BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

960916-TP

TESTIMONY OF

MARVIN H. KAHN

ON BEHALF OF

AMERICAN COMMUNICATIONS SERVICES, INC.

Reformatted September 6, 1996

TESTIMONY OF

DR. MARVIN H. KAHN

I. QUALIFICATIONS

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

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

Q. PLEASE REVIEW YOUR BACKGROUND AND QUALIFICATIONS.

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

In addition to my consulting experiences, I taught economics or lectured at the University of Tennessee, the University of Missouri in St. Louis, Washington University in St. Louis, at Merrimac College and at The Johns Hopkins University. I served as a senior economist with the Institute of Defense Analysis and the Mitre Corporation, both not-for-profit Federal Contract Research Centers in the Washington, D. C. metropolitan area. I also served as a senior staff economist with an Ad Hoc Committee of the U.S. House Committee on Currency and Banking, focusing on energy and employment issues.

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

Q HAVE YOU TESTIFIED BEFORE REGULATORY AGENCIES ON MATTERS DEALING WITH TELECOMMUNICATIONS?

A. Yes. I have served as an expert witness on matters regarding telecommunications before commissions in over 20 jurisdictions in this country and Canada. I have also undertaken research and prepared reports on ratemaking issues for the U.S. Postal Service, the National Association of State Utility Consumer

Advocates (NASUCA), the Federal Communications Commission (FCC) and the National Regulatory Research Institute (NRRI).

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

A. Yes. I have testified on local competition issues in California, Delaware, Kentucky, Pennsylvania, and West Virginia. Directly or indirectly, all of these testimonies involved the issue of appropriate pricing for unbundled telecommunications network elements. A copy of my resume listing my prior testimonies and reports is attached.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been asked by American Communications Services, Inc. (ACSI) to address the economic and ratemaking principles that underlie the pricing of unbundled network elements. Specifically, I have been asked to address the appropriate methodology for pricing unbundled local loops, one that is consistent with the Telecommunications Act of 1996 (1996 Act or Act) and with the promotion of meaningful and effective competition in the market for local exchange services. ACSI has also asked me to address the principles underlying the

development of reciprocal compensation for mutual traffic exchange.

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

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

Adherence to economic pricing principles is important in achieving the competitive outcome. The methodology used to determine the price ILECs charge for use of their facilities must send the correct price signals, encourage the entry of efficient competitors, promote efficient make-buy decisions, and allow

consumers to benefit from an increase in competitive activity, including lower retail prices and a diversity of service choices.

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

A. Prices in a competitive market are based on forward-looking, market-oriented costs. To achieve this competitive market outcome, prices for network elements should be developed based on two criteria. The first is a measure of forward-looking, direct costs. The total service long run incremental cost (TSLRIC) method is, thus, an appropriate standard for achieving the desired results. The second input is a mark-up over TSLRIC to permit recovery of forward-looking, efficiently incurred joint and common costs. As I describe below, I propose that this mark-up not be based on the ILEC's accounting records, but rather limited to what the ILEC elects by its own activities in competitive markets. This is the best approach for ensuring the efficient level of entry, efficient production of end use services, competitively determined end use prices and the avoidance of anticompetitive behavior by ILECs. Since the mark-up is limited to that which does prevail in the ILECs' more competitive markets, it is reasonable by market standards.

Under the 1996 Act, determinations by a state commission of the rate for interconnection and network elements are just and reasonable if the rate is based on cost (determined without reference to a rate-of-return or other rate-based proceeding).[1] The rate may include a reasonable profit.[2] A TSLRIC-based rate is a cost-based rate which is determined without reference to a rate-or-return or other rate-based proceeding. A mark-up over direct cost limited to a level determined by competitive market forces permits a reasonable profit. Thus, the approach outlined above is both economically sound and satisfies the pricing standards of the Act.

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

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[1] Section 252(d)(1)(A).

[2] Section 252(d)(1)(B).

