Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Commission's Rules Regarding	)	
the Pricing of Unbundled Network Elements	)	WC Docket No. 03-173
and the Resale of Service by Incumbent Local	)	
Exchange Carriers	)	

DECLARATION OF WILLIAM C. PALMER

I. INTRODUCTION

1. My name is William C. Palmer. I am a Director at LECG, LLC. My business address is 1603 Orrington Avenue, Suite 1500, Evanston, Illinois, 60201. LECG is an economics and finance consulting firm, providing economic expertise for litigation, regulatory proceedings, and business strategy. LECG has a staff of more than five hundred professionals in more than seventeen offices on four continents from academe and business. LECG's practice areas include antitrust analysis, intellectual property, and securities litigation, in addition to specialties in the telecommunications, gas and electric, and health care industries.

2. I have consulted on various telecommunications matters including but not limited to developing cost models and cost studies addressing unbundled network elements, resale, shared and common costs, switching, local loops, and network usage. I have also developed financial models designed to test the viability of various telecommunications structural separation scenarios. In addition, I have evaluated cost models for the government of the Cayman Islands and Telcom New Zealand, as well as cost models used in arbitrations by wireless and paging carriers. I am also familiar with the FCC's Hybrid Cost Proxy Model ("HCPM") and was retained to evaluate it during its development. Many of the cost models now used by SBC were developed under my direction. I have also done cost modeling for BellSouth. I have over 30 years of telecommunications experience gained throughout my tenure at Ameritech and LECG. My experience includes testifying as Ameritech's cost of service witness in numerous Indiana, Illinois, and Michigan proceedings. Furthermore, I testified in arbitration proceedings pursuant to the Telecommunications Act of 1996 in Wisconsin, Indiana, Michigan, and Illinois. Prior to joining LECG, I served as Ameritech's Director of Economic Analysis, a position I held from 1994 to 1998. My responsibilities included the development of the methodological framework for the cost studies and models used by Ameritech and Ameritech's operating telecommunications subsidiaries. Specifically, I was responsible for developing the

cost studies underlying Ameritech's proposed prices for unbundled network elements, local transport termination, collocation, and resale. I received my Bachelor of Arts degree from Purdue University in 1977, and further advanced my academic credentials through the DePaul Graduate School of Business.

3. My curriculum vitae, which is attached to this declaration, provides more detail concerning my qualifications and experience.

4. The purpose of my declaration is to respond to competitive local exchange carrier ("CLEC") claims that incumbent local exchange carriers ("ILECs") do not have all the data and cost models necessary to accommodate a costing methodology that more closely reflects the characteristics of ILECs' real-world networks.[1] In Section II of my declaration, I review the key features of SBC's proposal to modify TELRIC to better account for real-world costs. In Section III, I discuss the data and models required to implement SBC's proposed approach and assess the ability of the ILECs to meet those requirements. Finally, in Section IV, I show that there is no basis for allegations that SBC's proposal would require excruciatingly detailed inquiries into ILECs' actual networks to develop UNE cost estimates.

II. SBC'S PROPOSAL TO MODIFY TELRIC

5. SBC's proposed methodology does not represent a radical departure from existing TELRIC practices. Rather, SBC's proposal is a modification to TELRIC which would take as given not just current wire center locations but also more generally, the configuration, architecture, and technology mix that will be present in the ILEC's network based on the ILEC's actual network plans.

6. The foundation of SBC's proposal is that the network attributes assumed in TELRIC models and studies should be presumed efficient, given the incentives instilled by price cap regulation and facilities-based competition.

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[1] *See, e.g.*, Declaration of Terry L. Murray and D. Scott Cratty on Behalf of Broadview Networks et al. § 4, at 17 (Dec. 16, 2003) ("Murray/Cratty Decl.").

7. The approach recommended by SBC is fully consistent with forward-looking cost principles. As with TELRIC as currently practiced, network element rates would be calculated on the basis of current prices and actual ILEC labor rates and would thus reflect the investments and expenses necessary to provide the elements in question *today*, not the higher or lower historical costs reflected on the ILEC's books. Moreover, under SBC's proposed approach, the inquiry would be framed to ask how much it would cost to replace network assets, not in their current form, but in the form they will collectively take during a planning period of expected facilities upgrades documented in an ILEC's actual engineering plans.

