not only once but twice over the same trunks, potentially causing blockages and overuse of the network. To the extent trunking capacity is exhausted, this will impose an additional cost on the carrier. The trunks required for DID will also add to transport costs.

- **Opportunity Costs**: Whenever a service provider provides number portability for a customer it has, of course, lost that customer. Thus, one of the costs of providing INP is the lost opportunity to receiving revenues from that customer for other services that may have offset the costs of INP.

With regard to pricing of number portability, the Act states that "[t]he cost of establishing . . . number portability shall be borne by all telecommunications carriers on a competitively neutral basis as determined by the [FCC]." 47 U.S.C. § 251 (e)(2) (1996).

The Act mandates competitive neutrality and GTE's pricing proposal attains this goal. By determining forward-looking costs based on the existing captive network, GTE is able to fully capture the costs associated with providing INP. If GTE were not able to recover all the costs of providing INP, it would be at a competitive disadvantage vis-a-vis other LECs in contravention of the Act.

D. GTE'S Position On Bill-and-Keep Is Proper

1. Issue in Dispute

ACSI's Position: Bill-and-keep should be used for 12 months as an initial method of setting interconnection charges unless one party's volume of terminating traffic exceeds the other party by plus or minus 10 percent and the amount of compensation for the excess traffic would exceed $10,000.

GTE's Position: GTE should not be required to use a bill-and-keep arrangement, either initially or permanently. However, GTE would be willing to discuss with ACSI a method to assume that traffic is in balance in order to apply bill-and-keep initially. But as and when traffic is out of balance by plus or minus 10%, regardless of the number of months, bill-and-keep is not appropriate and the interstate end office switching rate should apply.

2. ACSI's Position that Bill-and-Keep Should be Employed Only After Excess Traffic Exceeds $10,000 is Untenable

While the Act allows significant flexibility in the parties' arrangements for interconnection, transport and termination, it nevertheless imposes fair and rational limits. GTE should be allowed to charge rates for interconnection, transport and termination that are just, reasonable and nondiscriminatory and that allow GTE full recovery of its costs.[10]

At their basic levels, the terms interconnection, transport and termination refer simply to functions within and between telephone networks. Interconnection means the physical linking of two networks for the mutual exchange of traffic. Interconnection takes place at a point of interconnection. Transport means carrying a call between switches, or from a point of interconnection to a switch. Thus, transport may involve transmission of a call from a tandem switch to an end office switch or from one end office switch to another end office switch. Termination means switching that is performed at the end office, and the delivery of the call to the called party.

Transport and termination agreements may provide for compensation arrangements, which allow the parties to bill the amounts owed to one another on a periodic basis. Alternatively, transport and termination agreements may provide for a "bill-and-keep" system whereby each party keeps whatever it bills to the end user and does not pay the other party for the costs of transport and termination. Where traffic exchanged between the two carriers is approximately equal, a bill-and-keep system may be appropriate.

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[10] A more detailed discussion of GTE's position is contained in the testimony of William Munsell.

The Act provides that a State commission may not consider reciprocal compensation to be just and reasonable unless the terms and conditions "provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination of each carrier's network facilities of calls that originate on the network facilities of the other carrier" and determine costs "on the basis of a reasonable approximation of the additional costs of terminating such calls." 47 U.S.C. § 252 (d)(2)(A)(i)-(ii) (1996). Section 252(d) also states that such pricing standards shall not be construed to prevent parties from arranging for "the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements)." 47 U.S.C. § 252(d)(2)(B)(i) (1996).

With regard to TELRIC and default rates, the FCC established the presumption that an ILEC's prices for transport and termination are a suitable proxy for an ALEC's costs of transport and termination. Id. ¶ 1085. Thus, the FCC ruled that TELRIC and default rates should be presumed to be symmetrical unless this presumption can be rebutted. See id. ¶ 1089.

With regard to bill-and-keep, the FCC ruled that State commissions may impose bill-and-keep arrangements if (1) neither carrier has rebutted the presumption of symmetrical rates and (2) the volume of terminating traffic from one network to the other is "approximately equal to the volume" of terminating traffic flowing the other way "and is expected to remain so." Id. ¶ 1111.

These provisions of the FCC's Order now are stayed, and the Commission need not apply either the notion that the ILEC's costs are a suitable proxy for the ALEC's, or the

notion of how the presumption is to be rebutted. Indeed, even under the Order, the Commission is not required to impose bill-and-keep; bill-and-keep is not mandated anywhere. The Order states that a State commission "may" impose bill-and-keep if neither party has rebutted the presumption of symmetrical pricing and if the volume of traffic exchanged is approximately equal. See id. As shown by GTE's testimony and cost study, the presumption of symmetrical rates is properly rebutted, and there presently exists no way for the Commission to determine whether the volume of traffic exchanged will, in fact, be equal. Thus, neither precondition has been met.

While GTE's preferred position is stated above, the Company is willing to enter into a bill and keep compensation arrangement with ACSI given certain conditions. The proposed arrangement, predicated upon approximately equivalent traffic flows, would be for the transport and termination of end users local traffic. The arrangement would specifically exclude any toll or access traffic. Also, interLATA access traffic must be carried over separate trunk groups and may not be included with the local and local toll traffic.

GTE, in an effort to expedite the competitive process, is proposing a fairly broad definition of "roughly balanced." The company is proposing that roughly balanced equates to plus or minus ten percentage points. This means that the originating/ terminating split could be up to 60/40. The following parameters are fundamental to GTE's proposed bill-and-keep arrangement:

1. The arrangement applies to the termination of interconnected calls and does not apply to internetwork facilities.

2. The arrangement applies to local and EAS traffic only and has no implications for access (or wireless) compensation.

3. Traffic must be local end user traffic. An ALEC may not aggregate traffic other than its end user local/mandatory EAS traffic for the purposes of this arrangement.

4. Traffic is assumed to be roughly balanced unless there are records available that would indicate otherwise. Either party may request traffic studies be performed not more frequently than on a quarterly basis.

5. If traffic studies indicate that traffic is outside of the roughly balanced range, either party may request that billing commence utilizing agreed upon rates no lower than GTE's TELRIC, plus the appropriate joint and common costs as discussed earlier in this report.

6. If bill-and-keep is employed initially, it should be for six (6) months (unless a given state commission requires a longer period) unless one party's volume of terminating traffic exceeds the other party's by more than 10% and the amount of composition for the excess traffic exceeds $2,000.

7. Either party may terminate the arrangement with twelve months' notice.

ACSI's position that bill-and-keep should be employed only after the excess traffic exceeds $10,000 is simply untenable. GTE is currently negotiating and arbitrating with approximately ten ALECs. To allow each to avoid compensating GTE unless excess traffic exceeds $10,000 could result in an enormous potential loss to the Company.

E. GTE's Position on Collocators' Cross-Connection is Proper

1. Issue in Dispute

ACSI's Position: ACSI should be able to cross-connect with other entities collocated at the same interconnection point without GTE's assistance free of charge. In the event GTE's assistance is requested, GTE should be compensated on a time and materials basis for personnel and equipment.

GTE's Position: GTE will provide this connection through the purchase of an unbundled network element.

2. The Cross-Connection Should Occur Only Through ACSI's Purchase of Unbundled Network Elements

The Act only requires ILECs to interconnect their network with a requesting ALEC's collocated equipment. Nonetheless, the FCC's First Report and Order requires an ILEC to permit ALECs to cross-connect through ILEC-provided facilities. First Report and Order, ¶ 595. GTE maintains that this requirement to permit ALECs to cross-connect with each other and bypass GTE's network, works a "taking" of GTE's property in excess of the FCC's authority under the Act and under Bell Atlantic v. FCC, 24 F.3d 1441 (D.C. Cir. 1994). GTE is willing to permit cross-connection between ALECs so long as the interconnection is accomplished through the purchase of an unbundled network element from GTE.

F. GTE's Position with Respect to Combining Unbundled Network Elements is Proper

1. Issue in Dispute

ACSI's Position: ACSI is free to combine and use the unbundled network elements it purchases from GTE to provide any telecommunications service it chooses which the unbundled network elements can be used to support.

GTE's Position: ACSI may lease and interconnect to whichever of these unbundled network elements ACSI chooses, and may combine these unbundled elements with any services or facilities that ACSI may itself provide, pursuant to the following terms: (i) interconnection for access to unbundled elements shall be achieved via expanded interconnection/collocation arrangements that ACSI shall maintain at the wire center at which the unbundled services are resident; (ii) each loop or port element shall be delivered to the ACSI collocation arrangement over a loop/port connector applicable to the unbundled services through other tariffed or contracted options; (iii) ACSI may combine unbundled network elements with ACSI's own facilities, but ACSI shall not combine unbundled network elements purchased from GTE to bypass resale offerings.

2. ACSI May Combine Network Elements Pursuant to GTE's Terms and Conditions

The FCC's rules permit ACSI and other requesting carriers to unbundle elements and then reassemble them to provide end-to-end telephone service. First Report and Order at ¶ 328. These rules, however, contradict the Act, which draws a distinction between the purchase of unbundled elements and the resale of wholesale services. Under the Act, unbundled elements must be provided at rates based on costs plus a reasonable

profit, 47 U.S.C. § 252(d)(1), whereas charges for resold services are set at retail rates less avoided costs, 47 U.S.C. § 252 (d)(3). These different costs serve entirely different purposes, and the "cost plus" rate for unbundled elements is intended to encourage facilities-based competition. The FCC's rules, however, render this distinction meaningless, and permit ACSI to obtain existing retail services at the cost standard applicable to unbundled elements. Under this scheme, ACSI has little incentive to build its own facilities until it has exhausted GTE's capacity.

The FCC's rules also contradict the intent of the Act because they discourage investment by ILECs. What economic incentive is there for an ILEC to invest in the research and development of new technologies? The very day the ILEC deploys these technologies, ACSI "unbundles" them, obtains them at TELRIC prices, and reassembles them. Congress could not have intended such an illogical result.

V. CONCLUSION

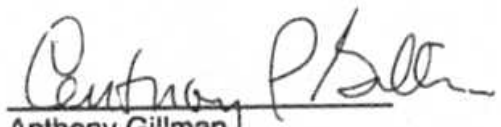
In determining the appropriate price for the sale of unbundled elements or resold services, the Commission must provide for the recovery of at least all of GTE's historic and forward-looking costs plus a reasonable profit. If the Act were interpreted to provide anything less, then it would effect a taking of GTE's property without just compensation in violation of the Constitution.

ACSI should not be permitted to acquire GTE's network and services at rates well below GTE's costs. Nor should GTE and its customers be forced to subsidize ACSI's foray into the local telecommunications marketplace.

To ensure that the purposes of the Act are met, GTE respectfully requests that the Commission do two things: first, the Commission should refuse to adopt the FCC's arbitrary default rates and refuse to establish any rate for GTE's network elements or services until the parties have presented their evidence. Second, the Commission should establish pricing methodologies and cost recovery mechanisms that will ensure ACSI pays for its own entry into the local telecommunications market.

GTE's proposals -- especially its M-ECPR pricing methodology -- properly balance the interests of the parties and the public with the letter and spirit of the Act. Accordingly, GTE respectfully requests that this Commission adopt GTE's proposals.

Respectfully submitted on October 21, 1996.

By: 

Anthony Gillman
Kimberly Caswell
P. O. Box 110, FLTC0007
Tampa, Florida 33601
Telephone: 813-483-2615

Attorneys for GTE Florida Incorporated

TAB 2

United States Court of Appeals

FOR THE EIGHTH CIRCUIT

FILED

OCT 15 1996

MICHAEL GANS
CLERK OF COURT

No. 96-3321

Iowa Utilities Board,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3406

National Association of Regulatory Utility Commissioners,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3410

The Southern New England Telephone Company,

Petitioner,

v.

Order Granting Stay Pending Judicial Review

Federal Communications Commission; United States of America,

Respondents.

No. 96-3414

Bell Atlantic Corporation; Bellsouth Corporation; Pacific Telesis Group,

Petitioners,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3416

Ameritech Corporation,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3418

US West, Inc.,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3424

GTE Service Corporation; GTE Alaska, Incorporated; GTE Arkansas, Incorporated; GTE California, Incorporated; GTE Florida, Incorporated; GTE Midwest, Incorporated; GTE South, Incorporated; GTE Southwest, Incorporated; GTE North, Incorporated; GTE Northwest, Incorporated; GTE Hawaiian Telephone Company, Incorporated; GTE West Coast, Incorporated; Contel of California, Inc.; Contel of Minnesota, Inc.; Contel of the South, Inc.,

Petitioners,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3430

New York Telephone Company; New England Telephone and Telegraph Company,

Petitioners,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3436

Cincinnati Bell Telephone Company,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3444

People of the State of New York; The Public Service Commission of the State of New York,

Petitioners,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3450

SBC Communications, Inc.

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3453

Louisiana Public Service Commission,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3460

Florida Public Service Commission,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3507

South Dakota Public Utilities Commission,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3519

The People of the State of California; The Public Utilities Commission of the State of California,

Petitioners,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3520

United States Telephone Association,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3603

Rural Telephone Coalition,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3604

Competitive Telecommunications Association,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

No. 96-3608

Mississippi Public Service Commission,

Petitioner,

v.

Federal Communications Commission; United States of America,

Respondents.

Submitted: October 3, 1996

Filed: October 15, 1996

Before BOWMAN, WOLLMAN, and HANSEN, Circuit Judges.

HANSEN, Circuit Judge.

These cases have been consolidated in this circuit by the September 11, 1996 order of the Judicial Panel on Multidistrict Litigation, Docket No. RTC-31, pursuant to Rule 24 of the Rules of Procedure of the Judicial Panel on Multidistrict Litigation. See 28 U.S.C. § 2112(a)(3) (1994). Numerous petitioners have moved this court for a stay pending judicial review of the Federal Communications Commission's First Report and Order.[1] The FCC promulgated the rules and regulations in its First Report and Order pursuant to its reading of its statutory duty to implement the local competition provisions of the Telecommunications Act of 1996 (the Act).[2] This court granted a temporary stay on September 27, 1996, pending oral argument. After hearing oral argument on October 3, 1996, from representatives of the concerned parties, we have decided to stay the operation and effect of only the pricing

[1]First Report and Order, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98 (Aug. 8, 1996) [hereinafter First Report and Order].

[2]Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (to be codified as amended in scattered sections of 47 U.S.C.).

provisions[3] and the "pick and choose" rule[4] contained in the FCC's First Report and Order pending our final determination of the issues raised by the pending petitions for review.

I.

In the Telecommunications Act of 1996, Congress enacted a plan to alter the monopolistic structure of local telephone service markets with an injection of competition. The Act effectively opens up local markets by imposing several new obligations on the existing providers of local telephone service in those markets. The Act refers to the current local providers as "incumbent local exchange carriers" (incumbent LECs). See 47 U.S.C.A. §§ 251(c), (h), 252(j) (West Supp. May 1996). Among other duties, the Act requires incumbent LECs (1) to allow other telecommunication carriers (such as cable television companies and current long-distance providers) to interconnect with the incumbent LEC's existing local network to provide competing local telephone service (interconnection); (2) to provide other telecommunication carriers access to elements of the incumbent LEC's local network on an unbundled basis (unbundled access); and (3) to sell to other telecommunication carriers, at wholesale rates, any telecommunications service that the incumbent LEC provides to its retail customers (resale). Id. § 251(c).

To accomplish these directives, the Act places a duty on incumbent LECs to privately negotiate, in good faith, comprehensive

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[3]The pricing provisions refer to First Report and Order, Appendix B-Final Rules §§ 51.501-51.515 (inclusive), 51.601-51.611 (inclusive), 51.701-51.717 (inclusive) and to the default proxy range for line ports used in the delivery of basic residential and business exchange services established in the FCC's Order on Reconsideration, dated September 27, 1996.

[4]The "pick and choose" rule refers to First Report and Order, Appendix B-Final Rules § 51.809.

agreements with other telecommunication carriers seeking to enter the local market. See id. §§ 251(c)(1), 252(a). If the incumbent LEC and the carrier seeking entry are unable to reach a negotiated agreement, either party may petition the respective state utility commission to conduct a compulsory arbitration of the open and disputed issues and arrive at an arbitrated agreement. See id. § 252(b). The final agreement, whether arrived at through negotiation or arbitration, must be approved by the state commission. Id. § 252(e)(1). Certain portions of the Act also require the FCC to participate in the Act's implementation. See, e.g., id. §§ 251(b)(2), (d)(1), (e), 252(e)(5). The FCC's regulations pertaining to the Act form the heart of the controversies at bar.

On August 8, 1996, the FCC released its First Report and Order in which it published its comments and rules regarding the local competition provisions of the Act. The petitioners in this consolidated proceeding, consisting, at the moment, primarily of incumbent LECs and state utility commissions, argue that the FCC exceeded its authority in promulgating these rules. While several of the petitioners object to the FCC's regulations in their entirety, others specifically challenge the FCC's rules regarding the prices that an incumbent LEC may charge an incoming competitor for interconnection, unbundled access to network elements, and resale of its services.

Despite the different approaches, it is clear that all of the petitioners object principally to the FCC's pricing rules. One such rule is a mandate from the FCC that state commissions employ the "total element long-run incremental cost" (TELRIC) method to calculate the costs that an incumbent LEC incurs in making its facilities available to competitors. See First Report and Order, Appendix B-Final Rules §§ 51.503, 51.505. After applying the TELRIC method and arriving at a cost figure, the state commissions, acting as arbitrators, must then determine the price that an

incumbent LEC may charge its competitors, based on the TELRIC driven cost figure. See id.

Many of the incumbent LECs object to the TELRIC method for two reasons. First, it does not consider their "historical" or "embedded" costs (costs that an incumbent incurred in the past) in calculating the cost figure to be used to determine the rates. See id. § 51.505(d)(1). Second, it requires that an incumbent LEC's cost be measured as if the incumbent were using the most efficient telecommunications technology currently available, regardless of the technology presently employed by the incumbent and to be used by the competitor. See id. § 51.505(b)(1). The incumbent LECs argue that the TELRIC method underestimates their costs and results in prices that are too low. The incumbent LECs maintain that these low prices would effectively require them to subsidize their competitors and thereby threaten the viability of the LECs' own businesses.

For similar reasons, the petitioners also object to the FCC's proxy rates, which are to be used by the state commissions if they elect not to employ the TELRIC method to set prices. See id. §§ 51.503(b)(2), 51.513, 51.705(a)(2), 51.707. The incumbent LECs argue that these proxy rates do not accurately reflect their costs and are artificially low. In addition to the rules regarding TELRIC and the proxy rates, the petitioners object to several other FCC regulations that pertain to the pricing of intrastate telephone service.[5]

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[5]The state utilities commissions take issue with the "deaveraging" rule requiring them to establish different rates in at least three different geographic areas within each state. See id. § 51.507(f). Many of the incumbent LECs also challenge the FCC's wholesale rate rules, asserting that the FCC's mandated method for calculating these rates, as well as its interim wholesale rates, result in rates that are also too low and threaten the incumbent LECs' viability. See id. §§ 51.607, 51.609, 51.611.

Some of the petitioners also seek to stay the FCC's so-called "pick and choose" rule, id. § 51.809, with which the FCC purports to implement § 252(i) of the Act. Section 252(i) requires an LEC to make available any interconnection, service, or network element contained in an approved agreement to which it is a party to any other telecommunications carrier upon the same "terms and conditions" as those provided in the agreement. Here again, price becomes a key issue. When the FCC promulgated its rule, it expanded the statutory language of § 252(i) to include "rates, terms, and conditions." Id. § 51.809 (emphasis added). The petitioners' objection is that the rule would permit the carriers seeking entry into a local market to "pick and choose" the lowest-priced individual elements and services they need from among all of the prior approved agreements between that LEC and other carriers, taking one element and its price from one agreement and another element and its price from a different approved agreement. Moreover, if an LEC and Carrier A, for example, reach an approved agreement, and then the LEC and a subsequent entrant, Carrier B, agree in their agreement to a lower price for one of the elements or services provided for in the LEC's agreement with Carrier A, Carrier A will be able to demand that its agreement be modified to reflect the lower cost negotiated in the agreement with Carrier B. Consequently, the petitioners assert that the congressional preference for negotiated agreements would be undermined because an agreement would never be finally binding, and the whole methodology for negotiated and arbitrated agreements would be thereby destabilized.

II.

We consider the following four factors in determining whether a stay is warranted: (1) the likelihood that a party seeking the stay will prevail on the merits of the appeal; (2) the likelihood that the moving party will be irreparably harmed absent a stay; (3) the prospect that others will be harmed if the court grants the

stay; and (4) the public interest in granting the stay. See Arkansas Peace Ctr. v. Dep't of Pollution Control, 992 F.2d 145, 147 (8th Cir. 1993), cert. denied, 114 S. Ct. 1397 (1994); Wisconsin Gas Co. v. F.E.R.C., 758 F.2d 669, 673-74 (D.C. Cir. 1985), cert. denied, 476 U.S. 1114 (1986). Applying these factors to the case at hand leads us to conclude that a stay pending final review of the FCC's pricing and "pick and choose" rules is justified.

A.

In evaluating the likelihood of the petitioners' success on appeal, we note that the petitioners "need not establish an absolute certainty of success." Population Inst. v. McPherson, 797 F.2d 1062, 1078 (D.C. Cir. 1986). Instead, as the actual terms of the test indicate, the petitioners must show that they are "likely" to succeed on the merits. Here, the petitioners allege primarily that the FCC exceeded its jurisdiction by imposing national pricing rules for what is essentially local service. They argue that the text and the structure of the Act give the States, not the FCC, authority over the pricing of intrastate telephone service. After evaluating the contentions of all of the interested parties, we believe that the petitioners present a strong argument that is sufficient to satisfy the first prong.

Historically, the state commissions have determined the rates for intrastate communications services. See Communications Act of 1934, § 2(b), 47 U.S.C. § 152(b) (1994). Subsection 252(d), which indicates that state commissions have the authority to determine "just and reasonable rates" necessary to implement the local competition provisions of the Act, appears consistent with that past practice. This subsection, entitled "Pricing standards," makes no mention of FCC rules on pricing. Moreover, subsection 252(c)(2) directs state commissions to "establish any rates for interconnection, services, or network elements according to

subsection (d) of this section." Again, no reference is made to FCC regulations regarding rates. By contrast, where Congress intended for the state commissions to follow FCC rules in arbitrations, it expressly said so. In subsection 252(c)(1), the Act requires state commissions to ensure that their resolutions of arbitrated disputes comply with both section 251 and with the regulations that the FCC is specifically authorized to issue under section 251. But nowhere in section 251 is the FCC specifically authorized to issue rules on pricing. The sections of the Act that directly authorize the state commissions to establish prices are devoid of any command requiring the state commissions to comply with FCC pricing rules (or, for that matter, authorizing the FCC to issue any pricing rules). This absence indicates a likelihood that Congress intended to grant the state commissions the authority over pricing of local telephone service, either by approving or disapproving the agreements negotiated by the parties, or, when the parties cannot agree, through compulsory arbitration, thereby preserving what historically has been the States' role.

We are mindful of the FCC's contrary interpretation of the Act. The FCC asserts that subsection 251(d)(1), when read together with subsection 252(c)(1), authorizes the FCC to establish rules regarding pricing. Subsection 251(d)(1) directs the FCC to complete the promulgation of regulations pursuant to its duties under section 251 by August 8, 1996. The FCC also urges us to read the general provisions of subsection 251(c) together with subsection 252(d) (the pricing standards) and conclude that these portions of the Act supply the FCC with the power to issue pricing rules.

We recognize that courts must give deference to an agency's reasonable interpretation of an unclear statute. See Chevron U.S.A., Inc. v. Natural Resources Defense Council, 467 U.S. 837, 843-45 (1984). In this case, however, we believe that the petitioners have a better than even chance of convincing the court

that the FCC's pricing rules conflict with the plain meaning of the Act, in which case the court would not be bound by Chevron deference and would be entitled to overturn the agency's interpretation. See id. at 842 ("If the intent of Congress is clear, that is the end of the matter, for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."); id. at 844 (indicating that courts should not give controlling weight to regulations that are contrary to the statute). In this, our first look at the issue, we are skeptical that the FCC's roundabout construction of the statute could override what, at first blush, appears to be a rather clear and direct indication in subsections 252(c)(2) and 252(d) that the state commissions should establish prices.

Moreover, we have serious doubts that the FCC's interpretation of the Act constitutes the straightforward or unambiguous grant of intrastate pricing authority to the FCC sufficient to qualify as an exception to the provisions of subsection 2(b) of the Communications Act of 1934, 47 U.S.C. § 152(b) (1994). See Louisiana Pub. Serv. Comm'n v. FCC, 476 U.S. 355, 377 (1986). Subsection 2(b) provides that "nothing in this Chapter shall be construed to apply or to give the [FCC] jurisdiction with respect to . . . charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communications service." 47 U.S.C. § 152(b) (1994). In Louisiana, the Supreme Court determined that in order to overcome subsection 2(b)'s limits on the FCC's jurisdiction with respect to intrastate communications service, Congress must "unambiguously" or "straightforwardly" either modify subsection 2(b) or grant the FCC additional authority. 476 U.S. at 377. We acknowledge that portions of the Telecommunications Act of 1996 expressly grant the FCC authority over some aspects of intrastate telephone service. See, e.g., 47 U.S.C.A. § 251(e) (West Supp. May 1996) (FCC authority regarding numbering administration). We have been unable, however, to find such an express grant of authority to the FCC over the pricing of

intrastate telephone service, nor does there appear to be a modification of subsection 2(b).[6] The combination of these omissions indicates a sufficient likelihood that the petitioners will succeed on the merits of their appeal. We, of course, remain open to being persuaded that the FCC's read is the correct one when full briefing and argument on the merits have been concluded.

Because we believe that the petitioners have demonstrated that they will likely succeed on the merits of their appeals based on their argument that, under the Act, the FCC is without jurisdiction to establish pricing regulations regarding intrastate telephone service, we think that it is unnecessary at this time to address the remaining theories which the petitioners use to challenge the legality of the FCC's pricing rules.

B.

With respect to the likelihood of irreparable harm, the petitioners initially assert that their interest in productive ongoing negotiations and arbitrations regarding the implementation of the Act will be irreparably harmed if the FCC's pricing regulations are not stayed. They argue that the competitors seeking entry into the local phone markets will refuse even to consider prices that are higher than the FCC's proxy rates and will simply hold out for the proxy rates that the States will feel obligated to impose in their arbitrations. In this manner, the proxy rates effectively establish a price ceiling, an observation recognized by the FCC itself, which inevitably confines and restricts the give and take characteristic of free negotiations and arbitrations. The state commissions specifically argue that the FCC's pricing regulations effectively undermine their authority,

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[6]In fact, we are told that a provision which specifically modified subsection 2(b) was expressly rejected by Congress before the bill was passed. See S. 652, 104th Cong., 1st Sess. § 101(c) (1995).

and if not stayed, the rules will disrupt the predictability and continuity of the existing regulatory system. The state commissions explain that the FCC pricing rules essentially handcuff their discretion in determining the just and reasonable rates in arbitrations required under subsection 252(d)(1).

In order to demonstrate irreparable harm, a party must show that the harm is certain and great and of such imminence that there is a clear and present need for equitable relief. See Packard Elevator v. I.C.C., 782 F.2d 112, 115 (8th Cir. 1986), cert. denied, 484 U.S. 828 (1987) (quoting Wisconsin Gas, 758 F.2d at 673-74). The FCC asserts that the petitioners' allegations of irreparable harm are merely speculative and that there is no certainty that its proxy rates will ever be applied to the petitioners. We are persuaded, however, by the petitioners' evidence that the negotiations preferred by the Congress are already breaking down due to the competitors' desire to hold out for the FCC's proxy rates. Moreover, given the time constraints under the Act, some state commissions have already felt obliged to impose the proxy rates in their arbitrations. These experiences indicate that the FCC's pricing rules will derail current efforts to negotiate and arbitrate agreements under the Act, and the "pick and choose" rule will operate to further undercut any agreements that are actually negotiated or arbitrated. The inability of the incumbent LECs and the state commissions to effectively negotiate and arbitrate agreements free from the influence of the FCC's pricing rules, including the "pick and choose" rule, will irreparably injure the interests of the petitioners. If the FCC's rules are later struck down, it will be extremely difficult for the parties to abandon the influence of their previous agreements that were based on the national pricing rules and to recreate the atmosphere of free negotiations that would have existed in the absence of the FCC's dictated presumptive prices. Without a stay, the opportunity for effective private negotiations will be irretrievably lost. We initially believe that this result would be

contrary to Congress's intent that these matters be resolved through negotiation and/or arbitration.

The petitioners also argue that the FCC's pricing rules will force the incumbent LECs to offer their services to requesting carriers at prices that are below actual costs, causing the incumbent LECs to incur irreparable losses in customers, goodwill, and revenue. The FCC contends that its pricing rules, in particular its proxy rates, are merely an option for the parties and the state commissions to consider, and consequently the petitioners cannot make a showing that the harm is certain and imminent, as required in Packard Elevator, 782 F.2d at 115. As we explained above, we are persuaded that, absent a stay, the proxy rates would frequently be imposed by the state commissions and would result in many incumbent LECs suffering economic losses beyond those inherent in the transition from a monopolistic market to a competitive one. We are mindful of the precedents that declare that "economic loss does not, in and of itself, constitute irreparable harm," Wisconsin Gas, 758 F.2d at 674, and that "revenues and customers lost to competition which can be regained through competition are not irreparable." Central & S. Motor Freight Tariff Ass'n v. United States, 757 F.2d 301, 309 (D.C. Cir. 1985), cert. denied, 474 U.S. 1019 (1985). Both of these propositions, however, rest on the assumption that the economic losses are recoverable. The threat of unrecoverable economic loss, however, does qualify as irreparable harm. See Baker Elec. Coop., Inc. v. Chaske, 28 F.3d 1466, 1473 (8th Cir. 1994); Airlines Reporting Co. v. Barry, 825 F.2d 1220, 1227 (8th Cir. 1987). In this case, the incumbent LECs would not be able to bring a lawsuit to recover their undue economic losses if the FCC's rules are eventually overturned, and we believe that the incumbent LECs would be unable to fully recover such losses merely through their participation in the market. Moreover, the petitioners' potential loss of consumer goodwill qualifies as irreparable harm. See

Multi-Channel TV Cable Co. v. Charlottesville Quality Cable Operating Co., 22 F.3d 546, 552 (4th Cir. 1994) (holding that the possibility of permanent loss of customers to a competitor or the loss of goodwill satisfies the irreparable injury prong). For the foregoing reasons, we believe that the petitioners have adequately demonstrated that they will be irreparably harmed if a stay of the FCC's pricing rules is not granted.

C.

In assessing whether others will be harmed if the court grants the stay, we acknowledge that our decision, either way, will unavoidably adversely affect the interests of either the incumbent LECs or their potential competitors. If we decide to grant the stay, we recognize that the companies seeking entry into the local telephone markets will have to negotiate and arbitrate their agreements without the added leverage of the FCC's pricing rules, and assuming that the FCC's rules were later upheld, they would likely renegotiate the terms of their agreements. The inconvenience of this scenario, however, is outweighed by the harm and difficulties of its alternative, discussed in the previous section. In other words, we think that it would be easier for the parties to conform any variations in their agreements to the uniform requirements of the FCC's rules if the rules were later upheld than it would be for the parties to rework agreements adopted under the FCC's rules if the rules were later struck down. Consequently, we conclude that any harm that other parties may endure as a consequence of imposing a stay is outweighed by the irreparable injury that the petitioners would sustain absent a stay.

D.

The FCC argues that a stay would not promote the public interest because it would not maintain the status quo and it would

block the road to competition in local telephone service markets. We reject both contentions. Before the FCC published its regulations pursuant to the Act, several incumbent LECs, potential competitors, and state utility commissions were all working together to implement the local competition provisions of the Act. The Act's system of private negotiation backed by state-run arbitration was operating without the input from the FCC. A stay would preserve the continuity and stability of this regulatory system -- a system that has initially proved to be successful. The FCC asserts that without its pricing regulations in effect, the incumbent LECs will be able to exert their superior bargaining power over their potential competitors and impose unreasonable rates for their services. This argument ignores the empirical success that private parties and the state commissions have had in implementing the local competition provisions of the Act.[7] It also denigrates the proven ability of the state commissions to prevent incumbent LECs from charging excessive rates for their services. The Act requires rates to be just and reasonable and it authorizes state commissions to enforce these requirements. Presently, we have no reason to doubt the ability of the state commissions to fulfill their duty to promote competition in the local telephone service markets and thus conclude that the public interest weighs in favor of granting a stay.

III.

Having concluded that the petitioners satisfy the four

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[7]We note that some states, Connecticut, Florida, and Iowa in particular, have already established rates based on local conditions and are already involved in opening up their local markets to competition under both the federal Act and state statutes which foreshadowed the new federal law. Moreover, the FCC-imposed rate for Iowa is substantially higher than the state-set rate which was based on the full record from a contested case proceeding, while in Florida, the FCC proxy rate is substantially lower than the state-set rate.

requirements for granting a stay, we grant the petitioners' motion to stay the FCC's pricing rules and the "pick and choose" rule contained in its First Report and Order[1] pending a final decision on the merits.

Upon the filing of this order, the stay imposed by our order of September 27, 1996, is dissolved, and is replaced by the stay imposed by the terms of this order.

A true copy.

Attest: Michael E. Gans

CLERK, U. S. COURT OF APPEALS, EIGHTH CIRCUIT.

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[1]The stay pertains only to §§ 51.501-51.515 (inclusive), 51.601-51.611 (inclusive), 51.701-51.717 (inclusive), § 51.809, and the proxy range for line ports used in the delivery of basic residential and business exchange services established in the FCC's Order on Reconsideration, dated September 27, 1996.

TAB 3

GTE/ACSI MATRIX

Issues	GTE Position	ACSI Position
1. What rates should be charged to ACSI by GTE for (1) unbundled exchange access loops (2) associated charges for linking ACSI's collocated equipment to the main distribution frame, and (3) use of the NID?	The Act recognizes that pricing must cover all of the ILECs costs including a reasonable share of joint and common costs. Even the FCC agrees that a TELRIC methodology does not recognize such costs. The parties disagree about how to measure TELRIC, and also about whether GTE is entitled to recover its joint and common costs. GTE's proposal is consistent with the Act and recognizes a reasonable share of joint and common costs. The rates for the two items subject to this arbitration (local loop and NID) are presented in GTE's Response.	ACSI has requested GTE set the prices for unbundled network elements and network element combinations at TELRIC consistent with *FCC Rule §51.505.* ACSI agrees that rates should be based on the ILEC's best cost information. Prior to the filing of the petition, GTE has not provided necessary cost information from which to calculate TELRIC costs. In the absence of cost data from GTE, ACSI developed rates based on publicly available data for the dominant ILEC in each state (generally the RBOC) and the Hatfield Model.
2. What method should be used to price interim number portability and what specific rates, if any, should be set for GTE?	GTE should recover its total costs for providing interim number portability. New entrants can allocate or recover their costs as they choose. GTE's costs for interim number portability should be determined based on the network in place today, and allowing for capital, transport and termination, and opportunity and investment costs. The specific rates presented by GTE should be adopted.	New entrants' share of costs is too high. ACSI's contribution to the costs of interim number portability should be limited to an amount based upon its size relative to GTE and other carriers the Commission determines must contribute.
3. Should GTE permit collocators to cross-connect with each other with equipment collocated at GTE's central office, and if so, what should be charged for such collocation?	GTE will provide this connection through the purchase of an unbundled network element.	ACSI should be able to cross-connect with other entities collocated at the same interconnection point without GTE's assistance free of charge. In the event GTE's assistance is requested, GTE should be compensated on a time and materials basis for personnel and equipment.
4. Should bill-and-keep be used as a reciprocal compensation arrangement for transport and termination of local traffic?	GTE should not be required to use a bill-and-keep arrangement, either initially or permanently. However, GTE would be willing to discuss with ACSI a method to assume that traffic is in balance in order to apply bill-and-keep initially. But as and when traffic is out of balance by plus or minus 10%, regardless of the number of months, bill-and-keep is not appropriate and the interstate end office switching rate should apply.	Yes. Bill-and-keep should be used for 12 months as an initial method of setting interconnection charges unless one party's volume of terminating traffic exceeds the other party by plus or minus 10 percent and the amount of compensation for the excess traffic would exceed $10,000.

Issues	GTE Position	ACSI Position
5. To what extent should ACSI be permitted to combine network elements?	ACSI may lease and interconnect to whichever of these unbundled network elements ACSI chooses, and may combine these unbundled elements with any services or facilities that ACSI may itself provide, pursuant to the following terms: I. Interconnection for access to unbundled elements shall be achieved via expanded interconnection/collocation arrangements that ACSI shall maintain at the wire center at which the unbundled services are resident. II. Each loop or port element shall be delivered to the ACSI collocation arrangement over a loop/port connector applicable to the unbundled services through other tariffed or contracted options. III. ACSI may combine unbundled network elements with ACSI's own facilities. ACSI shall not combine unbundled network elements purchased from GTE to bypass resale offerings.	ACSI is free to combine and use the unbundled network elements it purchases from GTE to provide any telecommunications service it chooses which the unbundled network elements can be used to support.
6. Should GTE be required to permit ACSI to collocate its remote switching modules in GTE's central offices?	No. ACSI should be permitted to collocate only equipment that is necessary for interconnection or access to unbundled network elements. This would include transmission equipment for termination, concentration equipment and multiplexing equipment.	Yes. ACSI should be permitted to collocate its remote switching module at GTE's central office.
7. Must the agreement provide for a Most Favored Nations clause?	No. Each agreement negotiated is a process of give and take. A party desiring to obtain the terms of another agreement must abide by the entire agreement. Otherwise, the Act's provisions encouraging negotiations would be meaningless.	Yes. The "most favored nation" clause must be part of the agreement.

GTE objects to arbitration of any issues on which ACSI states that it has or believes it will reach agreement in principle with GTE. Those issues are not properly submitted to arbitration at this time, as ACSI states that they are at or near resolution. Under § 252(c) of the Telecommunications Act, the parties are to create and finalize contract language after the arbitrator's decision on disputed issues.

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TAKINGS REPORT

Introduction

In determining the appropriate price for the sale of unbundled elements or the resale of services by GTE in response to ACSI's Arbitration Petition (dated September 10, 1996) ("ACSI Petition"), this State Utilities Commission (the "Commission") must interpret the federal Telecommunications Act of 1996 (the "Act" or "1996 Act") to provide for the recovery of at least all of GTE's historic and forward- looking costs of unbundled elements or resold services plus a reasonable profit. As we demonstrate below, if the Act were interpreted to require GTE to sell unbundled elements or resell services at prices that do not cover all of GTE's costs associated with those elements or services, then the Act would effect a taking of GTE's property without just compensation, in violation of the Fifth and Fourteenth Amendments of the U.S. Constitution as well as Article 10, Section 6 and Article 1, section 9 of the Florida Constitution.

Under familiar principles of statutory construction, such an interpretation must be avoided because the Commission must read the Act to avoid serious constitutional questions. See, e.g., Rust v. Sullivan, 500 U.S. 173, 190-91 (1991); Ashwander v. Tennessee Valley Authority, 297 U.S. 288, 347 (1936) (Brandeis, J., concurring). Indeed, in the specific context of takings, the Supreme Court has admonished that if an "identifiable class of cases [exists] in which application of a statute will necessarily constitute a taking," then concerns for avoiding uncompensated takings properly require a narrowing construction of the statute. United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 128 n.5 (1985).

As we demonstrate below, under either a regulatory takings or physical occupation analysis, the Act would effect an unconstitutional taking if it were interpreted

to require GTE to sell its elements or services below their true costs to ACSI or to any competitive local exchange carrier ("CLEC"). Thus, to avoid constitutional infirmity, the Commission must read the Act to require prices that cover all of GTE's costs plus a reasonable profit. In the specific context of this arbitration, that principle requires at least two things:

First, at a minimum, the prices set for unbundled elements or resold services must cover at least the following five elements, which comprise GTE's true forward-looking costs:

(i) **Incremental Costs.** The prices set must cover GTE's total element long-run incremental cost of providing that service ("TELRIC"). Moreover, the principle that all of GTE's true costs must be recovered requires that TELRIC be calculated based on GTE's actual network architecture, not on some hypothetical, more efficient network that could now be constructed.

(ii) **Joint And Common Costs.** The principle that GTE must be allowed to recover all its costs further requires that prices be set to allow GTE to recover all of its forward-looking joint and common costs, not just a portion of those costs. Any pricing rule that denies GTE recovery for all its joint and common costs, or provides for the recovery of only a portion of those costs, necessarily requires GTE to sell below its true costs and thereby would effect an uncompensated and unconstitutional taking.

(iii) **Cost of Subsidies.** To the extent that the current price of an unbundled element or a resold service contains a subsidy, or "contribution" towards either the cost of the provision of a service that this State requires GTE to provide at regulated prices that are below cost or the cost incurred as a result of incumbent burdens that GTE

continues to bear after the advent of competition, then GTE must recover its costs unless and until this State allows GTE to rebalance its rates or eliminates the mandated subsidy.

(iv) **Costs of Unbundling or Resale**. Any price set under the Act must include any additional costs incurred to accomplish unbundling or resale.

(v) **No Overstated Avoided Costs**. With respect to resold services, GTE cannot be required to resell services below their true costs (considering all other elements listed here) or with a discount that exceeds GTE's truly avoided costs.

Second, even if the Commission were to allow GTE a recovery of its forward-looking incremental costs plus a reasonable profit, GTE still must be allowed to recover any portion of its historical costs not yet recovered and to earn a fair rate of return on that investment. Accordingly, the Commission must provide for some mechanism -- such as an end-user charge or surcharge -- by which GTE recovers the difference between the reasonable return that it was promised on its historical, embedded costs and what it will now receive under a regime of competition. For GTE, the transition from regulation to competition means that its market will be opened up to competition yet it will be saddled with the heavy costs of an incumbent local exchange carrier (like universal service and carrier of last resort), while its competitors will not only be free of those burdens but will also be allowed to purchase or lease GTE's services or network elements at heavily discounted prices -- which GTE itself will subsidize. The Takings Clause requires that GTE be allowed to recover the substantial investments it made under a regulated-monopoly regime in which the Commission promised GTE that it would be able to recover and earn a fair rate of return on its investments.

Discussion

I. THIS COMMISSION IS NOT BOUND BY THE FCC'S PRICING RULES.

As a predicate matter, it is important to point out that the Commission is not bound by the pricing rules set in the Federal Communications Commission's ("FCC's") First Report and Order for two wholly independent reasons.[1] First, the FCC had no statutory authority to set the pricing rules and default prices it did (see Part I.A below). Second, even if it did, the prices it did set would work an unconstitutional taking. (See Part II.B.) In either case, the Commission is not bound to follow the FCC's prices. Indeed, the Commission is under a statutory duty to interpret the Act for itself and a constitutional duty to ensure that GTE receives just compensation for opening up its network to unbundling and resale.

A. The FCC Lacks Authority To Promulgate National Pricing Standards Governing Agreements Under Section 251 of the Act.

The FCC's attempt to set national pricing standards to govern interconnection, unbundling, and resale agreements negotiated under Sections 251 and 252 of the Act is inconsistent with Congress' scheme to have the States (through arbitrations) and private parties (through negotiations) establish prices. It is clear -- both under the Act and under Section 2(b) of the Communications Act of 1934 -- that the FCC lacks the power to promulgate national pricing standards. See 47 U.S.C. § 152(d).