In summary, this approach is consistent with the FCC's ruling on interconnection interpreting Section 252(d)(1) of the 1996 Act. As of this writing, the FCC order in Docket No. 96-98 is not available. However, the press release issued on August 1, 1996 states that the FCC has ruled that a cost-based pricing methodology based on forward-looking economic costs (specifically TSLRIC) is most consistent with the goals of the Act. Because the TSLRIC studies are for network elements, the FCC calls them Total Element Long Run Incremental Costs (TELRIC). Under the Order, prices are to be set at TELRIC plus a "reasonable share of forward-looking joint and common costs" (p. 2). Section IV of my testimony discusses the mark-up in greater detail.

Q. **HOW IS YOUR ANALYSIS AND RECOMMENDATION AFFECTED BY THE FCC'S RECENTLY ANNOUNCED DECISION IN ITS DOCKET 96-98?**

A. The FCC's press release made clear that it has taken two actions with respect to the pricing of unbundled network elements. First, the FCC required that arbitrated rates be based on TELRICs. In addition, the FCC established default proxies to be used on an interim basis absent the necessary TELRIC cost information. Naturally, both of these actions are directly relevant to my

analysis and testimony. I intend to revise and update my testimony, as appropriate, after I review the FCC decision and any BellSouth TELRIC/TSLRIC and other relevant data provided.

Q. WHAT RATES DO YOU RECOMMEND FOR UNBUNDLED LOOPS?

A. BellSouth did not provide cost studies to ACSI during negotiations. Therefore, BellSouth's version of TELRIC or TSLRIC for network elements and data necessary to develop a cost-based, competitive mark-up are not available. In the absence of such data, I recommend using the best cost information currently available to the extent it is also consistent with the approach outlined above.

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

A. The best TSLRIC alternative (at this time) for estimating reasonable TSLRIC data uses the updated Hatfield Model.[3] This model produces TSLRIC data by population density zone (six density zones) for each state. The model is forward looking and takes into consideration population demographics, geology,

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[3] Version 2.2, Release 1, by Hatfield Associates, Inc., dated May 30, 1996, is the most current version available at this time, although it is my understanding that an update is due shortly.

network architecture and technology. The cost estimates for the areas to be served by ACSI are provided in Exhibit D of ACSI's Petition. BellSouth has not provided cost studies which could be used to determine or evaluate TSLRIC estimates or a competitive mark-up. In the absence of BellSouth sponsored TELRIC studies completed within two months, I recommend setting interim rates based on the TSLRIC estimates developed in the Hatfield Model. Further, the Commission should order BellSouth to provide the information necessary to estimate the mark-up on BellSouth's more competitive services and to provide BellSouth cost studies or other data which the Commission determines to be necessary to evaluate and verify the Model's TSLRIC estimates. The interim rates should remain in effect until BellSouth's TELRIC-cost-based rates are effective, which should occur no later than six months from now.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY STRUCTURED?

A. In Section III, I discuss the economic efficiency goals and explain the role of pricing in achieving those goals. Section IV discusses the appropriate cost-based pricing methodology for achieving the competitive outcome and explains why a TSLRIC methodology best satisfies the criteria for efficient pricing. BellSouth has not

provided any cost studies or estimates of cost. Section V compares the theoretical pricing methodology discussed in Section VI with the proxy cost model developed by Hatfield Associates, Inc. to estimate TSLRIC for network elements.

III. EFFICIENCY GOALS

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

A. A key objective of the 1996 Act is a structure that allows the entry of both facilities-based and resale carriers into the local service market to promote effective competition. The pricing of unbundled network elements is one of the critical components of any open market policy, as reflected in new Sections 251(c)(3) and 252(d)(1) of the Communications Act of 1934 (the Act) adopted by the 1996 Act. With this in mind, the goal should be to structure a competitive outcome. A competitive outcome requires efficiency in production and pricing. Efficient pricing, in turn, requires that price reflect the cost of the good or service in question which means that rational choices by producers and consumers are encouraged. Production, entry and consumption decisions are each influenced by pricing, or at least potentially so. Only when prices reflect costs will the market yield the optimal quantity or combination of those goods and services

valued by society at the minimum resource cost to society. Adherence to economic costing principles is important in achieving the competitive outcome and requires the use of reasonable, accurate measures of cost.