8. Most importantly, SBC's proposal addresses many of the highly controversial specific inputs to TELRIC cost models. For example, under SBC's proposal, UNE rates would be calculated on the basis of the current fills in an ILEC's existing network. UNE cost studies also would take as given other key cost drivers and characteristics of the actual network during the planning period, including (i) material costs and labor rates reflected in current contracts; (ii) the percentages of aerial, buried, and underground cable in the network; (iii) the mix of fiber and copper feeder facilities in the network; and (iv) depreciation lives based on the actual GAAP-compliant lives used for the ILEC's financial statements. For these and the other specific inputs used and assumptions reflected in TELRIC models, the appropriate point of reference would be, under SBC's proposal, the real-world experience of the ILEC.

III. THE ILECS HAVE THE DATA AND MODELING CAPABILITIES REQUIRED TO IMPLEMENT SBC'S PROPOSAL

9. SBC's proposal is both fully consistent with forward-looking cost principles and fully compatible with the forward-looking cost models currently used by the ILECs. Many existing ILEC cost models use the ILEC's actual network configuration, architecture, and technology mix as a *starting point* to model forward-looking costs. That is, it is standard practice in forward-looking network cost modeling to first identify and model the key characteristics of the current actual network and then apply a series of

assumptions to those characteristics to create the hypothetical version called for under the current application of TELRIC. Those same models can easily be used—by eliminating the hypothetical assumptions—to calculate the ILECs' actual forward-looking costs.

10. A typical example is the mix of copper cable versus fiber optic cable found in the network. For example, an inventory of in-place local loop feeder facilities might show that 35% of all loops are provided on fiber feeder facilities and 65% of all loops are provided using copper feeder cables. However, an ILEC's future network deployment plans might call for increasing the deployment of fiber feeder facilities to take advantage of the efficiencies of fiber feeder technology, and this might produce a mix of 50% fiber-fed loops and 50% copper-fed loops over the network planning period. ILEC cost models allow the modeled mix of copper and fiber feeder facilities to be varied to account for such plans.

11. Unfortunately, TELRIC as it currently stands allows too much room for speculation regarding the idealized efficiencies of a purely hypothetical network. Such speculation produces modeling assumptions and study inputs that are totally divorced from what might be realistically achievable in any efficient real carrier's network.

12. For example, continuing with the fiber versus copper example, an extreme view of TELRIC might lead to an assumption that fiber reflects an ever-declining cost structure and that, at some point in the future, some theoretical carrier could construct an entire network that uses low-cost fiber *exclusively*. This may never happen in the real world, but ILEC cost models are sufficiently flexible to process these extreme assumptions.

13. SBC's proposal would eliminate such theoretical speculation while remaining faithful to a forward-looking costing methodology, and the data and models necessary to implement this proposal are readily available. Its cost models are fully capable of calculating actual forward-looking costs.

14. With respect to fill factors, SBC's local loop TELRIC model ("LoopCAT") can be run using SBC's actual fill factors, consistent with SBC's position that existing fills are the best indicator of the fills that would be achieved in an efficient ILEC network on a forward-looking basis. SBC obtains data about fills in the existing network by accessing SBC's Wirecenter Statistics ("WCSTATS") database, which was developed by Telcordia to capture wire center plant utilization statistics from the Loop Engineering Information System ("LEIS") database. Capacity and utilization data are updated for each wire center on a monthly basis. These data are easily plugged into the LoopCAT model. Further, because Telcordia developed the databases SBC relies on to determine fill factors, other ILECs are likely to have comparable capabilities.

15. Similarly, vendor contract data that identifies current material prices is also readily available and easily incorporated into existing ILEC cost models. One example is SBC's Switching Information Cost Analysis Tool ("SICAT"). SICAT is a model developed under my direction that takes the multi-tiered pricing data in the contracts SBC currently has with its switch vendors and develops a weighted average price per line of switching that is appropriate for UNE cost studies. Importantly, the output of SICAT represents the weighted average price per line based on the actual quantities of the different line types SBC actually expects to purchase over the life of each contract.

