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November 16, 1992

BY HAND-DELIVERY

Mr. Steve C. Tribble, Director
Division of Records and Reporting
Florida Public Service Commission
101 East Gaines Street
Tallahassee, FL 32399-0850

Re: Docket No. 920260-TL

Dear Mr. Tribble:

Enclosed for filing in the above-referenced docket on behalf of MCI Telecommunications Corporation are the original and fifteen copies of the direct testimony of the following:

Nina Cornell
Don Wood

By copy of this letter, this testimony has been furnished to the parties on the attached service list.

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Very truly yours,

Richard D. Melson

Richard D. Melson

Wood

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Cornell

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was sent by U.S. Mail this 16th day of November, 1992.

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TESTIMONY OF NINA W. CORNELL

ON BEHALF OF MCI TELECOMMUNICATIONS CORPORATION

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 920260-TL

NOVEMBER 16, 1992

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FPSC-RECORDS/REPORTING

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2

3 A. My name is Nina W. Cornell. My address is 1290 Wood River Road, Meeteetse,
4 Wyoming 82433.

5

6 Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL
7 BACKGROUND AND EXPERIENCE.

8

9 A. I am an economist in private practice, specializing in microeconomic analysis of
10 regulatory and antitrust issues. Until late 1988, I was with the firm of Cornell,
11 Pelcovits & Brenner Economists Inc., of which I was president.

12 Before entering private practice, I was Chief of the Office of Plans and
13 Policy, Federal Communications Commission (FCC). As Chief of the Office of
14 Plans and Policy, I served as chief economist to the Commission and participated
15 in virtually all FCC agenda meetings.

16 Prior to being associated with the FCC, I was the Senior Staff Economist
17 for regulatory, transportation, environmental, and health and safety issues for the
18 Council of Economic Advisers (CEA). In this position I reported directly to
19 Charles L. Schultze, Chairman of the Council.

20 Prior to being with the CEA, I was employed as an economist with the
21 Council on Wage and Price Stability, where I served on the Task Force on
22 Reform of Federal Energy Administration Regulations. Before joining the
23 Federal Government, I spent four years at the Brookings Institution as a Research
24 Associate. I am a graduate of Swarthmore College, and received my Ph.D. in
25 Economics from the University of Illinois in 1972.

26

27 Q. HAVE YOU PUBLISHED ANY PAPERS ON TELECOMMUNICATIONS?

28

1 A. Yes. I have published a number of papers on the regulation of
2 telecommunications as well as on other regulatory and natural resource issues. A
3 list of my publications is contained in my resume -- Attachment NWC-1.

4

5 Q. HAVE YOU TESTIFIED BEFORE?

6

7 A. Yes. I have served as an expert witness in several court and a number of
8 regulatory proceedings, particularly proceedings involving telecommunications
9 issues. I have also testified before various committees of the U.S. Congress. A
10 list of my testimonies is also contained in my resume.

11

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

13

14 A. The purpose of my testimony is to analyze the alternative regulatory plan
15 proposed by Southern Bell. That analysis shows the plan to have a number of
16 major shortcomings, all of which will cause monopoly ratepayers to pay higher
17 rates than are appropriate. Many of these shortcomings also will cause Florida to
18 have a less robust and dynamically efficient telecommunications system than it
19 could if another approach to regulating Southern Bell were adopted. The
20 problems with Southern Bell's proposed plan may stem in part because of major
21 failings in the arguments that Southern Bell has used to support its request for an
22 alternative regulatory plan.

23

24 Q. WOULD YOU PLEASE SUMMARIZE YOUR CONCLUSIONS?

25

1 A. Yes. I recommend that the Commission not approve a plan that has any
2 automatic rate increase mechanism, as telecommunications is an industry in which
3 costs are falling rather than rising. If such a mechanism is included, it should not
4 have any "escape clauses" as are contained in the proposed plan of Southern Bell.

5
6 I further recommend strongly that Southern Bell be granted no pricing
7 flexibility until it implements a building block approach to costing and to setting
8 price floors for all of its services. This is necessary to protect the competitive
9 process in telecommunications. The proposed plan lacks completely any credible
10 protections for dependent competitors, a flaw so serious that it jeopardizes the
11 future efficiency of telecommunications and its role in the economic development
12 of Florida. If the Commission determines that the building block approach were
13 to take too long to implement and that some pricing flexibility were needed
14 sooner, the Commission should order the principle of imputation to be adopted
15 for all services subject to entry. This principle needs to be accompanied by the
16 requirement that any failure to pass an *imputation test for any service facing entry*
17 is not allowed to be reflected in the computed earnings of Southern Bell used to
18 determine either sharing or whether any earnings floor has been reached or
19 breached.