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

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

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

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

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

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

First, it must be recognized that properties which allow the ILECs' monopoly control to remain may delay the competitive entry for some network elements. The Commission should establish rates to allow the benefits of a competitive outcome to be realized by consumers well before full facilities-

based competition emerges for all elements and in all areas of the local service market. Otherwise, the benefits of competition could be delayed indefinitely given the tremendous practical and economic obstacles with replicating more than a negligible portion of the incumbent LEC's network.

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

In short, the pricing policy designed to promote competition must recognize that competition is not likely to evolve evenly or with equal success for all network elements or in all areas of the state. The policy should be designed to provide the benefits of competition in the end use market to

consumers, even before the successful emergence of that competition. In fact, the policy should be structured to create these benefits in the end use market for consumers, even if competition for each network element never emerges.

Q. WHY IS A TOTAL SERVICE LONG RUN INCREMENTAL COST METHODOLOGY BETTER SUITED THAN OTHER COSTING METHODOLOGIES TO PROMOTING COMPETITION?

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

Pricing based on embedded costs or revenue requirements cannot provide these benefits. Further, such pricing requires that the firm has -- and that it exercises -- a certain degree of market

power. Market power permits the ILEC to engage in anticompetitive conduct by allocating costs to non-competitive network elements. This will provide a "cost basis" to raise the prices for those non-competitive network elements, removing the need to recover these costs from competitive network elements.

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

A. Without the availability of unbundled network elements, entry into the local exchange market is severely restricted and in some circumstances would be impossible. It is for this reason that the Act specifically requires incumbents to provide nondiscriminatory access to network elements on an unbundled basis at any technically feasible point.[4] Further, to facilitate competition, network elements must be available in a manner such that new entrants are not forced to take and pay for elements that are not needed by that entrant in the provision of the local service, and are not denied access to key elements needed to ensure quality provision on a par with the ILEC's services. If new entrants are forced to buy unneeded elements in order to get others (if elements are not sufficiently unbundled), they will incur

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[4] Section 251(c)(3).

unnecessary costs which will deter efficient entry. Similarly, if access is denied to certain elements needed to ensure equal quality service, efficient entry will be deterred. The Act not only requires access to unbundled elements, it requires that unbundled elements be available in a manner that allows requesting carriers to choose the desired combination of those elements to provide the services they choose to the extent technically feasible.[5]

The network elements at issue in this arbitration are loops. The loop is the component of local service, i.e., the circuit or channel, by which the LEC provides transport between the end user premise and the LEC wire center. These communications channels or circuits may be provided as 2-wire or 4-wire copper pairs, as radio frequencies or as channels on a high-capacity feeder/distribution facility.

Further unbundling, for example, unbundling at the sub-loop level, is technically feasible, albeit ACSI is not asking for such further unbundling at this time. The FCC has concluded that unbundling of local loops is feasible[6] and that, tentatively, further unbundling of the local loop should be required.[7] In

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[5] Ibid.

[6] Press Release, August 1, 1996. The Commission identified a minimum of seven network elements, including the local loop.

[7] Notice of Proposed Rulemaking, CC Docket No. 96-98, ¶97.

addition, the FCC has identified local and tandem switches (including all software features provided by switches) as one of seven separate unbundled network elements; and, apparently, left additional unbundling requirements up to the states.[8] Competition is enhanced by allowing the degree of unbundling requested by ACSI.

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

A. Yes. Physical replication of the loop by facilities-based carriers could not occur in the relatively near future; such massive investment would take time, if it occurred at all. Currently, BellSouth has a virtual monopoly on loop elements, which, in turn, are necessary for facilities-based competition to occur. Without access to the unbundled loop, and specifically access at economically feasible rates, entry will not occur and the objective of promoting efficient facilities-based entry will not be met. Lack of access to unbundled loops at cost-based rates would perpetuate the entry barriers in the local exchange market. Such entry barriers are inefficient from an economic perspective and clearly inconsistent with the 1996 Act.

IV. APPROPRIATE METHODOLOGY FOR

[8] Press Release, August 1, 1996.

PRICING UNBUNDLED ELEMENTS

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

A. Rates based on a TSLRIC methodology give the appropriate signals to carriers and consumers, ensure efficient entry into the market, and promote efficient utilization of the telecommunications network. As pointed out above (Section III), in a competitive market, prices are driven toward market-oriented, incremental costs over the long term. Thus, the rates for unbundled network elements should be based on a long run incremental cost methodology. TSLRIC is just such a cost methodology.