16. Unfortunately, under current applications of TELRIC, regulators often ignore the actual quantities of lines an ILEC will purchase and the actual prices it will pay for those lines; instead, regulators have relied on purely speculative estimates of what an ILEC might pay to replace all of the switches in its network at one time, as some argue TELRIC requires. Since the switch vendor contracts generally have lower prices for new or replacement switches than for growth or existing switches, the CLECs often argue that TELRIC requires an assumption that 100 percent of the switches in the modeled network are new or replaced and thus should reflect the lower prices for new or replacement switches.

17. However, the prices in the contract were established based on the clear expectations of both buyer and seller of how many lines of each type the buyer would buy and the seller would sell in the real world, over the life of that particular contract. The contracts were not designed or intended to represent the prices for switching equipment that would occur in the "scorched node" environment hypothesized by many regulators under the current TELRIC rules. SBC's proposal would also eliminate these ludicrous outcomes and, further, provide an appropriate empirical basis for tying forward-looking switching costs directly to actual purchases and contract prices. SBC's models are fully capable of using actual switch prices and line estimates in calculating actual forward-looking switch costs.

18. ILEC databases contain data that reflect real-world ILEC experience and can be readily used for significant UNE cost study inputs such as cable lengths, support structure types (i.e., aerial vs. buried vs. underground), cable sizes, and copper cable gauges (19 gauge vs. 22 gauge, vs. 24 gauge vs. 26 gauge). For years, ILECs have used these real-world data as the starting point or foundation in the development of their forward-looking cost studies and models, with adjustments to accommodate applicable costing standards such as TELRIC. TELRIC reform which would require that real-world data be taken as given in current ILEC cost models would produce reasonable estimates of the costs an efficient ILEC would actually incur in the provision of UNEs on a going-forward basis.

IV. CONTRARY TO CLEC CLAIMS, SBC'S PROPOSAL WOULD NOT REQUIRE A DETAILED INQUIRY INTO EVERY NUT AND BOLT IN AN ILEC'S NETWORK.

19. Some CLECs contend that ILECs do not have all the data required "to implement a Commission-mandated costing methodology that would tie UNE prices closely to the ILEC's 'real-world' costs."[2] I have already shown above that real-world data for an ILEC's most significant cost drivers are readily available.

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[2] Murray/Cratty Decl. § IV(A), at 17.

20. The CLECs, however, focus on the Commission's tentative conclusion at ¶ 52 of the Notice, which states: "We tentatively conclude that our TELRIC rules should more closely account for the real-world attributes of the routing and topography of an incumbent's network in the development of forward-looking costs."[3]

21. According to Murray and Cratty, this represents an "insurmountable" problem because "real-world detail concerning the ILEC's embedded 'routing and topography' does not exist or is typically not in a usable format."[4] They also contend that "ILECs rarely have any usable records at the level of granularity that would be required to model actual routes and rights of way."[5] These statements seem to indicate that the CLECs are confusing SBC's proposal to move to actual forward-looking costs with a proposal to abandon the use of models. That is not so.

22. Murray and Cratty assert: "Models and simplifying assumptions exist in part because the 'real-world' is too big to inventory and evaluate one cable and splice at a time."[6] That is true, but it is not a basis for retaining TELRIC in its current form or for doubting the feasability of SBC's proposed alternative. In particular, SBC's proposal would not require abandoning cost models altogether, as the CLECs imply, nor would it require the development of a model that incorporated the intensive level of detail implied by the CLECs' comments. Current ILEC models make appropriate use of simplifying assumptions. But the simplifying assumptions employed in ILEC models are based on real-world experience. More specifically, as I will discuss in more detail below, the simplifying assumptions employed in ILEC models reflect current real-world engineering practices. No ILEC that I am aware of attempts to account for and model each and every nut, bolt, obstacle, and nuance that one might encounter in the actual embedded network. That level of detail implies a degree of precision that is neither achievable nor, more importantly, required to produce reasonable forward-looking cost estimates.