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[1] In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, CC Docket 96-98, CC Docket 95-185, FCC 96-325 (released Aug. 8, 1996) ("First Report and Order") ¶¶ 618-984.

1. Only The Commission Was Granted Pricing Authority.

In the event that the parties to a negotiation cannot agree on the price for interconnection, unbundled access or resale, the Act expressly assigns to State commissions, not the FCC, the power to determine those prices through the arbitration process. Section 252(c)(2) provides, in terms that could not be clearer, that "a State Commission shall . . . establish any rates for interconnection, services, or network elements according to subsection (d)." 47 U.S.C. § 252(c)(2) (emphasis added). Subsection (d)(1) then goes on to provide that "[d]eterminations by a State commission of the just and reasonable rate for . . . interconnection . . . and [access to unbundled] network elements" shall be based on "cost" and "may include a reasonable profit." 47 U.S.C. § 252(d)(1) (emphasis added). Similarly, subsection (d)(3), governing resale, expressly provides that "a State Commission shall determine wholesale rates . . . ." 47 U.S.C. § 252(d)(3) (emphasis added). These sections, in unambiguous terms, assign to the State commissions -- not the FCC -- the power to set prices for interconnection, unbundling, and resale.

If the explicit statutory text assigning the power to determine prices to State commissions were not clear enough, then the structure of the Act makes the point even clearer. Section 252(c)(1) provides, generally, that in imposing conditions on the parties to a negotiation, a State commission shall ensure that such conditions meet the requirements of both "section 251" and "the regulations . . . prescribed by the [FCC] pursuant to section 251." 47 U.S.C. § 252(c)(1). By contrast, the very next subsection -- § 252(c)(2), which governs pricing -- provides that a State commission shall establish rates for interconnection and unbundling "pursuant to subsection (d)." 47 U.S.C. § 252(c)(2).

There is no mention of any FCC regulations on pricing issues. Thus, where Congress wanted the State commissions to follow the FCC's regulations (§ 252(c)(1)), it said so explicitly; by contrast, with respect to setting prices, Congress expressly omitted any reference to regulations by the FCC, and referred instead only to the substantive requirements imposed on the State commissions by § 251(d) in determining prices.

2. The FCC Has No Pricing Authority.

The textual basis relied on by the FCC to assert jurisdiction to determine prices only highlights the weakness of its position. The FCC concedes that "we recognize that these sections [§§ 251 and 252] do *not* contain an explicit grant of intrastate authority to the [FCC]." First Report and Order ¶ 84 (emphasis added). The FCC finds purported textual authority to determine prices in the directive in § 251(d)(1) stating that "[w]ithin 6 months after the date of enactment of [this Act], the [FCC] shall complete all actions necessary to establish regulations to implement the requirements of this section." 47 U.S.C. § 251(d)(1).

It is quite unreasonable for the FCC to rely on § 251(d)(1) as granting the FCC authority to determine prices. First, that section has nothing to do with granting the FCC the authority to do anything. It merely sets time deadlines for those tasks the FCC is otherwise given under the Act. Indeed, Section 251(d)(1) is a limitation on the FCC -- requiring it to act within sixth months -- not a grant of authority. Second, to the extent that § 251(d)(1) impliedly grants the FCC authority to issue regulations, it does so only with respect to certain specific tasks expressly assigned to it by the Act. It is not a general grant of authority for the FCC to establish prices. Thus, for example, § 251(e)(1) expressly directs the FCC to "create or designate one or more impartial entities to administer

telecommunications numbering." 47 U.S.C. § 251(e). That obviously has nothing to do with pricing.[2]

Section 2(b) of the Communications Act of 1934 (codified at 47 U.S.C. § 152(b)) provides that "nothing in this chapter shall be construed to apply or to give the [FCC] jurisdiction with respect to . . . charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communications service." The Supreme Court has held that this "congressional denial of power to the FCC" over prices and other matters regarding the provision of local telephone service can be overcome only if Congress includes "unambiguous" and "straightforward" language in the Act either modifying § 2(b) or expressly granting the FCC additional authority. See Louisiana Pub. Serv. Comm'n v. FCC, 476 U.S. 355, 374, 377 (1986).

Obviously, neither exception to § 2(b) is present here. Whatever else can be said of § 251(d)(1), it cannot be said that that section "unambiguously" or "straightforwardly" gives the FCC the authority to set the prices for interconnection and unbundling of the local telephone network or resale of local telephone service. Similarly, no provision in the 1996 Act expressly modifies § 2(b) in granting to the FCC authority to regulate either prices or other local matters under § 251. To the contrary, such a provision **was expressly rejected by Congress**, for while it was included in the Senate bill, it was

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[2] If anything, § 251(d) **confirms** by implication that the FCC has no authority under the Act to determine the prices for interconnection, unbundling and resale. That is so because § 251(d)(2), while expressly articulating the substantive standards to govern the FCC's power to determine which network elements to unbundle, omits any reference to any substantive standards to govern the determining of pricing. 47 U.S.C. § 251(d)(2). Rather, the only place those substantive standards -- governing pricing -- are found are in § 252(d)(1), which expressly refers to the substantive standards governing the State commissions' determination of prices. 47 U.S.C. § 252(d)(1).

not included in the law as enacted. See Conf. Rep. No. 458, 104th Cong., 1st Sess. § 101(c) (1996). Indeed, even the FCC concedes that no provision of the 1996 Act "contain[s] an explicit grant of intrastate authority to the [FCC] . . . ." First Report and Order, ¶ 84.

In response to this fatal § 2(b) problem, the FCC contends that the 1996 Act supposedly "moves beyond the distinction between interstate and intrastate matters that was established by the 1934 Act" and that section 251 "should take precedence" over any "contrary implications" in § 2(b). First Report and Order ¶¶ 24, 83, 93. But that "reasoning" is plainly flawed on a number of different levels.

Most notably, there is simply no grant of authority over prices in § 251 to "take precedence" over the rule of § 2(b). In addition, the Supreme Court could not have been more clear that § 2(b) deprives the FCC of jurisdiction over intrastate communications services unless some later act expressly modifies § 2(b) or expressly grants the FCC power over intrastate communications services. See Louisiana Pub. Serv. Comm'n, 476 U.S. 355 (1986). The FCC's general "sense" that the 1996 Act impliedly "moves beyond the distinction between interstate and intrastate matters established by [§ 2(b)]" cannot overrule the explicit "congressional denial of power to the FCC" in § 2(b).

In sum, the plain language of the Act, the structure of the Act, the rule of construction specified by Congress in Section 2(b), and important policy concerns all demonstrate that the FCC has no authority to set the prices for interconnection, unbundling, and resale. That task is plainly and unequivocally given to the Commission.

B. Even If The FCC Had The Authority To Set Prices, Both Its Pricing Methodology And Its Default Proxy Rates, If Followed, Would Effect A Taking.

1. The FCC's Pricing Methodologies Would Effect A Taking.

Even if the FCC had the authority to set prices (which it does not), the standards it has chosen are an impermissible interpretation of the Act because they would not compensate GTE fully for its true costs. As we demonstrate below (Parts II-III), the FCC's pricing methodology is defective for a variety of reasons. Principally, though, it fails to allow GTE full recovery of its historic costs and fails to allow GTE its full measure of joint and common costs on a forward-looking basis. Both aspects of the FCC's defective pricing methodology only underscore why anything less than full recovery of GTE's costs, as discussed in more detail in the testimony of GTE company witnesses, would effect an unconstitutional taking without just compensation.

2. The FCC's Default Proxy Rates For Unbundling, Interconnection And Resale Are Procedurally Defective And Effect A Taking.

The FCC also erred in several respects in establishing the default proxy prices for interconnection, unbundled elements, and resale under the Act. See First Report and Order ¶¶ 767, 932. First, the FCC erred by circumventing the congressionally designed State-sponsored arbitration process by establishing default prices through a rulemaking -- and an abbreviated rulemaking at that. By design, the arbitration process was intended by Congress to allow the Commission to engage in the fact-specific decision making tied to the circumstances of each case. By attempting to arrive at default proxy rates through a rulemaking, the FCC usurped the role of the Commission and deprived

parties of the fact-specific adjudicative process contemplated under the Act, violating both the Administrative Procedure Act and the Due Process Clause of the Constitution.

Further, the default proxy rates established by the FCC for interconnection and unbundled elements are defective because they are not only inconsistent with the FCC's own flawed pricing methodology but they also effect an unconstitutional taking. As shown in our Response, the FCC's proposed proxy rates fall well below the minimum that GTE must recover for resale and unbundled elements in order to recover its true costs and avoid an unconstitutional taking without just compensation.

In short, under the Act, the Commission -- not the FCC -- has the right and obligation to set the prices for unbundled elements and resold services. Moreover, the Commission is bound to read the Act in a manner that avoids constitutional infirmity, and it need not follow an interpretation by the FCC that raises such constitutional difficulties. Thus, the Commission should determine on its own what pricing rule the Act and the Constitution require without reference to the FCC's First Report and Order.[3]

II. THE TAKINGS CLAUSE PROHIBITS GTE FROM BEING REQUIRED TO PROVIDE ELEMENTS OR SERVICES BELOW THEIR TRUE COSTS.

Whether ACSI's Petition is analyzed as a regulatory takings issue because its proposed rates would be confiscatory and, therefore, unconstitutional (see Part II.A below) or as a physical per se taking because ACSI's Petition proposes a physical occupation of GTE's network without just compensation (see Part II.B below), the result is the same: The Fifth and Fourteenth Amendments simply prohibit Congress and the States

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[3] On October 15, 1996, the 8th Circuit Court of Appeals granted a stay of the FCC First Report and Order pending judicial review.

from requiring GTE to sell elements or services at prices that do not cover all of their true costs, plus a reasonable profit.

A. Regulatory Takings Analysis.

1. Regulators Cannot Force a Business to Operate at a Loss.

The Supreme Court's Brooks-Scanlon decision long ago established the rule that the Takings Clause of the U.S. Constitution forbids a regulator from forcing a utility to operate a segment of its business at a loss because the firm happens to be profitable elsewhere in another segment of its business. Brooks-Scanlon Co. v. Railroad Comm'n of Louisiana, 251 U.S. 396, 399 (1920). The Supreme Court concluded that

> [a] carrier cannot be compelled to carry on even a branch of business at a loss, much less the whole business of carriage . . . . The plaintiff may be making money from its sawmill and lumber business but it no more can be compelled to spend that than it can be compelled to spend any other money to maintain a railroad for the benefit of others who do not care to pay for it.

Brooks-Scanlon stands for the proposition that the Commission may not force a regulated entity to provide a regulated service below cost without providing compensation. See also Northern Pac. Ry. Co. v. North Dakota, 236 U.S. 585, 595 (1915) (to same effect, noting that "[t]he fact that the property is devoted to a public use on certain terms does not justify the requirement that it shall be devoted to other public purposes").[4]

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[4] Many courts have reaffirmed Brooks-Scanlon's rule that a railroad may not be required to operate part of its business at a loss. See, e.g., Railroad Commission of Texas v. Eastern Texas R.R. Co., 264 U.S. 79, 85 (1924) (state regulators cannot require continued operation of railroad line at a loss); Bullock v. Florida, 254 U.S. 513, 520-21 (1921) (same); National Wildlife Fed'n v. ICC, 850 F.2d 694, 707 (D.C. Cir. 1988) (reaffirming "general rule" set forth by Brooks-Scanlon and Bullock that "[a] carrier cannot be compelled to carry on even a branch of business at a loss, much less the whole business of carriage"); Gibbons v. United States, 660 F.2d 1227, 1233 (continued...)

It is no answer to the Brooks-Scanlon principle that the firm may have an overall rate of return that covers its costs based on sales of other services. In Duquesne Light Co. v. Barasch, 488 U.S. 299 (1989), the Supreme Court carved out an exception to Brooks-Scanlon along those very lines, but that exception has no application here. Duquesne suggests that all that matters for purposes of the Takings Clause is the net effect of regulation on the enterprise. Duquesne involved two utilities that challenged a state statute prohibiting a utility from recovering in its rates an investment that was not used and useful. The $35 million investment at issue in Duquesne reduced the rate base for one of the utilities by 1.9% and reduced its revenue by 0.4%; for the other, it reduced the utility's rate base by 2.4% and its revenue by 0.5%. The Court reasoned that there was a negligible effect on the overall financial status of both utilities. The Court thus focused not on any one aspect of an order, but rather on the overall effect of regulation on the enterprise:

> Errors to the detriment of one party may well be canceled out by countervailing errors or allowances in another part of the rate proceeding.

(...continued)
(7th Cir. 1981) ("Brooks-Scanlon and Bullock define the basic limitations upon a modern railroad's public service obligation in the face of financial loss. . . . The constitutional principle embodied in these decisions retains its vitality; a railroad cannot be compelled to continue unprofitable operations indefinitely") (citation omitted); In re New York, New Haven & Hartford R.R., 304 F. Supp. 793, 804 (D. Conn. 1969) ("This court . . . concludes that Brooks-Scanlon and subsequent cases, reaffirming the validity of its holding, are still applicable and determinative."), aff'd in part, vacated in part, 399 U.S. 392 (1970); New York, New Haven & Hartford R.R. v. United States, 289 F. Supp. 418, 440-41 (S.D.N.Y. 1968) (3-judge court) (Friendly, J.) ("We see no reason to question the validity of Justice Holmes' decision in [Brooks-Scanlon] . . . forbidding the State of Louisiana to require a railroad to continue its deficit operation with no hope for profits in the foreseeable future."), vacated, 399 U.S. 392 (1970) (citation omitted).

> The Constitution protects the utility from the net effect of the rate order on its property.

Id. at 314. The Duquesne Court also made clear that there would have been a taking if the allowed rates had been "inadequate to compensate current equity holders for the risk associated with their investments under a modified prudent investment scheme." Id. at 312.[5]

The central insight in Duquesne was that there was no need to analyze closely the method used by the regulator as long as it passed constitutional scrutiny by allowing the firm to earn a competitive rate of return on invested capital. **But, the premise of the decision -- which distinguishes it from Brooks-Scanlon -- was that the regulator could and did insulate the regulated utility from competition and thus guarantee a constitutionally acceptable outcome.** Thus, to the extent that the "end-result" test of Duquesne suggests that a regulator could force a utility to operate one segment at a loss, that reasoning has no application here. It may well be that GTE is still subject to "regulation" by the Commission, but that no longer means what it once did in a regulated monopoly regime. Now, under competition, GTE no longer is insulated from the competitive forces of the marketplace. This has nothing to do with whether competition, as a normative matter, is the best policy. It simply means that ACSI cannot rely on the

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[5] See also Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944) ("[R]eturn to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."); Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n, 262 U.S. 679, 692-93 (1923) ("A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risk and uncertainties").

exception in Duquesne to justify the Commission setting insufficient rates for resale, unbundled elements, and interconnection on the theory that GTE may be profitable elsewhere in its system. For these reasons, the Brooks-Scanlon rule governs this case, and the Commission cannot force GTE to operate any segment of its business at a loss.

2. The Commission Must Ensure GTE A Fair Rate of Return.

Whether the Brooks-Scanlon or Duquesne model applies, a regulator must ensure the utility a fair, non-confiscatory rate of return. That requires a utility's investors to earn a return that is commensurate with investments having a similar risk. As the Supreme Court concluded in Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944):

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

320 U.S. at 603 (emphasis added).

In Duquesne, as explained above, the Court reaffirmed that "the return investors expect given the risk of the enterprise" is always relevant to the constitutional adequacy of a rate. Duquesne, 488 U.S. at 314. In support of this point, the Court quoted with approval from its opinion in Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n, 262 U.S. 679 (1923), which held that a utility is entitled to rates that will enable it to earn a return "'equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are

attended by corresponding risks and uncertainties.'" Id. at 314-15 (quoting Bluefield Water Works, 262 U.S. at 692).[6] Thus, pursuant to the Takings Clause, the Commission must interpret the Act to allow GTE sufficient recovery of its invested capital to maintain its credit, to attract capital, and to ensure an opportunity to earn a return that will be commensurate with investments of a similar risk. See also Tennoco Oil Co. v. Department of Consumer Affairs, 876 F.2d 1013, 1020 (1st Cir. 1989) ("To be just and reasonable, rates must provide not only for a company's costs, but also for a fair return on investment. Rates which fall below this standard are 'confiscatory'") (citation omitted), aff'd, 60 F.3d 864 (1st Cir. 1995); Medical Malpractice Joint Underwriting Ass'n v. Paradis, 756 F. Supp. 669, 676 (D.R.I. 1991) (holding unconstitutional an insurance rate that would have caused insurance companies to incur a loss).

It has also long been required that just compensation for a taking requires that the property owner be put in the same position as he would have been if the exchange had been voluntary – as opposed to involuntary (as here). Consistent with this principle, courts have held that the owner is "to be put in as good a position pecuniarily as if his property had not been taken." Olson v. United States, 292 U.S. 246, 255 (1934); see also United States v. Reynolds, 397 U.S. 14, 16 (1970); Hedstrom Lumber Co. v. United States, 7 Cl. Ct. 16, 27 (1984) (citing Foster v. United States, 2 Cl. Ct. 426, 445 (1983)) (to same

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[6] See also Illinois Bell Tel. Co. v. FCC, 988 F.2d 1254, 1263(D.C. Cir. 1993) (test to be applied in evaluating a rate order is "whether the 'end result' meets the Hope standards: attraction of capital and compensation for risk"); Jersey Central Power & Light Co. v. FERC, 810 F.2d 1168, 1178, 1181 (D.C. Cir. 1987) (en banc) (utility's inability to pay dividends to common shareholders supported contention that FERC's rates were confiscatory) (citing Permian Basin Area Rate Cases, 390 U.S. 747, 792, 812 (1968)).

effect); see generally Richard A. Epstein, Takings: Private Property And The Power Of Eminent Domain 182 (Harvard University Press 1985) ("In principle the ideal solution is to leave the individual owner in a position of indifference between the taking by the government and retention of the property").[7]

Applying these takings principles here requires that GTE recover its full joint and common forward-looking costs as well as its historic costs. Anything less would jeopardize GTE's ability to continue attracting capital, would not afford its investors a return commensurate with the risk of similar investments, and would fail to place GTE in the position it would have been had its property not been taken through confiscatory pricing.

B. **Physical Occupation Analysis.**

The Commission must set prices for unbundled elements and resold services that allows GTE a recovery of its true costs and reasonable profit for yet another wholly independent but related reason. ACSI's proposals would amount to a per se taking by physical occupation of various parts of GTE's network.

In Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419 (1982), the Supreme Court held that a New York law requiring a landlord to permit installation of cable

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[7] See also Yancey v. United States, 915 F.2d 1534, 1542 (Fed. Cir. 1990) ("the fair market value of property under the Fifth Amendment can include an assessment of the property's capacity to produce future income if a reasonable buyer would consider that capacity in negotiating a fair price for the property"); Cloverport Sand & Gravel Co. v. United States, 6 Cl. Ct. 178, 188 (1984) (fair market value has been defined as the amount a "willing buyer would agree to pay a willing seller in cash, with neither party being under a compulsion to buy or sell"). Accord United States v. New River Collieries Co., 262 U.S. 341, 343 (1923); Seaboard Air Line Ry. v. United States, 261 U.S. 299, 304 (1923).

television equipment on rental property was a constitutionally compensable taking. The Court held that, while "no 'set formula' existed to determine, in all cases, whether [government regulation of private property constitutes a taking]," where the government authorizes a permanent physical occupation of one's property by a third party, a taking is determinatively established. Id. at 426. The Court held that the law at issue in Loretto plainly amounted to a taking by a physical occupation because the "installation involved a direct physical attachment of" the cable company's equipment to the owner's property. Id. at 438.

The Supreme Court revisited the application of takings principles by permanent physical occupation to highly regulated industries in FCC v. Florida Power Corp., 480 U.S. 245 (1987). In that case, a utility company challenged on takings grounds the provisions of the Pole Attachments Act that authorized the FCC to set the rates that utility companies could charge cable television companies for using their utility poles for stringing television cable. The Court held that

> Loretto ha[d] no applications to the facts of [Florida Power -- and there was no taking by physical occupation -- because while] the statute we considered in Loretto specifically required landlords to permit permanent occupation of their property by cable companies, nothing in the Pole Attachments Act as interpreted by the FCC . . . gives cable companies any right to occupy space on utility poles, or prohibits utility companies from refusing to enter into attachment agreements with cable operators.

Id. at 250-51 (emphasis added).

In other words, where, as in Florida Power, the property owner voluntarily invites the third party onto its property (by lease or otherwise), there is no permanent physical occupation mandated by the government and hence no taking for that reason, and the government is free to regulate the terms of the lease or other invitation (i.e., regulate

the use of the property) without effecting a per se taking by physical occupation. Or, as the Supreme Court put it, the "element of required acquiescence is at the heart of the concept of [per se taking by physical] occupation." Id. at 252. See also Yee v. Escondido, 503 U.S. 519, 527 (1992) ("required acquiescence is at the heart of the concept of [taking by physical] occupation").

Applying these well-settled principles here, it is plain that the obligations imposed on GTE under section 251 -- collocation, unbundled network access to the local loop, pole attachments, and access to GTE databases -- constitute a taking by permanent physical occupation.

1. Physical Collocation.

ACSI has requested physical collocation. As described in the testimony of GTE witness Cantrell, physical collocation allows a CLEC to place certain equipment necessary for interconnection in a dedicated space at the facility of an incumbent local exchange carrier ("ILEC"), like GTE. See 47 U.S.C. §251(c)(6); First Report and Order ¶¶ 555-607. The Act obligates ILECs to allow for the physical occupation by the CLEC to establish a mini-facility on the property of the ILEC for an indefinite period with the further right to enter the ILEC's facility to install, maintain, and repair collocated equipment, as it deems necessary.

Physical collocation amounts to an installment and direct physical attachment to GTE's property. Cf. Loretto, 458 U.S. at 438. There is no question that a third party -- as opposed to GTE -- would have an exclusive property interest in the space on GTE's premises. See Id. at 440 n.19. And there is no question that, unlike in Florida Power and Yee, the Act requires an ILEC to allow third parties to physically occupy their premises.

Thus, this case falls squarely within the per se takings rule of Loretto, as clarified in Florida Power and Yee.

The collocation issue has been squarely addressed by the Oregon Supreme Court, which held that physical collocation amounts to a taking by permanent physical invasion. In GTE Northwest Inc. v. Public Util. Comm'n of Oregon, 321 Ore. 458, 468-77, 900 P.2d 495, 501-06 (1995), cert. denied, 116 S.Ct. 1541 (1996), the Supreme Court of Oregon held that state-mandated collocation rules effected an unconstitutional physical taking. Id. The Court reasoned that when the government requires a physical intrusion into one's property that reaches the extreme form of a permanent physical occupation, a taking has occurred. Id.[8]

2. Unbundled Access To The Local Loop.

ACSI has requested access to the local loop on an unbundled basis. The Act provides CLECs with the right to unbundled access to the local loop. 47 U.S.C. § 251(c)(3); First Report and Order ¶¶ 226-541. As described in the testimony of GTE witness Hartshorn, GTE is forced to transfer a property interest in the loop to ACSI. That interest is more akin to a forced lease than a sale. If a customer who elects ACSI as a local telephone provider decides to switch back to GTE, then GTE would again assume the property interest given to ACSI. Once ACSI or any other CLEC assumes an interest

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[8] The one federal court to address this issue has agreed that physical collocation "would seem necessarily to 'take' property regardless of the public interests served in a particular case." Bell Atlantic Tel. Cos. v. FCC, 24 F.3d 1441, 1446 (D.C. Cir. 1994). The D.C. Circuit did not, however, have to reach the taking issue because that court concluded that the FCC did not have the statutory authority to order physical collocation.

in the local loop, however, GTE cannot provide local exchange or any other service over that wire.

The physical occupation here is very similar to the taking in physical collocation. Here, GTE's turning over of the local loop to ACSI -- by compulsion from the government -- amounts to a direct physical occupation of its property by a third party, as it did in Loretto. 458 U.S. at 438. Nor is there a question that GTE owns this property. See id. at 440 n.19. And there is no question that, unlike in Florida Power and Yee, the Act requires GTE to allow ACSI and other third parties to physically occupy its premises. This case, just like physical collocation, falls squarely within the per se takings rule of Loretto, as clarified in Florida Power and Yee.

* * *

It is no response to the various physical takings here that somehow GTE's interest in its real property (e.g., facilities, network, etc.) should be accorded any less respect because GTE's local telephone exchange business has been regulated by the Commission. A long line of cases establishes that a utility's property -- even though subject to regulation -- remains the property of the utility, not the government. See Munn v. Illinois, 94 U.S. 113, 126 (1877); Delaware, L. & W. R.R. v. Morristown, 276 U.S. 182, 193 (1928); Northern Pac. Ry. v. North Dakota, 236 U.S. 585, 595 (1915). Therefore, regulation by the Commission may alter the use of property, but it cannot alter the underlying ownership of the property for purposes of a physical taking.

Put another way, there is nothing about the relationship between GTE, as a regulated entity, and the Commission that suggests that GTE has in any way bargained

away its private property rights in exchange for a franchise that it has enjoyed up until now in the local exchange market in its service territory. ACSI has provided no evidence -- and it will be unable to provide any evidence -- of any agreement by GTE to give up its private property rights in its network facilities. The only bargain that GTE has entered into has been to provide quality universal telephone service to the customers of this State in exchange for an exclusive franchise that would allow for a recovery of and a fair rate of return on its invested capital. Never has GTE turned over any part of its property rights to the State.

To the contrary, GTE has preserved all the traditional incidents of private ownership of its network property -- including title, possession, and the right and obligation to incur debt to finance that property, to depreciate it, and to pay taxes on it. Any suggestion that GTE does not have a full property interest in its property would be news to state and federal taxing authorities, to GTE's creditors, and to its shareholders.

Therefore, GTE is entitled to just compensation for the physical occupation and taking of its property. While recovery of the fair market value is typically the measure of just compensation for a taking, see, e.g., United States v. 564.54 Acres of Land, 441 U.S. 506, 515-17 (1979), the Supreme Court has long recognized that there is no "rigid rule" requiring that standard. United States v. Commodities Trading Corp., 339 U.S. 121, 123 (1950). Thus, where a "market value", as here, would be "difficult to find," other standards may be appropriate. Again, the guiding principle is that the property owner should be put in "as good a position pecuniarily as if his property had not been taken." Olson, 292 U.S. at 255. Here, that means allowing GTE all of its forward looking costs pursuant to the "market-determined efficient component pricing rule" ("M-ECPR") (as

discussed in greater detail in Part III.A below) and a recovery of and a fair rate of return on its historic costs of creating the network that has been taken (Part III.B below). Here, the measure of just compensation for a physical taking is no different from the compensation owed GTE under the regulatory/confiscatory pricing analysis discussed above (Part II.A).

III. GTE MUST RECOVER ALL ITS FORWARD-LOOKING COSTS AND EARN A FAIR RATE OF RETURN ON ITS HISTORIC COSTS.

In Parts I and II above, we explained how ACSI's Petition would effect an unconstitutional taking and why the FCC's First Report and Order provides no safe harbor for that taking. In this Part, we apply these takings principles to this arbitration and demonstrate that GTE must recover its full forward-looking costs (Part III.A) and historic costs (Part III.B) to avoid an uncompensated and unconstitutional taking.

A. There are Four Forward-Looking Costs That GTE Must Recover.

1. Incremental Costs.

For any piece of GTE's network that is either leased or sold, it is commonly accepted that GTE is entitled to its long run incremental cost. In its First Report and Order, the FCC adopted this principle by establishing a pricing methodology for interconnection and unbundled elements based on the TELRIC of providing a particular network element plus a reasonable share of forward-looking joint and common costs. First Report and Order ¶¶ 674-703. Where GTE's incremental cost is higher than its retail rate (in the case of residential service, for example), forcing GTE to sell at "retail" would effect an unconstitutional taking in the absence of some other mechanism to make GTE whole. (Id.) That is to say, even the retail price does not fully cover GTE's incremental costs.

Even worse, forcing GTE to sell at a price that is less than retail -- in the case of wholesale rates, for example -- would only make the taking more pronounced. (Id.)

2. All Forward-Looking Joint And Common Costs.

To the extent that ACSI's Petition allows for GTE to receive anything less than the full recovery of all forward-looking joint and common costs for any piece of GTE's network that is either leased or sold, it would be a taking without just compensation.[9] Even the "reasonable" portion of joint and common forward-looking costs that would be permitted under the FCC's interpretation, however, would be insufficient. The First Report and Order suggests two permissible methods of calculating the "reasonable" portion -- both of which would subsidize ACSI's entry into the market by ensuring that GTE earned only a portion of its forward-looking joint and common costs. First Report and Order ¶ 696.

Under one method, GTE would only be entitled to a fixed markup, which would mean that GTE would be forced to forego a significant share of the contribution it otherwise would have earned. Under the other method, the FCC would "allocate" GTE's forward-looking common costs to the elements that are the most competitive and, therefore, least likely to recover their assigned costs. As explained in greater detail in the Economic Report, both methods would foreclose the possibility that GTE would be able to achieve the recovery of forward-looking costs that the FCC purports to endorse, and

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[9] A firm's "joint" costs are those costs incurred when two or more services are produced in fixed proportion. A firm's "common" costs are those costs incurred in the provision of some or all the firm's services that are not incremental to any individual service. Common costs can only be "avoided" by shutting down the entire firm or by not producing a particular group of services under review. (See Economic Report)

would effect an unconstitutional taking without just compensation. ACSI has failed to explain how this basic constitutional defect would be rectified.

Taking a position that is even more aggressive than the FCC, ACSI appears to assume that forward-looking costs are exactly equal to the sum of GTE's TELRICs. That is to say, ACSI's pricing proposal appears to be based on the erroneous proposition that joint and common costs are de minimis in the provision of local telephone service. ACSI has -- once again -- offered no evidence to support this claim. Moreover, ACSI's proposal conflicts with the FCC's interpretation, which assumes there will be some forward-looking joint and common costs that an ILEC is entitled to recover. See First Report and Order ¶¶ 672-73, 694-98.

3. **GTE's Costs Of Subsidizing Other Services.**

It has long been a fundamental tenet of regulation of local telephone service that the incumbent LEC bears certain burdens -- notably, rate structures that reflect cross subsidies from universal service and carrier of last resort obligations. These burdens, unique to the incumbent, come at a tremendous cost. GTE has explained elsewhere in its submission (GTE Company pricing and cost witnesses) that these costs are certain and quantifiable. Yet ACSI's Petition seeks to avoid any responsibility for paying for these costs. Instead, without any basis whatsoever, it would force the incumbent to bear these costs. If the Commission were to force GTE to bear these costs, that would constitute an uncompensated, unconstitutional taking.

The cost of the subsidy, or "contribution" is particularly severe when considering the sale or lease of an unbundled element (the local loop, for example). If the price of the loop is set too low, then GTE will not recover its full costs associated with the

loop, as discussed in greater detail in the testimony of GTE Company pricing and cost witness. But even worse, GTE will also lose the opportunity to sell other higher-margin services that provide contribution toward universal service and carrier of last resort obligations. So, when GTE sells/leases an unbundled loop to ACSI, for example, ACSI will likely self-provision the switching facilities necessary to provide higher-margin vertical services. Yet these are precisely the higher-margin vertical services that provide contribution to GTE's costs that traditionally served to keep basic telephone rates low. Thus, the more GTE and other ILECs lose the opportunity for contribution, the more compelling is the case that ACSI's proposal would effect a taking. By contrast, the market-determined efficient component pricing rule, as explained in detail by GTE pricing and cost witnesses, derives a mechanism that prices GTE components at their economic costs. This price rule, supplemented with a competitively neutral surcharge, is the proper -- and constitutional -- method for compensating GTE.

It is no answer to a taking that there may be alternate funding available at some later point through a universal service fund ("USF"). 47 U.S.C. § 254. Indeed, the very fact that Congress has recognized that there is a need for the USF only underscores why there would be an unconstitutional taking if ACSI's proposal were adopted. The whole point of the USF is that Congress recognized that local telephone service has been subsidized by allowing higher-priced services -- like toll calling, business service, vertical services (voice mail, caller identification, call forwarding etc.) -- to keep rates low for preferred classes of customers. Yet that is precisely what is at issue here. Moreover even if this were somehow an answer (and it is not), it would only be a partial answer because the USF is designed to recover only a limited portion of historical and forward-looking

costs. And, in addition, the USF will not go into effect for quite some time -- which would leave GTE uncompensated until that time and wrongfully leave the burden on GTE to bring a separate action to recover those lost funds.

4. GTE's Costs Of Unbundling And Resale.

As described in more detail elsewhere in GTE's submission, unbundling and resale entail economic costs -- both direct production costs and transaction costs. There is no justification for compelling GTE to bear these costs, and ACSI has offered no rational explanation for doing so. To be sure, ACSI would no doubt prefer GTE to bear these costs, but the Constitution requires that GTE be compensated for these additional costs. These are real costs that will be no less if GTE bears them, as opposed to ACSI.

B. GTE Must Be Allowed A Reasonable Return on Its Historic Costs.

ACSI's proposal forbids the recovery by GTE of **any** return on its historic, or embedded costs in building the very network with which it now seeks interconnection. Yet, it has long been settled that the Takings Clause requires a fair rate of return for regulated utilities on their investments. See, e.g., Duquesne, 488 U.S. 299. The question for regulators has traditionally been "On which investments is the utility entitled to a fair rate of return?" In his concurrence in Duquesne, Justice Scalia correctly concluded that for purposes of determining whether a taking has occurred, all "prudently incurred investment[s] may well have to be counted." Id. at 317. That is to say, at a minimum, the Commission must include **all** prudently incurred investments by GTE in constructing the very network that the government would now take from the Company for the use of third parties. Thus, GTE is entitled to recover that portion of its historic costs not yet recovered and to earn a fair rate of return on those investments.

ACSI has presented no evidence demonstrating that GTE's investments in constructing the local exchange network were not prudently incurred or should be excluded. Nor could it, for those very investments were the subject of close regulatory scrutiny by this very Commission. Thus, to the extent that ACSI now seeks access to GTE's network, it should have to either pay for an appropriate share of (and return on) those historic costs or GTE should otherwise be made whole through a rate rebalancing, end user charge, or one-time payment that would account for the monies prudently spent by GTE but now stranded by the transition from regulation to competition.

If the Commission were to afford GTE anything less than a fair rate of return on the very historic costs that the Commission induced GTE to spend to create the local exchange network, it would also run afoul of the principle that a regulator may not switch "back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others". Duquesne, 488 U.S. at 315. Indeed, given that the "end result" test in Duquesne has no application where there has been a transition, as here, from regulation to competition, then the Commission's close scrutiny of each element of GTE's expenditures -- including historic, sunk costs -- is compelled by longstanding case law requiring a fair rate of return for a regulated utility.

Thus, the Commission needs to adjust its calculations to either the rate base or to future rate of return to reconcile its obligations to GTE. Alternatively, it may prefer to address this issue in a franchise-impact proceeding. The central issue though remains the same -- GTE must receive fair compensation; the method by which that happens is secondary.

Conclusion

For all of the reasons described above and elsewhere in our response, the Commission must avoid an unconstitutional taking of GTE's property without just compensation by ensuring that GTE will recover its forward-looking costs and any portion of its historic costs not yet recovered and earn a fair rate of return on that investment.

SECTION II

GLOSSARY

GLOSSARY

The following definitions are taken from Section 153 of the Telecommunications Act of 1996 and the FCC's First Report and Order. Some of the definitions taken from the FCC's First Report and Order apply to only certain FCC rules, and these rules are referenced in the appropriate definitions. GTE does not agree with all of the FCC's definitions, such as the FCC's definition of 'technically feasible', but these definition are provided here for convenience. Moreover, some of the definitions listed here may be inconsistent with State law.

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Act. The Communications Act of 1934, as amended.

Advanced intelligent network. "Advanced Intelligent Network" is a telecommunications network architecture in which call processing, call routing, and network management are provided by means of centralized databases located at points in an incumbent local exchange carrier's network.

Arbitration, final offer. "Final offer arbitration" is a procedure under which each party submits a final offer concerning the issues subject to arbitration, and the arbitrator selects, without modification, one of the final offers by the parties to the arbitration or portions of both such offers. "Entire package final offer arbitration," is a procedure under which the arbitrator must select, without modification, the entire proposal submitted by one of the parties to the arbitration. "Issue-by-issue final offer arbitration," is a procedure under which the arbitrator must select, without modification, on an issue-by-issue basis, one of the proposals submitted by the parties to the arbitration.

Billing. "Billing" involves the provision of appropriate usage data by one telecommunications carrier to another to facilitate customer billing with attendant acknowledgments and status reports. It also involves the exchange of information between telecommunications carriers to process claims and adjustments.

Commission. "Commission" refers to the Federal Communications Commission.

Common carrier. The term "common carrier" or "carrier" means any person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy, except where reference is made to common carriers not subject to the Act [47 USC §§ 151 et seq.]; but a person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier.

Customer premises equipment. The term "customer premises equipment" means equipment employed on the premises of a person (other than a carrier) to originate, route, or terminate telecommunications.

Dialing parity. The term "dialing parity" means that a person that is not an affiliate of a local exchange carrier is able to provide telecommunications services in such a manner that customers have the ability to route automatically, without the use of any access code, their telecommunications to the telecommunications services provider of the customer's designation from among 2 or more telecommunications services providers (including such local exchange carrier).

Directory assistance service. "Directory assistance service" includes, but is not limited to, making available to customers, upon request, information contained in directory listings.

Directory listings. "Directory listings" are any information: (1) identifying the listed names of subscribers of a telecommunications carrier and such subscriber's telephone numbers, addresses, or primary advertising classifications (as such classifications are assigned at the time of the establishment of such service), or any combination of such listed names, numbers, addresses or classifications; and (2) that the telecommunications carrier or an affiliate has published, caused to be published, or accepted for publication in any directory format.

Downstream database. A "downstream database" is a database owned and operated by an individual carrier for the purpose of providing number portability in conjunction with other functions and services.

Equipment necessary for interconnection or access to unbundled network elements. For purposes of section 251(c)(2) of the Act, the equipment used to interconnect with an incumbent local exchange carrier's network for the transmission and routing of telephone exchange service, exchange access

service, or both. For the purposes of section 251(c)(3) of the Act, the equipment used to gain access to an incumbent local exchange carrier's unbundled network elements for the provision of a telecommunications service.

Exchange access. The term "exchange access" means the offering of access to telephone exchange services or facilities for the purpose of the origination or termination of telephone toll services.

Incumbent Local Exchange Carrier (Incumbent LEC). With respect to an area, the local exchange carrier that: (1) on February 8, 1996, provided telephone exchange service in such area; and (2) (i) on February 8, 1996, was deemed to be a member of the exchange carrier association pursuant to 47 C.F.R. § 69.601(b); or (ii) is a person or entity that, on or after February 8, 1996, became a successor or assign of a member described in clause (i) of this paragraph.

Interconnection. "Interconnection" is the linking of two networks for the mutual exchange of traffic. This term does not include the transport and termination of traffic.

Local access and transport area. The term "local access and transport area" or "LATA" means a contiguous geographic area--

(A) established before the date of enactment of the Telecommunications Act of 1996 [enacted Feb. 8, 1996] by a Bell operating company such that no exchange area includes points within more than 1 metropolitan statistical area, consolidated metropolitan statistical area, or State, except as expressly permitted under the AT&T Consent Decree; or

(B) established or modified by a Bell operating company after such date of enactment and approved by the Commission.

Local Exchange Carrier (LEC). A "LEC" is any person that is engaged in the provision of telephone exchange service or exchange access. Such term does not include a person insofar as such person is engaged in the provision of a commercial mobile service under section 332(c) of the Act, except to the extent that the Commission finds that such service should be included in the definition of the such term.

Maintenance and repair. "Maintenance and repair" involves the exchange of information between telecommunications carriers where one initiates a request for maintenance or repair of existing products and services or unbundled network elements or combination thereof from the other with attendant acknowledgments and status reports.

Meet point. A "meet point" is a point of interconnection between two networks, designated by two telecommunications carriers, at which one carrier's responsibility for service begins and the other carrier's responsibility ends.

Meet point interconnection arrangement. A "meet point interconnection arrangement" is an arrangement by which each telecommunications carrier builds and maintains its network to a meet point.

Network element. A "network element" is a facility or equipment used in the provision of a telecommunications service. Such term also includes, but is not limited to, features, functions, and capabilities that are provided by means of such facility or equipment, including but not limited to, 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.

Number portability. The term "number portability" 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.

Operator services. "Operator services" are any automatic or live assistance to a consumer to arrange for billing or completion of a telephone call. Such services include, but are not limited to, busy line verification, emergency interrupt, and operator-assisted directory assistance services.

Physical collocation. "Physical collocation" is an offering by an incumbent LEC that enables a requesting telecommunications carrier to:

(1) place its own equipment to be used for interconnection or access to unbundled network elements within or upon an incumbent LEC's premises;

(2) use such equipment to interconnect with an incumbent LEC's network facilities for the transmission and routing of telephone exchange service, exchange access service, or both, or to gain access to an incumbent LEC's unbundled network elements for the provision of a telecommunications service;

(3) enter those premises, subject to reasonable terms and conditions, to install, maintain, and repair equipment necessary for interconnection or access to unbundled elements; and

(4) obtain reasonable amounts of space in an incumbent LEC's premises, as provided in this part, for the equipment necessary for interconnection or access to unbundled elements, allocated on a first-come, first-served basis.

Pre-ordering and ordering. "Pre-ordering and ordering" includes the exchange of information between telecommunications carriers about current or proposed customer products and services or unbundled network elements or some combination thereof.

Provisioning. "Provisioning" involves the exchange of information between telecommunications carriers where one executes a request for a set of products and services or unbundled network elements or combination thereof from the other with attendant acknowledgments and status reports.

Rural telephone company. A "rural telephone company" is a LEC operating entity to the extent that such entity:

(1) provides common carrier service to any local exchange carrier study area that does not include either:

(i) any incorporated place of 10,000 inhabitants or more, or any part thereof, based on the most recently available population statistics of the Bureau of the Census; or

(ii) any territory, incorporated or unincorporated, included in an urbanized area, as defined by the Bureau of the Census as of August 10, 1993;

(2) provides telephone exchange service, including exchange access, to fewer than 50,000 access lines;

(3) provides telephone exchange service to any local exchange carrier study area with fewer than 100,000 access lines; or

(4) has less than 15 percent of its access lines in communities of more than 50,000 on February 8, 1996.

Service control point. A "service control point" is a computer database in the public switched network which contains information and call processing instructions needed to process and complete a telephone call.

Service creation environment. A "service creation environment" is a computer containing generic call processing software that can be programmed to create new advanced intelligent network call processing services.

Signal transfer point. A "signal transfer point" is a packet switch that acts as a routing hub for a signaling network and transfers messages between various points in and among signaling networks.

State commission. A "state commission" means the commission, board, or official (by whatever name designated) which under the laws of any State has regulatory jurisdiction with respect to intrastate operations of carriers. As referenced in this part, this term may include the Commission if it assumes the responsibility of the state commission, pursuant to section 252(e)(5) of the Act. This term shall also include any person or persons to whom the state commission has delegated its authority under section 251 and 252 of the Act.

State proceeding. A "state proceeding" is any administrative proceeding in which a state commission may approve or prescribe rates, terms, and conditions including, but not limited to, compulsory arbitration pursuant to section 252(b) of the Act, review of a Bell operating company statement of generally available terms pursuant section 252(f) of the Act, and a proceeding to determine whether to approve or reject an agreement adopted by arbitration pursuant to section 252(e) of the Act.