Q. WHAT IS MEANT BY TSLRIC?

A. As the FCC in its Notice of Proposed Rulemaking[9] points out, parties sometimes assign (or appear to assign) different meanings to the term TSLRIC. Generally, however, the TSLRIC of an unbundled network element is the sum of the costs added (or avoided) by a decision to supply (discontinue) all of the demand for an element, assuming that the carrier continued to provide its other network elements, services and functionalities.

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[9] CC Docket No. 96-98, in the matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996.

A number of states have adopted this approach as the standard for costing local service and network elements.[10] In some instances, this same costing approach has been adopted, though a different name is used. For instance, the Illinois Commission has adopted this type of costing approach, referring to it as Long Run Service Incremental Cost, or LRSIC.[11] Some, including the FCC, have suggested that when applying the principle to network elements rather than services, it should be described as the Total Element Long Run Incremental Cost, or TELRIC.[12] This rose may go by several other names.

Q. WHY IS TSLRIC THE PROPER MEASURE OF THE COST OF NETWORK ELEMENTS?

A. Using TSLRIC will result in prices for network elements reflecting forward-looking, efficiently incurred costs. It is appropriate that the TSLRIC be forward looking. Efficient decisions regarding market entry, exit and expansion are based on forward-looking comparisons of expected revenues and

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[10] Notice of Proposed Rulemaking, FCC 96-182, CC Docket No. 96-98, paragraph 127.

[11] Ibid.

[12] As noted above, the FCC has used the TELRIC terminology in describing a TSLRIC methodology applied to unbundled network elements in the Press Release dated August 1, 1996.

expected costs. For correct price signals to promote efficient market activity, forward-looking costs should be used.

The appropriate cost study is long run in nature, i.e., it is based on a time horizon long enough to allow entry or exit to occur and/or for substantial changes in capacity or technology to occur. All costs affected by any of these decisions (entry, exit, capacity expansion or technology adoption) are variable. A properly structured incremental cost study should therefore include forward-looking capital costs, and the preponderance of all expenses should be viewed as variable, i.e., joint and common costs should amount to a relatively small fraction of total costs.

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

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

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

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

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

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

A. There are at least four reasons why a limit to the mark-up should be applied. First, by applying the competitive mark-up to all elements, non-competitive elements are treated as if they were competitive. This allows the benefits of competition to be realized even before actual competition emerges. This also keeps the ILEC from using revenues from non-competitive elements to finance strategic pricing responses in competitive markets.

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

Third, by not limiting the mark-up, the ILEC is able to recover a large, if not virtually unlimited, volume of shared and common costs in prices charged for monopoly elements. As such, it has no incentive to accurately classify costs as direct as opposed to shared or common in TSLRIC studies. Misclassifying costs as shared or common will reduce price floors and maximize pricing flexibility, improving the ILEC's position in competitive markets without any change in the level of costs incurred. On the other hand, if the extent to which

monopoly service elements can bear a mark-up is limited, there is less opportunity to recover these costs through pricing of monopoly services and there is less incentive to misassign these costs as shared or common. To be sure, the ILEC can still misassign costs and can still reduce prices selectively. However, the ability to recover the costs misassigned is substantially limited and, therefore, the incentive to do so is reduced. The result is a general incentive to increase the proportion of costs subject to direct attribution. Further, putting shared and common costs at risk by limiting the mark-up will also provide the ILEC with greater operational incentives to minimize these shared and common costs.

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

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

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

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

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

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

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

Further, it must be recognized that rates established historically have been designed to allow BellSouth to fully recover its revenue requirement. Rates for many of the services that are less elastic have been set at levels necessary to accomplish this recovery. If competition successfully emerges in

these markets, rates for many of these services are likely to fall. Consequently, in the interest of capturing a competitively inspired mark-up, it is inappropriate to take the average of all services, but instead the focus should be on competitive market operations and the market pricing of BellSouth's more competitive activities, i.e., on the revenues realized under specific market-type contracts negotiated by BellSouth.