20 I also recommend that the Commission use the building block approach
21 to separate out the costs (and revenue requirement) that bottleneck monopoly
22 services should have to bear, leaving all other costs (and revenue requirement)
23 for competitive services to cover. This amounts to a reversal of the historic
24 practice of residual ratemaking. I also recommend that there be no "escape
25 clauses" within the plan. Rather, if Southern Bell believes that the plan no longer
26 serves its needs, it should come in for a rate case.

1 Finally, I recommend that the Commission take with a grain of salt some
2 of the claims that have been advanced by the witnesses for Southern Bell about
3 why such a plan is needed.

4

5 Q. WHAT SHOULD BE THE GOALS OF AN ALTERNATIVE REGULATORY
6 PLAN?

7

8 A. An alternative regulatory plan should seek to improve upon traditional regulation
9 without losing sight of why the firm in question is regulated at all. Southern Bell
10 is regulated because it has a monopoly over services that people think are very
11 important for the vast majority of people to be able to have. Putting that last part
12 into economic language, the services in question have a very low elasticity of
13 demand by end users. Because of its monopoly and the low elasticity of demand,
14 Southern Bell could make very large monopoly profits if it were not regulated to
15 try to prevent that outcome.

16 Traditionally, rate of return regulation was used to try to constrain
17 Southern Bell's total profits to a level approximating those that would have been
18 earned by a competitive firm. Some time well after the institution of rate of
19 return regulation, the question of what the relative prices should be for each of
20 the separate services offered by Southern Bell became an important issue. At that
21 time, cost of service studies were added to the more aggregate accounting
22 measures used as part of the regulatory process.

23 These two aspects of regulation are not perfect. Traditional rate of return
24 regulation does not impose the same incentives for efficiency that unregulated
25 firms face. Moreover, once entry begins into any part of the regulated firm's
26 market, traditional regulation creates incentives for anticompetitive behavior even

1 beyond the incentives facing an unregulated monopoly firm. Cost of service
2 regulation imposes costs to try to determine the costs of each service, beyond the
3 costs of keeping the more aggregate accounts that would be required in any event.
4 Under certain conditions, cost of service regulation can create incentives to bias
5 the choice of technology in order to minimize the unique costs of a given service,
6 even if the result is higher than necessary total costs.

7 In looking for an alternative form of regulation, the challenge is to see if
8 other techniques exist that preserve the benefits but reduce the inefficiencies of
9 traditional regulation. A major goal that should be sought is to find an alternative
10 that promotes dynamic efficiency in telecommunications, as that is most likely to
11 promote sustained economic development. To do this, any alternative form of
12 regulation should work to reduce, not to expand, both the incentives and the
13 ability to engage in anticompetitive behavior.

14

15 Q. WHAT DO YOU MEAN BY DYNAMIC EFFICIENCY?

16

17 A. Dynamic efficiency occurs when changes in output levels, technologies, and
18 service offerings occur in the most efficient way possible. For this to happen,
19 markets need to be structured so that they can determine which firm can expand
20 supply at least cost.

21 In a market that is expanding, as is the case in telecommunications, if that
22 market is effectively competitive, new firms enter with the most modern plant and
23 equipment that they can acquire and try to serve not only the growth in demand,
24 but eventually some of the current demand. New entrants have two marketing
25 weapons they can use to gain customers: they can offer lower prices or they can
26 offer new capabilities not available before. New capabilities include not only

1 functions not available before, but quality levels not available before for existing
2 functions.

3 If the entering firms are successful in capturing customers offering lower
4 prices using the new plant and equipment, existing firms have to respond by
5 lowering their prices, potentially even replacing their plant to gain the same cost
6 advantage that the new entrant has achieved. This same process can, of course,
7 be initiated by an existing firm that changes out its plant and equipment in order
8 to move to a new, lower cost technology in order to lower prices and expand its
9 market share. The speed with which existing firms respond by lowering prices
10 and replacing plant and equipment is driven by how rapidly consumers respond
11 to the lower prices.