Technically feasible. Interconnection, access to unbundled network elements, collocation, and other methods of achieving interconnection or access to unbundled network elements at a point in the network shall be deemed technically feasible absent technical or operational concerns that prevent the fulfillment of a request by a telecommunications carrier for such interconnection, access, or methods. A determination of technical feasibility does not include consideration of economic, accounting, billing, space, or site concerns, except that space and site concerns may be considered in circumstances where there is no possibility of expanding the space available. The fact that an incumbent LEC must modify its facilities or equipment to

respond to such request does not determine whether satisfying such request is technically feasible. An incumbent LEC that claims that it cannot satisfy such request because of adverse network reliability impacts must prove to the state commission by clear and convincing evidence that such interconnection, access, or methods would result in specific and significant adverse network reliability impacts.

Telecommunications. The term "telecommunications" means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

Telecommunications carrier. A "telecommunications carrier" is any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in section 226 of the Act). A telecommunications carrier shall be treated as a common carrier under the Act only to the extent that it is engaged in providing telecommunications services, except that the Commission shall determine whether the provision of fixed and mobile satellite service shall be treated as common carriage. This definition includes CMRS providers, interexchange carriers (IXCs) and, to the extent they are acting as telecommunications carriers, companies that provide both telecommunications and information services. Private Mobile Radio Service providers are telecommunications carriers to the extent they provide domestic or international telecommunications for a fee directly to the public.

Telecommunications equipment. The term "telecommunications equipment" means equipment, other than customer premises equipment, used by a carrier to provide telecommunications services, and includes software integral to such equipment (including upgrades).

Telecommunications service. The term "telecommunications service" 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.

Telephone exchange service. The term "telephone exchange service" means (A) service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished

by a single exchange, and which is covered by the exchange service charge, or (B) comparable service provided through a system of switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service.

Telephone toll service. The term "telephone toll service" means telephone service between stations in different exchange areas for which there is made a separate charge not included in contracts with subscribers for exchange service.

Virtual collocation. "Virtual collocation" is an offering by an incumbent LEC that enables a requesting telecommunications carrier to:

(1) designate or specify equipment to be used for interconnection or access to unbundled network elements to be located within or upon an incumbent LEC's premises, and dedicated to such telecommunications carrier's use;

(2) use such equipment to interconnect with an incumbent LEC's network facilities for the transmission and routing of telephone exchange service, exchange access service, or both, or for access to an incumbent LEC's unbundled network elements for the provision of a telecommunications service; and

(3) electronically monitor and control its communications channels terminating in such equipment.

SECTION III

TESTIMONY

PART I

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY OF KIRBY D. CANTRELL

DOCKET NO. 961169-TP

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Kirby D. Cantrell. My business address is 201 N. Franklin Street, Tampa, Florida 33601.

Q. WHO IS YOUR EMPLOYER AND WHAT IS YOUR POSITION?

A. I am employed by GTE Florida Incorporated (GTEFL) as Technical Support Administrator in Carrier Markets.

Q. PLEASE DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE.

A. I graduted from the University of Florida in 1972 with a Bachelor of Science degree in Business Administration. I joined GTEFL in 1973 and have held management positions in Sales, Product Management and Carrier Markets.

Q. WHAT ARE YOUR RESPONSIBILITIES IN YOUR CURRENT POSITION?

A. I am responsible for providing technical support for alternative local exchange carriers accessing GTEFL's network, and I am the GTE collocation administrator for Florida.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS DOCKET?

A. The purpose of my testimony is to identify the issues that are disputed between GTE and ACSI related to collocation and then set forth GTE's position on those issues.

Q. HOW IS YOUR TESTIMONY STRUCTURED?

A. My testimony is separated into five sections as follows: Section A provides a general overview of collocation; Section B sets out the collocation provision of the Act; Section C provides a list of the issues presented and a summary of the respective parties' positions; Section D presents GTE's position in detail and; Section E presents a summary of my testimony.

SECTION A: AN OVERVIEW OF COLLOCATION

Q. WHAT IS COLLOCATION?

A. A central objective of the Act is to facilitate competition in local exchange markets by allowing new entrants to interconnect with unbundled elements of an ILEC's network. For example, alternative local exchange carriers ("ALEC") may wish to terminate its own transmission links and interconnect them with an ILEC's switch, located in the central office, for routing to individual customers. In doing so, it may want to utilize its own circuit termination equipment rather than purchase termination and transport service from the ILEC.

For technical reasons (e.g., the cable required to cross-connect two communications circuits cannot exceed a certain length), the ALEC's circuit termination equipment must be in close proximity to the ILEC's network equipment. In these circumstances, it may be necessary to allow the ALEC to "collocate" its equipment on the ILEC's premises.

Collocation can take two forms, "physical collocation" and "virtual collocation."

Q. PLEASE DESCRIBE PHYSICAL COLLOCATION.

A. Essentially, physical collocation enables an interconnector to set up a mini-facility on the premises of a local exchange carrier ("LEC"). The LEC leases a portion of the space in its facility to the interconnector, which then places its own equipment in the segregated space. Typically, that space is enclosed by "cages" or similar structures to provide security for the ILEC facilities and the installed equipment. The interconnector is permitted to enter the facility to install, maintain, and repair collocated equipment.

Q. WHAT IS VIRTUAL COLLOCATION?

A. In the case of virtual collocation, the interconnector does not occupy a portion of the ILEC's facility, nor does it own the equipment that is used to interconnect with the ILEC's network. Instead, the ILEC owns or leases the equipment necessary to terminate the interconnector's circuits and dedicates that equipment to the exclusive use of the

interconnector. This dedicated equipment is housed inside the ILEC's facility (usually the central office) and is linked to the interconnector's circuits outside the facility (typically at a manhole). As opposed to physical collocation, the ILEC provides installation, maintenance and repair services for the equipment.

SECTION B: COLLOCATION AND THE ACT

Q. IS COLLOCATION ADDRESSED IN THE TELECOMMUNICATIONS ACT OF 1996?

A. Yes. The Act takes account of the technical need to provide some level of collocation to enable ALECs to interconnect with an ILEC's network and access to unbundled network elements. Section 251(c)(6) of the Act sets out an ILEC's collocation obligations:

> COLLOCATION.– The duty to provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the local exchange carrier, except that the carrier may provide for virtual collocation if the local exchange carrier demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations.

47 U.S.C. § 251(c)(6) (1996).

The FCC has interpreted this provision to require collocation to be provided:

- on a physical or virtual basis at the request of an ALEC;
- at "all buildings or similar structures owned or leased by the incumbent LEC that house LEC network facilities";
- for transmission equipment "used" or "useful" for interconnection or access to unbundled elements, but not for switching equipment;
- for "cross-connects" between collocated ALEC equipment; and
- consistent with reasonable security measures, including cages.

(See In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, CC Docket No. 96-98, FCC 96-325 (released Aug. 8, 1996) (the"Order") ¶ 555, forward)

GTE and ACSI appear to disagree on just a few issues regarding implementation of the statutory provision.

SECTION C: POSITIONS OF THE PARTIES

Q. WHAT ARE THE POSITIONS OF ACSI AND GTE CONCERNING COLLOCATIONS ISSUES?

A. The issues presented in this arbitration are very few. The questions which must be resolved are:

(1) *What types of equipment are necessary for interconnection?*

ACSI's Position: ACSI states that it must be permitted to locate it's remote switching modules at GTE's premises, in order to obtain interconnection and access to GTE unbundled loops.

GTE's Position: ACSI should be allowed to place on GTE's premises only equipment that is technically necessary to provide basic transmission service, such as circuit termination equipment. It should not be permitted to collocate either remote switching modules, or switches, enhanced services equipment or customer premises equipment.

(2) *Must GTE permit two collocators to cross-connect with each other, with equipment collocated at GTE's central office?*

ACSI's Position: There should be no prohibitions against non-GTE carriers interconnecting with one another on GTE's premises.

GTE's Position: The Act does not require collocators housed on GTE property to cross-connect with each other in order to bypass GTE's network. GTE will provide the cross-connection ACSI seeks through the purchase of an unbundled network element.

Pending judicial review of the FCC's Order, GTE will permit the interconnection via cross-connects of the collocated equipment of different ALECs under the following conditions: (1) the provisioning of the cross-connect by GTE or the ALECs shall be at the option of GTE; (2) the connected equipment is used for interconnection with GTE or access to GTE's unbundled network elements; (3) adequate space is available; (4) reasonable security arrangements can be provided; and (5) the CLECs pay all costs associated with the cross-connect.

(3) *What rate should be established for cross-connections to other collocated entities?*

ACSI's Position: ACSI believes they should be able to make arrangements directly with the other entity, at no charge by

GTE, or by contracting GTE to perform the arrangement on a time and material basis.

GTE's Position: GTE will perform the cross-connect arrangement via the collocator purchasing an unbundled network element. This element will be priced using TELRIC methodology.

SECTION D: GTE'S POSITION RELATIVE TO THE DISPUTED ISSUES

Q. WHAT IS GTE'S GENERAL POSITION RELATIVE TO ACSI's COLLOCATION REQUESTS?

A. GTE is concerned that ACSI may be seeking to more than simply collocate equipment "necessary for interconnection or access to unbundled network elements" on GTE premises as the Act. Apparently, ACSI seeks to use GTE's property whenever it is to ACSI's convenience or advantage to do so. Section 251(c)(6) of the Act does not support the positions ACSI has taken in negotiations with respect to collocation.

When considering the issue presented, it is important to keep in mind that collocation is a limited measure, designed to remove technical barriers to new local exchange providers entering the local telephone market and effectively competing with ILECs. Collocation is not intended as a vehicle by which new entrants may avoid offering true

facilities-based competition by building their business on the premises of their competitors. GTE sets out in greater detail below the justifications for its positions with respect to the disputed collocation issues.

Q. WHAT IS GTE'S POSITION CONCERNING WHAT TYPES OF EQUIPMENT SHOULD BE NECESSARY FOR INTERCONNECTION VIA COLLOCATION?

A. ACSI should not be permitted to collocate on GTE premises any equipment it chooses. ACSI has taken the position that a collocator should be permitted to place any type of equipment on GTE's premises; which could include switches. This position disregards the language of the Act, which limits collocated equipment to that "necessary for interconnection or access to unbundled network elements." (47 U.S.C. § 251(c)(6)) (emphasis added). While the FCC's interpretation of the "necessary" qualifier as "used or useful" is questionable, the FCC correctly concludes that switching equipment, enhanced services equipment and CPE may not be collocated. (Order, ¶¶ 579-82) Thus, both the Act and the Order foreclose ACSI's request to collocate on GTE facilities equipment that is not necessary. Necessity, not convenience, is the touchstone of collocation under the Act.

The fundamental purpose of the "interconnection and access" provisions is to enable an interconnector to use ILEC network

components without having to purchase complete switched access or exchange service. A "'fundamental purpose of expanded interconnection . . . is to allow interconnectors to use LEC switches without having to purchase the LECs' end-to-end switched access services. If interconnectors want to do their own switching, they may place switches on their own property" (Expanded Interconnection with Local Telephone Company Facilities, CC Docket No. 91-141, and Amendment of Part 36, CC Docket No. 80-286, Second Report and Order and Third Notice of Proposed Rulemaking, 8 FCC Rcd. 7374 (1993) (the "Switched Access Order" ¶ 62) (quoting PacTel Comments at 46-47)).

The FCC has recognized the importance of limiting the types of equipment that must be collocated on a LEC's premises to equipment that is necessary and directly related to the competitive provision of basic transmission service, and it has consistently rejected suggestions that LECs be required to provide collocation of enhanced services equipment, customer premises equipment, switches, or other non-transmission equipment. "LECs are not required to provide collocation of enhanced services, customer premises, or other non-transmission equipment."); (Special Access Order, ¶ 63). "In our earlier orders, we required LECs to permit interconnectors to place . . . in LEC central offices only equipment needed to terminate basic transmission facilities . . . [w]e conclude that the same principles should apply [for the policies] we adopt in this order". In re Expanded

Interconnection with Local Telephone Company Facilities, Memorandum Opinion and Order, 9 FCC Rcd. 5154 (1994) ("Virtual Collocation Memorandum and Order") ¶ 94 . Congress was clearly aware of this history when it enacted Section 251(c)(6).

If a collocator were permitted to place any type of equipment it wished on GTE's premises, it would quickly exhaust existing space available for collocation. For example, if the first party seeking collocation were allowed to install remote switching modules, ACSI's requests here, or other large switches, circuit termination equipment, enhanced services equipment, and customer premises equipment, inadequate space would be available for other competitors to collocate equipment essential to offering basic services. That first collocator – perhaps ACSI – would be able to monopolize the limited amount of usable space in GTE's facilities, and deny other interconnectors the opportunity to collocate on GTE's premises in order to compete directly with ACSI and GTE. Such a result would contravene the goals of the Act.

Allowing any one interconnector to use up portions of GTE's facilities with equipment unrelated to providing basic service would give rise to other adverse consequences.

Q. WHAT COULD THOSE OTHER ADVERSE CONSEQUENCES BE?

A. First, it would impinge on GTE's ability to upgrade its equipment and expand its services. Second, the placement of extraneous equipment would place additional demands on the facility's power supply. Switches, for example, demand an inordinate amount of power, and significant modifications would be required to power that equipment if a collocator were permitted to install a switch. Third, similar modifications would be required to maintain the environmental stability required by central office equipment. The public ultimately would bear these unnecessary costs in exchange for limited or no competitive benefits.

Q. PLEASE DESCRIBE THE TYPES OF EQUIPMENT THAT CAN BE COLLOCATED.

A. Collocation equipment is limited to concentration and circuit termination equipment (including optical line terminating equipment and multiplexers). Concentration equipment aggregates multiple loops to a single loop for more efficient transport. Termination equipment allows an ALEC to convert the optical signals on its loops to electrical signals that can be used by GTE's network equipment. Because current cross-connection technology limits the maximum distance between these various pieces of equipment, collocation is necessary and should be permitted for concentration and termination equipment.

Q. DOES THE FCC'S ORDER CALL FOR COLLOCATION THAT ACSI SEEKS?

A. No. Justification does not exist for collocating either remote switching modules, switches, enhanced services equipment or customer premises equipment. Thus, to the extent the FCC's "used or useful" test may be viewed as broader than GTE's position or may be argued in the future to require collocation of additional or different equipment than that described above, GTE submits that such a construction would be contrary to the Act itself. The FCC left to State commissions the determination whether particular equipment not discussed in the Order is entitled to collocation. Order, ¶ 581.

Q. WHAT IS GTE'S POSITION RELATIVE TO ACSI CROSS-CONNECTING TO ANOTHER PARTY COLLOCATED IN GTE'S FACILITY?

A. ACSI should not be permitted to cross-connect with non-GTE collocators on GTE property in order to completely bypass GTE's network. Although nothing in the language of the Act suggests that Congress contemplated such action, the FCC recently has required that, at the option of the ILEC, such cross-connects be made available through ILEC-provided or CLEC-provided facilities. Order, ¶ 595.

GTE attorneys have advised me that this requirement works a "taking" of ILEC property in excess of the FCC's authority under the

Act under Bell Atlantic v. FCC. This issue is addressed in more detail in GTE's Takings Report included in its response to ACSI's request for arbitration.

The Act imposes a duty on ILECs only to interconnect their network elements with a requesting party's collocated equipment. It does not impose a duty to facilitate interconnection between third-parties anywhere, much less on its own premises. In other words, collocation authorized under section 251 permits third parties to make use of their competitors' private property only for the limited purpose of gaining access to critical network elements that are in the ILEC's control. Collocation is not an open invitation for ALECs to use ILEC property for purposes wholly unrelated to the ILECs' network.

Nonetheless, should the Commission deem itself bound to follow the FCC's Order pending judicial review of the FCC decision, GTE will permit the interconnection via cross-connects of the collocated equipment of different ALECs as long as the provisioning of the cross-connect by GTE or the ALECs shall be at the option of GTE, the connected equipment is used for interconnection with GTE or access to GTE's unbundled network elements, space is available, reasonable security arrangements can be provided, and the ALECs pay all costs associated with the cross-connect.

Q. IF THE COMMISSION FEELS BOUND BY THE FCC ORDER TO PERMIT THE CROSS-CONNECTING OF TWO COLLOCATED PARTIES, WHO PERFORMS THIS CONNECTION ?

A. The FCC Order (para 595) states that the ILEC is required to provide the connection unless it permits the collocating parties to provide this connection for themselves. GTE would choose to provide this connection through an unbundled network element.

Q. PLEASE DESCRIBE HOW GTE DETERMINED COSTS AND RATES FOR THE COLLOCATION ELEMENTS.

A. Costing and pricing for the collocation rate elements were established as follows: forward looking costs were determined for each cost item. A monthly rate was established to recover the monthly recurring costs along with a reasonable allocation towards the Company's common costs.

Q. WOULD GTE USE THE SAME METHODOLOGY TO ESTABLISH THIS RATE AS IT USED TO DEVELOP THE OTHER COLLOCATION RATE ELEMENTS?

A: Yes. GTE would use the forward looking costs of the elements with a reasonable contribution to the Company's common costs.

Q. DO YOU HAVE ANY OTHER REMARKS THAT ARE PERTINENT TO COLLOCATION?

A. Yes. I will offer general remarks concerning structures where ILECs can collocate, as well as safety and security measures, help explain why collocation of remote switching units should not be permitted.

Q. SHOULD A NEW ENTRANT BE PERMITTED TO COLLOCATE AT ANY AND EVERY STRUCTURE OWNED BY GTE, IRRESPECTIVE OF ITS PURPOSE AND CAPABILITIES?

A. No. A new entrant should not be permitted to have access to any and all of GTE's buildings and structures. This type of request is not limited to what is necessary for interconnection and fails to consider space limitations. Many of GTE's buildings and structures are very small and house network elements that do not perform routing or rating functions. Therefore, interconnection and collocation at many of those points offers few benefits that cannot be obtained by collocating either at a central office (where calls are routed to and from customers), a service wire center (the office closest to an interexchange carrier's point of presence which serves as a rating point, but provides no switching), or a tandem switch (which routes calls from one central office to another). These latter facilities offer much greater space, the proper environmental conditions, and allow more efficient maintenance and repair of equipment.

Remote units, which are smaller structures housing certain network elements located some distance away from the central office, must be evaluated on an ad hoc basis. GTE maintains two types of remote

units. Remote switching units ("RSUs") have some independent switching capability and may direct local transmission traffic within a particular area. Remote line units ("RLUs"), by contrast, contain no such independent capability. RLUs interact with the switch at the central office, which acts as the host computer, directing transmission traffic. Host switches and RLUs often share NXX codes, making it impossible to route terminating traffic to a RLU. Many remote units also lack "rating" capability – the ability to measure and record traffic flow data for billing and other purposes.

Remote units are very small and offer very little space to accommodate collocators. The cramped confines of these facilities also make it difficult to segregate adequately different companies' equipment and to limit third-party access. Consequently, few, if any, ALECs will be able to place equipment in these structures. Since "dumb" remote units, such as RLUs, offer no significant benefits over central offices, service wire centers and tandem switches (which contain routing and switching functions, have greater space, and offer the proper environmental conditions) GTE believes that collocation should not be permitted at such locations. For the same reasons, GTE opposes collocation at vaults and manholes which also have very limited space and which, like RLUs, house no routing or rating equipment.

Q. DOES THE FCC'S ORDER REQUIRE COLLOCATION AT ALL STRUCTURES THAT HOUSE NETWORK ELEMENTS?

A. GTE recognizes that the FCC's Order requires collocation to be provided at all structures that house GTE network facilities, including "any structures that house LEC network facilities on public rights-of-way, such as vaults containing loop concentrators or similar structures." (Order, ¶¶ 573-75). GTE submits, however, that such an expansion of the FCC's earlier collocation requirements is unauthorized under the Telecommunications Act. To the extent the Commission deems itself to be bound by the FCC's holding in this regard, GTE would be willing, pending judicial review of the FCC's determination, to provide collocation at such structures to the extent space is available, the interconnection requested is technically feasible, security concerns can be adequately addressed, and the collocator bears the costs of the collocation arrangement.

Collocation at RSUs or remote units that offer independent routing or rating capability do provide greater interconnection benefits, but they too suffer from severe space limitations. Nonetheless, because RSUs contain some unique network functions, GTE will provide collocation at these sites where space is available, the requested interconnection is technically feasible, security concerns can be adequately addressed, and the collocator pays all costs of the collocation arrangement. This position is consistent with the FCC's prior collocation policies. (Special Access Order, ¶¶ 53-57).

Q. DOES GTE DESIRE TO IMPLEMENT SAFETY AND SECURITY MEASURES RELATIVE TO COLLOCATION?

A. Yes. GTE should be permitted to implement reasonable safety and security measures to protect its systems, and this is especially true where GTE permits a third party competitor to have access to GTE's private facilities which house highly sensitive equipment and proprietary information. It is reasonable in this situation to establish security measures, such as partitioning areas for collocating parties and installing fencing within the partitioned areas for each collocator. This ensures that no party has access to any other party's equipment. As the FCC has recognized, such measures minimize the risk of harm to the public-switched telephone network and are in the best interests of all the parties. (Order, ¶ 598).

SECTION E: SUMMARY

Q. DO YOU HAVE A BRIEF SUMMARY OF YOUR TESTIMONY?

A. Yes. The Act was passed to introduce competition into the local telephone market. It recognizes that certain functions of the traditional local exchange network cannot be quickly or easily duplicated by new market entrants, and that competing providers will have to be interconnected in order to switch traffic among their customers. Collocation is a limited measure designed to remove technical and market barriers to interconnection and access to network elements. Because state-mandated physical occupation of

a company's private property may offend the Constitution, Congress was careful to limit collocation to equipment "necessary for interconnection." ACSI, however, goes far beyond what is necessary and seeks to collocate whenever ACSI finds it convenient and advantageous to do so. Accordingly, the Commission should adopt GTE's preferred positions as set out above or, at a minimum, GTE's alternative positions as conditioned herein and subject to judicial review of the FCC's Order.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

PART II

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY OF BEVERLY Y. MENARD

DOCKET NO. 961169-TP

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION WITH GTE FLORIDA INCORPORATED (GTEFL).

A. My name is Beverly Y. Menard. My business address is One Tampa City Center, Tampa, Florida 33601-0110. My current position is Regional Director - Regulatory and Industry Affairs.

Q. WILL YOU BRIEFLY STATE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE?

A. I joined GTEFL in February 1969. I was employed in the Business Relations Department from 1969 to 1978, holding various positions of increasing responsibility, primarily in the area of cost separations studies. I graduated from the University of South Florida in June of 1973 receiving a Bachelor of Arts Degree in Business Administration with an Accounting Major. Subsequently, I received a Master of Accountancy Degree in December of 1977 from the University of South Florida. In March of 1978, I became Settlements Planning Administrator with GTE Service Corporation. In January of 1981, I was named Manager-Division of Revenues with GTE Service Corporation, where I was responsible for the administration of the GTE division of revenues procedures and the negotiation of settlement matters

with AT&T. In November of 1981, I became Business Relations Director with GTEFL. In that capacity, I was responsible for the preparation of separations studies and connecting company matters. Effective February 1987, I became Revenue Planning Director. In this capacity, I was responsible for revenue, capital recovery and regulatory issues. On October 1, 1988, I became Area Director - Regulatory and Industry Affairs. In that capacity, I was responsible for regulatory filings, positions and industry affairs in eight southern states plus Florida. In August 1991, I became Regional Director - Regulatory and Industry Affairs for Florida. I am responsible for regulatory filings, positions and industry affairs issues in Florida.

Q. HAVE YOU EVER TESTIFIED BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION?

A. Yes. I have testified before this Commission on numerous occasions.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present the position of GTE regarding number portability. Included within my testimony is an identification of issues existing between GTE and American Communications Services, Inc. and its affiliates ("ACSI") related to number portability.

Q. HAS THIS COMMISSION PREVIOUSLY CONSIDERED THE ISSUE OF INTERIM NUMBER PORTABILITY ("INP")?

A. Yes. In Docket No. 950737-TP, the Florida Public Service Commission approved the use of Remote Call Forwarding (RCF) for INP. GTEFL filed tariffs reflecting the Commission's decision effective January 1, 1996.

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF GTE'S POSITION CONCERNING NUMBER PORTABILITY.

A. The Telecommunications Act of 1996 (the "Act") requires all local exchange carriers to provide number portability to the extent "technically feasible" and "currently available". Until the implementation of long-term number portability, there are several methods available to provide interim number portability ("INP"), and GTE has negotiated with alternative local exchange carriers ("ALECs") over methods and pricing of INP. The FCC has already issued regulations relating to INP which broadly regulate its terms, conditions and rates. See In re Telephone Number Portability, First Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 95-116, FCC 96-286 (released July 2, 1996) (the "Number Portability Order"). GTE's position with regard to INP is consistent with these regulations and the additional requirements imposed on INP by various State commissions.

Q. HOW IS YOUR TESTIMONY STRUCTURED?

A. The remainder of my testimony is divided into four sections as follows: Section A presents a summary of the testimony; Section B sets forth what the Act and the FCC regulations require; Section C discusses open issues between the parties with regard to INP; and Section D sets forth GTE's position on these issues and shows how this position is entirely consistent with the requirements of both the Act and the FCC's Number Portability Order.

SECTION A: SUMMARY

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. Remote Call Forwarding ("RCF") and Direct Inward Dialing ("DID") are currently available methods for providing number portability that will provide ACSI with the full benefit of INP, with the least amount of modification to GTE's current network. While both are subject to disadvantages that make them unfit for long-term portability, GTE believes that these disadvantages do not preclude the use of RCF or DID for INP. RCF and DID are currently available solutions. Even using RCF and DID, however, GTE will incur significant costs that it is entitled to recover. Even if competitive neutrality is applicable to cost recovery for INP, GTE and all other carriers should be able to recover their tariffed rates to the extent such tariffs have already been filed or, alternatively, recover the costs of INP through a cost pooling system.

SECTION B: NUMBER PORTABILITY AND "THE ACT"

Q. DOES THE TELECOMMUNICATIONS ACT OF 1996 ADDRESS NUMBER PORTABILITY?

A. Yes. Section 251(b) of the Act requires all telecommunications carriers "to provide, to the extent technically feasible, number portability in accordance with requirements prescribed by the Commission." 47 U.S.C. § 251(b) (1996). Number portability is defined by the Act as "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." 47 U.S.C. § 153(30) (1996). With regard to pricing of number portability, the Act states that "[t]he cost of establishing . . . number portability shall be borne by all telecommunications carriers on a competitively neutral basis as determined by the [FCC]." 47 U.S.C. § 251(e)(2) (1996).

In July 1996, the FCC released its regulations regarding number portability. See Number Portability Order. The FCC regulations establish a schedule whereby telephone companies will be required to implement long-term number portability using database methods. See id. ¶¶ 77-81. With regard to INP, the Number Portability Order held that "currently RCF and DID are the only methods technically feasible," and thus required local exchange carriers "to offer number portability through RCF, DID and other comparable methods. . . ." Id.

¶ 110. These are the only criteria established by the FCC with regard to INP. The FCC established nine performance criteria for long-term number portability, but did so solely in that context. See Number Portability Order ¶ 48.

The FCC regulations also establish guidelines for State commissions to follow in setting the rates for INP. Alternatively, however, the State commission may require carriers to file a tariff, in which case the guidelines do not necessarily apply. Id. ¶ 127. With regard to the FCC's guidelines, the FCC defines the cost of providing INP as being the "incremental cost incurred by a LEC to transfer numbers initially and to subsequently forward calls to new service providers using existing RCF, DID, or other comparable measures." Id. ¶ 129. The FCC provided that any mechanism for the recovery of these costs must be "competitively neutral," meaning that it must meet two criteria. First, it "should not give one service provider an appreciable, incremental cost advantage over another service provider, when competing for a specific subscriber." Id. ¶ 132. Second, it "should not have a disparate effect on the ability of competing service providers to earn normal returns on their investment." Id. ¶ 135. Furthermore, assuming that ILECs will win customers away from ALECs, just as ALECs will win customers from ILECs, the FCC held that competitive neutrality requires a "reciprocal compensation arrangement" with the rate paid by the ILEC to the ALEC equal to that paid by the ALEC to the ILEC. Id. ¶ 137.

Q. WHAT TYPE OF COSTS WILL BE INCURRED BY GTE RELATED TO PROVIDING INTERIM NUMBER PORTABILITY?

A. As discussed in the testimony of the GTE pricing witnesses, all INP methods impose costs on the service provider that is providing INP. These costs can be classified as follows:

- **Switching Costs**: These costs are incurred when the service provider reroutes the call (call forwarding and route indexing), changes the dialed digits (digit substitution) and adds digits (pseudo NPA code addition). Additional switching costs may be incurred where end offices exhaust their software capacity to provide these forwarding, indexing and digit manipulation functions.

- **Transport Costs**: Service providers offering INP will incur the cost of transporting all ported calls from switch to switch. Many times, such transport may occur not only once but twice over the same trunks, potentially causing blockages and overuse of the network. To the extent trunking capacity is exhausted, this will impose an additional cost on the carrier. The trunks required for DID will also add to transport costs.

- **Opportunity Costs**: Whenever a service provider provides number portability for a customer it has, of course, lost that customer. Thus, one of the costs of providing INP is the lost

opportunity of receiving revenues from that customer for other services that may have offset the costs of INP.

SECTION C: THE POSITIONS OF GTE AND ACSI

Q. WHAT ARE THE DISPUTED ISSUES REGARDING NUMBER PORTABILITY?

A. ACSI has requested that GTE provide it with immediate INP, using RCF and DID at a rate determined by calculating GTE's total element long run incremental cost ("TELRIC") for providing INP. GTE contends that ACSI's pricing methodology will result in GTE being unable to recover the costs of INP and place it at a competitive disadvantage. The specific disputed number portability issues which must be resolved include:

(1) *What are GTE's costs for providing INP?*

ACSI's Position: GTE's costs should be determined by calculating GTE's TELRIC for providing the service assuming equipment deployed today, which would only include GTE's capital costs and certain costs of supporting the investment to provide INP, such as taxes, depreciation and maintenance. ACSI believes that a competitively neutral allocation of TELRIC costs that does not require new entrants to bear all of the cost of implementing currently available number portability should take place. ACSI suggests that it should contribute to

the costs of interim number portability an amount based upon its size relative to GTE and other carriers the Commission determines must contribute.

GTE's Position: GTE's costs should be determinod according to the forward-looking methodology allowed by the FCC's Number Portability Order. Thus, GTE's costs assume the network in place today, and allow for capital costs, transport and termination costs, opportunity costs and the costs of supporting the investment in INP.

(2) *How should GTE's rate for number portability reflect "competitive neutrality"?*

ACSI's Position: "Competitive neutrality" requires that the cost of INP be apportioned among all competitive telephone service providers, including GTE.

GTE's Position: "Competitive neutrality" means that no service provider, including GTE, faces a competitive disadvantage because of the cost of INP. To the extent GTE cannot recover its costs, it faces a competitive disadvantage. All carriers should be allowed to recover their costs according to tariffed rates or, alternatively, all carriers should be subject

to a system that collects the cost of number portability from end users.

SECTION D: GTE's POSITION

Q. WHAT IS GTE'S POSITION CONCERNING THE DISPUTED ISSUES?

A. GTE believes that ACSI's positions concerning the following are incorrect. First, ACSI ignores certain costs borne by GTE to provide INP which can be charged to ACSI under the Act and the LCC's number portability order. Second, ACSI's interpretation of discounts is incorrect, and would result in GTE being at a competitive disadvantage.

Q. SINCE GTEFL ALREADY HAS TARIFFS IN PLACE FOR RCF, SHOULD ANY CHANGES BE CONSIDERED IN THE RATES FOR RCF IN THIS DOCKET?

A. No. As discussed previously, in the Number Portability Order, the FCC has stated the State commission may require carriers to file a tariff, in which case the guidelines do not necessarily apply. (Number Portability Order at ¶ 127.) In addition, since this issue affects all LECs and ALECs, hearings are already scheduled in Docket No. 950737-TP to address this issue on November 25, 1996. GTEFL has filed testimony in that proceeding addressing

the issue of competitive neutrality with respect to the pricing for interim number portability.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

PART III

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY MICHAEL J. DOANE

DOCKET NO. 961169-TP

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Michael J. Doane, Analysis Group Economics, Inc., Two Embarcadero Center, Suite 1160, San Francisco, California, 94111.

Q. ARE YOU THE SAME MICHAEL J. DOANE WHO FILED DIRECT TESTIMONY IN DOCKET 961173-TP, THE ARBITRATION BETWEEN GTE FLORIDA INCORPORATED (GTE) AND SPRINT COMMUNICATIONS COMPANY LIMITED PARTNERSHIP (SPRINT)?

A. Yes, I am. That Testimony was filed on October 21, 1996.

Q. WHAT WAS THE PURPOSE OF THAT EARLIER-FILED DIRECT TESTIMONY?

A. That Testimony provided an economic analysis of the issues to be arbitrated between Sprint and GTE.

Q. ARE THE ECONOMIC ISSUES REGARDING ACSI SIMILAR TO THOSE TO BE ARBITRATED BETWEEN SPRINT AND GTE?

A. Yes, the economic, pricing and costing issues addressed in the Sprint case are also applicable with respect to ACSI. Because of the

similarity in issues, the Commission consolidated the ACSI and Sprint arbitrations.

Q. HAVE YOU REVIEWED THE TESTIMONY SUBMITTED BY ACSI IN THIS ARBITRATION?

A. Yes, I have reviewed the testimony prepared by Dr. Marvin Kahn, Mr. Richard Robertson and Mr. C. William Stipe.

Q. HOW WOULD YOU CHARACTERIZE ACSI'S PROPOSAL OVERALL?

A. As stated in the testimony of Dr. Martin Kahn, ACSI is not proposing to allow GTE to recover all of its forward-looking common costs, but rather only a fraction of them. This represents a taking of GTE's facilities. Also, Dr. Kahn justifies his proposal on the grounds that it would put in place competitive prices even before the advent of actual competition. This is a task beyond the mandate of the Commission under the Telecommunications Act of 1996 and also puts the cart before the horse. To get real competitive pricing, the Commission should focus on the conditions of entry into the local exchange, and not try to forecast competitive prices, as Dr. Kahn suggests. Such a task is well beyond the abilities of even the most determined analyst and is not something to be done within the limitations of an arbitration proceeding. By contrast GTE's proposals will allow prices to be determined by market forces directly.

Q. WHY DO YOU THINK ACSI'S PROPOSAL IS NOT A REASONABLE PRICING RULE FOR THE FLORIDA COMMISSION TO USE?

A. The ACSI proposal should be rejected for the following reasons:

(1) It will fail to cover GTE's forward-looking common costs and will be a taking of GTE's facilities;

(2) Given that competitive supply forces are stronger for some network elements than for others, whatever uniform markup is chosen, actual revenues are likely to fall short of that markup. Competitive sources of supply of network elements are clear for SS7, switching, and local transport. Even for loops, competition exists in many area;

(3) As technology and markets change over time, the TELRICs of network elements are likely to change too, requiring continuing regulatory involvement with updated TELRIC studies;

(4) If GTE's TELRICs for network elements fall or rise, requiring new regulatory cost proceedings, parties with competitive interests at stake may be expected to manipulate the regulatory process;

(5) Dr. Kahn's proposal of a uniform competitive markup presupposes incorrectly that competitive markets tend to have the same markups over incremental cost; and

(6) Dr. Kahn's proposal ignores the fact that the competitive markets which he deems to be appropriate benchmarks were deregulated precisely because they appeared not to be natural

monopolies. Therefore, it is both unsurprising and irrelevant that markup over incremental costs are relatively low.

Q. DO THE PRINCIPLES SET FORTH IN YOUR DIRECT TESTIMONY IN GTE'S RESPONSE TO SPRINT'S PETITION APPLY WITH EQUAL FORCE TO THIS ARBITRATION WITH ACSI?

A. Yes. My conclusions there regarding the proper way to set prices for wholesale services and unbundled network elements under the Telecommunications Act of 1996 do not change with the identity of the company requesting resale or unbundling. Likewise my specific criticisms of the Sprint proposal also apply to ACSI. As such, to avoid undue repetition--particularly in view of the consolidation of the ACSI and Sprint cases--I am adopting the rest of my Direct Testimony (including the Economic Report attached to that testimony as MJD-2) in the Sprint case as my Direct Testimony in this proceeding with ACSI.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

PART IV

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY OF BERT I. STEELE

DOCKET NO. 961169-TP

Q. PLEASE STATE YOUR FULL NAME AND BUSINESS ADDRESS.

A. My name is Bert I. Steele. My business address is 600 Hidden Ridge Drive, Irving, Texas 75038.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by GTE Telephone Operations as Manager - Pricing and Tariff Support. In this capacity I have responsibility for supporting incremental cost models and their application to support the pricing of network services for all of the GTE Telephone Operations ("Company" or "GTE").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I have a Bachelor of Science Degree in Mathematics from Gannon University and a Master of Engineering Degree in Engineering Science from Pennsylvania State University. I joined GTE in 1972 with General Telephone Company of Pennsylvania. During the course of my career with GTE, I have held various valuation engineering, marketing, product management, and regulatory positions throughout GTE Telephone Operations. I assumed my present position in January of 1994.

Approximately fourteen of my twenty-four years with GTE have been in the area of developing incremental costs for pricing decisions. I have taken a number of incremental cost and pricing courses from AT&T, Bellcore, United States Telephone Association ("USTA"), GTE and the University of Chicago. For seven years I have been an active participant of the USTA Economic Cost Analysis Subcommittee and the USTA Training/Education Work Group responsible for promoting awareness, understanding and proper application of economic principles. At present, I am the chairman of the USTA Economic Analysis Training/Education Work Group.

Q. HAVE YOU TESTIFIED BEFORE THIS OR ANY OTHER STATE REGULATORY COMMISSIONS?

A. I have testified on behalf of GTE's telephone operating companies as an expert witness in the area of incremental costing before numerous state public utility commissions including: Florida, California, Pennsylvania, Oklahoma, Wisconsin and Illinois.

COST STUDIES

Q. WHAT COSTING PRINCIPLES DID GTE EMPLOY IN DEVELOPING ITS TOTAL ELEMENT LONG-RUN INCREMENTAL COST ("TELRIC") STUDIES?

A. Exhibit No. BIS-1 to this testimony contains a detailed description of the cost study methodology and principles used by GTE to develop its TELRIC estimates for unbundled network services. Tab 1 of the

separately filed "GTE's Cost Submission" in this proceeding contains further discussion on GTE's costing method and models. The cost study methodology conforms to the long-run incremental cost study methodology documented by Federal Communications Commission in its First Report and Order dated August 8, 1996. Certain parts of the FCC's First Report and Order have been stayed. Although I reference some of its provisions in my testimony, I do not endorse all of the FCC's rules.

Q. WHAT COST STUDIES HAS GTE FILED IN THIS PROCEEDING?

A. GTE's Cost Study Submission contains TELRIC estimates for certain "network elements" as well as Total Service Long-Run Incremental Cost ("TSLRIC") estimates for select bundled "services." The Company has provided TELRIC estimates for the following elements:

- Network Interface Device ("NID"): Basic and 12X
- Loops: 2-wire and 4-wire
- Local Switching
  - Ports: 2-wire analog and DS-1
  - End Office Switching: Originating and Terminating
  - Vertical Features
- Tandem Switching
- SS7 Signal Links: 56kb and DS-1
- SS7 Signal Transfer Point ports
- Transport: Common and Dedicated

Collocation element cost studies were also provided for:

- Network Access Cross Connection: DS-0, DS-1, and DS-3 levels
- Physical Engineering Fee
- Building Modification Charges
- Partitioned Space Rental
- DC Power
- Cable Space Charges

The GTE Submission also provides Service Provider Number Portability cost studies:

- Remote Call Forwarding per number ported
- Simultaneous Call paths

And it includes Service Ordering and Service Connection Activities.

In addition, TSLRIC studies were performed and submitted for other services that the Company offers (e.g., basic local service, vertical services, toll, and switched access). These studies were one of the components used in deriving the Company's total "forward-looking" costs for its services. This estimate of total forward-looking costs helped the Company to estimate its "forward-looking" common costs.

GTE's Cost Study Submission also includes its "Avoided Cost Study" analysis, which is a primary component of its recommended resale rates. This study and the resulting recommended price levels for resold services is the topic of GTE's Resale/Avoided Cost Presentation.

Q. WHAT DISTINCTION DOES GTE MAKE BETWEEN TELRIC AND TSLRIC STUDIES ?

A. GTE uses the terminology "TELRIC" when referring to network element cost studies and "TSLRIC" when referring to cost studies performed for GTE's current services.

Q. WHAT COST STUDIES ARE YOU SPONSORING?

A. I am presenting GTE's TELRIC and TSLRIC cost study methodology as described in Exhibit No. BIS-1 to my testimony. I am also sponsoring GTE's TELRIC and TSLRIC study results with the exception of non-recurring charges (i.e., service order cost studies), collocation and avoided costs. The cost study process and results for these three items are being handled by other witnesses in the proceeding.

Q. YOUR EXHIBIT NO. BIS-1 DOCUMENTS GTE'S TELRIC AND TSLRIC METHODOLOGY. PLEASE PROVIDE AN OVERVIEW OF GTE'S METHODOLOGY.

A. The cost study prepared for this proceeding is a very special type of cost study which captures the impact of providing loops, switching and transport network elements. In this regard, all of the forward-looking costs for loop facilities are assigned to loop network elements, all of the forward-looking costs for switching are assigned to switching network elements and all of the forward-looking costs for transport are assigned to transport network elements. None of the

costs, from a cost study objective perspective, for loops, switching or transport facilities are assigned to GTE's common costs. Stated another way, all of the these forward-looking costs are included in the per unit TELRIC and TSLRIC results, respectively. Accordingly, the "cost objects" are the wholesale network elements not the retail services. This is consistent with the FCC First Report and Order ("Report"), which states in Paragraph 690, for example: ***"The increment that forms the basis for a TELRIC study shall be the entire quantity of the network element provided."***

Q. ARE THE LONG-RUN INCREMENTAL COST STUDY RESULTS ESTIMATES OF GTE'S ACTUAL FORWARD-LOOKING COSTS?

A. Yes. GTE's cost study results are forward-looking and representative, to the extent possible, of the future costs expected to be incurred by GTE. These long-run incremental cost study results are not for a hypothetical carrier nor are they representative of the costs for a new entrant. Rather, all input prices for equipment, installation, maintenance, repair and other expenses are estimates of GTE's future costs. These input prices are based on the most efficient outcome available to GTE as neither a hypothetical nor embedded view is appropriate for determining long-run incremental costs for the LEC. Forward-looking costs for the actual carrier in question should be used to perform TELRIC and TSLRIC studies.

Q. DO THE COST STUDY RESULTS PROVIDE CONSERVATIVE ESTIMATES OF GTE'S LONG-RUN INCREMENTAL COSTS?

A. Yes. The TELRIC and TSLRIC studies performed by GTE are conservative in that they do not adjust for the overall change in risk created by the introduction of competition intended by the Telecommunications Act of 1996. In addition, the cost study models currently available to GTE and the resulting input factors assume, for the most part, that GTE is the sole provider of loop, switching and transport facilities in the local network. This fact alone tells us that the cost numbers must be lower bound estimates of GTE's future costs since most certainly the marketplace will experience facility-based entry.