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[3] *Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers*, 18 FCC Rcd 18945, 18965 ¶ 52 (2003).
[4] Murray/Cratty Decl. ¶ 68.
[5] Murray/Cratty Decl. ¶ 70.
[6] Murray/Cratty Decl. ¶ 78.

23. The simplifying assumptions employed in CLEC models, on the other hand, as well as the assumptions CLECs typically recommend for ILEC models, are generally based on the theoretical efficiencies they claim hypothetical carriers might be able to achieve. Drs. Aron and Rogerson discuss one example in their paper titled "The Economics of UNE Pricing," filed in this proceeding on December 16, 2003:

> As another example, although the FCC rules require maintaining the existing placement of "nodes," nodes are typically interpreted narrowly as wire centers only. Other network interfaces or network interconnection points, such as Serving Area Interfaces (SAIs), are typically not considered nodes in some TELRIC models. It is common that CLECs will advocate, and commissions will accept, the premise that the design and placement of outside plant is open to clean slate design. With respect to SAIs, for example, one common modeling approach is to "place" SAIs in the exact center of a serving area in order to minimize the length of plant needed to serve the customer locations in the area. What such models fail to recognize is that real engineering practice must take into account the fact that the center of an SAI's serving area is likely to be in someone's swimming pool or living room, and that a location that is more accessible to engineers and technicians may commonly be at the edge of the serving area, which is where real network engineering practices will place them. The edge of a serving area may typically be a large street or thoroughfare, so that engineers can access the equipment efficiently. The fact that the practical considerations that drive real engineering practices are ignored results in costs that could not be achieved by a real carrier.[7]

24. Forward-looking ILEC cost models currently in use generally deal with such realities by relying on a combination of actual network data and forward-looking engineering practices. As such, the ILEC models discussed below are fully capable of being used to implement SBC's proposed TELRIC reforms.

25. SBC's LoopCAT model draws upon data available from several SBC databases for the purpose of estimating the costs of a single average loop per service, per study area. Loop characteristics are representative of actual network topology.

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[7] Debra J. Aron & William Rogerson, *The Economics of UNE Pricing* § 3.1, at 18-19 (Dec. 16, 2003) (attached as Exhibit A to SBC's opening comments).

26. Specifically, LoopCAT relies on data from sources such as LEIS (described in ¶ 14 above) and the Automated Records and Engineering System ("ARES") to develop loop length data, a prime driver of loop costs. For example, in the TELRIC proceeding currently in progress before the Illinois Commerce Commission, Docket 02-0864, over 5 million records of in-service loops were extracted from ARES in order to develop the average loop lengths modeled in LoopCAT. Importantly, the LEIS and ARES data reflect the multitude of real-world decisions engineers must make when designing outside plant. For example, the engineers must obtain rights-of-way for placing cable or fiber and must also comply with all relevant municipal codes with respect to the placement of plant. The current data derived from existing company databases such as LEIS and ARES thus inherently reflect all the real-world decisions engineers must make when constructing outside plant.

27. In addition, LEIS contains utilization data and other detailed information regarding virtually every cable segment in SBC's territory. This information includes the length of each segment, the size and gauge of the cables deployed, the routes the cables follow, and splice points. All of this information, like the ARES data, inherently reflects real-world topography, routing, engineering decisions, and construction. LoopCAT also relies on the Automated Reporting Management Information System ("ARMIS") to determine the current mix of fiber optic cable construction types. This data is regularly filed with the FCC and is publicly available. This data also reflects inherently real-world routing and construction decisions.

28. LoopCAT is fully capable of accurately modeling the existing local facilities network in terms of central offices, customer locations, and cable routes. It thus is fully capable of calculating loops costs based on the current architecture and technologies deployed in SBC's network. For example, a primary assumption is the use of digital loop carrier over fiber feeder when total loop length surpasses engineering guidelines for use of copper cable: LoopCAT is fully capable of calculating loop costs based on the amount of digital loop carrier that will be in SBC's network based on SBC's deployment guidelines. Finally, the loop costs generated by LoopCAT reflect current

resource costs for cable, circuit equipment, and other components based on current vendor material prices, engineering and labor costs, and other costs of construction.