12 If the entrant (or an existing firm) focuses not on lowering prices for
13 existing services, but on offering new capabilities not previously provided, a
14 similar process occurs. The existing firms have to keep track of whether the new
15 entrant (or initiating firm) is succeeding in convincing customers to subscribe to
16 the new services, and if so, to move to offer those services themselves. The move
17 to all-digital and mostly fiber optic technology in the interstate interexchange
18 market may offer a classic example of this process. U S Sprint, with its
19 advertising focus on its all-fiber network, appears to have pushed the other firms,
20 particularly AT&T, which had a very large but partially analog network, to move
21 in the same direction.

22 Whichever way the entering or moving firm goes, the market -- driven by
23 how consumers respond to the lower prices or new service offerings -- determines
24 what is the optimal technology, how fast it gets deployed, and what are the new
25 services that consumers value the most. As it does so, consumers get the benefit

1 of the continuing pressure on increased efficiency in the form of lower costs and
2 increased service capabilities.

3

4 Q. DOES THE PROPOSED PLAN OF SOUTHERN BELL MEET THE TEST OF
5 KEEPING THE BENEFITS OF TRADITIONAL REGULATION WHILE
6 REDUCING THE COSTS?

7

8 A. No, the proposed plan of Southern Bell does not meet this test. Southern Bell has
9 proposed an alternative regulatory plan that preserves some of the worst aspects
10 of traditional rate of return regulation while not retaining many of its benefits. In
11 particular, Southern Bell's proposal would greatly reduce the constraints
12 preventing exploitation of the inelastic demand by end users for monopoly
13 services, while preserving the incentives and increasing the abilities to engage in
14 anticompetitive behavior. Moreover, Southern Bell's plan would not necessarily
15 advance economic development in Florida. Indeed, depending upon the future
16 direction of efficient technological change, it could impede the economic
17 development of Florida. Finally, the proposed plan contains what I would call
18 "escape clause" provisions that are both inappropriate and that could impede
19 improved regulation.

20 These failings of Southern Bell's regulatory plan are both unwise and
21 unnecessary. It is possible to devise an alternative regulatory plan that preserves
22 the protections for monopoly ratepayers while reducing the incentives to engage
23 in anticompetitive behavior. Such a plan would also improve the dynamic
24 efficiency of telecommunications in Florida. Dynamic efficiency in the
25 development both of new technologies and of market structure in

1 telecommunications are necessary if telecommunications is to aid economic
2 development in Florida.

3

4 Q. HOW DOES THE PLAN PROPOSED BY SOUTHERN BELL REDUCE THE
5 CONSTRAINTS PREVENTING EXPLOITATION OF INELASTIC DEMAND
6 BY END USERS?

7

8 A. There are three aspects of Southern Bell's proposed alternative regulatory plan
9 that together would reduce the constraints that today prevent Southern Bell from
10 exploiting inelastic demand for monopoly services. These are the price change
11 mechanism, the pricing flexibility that Southern Bell has proposed that it receive,
12 and the earnings floor for Southern Bell.

13 Mr. Lombardo states in his testimony that the proposed plan would benefit
14 consumers by "ensuring that the average real price of telephone services will fall
15 at least 4% annually in relation to inflation regardless of the company's
16 earnings." (Lombardo testimony at page 35) First of all, Southern Bell has not
17 shown that any increase in actual rates is needed at all. Thus, I do not believe it
18 is in the best interest of the public to have a plan that has any automatic price
19 increase mechanism.

20 If an increase is found to be in the public interest, it should be one that
21 does ensure that consumers will face declining real rates, as Southern Bell has
22 demonstrated that its costs are falling. In fact, however, Southern Bell's proposal
23 would not "ensure" anything of the sort. Southern Bell has proposed that it be
24 allowed to raise rates independently of its price cap formula whenever its overall
25 return on equity falls below 11.5%. Thus, Mr. Lombardo's statement is false. As
26 I discuss below, given the lack of any safeguards against anticompetitive

1 behavior, Southern Bell could see its rate of return on equity fall below the floor
2 due to anticompetitive pricing changes designed to maximize Southern Bell's
3 market share, compensated for by a rate increase triggered by the drop in the
4 return on equity.