Depreciation rates and cost of capital should be adjusted to account for risks that a carrier incurs. Depreciation rates, in particular, should be adjusted for declining technology costs, sunk investments and rapid technology change. As even the FCC noted in the Report, an increase in risk due to entry into the market can increase the LEC's cost of capital. However, due to time constraints imposed by the Telecommunications Act, GTE was unable to adjust its depreciation lives for sunk investments and declining technology costs. In addition, the cost of capital used is based on GTE's current capital structure and rate of return. The cost of capital, therefore, was not adjusted to account for changes in risk.

Q. DO THE GTE TELRIC RESULTS INCLUDE COMMON COSTS?

A. No, there are no common costs incorporated in GTE's TELRIC results. Common costs, therefore, are addressed from a cost recovery or pricing perspective rather than from a per unit TELRIC perspective.

Q. WHY DOES GTE's COST STUDY SUBMITTAL INCLUDE LOOP COST STUDY RESULTS FROM THE BENCHMARK COST MODEL - VERSION 2 ("BCM II")?

A. The BCM II results provide an independent estimate of GTE's two-wire loop costs. A comparison of the GTE TELRIC for two-wire loops with the BCM II results provides a further reflection of the conservative nature of GTE's cost studies. (The following companies have taken an active role in sponsoring BCM: Sprint, US West, and NYNEX. See "Benchmark Cost Model," submitted to the FCC, CC Docket No. 80-286, September 12, 1995. BCM II development has been led by Sprint and US West.)

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Docket No. 961169-TP
Docket No. 961173-TP
Direct Testimony of Bert I. Steele
Exhibit No. BIS-1
FPSC Exhibit No. _____
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GTE TELEPHONE OPERATIONS
TELRIC/TSLRIC METHODOLOGY

I. SUMMARY

This document presents a complete overview of the manner in which GTE develops costs for its services and its basic network functions (BNFs), which are the components that typically constitute a service. The type of cost developed for both BNFs and services is Total Service Long Run Incremental Cost (TSLRIC). TSLRIC, by design, does not incorporate any common cost and, as such, cannot be used for pricing without adjustments to reflect the total cost of doing business.

A TSLRIC is a very special type of cost that tries to capture the incremental impact of providing a service (or network element), such as basic loop.[1] Contained within this service definition is a collection of services provided to residence, business and carrier customers, such as residential local exchange service, business local exchange service and unbundled loop service. The TSLRIC, as a cost, is characterized by the basic principles that help to define it. These principles establish the increment of study, the conditions under which a cost should be included, the range of options to consider, the means of selecting between options, and the set of costs to be excluded.

Based on this set of principles, and on a set of engineering process cost models for switching, transport, outside plant and signaling, GTE develops costs for its

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[1] In its recent First Report and Order (CC Docket No. 96-98), the FCC states: "While we are adopting a version of the methodology commonly referred to as TSLRIC as the basis for pricing interconnection and unbundled elements, we are coining the term 'total element long run incremental cost' (TELRIC) to describe our version of this methodology." The Commission explained that TELRIC refers explicitly to discrete network elements, such as local loops and switching, in contrast to TSLRIC, which refers to conventional services such as interstate access service and local residential or business exchange service. The Commission also suggested that a TELRIC study likely would account for a greater percentage of a carrier's total costs than would a TSLRIC study.

The distinction between TSLRIC and TELRIC, thus, is one that relates to the object of study (e.g., retail services versus unbundled network elements). There is no distinction between the two regarding the fundamental long run incremental cost methodology. This methodology states that the LRIC for a service or element is equal to the total costs of the carrier with that service or element minus the total costs without that service or element. In its LRIC studies of both services and elements, GTE has followed this same methodology, which is also the methodology presented in the Commission's First Report and Order. Of course, whether or not the Commission's hypothesis that a TELRIC study would account for a greater percentage of a carrier's total costs than would a TSLRIC study is an empirical question, and the Commission's Order offers no evidence on that point.

services and for BNFs. The modeling process consists of first isolating and expressing on a unit basis the costs that change with the volume of service and then of associating with each unit a share of the fixed and standby capacity costs that do not vary with the level of output. Both these volume sensitive and volume insensitive costs need to be included with a properly developed TSLRIC.

The use of TSLRIC presents limitations that must be kept in mind. As a pricing tool, the user of a TSLRIC must first resolve how to appropriately modify it to account for common costs explicitly excluded by the principles. Although these costs are generally substantial, there are no clearly defined cost causative principles that dictate how to assign them to services. In addition, the TSLRIC, as it is developed today by GTE's models, is based on a narrow definition of the principles that ignores the costs of an uncertain environment: the world as it is postulated assumes all demand is known and static. This same method of TSLRIC should be refined to capture the interrelationship between the industry with rapidly changing technology and increased risk. This interrelationship is reflected in the adjustment of plant lives and the cost of money.

II. Definition of TSLRIC

TSLRIC is defined as the additional cost incurred by the company to produce the entire output of a particular service, holding constant the production of all other services produced by the company. In other words, TSLRIC is equal to the company's total cost of producing all of its services, assuming the service in question is offered, less the company's total cost of producing all of its services without the service in question. Strict adherence to this definition of TSLRIC would involve the preparation of two major cost studies, with the total costs calculated in one study subtracted from the total costs calculated in the other. However, it would be extremely difficult and complex to estimate TSLRIC in this manner. Instead, an estimate of TSLRIC is completed in a manner that can be calculated directly for the network element or service in question. Consistent with this approach, GTE has estimated the TSLRIC for its services by deriving the volume sensitive (variable) and volume insensitive (fixed) costs for each service.

III. TSLRIC Principles

Principle No. 1: Long run implies a period long enough so that all costs are avoidable.

Long run is a period of time long enough so that all costs are treated as avoidable. Variable, as a term, is synonymous with volume sensitive and therefore not synonymous with avoidable. Avoidable costs include both volume sensitive and volume insensitive costs.

Principle No. 2: Cost causation is a key concept in incremental costing

Cost causation is a consistent and fundamental principle of TSLRIC studies. The principle of cost causation should be utilized to determine the appropriateness of including a cost in a TSLRIC study. The basic principle of cost causation is that only those costs that are caused by a cost object in the long run should be directly attributable to that cost object. Costs are considered to be caused by a cost object if the costs are brought into existence as a direct result of the cost object or, in the long run, can be avoided when the company ceases to provide the cost object.

For example, within the telecommunications industry, the principle of cost causation is best viewed from the standpoint of providing a service and what costs are necessary to offer that service. All costs caused by a decision to offer a service should be included in a TSLRIC study of that service.

Principle No. 3: The increment of the study should be the entire output of the service (or group of services) under study.

The methodology and associated TSLRIC studies are intended to answer the specific cost question: "What is the change in the company's costs due to offering or not offering the service?" Consistent with this definition, TSLRIC studies shall provide a measurement for the entire service under study. The TSLRIC results, therefore, will include both the volume sensitive and volume insensitive costs. The volume sensitive costs represent costs that change with output. The volume insensitive costs are fixed with respect to a given output, yet are incremental with the service offering.

Principle No. 4: All costs shall be forward-looking and reflective of the costs expected to be realized by the company.

TSLRIC studies shall be forward looking and representative, to the extent possible, of the future costs expected to be incurred by the company. TSLRIC studies do not necessarily reflect a company's embedded base facilities. Rather, studies shall account for the most efficient and cost-effective means available to the company. The technologies addressed shall be known and actually are being deployed by the company.

Principle No. 5: Common Costs are not part of a TSLRIC study, except for a TSLRIC study for the company as a whole. Recovery of those costs should be a pricing issue.

TSLRIC studies should include costs that are often called overhead costs, if those costs are caused by the decision to offer the cost object. TSLRIC studies of individual services should exclude overheads that are not demonstrated to be caused by the cost objects. Recognition of such costs will be treated as a pricing issue. No cost should be assumed to be volume insensitive shared or common costs on the basis of its accounting treatment.

IV. GTE's TSLRIC Methodology

A. Overview

GTE's TSLRIC methodology incorporates a two-step process to identify the total costs for a given service offering. In the first step, the TSLRIC method identifies the volume sensitive costs. The volume sensitive costs represent the costs that vary with changes in the level of output for the service. The second step identifies the volume insensitive costs for the service. The volume insensitive costs represent the costs that are fixed with respect to changes in output, yet are incremental with the offering of the service. The results of the TSLRIC cost study represent the sum of the volume sensitive and volume insensitive costs.

The GTE methodology determines the TSLRIC associated with being in the loop, switching and transport business. The cost objects or services under evaluation are generic loop, switching and transport units of production. Within this approach, the TSLRIC for a voice-grade loop, for a specific distance and density, is the same regardless of the customer "type" ordering the service (i.e., a business customer versus a residential customer). Likewise, the TSLRIC for a minute-of-use for an outgoing call is the same for a local, EAS or toll call. This approach to TSLRIC analysis is particularly attractive because it brings to the

surface cost information that is both easy to understand as well as consistent with the principles listed above. The approach assigns, on an equal and uniform basis, all of the forward-looking costs attributable to loops, switching and transport to the services that cause GTE to incur these costs. Accordingly, the costs associated with GTE's loop, switching and transport networks are identified and included in the service-specific TSLRIC studies. None of these facility-related costs are treated as shared or common.

Because incremental cost studies deal with forward-looking costs, one must have a means of assessing the future technologies from which products and services will be provided. GTE has performed such assessments for loop, central office switching and interoffice transport technologies. GTE's current and future plans identify the technologies that are expected to experience growth. Certain embedded technologies and vendor-specific embedded products are not experiencing growth, and these embedded technologies and products are not incorporated in GTE's TSLRIC studies.

GTE's TSLRIC studies incorporate a mix of copper and pair-gain facilities to satisfy the technology requirements for voice grade loops. Fiber facilities are used for loops at the DS-1 and DS-3 levels (i.e., 1.544 Mb/s and 45 Mb/s digital transmission levels). The predominant switching technology used by GTE to satisfy future growth is digital, and it is the sole technology used in the TSLRIC studies. Lucent 5ESS ("5ESS"), NTI DMS ("DMS") and AGCS GTD-5^{R} EAX ("GTD-5") digital switching technologies were analyzed to determine the cost of switched-based network services. Further, the predominant interoffice transmission technologies used by GTE to satisfy future growth are fiber optics facilities. Accordingly, fiber optic system costs are examined in GTE's TSLRIC studies for interoffice transport.

GTE utilizes engineering process models (e.g., COSTMOD System and SCIS) to measure the incremental costs of local, toll, switched access, unbundled loops, unbundled ports and other network services. The models, by definition, are designed to directly and explicitly reflect the underlying production technology by duplicating the processes required to engineer and provision the particular production function under review. Production units required to satisfy the desired demand are developed based on a set of engineering design criteria. The resulting production units are then multiplied by their respective unit costs, using a price list developed by component, to determine the associated investments. The engineering design criteria are determined based on the technology under review and reflect the network design standards used by GTE.

GTE TELEPHONE OPERATIONS
TELRIC/TSLRIC METHODOLOGY

Engineering process models are appropriate for telecommunications services since a discrete and well defined set of standard engineering design criteria are undertaken during the network design process. These algorithms and practices are readily incorporated into engineering process model equations. The necessary technology-specific technical information is available from vendors and GTE engineers.

GTE uses the COSTMOD System (COST MODel System), including the Bellcore SCIS (Switching Cost Information System) model, to measure the costs of the various network services. The COSTMOD System ("COSTMOD") is an integrated cost development tool that employs various "Technology Modules" and "Application Modules" to model the costs of services utilizing loop, switching and transport facilities. The models are populated with company specific information required by the models to size and determine the number of associated production units. This includes office/system size, technology, traffic data and mileage information, along with other information needed to run the models.[2] The following modules are contained in the COSTMOD System.

The Technology Modules include:

- Loop Technology Module (for voice grade applications);
- GTD-5 Switching Technology Module;
- Fiber Optic Technology Module;
- DMS Switching Technology Module (via the Bellcore SCIS model);
- SS7 Technology Module (System Signaling Seven -- out-of-band signaling);
- Lucent 5ESS Switching Technology Module (via the Bellcore SCIS model).

The Application Modules include:

- Usage Application Module (calls and minutes for local, toll, switched access);
- GTD-5 Switching Features Application Module (for custom calling and other features);
- DMS Switching Features Application Module (for custom calling and other features via SCIS);
- Lucent 5ESS Switching Features Application Module (for custom calling and other features via SCIS).

[2] A description of the COSTMOD System, including SCIS, is provided in Appendix 1.

The COSTMOD System provides the technology and application modules necessary for modeling costs. The technology and application modules are used in different combinations for assessing costs. The technology modules provide the costs for the technologies (e.g., fiber optic systems) under investigation, without regard to use or application. When the technology modules are used in conjunction with an application module, the costs for GTE services are identified.

In practice, the technology and application modules are linked or combined to assess the costs for network services. In order to estimate the costs for a network element or service, a user of the COSTMOD System must first identify the relevant technology modules needed to support the element or service. Each technology module provides the investment costs for each cost category or cost driver (e.g., cost per busy hour centrum call second). The unit investments provided by each technology module are then passed to the relevant application module where, along with user-input feature or service data, they are applied to determine the incremental cost for the element or service under study (e.g., minutes and calls via the usage application module).

The production unit-dependent investments provided by the engineering models are converted into the per-unit costs of providing GTE's services, based on annual cost factors. These annual cost factors represent the relationship between plant investment and expenses incurred by GTE. These state-specific cost factors are identified by USOA (Uniform System of Account) categorization reflecting the forward-looking technology under analysis. The annual cost factors include depreciation, return, income taxes, maintenance and repair, customer operations and miscellaneous taxes (e.g., ad valorem tax, gross receipts tax).[3]

B. Modeling Process

1. Service Mapping

Most of the services provided by a telecommunications company can be perceived to consist of various functional components. Some of these components represent primary network functions that are designated "basic network functions" or "BNFs." Other components, such as billing and collection, are non-network related and are designated non-BNF components. The following table provides an example of the relationship between services (i.e. Local Exchange and Toll Services) and their components. The mapping is

[3] Customer operations expenses are the only "administrative costs" identified in GTE's TSLRIC studies.

broken into two categories: BNF Components and Non BNF Components. Table 1 below shows how local exchange and toll services are mapped into different components.[4]

Table 1
Mapping of Cost Components to Services

Service	BNF Component	Non-BNF Component
Local Exchange Service	· Network Access Channel Basic Level · Network Access Channel Connection-Basic Analog Level-Switch Interface · Network Access Channel Connection-Basic Level · Intraoffice Call Setup · Intraoffice minute-of-use (MOU) · Outgoing Call Setup · Outgoing MOU · Incoming Call Setup · Incoming MOU · Tandem Call Setup · Tandem MOU · Sw. Transport Per Setup Termination · Sw. Transport Per MOU Termination · Sw. Transport Per Setup Per Air Mile · Sw. Transport Per MOU Per Air Mile · Measurement (if a Measured Service) · DTMF	· Billing and Collection · Directory Assistance · Directory · Terminating Access Charges
Toll Service	· Outgoing Call Setup · Outgoing MOU · Incoming Call Setup · Incoming MOU · Tandem Call Setup · Tandem MOU · Sw. Transport Per Setup Termination · Sw. Transport Per MOU Termination · Sw. Transport Per Setup Per Air Mile · Sw. Transport Per MOU per Air Mile · Measurement	· Billing and Collection · Terminating Access Charges

2. Estimating the TSLRIC

TSLRIC includes both volume sensitive and volume insensitive costs. As previously stated, the TSLRIC for a service is estimated by a two-step approach. The first step is to estimate the volume sensitive costs for the service, and the second step is to incorporate the volume insensitive costs to determine the TSLRIC for the service.

Volume sensitive costs are determined by the engineering process models in conjunction with the annual cost factors previously addressed. The engineering models simulate the investment of providing the BNF and associated service on

[4] A description of the basic network functions (i.e., BNFs) is provided in Appendix 2.

a forward-looking basis, based on a host of parameters (e.g., loop length, central office size, call volumes, holding times, transport distance, etc.). These investment costs are converted into monthly costs using annual cost factors for depreciation, return, income taxes, maintenance and repair, customer operations and miscellaneous fees and taxes (e.g., ad valorem tax, gross receipts tax).

GTE has developed a series of engineering process models within its COSTMOD System to develop investment costs. GTE also uses Bellcore's Switching Cost Information System (SCIS) to develop switch-related costs associated with the DMS (Nortel) and 5ESS (Lucent Technologies) switches. The GTE engineering process models, which reflect the long run view of costs, account for advancement or delay in investment attributable to changes in output for network services. The models provide good estimates of this causal relationship when a production component is divided by its usable capacity. This capacity cost calculation essentially smoothes the "lumpy" investment to account for the advancement or delay of future costs due to the change in output. It provides a good measurement of the volume sensitive cost for telecommunications BNFs and associated services.

The following table summarizes the engineering process models used by the Company to estimate volume sensitive costs:

GTE TELEPHONE OPERATIONS
TELRIC/TSLRIC METHODOLOGY

Table 2

Summary of Engineering Process Models

Engineering Process Model	Output
Loop Technology Module	· Network Access Channel Basic Level
GTD-5 Switching Technology Module	· Network Access Channel Connection-Basic Analog Level Switch Interface · Touch Call (DTMF) · Cost input for Usage Services Application Module - See Below
DMS Switching Technology Module 5ESS Switching Technology Module (via Bellcore SCIS model)	· Network Access Channel Connection-Basic Analog Level Switch Interface · Touch Call (DTMF) · Cost input for Usage Services Application Module - See Below
Fiber Optic Technology Module	· Transport Per Termination (Voicegrade, DS1, DS3) · Transport Per Air Mile (Voicegrade, DS1, DS3) · Also used as input into Usage Service Application Module - See Below
SS7 Technology Module	· Input into Usage Services Application Module - See Below
Usage Services Application Module	· Intraoffice Call Setup · Intraoffice MOU · Outgoing Call Setup · Outgoing MOU · Incoming Call Setup · Incoming MOU · Tandem Call Setup · Tandem MOU · Measurement · Sw. Transport Per Setup Termination · Sw. Transport Per MOU Termination · Sw. Transport Per Setup Per Air Mile · Sw. Transport Per MOU Per Air Mile

The last component of TSLRIC is the volume insensitive costs. The volume insensitive costs represent the costs associated with standby capacity. GTE must have sufficient capacity to service its customers on a ready-to-service basis. In this industry, the nature of the service and the market expectation have made the service delays unacceptable. Accordingly, GTE must install sufficient capacity in its network in advance of the realization of customer demand. The cost of this "standby capacity" is a necessary component of the TSLRIC studies for GTE's services. The cost for standby capacity was determined for loops (feeder) and transport based on examination of GTE's forward-looking objective utilization levels in conjunction with the forward-looking actual utilization levels required to support GTE's "standby" obligation. The volume insensitive costs for switching were identified by using the COSTMOD and SCIS models. In this case, the volume insensitive costs represents the difference between the total cost, by technology type, and the total volume sensitive costs. Taking these

costs into account in this manner assures that the entire cost of the network facility is included in the TSLRIC calculation.

3. Company Specific Expenses

The following expenses items are included in GTE's service-specific TSLRIC studies:

- Depreciation;
- Return;
- Income Taxes;
- Plant Specific Maintenance and Repair (by technology);
- Central Office Land and Buildings;
- Customer Operations (e.g. Sales);
- Miscellaneous Fees and Taxes (e.g., ad valorem tax, gross receipts tax).

The following expenses items are not presently included in GTE's service-specific TSLRIC studies. These costs are specific to service groups offered by GTE or are common to the GTE as a whole.[5] It is not unusual for these costs to range from 35% to 45% of a company's total costs:

- Plant Specific Expenses - network support, general support, and general purpose computers (adjusted for data processing costs for billing production);
- Plant Nonspecific Expenses;
- General Support Assets - furniture, office support equipment, company communications equipment, and general purpose computers;
- Land and Buildings (other than Central Offices);
- Indirect Labor - indirect support/supervision and indirect departmental labor expenses;
- Corporate Expenses;
- Other Taxes and Fees, such as local franchise taxes, federal superfund taxes, local and state business license and occupation taxes.

[5] GTE's current TSLRIC studies rely on the accounting treatment of "overhead or common" expenses . See Principle No. 5 and Model Limitations.

V. Model Limitations

As with any model, it is important to understand the limitations of TSLRICs, as currently developed. First, the TSLRICs cannot be directly used to determine prices for services. Based on principle 5, which states that common costs should be excluded, it is clear that common costs will not be covered if all services are priced at TSLRIC. All of the services must be marked-up to cover common cost if the firm is to stay in business. The TSLRIC principles provide no guidance on how services are to be marked-up. Second, TSLRICs tend, for various reasons, to be conservative estimates of GTE's cost of business.

A. Impact of Uncertainty, Competition and Growth

TSLRIC studies, as they are conducted today, assume that input price and demand are known with certainty. This assumption can have a significant impact on the cost of service. In the case of demand, it is typically assumed that for any wire center location and surrounding service area, the customer base is in place and will not change in the future. In the case of input prices, such as switch cost, it is assumed that all prices are known, available to all participants, and unchanging in the future. In actuality, demand is neither static nor known with certainty at the time plant is installed, nor is the costs of equipment known and unchanging over time.

Modeled costs for a known, static demand have efficiencies and economies of scale and scope that can never be achieved. Actual demand requires smaller, more costly quantities to offset the uncertainty in demand (e.g., feeder loop plant). In high growth areas, this cost can be substantial, since the uncertainty in demand and the frequency of additions increase with growth rate. In addition, as the market becomes more competitive, actual demand will become more uncertain and plant utilization and cable sizes will drop as market share erodes, driving up the cost.

In the case of investment, uncertainty will lead directly to higher costs of capital and shorter plant lives. Potential drops in input prices which, according to the model, translate into lower prices and lower margins will result in either delays in investing by the firm or shorter plant lives to allow the recovery of the investment before prices drop. This same potential squeeze on margin will also result in investors requiring a higher return on their money to cover the risk.

B. Other Factors

TSLRIC estimates tend to be conservative for a variety of reasons other than uncertainty, competition and growth. One of the more significant reasons is due to the difference between the accounting definition of common costs and the TSLRIC definition of common cost The accounting definition of common cost includes many items which are, in reality, service specific but separated from the service by the way in which they are accounted for on the books. Another reason why the TSLRIC results are conservative is the modeling process. Models, by design, assume a standard environment which does not reflect any of the potentially high cost anomalies which can occur. Densities are generally assumed to be uniform, soil conditions average, traffic and weather conditions standard, and catastrophes like earthquakes, hurricanes and floods never happen.

VI. Appendixes

A. Appendix 1: COSTMOD System (including SCIS)

B. Appendix 2: Basic Network Function (BNF) Definitions

GTE TELEPHONE OPERATIONS

COSTMOD System (including SCIS)

INTRODUCTION

This narrative provides a description of the methodology used by GTE in estimating the long run incremental costs associated with various network services. The costs developed by this approach are GTE's estimates of the long-run incremental costs of providing such services. The costs of installing and maintaining loop, switching, and transmission facilities, including directly associated operating expenses (developed externally via annual cost factors) are identified by the **family of cost models comprising the CostMod System**.

By definition, a model is a representation of something real; it shows relationships among variables and can be used to predict or explain a process or mechanism, such as an OSP facility incorporated in a telecommunications network. Despite their utility, however, one must recognize all models for what they are -- artificial representations for real-world processes or mechanisms, and as such, they have practical shortcomings. The criteria by which a particular modeling technique is selected should seek to minimize these inadequacies.

There exists a number of modeling techniques which may be employed in estimating network service costs. Foremost among these techniques are engineering process models, which, by definition, are designed to directly and explicitly reflect the underlying production technology by attempting to duplicate the processes required to engineer and provision the particular production function under review, given certain inputs. Production units that are required to satisfy the desired traffic load are developed based on a fixed set of rules. The resultant production units are then multiplied by their respective unit costs (based on some "master price list" developed by component part number) to determine the associated investment. It should be noted that these "rules" are defined consistent with the technology under review, and should be expected to change from technology to technology, and from vendor to vendor.

Engineering process models are perhaps the most appropriate for the telecommunications industry, since a discrete and well-defined set of standard engineering procedures are undertaken during the network design process. These algorithms and practices, such as the use of Erlang-B or Poisson tables to determine the optimal number of interoffice trunks for a given traffic load and desired grade of service, are readily incorporated into engineering process model equations. Furthermore, the various technology-specific information is also available from

manufacturers. The models employed by GTE Telephone Operations and described later in this narrative follow this approach to network services cost development.
GTE Telephone Operations utilizes engineering process model techniques to estimate costs. For example, the transport cost models are based on the production functions inherent in DS-1/DS-3 digital transmission facilities that are typically used to provide interoffice trunking, while the switching cost models are based on the production functions inherent in digital stored program control (SPC) switching facilities that are typically used to provide switched network services. The models determine the appropriate input combination (e.g., processors, memory, cable, repeaters, etc.) for producing any given level of output (e.g., call attempts, CCS, circuits), based upon the engineered capacity that is provided to accommodate demand (e.g., ABSBH). The units in which inputs are purchased are called production units. The investment required to purchase each production unit depends upon the type of digital technology involved. Further details for each model are provided in their respective narratives.

The GTE-developed CostMod System is a PC-based, user-friendly, integrated cost development tool that employs various **"Technology Modules"** (e.g., loops, digital stored program control (SPC) switching, digital transport, etc.), along with various complementary **"Application Modules"** (e.g., usage services, vertical services, etc.) to produce "cost models" applicable to a large portion of the GTE Telephone Operations network service spectrum. Development of this system is a multi-phase, long-term endeavor that began several years ago and will continue for some time to come.

The PC CostMod Release 2.0 & 2.1 models, reflecting the GTD-5 EAX digital SPC switching technology (AG Communication Systems) up to and including System Version Release (SVR) 1.6.2.1, represented Phase-I of this evolutionary process. This involved the migration of a mainframe computer program to a PC platform. While this cost model integrated both digital SPC switching and digital transport to determine costs for usage services, it made no provision for the costing of the various special features or "vertical services" (e.g., call waiting, call forwarding, Centrex features, etc.) available with the GTD-5 EAX technology. In response to this need, the CostMod VS model, representing Phase-II of the CostMod System evolution, was designed primarily to assist in the cost development process for these special features available with the GTD-5 EAX digital SPC switching technology under SVR 1.6.3.X.

This cost model is derived from the **"GTD-5 EAX Switching Technology Module"** of the CostMod System, which develops the resource costs (i.e., cost primitives) for each "functionally significant" switching resource category, and the **"GTD-5 EAX Switching**

Application Module" of the CostMod System, which applies the cost primitives to user-input feature-specific traffic data in order to develop the investment associated with individual vertical service features. Release 1.4 of the CostMod VS model includes 380 special features and services available with the GTD-5 EAX digital SPC switching technology under SVR 1.7.1.1. Due to its modular design, the model is easily expanded as new features are developed by the manufacturer and released in future SVRs.

Comparable costs for the DMS-10 and DMS-100F (Northern Telecom), and the 5ESS (AT&T Network Systems) digital SPC switching technologies are developed via the Bellcore "Switching Cost Information System" (SCIS). GTE uses this model under license agreement with Bellcore. This "cost model" comprises the **"DMS-10 Switching Technology Module,"** the **"DMS-100F Switching Technology Module,"** and the **"5ESS Switching Technology Module"** of the CostMod System, which develop the resource costs (i.e., cost primitives) for each "functionally significant" switching resource category, and the **"DMS-10 Switching Application Module,"** the **"DMS-100F Switching Application Module,"** and the **"5ESS Switching Application Module,"** of the CostMod System, which apply the cost primitives to user-input feature-specific traffic data in order to develop the investment associated with individual vertical service features.

Phase-III of the CostMod System evolution incorporated digital transport facilities, local loops, and SS7 network costs via the **"DS-1 Technology Module," "Fiber Optic Technology Module,"** the **"Loop Technology Module,"** and the **"SS7 Technology Module,"** respectively, while Phase-IV reflected usage costs coincident with their respective tariff format via the **"Usage Services Application Module."** This module will provide the capability for a cost analyst to apply different rate structures (e.g., first minute/additional minute, per message/per minute, etc.) to the cost primitives developed in the various technology modules in order to determine the cost for usage services (e.g., local, toll, access). The CostMod System continues to evolve into a world-class costing tool and is widely used in the cost study process by GTE Telephone Operations.

GTE TELEPHONE OPERATIONS

COSTMOD System (including SCIS)

LOOP TECHNOLOGY MODULE

The **CostMod System "Loop Technology Module"** (Loop Model) is an engineering process model that is used to develop the incremental costs associated with loop facilities. The Loop Model replicates the processes and adheres to the same standards that an engineer would follow in designing and provisioning loops. It employs forward looking technology and includes only those technologies that are currently being installed or those planned for future use. The Loop Model is a flexible costing tool that allows the user to develop costs for either an all copper loop or a copper loop with fiber feeder (i.e., pair gain). Originally designed as a research tool to study loop costs, the model permits the user to easily examine how loop costs vary with length, distribution of plant, and central office size. It is applicable for all switched services as well as for non-switched services (e.g., DDS, voice, or data private lines) that require a loop.

The Loop Model employs GTE standard engineering designs that reflect the configurations and technologies currently being provisioned in the loop. These engineering designs indicate that there are two basic technologies in widespread use. The first technology employs copper cable for both feeder plant and distribution plant. Here, the terms "feeder" and "distribution" are used loosely -- there is no universally acceptable technical definition of the demarcation point between feeder and distribution facilities, particularly in the case where all copper facilities are used. It is generally accepted that feeder cables are larger in size and are engineered to an objective fill level (e.g., 85%) for a specific time frame (e.g., 5 years). Distribution cables, on the other hand, are usually smaller in size and are engineered to their ultimate capacity (i.e., total demand or output for a subdivision).

The second technology is fiber feeder cable to a remote pair gain device with copper cable used for the distribution to the customer. This technology is used for longer loops and to serve pockets of subscribers or remote areas from a centrally located serving wire center. This is one of the few instances where there is a clear demarcation point between feeder and distribution. For switched services, pair gain devices can be either "integrated" (i.e., interface directly with a digital switch at the 1.544 Mb/s level) or "non-integrated" (i.e., interface the switch through a Central Office Terminal - COT). For non-switched (e.g., for Private Line Services) the pair gain device must terminate on a COT.

The Loop Model determines the equipment units and their respective cost as well as the associated engineering and installation labor. The total investment is then divided

by the unit capacity to determine the unit cost. For example, a 1,200 pair cable with a unit cost of $10.00 per foot plus engineering labor of $1.00 per foot and installation labor of $2.00 per foot results in a $13.00 per foot total cost. Dividing this by the capacity (i.e., 1,200 pair) yields a cost per pair foot of $.011. The typical loop requires investments for the following items:

1. Cable - copper and/or fiber (depending on design) including aerial, underground, and buried.

2. Customer premise connections - the equipment which terminates the loop at the customer location (e.g., Drop Cable & Protector).

3. Central Office connectors - the equipment which terminates the loop at the central office (e.g., Main Distribution Frame and Protector).

4. Other equipment - including channel banks, repeaters, cross-connects, multiplexers, pair gain, or any specialized equipment required by the service.

Cable costs are developed based on GTE standard material costs and labor hours, along with jurisdictional specific financial factors. An effort was made to ensure that all significant components, both singularly and in the aggregate, were included in the loop cost. GTE standard labor hours, developed by labor group categories, are multiplied by the appropriate labor rates for the jurisdiction under review to develop a labor cost. The actual mix of cable type and size can be developed in two ways. In one case, the user inputs the loop length, central office size, and the aerial, buried, and underground fraction of plant. From this information, a default loop make-up would be generated, consisting of cable segments by size, type, and length. In the other case, the user directly inputs the loop make-up to be analyzed.

Support equipment such as load coils, conduit, poles, and VF repeaters are added to the loop based upon GTE standard engineering guidelines for the type of plant. Loop length and plant mix are typically developed based upon a sample of loops currently providing the service under study, as an estimate of a prospective loop makeup. For example, if residential lines are being studied, a sample of residential lines would be taken to determine average loop length. This information can then be entered into the model.

Adjustments for capacity utilization (i.e., fill factors) are left to the discretion of the user. The model generates an outside plant network of sufficient size to meet the demand parameters input by the user. Loop Model outputs reflect investment by 6-digit USOA plant account.

COSTMOD VS MODEL
(AGCS GTD-5 EAX Switching Technology/Application Modules)

The CostMod VS model was designed specifically to assist GTE Telephone Operations pricing personnel in the cost development process for the various special features or "vertical services" available with the AGCS GTD-5 EAX digital stored program control (SPC) switching technology under System Version Release (SVR) 1.7.1.1. This cost model is derived from the **"GTD-5 EAX Switching Technology Module" of the CostMod System**, which develops the resource costs (i.e., cost primitives) for each "functionally significant" switching resource category, and the **"GTD-5 EAX Switching Application Module" of the CostMod System**, which applies the cost primitives to user-input feature-specific traffic data in order to develop the investment associated with individual vertical service features. It is similar to the Bellcore-developed "Switching Cost Information System" (SCIS), which develops switching costs for several alternative switching technologies, including the AT&T 5ESS and Northern Telecom DMS-100F. The CostMod VS model is a PC-based, interactive cost development tool that develops the long-run incremental costs (LRIC) for digital SPC switching in a GTD-5 EAX base unit (BU) or remote switching unit (RSU).

Economic theory defines a "production function" as a mathematical representation of a machine or process that uses inherent "economic resources" (e.g., land, labor, material, capital) to produce one or multiple products and/or services. A costing methodology that 1) determines the unit cost of each defined "economic resource," 2) determines what amount of these economic resources are consumed in providing the service, and 3) multiplies these consumed resource units by their respective unit cost to arrive at an extended resource cost is appropriate in the case of special switch features that have been traditionally termed "vertical services." It is appropriate because such a methodology is capable of discretely identifying the costs uniquely attributable to these vertical services.

A GTD-5 EAX digital SPC switching system can be viewed as a specialized computer that provides a variety of telecommunications services by utilizing specific "technical

functionalities" that are inherently provided by its hardware and software. These "technical functionalities" may be broadly defined as "service resources" (and the associated unit costs as "cost primitives"), in that each service resource provides a particular functionality, and that groupings of these service resources form the framework for a given network product or service.

Any switched telecommunications service that is provided from a GTD-5 EAX must necessarily be "provisioned" by assigning the appropriate amount of each available service resource. The investment cost function (CF) for such services can be expressed with a single algebraic equation, with variables (X) for each available service resource cost category, as follows:

$$CF(i) = X_1(i) + X_2(i) + X_3(i) + X_4(i) + X_5(i) + \ldots + X_n(i)$$

where $X_n(i) = K_{i,n} * X_n$

= service resource cost
for category (n)
for service (i)

and X_n = service resource unit cost
variable for category (n)

and $K_{i,n}$ = coefficient
for service (i)
and service resource unit cost
variable for category (n)

Given that each variable (X_n) will have a unique coefficient ($K_{i,n}$), and that each feature (i) will have a unique set of coefficient values, this equation may be re-written as:

$$CF(i) = A_i * X_1 + B_i * X_2 + C_i * X_3 + D_i * X_4 + E_i * X_5 + \ldots + Z_i * X_n$$

where $A_i = K_{i,1}$

= coefficient
for service (i)
and service resource unit cost
variable for category (1)

and $B_i = K_{i,2}$
and $C_i = K_{i,3}$

and $D_i = K_{i,4}$

...

and $Z_i = K_{i,n}$

Thus, we have a single cost function (CF) and (i) sets (A_i, B_i, etc.) of feature-specific resource coefficients. This fundamental concept was central to the creation of the feature-specific "coefficient data records" that are employed in the CostMod VS model.

The approach used in the CostMod VS model is two-fold. In the **"GTD-5 EAX Switching Technology Module,"** the GTD-5 EAX base unit and remote switching unit equipment is "partitioned" or "classified" into one of several "resource categories" and is then sized based on user-input central office data (e.g., lines, trunks, busy hour traffic). Investment is derived by multiplying the resultant sized equipment quantities by the manufacturer's (AG Communication Systems Corporation) price, by component. Finally, the investment cost is divided by the appropriate quantity of each resource to arrive at a unit resource cost (i.e., cost primitive) for each of the major cost categories, including line terminations, network path CCS, and processor milliseconds.

This process applies to both hardware and software, and is tailored specifically to reflect the mix of traffic (i.e., POTS and vertical services) switched within the particular central office(s) under study. It is important to note that the "composite" office may reflect either an actual central office location, or some hypothetical "representative" example.

Having developed the cost primitives for each service resource via the **"GTD-5 EAX Switching Technology Module,"** the next step is to determine what amounts of the service resource units are necessary to provide a given feature. In the **"GTD-5 EAX Switching Application Module,"** user-input feature-specific central office data (e.g., lines, traffic) are used to determine the amount of switching resources required to provide the feature selected for cost development.

For example, the "Call Forwarding - Fixed" feature cost includes the central processor (TPC) time, in milliseconds, required to execute the series of binary software instructions associated with completing a call forwarding attempt. This "real time" is developed by the manufacturer and is provided to GTE Telephone Operations under strict nondisclosure guidelines as part of various support agreements for the GTD-5 EAX digital SPC switching technology. Assuming that the time for this special feature "event" is 65 milliseconds, assuming that the unit cost for this service resource

(developed in and passed from the **"GTD-5 EAX Switching Technology Module"**) is $0.15 per millisecond, and also assuming that the feature-specific traffic data input by the user is 1.00 busy hour call attempt per feature line, then (for illustrative purposes) the cost for this "event" is given by 1.00 * 65 * $0.15 = $9.75. Similarly, the remaining service resource units (e.g., line terminations, line path CCS, trunk path CCS, TCU/RCU milliseconds, Right-To-Use (RTU) fees, memory words, special hardware, etc.) are determined and multiplied by their respective unit costs.

With certain exceptions (noted in the feature-specific documentation), all costs that are output from the **"GTD-5 EAX Switching Application Module"** are "per feature line" costs. All feature-specific "getting-started" Right-To-Use fees are reported at the bottom of the **"GTD-5 EAX Switching Application Module"** output screen as "excluded" from the cost analysis. This allows the user to decide the appropriateness, application, and cost recovery of these software costs. Release 1.4 of the CostMod VS model includes 380 special features and services available with the GTD-5 EAX digital SPC switching technology under SVR 1.7.1.1. Due to its modular design, the model is easily expanded as new features are developed by the manufacturer and released in future SVRs.

The **"GTD-5 EAX Switching Technology Module"** of the CostMod System has been benchmarked against the manufacturer's CASE-5 ("Computer-Aided Systems Engineering for the GTD-5 EAX") program used by GTE Telephone Operations engineering personnel to size and order GTD-5 EAX switching equipment. Using a variety of central office configurations, identical input parameters were passed through both models. During the development process the engineering equations were refined until the **"GTD-5 EAX Switching Technology Module"** matched the manufacturer's model within a plus or minus two percent variance for total investment. In most cases, this variance was less than one percent. Furthermore, the CostMod VS methodology was presented to and reviewed by the manufacturer. AGCS Technical Standards & Support personnel found that "the methodology reflected in the CostMod VS model represents a reasonable and relatively accurate approach to GTD-5 EAX special features costing."

The CostMod VS model is an effective cost development tool that affords the user flexibility and ease-of-use. It follows generally accepted telecommunications industry costing methods, and determines the costs for a wide variety of GTD-5 EAX switched services and special features. The model has been reconciled with the manufacturer's engineering model, and has met all targeted acceptable tolerances. It is anticipated

that the CostMod VS model, along with the Bellcore SCIS model, will be widely used to support future GTE Telephone Operations tariff filings and regulatory requirements.

GTE TELEPHONE OPERATIONS

COSTMOD System (including SCIS)

BELLCORE SCIS MODEL
(NTI DMS-10 Switching Technology/Application Modules)
(NTI DMS-100F Switching Technology/Application Modules)
(AT&T 5ESS Switching Technology/Application Modules)

The Bell Communications Research (Bellcore) "Switching Cost Information System" (SCIS) was designed specifically to assist telephone company personnel in the cost development process for switched network services available with several popular switching technologies. It may also be employed in the cost development process for basic usage and switched access services. The model reflects the cost of digital, stored program control (SPC) switching facilities (e.g., AT&T 5ESS, NTI DMS-10, and NTI DMS-100F) that are employed by GTE to provide growth in central office based, switched network services. The model is typically used to develop the long-run incremental costs for such GTE tariffed services as CentraNet® and Smart Call® features, in addition to local, toll, and switched access services.

SCIS is a PC-based, interactive cost development tool that develops the long-run incremental costs for digital switching equipment manufactured and sold by various vendors, including AT&T Network Systems and Northern Telecom. The model determines the required equipment combination (e.g., mounting frames, line cards, central processors, memory and interface cards, etc.) and associated investment for producing at a given level of output, assuming that the engineered capacity is provided to accommodate demand in the busy hour. Each then divides this investment by its associated units to determine unit LRIC. This cost model comprises the **"DMS-10 Switching Technology Module," the "DMS-100F Switching Technology Module," and the "5ESS Switching Technology Module" of the CostMod System**, which develop the resource costs (i.e., cost primitives) for each "functionally significant" switching resource category, and the **"DMS-10 Switching Application Module," the "DMS-100F Switching Application Module," and the "5ESS Switching Application Module," of the CostMod System**, which apply the cost primitives to user-input feature-specific traffic data in order to develop the investment associated with individual vertical service features.

Economic theory typically defines a "production function" as a mathematical representation of a machine or process that uses its inherent "economic resources" (i.e., land, labor, material, and capital) to produce one or multiple products and/or services. A costing methodology that: 1) determines the unit cost of each defined economic resource, 2) determines what amount of these economic resources are

consumed in providing the service, and 3) multiplies these consumed economic resource units by their respective unit cost to arrive at an extended resource cost is appropriate in the case of central office based, switched network services and special switched features that have been traditionally termed "vertical services." It is appropriate because such a methodology is capable of discretely identifying the costs uniquely attributable to such services, which is a necessary attribute of a valid incremental cost study. This allows the proper application of cost causation principles in the study.

A digital SPC switching system can be viewed as a specialized computer that provides a variety of telecommunications services by utilizing specific "production units" or "cost primitives" that are inherently provided by its hardware and software. These "cost primitives" may be viewed as "economic resources," in that each cost primitive provides a particular functionality, and that groups of these cost primitives form the framework for the functionality of a particular service. With this concept in mind, it follows that any switched telecommunications service that is provided from a digital SPC switch must necessarily be "provisioned" by assigning the appropriate amount of each available cost primitive. The cost for such services can be expressed with a single equation, with variables for each cost primitive category, representing the amount of switch resources consumed by a given switched service or feature.

The costing approach employed in SCIS is two-fold. The first step in the process is to develop the appropriate unit costs in the "Model Office" (i.e., **"DMS-10 Switching Technology Module," "DMS-100F Switching Technology Module,"** or **"5ESS Switching Technology Module"**). Inputs to this module (i.e., "SCIS/MO") include lines and trunks, their associated traffic information, and standard central office parameters. Outputs from this module include the unit cost for lines and trunks, network path centum call seconds (CCS), processor milliseconds, memory words, SS7 octets, and Automatic Message Accounting (AMA) records. Once these unit costs are developed, the second step in the process is to integrate them with feature-specific information in the "Features Module" (i.e., **"DMS-10 Switching Application Module," "DMS-100F Switching Application Module,"** or **"5ESS Switching Application Module"**). This module (i.e., "SCIS/IN") has been given additional functionality in order to reflect the new features associated with the SS7 "intelligent network," hence the name. Inputs to SCIS/IN include feature lines, their associated traffic information, and standard feature parameters, in addition to SCIS Model Office outputs and costs associated with the external SS7 network (e.g., STPs, signaling links, etc.). Outputs from SCIS/IN include the cost of the switch resources used by the feature, plus any

feature-specific hardware or software. This resultant output illustrates the cost (i.e., busy hour investment) for the given feature. The same approach is used to determine the cost for basic usage and switched access services, albeit not necessarily within SCIS/IN.