29. It is my understanding, based on my experience and discussions with other ILECs, that those ILECs have comparable databases and capabilities. For example, "VzLoop" is the latest loop model developed by Verizon and has been filed in California and Washington UNE proceedings. It is my understanding that the existing local loop network configuration is the starting point for VzLoop's modeled network. For example, customer demand and location data used by VzLoop correspond to existing distribution terminal locations. Additionally, VzLoop utilizes information on existing feeder route locations, digital loop carrier ("DLC") systems, and SAIs. Once the baseline characteristics of the modeled network are determined as described above, VzLoop allows the user to substitute technologies (replace them with fiber), resize components, and model alternative configurations (such as by changing the amount of DLC in the modeled network) to comply with applicable costing standards. Since VzLoop begins with existing distribution terminals and feeder routes, the network modeled is significantly more real-world-oriented than the more theoretical networks modeled by the CLECs' HAI model or the FCC's Synthesis Model.

30. The current version of the Qwest loop cost model ("LoopMod") is also new and has also been filed for the first time in a UNE cost proceeding in Washington. Based on the documentation available, it is my understanding that the model constructs loop facilities from existing central office locations to "customer clusters" derived from the FCC's HCPM customer location information. When placing plant, conditions in the actual environment such as buildings, roads, and other structures are assumed to remain in place. Other inputs, such as material costs, type of plant placed, and placement costs reflect Qwest's actual contracts and engineering practices. "[P]lant

utilization levels are based on best case, reasonable (often overly optimistic) projections of the actual use of plant."[8]

31. I also understand that BellSouth's loop model, the BellSouth Telecommunications Loop Model ("BSTLM"), begins with customer locations developed from actual customer service records and addresses. Central offices also reflect their real world locations. Once BSTLM determines where customers are located, it "lays" facilities along the real roads actually found in the wire center. A cable path can literally be traced from each customer's premises to the serving central office that follows actual roads in the wire center. Once the layout of the network is determined, the BSTLM's configuration process connects the network components. This procedure relies on real-world engineering practices to determine cable sizes, cable types (copper/fiber, aerial/buried/underground), and selection of DLC. After the network is configured, the BSTLM calculates the costs of each network component by type and by location using current vendor prices.

32. The basic methodologies reflected in all of these models have been utilized in forward-looking cost studies since the 1970s. That is, all the models discussed above perform three basic steps that have been employed in forward-looking cost studies since the days of the old Bell System. First, the most important characteristics of the actual network, such as cable lengths and sizes, cable gauges, types of cable (aerial versus buried etc.), and terminating equipment employed are identified. Data that defines these key characteristics of the network are readily available from the many databases and systems ILECs rely upon daily to engineer their networks and manage their operations. As discussed previously, these tools include the LEIS database, which, in addition to providing the utilization data discussed in ¶ 14 above and the length and other data discussed in ¶¶ 26-27 above, is used by network engineers to monitor, forecast, and analyze outside plant feeder facilities to ensure timely and economical relief plans. Second, the studied loops are redesigned to reflect engineering practices and other assumptions required by the applicable cost

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8 Direct Testimony of Richard J. Buckley on behalf of Qwest Corporation, *Review of Unbundled Loop and Switching Rates; the Deaveraged Zone Structure; and Unbundled Network Elements, Transport,*

standards. Third, the cost of modeled loops is calculated using current equipment prices.

33. In the 1970s, the then-Bell Operating Companies generally relied on statistically valid samples in order to identify the key attributes of the loops studied, and the circuit redesign process was largely a manual effort. The first loop study performed by Illinois Bell in the 1970s was based on a sample of around 3000 loops. At the same time Illinois Bell had approximately 6 million loops in service.

34. In the proceedings in which these early studies were reviewed, much of the focus, as has been the case in TELRIC proceedings, was directed at the key study inputs that have a significant impact on the cost estimate, such as fill factors, depreciation lives, and capital cost estimates. I am not aware of any case in which the studies in question purported to account for, or were rejected for failing to account for, every nuance that might be encountered in the actual network. All parties seemed to recognize that such granularity was not a prerequisite to producing reasonably accurate cost estimates.