5 Not only would Southern Bell's proposed plan not protect ratepayers from
6 an increase in the overall level of rates not warranted by an increase in costs, but
7 the plan also would allow Southern Bell more freedom to discriminate in the
8 prices it charges different ratepayers for the same services. Such discrimination
9 is a way to exploit differing elasticities of demand by different groups of
10 consumers. Dr. Sappington notes with approval that Southern Bell's proposed
11 plan would allow it to "implement prices that more closely reflect the value
12 customers derive from the services they purchase." (Sappington testimony, page
13 13, lines 21-23) The simple translation is that the company would be able to
14 charge prices that are higher when demand is less elastic, without regard to any
15 change in cost. This is the same kind of pricing strategy that an unregulated
16 monopoly uses to earn monopoly profits.

17 In both of these ways, therefore, Southern Bell's proposed plan reduces
18 significantly the protection provided by traditional regulation against exploitation
19 of monopoly power over services that face inelastic demand.
20

21 Q. HOW DOES SOUTHERN BELL'S PROPOSED PLAN RETAIN THE
22 INCENTIVES OF SOUTHERN BELL TO ENGAGE IN ANTICOMPETITIVE
23 BEHAVIOR?

24 A. There are two aspects of the proposed plan that leave Southern Bell's incentives
25 to engage in anticompetitive behavior intact. These are the continued existence of
26 some constraint on total earnings and the failure to separate out costs and

1 revenues of services that face entry from the costs and revenues of totally
2 monopoly services.

3 The incentives for anticompetitive behavior inherent in traditional rate of
4 return regulation stem from the constraint on total earnings when coupled with
5 any ability to shift either costs or revenue requirement recovery responsibility
6 from services facing entry to services that do not. One of the ways that this shift
7 is facilitated is by looking at the earnings of the company as a whole, rather than
8 looking at earnings from only monopoly services. Southern Bell's proposed plan
9 does not change either of these conditions.

10

11 Q. HOW DOES SOUTHERN BELL'S PROPOSED PLAN INCREASE ITS
12 ABILITY TO ENGAGE IN ANTICOMPETITIVE BEHAVIOR?

13

14 A. The increase in pricing flexibility combined with the absence of any competitive
15 safeguards mean that the proposed plan, if approved, would be much more likely
16 to result in anticompetitive pricing than is the case today.

17 Southern Bell has proposed that it be allowed to adjust its rates within two
18 broad "baskets" of services, basic and all other. The basic services would each
19 be capped directly, but the services in the second "basket" would face a cap either
20 at the top of a current band if banded rates apply, or a 20% rate increase cap.
21 Included in the two baskets are services that Southern Bell offers to dependent
22 competitors to enable them to offer services or equipment that compete with
23 services that Southern Bell offers to end users. Some of these end user services
24 are in the same basket as some of the services to dependent competitors.

25 Nowhere in Southern Bell's plan is there any set of safeguards to prevent
26 it from imposing a price squeeze on its dependent competitors. As the price caps

1 do not apply to each service individually, it would be easy for Southern Bell to
2 raise the rates it charges to its dependent competitors, while leaving its own end
3 user service rates unchanged or even lowering them on the grounds that they face
4 "competition." These kinds of price changes can easily result in a price squeeze.
5 Price squeezes are bad for captive monopoly ratepayers in both the short and the
6 longer run.

7

8 Q. WHAT DO YOU MEAN BY A PRICE SQUEEZE?

9

10 A. A price squeeze occurs when a firm that 1) has a monopoly over an input and 2)
11 offers services to end users that require that input, charges others for that input
12 more than it implicitly charges itself. The presence or absence of a price squeeze
13 can be determined by looking at the cost, properly measured, of producing the
14 service except for the cost connected with the input in question, subtracting all
15 of these other costs from the price, and comparing the result to the price charged
16 others for the input. If the result is less than the price charged others for the
17 input, a price squeeze exists.

18

19 Q. WHY ARE PRICE SQUEEZES BAD FOR CAPTIVE MONOPOLY
20 RATEPAYERS?

21

22 A. Price squeezes are bad for captive monopoly ratepayers in the short run because
23 they result in higher monopoly service rates than would otherwise occur. The
24 reason for this is that when an input is a monopoly input, Southern Bell should
25 not receive less for it when it uses that input itself than when it offers it to
26 dependent competitors. As those competitors have no other source of the input,

1 they have no choice but to pay whatever price Southern Bell sets (with the
2 concurrence of the Commission) for it. Thus, there is no "competitive necessity"
3 for Southern Bell to pay less either.