The Bellcore Switching Cost Information System (SCIS/MO and SCIS/IN) is an effective cost development tool that affords the user flexibility and ease-of-use. Furthermore, it follows generally accepted telecommunications industry incremental costing methods, and determines long-run incremental costs for a wide variety of digital SPC switched services and special features. The model has been reconciled with the vendor's engineering model (e.g., 5-DOPS for the 5ESS, and NT-ACCESS for the DMS-100F), and has (favorably) exceeded all targeted acceptable tolerances. It is anticipated that SCIS will continue to be widely used in support of GTE Telephone Operations management studies, tariff filings, and regulatory requirements.

GTE TELEPHONE OPERATIONS

COSTMOD System (Including SCIS)

FIBER OPTIC TECHNOLOGY MODULE

The **CostMod System "Fiber Optic Technology Module"** (FO Model) is an engineering process model that can be used to develop the investment required to provide digital fiber optic transport facilities between central offices or from a customer to a central office. The model replicates the processes and standards that an engineer would follow to provide fiber optic service between two points. GTE standards for protection, fiber cable, fiber terminals, and engineering and installation hours along with GTE net material costs are used by the model to develop the investments on a DS-3/STS-1 (672 channels), DS-1 (24 channels), or DS-0 (individual channel) level. The investment provided by the FO Model includes the cost of fiber cable, fiber optic terminals, fiber distribution panels, DSX-3 or STS-1 cross-connects, regenerators, and DSX-1 and M1-3/STS-1 multiplexing when required. The GTE standard protection arrangement for all fiber systems is 1 for 1 (i.e., one stand-by DS-3 for each working DS-3 and stand-by transmit and receive fibers). The FO Model provides costs for standard DS-2 and DS-3 transmission systems as well as Synchronous Optical Network (SONET) technologies. The user may select fiber cables that range in size from four fibers to ninety-six fibers and system sizes (i.e., terminal bandwidth) that range from 6.3 M/bs to 1.13 G/bs.

Jurisdictional specific labor rates, material loading factors, utilization factors, outside plant support factor, facility distance, and the route-to-air mile factor must be provided by the user.

The output reports from the FO Model display the costs for the total system (i.e., fiber plus electronics on both ends); the cost expressed on a per DS-3 basis, the costs on a per DS-1 basis, and the cost per DS-0. If the interoffice transport option is selected, the model will provide a summary report in FCC Tariff format at the DS-1 and DS-0 level.

GTE TELEPHONE OPERATIONS

COSTMOD System (including SCIS)

SIGNALING SYSTEM 7 (SS7) TECHNOLOGY MODULE

The **CostMod System "SS7 Technology Module"** (SS7 Model) is used to determine the investments and expenses associated with busy hour usage on GTE's SS7 Network. The SS7 Model is an engineering process model that replicates GTE's SS7 Network for the area under study. The model develops the hardware investments and software expenses for Signal Transfer Points (STP) and Signal Control Points (SCP). The STP and SCP investments and expenses are expressed on a per octet basis so that they may be applied to any service that uses the SS7 network. Additionally, the SS7 Model converts the expenses associated with the leasing of facilities that carry the SS7 signaling links to a per octet basis.

The basic methodology employed by the SS7 Model is to determine the respective STP and SCP busy hour investments and expenses and to convert them into a cost per octet. This is accomplished by determining the network configuration for the area under study and then developing the costs associated with the Local and/or Regional STP. The SCP investment and expenses are developed in the same manner.

The only input variables required for the model are the expenses associated with the SS7 signaling links and appropriate utilization factors for SCP storage and SS7 signaling links.

Outputs from the SS7 Module include the busy hour investments and expenses expressed on a per octet basis for the local and/or region STP and SCP. The SS7 signaling link busy hour expenses are also expressed on a per octet basis.

GTE TELEPHONE OPERATIONS

COSTMOD System (including SCIS)

USAGE SERVICES APPLICATION MODULE

The **CostMod System "Usage Services Application Module"** (USAM) is used to convert the investments associated with busy hour usage in digital stored-program control (SPC) switching equipment and digital fiber optic transmission facilities into a cost per call and per minute of use by time of day, by distance, for usage and access services. The USAM is applicable for the AT&T 5ESS, NTI DMS-10, NTI DMS-100F and AGCS GTD-5 EAX digital SPC switching technologies.

The basic methodology employed by the USAM is to convert the various switching technology module developed cost primitives expressed as busy hour hardware and software investments into investments per call attempt and per minute of use. The annual cost factors for the appropriate USOA accounts are then applied to the hardware and software investments to convert them to a cost per call or minute of use.

The USAM input variables for the DMS-10, DMS-100F, and 5ESS switching investments include the cost primitives (e.g., cost per millisecond, cost per line CCS, cost per trunk CCS, etc.) developed by the Bellcore "Switching Cost Information System" (SCIS) Model Office Studies (i.e., **"DMS-10 Switching Technology Module," "DMS-100F Switching Technology Module,"** and **"5ESS Switching Technology Module"** of the CostMod System). The input variables for the GTD-5 EAX switching investments are the equivalent cost primitives developed by the CostMod System **"GTD-5 EAX Switching Technology Module"** Composite Office Study.

The interoffice transport investment inputs include the cost primitives (e.g., cost per DS-1 mile, cost per DS-1 termination, etc.) developed by the CostMod System **"Fiber Optic Technology Module"** (i.e., FO Model). The investments from the FO Model and the CCS per trunk that was used in the respective switching cost technology module, are used by the USAM to determine the interoffice transport costs.

The USAM inputs for Signaling System 7 (SS7) investments are developed by the CostMod System **"SS7 Technology Module"** and the appropriate switching cost technology module.

The USAM outputs for basic usage services (e.g., for local, toll, EAS and Switched Access services) are expressed as a cost per call type (e.g., intraoffice, incoming, outgoing, or tandem) and per minute of use. If required, Automatic Message Accounting (AMA) costs for both access and basic services are expressed on a per call basis.

The costs for interoffice transport are expressed on a per end (termination) per minute of use, per mile, and per mile per minute of use basis. SS7 costs are expressed as a cost per interoffice call.

GTE TELEPHONE OPERATIONS

BASIC NETWORK FUNCTION (BNF) DEFINITIONS

A. **Network Access (NA) Channel** - The subcategory of BNFs that provides the bandwidth specific transmission path between the point of interface at the customer's location and the main distribution frame or equivalent (i.e., DSX-1, DSX-3) at the customer's serving central office.

1. NA Channel Basic Level: A 2-wire transmission path that provides a maximum of 64 kilobits per second digital capacity. This includes 300 to 3,000 Hz analog voice service, which is the basic channel for most voice grade services such as basic residence and business main line service, PBX trunks, Centrex type access lines and voice grade private line service.[1]

   Each BNF consists of a Basic Level 2-Wire NA Channel for a particular NA Channel distance, for a particular office size and for a particular NA Channel density.

2. NA Channel DS-1 Level: A transmission path that has 1.544 Mbps digital capability. A high capacity transmission facility that operates in a full duplex, time division (digital) multiplexing mode. This is the first level (primary rate) within the "T" Carrier system. DS-1 service provides transmission of 193 bit frames at a rate of 8,000 frames per second to yield 1.544 Mbps.

   Each BNF consists of a NA Channel DS-1 Level for a particular system size, for a particular distance.

3. NA Channel DS-3 Level: A transmission path that has 45 Mbps digital capability. A high capacity transmission facility that operates in a full duplex, time division (digital) multiplexing mode. This is the third level within the "T" Carrier system. A DS-3 provides the equivalent of 28 DS-1s or 672 basic channels.

   Each BNF consists of a NA Channel DS-3 Level for a particular system size, for a particular distance.

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[1] Additional BNF costs are addressed under "NA Channel Connection - Performance and Other Features and Functions."

GTE TELEPHONE OPERATIONS

BASIC NETWORK FUNCTION (BNF) DEFINITIONS

B. **NA Channel Connection** - The subcategory of BNFs that provide the interface between the NA Channel, the central office switching equipment, another NA Channel or a Dedicated Transport interoffice transmission path.

1. NA Channel Connection Basic Level: This is the interface between a NA Channel Basic Level and, (a) any other NA Channel Basic Level, (b) a basic analog transport path or, (c) a NA Channel Connection Basic Analog Level - Switch Interface (line) to the switch architecture.[2]

2. NA Channel Connection DS-1 Level: This is the interface between a NA Channel DS-1 Level and, (a) any other NA Channel DS-1 Level, (b) a DS-1 transport path or, (c) a NA Channel Connection DS-1 Level - Switch Interface to the switch architecture.

3. NA Channel Connection DS-3 Level: This is the interface between a NA Channel DS-3 Level and, (a) any other NA Channel DS-3 Level or, (b) a DS-3 transport path.

4. NA Channel Connection Basic Analog Level - Switch Interface: This is the analog interface to the switch architecture. The Standard line interface supports most services (e.g., residence, business, CentraNet®).

C. **NA Channel Connection - Performance and Other Features and Functions**[3] The subcategory of BNFs that provide the necessary multiplexing required for interoffice transport from one digital Network Access Channel to another.

1. Voice Grade to/from DS-1 Multiplexing: This BNF allows the combining of 24 individual voice grade or equivalent channels into a single DS-1 (1.544 Mbps) signal or the provision of 24 individual voice grade or equivalent channels from a single DS-1 (1.544 Mbps) signal.

2. DS-1 to/from DS-3 Multiplexing: This BNF allows the combining of 28 discreet DS-1 (1.544 Mbps) signals into a single DS-3 (45 Mbps) signal or the provision of 28 discreet DS-1 (1.544 Mbps) signals from a single DS-3 (45 Mbps) signal.

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[2] (e.g., ISDN, Special Access, Private Line)

[3] This BNF subcategory also addresses equipment components which are used in conjunction with a NA Channel Basic Level to meet the quality or utility of specific private line or special access services. These unique service-specific, engineering requirements are typically addressed in conjunction with private line service cost studies.

GTE TELEPHONE OPERATIONS

BASIC NETWORK FUNCTION (BNF) DEFINITIONS

D. **Interoffice Switching** - The establishment of a temporary path through the switch architecture for outgoing, incoming or tandem switching.

(a) Interoffice Switching - Outgoing: The establishment of a temporary transmission path between a NA Channel Connection Switch (line) Interface and a Switched Transport path (i.e., a line-to-trunk call or minute).

Each BNF consists of an: (a) outgoing switching call setup, by time-of-day (TOD), and (b) outgoing switching minutes-of-use (MOU), by TOD.

2. Interoffice Switching - Incoming: The establishment of a temporary transmission path between a Switched Transport path and a NA Channel Connection Switch (line) Interface (i.e., a trunk-to-line call or minute).

Each BNF consists of an: (a) incoming switching call setup, by TOD and (b) incoming switching MOU, by TOD.

3. Interoffice Switching - Tandem: The establishment of a temporary transmission path between two Switched Transport paths (i.e., a trunk-to-trunk call or minute).

Each BNF consists of a: (a) tandem call setup, by TOD, and (b) tandem MOU, by TOD.

E. **Intraoffice Switching** - The establishment of a temporary transmission path through the switch architecture between two NA Channel Connection Switch (line) Interfaces (i.e., a line-to-line call or minute).

Each BNF consists of an: (a) intraoffice call setup, by TOD and (b) intraoffice MOU, by TOD.

F. **Switch Features** - The category of BNFs that provides additional switched functionality to other BNFs or finished services (e.g. custom calling).

GTE TELEPHONE OPERATIONS

BASIC NETWORK FUNCTION (BNF) DEFINITIONS

G. **Dedicated Transport -** A full period bandwidth specific interoffice transmission path between switching offices and/or serving wire centers.

1. Dedicated Transport Basic Level: A full period Basic Level interoffice transmission path between switching offices and/or serving wire centers.

   Each BNF consists of a basic level interoffice transmission path, for a particular distance (e.g., 1, 2, ... miles), for a particular system size. Termination and facility costs are separately identified.

2. Dedicated Transport DS-1 Level: A full period DS-1 interoffice transmission path between switching offices and/or serving wire centers.

   Each BNF consists of a DS-1 interoffice transmission path, for a particular distance (e.g., 1, 2, ... miles), for a particular system size. Termination and facility costs are separately identified.

3. Dedicated Transport DS-3 Level: A full period DS-3 interoffice transmission path between switching offices and/or serving wire centers.

   Each BNF consists of a DS-3 interoffice transmission path, for a particular distance (e.g., 1, 2, ... miles), for a particular system size. Termination and facility costs are separately identified.

H. **Switched Transport -** A temporary duration sensitive interoffice transmission path between switching offices.

Each BNF consists of a basic level interoffice transmission path, for call setup and MOU by time-of-day, for a particular distance (e.g., 1, 2, ... miles), for a particular system size. Termination and facility costs are separately identified.

I. **Network Interface Device (NID)** - The subcategory of BNFs that provide a termination for a single line or circuit. This device provides the point of separation between the end-user customer and the provider's network. The NID includes connection points for the provider and the end-user customer, and also provides a protective ground connection. The connection points are capable of terminating cables such as twisted pair cable.

Each BNF consists of a device for one or more two-wire connection points.

GTE TELEPHONE OPERATIONS

BASIC NETWORK FUNCTION (BNF) DEFINITIONS

J. The **Signaling System Seven (SS7)** network is the subcategory of BNFs that provides an internationally standard-purpose Common Channel Signaling (CCS) system. The SS7 network is a dedicated digital network used for telephone call setup and control. Each signaling point is uniquely identified by a numeric point code. Point codes are carried in signaling messages exchanged between signaling points to identify the source and destination of each message. The signaling point uses a routing table to select the appropriate signaling path for each message.

There are three kinds of signaling points, and three data links in the SS7 network:

1 Service Switching Points (SSPs) are stored program controlled switches that originate, terminate or tandem calls.

SSP BNFs are included in the switching BNFs for interoffice calls.

2. Signal Transfer Points (STPs) route network traffic between signaling points. An STP routes each incoming message to an outgoing signaling link based on routing information contained in the SS7 message.

STP BNFs consist of the STP Ports which are the interface to the SS7 network.

3. Service Control Point (SCP) are database repositories which provide routing information.

SCP BNFs consist of a Standard Query or Octet.

4. Data Links are 56 Kbps connections between STPs and between an SSP and an STP.

Each BNF consists of a four-wire loop supported by 56 Kbps circuit equipment.

GTE TELEPHONE OPERATIONS

BASIC NETWORK FUNCTION (BNF) DEFINITIONS

APPENDIX 2.6 TO PREFACE 1

PART V

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY OF DENNIS B. TRIMBLE

DOCKET NO. 961169-TP

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

A. My name is Dennis B. Trimble. My business address is 600 Hidden Ridge Drive, Irving, Texas, 75015. I am employed by GTE Telephone Operations as Assistant Vice President - Marketing Services and am representing GTE or "the Company" in this arbitration proceeding with Sprint.

Q. WILL YOU PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE?

A. I received a B.A. in Business in 1970 and an M.B.A. in 1973, both from Washington State University. In 1972, I became an Assistant Professor at the University of Idaho, where I taught undergraduate courses in statistics, operations research and decision theory. From 1973 through 1976, I completed course work towards a Ph.D. degree in Business at the University of Washington, majoring in quantitative methods with minors in computer science, research methods, and economics. I began my career with GTE in 1976 as an Administrator - Pricing Research with General Telephone Company of the Northwest ("GTENW"). Through 1985, I held various jobs with GTENW and GTE Service Corporation, almost all related to demand analysis, market research, and/or strategic planning. In 1985, I was

named Director - Market Planning for GTE Florida, Incorporated ("GTEFL") and in 1987, I became GTEFL's Director - Network Services Management. During most of 1988 and early 1989, I was also Acting Vice President - Marketing for GTEFL. From 1989 through most of 1994, I was employed by GTE Telephone Operations as Director - Demand Analysis and Forecasting. In October of 1994, I became Director - Pricing and Tariffs for GTE Telephone Operations and assumed the additional responsibilities of the Assistant Vice President - Marketing Services position in August, 1995.

Q. HAVE YOU PREVIOUSLY TESTIFIED ON BEHALF OF GTE?

A. Yes. I have presented testimony on behalf of GTE before the California Public Utilities Commission, the Florida Public Service Commission and the Hawaii Public Utilities Commission.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THE DOCKET?

A. In response to ACSI's request for arbitration filed with this Commission, I will address GTE's proposed pricing for: (1) certain unbundled network elements placed in issue by ACSI and associated ordering/provisioning non-recurring charges ("NRC's"), (2) local interconnection elements, (3) collocation elements, and (4) service provider number portability ("SPNP"). [SPNP is also know in the industry as interim number portability ("INP").]. The economic rationale supporting the pricing policies employed by GTE in the

development of its proposed rates for unbundled network elements is the subject of the Economic Presentation in this proceeding. In addition, GTE's costing procedures are addressed by the direct testimony of GTE witness Bert Steele. I will also address the estimation and magnitude of the Company's "common costs" as well as the inappropriateness of any pricing proposals resembling the Federal Communications Commission's ("FCC") proxy rates (which a U.S. appeals court has stayed) for unbundled network elements.

PRICING PRINCIPLES FOR UNBUNDLED NETWORK ELEMENTS

Q. WHAT OVERRIDING PRINCIPLES DID GTE FOLLOW IN THE DEVELOPMENT OF ITS UNBUNDLED NETWORK ELEMENT PRICES?

A. As discussed in GTE's Economic Presentation, one of the principles employed by GTE was to base rates for unbundled network elements on their Total Element Long-Run Incremental Cost ("TELRIC") (TELRIC is a term coined by the FCC. See the FCC's First Report and Order issued in CC Docket No. 96-98 on August 8, 1996; hereinafter referred to as the FCC's "First Report.") plus a reasonable contribution to the Company's "common costs". The other major principle discussed in GTE's Economic Presentation is to incorporate competitive market assumptions into GTE's ratemaking process that limit rates to be less than or equal to the Stand-Alone-Cost ("SAC") of that network element.

Q. WHAT TESTIMONY ARE YOUR OFFERING REGARDING ACSI'S POSITION?

A. ACSI's position makes clear that it is disputing pricing for only three unbundled network elements, and for collocation of remote switching units and cross-connection, as well as pricing for interim number portability. My testimony addresses these points as disputed pricing issues. I present general discussion of pricing principles as background for those disputed issues; however my general discussion of, for example, pricing for unbundled network elements does not raise new issues for arbitration.

Q. PLEASE DESCRIBE THE MAJOR UNBUNDLED ELEMENTS GTE PROPOSES AND HOW THEY CAN BE USEFULLY COMBINED WITH THE ALTERNATIVE LOCAL EXCHANGE CARRIERS' ("ALEC"S) SELF-PROVISIONED NETWORKS AND SERVICES TO DELIVER COMPETITIVE LOCAL EXCHANGE SERVICE.

A. GTE's major proposed unbundled services are:

- Unbundled Loops. The unbundled loop provides a voice-grade path between an end user and a GTE wire center. An ALEC may obtain this loop from GTE and connect it to a cross connect available at the end office through a collocation arrangement. The ALEC could self-provision the transport facilities from GTE's end office to the ALEC's own switching center. In such an arrangement the ALEC would provide, through its own switch, all related switching services such as

local usage, custom calling services, switched access service (both originating and terminating), and toll services. Today, most of these are high-margin services which provide GTE with significant contributions (revenues minus costs) to cover its common costs and overheads, thus enabling GTE to support the level of investment infrastructure necessary to operate as a carrier of last resort ("COLR") and achieve the Commission's public policy objectives (e.g., universal service).

GTE is also offering loop conditioning services for unbundled loops that assure that desired loops have the technical capability to handle enhanced end user services (e.g., ISDN, switch data).

- Unbundled Port / Local Switching. The unbundled port provides access to switching services from a GTE switch to be used with an ALEC-provided loop. This element would apply in areas where ALECs have loop facilities but do not have a local switching center in service. In this situation, the ALEC will cross connect its loop with GTE's switch through a collocation arrangement. Through the port, the ALEC can obtain access to both the local switching capability of GTE's switch (e.g., local calling, switch features) and the capability to route calls from the trunk side of the switch (e.g., switched access, toll service, E-911 service, directory service, etc.).

- Collocation. GTE filed a physical collocation tariff on October 2, 1996 with an expected implementation date of November 16, 1996. GTE proposes to use the rates, terms and conditions in this tariff for all collocation elements. The cross connections contained in that tariff are used to facilitate the physical delivery of a loop from GTE's main distribution frame to the ALEC's collocated facilities.

- SS7 Interconnection. SS7 interconnection allows an ALEC to connect to GTE's SS7 network at a Signal Transfer Point ("STP"). This connection enables ALECs to exchange SS7 messages without providing the underlying SS7 network. It also provides access to database services (e.g., Database 800 Carrier Selection Service and Line Information Database ("LIDB")). This interconnection will also support efficient call setup and delivery of SmartCall™ services without first connecting to a GTE switch. Because there is such a vast array of possible services provided with SS7 interconnection, the Company proposes that interconnection arrangements be provided subject to negotiated contracts. With negotiated contracts, agreements can be customized to meet the specific SS7 requirements of each ALEC. These contracts would reference the signal links and STP ports currently tariffed in the GTOC Tariff FCC No. 1.

COMMON COSTS

Q. DO GTE'S TSLRIC OR TELRIC STUDIES INCORPORATE JOINT AND COMMON COSTS?

A. The methodology GTE currently employs to develop its TELRIC estimates does not incorporate common costs. (Throughout this testimony, Total Service Long-Run Incremental Cost ("TSLRIC") will be used as synonymous with TELRIC.) These costs must be recovered through the pricing of services.

Q. WHAT TYPE OF EXPENSES MAKE UP GTE'S COMMON COSTS?

A. GTE's current TELRIC methodology for services and unbundled elements includes the following expenses: (a) depreciation, (b) return on investment, (c) income taxes, (d) plant-specific maintenance and repair, (e) central office land and buildings, (f) customer operations (e.g., sales), and (g) miscellaneous fees and taxes (e.g., ad valorem tax, gross receipts tax). GTE's TELRIC methodology does not include the following expense items (and they are the ones considered to be common expenses of the Company): (a) plant specific expenses (e.g., network support, general support, and general purpose computers), (b) plant non-specific expenses (e.g., network planning, engineering), (c) general support assets (e.g., furniture, office support equipment, company communications equipment, and general purpose computers), (d) land and buildings (other than central offices), (e) indirect labor, (f) corporate expenses, and (g) other taxes and fees, such as local franchise taxes, federal

superfund taxes, local and state business license and occupation taxes). It is not unusual for the magnitude of these expense categories to be from 40% to 60% of the Company's total direct costs (i.e., sum of TSLRICs). Exhibit No. DBT-1 contains a depiction of GTE's estimate of total "forward-looking" common costs for this state.

Q. GTE'S BASIC PRICING PHILOSOPHY FOR A NETWORK ELEMENT IS BASED ON TELRIC PLUS A REASONABLE SHARE OF COMMON COSTS. BUT, VARIOUS PARTIES TO THE ARBITRATION PROCESS HAVE ASSERTED THAT GTE'S "COMMON COSTS" ARE EITHER NONEXISTENT OR DE MINIMIS. DO YOU AGREE?

A. No. GTE, as with most full-service local exchange companies, exhibits significant levels of common costs. As shown in Exhibit No. DBT-1, the annual common costs for GTE's operations in this state exceed $455 million, which translates to about 36% of GTE's total revenues. These "common costs" should not be arbitrarily allocated to the various TELRICs for aggregate network elements (loops, switching, transport, etc.); such an allocation would be a step backward to "Fully Distributed Costing" procedures. Recovery of these forward-looking costs must be addressed in the development of the prices at issue in this arbitration proceeding. GTE is not asking the ALECs to pay for all of GTE's "common costs," but is only asking that they contribute their "fair share" towards coverage of the Company's "common costs." The Company's "common costs" are

integral to the efficient operation of GTE and do support the offering of all the network elements requested by ALECs.

Q. VARIOUS ALECS HAVE ARGUED THAT THEY SHOULD NOT BE REQUIRED TO CONTRIBUTE TO THE RECOVERY OF GTE'S "COMMON COSTS" BECAUSE THEY HAVE THEIR OWN COMMON COSTS TO RECOVER. WOULD YOU PLEASE COMMENT ON THIS POSITION?

A. GTE's proposed rates include only a "fair share" amount of contribution. GTE's common cost structure supports those elements that the ALECs purchase from GTE and GTE must be allowed to set network element prices that include a reasonable allocation of the Company's forward-looking common costs. In fact, this was properly recognized by the FCC in its First Report (see paragraph 682 and Sections 51.503 and 51.505).

Q. HOW WERE GTE'S ESTIMATES OF ITS TOTAL FORWARD-LOOKING "COMMON COSTS" DEVELOPED?

A. As described in GTE's Economic Presentation, GTE computed its forward-looking "common costs" as the difference between its 1995 revenues and the sum of its total directly attributable forward-looking costs (i.e., TELRIC and TSLRIC). This computation was performed using the data presented in Exhibit No. DBT-1 and resulted in a fixed allocator of 47%. If the prices for all of GTE's network elements and services were to include a level of contribution equal to this "fixed

allocator," then GTE's prices would exactly recover its total forward-looking costs. GTE does not support this method of price development in all cases, as it is likely that this methodology does not introduce rational market considerations into the development of price sets.

Q. WHY ARE THE COMMON COSTS YOU DEFINED ABOVE EXCLUDED FROM GTE'S TELRIC METHODOLOGY?

A. The total amounts in these common cost categories are appropriately excluded from GTE's TELRIC studies because GTE's Universal System of Accounts ("USOA")-based accounting system records do not contain sufficient information to directly attribute (if appropriate) any of these expenses to specific network elements, and/or there is not a cost-causative method to associate these to specific elements of the network. The USOA-driven accounts, which GTE has identified as representing common costs, might include many items that are, in reality, service (or element) specific. However, as I have previously stated, those costs cannot be separately identified because the USOA-based accounting system does not contain a level of detail sufficient to allow direct attribution of those costs to their appropriate service (or network element). Thus, the USOA-based accounting processes limit GTE from identifying any remaining costs that may belong in the FCC's definition of TELRIC. However, even if GTE possessed an elaborate (and expensive) managerial accounting system that facilitated the direct assignment (when appropriate) of

these common costs to specific network elements, this capability would result in only a minor change in the level of GTE's "total" common costs. The USOA accounts that GTE currently incorporates in its TELRIC studies represent a vast majority of all directly assignable costs.

Q. TO WHAT PRODUCT CATEGORIES HAS GTE ALLOCATED ITS COMMON COSTS?

A. GTE's TELRIC studies do not attempt to perform this allocation of common costs. (Paragraph 694 of the First Report states: "Certain common costs are incurred in the provision of network elements. As discussed above, some of these costs are common to only a subset of the elements or services provided by the incumbent LEC's. Such costs shall be allocated to that subset, and should then be allocated among the individual elements of services in that subset, to the greatest possible extent." (Emphasis added).) Allocation of these common costs to specific products for recovery is accomplished through GTE's pricing activities, not through GTE's incremental costing activities. Thus, GTE's TELRIC methodologies (as currently employed) will lead to incremental cost estimates that will assuredly be substantially below what the FCC intended to be incorporated in the development of TELRICs.

Q. DID GTE USE ANY OTHER METHODOLOGY TO EXAMINE WHETHER ITS COMMON COSTS ARE NOT DE MINIMIS?

A. Yes. GTE also reviewed its USOA data for 1995 as an independent analysis to be used as a validation (or not) of the magnitude of its "common costs." Page 2 of Exhibit No. DBT-1 presents GTE's analysis and illustrates the type of costs GTE considers to be "common" to all network elements as well as GTE's network services. It should be apparent to all that the work activities depicted in Exhibit No. DBT-1 are integral to the operation of an efficient telecommunications network.

Q. DO THE TWO METHODOLOGIES THAT GTE EMPLOYED TO ESTIMATE ITS FORWARD-LOOKING "COMMON COSTS" RESULT IN THE SAME ESTIMATES?

A. No, the real issue is not whether the resulting percentages are identical but whether they are reasonably close and also whether they are significantly different from zero; which they are. The FCC seemed to believe that many of these "common costs" should be allocated to the Company's TELRICs. But that arbitrary allocation process would just result in higher TELRIC estimates (and thus artificially lower the level of common costs). GTE believes that the implied allocation of common costs should not be done during the TELRIC-costing exercise, but is only appropriately done during the development of element-specific pricing.

Q. WHICH OF THE TWO COMMON COST FIGURES DID YOU EMPLOY IN YOUR PRICING DEVELOPMENT?

A. To be conservative, in those instances where the Company has employed the average contribution to "common costs" in the development of its proposed prices, GTE has elected to use the lower percentage presented in Exhibit No. DBT-1.

PRICING

NON-RECURRING CHARGES

Q. BASED ON GTE'S ANALYSIS OF NON-RECURRING COSTS, WHAT WHOLESALE NRCS ARE YOU PROPOSING?

A. In general, charges have been designed to recover separately the costs of service ordering and installation activities, recognizing to the extent possible any like functions required for various types of Local Service Request ("LSR") activity. By structuring the NRCs in this way, common charges are established that apply to all types of ordering activities, simplifying administrative processes for both the Company and the ALECs.

The proposed NRC structure reflects the remaining differences in anticipated costs for various types of ordering activities, and enables a reasonable relationship between the service connection charges and the incurred costs of associated work functions on an order-by-order basis.

Service ordering and installation charges are proposed both for unbundled services and resale services.

Q. HOW WERE THE SERVICE ORDERING CHARGES FOR UNBUNDLED SERVICES DESIGNED?

A. These NRCs were designed to recover the costs of work functions performed by GTE's National Open Market Center ("NOMC") on a per-order basis. The Initial Service Order charge is based on the costs for the install, summary bill master, disconnect and all other ordering functions, plus system processing.

Separate charges are proposed for a Transfer of Service and for a Customer Service Record Search. The Transfer of Service charge will be administered as required by the type of LSR; a transfer of service charge is required on any change in service from GTE to a ALEC where GTE must continue end user billing on the account, for CPE or directory advertising, for example.

Customer service record research is performed at the request of the ALEC to obtain a summary of the services subscribed to by the end user. The Customer Service Record Research charge will be administered whenever account information is requested.

The Subsequent Service Order charge will be applied on LSRs requesting a service change on an existing account, and is designed

to recover the costs of work functions performed by the National Open Market Center on a per-order basis for all service change requests.

Q. HOW WERE THE INSTALLATION CHARGES FOR UNBUNDLED SERVICES DESIGNED?

A. Installation NRCs were designed to recover the costs of work functions performed by facility assignment, dispatch assignment and customer zone technician personnel. A separate Loop Facility Charge for outside facilities work by customer zone technicians will be administered when such work is required to complete LSRs for unbundled loop services. The balance of the installation costs are recovered through installation charges on a per-line or per-port basis.

Q. WOULD YOU PLEASE EXPLAIN THE CIRCUMSTANCES WHICH WOULD CALL FOR APPLICATION OF THE PROPOSED RESALE NRCS?

A. Yes. There are two resale scenarios, which I will refer to as "new" and "conversion". A "new" resale service is one for an end user who establishes service within a GTE local service area, but chooses a ALEC reseller for local service. A "conversion" represents the loss of an existing GTE retail end user to a ALEC reseller.

Since the anticipated GTE ordering activities required to complete the associated LSRs are the same, and since the installation charges will

be applied only when the installation work is required (e.g., for "new" services) there was no need to distinguish between these two cases.

Q. WHAT NRC RATES IS GTE PROPOSING TO THE ALECS FOR SERVICE ACTIVITIES?

A. GTE's proposed rate structure and rate levels for NRCs are presented in Exhibit No. DBT-2. These rates are, in most cases, being proposed at the direct cost of the specific NRC activity.

UNBUNDLED NETWORK ELEMENTS

Q. WHAT ARE THE COMPANY'S PROPOSED RATES FOR UNBUNDLED NETWORK ELEMENTS?

A. Exhibit No. DBT-3A presents GTE's proposed rates for the various unbundled elements. Although the elements identified in Exhibit No. DBT-3A are priced as though they are unbundled elements, GTE does not believe that all the elements in Exhibit No. DBT-3A are "network elements" under the Telecommunications Act of 1996 ("Act").

Q. WHAT IS THE BASIS UPON WHICH THESE UNBUNDLED NETWORK ELEMENT RATES WERE DEVELOPED?

A. The procedure employed by the Company along with the economic (and practical) rationale supporting the procedure are the topic of Company's Economic Presentation in this proceeding. Based on the procedures prescribed in the Economic Presentation, the

development of the specific rates for each element presented above will be described in the following testimony.

1. Unbundled Loops

The basic unbundled loop was priced at GTE's estimate of its Stand Alone Cost ("SAC"). This $33.08 estimate was not only supported by GTE's Cost Study Submission but also by GTE's analysis of the Benchmark Cost Model - Version II ("BCM II") [The following companies have taken an active role in sponsoring BCM: Sprint, MCI, US West, and NYNEX. See "Benchmark Cost Model," submitted to the FCC, CC Docket No. 80-286, September 12, 1995. BCM II development has been led by Sprint and US West.] which provided another independent estimate of GTE's TELRIC for unbundled loops. The unbundled loop cost estimates resulting from the use of BCM II are presented in Tab 21 of GTE's Cost Study Submission and supported by Company witness Mr. Bert Steele.

2. Collocation

These elements were priced at GTE's proposed Interstate Tariffed rates.

3. Transport (Dedicated and Common), Multiplexing and SS7 Services

All of these network elements were priced at existing Facility for Interstate Access Tariff rates.

Q. WHAT WOULD BE THE COST IMPLICATION OF ALLOWING ALECS TO COMBINE UNBUNDLED NETWORK ELEMENTS OR REQUIRING GTE TO OFFER A "COMBINATION" OF NETWORK ELEMENTS?

A. The concern arises when ALECs wish to obtain multiple unbundled elements from GTE that resemble GTE's network only by combining network elements. Absent valid and complete rate rebalancing, such a proposal would render meaningless the Act's clear and intentional distinction between unbundled network elements, which are priced according to cost plus reasonable profit, and resale of retail services, which are priced at a wholesale discount.

A. UNBUNDLED LOOPS

Q. HOW HAVE YOU EVALUATED THE REASONABLENESS OF THE COMMON COSTS RECOVERED IN YOUR PROPOSED UNBUNDLED LOOP RATES?

A. In addition to the pricing rules described in GTE's Economic Presentation, I utilized three basic criteria to assure myself of the overall reasonableness of GTE's proposed unbundled loop rates. These are: (1) an evaluation of the relationship of GTE's unbundled loop TELRICs to their respective Interstate special access (special access is a "functionally" equivalent service to an unbundled loop)

rates; (2) the overall (looking at all services, both wholesale and retail) GTE average percentage contribution levels, above direct cost (I am defining direct cost here as TELRIC and/or TSLRIC), required to achieve full recovery of the Company's forward-looking common costs; and (3) the "upper bound" loop price presented in the Economic Presentation.

Q. PLEASE EXPLAIN YOUR APPLICATION OF THE ECONOMIC PRESENTATION'S "UPPER BOUND" LOOP PRICE.

A. The "upper bound" loop price can be considered an assumed price level that would preserve GTE's overall levels of contribution to common costs. If GTE were to propose an unbundled loop price above the "upper bound," it would potentially be making more revenue contributions (and maybe net income), than it does without the introduction of unbundled loops. Thus, GTE's pricing proposals for unbundled loops have a constrained ceiling, even if the "upper bound" price is below GTE's estimate of entrants' "Stand Alone Costs" for unbundled loops.

Q. WHY DID YOU RELY ON AN EVALUATION OF THE INTERSTATE SPECIAL ACCESS RATES IN DETERMINING THE REASONABLENESS OF THE COMMON COSTS RECOVERED IN YOUR UNBUNDLED LOOP RATES?

A. Special access elements (i.e., two-wire and four-wire special access/entrance facilities) are functionally equivalent to basic

unbundled loops. In addition, the FCC stated at paragraph 821 of its First Report that it believes interstate special access rates to be at or close to their economic cost levels. Thus, I reviewed GTE's interstate rates to determine their appropriateness as a benchmark for GTE's unbundled loop rates. When this evaluation indicated that the interstate rate for a 2-wire facility was reasonable (above its TELRIC with some contribution to common costs and also below the estimate of "upper-bound" ceiling price), the current two-wire Interstate Entrance Facility rate was proposed for the two-wire unbundled loop.

Q. IN THOSE CASES WHERE THE TELRIC EXCEEDED THE CURRENT INTERSTATE ENTRANCE FACILITY RATE, HOW DID YOU DETERMINE THE REASONABLENESS OF THE COMMON COSTS RECOVERED IN YOUR UNBUNDLED LOOP RATES?

A. When the current Interstate Entrance Facility rate was not a good indicator of the economic costs of an unbundled loop (i.e., below TELRIC), the company relied on the TELRIC as a price floor and the "upper-bound" price as a ceiling for the unbundled loop rate. That is, if the TELRIC was above the current Interstate Entrance Facility rate, then this rate could not be a good indicator of the economic costs of the unbundled loop element. In those cases, the Company determined a mark-up to provide a reasonable contribution to common costs. The proposed rate in this instance provides minimal contribution when compared to the rate required to recover an equal percentage mark-up. Again, in no case do I propose a rate for an

unbundled loop that I consider to be above the SAC of an unbundled loop.

Q. PLEASE EXPLAIN WHY YOU COMPARED GTE'S PROPOSED UNBUNDLED LOOP RATES TO A RATE DERIVED FROM AN "EQUAL PERCENTAGE MARK-UP" CALCULATION.

A. The FCC in its First Report at paragraph 696 concluded that "... one reasonable allocation method would be to allocate common costs using a fixed allocator, such as a percentage markup over the directly attributable forward looking cost." Although GTE disagrees with this methodology, we wanted to check our results against the FCC's proposal.

Q. IF THE COMPANY WOULD HAVE EMPLOYED AN EQUAL PERCENTAGE (FIXED ALLOCATOR) MARK-UP RATE AS ADVOCATED BY THE FCC, HOW WOULD THOSE RESULTS COMPARE WITH THE COMPANY'S METHODOLOGY?

A. The comparative results of this evaluation are presented in Exhibit No. DBT-3A. As can be seen in Exhibit No. DBT-3A, GTE's proposed 2-wire unbundled loop rate generates less contribution to the Company's "common costs" than would result from the FCC's fixed allocator procedure. But even though the FCC's methodology would result in higher rates for GTE than GTE's methodology, GTE does not advocate adoption of the FCC's methodology.

Q. WHAT PERCENT MARGIN CONTRIBUTION WILL GTE BE MAKING FROM ITS PROPOSED RATES FOR UNBUNDLED LOOPS?

A. Based on an average unbundled loop cost of $23.26, GTE will achieve an approximate 42% margin above cost with its proposed $33.08 unbundled loop rate. We believe this is a reasonable contribution to the Company's common costs, since on the average, across all product offerings GTE must achieve an average 47% margin above all TELRICs (directly attributable forward looking costs) to fully recover its "forward-looking" common costs.

Q. COULD GTE'S PROPOSED RATES FOR UNBUNDLED LOOPS BE CONSIDERED "MAKE-WHOLE" RATES?

A. Absolutely not. The major contributor to this "not-make-whole" situation is GTE's proposed unbundled 2-wire loop price of $33.08. As presented in GTE's Economic Presentation material, the upper bound price (contribution preserving price) for an average business unbundled loop would be $64.56. The difference between the $64.56 and GTE's proposed rate of $33.08 represents a permanent loss of contributions to the Company; $31.48 "on the average" will be lost for every unbundled loop provisioned to an ALEC's business customers. If ALECs target business customers with above average usage characteristics, the losses in contributions that the Company will experience will greatly exceed $31.48 per unbundled loop. As can be seen from Exhibit No. DBT-4, this loss of contributions results from

the loss of high margin services (toll, switched access, and vertical services) that will certainly be lost when an ALEC provides a GTE unbundled loop to a business customer. Exhibit No. DBT-4 presents similar data for GTE's average residential customers and presents the computed rates that GTE would be required to charge if it were to be made whole ($64.56 for business, $29.47 for residence, or $38.49 for an "average" unbundled loop), ignoring market realities. GTE's proposed unbundled loop rate of $33.08 is substantially lower than any make-whole rate.

It should be noted that the "upper bound" loop rate of $64.56 is the result of many decades of pricing services based on their perceived "value of service" along with the complementary outcome that revenue contributions from business customers should be used to keep residential rates low. GTE's current rate structure, as mandated by regulation, continues to provide incentives for the inefficient entry of competitors whose major objective will be to capture the above-market contributions that are used by the Company to support public policy objectives. ALECs will use these captured contributions to finance their entry into the local market.

Q. ASSUMING THE COMMISSION ACCEPTS GTE'S PROPOSED UNBUNDLED LOOP RATE, WILL SUCH A RATE PROVIDE REVENUE AND CONTRIBUTION OPPORTUNITIES FOR ALECS TO EFFECTIVELY COMPETE WITH GTE?

A. Yes, and the ALECs do not have to be as efficient as GTE for this to occur. Equally efficient entrants would be just incented to enter the marketplace if GTE's unbundled loop rate were proposed at its "upper bound" loop price; but market conditions preclude this rate from being proposed. As illustrated in Exhibit No. DBT-4, the financial opportunities available to ALECs, in terms of their ability to earn additional contributions to their common costs and overheads, would equal the difference between any revenues GTE would have received from the end users (assuming the ALECs match GTE's retail rates) less the rate of GTE's unbundled loop and any self-provisioned elements.

At a $33.08 unbundled loop rate, ALECs should be highly motivated to attract GTE's business customers, whose revenue streams exceed $69.00. For illustrative purposes let's assume that the ALEC obtains 10 percent of GTE's end user customers through the use of GTE's unbundled loop. Under this scenario, the annual revenue contributions available to the ALEC, assuming its price and cost structures mirror GTE's, would be nearly $4.7 million per year as shown in Exhibit No. DBT-4.

To look at it another way, GTE (on the average for combined business and residence lines) obtains approximately $15.23 contribution per month (Source: The total contribution levels are presented in Exhibit No. DBT-4); which provides for recovery of the

Company's forward-looking common costs. From Exhibit No. DBT-4, one can compute that an equally-efficient ALEC (which we will assume the ALEC is) should be able to generate approximately $28.31 in contribution from an average business customer. Actual contribution levels for ALECs should be larger since they are not likely to be targeting an average business customer, but more likely will be targeting high-volume business customers. In addition, by purchasing GTE's unbundled loop, ALECs will most likely not have any of the common costs that result from the provision of loops, thus it is likely that their level of common costs will be significantly below GTE's average per line amount ($15.23). Of course the ALECs' contribution gains are also GTE's contribution losses.

B. UNBUNDLED PORTS / LOCAL SWITCHING

Q. MR. TRIMBLE, DO YOU HAVE A PROPOSAL REGARDING THE PRICING OF LOCAL SWITCHING ELEMENTS?

A. As a part of my work on behalf of GTE, I addressed local switching pricing. However, it is my understanding that ACSI does not raise an issue for arbitration concerning the pricing of the switch.