35. Since then, due for the most part to the tremendous advances in computer technology, ILEC cost models no longer have to rely on sample data to determine loop plant characteristics but instead are able to interface directly with the wealth of data which now resides in ILEC databases. The redesign and price-out processes are also now computerized. But despite these advances, modern forward-looking studies still rely on the same proven three basic steps described above, which have been the foundation of forward-looking cost analysis since the 1970s.

36. Today, excruciatingly detailed studies still are not required in order to produce reasonable cost estimates, and SBC, through its proposal, is not in any way suggesting that they are. Rather, SBC believes existing ILEC cost models and the simplifying assumptions and inputs applied therein, if reflective of real-world experience, provide all the detail required to accurately produce realistic estimates of ILECs' forward-looking costs.

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and Termination, Docket No. UT-023003 (Wash. Utils. & Transp. Comm'n June 26, 2003).

37. In summary, SBC's recommended TELRIC reforms are consistent with tried and true forward-looking cost methodologies and practices, and existing ILEC cost models can easily accommodate the changes SBC recommends. CLEC arguments to the contrary are likely nothing more than smoke intended to obscure the more relevant issues in this proceeding: *i.e.*, the basic model inputs for the ILEC's most significant cost drivers. SBC's recommended TELRIC reforms address these issues and should, in my opinion, be adopted by the Commission.

38. This concludes my declaration.

Declaration of William C. Palmer

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 29th day of January, 2004.

William C. Palmer

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EDUCATION

B.A., English, PURDUE UNIVERSITY, 1977

DEPAUL GRADUATE SCHOOL OF BUSINESS

Courses completed include Economics, Finance, Accounting, Industrial Psychology, Business Law, Calculus, Marketing and Business Case Analysis.

PRESENT POSITION

LECG, L.L.C., Evanston, IL, 1998 - present
Director, January 2001
Principal, 1999 - 2000
Senior Managing Consultant, 1998 - 1999

PROFESSIONAL EXPERIENCE

AMERITECH SERVICES, 1991 - 1998
Director, Business Unit Support/Economic Analysis, 1997 - 1998

- Responsible for achieving the regulatory objectives of Ameritech's Wholesale Business Units as well as the Payphone and Publishing Business Units.
- Responsible for identifying and addressing industry economic issues in all Ameritech regulatory proceedings involving cost models and studies.

Director, Wholesale Sector Advocate/Economic Analysis, 1994 - 1997

- Responsible for achieving the regulatory objectives of Ameritech's Wholesale Business Units.
- Responsible for identifying and addressing industry economic issues in all Ameritech regulatory proceedings involving cost models and studies.

Director, Payphone Regulatory/Economic Analysis, 1992 - 1994

- Responsible for achieving the regulatory objectives of Ameritech's Payphone and Economic Analysis Business Units.
- Responsible for identifying and addressing industry economic issues in all Ameritech regulatory proceedings involving cost models and studies.

Director , Cost Methods, 1991 - 1992

- Responsible for all methods and procedures and mechanized tools and models used in costs studies.
- Supported all Ameritech state service cost organizations.

ILLINOIS BELL, 1970 - 1992
Director, Service Costs, 1991 - 1992

- Responsible for all cost of service studies supporting Illinois Bell pricing and regulatory initiatives.

Director, Cost Methods, 1988 - 1991

- Responsible for cost methods used in Illinois Bell cost studies.
- Illinois Bell representative on Ameritech Cost Team charged with establishing consistent economic standards for regional effort to achieve cost-based pricing.

Manager, Regulatory, 1987 - 1988

- Position was created to support the Regulatory Assistant Vice President on a regional pricing task force and to prepare testimony and supporting economic studies for Illinois Bell's first Alternative Regulation Docket.

Manager, Customer Request for Proposal, 1985 - 1987

- Responsible for determining large customer service requirements and developing cost and pricing information for IBT bids.

Manager, Tariffs and Cost, 1982 - 1985

- Responsible for toll service pricing and costing.
- Participated in developing and implementing the Illinois Primary Toll Carrier deaveraging plan.