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

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

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

A. While none has been presented by BellSouth in the context of negotiations, other available data point to a mark-up in the 10-15 percent range. However, an analysis of BellSouth's data would be needed to determine the appropriate mark-up for BellSouth.

Q. ON WHAT DO YOU BASE THE INFORMATION REGARDING OTHER AVAILABLE DATA?

A. I have performed an analysis of the more competitive contracts for two ILECs in California. An analysis of contracts entered into by GTE and Pacific Bell in California for their competitive Centrex offering points to mark-ups of up to 15 percent. Comparing the Centrex contract revenues with Pacific Bell's estimate of TSLRIC (as filed with the California Commission in the cost study proceedings) provides a median mark-up of approximately 15 percent. The mark-ups obtained by GTE were generally lower.[13]

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

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

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[13] R.93-04-003, I.93-04-002, Rebuttal Testimony of Dr. Marvin H. Kahn (Revised), July 25, 1996, Tables III and IV.

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

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

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

(ii) nondiscriminatory; and

(iii) may include a reasonable profit.

These conditions clearly proscribe the use of the embedded or fully-allocated cost methodology of traditional regulation, which is based on the historical and actual costs incurred, in setting cost-based rates for network elements. A long-run incremental cost methodology does not rely on historical, embedded costs and is, therefore, consistent with the Act. In addition, rates based on a competitive mark-up are nondiscriminatory; reassured by Section 252(i) of the Act which requires an ILEC to make available any interconnection, service or network element provided under any agreement approved by a state commission

on the same terms and conditions. With my proposal, competitive and non-competitive elements are each priced according to identical standards.

Q. UNDER SECTION 252(d)(1)(B) OF THE ACT, A COST-BASED RATE FOR NETWORK ELEMENTS MAY INCLUDE A REASONABLE PROFIT. IS YOUR APPROACH CONSISTENT WITH THIS PROVISION?

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

Q. IS A LONG RUN INCREMENTAL COST APPROACH CONSISTENT WITH THE FCC ORDER ON INTERCONNECTION?

A. Yes. The FCC press release regarding Docket No. 96-98 indicates that the FCC has adopted a TSLRIC or long run incremental cost-based

methodology. The FCC's press release uses the term "Total Element Long Run Incremental Cost," instead of Total Service Long Run Incremental Cost, but the methodology is the forward-looking, incremental cost methodology of TSLRIC.[14]

Q. WHAT ARE NON-RECURRING CHARGES?

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

Q. HOW SHOULD THE NON-RECURRING COSTS ASSOCIATED WITH ESTABLISHING, MOVING OR CHANGING THE SERVICE RECEIVED BY A CUSTOMER OF ACSI OR ANOTHER COMPETITOR BE RECOVERED BY BellSouth?

A. The NRCs which BellSouth is allowed to charge ACSI to establish, move, or change service for a customer of ACSI should not exceed the charges which would apply if BellSouth was establishing, moving or changing service for a customer which it was serving directly. Moreover, the NRCs assessed should be limited to only the charges

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[14] FCC, NEWS, Report No. DC 96-75, Action In Docket Case, August 1, 1996.

applicable to those activities specifically required by ACSI or another competitor.

Q. CAN YOU PROVIDE EXAMPLES OF THE TYPES OF NRCS WHICH SHOULD APPLY BASED ON NRCS ASSESSED TODAY?

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

A second example of a situation where NRCs could apply would involve an existing customer of BellSouth changing to a new location. In this case, the only non-recurring costs involved would be those associated with changing the cross-connect from BellSouth's switch to ACSI's node. In situations such as this, the appropriate NRC would be comparable to the NRC which applies when customers switch from BellSouth to ACSI. If BellSouth does not have a specific NRC in place for changing local service providers, an appropriate level for the NRC

would be the secondary service charge applicable to a new customer or a customer move to a new location.

Q. YOU INDICATED PREVIOUSLY THAT THE NRCS ASSESSED TO ACSI SHOULD NOT EXCEED THE CHARGES WHICH WOULD APPLY IF THE ILEC WAS PERFORMING THE NON-RECURRING ACTIVITY FOR ITS OWN DIRECT CUSTOMER. WOULD THAT CHARGE NECESSARILY BE THE SAME THAT BellSouth CHARGES ITS OWN CUSTOMER?