C. APPLICATION OF ACCESS CHARGES

Q. WHAT ACCESS CHARGES, IF ANY, SHOULD BE COLLECTED ON A TRANSITIONAL BASIS FROM CARRIERS WHO PURCHASE GTE'S UNBUNDLED LOCAL SWITCHING ELEMENT?

A. GTE will assess a per minute charge to the ALEC for all traffic switched by GTE (local, intraLATA toll, and interLATA toll - both intra- and interstate). For calls that "traverse" an unbundled local switching element (i.e., port) that was purchased by the ALEC and would incur access charges in today's environment, GTE will assess the local switching rate plus the Carrier Common Line Charge (CCLC) and the residual interconnection charge (RIC). These charges should not be referred to as "access charges," rather they are local switching charges that provide continued contributions in lieu of access charges. They do not alter the ALEC's right/obligation to assess access charges. The ALEC will be responsible for assessing access charges on the IXC. Note that for calls that do not traverse an unbundled port, full switched access rates will apply.

The FCC notes that application of these elements is intended to provide continued contribution to universal service and local service rate support objectives. Therefore, application of the rates should continue at their currently tariffed levels and not at the diminished levels contained in the FCC's First Report. To do so would be ratemaking in an arbitrary and capricious manner, as no justification has been provided for applying only 75% of the RIC. In addition, GTE has not been provided an opportunity to rebalance those rate structures that are currently supported by the contributions from the RIC and CCLC rate elements.

Q. **HOW LONG SHOULD ANY TRANSITIONAL PERIOD LAST?**

A. Application of these rate elements should continue until a "reassignment" of revenues associated with these elements to appropriate rate elements is fully addressed. This is likely to occur through access reform, universal service and some form of rate rebalancing. GTE fully supports efforts to rationalize all rates, including local and access. It is our belief that only when rates have been fully rationalized can the magnitude of the funding issues associated with public policy choices be identified and dealt with. Further, GTE believes that funding of these public policy choices must be accomplished in a competitively neutral manner.

LOCAL INTERCONNECTION

Q. **WHAT RATE LEVEL DOES GTE PROPOSE FOR THE TERMINATION OF LOCAL TRAFFIC?**

A. Compensation for termination of local traffic should be based on cost plus a reasonable contribution. GTE is willing initially to accept a bill-and-keep arrangement in the interest of expediting the initiation of the competitive process. However, as soon as traffic becomes out of balance by plus-or-minus 10% or more, GTE would require a mutual compensation provision. GTE proposes to charge its interstate switched access rates for all minutes terminated to GTE that exceed that 10% "threshold of balanced traffic."

Q. WHY DO YOU BELIEVE THAT GTE'S CURRENT TARIFF RATES FOR INTERSTATE SWITCHED ACCESS ARE REASONABLE RATE LEVELS FOR LOCAL INTERCONNECTION?

A. Interstate switched access rates are rates that represent our current wholesale offering to interexchange carriers ("IXC"). GTE has no desire to continually introduce new rate levels that vary by "class of wholesale customer" (e.g., ALEC versus IXC, etc). The current switched access rates have been blessed by the FCC as appropriate rates for wholesale switching elements, and with GTE's "bill-and-keep" proposal, these proposed rates would not be effective until traffic becomes "out-of-balance". The arbitration process must be cognizant of the impacts that the "arbitration decision" will have on GTE's entire non-ALEC product offerings (i.e., decisions in this proceeding should not exacerbate nor accelerate the arbitrage of GTE's existing tariffs).

Q. DO MUTUAL COMPENSATION AGREEMENTS CREATE ANY ADDITIONAL RATEMAKING ISSUES?

A. Yes. Traditionally, in instances where GTE has paid other Local Exchange Carriers ("LEC"s) to terminate GTE-originated traffic, rate structures have been available that allowed GTE to recover those costs by levying charges to end users. Toll charges and Extended Area Service ("EAS") adders are examples of such rate structures. Historically, when GTE did not have a mechanism to levy charges to end users, GTE did not pay for the termination of its traffic. With

mutual compensation, GTE's expenses will increase. Recovery of such costs will necessitate a rate structure that allows charges to end users (the "cost-causer") for originating such traffic. Incumbent LECs, as well as all other telecommunications providers, should have the option of implementing such end user charges. This may require charging all end users for all originating traffic (perhaps with a provision for the terminating customer to accept such charges).

COLLOCATION

Q. WHAT RATES ARE PROPOSED BY GTE FOR PHYSICAL COLLOCATION?

A. GTE's proposed rates for physical collocation can be found in Exhibit No. DBT-5. These rates were filed with the FCC on October 2, 1996 and are expected to be approved on November 16, 1996. In general, the proposed non-recurring rate levels are set at the direct cost of the specific element, while the monthly recurring rates provide a reasonable level of contribution toward the recovery of common costs.

SERVICE PROVIDER NUMBER PORTABILITY

Q. WHAT RATES ARE PROPOSED BY GTE FOR SPNP?

A. GTE's proposed rates for SPNP can be found in Exhibit No. DBT-3A. The rate structure proposed by GTE includes a price per number ported. If an end user desires additional simultaneous call paths, then an additional call path price applies to each requested

simultaneous path. The prices for both of these rate elements were set at GTE's TELRIC estimates with an approximate 10% contribution to common cost.

FCC's PROXY RATES

Q. SHOULD THIS COMMISSION GIVE ANY CONSIDERATION TO THE FCC'S PROXY RATES?

A. No. This Commission should not give any consideration to using the default proxy rates proposed by the FCC in its First Report as amended by the FCC's September 27, 1996 announcement of reconsideration. First, those sections of the FCC's First Report that dealt with pricing rules, including proxy rates, were stayed by the U.S. Court of Appeals for the Eighth Circuit (pending final judicial review) on October 15, 1996. The Court imposed the stay with a detailed opinion, pending its final judicial review of the merits of GTE's objections. This fact alone eliminates the proxy rates from consideration by this Commission. In addition, I will address two points that conclusively illustrate that the FCC's proxy rates are absolutely inappropriate: (a) The results of cost studies prepared by GTE using the FCC's prescribed methodology, when compared with the FCC's mandatory proxy price ceilings, show that GTE's TELRIC costs are not covered by the proxy rates. Consideration of GTE's common costs, as required by the Act, would exacerbate this situation; and (b) GTE would experience a severe, prejudicial revenue shortfall under the FCC's proxy rates, as demonstrated by

comparing, on the one hand, the revenues that would be obtained using the FCC's proxy prices from an average customer in GTE's service area to, on the other hand, both the revenues generated from elements priced at GTE's TELRICs and to current average per line revenues.

Q. DESCRIBE THE RESULTS WHEN YOU COMPARE, AS YOU HAVE DESCRIBED, GTE'S TELRICS WITH THE FCC'S PROXY PRICE CEILINGS.

A. As Exhibit Nos. DBT-6 and DBT-7 demonstrate, when GTE applies the FCC's prescribed costing methodology, the costs that result are much higher than the FCC's proxy ceiling prices. Specifically, GTE's loop costs (without the NID) average at least 50 percent larger than the FCC's ceiling price for unbundled loops, and GTE's unbundled end office switching costs average at least two times the FCC's price ceiling of $0.004 per minute plus $2.00 for a switch port, even when all possible switching features and functions are not included. Moreover, as Exhibit No. DBT-8 shows, when GTE compares the revenues that would be obtained from the FCC's proxy prices to either the revenues from elements priced at the TELRICs computed by GTE or to current revenues per line, it is clear that a large gap exists. It is also obvious that the effective discount from the equivalent retail service price using the FCC proxy prices is much larger than the discount ceiling established by the FCC for resold services (25 percent).

Q. PLEASE EXPLAIN HOW EXHIBIT NO. DBT-6 WAS DEVELOPED AND WHAT IT SHOWS.

A. GTE's TELRIC cost studies are based upon the methodology prescribed by the First Report (at para. 672-702). GTE first calculated the direct forward-looking cost of each network element. GTE then determined the common costs that could not be attributed to any particular element or sub-group of elements. These latter costs are to be allocated to all network elements during the pricing process.

The First Report specified (at ¶ 744) that the rate for unbundled local loops be a flat, per-month charge. Further, the FCC specified (at ¶ 794, Appendix D) the statewide weighted average ceiling price that a state regulatory agency could adopt in an arbitration proceeding unless the state commission had completed its review of cost studies that comport to the FCC methodology. Exhibit No. DBT-6 shows the results of the GTE cost studies for loops in several states where GTE serves a large number of customers. The cost developed using a TELRIC methodology averages 50 percent larger than the FCC's statewide weighted average proxy ceiling price. This difference clearly supports my conclusion that the FCC's statewide weighted average loop proxy price is arbitrary and inappropriate (at least as it applies to GTE) because it is based upon a mixture of cost estimates for only the bare incremental cost of a loop, rather than being based upon a TELRIC methodology. Further, to assure a proper

comparison, neither the proxy price nor the GTE TELRIC results described above include any allocation of common costs as the FCC's own cost methodology requires.

Q. WHAT ASSUMPTIONS DID YOU EMPLOY IN THE DEVELOPMENT OF YOUR LOCAL SWITCHING COMPARISON FOUND IN EXHIBIT NO. DBT-7, AND WHAT WERE THE RESULTS?

A. The First Report specified (at ¶ 412) that the unbundled local switching network element is to include not only line-to-line and line-to-trunk "basic switching," but also all of the features, functions, and capabilities, such as a telephone number, directory listing, dial tone, signaling, and access to 911, operator services and directory assistance, all vertical features including custom calling and CLASS features, Centrex, and any technically feasible customized routing functions. The unbundled local switching rate structure was required to include "a combination of a flat-rated charge for line ports, which are dedicated to a single new entrant, and either a flat-rate or per-minute usage charge for the switching matrix and for trunk ports, which constitute shared facilities, best reflects the way costs for unbundled local switching are incurred." Id. at ¶ 810. Unless a state regulatory agency has completed its review of cost studies that comport with the FCC's costing methodology, it would have been required (Id. at ¶ 815) to set the rate for unbundled local switching "so that the sum of the flat-rated charge for line ports and the product of the projected minutes of use per port and the usage-sensitive charges

for switching and trunk ports, all divided by the projected minutes of use, does not exceed 0.4 cents ($0.004) per minute of use and is not lower than 0.2 cents ($0.002) per minute of use." The FCC's September 27 order on reconsideration introduced an additional fixed-rate port charge in the range of $1.10 to $2.00 per month.

Exhibit No. DBT-7 compares the FCC's proxy price for unbundled local switching to the results of cost studies prepared by GTE using the FCC's TELRIC methodology. Shown are GTE's cost estimates for three end office switching cost elements for a number of states where GTE serves a large number of customers. Those elements are: (i) a per minute cost to switch a call; (ii) a per line per month cost for the non-usage sensitive components of a switch (e.g., port); and (iii) a per line per month cost for a representative feature package. The cost element of a per line, per month cost for the feature package was chosen to comply with the FCC's mandate that a rate structure recover costs "in a manner that efficiently apportions costs among users." First Report at ¶ 755. It is very important to note that the feature package selected for illustrative purposes does not include all of the features, functions and capabilities that a switch may be capable of providing. The package selected includes many of the most commonly used features (e.g., Call Waiting, Speed Calling, Time of Day Routing). Also not included in any of the three cost estimates in Exhibit No. DBT-7 are the costs associated with a directory listing or the more esoteric switch features such as

customized routing and Meet-Me Conference Bridging. For comparison purposes, the analysis was performed twice for two states, Indiana and Ohio, to show the potential cost impact resulting from the incorporation of additional or advanced features.

To provide a logical comparison, GTE converted the two per line, per month cost elements into an equivalent per minute cost by dividing by the average switched minutes of use per month, including minutes associated with both local and long distance calls. The result of this calculation is a composite TELRIC per minute cost that is three times the FCC's upper price ceiling (even ignoring the two instances that incorporated feature packages which include extraordinary features). These results confirm my conclusion that the FCC's local switching proxy price was based upon information that estimated the incremental cost of line-to-line or line-to-trunk basic switching, but did not, as the FCC's own methodology requires, include either the costs related to other switch features and functions, or common costs. If GTE were to integrate all of the vertical features that its switches could provide into a "you get them all with switching" package, GTE's required price per minute of use would be astronomical. If each port came with a full complement of vertical services, the full TELRIC cost of the "free" vertical services could exceed $100 per month (see Tab 23 of GTE Cost Study Submission for the TELRICs of most vertical services), which could never be recovered with a $2.00 port charge and a $0.004 per minute of use switching charge. Even for a

reasonable level of vertical services, prices for a local switching network element would have to be in the $0.03 to $0.05+ per minute range for the Company to recover its forward-looking costs.

Q. IF THE DEFAULT PROXY RATES WERE IMPLEMENTED, WOULD GTE EXPERIENCE A SUBSTANTIAL REVENUE SHORTFALL?

A. Exhibit No. DBT-8 compares the FCC's proxy price for a combination of unbundled local switching and an unbundled local loop (i.e., the reassembled equivalent of local service) to both the results of GTE's TELRIC study, and to GTE's current average revenues per line. To prepare this comparison, GTE derived the average monthly usage per line, including local and toll minutes of use, for an average of residence and business lines. This average number of minutes was multiplied by the FCC's proxy price ceiling of $0.004 per minute, and that switched usage revenue amount was added to the flat rate components that would also be needed to comprise reassembled local service (i.e., a port at the FCC's $2.00 rate, a local loop and a Network Interface Device, or "NID"). GTE also derived the current revenues per line for an average of business lines, including flat rate local charges, local and toll usage charges, and vertical feature charges. When the unbundled network elements of switching (including the port), a loop and a NID are combined to replicate local service, the revenues from those elements when priced at the FCC's proxy rates are only fifty-seven percent of GTE's TELRIC for the combined service (Exhibit No. DBT-8, $21.30 compared to $37.31 per

month). This comparison of price to cost understates the shortfall, because by definition TELRIC does not include an allocation of common costs. Further, the FCC's proxy prices would provide new entrants with approximately a 62 percent discount off GTE's current average business retail revenue per line (Exhibit No. DBT-8, $21.30 compared to $56.27 per month). Clearly neither the FCC proxy price nor the TELRIC methodology come anywhere close to providing revenues that cover GTE's cost of providing service.

Moreover, the 62 percent discount that results from the FCC proxy price cannot be squared with the FCC's interim wholesale rates. Section 51.611 of the FCC's rules required that resale discounts should be "no more than 25 percent." Thus, the FCC's proposed requirements for its two pricing mechanisms (resale and unbundling) were totally inconsistent. The potential discount is significantly below the Company's costs and would result in GTE subsidizing competitive entry.

Based upon my and my staff's review of the FCC's First Report and FCC's subsequent September 27, 1996 reconsideration, I am convinced that the FCC's proxy price ceilings for unbundled loops and local switching are significantly understated.

Q. SHOULD THE FCC'S PROPOSED LOOP PROXY RATES, AS PUBLISHED IN ITS FIRST REPORT, PLAY ANY PART IN THE ARBITRATION PROCEEDING?

A. No. The FCC's proposed proxies have no relationship to reality. To begin with, they are subject to the Eighth Circuit's stay order. Further, for this state, the FCC's unbundled loop proxy price is $13.68. But GTE's 2-wire unbundled loop TELRIC is $23.26. A simple comparison of these two numbers summarily illustrates that the FCC's proxy rate is significantly understated. Similarly, the FCC's price is also significantly understated when compared with the BCM II produced TELRIC ($25.44).(See Tab 21 of GTE's Cost Study Submission.) This Commission must reject from consideration the FCC proxy rates and any other proposed rates that resemble the FCC's rates.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

FLORIDA
GTE

RECOVERY OF JOINT AND COMMON COSTS

		Revenue	TSLRIC (1)	Contribution
	Local			
1	Residence	$274,482,117	$420,151,824	($145,669,707)
2	Business	$250,180,256	$142,037,160	$108,143,096
3	Vertical Services	$50,874,520	$4,554,206	$46,320,314
4				
5	Total Local (2)	$575,536,893	$566,743,190	$8,793,703
6				
7	IntraLATA Toll	$53,792,000	$5,693,863	$48,098,137
8				
9	Switched Access	$320,896,000	$32,479,466	$288,416,534
10	2W & 4W Private & SAL (3)	$13,810,152	$12,764,952	$1,045,200
11				
12	Other	$305,000,955	$196,216,241	$108,784,714
13				
14	Total	$1,269,036,000	$813,897,712	$455,138,288

Note:

(1) *Total Service Long-Run Incremental Cost.*
(2) *Excludes other miscellaneous local services.*
(3) *Excludes transport and supplemental features.*

What's in GTE Florida's Common Costs

(a)	1995 Total Regulated Revenues	$1,269,036 K
(b)	Total Direct Costs	$813,898 K
(c)	Estimated Foward-Looking Common Costs (a-b)	$455,138 K
(d)	Estimated Common Costs as a % of Direct Costs (c/b)	56%

USOA Account	Common Cost Category	1995 Costs $K	Notes
21XX	**General Support Costs**		Capital Costs: Depreciation
2112	Motor Vehicle	$10,201	Return, and taxes associated
2114	Special Purpose Vehicle	$0	with the indicated capital
2115	Garage Work Equipment	$322	account.
2116	Other Work Equipment	$7,932	
2121	Building + Land	$41,661	(Non Central Office Only)
2122	Furniture	$1,797	
2123	Office Support Equipment	$2,113	
2123	Company Communications Equipment	$11,835	
2124	General Purpose Computers	$22,625	
	TOTAL 21XX	$98,486	
61XX	**Plant Specific Operations**		
611X	Network Support Expenses		
6112	Motor Vehicle Expense	$1,486	
6115	Garage Work Equipment Expense	$55	
6116	Other Work Equipment	$0	
612X	General Support Expenses		
6122	Furniture	$2,248	
6123	Office Equipment	$4,734	
6124	General Purpose Computers	$48,415	81% of Account (19% not Common)
	TOTAL 61XX	$54,938	
65XX	**Plant Non-Specific Operations**		
6512	Provisioning Expense	$2,365	
653X	Network Operations Expenses		
6532	Network Administration	$18,814	
6533	Testing	$22,283	
6534	Plant Operations Administration	$19,602	
6535	Engineering	$8,910	
	TOTAL 65XX	$71,974	
	Corporate Operations		
67XX 671X	Executive and Planning		
6711	Executive	$4,869	
6712	Planning	$3,045	
672X	General and Administrative		
6721	Accounting and Finance	$14,152	
6722	External Relations	$8,367	
6723	Human Resources	$11,009	
6724	Information Management	$55,873	87% of Account (13% not Common)
6725	Legal	$2,125	
6726	Procurement	$1,536	
6727	Research and Development	$4,515	
6728	Other G & A	$47,647	
	TOTAL 67XX	$153,138	
TOTAL COMMON COSTS		$378,536 K	
	Percent of Direct Costs (i.e., TELRICs) =	47%	

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GTFL
GTE Florida

WHOLESALE SERVICE NRCs

UNBUNDLED SERVICES	
Service Ordering (loop or port)	
Initial Service Order, per order	$47.25
Transfer of Service Charge, per order	$16.00
Subsequent Service Order, per order	$24.00
Customer Service Record Research, per request	$5.25
Installation	
Unbundled Loop, per loop	$10.50
Unbundled Port, per port	$10.50
Loop Facility Charge, per order (see Note 1)	$62.50
RESALE SERVICES	
Service Ordering	
Initial Service Order, per order	$41.50
Subsequent Service Order, per order	$24.00
Installation, per line	$26.25
Outside Facility Connection Charge, per order (see Note 2)	Note 2
SERVICE PROVIDER NUMBER PORTABILITY	
SPNP, per number ported	$10.50

Note 1: The Loop Facility Charge will apply when field work is required for establishment of a new unbundled loop service.

Note 2: The Outside Facility Connection Charge will apply when field work is required for establishment of a new resale service. The terms, conditions and rates that apply for this work are described in the Company's retail local service tariffs.

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Total Element Long Run Incremental Cost ("TELRIC")
Unbundled Network Elements
GTE - Florida

Unbundled Element	TELRIC /1 $/line/month	TELRIC /1 $/minute	Contract Rates	% Contribution	Weighted "Upper Bound"
(1) LOCAL LOOPS					
Local Loop					
2 Wire Loop	$23.26		$33.08	42.22%	$38.49
4 Wire Loop	$28.13		$52.93	88.16%	
Network Interface Device					
Basic NID	$1.32		$1.50	13.54%	
12x NID	$1.89		$2.10	11.11%	
(2) LOCAL INTERCONNECTION					
A Bill and Keep +/- 10% Traffic			Bill and Keep		
B Out of Balance TerminatingTraffic Average MOU		$0.0331591	$0.0107432	GTOC #1	
(3) SERVICE PROVIDER NUMBER PORTABILITY					
- Service Provider Number Portability per number ported	$4.65		$5.10		
- Simultaneous Call Capability - Additional	$2.78		$3.10		

Note: GTE's Fixed Allocator 47%

10/18/96

(1)

ACSI

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GTE
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Table 1

NUMERICAL EXAMPLE: UNBUNDLED LOOP RATE CALCULATION BASED ON AVERAGE BUSINESS CUSTOMER (DOLLARS PER LINE PER MONTH)

	Revenue	TSLRIC (1)	Contribution
Basic Retail Service	$37.49	$24.60	$12.89
End-User Line Charge	$5.84	$0.00	$5.84
Local Toll	$3.32	$0.45	$2.87
Vertical Services	$1.33	$0.63	$0.70
Switched Access			
Interstate			
CCLC (2)	$6.69	$0.00	$6.69
Other	$6.49	$1.70	$4.79
Intrastate	$8.05	$0.53	$7.52
Total	$69.21	$27.91	$41.30

Notes:
(1) *Total Service Long-Run Incremental Cost.*
(2) *Carrier Common Line Charge.*

"UPPER BOUND" LOOP PRICE

Unbundled Loop TSLRIC (1)	$23.26
Plus	
Incremental Marketing Costs	n/a
Plus	
Opportunity Costs (Forgone Contribution)	$41.30
Total	$64.56

Note:
(1) *Total Service Long-Run Incremental Cost.*

GTE

ACSI

Table 2

NUMERICAL EXAMPLE: UNBUNDLED LOOP RATE CALCULATION BASED ON AVERAGE RESIDENTIAL CUSTOMER (DOLLARS PER LINE PER MONTH)

	Revenue	TSLRIC (1)	Contribution
Retail Rate	$12.42	$24.36	($11.94)
End-User Line Charge	$3.50	$0.00	$3.50
Local Toll	$2.01	$0.18	$1.83
Vertical Services	$2.50	$0.05	$2.45
Switched Access			
Interstate			
CCLC (2)	$3.13	$0.00	$3.13
Other	$3.04	$0.79	$2.25
Intrastate	$5.33	$0.34	$4.99
Total	$31.93	$25.72	$6.21

Notes:
(1) *Total Service Long-Run Incremental Cost.*
(2) *Carrier Common Line Charge.*

"UPPER BOUND" LOOP PRICE

Unbundled Loop TSLRIC (1)	$23.26
Plus	
Incremental Marketing Costs	n/a
Plus	
Opportunity Costs (Forgone Contribution)	$6.21
Total	$29.47

Note:
(1) *Total Service Long-Run Incremental Cost.*

Table 3

Contribution Preserving Loop Rates
(Upper Bound Ceiling Price)

GTE

ACSI

	Unbundled Loop Cost	Lost Contribution to Margin	Total (Rate)
Business	$23.26	$41.30	$64.56
Residence	$23.26	$6.21	$29.47
WTD Bus/Res	$23.26	$15.23	$38.49

Table 4

Margin Opportunities for CLC's

	Market Share (10%) (a)	CLC's Retail Revenue (b)	CLC's Expense (c)	Annual Margin (d = a * (b-c) * 12)
Business	49,704	$69.21	$40.90	$16,885,443
Residence	143,730	$31.93	$38.95	($12,107,815)
WTD Bus/Res				$4,777,628

Total Element Long Run Incremental Cost ("TELRIC")
Unbundled Network Elements
GTE - FLORIDA

Collocation Elements	Rating Element	TELRIC /1 Costs	Proposed Rates /2
(1) Nonrecurring Costs			
Physical Engineering Fee	Per Request	$ 6,946.00	$ 6,948.00
Building Modifications	Per Central Office		
Simple		$ 13,484.00	$ 13,490.00
Moderate		$ 18,448.00	$ 18,450.00
Complex		$ 23,514.00	$ 23,520.00
DC Power	Per 40 Amps	$ 2,900.00	$ 2,900.00
Cable Pull	Per 12 Fibers	$ 1,213.00	$ 1,206.00
Cage Enclosure	Per Cage	$ 4,559.00	$ 4,558.00
(2) Monthly Recurring			
Partitioned Space	Per Sq. Ft	$ 1.59	$ 2.38
DC Power	Per 40 Amps	$ 368.24	$ 443.91
Cable Space	Per 12 Fibers	$ 12.60	$ 14.00
(3) Monthly Recurring for EIS			
DS0 level connection		$ 1.43	$ 2.36
DS1 level connection		$ 3.59	$ 5.93
DS3 level connection		$ 27.81	$ 45.91

1/ Includes volume sensitive and average volume insensitive costs.
2/ Filed in GTOC #1 10/02/96, to be effective 11/16/96.

LOOPS

STATE	FCC LOOP PROXY CEILING PRICE (a)	TELRIC UNBUNDLED LOOP (b)	PROXY PRICE TO TELRIC DIFFERENCE (c = b / a)
GTE California	$11.10	$23.09	208.02%
Contel California	$11.10	$34.98	315.14%
GTE California West Coast	$11.10	$37.78	340.36%
GTE Florida	$13.68	$21.94	160.38%
GTE Hawaii	$15.27	$18.66	122.20%
GTE Indiana	$13.29	$19.72	148.38%
Contel Indiana	$13.29	$22.48	169.15%
Alltel Indiana	$13.29	$24.43	183.82%
GTE Kentucky	$16.70	$26.91	161.14%
GTE Michigan	$15.27	$19.54	127.96%
Alltel Michigan	$15.27	$21.59	141.39%
GTE Minnesota	$14.81	$31.61	213.44%
GTE Missouri	$18.32	$31.52	172.05%
GTE North Carolina	$16.71	$26.00	155.60%
Contel North Carolina	$16.71	$30.16	180.49%
GTE Ohio	$15.73	$20.28	128.93%
GTE Oregon	$15.44	$21.49	139.18%
GTE Pennsylvania	$12.30	$19.04	154.80%
Contel Pennsylvania	$12.30	$20.18	164.07%
GTE Texas	$15.49	$22.46	145.00%
Contel Texas	$15.49	$35.08	226.47%
GTE Virginia	$14.13	$32.16	227.60%
Contel Virginia	$14.13	$26.63	188.46%
GTE Washington	$13.37	$22.20	166.04%

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END OFFICE SWITCHING

STATE	TELRIC PER MINUTE (a)	TELRIC PER PORT (b)	TELRIC FEATURE PACKAGE (c)	COMPOSITE TELRIC PER MINUTE (d = a + ((b + c) / MOU))	FCC PROXY PER MOU (e)	FCC PROXY PER PORT (f)	COMPOSITE FCC PROXY PER MOU (g = e + (f / MOU))	RATIO: TELRIC TO FCC UPPER BOUND (h=d/g)
GTE California	0.0034840	$4.63	$2.61	$0.0107	$0.0040	$2.00	$0.0060	1.79
Contel California	0.0049379	$4.52	$2.61	$0.0122	$0.0040	$2.00	$0.0060	2.02
GTE California West Coast	0.0042122	$4.69	$2.61	$0.0131	$0.0040	$2.00	$0.0064	2.04
GTE Florida	0.0033592	$4.51	$6.90	$0.0179	$0.0040	$2.00	$0.0065	2.73
GTE Hawaii	0.0073568	$5.22	$6.69	$0.0244	$0.0040	$2.00	$0.0069	3.56
GTE Indiana *	0.0030568	$4.08	$15.67	$0.0256	$0.0040	$2.00	$0.0063	4.07
GTE Indiana (Feature Pak 1000)	0.0030568	$4.08	$6.97	$0.0156	$0.0040	$2.00	$0.0063	2.49
Contel Indiana *	0.0038611	$4.08	$15.67	$0.0269	$0.0040	$2.00	$0.0063	4.25
Contel Indiana (Feature Pak 1000)	0.0038611	$4.08	$6.97	$0.0167	$0.0040	$2.00	$0.0063	2.65
Alltel Indiana *	0.0027506	$4.46	$15.67	$0.0239	$0.0040	$2.00	$0.0061	3.91
Alltel Indiana (Feature Pak 1000)	0.0027506	$4.46	$6.97	$0.0147	$0.0040	$2.00	$0.0061	2.42
GTE Kentucky	0.0031122	$3.65	$3.01	$0.0115	$0.0040	$2.00	$0.0065	1.77
GTE Michigan	0.0031419	$3.63	$4.06	$0.0119	$0.0040	$2.00	$0.0063	1.90
Alltel Michigan	0.0054617	$3.95	$4.06	$0.0138	$0.0040	$2.00	$0.0061	2.27
GTE Minnesota	0.0039068	$2.55	$0.87	$0.0081	$0.0040	$2.00	$0.0064	1.25
GTE Missouri	0.0025909	$3.04	$2.65	$0.0090	$0.0040	$2.00	$0.0062	1.44
GTE North Carolina	0.0020931	$3.65	$4.48	$0.0108	$0.0040	$2.00	$0.0061	1.76
Contel North Carolina	0.0026639	$3.65	$4.48	$0.0133	$0.0040	$2.00	$0.0066	2.01
GTE Ohio	0.0030980	$4.46	$15.29	$0.0262	$0.0040	$2.00	$0.0063	4.13
GTE Ohio (Feature Pak 1000) *	0.0030980	$4.46	$4.24	$0.0133	$0.0040	$2.00	$0.0063	2.09
GTE Oregon	0.0040910	$3.97	$5.97	$0.0168	$0.0040	$2.00	$0.0065	2.55
GTE Pennsylvania	0.0027488	$4.79	$2.39	$0.0120	$0.0040	$2.00	$0.0066	1.82
Contel Pennsylvania	0.0039634	$4.79	$2.45	$0.0123	$0.0040	$2.00	$0.0063	1.95
GTE Texas	0.0035126	$4.39	$4.90	$0.0147	$0.0040	$2.00	$0.0064	2.29
Contel Texas	0.0068937	$4.09	$4.88	$0.0178	$0.0040	$2.00	$0.0065	2.75
GTE Virginia	0.0034657	$2.35	$2.10	$0.0086	$0.0040	$2.00	$0.0063	1.37
Contel Virginia	0.0030602	$2.42	$2.10	$0.0077	$0.0040	$2.00	$0.0060	1.27
GTE Washington	0.0034332	$3.15	$2.08	$0.0096	$0.0040	$2.00	$0.0064	1.51
							Average	2.36
							Average w/standard feature package	2.07

* Nonstandard feature packages

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COMPARISON OF PROXY PRICES WITH GTE FLORIDA TELRIC AND REVENUES

Attachment 8

	TELRIC	FCC Proxy Prices	Current GTE Avg Bus Rev per Line per Month	
Local Loop	$21.94	$13.68	Local Service Price	$38.90
Network Interface Device	$1.32	$1.32	Switched Access	$7.08
Switching with Port	$14.05	$5.15	100% TIC	$1.22
75% TIC	n/a	$1.15	Local Switching	$4.43
			Vertical Services	$1.33
			IntraLATA Toll	$3.32
Per Line	$37.31	$21.30	Total Revenues	$56.27

Notes: Switched access transport excluded from costs & revenues above.
Carrier Common Line revenues excluded from all calculations
Subscriber Line Charge revenues included in average rate per switched access line.
TIC = Transport Interconnection Charge

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ACSI

PART VI

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY OF GREGORY M. DUNCAN

DOCKET NO. 961169-TP

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Gregory Michael Duncan. My business address is 555 South Flower Street, Suite 4100, Los Angeles, Ca 90071

Q. BY WHOM ARE YOU EMPLOYED? WHAT IS YOUR POSITION?

A. I am employed by National Economic Research Associates as Vice President. Before that, I worked for GTE Laboratories, Inc., with the Department of Economics and Statistics where I was a Staff Scientist; a position reserved for a small number of independent researchers with responsibility for developing, proposing and conducting research as well as supervising the research of other economists and statisticians at GTE Labs. I received a M.A. in Statistics in 1974 and a Ph.D. in Economics in 1976, both from the University of California, Berkeley. Beginning in 1975, I taught in the Economics Department and Statistics Program at Northwestern University in Evanston, IL, where I was an Assistant Professor of Economics and of Statistics. There, my teaching included demand and production theory, econometrics and statistics. I also conducted research on demand and production that appeared in refereed journals. I left Northwestern in 1979 to join the faculty at Washington State University. There, I served as Professor of Economics and of Statistics. My research

continued in demand, production theory and applications as well as in other topics. During that period, I was one of the first Associate Editors of the academic journal *Economic Theory*. I have published many referred papers in cost, production, and demand analysis, including the results of the research that supported other testimony before a number of regulatory commissions. During my career, I have spent a good part of my time working on the analysis of cost data and have been fortunate enough to be able to contribute much of it to the academic literature on costs and production. My papers in this area appear in the *International Economic Review, Proceedings of the National Academy of Sciences, Econometrica,* and the *Journal of Risk and Uncertainty*. In addition, under my supervision, a number of Ph.D. students at Northwestern University, Washington State University and Boston University wrote dissertations that utilized modern cost and production methods. The results of some of these dissertations have also been published as contributions to the economic profession's understanding of costs. My particular expertise includes the formulation, specification, estimation and testing of cost models. And, as a consequence, I was asked to teach and have taught numerous graduate-level courses that covered directly and indirectly all aspects of cost analysis.

Q. DO YOU ADOPT THE ATTACHED REPORT (MARKED AS GMD-1) AS YOUR DIRECT TESTIMONY ON BEHALF OF GTE FLORIDA INCORPORATED IN THIS PROCEEDING?

A. Yes, I do.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.

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NATIONAL ECONOMIC
RESEARCH ASSOCIATES
555 S. FLOWER STREET, LOS ANGELES, CALIFORNIA 90071
TEL: 213.628.0131 FAX: 213.628.9368

nera
Consulting Economists

ECONOMIC EVALUATION OF VERSION 2.2 OF THE HATFIELD MODEL

by

Gregory M. Duncan

and

Timothy J. Tardiff

September 14, 1996

White Plains, NY / Washington, DC / Los Angeles, CA / Cambridge, MA / Philadelphia, PA / San Francisco, CA / New York, NY / Ithaca, NY / Seattle, WA / London / Madrid
A MARSH & MCLENNAN COMPANY

EXECUTIVE SUMMARY

Version 2.2 of the Hatfield Model is fundamentally flawed, and therefore does not provide reasonable estimates of the costs of incumbent local exchange carrier (ILEC) network elements. Particular shortcomings of the model fall into two major areas. First, the model has never been directly empirically validated. By this we mean that the predictions of the model have never been compared to actual observable data to see how well the model predictions comport with reality. Second, the model fails direct internal consistency checks of its validity, indirect comparisons of its validity by comparison of its results to cost models that do depend on real data, and is based on a set of restrictive assumptions whose lack of realism would try the confidence of even the most partisan proponent. Particular shortcomings of the model include the following.

- The model is based on static notions of cost rather than the dynamic notions that are relevant to regulations that seek to emulate the workings of dynamic competitive markets.
- There is no attempt at empirical validation of the model or its predictions.
- Its predictions fail explicit internal consistency requirements that are a necessary feature of structures capable of representing the minimum cost of producing telecommunications services using the most efficient forward-looking technology[1].
- Its predictions do not agree with other industry models that are based on firm specific data.
- The assumption that all volumes currently served by local exchange carriers will be served by a brand new entrant that instantly materializes is inconsistent with both reality and sound economics. Accordingly, costs based on such a model will *not* be representative of the costs incumbent LECs incur providing services and unbundled networks components.

---

[1] By the most efficient forward looking technology, we mean the least cost technology taking the installed network as a base and building from that using the least cost technology available for producing the services required.
(continued...)

- The inputs (e.g., central office equipment prices) are consistently lower than what local exchange companies actually pay.

This report evaluates a number of additional, specific shortcomings of the model, including (1) the use of Census Block Groups to represent distribution plant, (2) the misuse of utilization (fill) factors, (3) the understatement of local switching costs, and (4) the understatement of the cost-of-capital and the rates of depreciation that will prevail under competitive conditions when network elements are offered on an unbundled basis. The cumulative impact of these various effects is that the Hatfield model understates the cost of loop plant and local switching by about one-third. Stated on a per line basis, the Hatfield model understates loop and local switching costs by about $9.00 per month.

Of course, the ultimate concern is how network elements are unbundled in a way that promotes competition. Basing prices on costs that no real-world provider could hope to meet is *anti-competitive*, because it would stifle, not promote, the most effective type of competition—facilities-based. In addition, requiring incumbent LECs to sell inputs at non-compensatory rates would have the deleterious effects of forcing whatever customers that may remain with the LEC to subsidize the below-cost input prices and/or severely handicapping firms that represent a substantial proportion of this dynamic industry.

(...continued)

Ignored in most "greenfield" or "scorched node" arguments is that to actually use them one would have to tear up useful plant. None of these methods take into account either the direct or indirect costs of such a strategy.

I. INTRODUCTION

In its May 16, 1996 comments and May 30, 1996 reply comments in the Federal Communications Commission's (FCC) Local Competition Investigation, AT&T introduced Version 2.2 of the Hatfield model.[2] On June 14, 1996, AT&T and MCI filed the same model in the unbundling proceeding in California.[3] The purpose of this paper is to demonstrate that the Hatfield model does *not* provide reasonable estimates of the costs of local exchange company (LEC) network elements, either for LECs in general or any particular LEC, because the model (1) departs from fundamental economics in a number of significant ways, (2) contains a number of inaccuracies in execution that depart from reality, (3) produces results that are inconsistent with what can actually be observed, and (4) implies a fantasy version of both regulation and functioning markets.[4]

Particular shortcomings of the model include the following:

- The model is based on static notions of cost rather than the dynamic notions that are relevant to regulations that seek to emulate the workings of dynamic competitive markets.
- There is no attempt at empirical validation of the model or its predictions.

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[2] The Hatfield model is somewhat of a moving target. For example, MCI introduced a different ("greenfield") version of the model in its May 16 comments (Hatfield Associates, Inc., "The Cost of Basic Network Elements: Theory, Modeling, and Policy Implications"). Versions of the model have received extensive attention in ongoing universal service and unbundling proceedings in California.

[3] We understand that the model has been filed in a number of other states as well.

[4] Given the recent release of the Hatfield model and the constant changes made by the proponents, our evaluation is preliminary in nature, and will undoubtedly uncover more errors. As we understand it, working versions of Version 2.2 Release 1 only became available in late June. We received a working version of Version 2.2 Release 2 on August 26. The model is extremely complex and has limited and incomplete documentation. As a thorough evaluation is necessarily time-consuming, one was not possible within the time period available for our evaluation. Consequently, as new discoveries are made, they are added to the text as appendices. One must also ask how many more releases are in the offering. As an indication of how complex the program is we note the following facts. The number of pages is 4,210. The number of cells is 2,720,973. The number of cells that are physically changeable is 1,431,335. The number of cells that are intended for user input is 370; and the number of cells that contain a formula is 1,413,043. Most of the inputs are undefined so that a knowledgeable user would need to guess at the appropriate definition.

- Its predictions fail explicit internal consistency requirements that are a necessary feature of structures capable of representing the minimum cost of producing telecommunications services using the most efficient forward-looking technology.

- Its predictions do not agree with other industry models that are based on firm specific data.

- The assumption that all volumes currently served by local exchange carriers will be served by a brand new entrant that instantly materializes is inconsistent with both reality and sound economics. Accordingly, costs based on such a model will *not* be representative of the costs incumbent LECs incur providing services and unbundled networks components.

- The inputs (e.g., central office equipment prices) are consistently lower than what local exchange companies actually pay.

II. EXTERNAL VALIDITY

We begin with the most vexing of the many problems accompanying the Hatfield Model. That is its lack of independent or external verification. Whether estimating costs using a pure econometric approach, a pure engineering approach or some hybrid approach, common practice requires validating a model by comparison to real world phenomena.

Ideally, a model such as the Hatfield Model would be calibrated or estimated using cost data from a source similar to those desired to be predicted. For example, the typical cost model would attempt to minimize differences in its predictions and real world data. If TS/TELRICs were readily available and observable for a number of firms over a period of time, then the model would be calibrated using all of the data from a subset of the firms, presumably a group of firms representative of the group whose TS/TELRICs we wish to predict. The model developed during this phase would then be subjected to a validation test, that being a comparison of the predictions of the model for firms left out of the calibration subset to the actual TS/TELRICs of those firms. For example if there were data on five or six firms one might hold out the data for two of them and calibrate the cost model on the basis of the other four. Then the model would be used to predict the TS/TELRICs for the two firms held out. The validity of the model would be judged by comparing the predictions of the model with the

data that obtained in the real world for the firms in the validation data set using a variety of well known and widely accepted criteria.

This ideal procedure is not always followed, of course. Data are precious and expensive; so often other types of validation are used where the whole data set can be employed in the calibration or estimation phase. Again the methods are well known and need not concern us here because the Hatfield model is not based on sampling data nor has it ever been validated to our knowledge. Consequently, its validity or lack thereof must be judged on other grounds. These include the realism of the model's assumptions, comparison of the results to those produced by other models, and the extent to which the model satisfies internal validity checks. The model will be shown to fail miserably in these other criteria, leaving absolutely no basis supporting the model.

One particular feature of the structure of the Hatfield model needs special verification, that is its assumption that the cost function is additive in element cost components[5]. This assumption is particularly troublesome because it assumes away the existence of joint and common costs without testing to see whether or not there really are. Ordinarily, such features of a model are subjected to statistical testing to validate the structure. Indeed, Baumol, Willig and Ordover base their claim that pricing at TELRIC is economically valid on a mistaken belief that the Hatfield Model proves that the costs are indeed separable, whereas it merely assumes that fact as part of its construction so necessarily reproduces such a result when run. The fact of the matter is that this crucial aspect of the Hatfield Model has never been tested at all, neither have any other features of the model.

Another reason for needing formal external validation is the fact that the model is written in EXCEL which is a language ill suited for modeling. While easy to use, it is difficult to debug in the best of circumstances. Particularly disturbing here is there are thousands of

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[5] If a cost function $C(y_1,...,y_n)$ can be written as $C(y_1,...,y_n)=C_1(y_1)+...+C_n(y_n)$ it is said to be additive. This is the only structure consistent with TELRIC pricing. This is because there are no joint or common costs. The TSLRICs are simply the components, e.g. $TSLRIC_1 = C_1(y_1)$.

lines of undocumented code. Moreover, the auditing feature that allows some minimal tracing of the code are turned off by the Hatfield authors and password protected preventing the feature to be turned back on. Consequently, the only way to figure out if all the formulas are correct is to see if the model correctly comports with reality.

The rest of the paper is divided into two parts. The first part concentrates on the realism of the assumptions and comparison of Hatfield Model outputs to those of other cost models. The second part demonstrates that the Hatfield Model is theoretically incapable of representing the minimum cost of producing telecommunications services using the most efficient forward looking technology.