Manager, Cost Methods and Mechanization, 1980 - 1982

- Responsible for cost methods and mechanized procedures used in Illinois Bell cost studies.
- Developed software to improve costing programs and replace outside vendors for annual savings of $400,000.

Assistant Manager, Costs, 1978 - 1980

- Responsible for performing cost studies of private line facilities.
- Extensive involvement in the MCI vs. AT&T antitrust case.

Communications Technician, 1970 - 1978

- Assignments included installation and repairs of data, teletype, microwave, television and central office equipment.

TESTIMONY

Indiana Cause No. 42393: Indiana Unbundled Network Elements rate proceeding

Illinois Docket No. 00-0700: Investigation into tariff providing unbundled local switching with shared transport

Wisconsin Docket No. 6720-T1-161: Investigation into Ameritech Wisconsin's Unbundled Network Elements

Illinois Docket No. 98-0252: Alternative Regulation Review

Indiana Cause Nos. 40849, 40785-S1 and 41058: High cost and Universal Service Funding Mechanisms in Alternative Regulation

Illinois Docket 99-0935: Supported modifications of the Cost of Service Rule proposed by Ameritech Illinois and supporting modifications to Imputation.

Illinois Docket 98-0770-0771 (consolidated): Proposed modifications to terms and conditions governing the provision of special construction arrangements and investigation into tariff governing the provision of special construction arrangements.

Illinois Docket 96-0486: Investigation into forward looking cost studies and rates of Ameritech Illinois for interconnection, network elements, transport and termination of traffic.

Indiana Cause 40603: Investigation of cost studies and rates of Ameritech Indiana for interconnection, network elements, transport and termination of traffic.

Affidavit in Ameritech Michigan's Application to provide InterLata Services: Cost studies and rates for interconnection, network elements, resale, transport and termination of traffic.

AT&T/Ameritech Interconnection Arbitrations in Illinois, Indiana and Wisconsin: Cost studies and rates of Ameritech for interconnection, network elements, transport and termination of traffic. Also addressed avoidable cost based resale discounts in Wisconsin and Indiana.

MCI/Ameritech Interconnection Arbitrations in Illinois, Indiana, Michigan and Wisconsin: Cost studies and rates of Ameritech for interconnection, network elements, transport and termination of traffic. Also addressed avoidable cost based resale discounts in Wisconsin, Indiana and Michigan.

TCG/Ameritech Interconnection Arbitrations in Indiana, Wisconsin and Illinois: Cost studies and rates for transport and termination of traffic.

Illinois Docket 95-0204: The economic basis and the appropriate compensation due payphone providers from interexchange carriers whose customers use payphones to complete calls.

Indiana Cause 39474: Indiana Independent Payphone Association complaint against Ameritech Indiana. Cost basis for interconnection rates charged independent payphone providers.

Illinois Docket 95-0458: The appropriate cost basis for retail vs. resale price differentials.

Illinois Docket 94-0096: Illinois Bell's Customers First proceeding. Testimony addressing the costs of unbundled loop and ports.

Illinois Docket 94-0042: Cost basis for Illinois Bell local transport deaveraging initiative.

Illinois Docket 92-0448: Alternative Regulation Case. Testimony addressing the forward-looking costs of all Illinois Bell services and economic tests for cross–subsidization.

Illinois Docket 90-0466: Costs of Caller ID services.

Illinois Docket 83-0142: The financial impacts of the Primary Toll Carrier Deaveraging plan on the Illinois industry.

OTHER CONSULTING

Advised SBC California in developing a study on the costs and implications associated with structural separation.

Evaluated the cost impacts and public policy implications of the proposed California Consumer Protection rules on wireless carriers.

Evaluated the Fully Allocated Cost ("FAC") model of Cable & Wireless on behalf of the Government of the Cayman Islands.

Provided alternative cost data for retail and interconnection services using the FCC's Hybrid Proxy Cost Model ("HCPM") on behalf of the Government of the Cayman Islands.

Designed and developed the cost models that Ameritech and SBC use for wholesale and retail costs.

September 2003