4 In the longer run, price squeezes are bad for all ratepayers and for society,
5 as they prevent equally or more efficient firms from providing the services. In an
6 industry subject to as much technological change as is occurring in
7 telecommunications, price squeezes can prevent the industry from developing in
8 a dynamically efficient way. The failure to structure prices to ensure dynamic
9 efficiency imposes long term costs on society that are hard to quantify but are
10 almost certainly larger than any losses that might arise due to the failure to
11 structure prices to promote static economic efficiency. Finally, if Southern Bell
12 puts its dependent competitors under a price squeeze, it would reduce its total
13 recovery from the provision both of the end user service and the inputs to
14 dependent competitors, increasing the possibility that Southern Bell's earnings
15 would fall below the floor included in its proposed plan.

16

17 Q. HOW CAN A PRICE SQUEEZE BLOCK DYNAMIC EFFICIENCY?

18

19 A. If a dependent competitor is subject to a price squeeze, it will be deterred from
20 offering new services or testing out new technologies. In essence, under a price
21 squeeze, a firm that is just as efficient as the monopoly input supplier cannot
22 recover all of its costs, including the prices it must pay the monopoly input
23 supplier. In such a setting it will have to cease offering the service in question.

24

25 When equally efficient entrants are denied the ability to compete in the
26 market, they become unable to serve as a source of new technology or new
 products. Moreover, the fact that the monopoly firm is able to impose a price

1 squeeze serves as a disincentive for even more efficient firms to enter that
2 market. A more efficient firm, despite having lower costs than the monopoly
3 input supplier, knows that the size of the price squeeze could be enlarged to
4 prevent it from covering its costs. This too deprives the market of future
5 technological choices.

6 It is unlikely that any one firm will be the source of all innovation in a
7 market. Indeed, Ms. Obuchowski's testimony supports this conclusion.
8 Discussing the competition from alternative access vendors, she notes that
9 alternative access vendors have brought faster transmission speeds, greater
10 disaster protection assurances, higher circuit availabilities, lower bit error rates,
11 more rapid installation intervals, diverse routing, and continuous circuit
12 monitoring. Moreover, they have provided this at what she calls "bare bones"
13 prices. (Obuchowski testimony, page 11, lines 4-23) All of these were not
14 available from Southern Bell at the time, according to her.

15 Driving all but the monopoly input supplier from the market is certain to
16 affect the pace and direction of future technology. Because the sources of
17 innovation will mostly have been removed from the market, the market will be
18 less efficient over time than if the price squeeze had been absent.

19

20 Q. SOUTHERN BELL CLAIMS IT HAS INCLUDED THE PROPER
21 COMPETITIVE SAFEGUARD BY STATING THAT IT WILL NOT PRICE
22 ANY COMPETITIVE SERVICE BELOW INCREMENTAL COST. IS THIS
23 "SAFEGUARD" OF NO USE?

24

25 A. In some ways, yes. A price floor at incremental cost is only a valid competitive
26 safeguard if two conditions both exist. The first is if the service in question does

1 not use any bottleneck monopoly inputs, so there is no possibility for a price
2 squeeze. This is extremely rare in telecommunications. The second is if the
3 incremental costs used as the floor are truly long run incremental costs, and are
4 the higher of either the average incremental costs of providing the entire quantity
5 of the service or marginal cost.

6

7 Q. WHAT DO YOU MEAN BY "TRULY LONG RUN" INCREMENTAL COSTS?

8

9 A. Truly long run incremental costs do not treat as sunk any cost that the company
10 would incur if it were constructing its network today. This is different from the
11 description of incremental cost put forward by the Division of Communications
12 of the staff in its Memorandum to the Director, Division of Records and
13 Reporting with regard to Docket 900633-TL. In that Memorandum, particularly
14 pages 7-10, there is a discussion of "run." Unfortunately, the conclusions
15 reached in that Memorandum about how an incremental cost study should be
16 performed, if the results were used as a price floor, would allow Southern Bell
17 to monopolize a market even when it was not the most efficient supplier of the
18 service in question. That is because the staff would allow Southern Bell to treat
19 some economic costs as sunk costs, and would allow Southern Bell to set the
20 price floor at marginal cost even where economies of scale would have average
21 incremental costs higher than marginal costs. Under both of these circumstances,
22 prices set at the floor would result in the service being subsidized. If the
23 shareholders do not pay the subsidy directly, subsidized prices are
24 anticompetitive.