III. ECONOMIC THEORY

The Hatfield model documentation characterizes the model as "scorched node"—it starts with the existing locations of central offices, then builds a brand new system instantaneously from the ground up. While proponents of this approach claim that it approximates the textbook definition of long-run cost, it is grossly at odds with how real businesses incur costs, especially capital-intensive firms that expand their facilities by adding capacity in discrete modules.[6] Almost five years ago, Professor Alfred Kahn advised the FCC of the need to employ a realistic and practical perspective.

> In strict economic terms, the concept of long-run marginal costs relates to a hypothetical situation in which all inputs are variable, and a supplier confronts the possibility of installing entirely new facilities, in effect from the ground up. And the "marginal" relates to the incremental cost of a single unit of output. The concept of long-run incremental cost, in contrast, is more pragmatic: it takes a firm's past history as given, does not assume that it is writing on a blank slate, but recognizes that it will ordinarily be planning the installation of new capacity, at whatever that additional investment will cost given its current

[6] Even the theoretical definition must be conditioned by reality. For example, Professor Varian has noted: "Long run and short run are of course relative concepts. Which factors are considered variable and which are considered fixed depends on the particular problem being analyzed. You must consider over what time period you wish to analyze the firm's behavior and then ask what factors can the firm adjust during that time period." Hal R. Varian, *Microeconomic Analysis, Third Edition*, New York: Norton, 1992, p. 66.

> situation, and it spreads the costs over either the total output of that additional capacity—in that sense it is a kind of average incremental cost—or over the additional output that is likely to be induced by a price reduction under consideration (or curtailed in response to a price increase.)[7]

An additional difficulty with the Hatfield scorched view of the world is that it ignores the fact that in an industry with technological change, which clearly characterizes telecommunications, no company would set prices based upon such costs. The reason is that when technology advances, a new entrant taking advantage of latest technologies would drive prices down. Basing prices on the Hatfield view of the world would never recover costs. Professor Kahn and Dr. Tardiff recently noted this phenomenon as follows:

> In a world of continuous technological progress, it would be irrational for firms constantly to update their facilities in order completely to incorporate today's lowest-cost technology, as though starting from scratch: investments made today, totally embodying today's most modern technology, would instantaneously be outdated tomorrow and, in consequence, never earn a return sufficient to justify the investments in the first place. For this reason, as Professor William J. Fellner pointed out many years ago, firms even in competitive industries would systematically practice what they calls "anticipatory retardation," adopting the most modern technology only when the progressively declining real costs had fallen sufficiently below currently prevailing prices as to offer them a reasonable expectation of earning a return on those investments over their entire economic life. In consequence even perfectly competitive prices would not be set at the level of these (totally) current costs—unless, to put it another way, the calculated costs of the new plant included an extremely high rate of return and of depreciation, in reflection of the exposure of any such investments to costs and prices progressively declining in real terms over their life.[8]

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[7] Affidavit of Alfred E. Kahn, Before the Federal Communications Commission, In the Matter of Expanded Interconnection with Local Telephone Company Facilities, CC Docket No. 91-141, August 6, 1991.

[8] Declaration of Alfred E. Kahn and Timothy J. Tardiff, Before the Federal Communications Commission, In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, May 30, 1996. (footnote omitted). Professor Jerry Hausman's reply affidavit, filed in this docket on the same day, makes a similar point in the context of depreciation. Professor Hausman's findings will be discussed later when depreciation issues are addressed.

The Hatfield model's scorched approach to cost modeling essentially assumes that a LEC's loses one hundred percent of its demand for telephone services on day one. In effect, the succession of incumbent LECs would hand over their entire business to the newcomer, which in turn would instantly size its plant to perfectly accommodate this demand, taking advantage of all the economies that come with serving the demand with perfectly sized facilities obtained at the maximum volume discounts. It would be nice if the world worked this way, because we would all like to pay less for what we consume. Unfortunately, it does not. A real firm grows to meet demand as it materializes. As such, it adds capacity taking into account the trade-off between the lower per unit costs of bigger modules (e.g., larger cable sizes) and the costs of carrying the unused capacity that deploying larger modules would entail.

In short, the Hatfield model creates a contradictory world in which both full competition and the scale economies that would ordinarily dictate a monopoly structure coexist:

- Only a single firm can enjoy the economies of scale from deploying larger modules and the high capacity utilization from efficient inventory management.
- The firm is subject to the cost reducing effects of using the latest technology, while at the same time its equipment depreciates at regulatory-prescribed rates and its cost-of-capital is the same as for regulated utilities and it is guaranteed the full level of demand that a monopoly carrier would enjoy. Unfortunately, as discussed by Dr. Hausman, competitive markets are inconsistent low depreciation rates, guaranteed demand and guaranteed returns.

IV. SPECIFIC COMPONENTS OF HATFIELD MODEL

The Hatfield model reports results for several networks components: (1) loops, (2) local switching, (3) signaling, (4) transport, and (5) operator systems. Because the first two components constitute a substantial proportion of the total cost and have been subject to more extensive examination in the California proceedings than the other components, our review focuses on these components.

A. Loops

For the most part, the Hatfield model's development of loop costs relies on an incompletely documented revision to the Benchmark Cost Model (BCM Plus). The original model (BCM1) has been filed with the FCC by MCI, NYNEX, Sprint, and U.S. West. BCM1 identified geographic areas where costs of basic residential access service are relatively high or low cost. The sponsors describe their model as follows.

> The BCM does not define the actual cost of any telephone company, nor the embedded cost that a company might experience in providing telephone service today. Rather the BCM provides a benchmark measurement of the relative costs of serving customers residing in given areas, i.e., the CBGs [Census Block Groups].[9]

What is noteworthy about this description of purpose is that the costs that the BCM produces are not the actual costs of any particular company. Despite this acknowledgment by the BCM's sponsors, the proponents of the Hatfield model incorrectly propose to use parts of the BCM, albeit revised, to produce actual prices for the incumbent LEC's unbundled elements.

The BCM starts with the current locations of the LEC's central offices. The model constructs loop plant (feeder, distribution, and associated structures) from the central office locations to the households in the CBG by means of specific engineering rules, e.g., the lines served by a particular central office are the result of assigning CBGs to the closest wirecenters.

This assignment does not necessarily assign the households within the CBG to the wire center that actually serves them. For example, in California, Pacific Bell and GTE have found that the BCM assigns substantial percentages of households to the wrong wirecenter. As a result, the network represented by the BCM departs from the LEC's actual network. The Hatfield model's proponents may argue that the BCM has assigned households more efficiently than the LECs have. A more likely explanation is that the extremely abstract representation of

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[9] MCI Telecommunications Corporation, NYNEX Corporation, Sprint Corporation, and US West Inc., "Benchmark Cost Model," Submitted to the FCC, CC Docket No. 80-286, September 12, 1995, p. 3.

the network—a featureless plain[10]—ignores real world constraints, such as physical barriers, e.g., rivers, lakes, and hills, between a CBG and its closest central office.

Because the BCM assumes that loop facilities are installed instantaneously, the model selects the largest available cable sizes to serve a given static volume. In contrast, because real networks evolve as demand grows and changes, firms face a trade-off between deploying larger cable sizes (and enjoying the economies of scale that result at or near full capacity) versus using smaller sizes, thus reducing the carrying costs of the extra inventory that large cable sizes entail. In this regard, the BCM may underestimate loop cost, because it could assign larger/less costly facilities (on a per-unit basis) than an efficient firm would deploy. Such "savings" are illusory, not real. What has been left out of the BCM is the carrying charges on the unused capacity that the larger cable sizes would require for several years, until actual demand materializes.

A number of calculations built into the BCM can produce inaccurate estimates of efficient loop costs.

1. Installation and Structure Costs

For loop plant, both feeder and distribution, BCM1 calculates the investment costs of installation and structures by multiplying the cost of cable by factors that represent the installation labor cost and support structure investments. While properly developed factors can give reasonable representations of average installation and structure costs if current conditions are similar to those from which the factors were based, problems can arise when conditions change. In particular, changes in the cost of cable pass through directly into changes in the cost of installation and structures. In other words, the model would predict that two otherwise identical areas would have different installation and structure costs if they were served by companies that paid different amounts for their cable. Similarly, the model would predict that

[10] The only distinguishing characteristics are a number of topological factors used to estimate the cost of installation and support structures.

cost of installation and structures would decrease when a company is able to secure a better discount on the cost of the cable itself.

Hatfield's BCM Plus separately estimates the cost of structures, thus potentially overcoming the conceptual flaw in BCM1. Of course, the accuracy of the estimates depend heavily on the use of correct input prices for structures. We understand that for at least one such structure—manhole structures—the default prices contained in the model are considerably lower than at least one LEC actually pays. This type of inaccuracy is of more than academic interest; installation and structures can account for upwards of 80 percent of loop costs. In fact, a reasonable sanity check on the structure cost inputs would be to ascertain whether the share of loop costs accounted for by structures reasonably approximates real world experience.

2. Modeling Distribution Facilities

The BCM constructs feeder plant from the central office to the edge of the CBG. All loop plant within a CBG is assumed to be distribution plant. The BCM assumes that CBGs are square in shape and that households are uniformly distributed over the area of the CBG, neither of which is true of real CBGs. The BCM also uses an abstract representation of the distribution plant within a CBG. CBGs in the same density class have the same number of distribution cables of length equal to 62.5 percent of the square-root of the area of the CBG.[11]

The abstract representation of distribution plant can produce results that differ from reality, i.e., loop lengths can be inaccurate, cable sizes can be incorrect, and the number of cables within a CBG can differ from the number of cables assigned by the BCM.

First, as the sponsors of the BCM acknowledge, in sparsely populated areas, the uniform distribution assumption can cause substantial errors in cost estimation.[12] The basic problem is that the average loop length depends on the distribution of households within an area. When

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[11] The model assumes that CBGs are square. Therefore, the square root of the area is the side of the square.

[12] BCM, p. 38.

the assumed distribution differs from the actual, an average based on the former will be inaccurate.

Second, although the BCM documentation describes CBGs as containing on average 400 households, there is, in fact, considerable variation in the number of households within a CBG. The consequence is that CBGs with a large number of households exceed the size of the distribution areas that at least one LEC, Pacific Bell, employs. In turn, the BCM allows larger copper cable sizes than the LEC actually employs. In particular, Pacific's maximum feeder cable is 3,600 pairs (GTE's maximum size is 3,000 pairs), compared to the 4,200 maximum in the BCM. For distribution cable, the corresponding values are 1,800 and 3,600 for Pacific and the BCM, respectively. If support structure can accommodate larger cables, there are economies in larger cable sizes. Because Pacific has found that its support structures cannot accommodate the largest cables assumed by the BCM, the BCM's default assumptions would understate the true cost of Pacific's loop plant.

Third, the use of the same number of distribution cables in a density class can cause substantial bias.[13] In fact, GTE examined the impacts of doubling the number of distribution cables from four to eight, accounting for installation and structural costs the way they are actually incurred. The estimated increase in cost was 49 percent.

Finally, the representation of the interface between the distribution cable and the subscriber (the drop wire and subscriber terminal) is not described in the Hatfield model documentation. The cost assumed for drop wire may be inconsistent with drop wire lengths that are compatible with the number of distribution cables employed in the model. For example, under a particular geometric representation of the distribution cables and drop wire, four distribution cables (as used in BCM1) implies an average drop wire length would be about 25 percent of the distribution cable length. In contrast, GTE estimates that the cost employed in the Hatfield model implies a drop distance of only about 25 feet, which is considerably shorter

[13] BCM1 used exactly four distribution cables per CBG. BCM Plus apparently varies the number of cables by density class, although no documentation on the actual numbers has been provided.

than 25 percent of the average length of distribution cable. For example, for a low density CBG of one square mile, one-quarter of the BCM1's distribution cable length is 3/16 of a mile. GTE estimates that the drop wire investment for this length to be about $1,700 in California.[14] This is equivalent to a monthly cost of $32, which is about 55 percent of the Hatfield model's loop cost in the lowest density group (0 - 5 households per square mile) in California.

The abstract nature of the BCM's distribution model has practical importance. In the network cost elements produced by Release 2, distribution plant accounted for 39 percent of the total cost of switched network elements in California. Percentages are similar in other states, e.g., distribution plant accounts for 42 percent of Hatfield's total cost for switched network elements in Texas.

3. Fill Factors[15]

Because telephone capacity is modular, i.e., it comes in sizes greater than a single unit, there is more capacity in place than volumes in service. Capacity exceeds volume even when the most efficient engineering practices are followed. The ratio of volume in service to capacity is the fill factor.

The spare capacity represented by a fill factor less than 1.0 is a *current* economic cost of providing service. In a previous evaluation of the BCM, Pacific Bell's cost experts in reviewed that model.[16] As part of that review of the BCM engineering rules, Pacific's experts compared

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[14] Despite the likelihood that changing the number of distribution cables (as well as an apparent change in the average distribution cable length) would change the drop length, no change in the default values for drop wire have been made in the latest version of the Hatfield model.

[15] A theoretical discussion of these issues appears in Richard D. Emmerson, "Theoretical Foundation of Network Costs," in W. Pollard, editor, *Marginal Cost Techniques for Telephone Services*, National Regulatory Research Institute, 1991, pp. 145-189. See also Gregory M. Duncan, "The Effect of Probabilistic Demand Structures on The Structure of Cost Functions", *Journal of Risk and Uncertainty* (1990), 3, 3, 211-220.

[16] Timothy J. Tardiff, "Evaluation of the Benchmark Cost Model," prepared on behalf of Pacific Bell, for filing with the California Public Utilities Commission, Rulemaking/Investigation on the Commission's Own Motion into Universal Service and to Comply with Mandates of Assembly Bill 3643, R.95-01-020/I.95-01-021, December 1, 1995.

the model's fill factors with the actual fill factors that would result from the best engineering practices. In general, the fill factors for feeder plant in the BCM were moderately higher than best practice and the fill factors for distribution plant in high density areas were substantially higher than best practice. Distribution fill factors are relatively low because of the high cost of adding capacity after the support structure has been built. Accordingly, capacity for an indefinitely long planning horizon is installed initially and utilization of that capacity is low as a result.

Unfortunately, Version 2.2 of the Hatfield model has increased the already somewhat high distribution fill factors in the original BCM, as shown in the table below. This would cause the underestimation of loop costs to be even greater.

	BCM		**Hatfield**	
Density Zone	Feeder	Distribution	Feeder	Distribution
1	0.65	0.25	0.65	0.50
2	0.75	0.35	0.75	0.55
3	0.80	0.45	0.80	0.60
4	0.80	0.55	0.80	0.65
5	0.80	0.65	0.80	0.70
6	0.80	0.75	0.80	0.75

The Hatfield model's use of unrealistically high fill factors causes costs to be understated because the fill factor, in part, determines how much cable is needed. The Hatfield model appears to be based on the belief that competitive firms would have minimal spare capacity. In this regard, the FCC's finding on spare capacity in interstate long-distance, which was one of the bases for granting AT&T non-dominant status, contradicts this apparent belief:

> AT&T asserts, and no one disputes, that MCI and Sprint alone can absorb overnight as much as fifteen percent of AT&T's total 1993 switched demand at no incremental capacity cost; that within 90 days MCI, Sprint, LDDS/Wiltel, using their existing equipment, could absorb almost one-third of AT&T's total switched capacity; or that within twelve months, AT&T's largest competitors could absorb almost two thirds of total switched traffic for a combined investment of $660 million. Thus, AT&T's competitors possess the ability to accommodate a substantial number of new customers on their networks with little or no investment immediately, and relatively modest investment in the short term. We therefore conclude that AT&T's competitors have sufficient excess capacity available to constrain AT&T's pricing behavior.[17]

To cast the FCC findings in terms relevant to the current discussion, note that MCI and Sprint combined are roughly one-half of AT&T's size. Overnight they can absorb 15 percent of AT&T's capacity. This implies that MCI and Sprint have at least 30 percent spare capacity that could be deployed overnight.

The implication of these findings is that, if anything, competition may require more, rather than less spare capacity to be flexible enough to respond the to vicissitudes of the market. Failure to recover in current revenues the current cost of business caused by the spare capacity necessary to operate in the competitive environment would be detrimental to the shareholders of such companies, perhaps even forcing some of them out of business.

B. Switching

Version 2.2 of the Hatfield model systematically understates the cost of local switching. By selectively using heavily discounted prices for new switches and by assuming that a local service provider would instantly install all of the switching capacity it needs at once, the Hatfield model produces results that are substantially lower than the forward-looking local switching costs that real telephone providers actually incur.

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[17] Federal Communication Commission, In the Matter of Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier, FCC 95-427, October 15, 1995, paragraph 59.

Hatfield developed a relationship between switching cost per line and the size of the switch by piecing together information from various sources. In particular, the algorithm is driven by three data points constructed as follows.[18]

- Small switch: the cost per line ($241 for 1994) was taken from the Northern Business Information report on the average cost of *new* lines for independent companies. Hatfield associated the average *installed* switch size of 2,782 lines for small LECs (LEC industry less RBOCs), calculated from statistics on lines and switches reported to the FCC for 1993.

- Medium switch: the cost per line ($104 for 1994) was taken from the Northern Business Information report on the average cost of *new* lines for RBOCs. Hatfield associated the average *installed* switch size of 11,200 for RBOCs, calculated from statistics on lines and switches reported to the FCC for 1993.

- Large switch: cost per line of $75 for a 80,000 line switch, "obtained from switch manufacturers."

Hatfield then drew straight lines between the three points to determine a relationship between switch price and switch size.

Hatfield's approach suffers from two problems. First, there is a mismatch between the data sources they employs. Note, for example, they matches a 1994 forecasted price with a 1993 average embedded switch size. In addition, while Hatfield uses independents (excluding GTE) for the small switch price, GTE is included in the calculation of the switch size. Finally, the approach assumes that the *average* installed switch is of the same size as the average *new* switch, an assumption that is not necessarily valid.

Second, and more fundamental, the Hatfield model ignores the fact that LECs buy additional lines for installed switches as well as new lines for new switches. These additional lines cost more, as the study that Hatfield used for his switch prices describes.

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[18] The switching cost function is described in some detail in the documentation for Release 1. The prices for the three switch sizes appear to be lower in Release 2. No justification for the lower prices has been provided.

The add-on market continues to retain revenue potential for the suppliers, particularly as the margins on new switches remain below the margins for the add-on market. A digital line shipped and in place will generate hundreds of dollars in add-on software and hardware revenue during the life of the switch. Suppliers can afford to lose a few dollars on the initial line sale in exchange for the increased revenue in the aftermarket, when prices are less likely to be set by competitive bidding.[19]

The local switching component of the Hatfield model graphically illustrates the fallacy of its scorched view of cost studies. In order for the approach to produce realistic costs (ignoring the data problems identified earlier), a new entrant would have to serve customers with initial lines only and also have the volumes to command the discounts that existing LECs apparently command. The fact that LECs expand their switches as demand grows and the existence of a lucrative aftermarket for this expansion demonstrate that the "instant LECs" posited by the Hatfield model are inconsistent with reality.

The documentation for Release 1 describes a single number for end-office switching: investment per line. Yet, the model produces two cost estimate: ports and usage. It appears that the model assigns exactly 30 percent of end office switching costs to ports and the remaining 70 percent to usage. The resulting costs are then divided by external estimates of the number of lines and minutes served by end offices in a service territory. We are aware of no justification for the assignment of end office costs to lines and usage.

C. Converting Investments to Annual and Monthly Costs

The various manifestations of the Hatfield model are essentially models of the *investment* component of an LEC's cost structure. These investments are converted into annual and monthly amounts by (1) annualizing the investments through the use of cost-of-capital and depreciation rates and (2) estimating out-of-pocket operating expenses through the use of historical expense to investment ratios.

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[19] Northern Business Information, *US Central Office Equipment Market—1994*, McGraw-Hill, p. 71.

1. The Hatfield Model Underestimates the Cost of Capital

The 10 percent return in Release 2, although higher than that used in the earlier release, is too low for two reasons. First, the FCC's approved rate of return remains at 11.25 percent. Second, the whole premise behind Hatfield's cost estimates is that they emulate the effects of competition. One of these effects is to raise the riskiness, and therefore the cost of capital, of competing firms (incumbents as well as entrants). This, in turn, increases the annual capital cost for local exchange services.

2. The Hatfield Model's Depreciation Rates Are Lower Than Economic Depreciation

The Hatfield model uses long depreciation rates in estimating the annual costs of network investments. While such long investment lives may have been appropriate for a regulated monopoly provider, the competitive environment fostered by the Telecommunications Act is a different world. The forces of competition itself, as well as the technological change that permeates this industry, invalidate the use of the old long depreciation lives. In fact, Professor Hausman's May 30, 1996 reply affidavit demonstrates that accounting for the increased risk and uncertainty of competition increases the annual cost related to investments by a multiple of at least 3.

Release 2 of Version 2.2 of the Hatfield model lists asset lives by type of facility, e.g., end office switches have a life of 14.3 years in the model. In order to compare these depreciation lives with external sources, we have calculated a weighted (by monthly cost) of about 17 years, which is equivalent to an annual depreciation rate of 5.9 percent. This rate is somewhat lower than the 1994 book depreciation of 7.16 percent for RBOCs, let alone the higher true economic depreciation rate.[20]

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[20] Federal Communications Commission, Statistics of Communications common Carriers, 1994/1995 Edition, Table 2.9.

Of course economic depreciation rates are much higher. For example, Schmalensee and Rohlfs reported that AT&T's depreciation rate is 18.5 percent.[21] Even AT&T's 1994 book depreciation rate of about 11 percent is much higher than the rates used in the Hatfield model.

3. The Operating Expense Estimates in the Hatfield Report Are Questionable

The Hatfield Report develops expense estimates based upon ratios of *booked* expenses to investment. This approach is problematic. Operating expense ratios based on historical investment may be a poor approximation of the forward-looking relationship. Consider, for example, an expense whose costs are unrelated to the underlying technology. As capital equipment becomes more (or less) productive, the expense to capital ratio changes, even though the absolute level of unit expenses does not.

The central office switching example discussed earlier illustrates the pitfalls of using annual factors. By employing the unrealistic assumption that an LEC can buy switching at the initial prices, the model assumes that annual cost (which we understand include the generic upgrades) would be lower as well. In fact, the very report that Hatfield relies on to develop the switch model suggests that such additional costs may increase when switch vendors discount initial prices.

The factor approach also suffers from the general problem that any decrease in an investment will cause a proportionate decrease in expenses. For example, if one LEC, for whatever reason, obtained a higher discount on its equipment, the model implies that it would enjoy lower out-of-pocket expenses, an implication that defies common sense.

V. COMPARISONS WITH EXTERNAL SOURCES

Version 2.2 of the Hatfield model produces estimates of network element costs, based on the abstract representations of network service costs. In contrast, the LECs have information

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[21]Richard Schmalensee and Jeffrey H. Rohlfs, "Productivity Gains Resulting From Interstate Price Caps for AT&T," National Economic Research Associates, September 1992.

on their current forward-looking costs of doing business. Because the prices for unbundled network elements obtained from the LECs must at least recover their costs, such a comparison is extremely informative.

Pacific Bell has provided the California Public Utilities Commission with results from its Cost Proxy Model (CPM) in the context of universal service.[22] Based upon our participation in the California unbundling and universal service proceedings, we understand that the CPM is designed to replicate the forward looking costs of Pacific's operations, because the model represents the engineering rules and cost-of-equipment Pacific actually uses.

To compare the output of the two models, we calculate the monthly cost for loops and local switching , which are common to both models. The results are $14.24 and $23.12 for the Hatfield model and the CPM, respectively. In short, the Hatfield model produces costs that are about 62 percent as high as Pacific's.[23] In light of the various shortcomings we discussed previously which would tend to understate the costs produced by the Hatfield model, the CPM's results are clearly the more plausible.

VI. INTERNAL CONSISTENCY

A. The Hatfield Model Is Not A Valid Cost Model

The Hatfield model is not a valid economic cost model because it fails the internal and external consistency checks required of any cost model. This is more than just a theoretical point. Failure to satisfy these checks means that the Hatfield cannot represent the minimum cost of producing outputs using the most efficient forward looking technology. In Attachment I, we show this and also show that any numbers the Hatfield model produces purporting to be

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[22] Pacific Bell and INDETEC International, The Cost Proxy Model, California Universal Service Subsidy, 1996.

[23] The loop costs produced by Release 2 of the Hatfield model are 25 percent higher than those produced by Release 1. In contrast, in Texas, loop costs increased by only about one percent between releases. In both states, locals switching costs hardly changed.

TS/TELRICs are biased in an unknown direction. This makes them useless for even the minimal task of providing upper and or lower bounds for prices. Further, we will show that the underlying approach is so flawed as to render the Hatfield model impossible to fix without a complete overhaul, starting with the basic conceptual approach and ending with data requirements.

B. Cost models and TS/TELRIC calculations

The primary purpose of a cost model is to answer the question "What is the minimum cost of producing a stream of outputs using the most efficient forward looking technology and facing a perhaps uncertain stream of input prices?" To use a cost model to calculate a TS/TELRIC for a product, one calculates the minimum cost of doing business as usual and subtracts from that the minimum cost of doing business if a product line were dropped from production. Both components of this difference should be dynamic cost functions, not costs calculated only for the year in question, but costs calculated over the optimal planning horizon of the firm. Single period static cost functions are totally inappropriate.

C. Valid cost models

A valid cost model shows the relationship between the minimum cost of producing a flow of services using the most efficient technology, given a set of expected input prices, starting today and flowing into the future as far as the firm's optimal planning horizon. Specifically, for input prices and output levels in each year of the planning period, it shows the minimum present discounted value of producing those levels of outputs.

As a consequence of this minimization, costs functions and cost models necessarily satisfy a set of mathematical properties which can be found in a first year graduate textbook such as 'Microeconomic Analysis' by Hal Varian. Rather than a complete listing of them, we will discuss two that the Hatfield model clearly violates. The first is linear homogeneity in prices; this means if all prices are increased proportionately, then total costs will increase by the same proportion. The second is the derivative property. An easily understood form of the derivative property is this: the percentage increase in total costs as a consequence of a one

hundred percent increase in the price of an input, i.e., labor , loops, wire, and the like, will be exactly equal to the share of total costs directly attributable to that input. So if cable of a certain grade comprises 10% of total costs and its price rises 100%, then total costs should rise 10% as a consequence.

To test the linear homogeneity assumption we increased all the input prices in the Hatfield model by 10% using their default GTE California data as a base case. A valid cost structure should yield an increase in TS/TELRICs of 10% as well[24]. The results can be seen in Table 2, and can be seen to yield increases of roughly 13%—a number 30% higher than it should be.

[24] This result is proved in Attachment I.

Table 2: Comparison of Hatfield TSLRIC Results
GTE California

	GTE Base Case	Costs with All Input Prices Increased 10%	Percent Change	Percent of Total Cost of Network Elements (Base)
Loop Distribution	$6.7455593	$7.7168590	14.3991%	42.43%
Loop Concentrator/Multiplexer	$1.7516408	$1.9674141	12.3183%	11.02%
Loop Feeder	$2.6270746	$3.0163648	14.8184%	16.53%
Local Switching	$1.1026042	$1.2219772	10.8265%	22.12%
Other				7.91%
Operator Systems	$6,876,152	$7,637,209	11.0681%	
common Transport	$0.0027286	$0.0030552	11.9700%	
Dedicated Transport	$4.0673481	$4.5524163	11.9259%	
Signaling Link Transport	$52.2779075	$57.9206566	10.7938%	
Signaling Transfer Points	$0.0000769	$0.0000852	10.7938%	
Service Control Points	$0.0010559	$0.0011698	10.7938%	
Tandem Switching	$0.0018684	$0.0020685	10.7066%	
Total Cost of Network Elements	$730,471,465	$827,067,353	13.2238%	

In the attachment we show that to the extent the Hatfield Model maintained the multiplicative structure of its past versions one shou'd expect the derivative property of cost functions to be violated as well. Regardless of the source or reason for the error, the fact that the model produces wrong results is incontrovertible. And to emphasize the consequences of the error we once again point out that any cost function or cost model that fails even one of the criteria required of a cost function, whether as stated above or found in a text, cannot represent the minimum cost of producing services using the most efficient forward looking technology.

VII. THE HATFIELD MODEL IS BASED ON INAPPROPRIATE STATIC NOTIONS

Because the Hatfield model is a static rather than a dynamic model, it mishandles growth and underestimates the true forward-looking cost of capital. It totally ignores growth and in doing so, it mischaracterizes that spare capacity which results from optimal timing of laying discrete plant, instead labeling it as inefficient over-capacity. A consequence of this is Hatfield's concentration on and insistence that fill factors are too low. In fact, at least since the mid 1970's it has been well known that in a dynamic context, the problem of optimally investing in discrete plant when there is growth has a component not found in static situations. In his 1978 paper in the *Review of Economic Studies*, David Starret shows that the cost minimizing firm in a dynamic situation trades off some spare capacity against the economies of scale in construction. The firm cost minimizes by choosing the lengths of the intervals between which it invests. During periods between investments there will always be spare capacity and it is often optimal and cost minimizing to always have spare capacity. Moreover, the mathematical structures that might be appropriate in a static situation may not be in the dynamic one. To determine whether or not they are appropriate requires the kind of empirical testing that the Hatfield model has not undergone.

Second, it underestimates real cost of capital by ignoring the effects on the cost of capital that attend (a) the increased riskiness of an industry moving rapidly into competition and (b) the increased economic depreciation rates required recover investment in current plant and equipment. Failure to recover sunk investment has severe economic consequences; for the rate and level of the recovery of capital not only tell firms which activities to direct the use of their existing equipment but also dictate whether or not there is an incentive to replace equipment, as it becomes obsolescent, with the next generation. Indeed, by ignoring dynamics altogether, it fails to be forward looking even in concept.

VIII. CONCLUDING REMARKS

There are many reasons not to use the Hatfield model to determine TS/TELRICs and none to support its use. Primary among these is that it has never been tested against real data as might be expected of any model of any type. Trying to use it in spite of this is a little like asking paying customers to fly on a plane the type of which has never before flown or even tested. As an added insight to the problem of using a model that it has not been verified on actual data consider the following example. Suppose that the IRS decides to simplify its analysis of all of the paper work associated with reporting and verifying tax payers' income. To make the process easier, the IRS decides to create a model that estimates how much income from employment and investment a person makes each year. The model is simply based on assumptions about how much a person should be making based on the tax payer's age and the number of years of schooling that the person has completed. To use this model, the IRS enters the person's age and number of years of schooling and lets the model derive an estimate of income which is used in place of any reported income. Despite valid criticisms of consumer groups and without taking the time to validate what the model predicts with actual income data, the IRS then uses this model to estimate a tax payer's income and taxes the person accordingly. We would hope everyone recognizes this as a ludicrous idea but this is an exact analogy of what the Hatfield model is doing to incumbent local exchange carriers.

Beyond lack of external verification and empirical validity, explicit economic and conceptual flaws were identified that make it unlikely the model could produce any useable numbers. The model is static rather than dynamic which gives rise to, among other things, fill factors that are too high. The model does not even satisfy the minimum criteria required of properly constructed cost models—that increasing all prices an common proportion must increase TS/TELRICs by exactly the same amount. In addition, are the other fundamental flaws in the Hatfield model that we identified (1) it models the cost of no realistic local service provider and certainly not the incumbent LECs who will actually sell the unbundled elements it attempts to cost and (2) particular inputs and processes appear to systematically understate the costs of network elements. Indeed, at the same time that AT&T reported to the FCC that it

would cost $1,240 per customer if AT&T provided local service to 20 percent of the market (likely the least costly part of the market), it and MCI are supporting models that produce investment costs of only $840 per line.[25]

Like any model, the Hatfield model is best interpreted in the context of why it was built and what objectives it is intended to foster. The architects and sponsors of the Hatfield model are quite clear in their purpose—they want to buy elements from the LECs, most prominently switched access, at rates far below current rates and even below the costs of the LECs require to produce these elements. While we would all like to pay lower prices, markets only permit this when those prices are commensurate with the costs of production.

The Hatfield model developers defend their costs by arguing that any difference between the costs of their model and costs reported by the LECs (either accounting costs that are required by law and by regulators or the cost produced by LEC incremental cost models) represent the costs of overinvestment. For example, the report describing the "greenfield" version of the Hatfield model that was attached to MCI's opening comments claims that about half of the LEC's current plant represents overinvestment. Apart from the facts that this label is entirely circular and Hatfield's estimate of the so-called gap is fatally flawed by the theoretical and measurement problems with the Hatfield models, it defies common sense to believe that the overinvestment of this degree could take place.[26] Regulators (both at the federal and state level) would have to have been quite derelict in their public responsibilities in order for this event to have occurred, an unlikely event given the scrutiny this industry receives. Perhaps even more telling, employees and representatives of the IXCs and other companies purchasing inputs from the LECs would have had to have been asleep at the switch to allow their companies to pay allegedly bloated prices for inputs for years without insisting on immediate correction of the

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[25] The FCC's April 19, 1996 Notice of Proposed Rulemaking listed the costs AT&T reported it would incur. The Hatfield investment per line is calculated from the "greenfield" version of the model.

[26] Some of the gap between book investment and forward looking investment could represent the effect of the decline in prices for facilities such as end office switches. The fact that current prices recover some of these costs is entirely consistent with the economic fact that with technological change, no firm could survive by charging prices that completely reflect the decline in new equipment prices.

situation. Of course, the more important concern is how network elements are unbundled in a way that promotes competition. Basing prices on costs that no real-world provider could hope to meet is *anti-competitive*, because it would stifle, not promote the most effective type of competition—facilities-based. In addition, requiring incumbent LECs to sell inputs at non-compensatory rates would have the deleterious effects of forcing whatever captive customers that may remain to subsidize the below-cost input prices and/or severely handicapping firms that represent a substantial proportion of this dynamic industry.

ATTACHMENT I:

In this Attachment we demonstrate that the Hatfield Model violates the derivative property and that it produces biased TS/TELRICs.

Let i=1,...,n index the types of cable, let p_{ci} be the price per foot of the ith type of cable, let L_{ci} be the miles of the ith type of cable, let E^{o}_{si} be the base year expense of structure and installation for cable of type i and let E^{o}_{ci} be the base year expense of cable of type i, let E_{si} be the cost minimizing expenditure for expenses associated with cable of type i and let E_{ci} be the cost minimizing expenditure on cable of type i, and let y be the output for which a TS/TELRIC is desired.

A. The Hatfield Model Violates the Derivative Property

The loop cost part of the Hatfield model may be represented as

$$C = \sum_{i=1}^{n} (p_{ci} L_{ci}) \left[1 + \left(\frac{E^{o}_{si}}{E^{o}_{ci}} \right) \right].$$

The derivative property of cost functions requires that the derivative of a cost function with respect to an input price give the optimal amount of the input.[27] Thus, the derivative of C with respect to p_{ci} should give L_{ci}. Symbolically this is,

$$\frac{\partial C}{\partial p_{ci}} = L_{ci}.$$

Unfortunately, direct calculation of the partial deriva ive of the Hatfield model yields

[27] We use the level form of the derivative property here rather than the proportional or logarithmic derivative form we used in the text, because the level form has easier mathematics.

$$\frac{\partial C}{\partial p_{ci}} = L_{ci}\left[1+\left(\frac{E^{o}_{si}}{E^{o}_{ci}}\right)\right]$$

which is an over statement of L_{ci} by a factor of

$$\left[1+\left(\frac{E^{o}_{si}}{E^{o}_{ci}}\right)\right].$$

B. Hatfield TS/TELRICs Are Biased

For simplicity, assume only expenditures on cable. and expenses. The results are exactly the same with switching and expenses except the notation is more elaborate and difficult to follow. The Hatfield Model gives a cost function of the following form:

$$C^{*} = \sum_{i=1}^{n}\left(p_{ci}L_{ci}\right)\left[1+\left(\frac{E^{o}_{si}}{E^{o}_{ci}}\right)\right]$$
$$= \sum_{i=1}^{n}\left(E_{ci}\right)\left[1+\left(\frac{E^{o}_{si}}{E^{o}_{ci}}\right)\right].$$

The cost minimizing cost function is

$$C = \sum_{i=1}^{n}\left(E_{ci}+E_{si}\right).$$

Use the difference calculus to obtain Hatfield TS/TELRIC and the true TS/TELRIC.

For the Hatfield Model,

$$\Delta C^{*} = \sum_{i=1}^{n}\left(\Delta E_{ci}\right)\left[1+\left(\frac{E^{o}_{si}}{E^{o}_{ci}}\right)\right],$$

for the true model

$$\Delta C = \sum_{i=1}^{n} \left(\Delta E_{ci} + \Delta E_{si} \right).$$

Taking the difference between the terms gives

$$\begin{aligned} \Delta C - \Delta C^{*} &= \sum_{i=1}^{n} \left(\Delta E_{ci} + \Delta E_{si} - \left(\Delta E_{ci} \right) \left[1 + \left(\frac{E_{si}^{o}}{E_{ci}^{o}} \right) \right] \right) \\ &= \sum_{i=1}^{n} \left(\Delta E_{si} - \left(\Delta E_{ci} \right) \left(\frac{E_{si}^{o}}{E_{ci}^{o}} \right) \right) \\ &= \sum_{i=1}^{n} E_{si}^{o} \left(\frac{\Delta E_{si}}{E_{si}^{o}} - \frac{\Delta E_{ci}}{E_{ci}^{o}} \right). \end{aligned}$$

Dividing by Δy, multiplying and dividing by y and rearranging terms gives

$$\frac{\Delta C - \Delta C^{*}}{\Delta y} = \sum_{i=1}^{n} \frac{E_{si}^{o}}{y} \left(\frac{\Delta E_{si}}{E_{si}^{o}} \frac{y}{\Delta y} - \frac{\Delta E_{ci}}{E_{ci}^{o}} \frac{y}{\Delta y} \right)$$

which is the bias in the incremental costs. The bias is then a weighted sum of the differences between installation and structure expenditure elasticities and the cable expenditure elasticities.

C. Valid TS/TELRICs Must Be Linear Homogeneous in Input Prices

As discussed above, total cost functions must be first degree (or linear) homogeneous in input prices. This means if all input prices are increased by the same percent, say 10%, than total costs will increase by the same percent, in this case 10%. In this section we show that TS/TELRICs must satisfy the same requirements. We state the result as a Lemma

TS/TELRICs are linear homogeneous in input prices.

Proof:

Let the total cost of providing n services at levels $y_1,...y_n$, with m inputs which have prices $w_1,...,w_m$ be denoted $C(y_1,...y_n, w_1,...,w_m)$. The TS/TELRIC for service 1 is given by

$$TS/TELRIC_1(y_1,...y_n,w_1,.....w_m) = C(y_1,...y_n,w_1,....,w_m) - C(0,y_2,...y_n,w_1,...,w_m).$$

Where $C(0, y_2, \ldots y_n, w_1, \ldots, w_m)$ is the minimum cost of dropping the production of service one entirely while keeping the levels of all other outputs at their previous values. Thus, both $C(y_1,...y_n, w_1,...,w_m)$ and $C(0,y_2,...y_n, w_1,...,w_m)$ satisfy the linear homogeneity requirements,

$$\lambda C(y_1,\cdots,y_n,w_1,\cdots,w_m) = C(y_1,\cdots,y_n,\lambda w_1,\cdots,\lambda w_m)$$
$$\lambda C(0,y_2,\cdots,y_n,w_1,\cdots,w_m) = C(0,y_2,\cdots,y_n,\lambda w_1,\cdots,\lambda w_m)$$

Thus, by subtraction

$$\lambda C(y_1,\cdots,y_n,w_1,\cdots,w_m) - \lambda C(0,y_2,\cdots,y_n,w_1,\cdots,w_m)$$
$$= C(y_1,\cdots,y_n,\lambda w_1,\cdots,\lambda w_m) - C(0,y_2,\cdots,y_n,\lambda w_1,\cdots,\lambda w_m)$$

or

$$\lambda TSLRIC(y_1,\cdots,y_n,w_1,\cdots,w_m) = TSLRIC(y_1,\cdots,y_n,\lambda w_1,\cdots,\lambda w_m).$$

Which says, in words, that proportionally increasing all input prices will increase TS/TELRICs by the same proportion.

D. HATFIELD'S JOINT COST ANALYSIS

In version 2.2 Release 1 Hatfield presents a regression analysis of common costs (support costs) regressed on direct costs (total costs as measured by total revenues minus support costs) to support a 10% factor to adjust for common costs. In release 2, the reference to the analysis is dropped and a 10% factor merely asserted. However, in ATT arbitration with GTE California, Dr. Mercer, one of the sponsors of the model, defended the 10% factor using the regression analysis contained in the old and presumably superseded manual and documentation for Release 1[28]. As a consequence we include here a critique of that method.

Hatfield's analysis cannot be used to determine either the amount or fraction of common or support cost. First, the Hatfield approach is based on a classic error in logic, the fallacy of division[29]. The fallacy of division ascribes properties that hold for a group to each member of the group. Second, underlying its analysis is an implicit assumption about telecommunications firms that is certainly false; by positing a linear relationship between directly attributable costs and common costs it implicitly assumes that the stand alone costs of producing each service or element is totally volume insensitive. This assumption simply does

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[28] Interestingly, Dr. Lee Selwyn presented the results of a similar analysis in the same arbitration to estimate the amount of avoided common cost and found a 18%-21% number. The difference in analysis seems to be in choice of firms to include and the year sampled (1994 for Selwyn 1995 for Mercer).

[29] Shim, J.K. and Joel Spiegel, *Dictionary of Economics*, John Wiley and Sons, Inc. New York

not withstand scrutiny. It has two implications: first, it implies the stand alone cost of providing loops for 20 customers is the same as the cost of providing them for 10,000; second, it implies that eventually telecommunications services will be provided by a set of natural monopolies one for each element or service. Given the Hatfield model's linear structure, the TELRICs are also the stand-alone costs. Thus this result says that if the Hatfield model adequately represents such a firm, its TELRICs should be volume insensitive as well. Thus if the regression were to be believed then it gives hard evidence that the Hatfield model does not model a real firm. This is somewhat of a non-issue since the regression analysis is worthless. Third, its data set, a single year of data on a subset of local exchange carriers, is incapable of determining the answer to the question it poses or the validity of its approach because it doesn't contain multiple observations on each firm to predict what happens to a specific firm when its direct costs vary. Fourth, it utilizes the wrong statistical technique, regression analysis, to identify a group relationship which it then mistakenly applies to the members of the group, GTE, specifically.

Hatfield suggests the following procedure to account for common costs. Using a sample of firms in a single year, it regresses an estimate of common costs (CC) on an estimate of direct costs (DC) (Hatfield Documentation of May 16, 1996 Version 2.2 Release 1, p. 51). It finds that the regression has a statistically insignificant value, and that the coefficient on direct costs is .10. This fraction is then used to gross up the direct costs to account for common costs.

There are a number of problems with Hatfield's analysis, any one of which renders all of its analysis useless. I begin with its approach. Hatfield would determine a relationship between direct and common costs that holds between firms, and then apply that relationship to

each firm. Hatfield suggests that since a direct statistical relationship between CC and DC exists across firms, e.g. JC=a +bDC. that a reduction of $100 dollars in DC due to resale will result in a reduction of JC of b*100. This is the fallacy of division that I referred to above. To take the implications of this from the abstract to the specific and intuitive level, an analogy is in order.