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

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

A. Under Section 252(d)(2) of the 1996 Act, the terms and conditions for transport and termination of traffic are just and reasonable if (1) they

provide for the mutual and reciprocal recovery of costs, and (2) costs are determined on the basis of a reasonable approximation of the additional costs of terminating calls. The Act does not preclude arrangements that waive mutual recovery, such as bill-and-keep arrangements (Section 252(d)(2)(B)). Indeed, the FCC in its Docket 96-98 decision stated that bill-and-keep is an appropriate reciprocal compensation mechanism where traffic exchanged between the two carriers is balanced and network architectures are symmetrical. As stated in the testimony of Richard Robertson, ACSI expects traffic to be balanced.

Where a state commission chooses not to adopt bill-and-keep in an arbitration, TSLRIC would be the appropriate costing methodology under the Act for estimating such charges.

Both approaches -- bill and keep, and TSLRIC-based charges -- promote competition by ensuring that the ILECs, with their greater market power, do not charge excessive rates for termination and transportation. However, where traffic is balanced, bill-and-keep is more efficient because it avoids the administrative costs associated with traffic measurement.

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

A. Yes. Washington adopted bill-and-keep for reciprocal compensation as an interim measure. Florida, California, Connecticut and Oregon have

also adopted bill-and-keep for specified periods of one to two (1-2) years. Other states, such as Delaware, are considering bill-and-keep in the establishment of interim rules on local competition.

Q. IF THE COMMISSION DOES NOT ORDER A BILL-AND-KEEP ARRANGEMENT, HOW SHOULD COMPENSATION BE DETERMINED?

A. If the Commission does not order a bill-and-keep mechanism, it should require charges determined in accordance with TELRIC, as discussed above. Where TELRIC studies are not yet available, rates should be established using the default proxies established in the FCC's Interconnection Order. Specifically, the FCC set a range of 0.2 to 0.4 cents per minute where traffic is terminated at the end office, and an additional charge not to exceed 0.15 cents per minute where the traffic is terminated at the tandem. Appropriate rates, if the proxies must be used on an interim basis, are presented in Exhibit J. These were established using the results for end office and tandem switching from the Hatfield Model.

V. DEVELOPMENT OF COST-BASED RATES IN THE ABSENCE OF BellSouth DATA

Q. HAS BellSouth PROVIDED TSLRIC STUDIES TO USE TO DEVELOP COST-BASED PRICES FOR UNBUNDLED NETWORK ELEMENTS?

all basic network elements needed for local service. In addition, the model reflects ILEC specific geographic and demographic differences that may affect cost. A summary of TSLRIC pricing rules and standards employed in the model is provided in Exhibit D of the ACSI Petition.

We relied upon Hatfield Version 2.2, Release 1. This is the most recent version of the model. The numeric results of the Hatfield Model Version 2.2,[16] Release 1, most recently submitted to the FCC are also presented in Exhibit D.

Q. GENERALLY, HOW IS THE HATFIELD MODEL CONDUCTED?

A. The Hatfield Model (HM) is primarily an engineering model, which is used to design a local network subject to various rules and constraints. The network is designed to meet demands for local and toll services, including both switched and dedicated access. The end product of this analysis can be costs for individual services or, as is the case here, cost by network element.

The Hatfield Model is based in part on the Benchmark Cost Model (BCM). The BCM is a costing technique initially developed by two ILECs (NYNEX and BellSouth) in cooperation with two IXCs (MCI and Sprint). The purpose of the BCM was to estimate the cost of local service in greater detail, i.e., in smaller geographic areas, than had been done to date. The intent was to focus on geographic areas where costs

[16] Ex parte presentation of AT&T Corp. in FCC Docket No. 96-98, dated July 3, 1996.

whatever combination of commercial interests may be driving that entity.[17] For instance, while the model assumes fiber facilities are used in both the interoffice and feeder network, it is premised on only copper facilities used in the loop distribution system.[18] In this manner, the costing procedures in the Hatfield Model do not require cost allocations to deal with those network facilities which are not needed to provide local service, but which are necessary to provide various strategic services such as high-speed data or video.