25

1 Q. EARLIER, YOU SAID THAT SOUTHERN BELL'S PROPOSED PLAN
2 COULD IMPEDE ECONOMIC DEVELOPMENT IN FLORIDA. MS.
3 OBUCHOWSKI CLAIMS THE PLAN IS NEEDED TO PERMIT MIAMI TO
4 BECOME THE MAJOR TELECOMMUNICATIONS HUB WITH SOUTH AND
5 CENTRAL AMERICA. IS SHE WRONG?

6

7 A. I believe she is wrong. I do not disagree that it will be important for Miami, as
8 well as for all other parts of the United States, to have dynamically efficient,
9 forward-looking telecommunications capabilities. I do not, however, agree that
10 the international business interests in, say Brazil, are going to choose a hub in the
11 United States based on where video dial tone is first available to residential users.

12 Southern Bell's proposed plan would clearly encourage Southern Bell to
13 make investments in modern technology. One of these would be to install fiber
14 to the curb, or even to the home, as noted with approval by Ms. Obuchowski.
15 That installation would be paid for by monopoly ratepayers, but would be
16 economic mainly if video dial tone were an economically desirable service. If it
17 is not, however, monopoly voice grade and low speed data users will be paying
18 very much more for telephone service than is economically necessary. This could
19 very well impede economic development. Industries do like to locate where there
20 are modern telecommunications facilities and services available. They are not
21 likely to want to locate, however, where they or their employees have to pay
22 unduly high prices for the telecommunications services they actually consume.

23

24 Q. ARE YOU ARGUING THAT THE COMMISSION SHOULD NOT ALLOW
25 SOUTHERN BELL TO INSTALL THE FACILITIES THAT ARE NEEDED TO
26 PROVIDE VIDEO DIAL TONE?

1 A. No, but I am arguing that the proposed plan is not in the public interest if those
2 facilities are installed at the expense of monopoly ratepayers when the facilities
3 would be economic only for video dial tone.

4 Video dial tone is intended to compete with or even supplant current cable
5 television facilities. Thus, it is a potentially competitive service. Future
6 investments in technologies needed primarily to provide services that are in
7 competition with other firms need to be paid for either by the customers for those
8 services or the stockholders. Failure to establish this safeguard is comparable to
9 the failure to prevent price squeezes for current dependent competitors.

10

11 Q. EARLIER YOU ALSO STATED THAT SOUTHERN BELL'S PROPOSED
12 PLAN HAD SOME "ESCAPE CLAUSE" PROVISIONS THAT YOU BELIEVE
13 WOULD IMPEDE THE ADOPTION OF IMPROVED REGULATION.
14 WHAT ARE THESE "ESCAPE CLAUSE" PROVISIONS AND HOW WOULD
15 THEY IMPEDE THE ADOPTION OF IMPROVED REGULATION?

16

17 A. Southern Bell's proposed plan would allow Southern Bell to file for increased
18 rates on 60 days notice without regard to the formula that is supposed to cap its
19 rates if any one of three events occurs. The first is if earnings fall below a floor
20 of 11.5%, a provision I have already discussed. The second is if there are
21 "significant structural changes to Southern Bell's service offerings due to changes
22 in the industry and/or Commission orders." (Lombardo testimony, page 43, lines
23 21-23) The third is if there are "changes to competitive conditions authorized by
24 the Commission." (Lombardo testimony, page 43, line 25-page 44, line 1)

25

26

These last two provisions provide Southern Bell with an ability to escape
from its own formula for price increases for virtually any change in the current

1 status of the industry. If the Commission were to order any unbundling of current
2 services, for example, or to order further implementation of ONA services,
3 presumably Southern Bell could increase its rates. It would not need to show any
4 evidence of harm to Southern Bell's earnings or increases in its costs, just that the
5 event had occurred. Similarly, if the Commission were to implement better
6 competitive safeguards, possibly by ordering the implementation of a functional
7 approach to price floors, Southern Bell would have the same ability. These
8 "escape clauses," if accepted by the Commission now, would create a disincentive
9 to make the regulatory changes described later, because they would allow
10 Southern Bell to raise its rates.