A strong positive correlation exists between height(H) and weight(W) of males. This means that men who are taller tend to be heavier. If, for a sample of men, Hatfield ran a regression of each man's height on its weight, it would obtain a positive coefficient on weight, just as Hatfield found a positive relationship between direct and joint costs. For purposes of illustration, let us assume that it found that H=(1/30)W. Thus a man weighing 150# would be predicted to be 5' tall, a man weighing 180# would be predicted to be 6' tall. Applying Hatfield's approach to the height and weight analogy, it would assert a person going on a diet and losing 10# would get 4" shorter (4"=12"×(1/30)×10). The problem with Hatfield's approach is that it took a group relationship, one that holds only for the group, and applied it to each member of the group. This is called a fallacy of division. This logical error is common and has severe consequences. For example, it the common source for stereotypical characterizations of ethnic, religious and gender groups that lead to various sorts of discrimination. In the next section, I present a graphical representation of this error and its likely consequences.

Related to this is the question is there any reason to believe that the group relationship might, nonetheless, hold individually. The answer is no. In the appendix I show that the only

case where the common costs bear a direct linear relationship to joint costs is one where marginal costs are zero. This means that to believe Hatfield's underlying model one must be willing to believe that supplying service to 10,000 extra customers is zero! Moreover, Hatfield's formulation has the additional odd feature that if it is believed, then eventually the volume sensitive costs of joint production, which increase as volume increases, will exceed the volume insensitive costs of independent production. Consequently, production will take place independently using a technology having volume insensitive costs. Necessarily this means only one firm is needed to produce arbitrarily large amounts of any one service or element, so that were Hatfield believed one need also believe that competition will fail and the current industry will be replaced by a group of natural monopolists. I am sure no one believes this scenario, but that is what is implicit in Hatfield's structure---accepting Hatfield's structure implies accepting the scenario that follows from it.

The third problem is that its choice of a sample, a single cross section of firms in a single year, is incapable of either supporting or refuting its claims. To determine whether or not its group relationship could be applied to a member of the group, it would need to use a panel of data, that is, multiple observations on each firm over time. It would need to do a pooled time-series cross-section analysis and test the hypothesis that the between firm relationship is the same as the within-firm, a single cross-section cannot provide information on within firm relationships because there is only one observation on each firm, whereas many

more than the number of coefficients estimated are needed[10]. Moreover, regression analysis of the type it attempted will give the wrong result. I now turn to this problem.

A fourth problem with Hatfield's analysis is its choice of methodology. Having shown that its group relationship cannot be applied to specific members of the group, I will now show that Hatfield's method of obtaining the group relationship is also flawed. Regression analysis like many other technical devices operates validly only in specific environments. Statisticians and econometricians present the environments where regression analysis is valid in the form of assumptions. For example, a statistician might say a regression will give you the right answer provided none of the following occur. A conscientious practitioner of econometrics then checks the specific situation he or she is working in to make sure none of the required assumptions are violated. She might, for example, check to make sure that the independent variable, in Hatfield's case, direct costs, is uncorrelated with the error in the equation. If the independent variables are found to be correlated with the error, then regression analysis will lead to spurious results. Examples of spurious results include the finding that as birth rates increased in Holland so too did the number of storks, leading to a conclusion that storks brought babies. In fact, as people got wealthier and had more children and more garbage---storks are scavengers. So the relationship is spurious, there is none between storks and babies, instead there is one between income and babies and income, through consumption and garbage,

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[10] An elementary but more complete explanation can be found in Greene, William H. (1993) *Econometric Analysis* 2nd Edition, Macmillan Publishing Company. New York. p. 444-480.

to the number of storks. The alleged relationship comes because both relations are positively related to income. However, a good trash collection policy or birth control policy would sever the relationship. Hatfield's group regression is of exactly this type. common costs are neither caused nor caused by direct costs: instead both are caused by the interaction of production with market forces. Specifically, a firm chooses inputs to minimize the total costs of production, thus the amount of direct and common costs are jointly determined. It can be found in any basic econometrics text that regression analysis is wrong when the dependent variable, here common costs and the independent variable, here direct costs, are jointly determined[31]. The consequence is a simultaneous equations bias. To give an example of how misleading a regression with a simultaneous equations bias can be we need to go back 50 years to the end of WWII (since then competent econometricians have known better than to make such errors). Then, the National Bureau of Economic Research issued a forecast and a prediction that as a consequence of the end of WWII and the return of the servicemen, the economy would be thrust back into a severe depression. That never happened. Milton Friedman, a Nobel Prize winner in Economics, and arguably also one of the great statisticians of that period, showed that the NBER had committed the very error I alluded to above, and as a consequence the prediction was fallacious[32].

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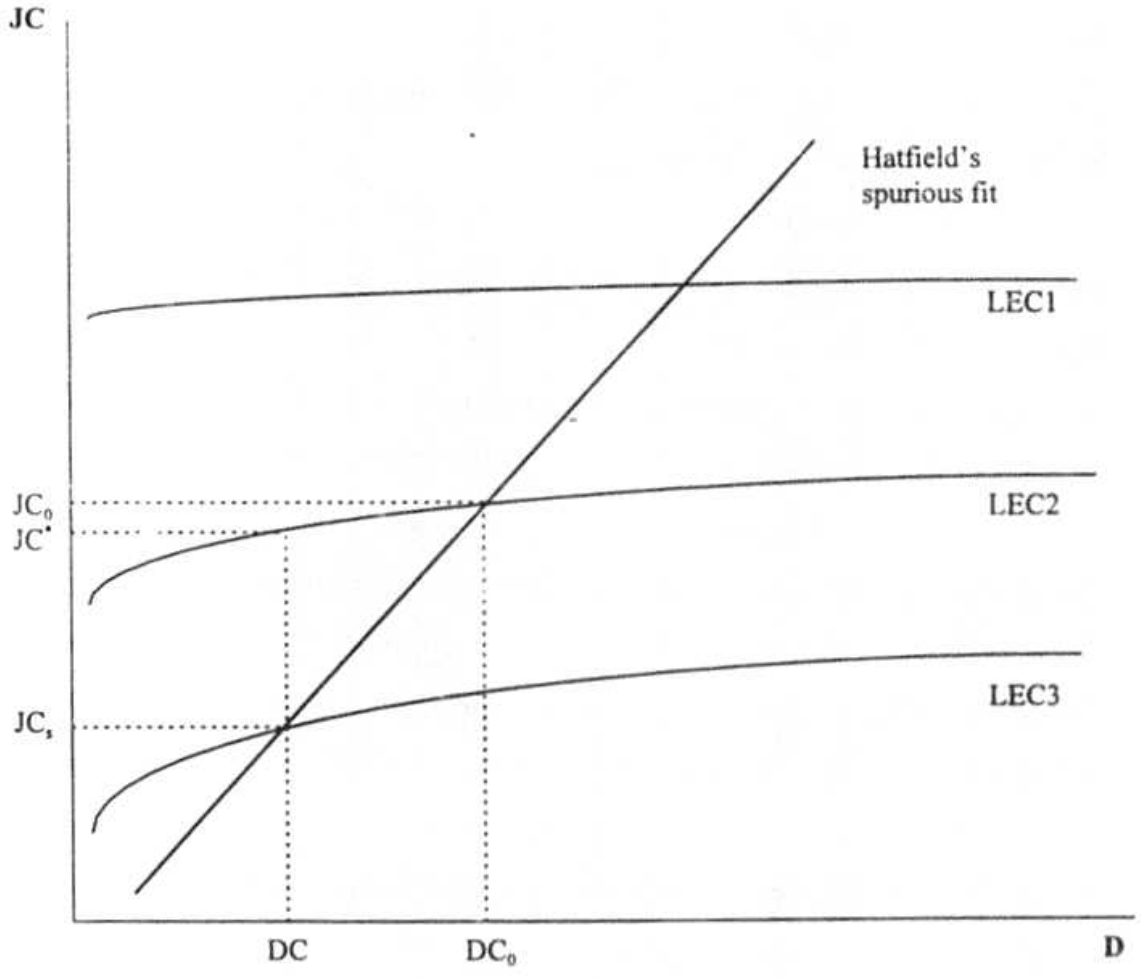
[31] Greene, William H. (1993) *Econometric Analysis* 2nd Edition, Macmillan Publishing Company. New York p. 579.

[32] Friedman, Milton (1957) *A Theory of the Consumption Function*, Princeton University Press. Princeton NJ

1. Graphical illustration of Hatfield's Fallacy of Division

Graphically, the error and its consequences can be clearly seen. Referring to the graph below let LEC1 be the graph of the true relationship between the direct costs (DC) of LEC1 and its joint costs (JC). Define LEC2 and LEC3 analogously. The three points where the straight line labeled Hatfield's spurious regression intersect the lines LEC1, LEC2, and LEC3 correspond to the observed values of joint and direct costs observed for each firm. Hatfield's regression runs a line through these three points. Hatfield then uses this relationship to predict the avoided joint costs for a particular firm. Here I use LEC2 as an illustration. If DC falls from DC0 to DC*, the joint costs for LEC2 fall from JC_0 to JC* -- moving along the true relationship LEC2 from point A to B. Hatfield would predict that JC would fall from JC_0 to JCs, that is, moving from A to C. So Hatfield's model will far over predict the avoided joint cost.


JC
Hatfield's
spurious fit
LEC1
LEC2
LEC3
JC0
JC*
JCs
DC
DC0
D

2. Hatfield's Formulation Has Incredible Implications:

In this part of the appendix, we show that the only industries that Hatfield's formulation can be applied are those where the stand alone costs are volume insensitive. For purposes of demonstration I show this is true for the first service, it can be shown to be true for all services.

$$TSLRIC_i(y_1,\ldots,y_n) = C(y_1,\ldots,y_n) - C(y_1,\ldots,y_{i-1},0,y_{i+1},\ldots,y_n)$$

Direct cost can be defined

$$DC = \sum_{i=1}^{I} TSLRIC_i$$

Joint cost can be defined as

$$JC = C - DC$$
$$= C - \sum_{i=1}^{I} TSLRIC_i$$

Hatfield model supposes that $JC = a + b \times DC$. This may be written as

$$C - \sum_{i=1}^{I} TSLRIC_i = a + b \times \sum_{i=1}^{I} TSLRIC_i .$$

The following algebra shows that if this is true then the standalone costs of producing services or elements is totally volume insensitive. Such an assertion is on its face certainly incorrect.

Lemma:

If $C - \sum_{i=1}^{I} TSLRIC_i = a + b \times \sum_{i=1}^{I} TSLRIC_i$ then for each service or element, i, the standalone cost of production is volume insensitive.

Proof:

$$
\begin{aligned}
C &= a + (b+1) \times \sum_{i=1}^{n} \mathrm{TSLRIC}_i \\
&= a + (b+1) \\
&\quad \times [C(y_1,\ldots,y_n) - C(0,y_2,\ldots,y_n) \\
&\quad + C(y_1,\ldots,y_n) - C(y_1,0,y_3,\ldots,y_n) \\
&\quad + C(y_1,\ldots,y_n) - C(y_1,\ldots,y_{i-1},0,y_{i+1},\ldots,y_n) \\
&\quad \vdots \\
&\quad + C(y_1,\ldots,y_n) - C(y_1,\ldots,y_{n-1},0)]
\end{aligned}
$$

$$
\begin{aligned}
C(y_1,\ldots,y_n) = a + (b+1) \times n \times C(y_1,\ldots,y_n) \\
-(b+1) \times [C(0,y_2,\ldots,y_n) \\
+C(y_1,0,y_3,\ldots,y_n) \\
+C(y_1,\ldots,y_{i-1},0,y_{i+1},\ldots,y_n) \\
\vdots \\
+C(y_1,\ldots,y_{n-1},0)]
\end{aligned}
$$

$$
\begin{aligned}
C(y_1,\ldots,y_n) = \frac{(b+1)}{(b+1)n-1} \times [C(0,y_2,\ldots,y_n) \\
+C(y_1,0,y_3,\ldots,y_n) \\
+C(y_1,\ldots,y_{i-1},0,y_{i+1},\ldots,y_n) \\
\vdots \\
+C(y_1,\ldots,y_{n-1},0)] \\
-\frac{a(b+1)}{(b+1)n-1}
\end{aligned}
$$

Without loss of generality, we demonstrate the result for the first service. The standalone cost of service 1 is given by $C(y_1,0,\ldots,0)$. We now evaluate the result above at $(y_1,0,\ldots,0)$.

$$C(y_1,0,\ldots,0) = \frac{(b+1)}{(b+1)n-1} \times [C(0,0,\ldots,0) + C(y_1,0,0,\ldots,0) + C(y_1,0,0,\ldots,0) \vdots + C(y_1,0,\ldots,0)] - \frac{a(b+1)}{(b+1)n-1}$$

$$C(y_1,0,\ldots,0) = \frac{(b+1)}{(b+1)n-1} \times C(0,0,\ldots,0) + \frac{(b+1)(n-1)}{(b+1)n-1} C(y_1,0,0,\ldots,0) - \frac{a(b+1)}{(b+1)n-1}$$

$$C(y_1,0,\ldots,0)\left[1 - \frac{(b+1)(n-1)}{(b+1)n-1}\right] = \frac{(b+1)}{n(b+1)-1} \times C(0,0,\ldots,0) - \frac{a(b+1)}{n(b+1)-1}$$

$$C(y_1,0,\ldots,0)\left[1 - \frac{(b+1)(n-1)}{n(b+1)-1}\right] = \frac{(b+1)}{n(b+1)-1} \times C(0,0,\ldots,0) - \frac{a(b+1)}{n(b+1)-1}.$$

Simplifying and solving for the standalone cost gives:

$$C(y_1,0,\ldots,0) = \frac{(b+1)(C(0,0,\ldots,0)-a)}{b}.$$

Note that the right hand side of the equation does not depend on the level of service y_1. Thus the stand-alone cost of providing a service does not depend on the level of the service provided. This means the cost of a new entrant would be the same whether it proposes to serve one customer or a million. Clearly, this is not a cost relationship that is relevant to telecommunications.

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PART VII

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY OF DONALD W. MCLEOD

DOCKET NO. 961169-TP

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Donald W. McLeod. My business address is 600 Hidden Ridge, Irving, Texas.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed as Vice President - Local Competition/Interconnection Program Office for GTE Telephone Operations, which has telephone operations in 28 states.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL AND WORK EXPERIENCE.

A. I graduated from San Diego University in June 1966, receiving a Bachelor of Science degree in Business Administration with a Management major. Immediately upon graduation from college, I joined the Engineering Department of General Telephone Company of California, where I was involved in the preparation of Cost Separations Studies. In August 1969, I moved to General Telephone Company of the Northwest, as Settlements Administrator. In February 1971, I became Revenue Requirements Administrator with

GTE Service Corporation. In that capacity, I was involved in settlement matters affecting all GTE telephone operating companies.

In December 1972, I was appointed to the position of Business Relations Manager with General Telephone Company of Florida, where I was responsible for the supervision of Division of Revenue Studies. I was promoted to the position of Director of Business Relations in December 1979, with responsibility for the preparation of separations studies, various cost valuation studies, connecting company matters, and the functional coordination of rate case activity.

In October 1981, I returned to GTE Service Corporation. During the next five years, I held various positions pertaining to the areas of strategic revenue planning, access and cost allocation issues, rate cases and carrier relations. I subsequently transferred to GTE North in July 1986, accepting the position of Director-Revenue Planning, where I was responsible for strategic revenue planning, capital recovery state and federal regulatory filings, and policy recommendations on revenue matters. In October 1988, I was appointed Director-Revenue & Earnings Management-North Area. In June 1991, I was appointed Director-Revenue & Earnings (South). In December 1993, I was appointed Vice President-External Affairs (Florida) and was appointed Regulatory and Governmental Affairs Vice President (East) in October 1994. In March 1996, I accepted my

present position.

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

A. The purpose of my testimony is to: 1) describe GTE's negotiations with ACSI, and (2) summarize GTE's Response to individual issues presented for arbitration by ACSI's Petition. But first, I will briefly discuss the Telecommunications Act of 1996 and the FCC's implementing rules as they relate to GTE's pricing proposal.

The Telecommunications Act and the FCC's Rules

Q. PLEASE COMMENT ON THE TELECOMMUNICATIONS ACT OF 1996 AND THE IMPLEMENTING RULES ADOPTED BY THE FEDERAL COMMUNICATIONS COMMISSION IN ITS FIRST REPORT AND ORDER.

A. The Telecommunications Act of 1996 ("the Act") itself is unprecedented, and makes fundamental changes to the local telecommunications industry. Specifically, the Act is intended to encourage competition by requiring incumbent local exchange carriers ("ILECs") such as GTE to provide interconnection and access to unbundled network elements at cost-based rates, and to offer services for resale at wholesale rates based on an ILEC's avoided costs.

The FCC's rules, however, contradict the Act on several significant points. For example, ACSI requests interconnection, services, and unbundled elements under § 251(c) of the Act. The prices for these facilities and services are subject to the pricing standards set forth in § 252(d)(1)-(3). The Act expressly provides that the ***State Commissions*** have exclusive authority to establish and apply these standards. In its First Report and Order, the FCC had set out detailed rules and methodologies of its own making for these pricing standards, purporting to preclude States from considering other methodologies. The FCC's pricing rules (as well as its "pick and choose" provisions) now have been permanently stayed by the U.S. Court of Appeals for the Eighth Circuit, pending judicial review in early 1997. Thus, they no longer have a legal effect in the current arbitrations.

One thing that was most troubling about the FCC's First Report is that it established "default proxy rates" for wholesale services and unbundled elements for potential adoption as interim rates pending a hearing on the merits. GTE is very concerned with such a proposal. First, as now apparently confirmed by the Eighth Circuit, the FCC improperly assumed the State's rate-setting function and exceeded its statutory authority. Second, we believe the FCC's default rates are erroneous. And while ACSI may disagree with us, we are entitled to a hearing on the merits as well as an opportunity to present our case ***before*** rates can be imposed upon GTE. In fact, when the FCC

for its own part denied the Motion for Stay requests filed by GTE, SNET and U.S. West, even it acknowledged at ¶ 27 that the proxy prices must be replaced with cost studies when they become available and that the appropriate prices may exceed the proxy ceiling. Of course, the FCC's denial of the stay motion has now been reversed, and its proposed default proxy rates have no effect at this time.

A related concern is that the recombining of unbundled elements contemplated by the FCC First Report would allow bypass of access charges and also allow avoidance of the appropriate resale pricing standards. The FCC's First Report violates the intent of the Act not to change the level and application of carrier access charges. For example, it arbitrarily sets end office switching prices at the proxy range of 2 to 4 mils, and it arbitrarily reduces the residual interconnection charge (RIC) to three-quarters of its former level. As a further example, it established without hearing or cause a sunset period for application of carrier common line charges and the three-quarters of the RIC.

Along these same lines, I would like to note that in my experience, regulatory bodies have devoted more time to general rate proceedings and other, more "common" regulatory matters than to this kind of proceeding, where the Commission must resolve fundamental issues resulting from the reorganization of an entire

industry. We recognize that the time lines are imposed by federal law, not State commissions, but we need to ensure that the fundamental issues -- such as those relating to pricing and costing -- receive the attention they deserve.

Q. SHOULD THE FCC'S PROXY RATES BE IMPOSED ON GTE ON AN INTERIM BASIS WHILE THESE ISSUES ARE BEING CONSIDERED?

A. The Court of Appeals' decision, which stayed the FCC's rules, mandates that those cannot be imposed on GTE.

Even absent this decision, the proxy rates should not be imposed on GTE on an interim basis. As demonstrated by other witnesses, the default rates are too low to cover GTE's costs. Were the FCC's default rates used even in the interim, there can be no mechanism fashioned to fix the problem after the fact. "Truing up" rates is not an adequate solution. If unbundled rates are set at levels below cost, new entrants will have the ability to attract more customers than they otherwise would be capable of attracting away from GTE. Once this excessive share loss occurs, it would be impossible for the State to correct for the problem from a customer perspective. While it is conceivable that the State could order retroactive treatment from a revenue perspective, the market cannot be retroactively corrected. It is very costly to win back a customer once lost to another competitor. GTE would be irreversibly harmed by those rates, even

if the Commission allowed for a retroactive "true-up" mechanism.

Q. MAY THE COMMISSION ADOPT RATES ON AN INTERIM BASIS AND, IF SO, DOES THE COMMISSION HAVE THE AUTHORITY TO APPROVE A TRUE-UP MECHANISM TO ACCOMMODATE DIFFERENCES IN FINAL RATES FROM THOSE IMPLEMENTED ON AN INTERIM BASIS?

A. Yes, the Commission has such authority, provided that it adopts GTE's proposed rates as the interim rates. If the Commission uses ACSI's proposed rates, which the evidence will show to be far below GTE's costs, and later orders a true-up to compensate GTE, the Commission will be effecting the same unconstitutional taking that the FCC's proposed pricing rules committed. As I discussed earlier, those pricing rules, including the default proxy rates, were stayed by the United States Court of Appeals for the Eighth Circuit. Moreover, such a low interim rate would cause irreparable harm to GTE's market share, business reputation and good will as I already explained.

I want to make clear, however, that even GTE's proposed rates do not reflect all of GTE's costs, including, for example, GTE's stranded investment. This issue is addressed in GTE's Economic Report (along with the need to rebalance rates). GTE strongly believes it is entitled to recover all of its costs, and this position was an important part of GTE's Motion to Stay the FCC's First Report and Order, which the Eighth Circuit granted. Therefore, any order of this Commission

or any agreement between the parties must permit GTE recovery of all its costs, either as a part of this proceeding or in a subsequent proceeding.

Q. HAS GTE PROPOSED ITS OWN PRICES FOR WHOLESALE SERVICES, UNBUNDLED ELEMENTS, AND INTERCONNECTION?

A. Yes, it has. However, the prices for these network elements are not compensatory due to GTE's current distorted rates. Wholesale rates and retail rates must be consistent and rational for all the rates set. Yet, GTE's wholesale rates for unbundled elements reflect market considerations, while GTE's retail rates were set with certain public policy goals in mind, most notably the goal of universal service. These goals allowed prices for some services to be set below their economic costs, while other services were priced far above costs as a source of contribution for the below-cost services. Other examples of distorted ratemaking policy goals included statewide rate averaging and class of service pricing. As long as GTE was the single provider, the public policy goals could be achieved without harm to the Company or its customers.

Now, however, competition has been introduced in the local exchange market. In that event, there arises a mismatch between, on the one hand, the pricing methodology historically used for determining retail and wholesale rates (where rates will not uniformly reflect costs) and, on the other hand, the cost-based pricing required

by the Act for unbundled elements and interconnection.

For this reason, GTE respectfully requests that the Commission move expeditiously to establish a uniform and consistent set of pricing policies that can be applied to the pricing of all of GTE's services -- retail, wholesale, and unbundling.

Q. DID GTE HAVE A POSITION ON COST AND PRICING IN THE NEGOTIATION?

A. Yes. GTE consistently maintained that any term or condition relating to technical, business, and administrative issues that was dependent on an open pricing issue necessarily awaits resolution of how GTE would be compensated for the elements, services, or modifications requested by ACSI.

Summary of the Parties' Negotiation

Q. WOULD YOU BRIEFLY DESCRIBE THE HISTORY OF GTE'S NEGOTIATIONS WITH ACSI?

A. Yes. Since April 1996, the parties have held numerous meetings to discuss interconnection in Texas and Kentucky. No mention was made of Florida until ACSI presented a model contract to GTE on July 30. Negotiation of general issues continued by conference calls in August and September, but ACSI never made a clear and formal

request for interconnection in Florida, and the parties did not complete their negotiations.

Q. HOW DID GTE APPROACH ITS NEGOTIATIONS WITH ACSI?

A. GTE fully recognizes its obligations as an incumbent local exchange carrier (ILEC) under the Act and is committed to seeing that Congress' objectives in enacting this legislation are achieved. To this end, GTE approached its negotiations with ACSI with a pro-competitive spirit to provide ACSI interconnection and access to unbundled network elements on a non-discriminatory basis. This does not mean, of course, that GTE was (or is) prepared to have either its customers or shareholders subsidize any ALEC's foray into the local exchange market. To the contrary, Congress intended, and the Act makes clear, that GTE must be fully compensated for its provision of interconnection and unbundled elements.

Q. DID THE PARTIES EXCHANGE CONTRACT LANGUAGE?

A. Not really. ACSI did present to GTE a proposed contract for Texas, Kentucky and Florida on July 30. This contract was GTE's first notice that ACSI was seeking interconnection in Florida. Conversation continued over the phone in August and September, but the parties need time to develop contract language regarding the issues on which they have agreed in principle.

Summary of GTE's Response

Q. PLEASE SUMMARIZE GTE'S RESPONSE TO ACSI'S PETITION.

A. In this summary, I have divided the open issues submitted by ACSI which I will address into the following major categories: (1) "most favored nations" treatment and (2) unbundled elements.

"Most Favored Nation" Treatment

Q. WHAT IS ACSI'S POSITION ON "MOST FAVORED NATION" TREATMENT?

A. ACSI is asking for more than is required by the Act. Under the guise of "non-discrimination" in prices, ACSI asserts that it is entitled to "pick and choose" those portions of an agreement between GTE and any other ALEC, and have it inserted into its agreement. In other words, it wants to make sure it gets the same or better terms than any other ALEC. This is contrary to the purposes of the Act.

Q. IS ACSI ENTITLED TO "MOST FAVORED NATION" TREATMENT ON INDIVIDUAL TERMS AND CONDITIONS?

A. No. ACSI's position is based on FCC Rule 51.809. The Eighth Circuit's opinion stayed this Rule and described why it inhibits the negotiation process mandated by Congress. Consistent with the Act,

GTE is willing to offer any ALEC, including ACSI, the same complete contract negotiated with any other ALEC.

Q. SHOULD THE PRICES, TERMS AND/OR CONDITIONS UNDER WHICH SERVICES OR FACILITIES ARE PROVIDED BY GTE TO ONE CARRIER BE MADE AVAILABLE TO ALL CARRIERS?

A. No. Congress did not intend to usurp the negotiation process by enabling ALECs to "pick and choose" specific provisions from any and all agreements. Any normal sound business contract would not include a "most favored nation" clause. To do so would eliminate any and all incentive to the negotiation process and the individuality of the request. Each ALEC is unique and asking to negotiate for terms, conditions and rates that are appropriate to their individual requests based on their individual requirements. This is fundamental to establishing a fully competitive market place. The Eighth Circuit apparently agrees, having stayed the provisions of the FCC's First Report on this account as well as the pricing principles.

Q. HOW IS ACSI'S PETITION CONTRARY TO THE PURPOSES OF THE ACT?

A. The Act was designed to encourage negotiation between the parties, and specified arbitration of only the subset of unresolved issues as a last resort. Inherent in the negotiation process are trade-offs: e.g., Party A will concede on issue X if Party B will agree to A's position on issue Y. Particular issues may be more important to ACSi; for

example, than for another potential entrant. Thus, the negotiations between ACSI and GTE would produce an agreement that might be quite different than as between GTE and another ALEC.

ACSI, however, does not want negotiation and compromise. It wants "most favored nation" treatment so that all the material terms in the agreements will be the same among the ALECs. In other words, ACSI wants to pick and choose from various ALEC agreements in order to obtain individual contract terms that are most favorable to ACSI. This result, of course, is the very opposite of competition.

ACSI's position – if accepted by this Commission – would destroy the negotiation process. Therefore, GTE's position is that each agreement is the product of comprehensive negotiations. Any party desiring to obtain the terms of another agreement must abide by that agreement in its entirety.

Unbundled Elements

Q. PLEASE DESCRIBE THE UNBUNDLED ELEMENTS GTE WILL PROVIDE TO ACSI.

A. GTE will offer on an unbundled basis the following:

(1) the loop, which is in general the transmission facility which extends from a main distribution frame to the customer premises;

(2) the port, which in general is the line card and associated peripheral equipment on a GTE end office switch that serves as the hardware termination for the customer's exchange service on that switch, generates dial tone and provides the customer a pathway to the public switched telecommunications network;

(3) transport, by which I mean the transmission facility which extends from a main distribution frame (MDF) to either another MDF or a meet point with transport facilities of ACSI (unbundled transport is provided under rates, terms and condition of the applicable tariff);

(4) signaling, which in general is SS7 signaling and transport service in support of ACSI's local exchange service;

(5) certain databases in accordance with the rates, terms and the conditions of applicable switched access tariff; and

(6) the network interface device (NiD), which is the point of demarcation between the customer's inside wiring and GTE's facilities.

This description of unbundling means that ACSI may subscribe to and interconnect with whatever of these unbundled elements it chooses, and may combine these unbundled elements with any facilities or services that ACSI may itself provide, pursuant to the following terms: first, the interconnection shall be achieved by expanded interconnection/collocation arrangements ACSI shall maintain at the wire center at which the unbundled services are resident; and second, that each loop or port element shall be delivered to ACSI's collocation arrangement over a loop/port connector applicable to the unbundled services through other tariffed or contract options; and third, ACSI shall combine unbundled elements with its own facilities but shall not recombine GTE unbundled elements.

Q. ACSI WANTS TO BE ABLE TO OBTAIN UNBUNDLED ELEMENTS FROM GTE AND THEN REASSEMBLE THEM TO OFFER END-TO-END SERVICE. WHAT IS GTE'S POSITION ON THIS ISSUE?

A. As I alluded to earlier when describing the nature of ACSI's access to the GTE unbundled elements, GTE strongly believes that ACSI should not be permitted to unbundle and then reassemble GTE's network. Such a proposal by ACSI would render meaningless the

Act's required distinction between unbundled elements and wholesale services -- that they be priced under different cost methodologies.

Q. HOW SHOULD THE PRICES FOR THE LOOP, THE ASSOCIATED COLLOCATION COST AND THE NID, AS UNBUNDLED ELEMENTS, BE SET?

A. The prices should be cost-based, as required by the Act. They should be set in a manner to allow recovery of GTE's actual costs of its actual network and should not be based on the theoretical costs of a network that has never been built. GTE has proposed a pricing methodology that meets the Act's requirements and that allows prices to be set by the market as competition develops. This methodology is discussed in detail in the Economic Report included in our Response, as well as the testimony of Mr. Trimble and Mr. Steele.

Interconnection

Q. PLEASE DESCRIBE GTE'S POSITION ON THE APPROPRIATE PRICING OF INTERCONNECTION.

A. GTE's position on all pricing matters is that the Company should be given the opportunity to recover costs incurred in the operations of the Company from the "cost-causers." Sections 251(b)(5) and 252(d)(2) of the Act, as well as the FCC's Order released August 8, 1996, set forth the standard for establishing reciprocal compensation arrangements. These standards provide for the mutual and

reciprocal recovery of each carrier's costs, calculating such amounts on the basis of the additional costs of terminating calls originated by the other carrier. A bill-and-keep arrangement is inconsistent with these standards unless costs of the two carriers are symmetrical and the volume of traffic terminated on each other's network is approximately equal.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

PART VIII

GTE FLORIDA INCORPORATED

DIRECT TESTIMONY OF WILLIAM E. MUNSELL

DOCKET NO. 961169-TP

Q. PLEASE STATE YOUR NAME AND YOUR BUSINESS ADDRESS.

A. My name is William E. Munsell. My business address is 600 Hidden Ridge, Irving, TX 75038.

Q. BY WHOM ARE YOU EMPLOYED, AND WHAT IS YOUR POSITION?

A. I am employed by GTE Telephone Operations as Senior Product Manager-Switched Access Service.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE.

A. I have an undergraduate degree in Economics from the University of Connecticut, and a masters degree from Michigan State University in Agricultural Economics. I joined GTE in 1982 with GTE of Florida. During the course of my career with GTE, I have held positions in Demand Analysis, Pricing and Product Management.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address ACSI's request for bill-and-keep.

Q. HOW IS YOUR TESTIMONY STRUCTURED?

A. My testimony will be presented in five sections. Section A is a general description of interconnection, transport and termination as background; Section B is a discussion of certain of the Act's requirements; Section C sets forth the parties' positions on bill-and-keep; Section D discusses GTE's position on the issue; and Section E provides a brief summary.

Q. PLEASE PROVIDE AN OVERVIEW OF YOUR TESTIMONY.

A. The Telecommunications Act of 1996 (the "Act") requires GTE to (1) permit any requesting telecommunications carrier to interconnect with its network and (2) establish reciprocal compensation arrangements for the transport and termination of telecommunications. Further, the Act sets forth certain minimum conditions and rate standards for interconnection, transport and termination. While the Act allows significant flexibility in the parties' arrangements for interconnection, transport and termination, it nevertheless imposes fair and rational limits. GTE should be allowed to charge rates for interconnection, transport and termination that are just, reasonable and nondiscriminatory and that allow GTE full recovery of its costs and a reasonable profit.

SECTION A: DESCRIPTION OF TRANSPORT, INTERCONNECTION AND TERMINATION

Q. PLEASE DESCRIBE THE MANNER IN WHICH COSTS ARE INCURRED WITH RESPECT TO INTERCONNECTION TRANSPORT AND TERMINATION.

A. Once an ILEC interconnects with an alternative local exchange carrier ("ALEC"), the ILEC can complete the ALEC's calls by transporting and terminating those calls over its network system, and vice versa. When an ILEC or ALEC transports and terminates its own traffic, the costs of transport and transmission are part of the carrier's overall costs. With interconnection, an ILEC or an ALEC still incurs costs for the transport and termination of calls it terminates for other carriers. Thus, in interconnection agreements, ILECs and ALECs usually quantify these costs at a given rate per minute of usage.

These costs may differ depending on the extent to which completion of calls from the point of interconnection involves tandem switching and transport. If an ALEC interconnects with an ILEC at an end office, the ILEC will incur the cost of switching at the end office and termination to the end user. If, on the other hand, an ALEC interconnects with an ILEC at a tandem switch, the ILEC incurs the costs of switching at the tandem office, transport to the end office, switching at the end office and termination to the end user. Thus, parties to an interconnection agreement will take into account the

functions of tandem switching, transport and termination involved and generally price these elements separately.

Q. WILL THE COSTS OF INTERCONNECTION BE THE SAME FOR AN ILEC AS FOR AN ALEC?

A. No. The cost of transport and termination will generally be higher for an ILEC than an ALEC because ILEC equipment is older and also because ILEC equipment will tend to have a lower throughput than ALEC equipment. Generally, ILECs have older switches and transmission plant in their networks. ALECs are just now entering the local exchange business and are installing currently available switches and transmission plant. New equipment is often less expensive per unit of traffic than older equipment already deployed by the ILECs. With regard to GTE specifically, traffic on GTE's network is usually dispersed throughout a large network of end offices and tandem switches, which serves a relatively large number of low volume residential or rural customers. By contrast, an ALEC will have relatively few end office switches which can be expected to serve a relatively large number of high volume business customers. Thus, because an ALEC's network is handling a relatively higher volume of traffic through a fewer number of switches, an ALEC's switches and transmission plant can be expected to have a higher throughput than an ILEC's switches and transmission plant. Because the total capacity of an ALEC's network tends to be more fully utilized than the

capacity of the ILEC's network, the ALEC's per unit cost for carrying that capacity will be lower than the ILEC's per unit cost.

Therefore, if a transport and termination agreement accurately reflects the true relative costs incurred by an ALEC and an ILEC for terminating each other's traffic, the agreement will, most likely, provide that the ILEC recovers its costs at a higher rate than the ALEC. If, however, a transport and termination agreement provides for symmetrical rates (i.e., each carrier charges the other the same price), the agreement does not necessarily reflect the actual costs of interconnection for each party.

Q. ARE COMPENSATION ARRANGEMENTS NORMALLY INCLUDED IN INTERCONNECTION AGREEMENTS?

A. Transport and termination agreements usually include a compensation arrangement to allow the parties to bill the amounts owed to one another on a periodic basis. Alternatively, transport and termination agreements may provide for a "bill-and-keep" system whereby each party keeps whatever it bills to the end user and does not pay the other party for the costs of transport and termination. Where traffic exchanged between the two carriers is approximately equal, a bill-and-keep system may be appropriate. Moreover, as discussed above, the cost of transport and termination for an ILEC is unlikely to be equivalent to the cost of transport and termination for an ALEC. As such, rendering periodic bills is quite often the only way

an ILEC can recover its reasonable costs of transporting and terminating traffic for an ALEC.

SECTION B: THE "ACT"

Q. DOES THE ACT ADDRESS THE METHOD FOR PRICING INTERCONNECTION SERVICES?

A. Although the parties are free to negotiate the price of interconnection, in the event the parties seek arbitration by a State commission under section 252 of the Act, rates for interconnection set by the State commission shall be "based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection . . . and . . . nondiscriminatory, and . . . may include a reasonable profit" (47 U.S.C. § 252(d)(1)(A)-(B) (1996)).

With regard to transport and termination, the Act provides that a State commission may not consider the terms and conditions of reciprocal compensation to be just and reasonable unless such terms and conditions "provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier" and determine costs "on the basis of a reasonable approximation of the additional costs of terminating such calls" (47 U.S.C. § 252(d)(2)(A)(I)-(ii) (1996)). Section 252(d) also

states that such pricing standards shall not be construed to prevent parties from arranging for "the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements)" (47 U.S.C. § 252(d)(2)(B)(I) (1996)).

SECTION C: UNRESOLVED ISSUES

Q. PLEASE IDENTIFY THE ISSUES THAT ARE IN DISPUTE BETWEEN GTE AND ACSI AND THEIR RESPECTIVE POSITIONS.

A. Although contract language has yet to be worked out, I understand that ACSI and GTE seem to have agreed in principle to a range of interconnection issues that will not be addressed here. However, ACSI's petition presents one issue yet to be resolved.

(1) *Should bill-and-keep be used as a reciprocal compensation arrangement for transport and termination?*

ACSI's Position: At least for an interim period, a bill-and-keep system should be used.

GTE's Position: While GTE's preferred position is asymmetrical rates as stated below, the Company is willing to enter into bill and keep arrangements initially, but only where traffic is approximately equal and other specified parameters

are met. As and when traffic becomes out of balance by plus or minus 10%, then individual charges should be issued.

SECTION D: GTE'S POSITION

Q. DOES SYMMETRICAL PRICING ALLOW RECIPROCAL AND MUTUAL RECOVERY OF COSTS AS A REASONABLE APPROXIMATION OF THE COST OF TERMINATING CALLS?

A. Although required by the FCC, symmetrical pricing is completely at odds with the requirements of the Act. Section 252(d)(2)(A)(I) of the Act requires that the terms and conditions for transport and termination must "provide for the mutual and reciprocal recovery by each carrier of costs . . . of calls that originate on the network facilities of the other carrier." The terms and conditions for transport and termination must "determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls" (47 U.S.C. § 252(d)(2)(A)(ii) (1996)).

Symmetrical pricing between ACSI and GTE will not afford GTE recovery of its costs. ACSI's costs for terminating calls will, most likely, be less than GTE's costs for terminating calls. As discussed above, this is due to the expectation that ACSI will have deployed newer equipment in its network using a relatively higher percentage of its network's capacity. Using symmetrical pricing, ACSI will receive a subsidy from GTE, because it will be receiving far more than the

cost it incurs to complete a call. Thus, GTE's costs are not a suitable proxy for determining the actual costs of interconnection, meaning that symmetrical pricing does not allow for mutual or reciprocal recovery of costs and is not based on a reasonable approximation of the additional cost of terminating calls. Accordingly, the Commission should adhere to the letter and intent of the Act and allow the parties to recover their respective true costs of transport and termination.

At a minimum, pending judicial review of the FCC's Order, the cost studies submitted by GTE justify a departure from symmetrical pricing, as GTE believes its costs for transport and termination to be significantly higher than ACSI's costs. See Direct Testimony of Dennis Trimble and attachments thereto. GTE's costs are thus not a suitable proxy for ACSI's costs, and symmetrical pricing is not justified. The FCC's Order can be read to limit the right to rebut the presumption to the requesting ALEC as opposed to the ILEC (Order ¶ 1089). Such a reading, however, is illogical – if an ALEC can prove higher costs than the ILEC, thus justifying a departure from symmetrical pricing, there seems to be no reason an ILEC cannot similarly make such a showing, nor does the Act give any indication that an ILEC should be barred from doing so. Moreover, the FCC stated that State commissions could impose bill-and-keep if, among other things, "neither carrier has rebutted the presumption of symmetrical rates" (Order ¶ 1111) (emphasis added). Hence, the

Order actually does allow both parties to challenge the presumption of symmetrical pricing.

If, however, the Commission decides symmetrical pricing is justified pending judicial review of the Order, GTE should be allowed a true-up of its costs in the event the FCC's requirement of symmetrical pricing is eventually overturned.

Q. IS THE BILL-AND-KEEP METHOD OF PRICING APPROPRIATE OR NECESSARY?

A. The Act requires that transport and termination arrangements allow for "the mutual recovery of costs through the offsetting of reciprocal obligations" (47 U.S.C. § 252(d)(2)(B)). Among the other possible options for mutual recovery of costs, parties may opt for "arrangements that waive mutual recovery (such as bill-and-keep arrangements)," but are not required to do so. Thus, the Act does not require or permit the Commission or the FCC to impose bill-and-keep on GTE and ACSI.

The Commission is likewise not required to impose bill-and-keep under the FCC's Order. The Order states that a State commission "may" impose bill-and-keep if neither party has rebutted the presumption of symmetrical pricing and if the volume of traffic exchanged is approximately equal (Order ¶ 1111). Not only has GTE rebutted the presumption of symmetrical pricing, but there presently

exists no way for the Commission to determine whether the volume of traffic exchanged will, in fact, be equal. Thus, neither precondition has been met. Moreover, because the FCC allows State commissions to impose bill-and-keep if both preconditions are met, it has misread the statute, which clearly allows bill-and-keep arrangements but does not mandate them under any circumstances.

While GTE's preferred position is as stated above, the company is willing to enter into a bill and keep compensation arrangement given certain parameters. The proposed arrangement, predicated upon approximately equivalent traffic flows, would be for the transport and termination of end-user local traffic. The arrangement would specifically exclude any toll or access traffic. Also, interLATA access traffic must be carried over separate trunk groups and may not be included with the local and local toll traffic.

GTE, in an effort to expedite the competitive process, is proposing a fairly broad definition of roughly balanced. The Company is proposing that roughly balanced equates to plus or minus ten percentage points. This means that the originating/terminating split could be up to 60/40.

GTE is willing, in the spirit of the Act, to reach a compromise position regarding the issue of bill and keep. This definition, in conjunction with certain parameters, provides a reasonable approach.

The following parameters are fundamental to GTE's proposed bill and keep arrangement:

1) The arrangement applies to the termination of interconnected calls and does not apply to internetwork facilities.

2) The arrangement applies to local and EAS traffic only and has **no** implications to access (or wireless) compensation. For purposes of traffic compensation, local and EAS calling scopes are as defined in the GTE exchange services tariff, and does not include optional wide area calling scopes.

3) Traffic must be local end-user traffic. An ALEC may not aggregate traffic other than its end-user local/mandatory EAS traffic for the purposes of this arrangement. Toll/access type traffic should be compensated via access charges.

4) Traffic is assumed to be roughly balanced unless there are records available which would indicate otherwise. Either party may request traffic studies be performed on not more frequently than a quarterly basis.

5) If traffic studies indicate that traffic is outside of the roughly balanced range, either party may request that billing

commence utilizing agreed-upon rates no lower than GTE's TELRIC plus the appropriate joint and common costs.

6) Either party may terminate the arrangement with twelve months' notice.

SECTION E: SUMMARY

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. While interconnection is a significant step towards creating a competitive market for local exchange services, this step is not intended to open up GTE's network to interconnection at any point for any price. Accordingly, the Commission should:

- reject symmetrical pricing for transport and termination, or allow GTE a true-up if symmetrical pricing is rejected through judicial review of the Order; and

- allow bill-and-keep compensation only within the parameters specified herein.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.