The Hatfield Model is driven by current demand levels for local and toll services. The network is sized to meet both local and toll requirements for business and residential customers (including second line residential demands), plus the growth of these services over time. In this manner, a network is modeled that is efficiently sized to meet the demands of these customers, but not the demands for other strategic services whose evolvement is both risky and possibly distant. Spare capacity is required in this analysis, but not to meet potential strategic service demands.

As noted, the Hatfield Model draws from the BCM census block data base. This sets it apart from the typical ILEC TSLRIC study, which tends to be both state and purpose specific. By that, I mean that

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[17] Hatfield Model, Version 2.2, Release 1, Documentation, May 16, 1996, page 2.

[18] Id., page 3.

the cost studies are developed individually for each state and based upon the specific requirements at hand. Cost studies may be developed at the wire center level, at other times by exchange, or at other times utilizing statewide averages. Therefore, comparisons of costs across these studies, as well as across space and time, are most difficult. With the Hatfield Model, such comparisons are both possible and, in fact, are promoted by the study authors.

Q. THE HATFIELD MODEL HAS BEEN CRITICIZED AS PROVIDING INEFFICIENT OR INACCURATE ESTIMATES OF COSTS FOR LESS DENSELY POPULATED AREAS. HOW HAVE YOU DEALT WITH THIS?

A. For the purposes at hand, that criticism is not limiting.

One of the difficulties in any technique that draws on data that is widely applicable is that the accuracy of the analysis in any individual specific circumstance may be limited. The inaccuracies or inefficiencies of the calculation procedure are typically greatest the further one goes from the median, or average, of the distribution of outcomes. With regard to the data used in the Hatfield Model, the inaccuracies in the calculation procedure have been claimed to exist primarily with regard to cost estimates in census block groups with the lowest population densities. While there may be a large number of such census block groups, they tend to include but a small portion of the total number of

costs or, alternatively, as I have suggested in Section IV, by assessing the mark-up which BellSouth has elected in the context of pricing its most competitive service offerings.

The difficulty faced by the Commission in either of these instances is that the data necessary to construct the mark-up are within BellSouth's control. Consequently, the ability to calculate this mark-up must await the availability and the examination of those data. It is my understanding that ACSI is seeking those data through discovery.

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

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

Q. ARE THERE ANY ADDITIONAL ISSUES RELATED TO THE HATFIELD MODEL WHICH SHOULD BE BROUGHT TO THE ARBITER'S ATTENTION AT THIS TIME?

A. Yes, there is one. It should be noted that the Hatfield Model is being updated and the results of this update will be available soon. When

those results are available, the information included in Exhibit D and Exhibit H (ACSI's proposed rates) of ACSI's Petition will be updated.

Q. YOU NOTED THAT BellSouth DID NOT PROVIDE ITS TSLRIC FOR YOUR REVIEW. IF THAT WERE TO BE MADE AVAILABLE ON A TIMELY BASIS, WOULD YOU USE THE RESULTS OF THAT ANALYSIS IN PLACE OF THE HATFIELD MODEL?

A. That is not clear. It is my understanding that ACSI is requesting copies of BellSouth's TSLRIC studies. Upon receipt of that cost study information on a timely basis, it will be reviewed and a decision will be made as to its applicability in terms of establishing rates in this proceeding. At that time, I will comment on whether this BellSouth's study should be adopted, modified and adopted, or simply rejected. At this juncture, I offer no observation.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

VERIFICATION

STATE OF MARYLAND)
) ss
COUNTY OF ANNE ARUNDEL)

Marvin H. Kahn, being first duly sworn, deposes and states that he is a founding principal of Exeter Associates, Inc. and is authorized to make this verification; that he has read the foregoing Testimony and knows the contents thereof, and that the same is true to the best of his knowledge, information and belief.

Marvin H. Kahn

Subscribed and sworn to before me on the 8th day of August, 1996.

Notary Public

My Commission Expires:
CHARLES H N KA[illegible]
Notary Public, State of Mar[illegible]
Qualification Anne Arundel County
Commission Expires 5/16/00

(SEAL)