11

12 Q. HOW SHOULD THE PROPOSED PLAN BE CHANGED TO CORRECT THE
13 DEFICIENCIES THAT YOU HAVE NOTED?

14

15 A. There need to be at least four changes in the plan to correct its deficiencies. The
16 first is to delete any automatic rate increase mechanism. The second is to change
17 the timing and nature of any increased pricing flexibility. The third is to separate
18 out the costs of and revenues needed from bottleneck monopoly elements from
19 the costs of and revenues from potentially competitive offerings, thereby altering
20 who bears the risk for investments made for competitive or potentially
21 competitive offerings. The fourth is to change how Southern Bell could ask for
22 price increases greater than any formula, if a formula is used at all, would
23 otherwise allow.

24

1 Q. WHAT CHANGES ARE NECESSARY IN THE TIMING AND NATURE OF
2 ANY INCREASED PRICING FLEXIBILITY GRANTED TO SOUTHERN
3 BELL?

4
5 A. The proposed plan should be changed to eliminate any flexibility to change
6 *relative prices* until after a building block approach to price floors has been
7 adopted and implemented. The Commission in Order No. 24910 in Docket No.
8 900633-TL stated, "As set forth in greater detail below, we adopt a functional
9 building block approach for determining price floors for specific services."
10 (Order, page 2) This approach needs to be implemented in such a way that all
11 business users, at a minimum, pay the same for the bottleneck monopoly elements
12 of Southern Bell's network.

13 Once such nondiscriminatory price floors have been set, Southern Bell
14 could be given pricing flexibility above those floors for its end user services that
15 face competition from dependent competitors, but not for its monopoly service
16 prices, whether to end users or to dependent competitors. This requirement would
17 prevent exploitation of inelastic demand for monopoly services, and would
18 prevent most price squeezes. It would permit telecommunications markets to
19 develop in dynamically efficient ways, which would also benefit the economic
20 development of Florida in ways that Southern Bell's proposed plan would not.

21

22 Q. ARE THERE ANY INTERIM STEPS THAT COULD BE TAKEN IF IT WERE
23 TO TAKE A LONG TIME TO IMPLEMENT A BUILDING BLOCK
24 APPROACH TO COSTING AND SETTING PRICES FOR THE BOTTLENECK
25 MONOPOLY ELEMENTS OF SOUTHERN BELL'S NETWORK?

26

1 A. Yes, although I believe it would not take so long to implement a building block
2 approach if the Commission held firm that such an approach was the precondition
3 for pricing flexibility. If, however, some pricing flexibility is believed to be
4 needed before a complete building blocks approach is implemented, imputation
5 of the charges to dependent competitors should be required for each and every
6 service that faces entry. This requirement should be without exception. Any
7 Southern Bell service that failed the test for a price squeeze (which it would if
8 Southern Bell were not imputing) should have the amount by which it failed the
9 price squeeze added to its actual earnings when determining whether or not there
10 should be sharing. If there is to be an earnings floor, moreover, the amounts by
11 which Southern Bell failed any tests for a price squeeze should be added to its
12 actual earnings before a determination of whether or not earnings were below the
13 floor.

14
15 Q. MR. LOMBARDO COMPLAINED ABOUT HAVING TO IMPUTE ACCESS
16 CHARGES INTO TOLL RATES, CLAIMING SOUTHERN BELL WAS
17 HINDERED IN COMPETING FOR TOLL TRAFFIC DUE TO THAT
18 REQUIREMENT. DO YOU THINK HE IS WRONG?

19
20 A. Yes. Mr. Lombardo makes that claim on pages 7-8 of his testimony. He later
21 notes, however, that Southern Bell's per minute MTS rates are lower than those
22 of the three largest interexchange carriers. Nowhere has he shown that
23 imputation -- a necessary competitive safeguard -- in fact does hinder Southern
24 Bell. Nor do I believe he could. His claim that interexchange carriers can average
25 interstate and intrastate access charges does not prove anything. An interexchange
26 carrier that conducts such an averaging must charge higher interstate rates than

1 are warranted by interstate access charges. Another interexchange carrier can
2 offer the interstate services for a lower price, leaving the interexchange carrier
3 that performed such an averaging supplying the intrastate services for less than
4 cost and not being able to ensure that it gets the interstate service to make up for
5 the difference. In fact, intrastate access charges are a cost that each interexchange
6 carrier must cover in the services it offers. As each customer takes differing
7 proportions of interstate and intrastate service, each part of the service has to
8 cover the access charge burden it imposes. Thus, Southern Bell is not
9 handicapped by having to impute intrastate access charges into its toll services.

10

11 Q. HOW SHOULD THE PLAN BE ALTERED TO SEPARATE OUT THE COSTS
12 FOR AND REVENUES NEEDED FROM MONOPOLY SERVICES FROM
13 THE COSTS FOR AND REVENUES NEEDED FROM COMPETITIVE
14 OR POTENTIALLY COMPETITIVE OFFERINGS?

15

16 A. This is a task that would be made much easier if the functional costing and price
17 floor approach using building blocks were adopted. Once the basic building
18 blocks were determined and their incremental costs estimated, the total economic
19 costs of Southern Bell in Florida could also be estimated. This amount could then
20 be compared with what would be a revenue requirement under traditional rate of
21 return regulation. The difference between the two, if positive, is an amount of
22 noneconomic costs that regulation allows Southern Bell to recover.

23

24 Once that amount is determined, however, the Commission could set the
25 "prices" that could be charged for the bottleneck monopoly elements of Southern
26 Bell's services. That amount would be all that Southern Bell could get for those
monopoly parts of its offerings. Any additional costs incurred by Southern Bell

1 would have to be recovered from its competitive services, over and above the
2 amount those services would have to recover for their use of bottleneck monopoly
3 elements. Any shortfall from competitive services should fall on the shareholders.

4 This approach to regulation is almost the direct opposite of the residual
5 ratemaking of the past. If it were adopted, shareholders would bear the risk of
6 investments needed solely or primarily for competitive services, such as
7 investments in fiber to the curb or to the home whenever the costs of that
8 technology for voice grade and low speed data to residential users would be
9 higher than the use of copper. This would improve the likelihood that such
10 investments would only be made if there were real prospects that they would be
11 economic.

12

13 Q. WHAT PROVISIONS SHOULD EXIST FOR ALLOWING SOUTHERN BELL
14 TO RAISE ITS RATES HIGHER THAN ANY FORMULA (IF A FORMULA
15 IS ADOPTED AT ALL) CONTAINED IN AN ALTERNATIVE
16 REGULATORY PLAN?

17

18 A. There should be no automatic lifting of the formula. As I understand the law,
19 Southern Bell would always have the right to come in and file a traditional rate
20 case if its earnings were too low. If events make Southern Bell unwilling to
21 continue to live with the alternative regulatory plan, the only "escape clause" it
22 should have is a traditional rate case.

23

24 Q. YOUR RECOMMENDATION WOULD IMPOSE ALL OVER AGAIN THE
25 COSTS OF PERFORMING COST STUDIES, ONE OF THE SAVINGS THAT

1 SEVERAL OF THE SOUTHERN BELL WITNESSES NOTED CAME WITH
2 ADOPTION OF THE PLAN. ISN'T THIS A HIGH COST OF REGULATION?

3

4 A. No, not compared to the other costs that could be incurred by the public if cost
5 studies are not done. The purpose of regulatory reform should not be to save
6 initial dollars per se, but to look for alternatives whose benefits net of their costs
7 are larger than is the case for traditional regulation. In fact, costing exercises --
8 although disliked by the regulated firm -- are absolutely necessary if a monopoly
9 regulated firm is to be allowed to offer services that can also be provided by
10 other firms, while not allowing the monopoly firm to maximize its potential
11 monopoly profits. This is still the goal of regulation for Southern Bell. Under
12 these circumstances, the Commission has only two avenues for preventing
13 subversion of the competitive process: requiring Southern Bell to perform cost
14 studies, or requiring Southern Bell to put all of its competitive activities into
15 completely separate subsidiaries, taking services from the monopoly portion of
16 Southern Bell only on tariffed terms and conditions effectively available to all.

17

18 Q. YOU SAID THERE WERE MAJOR FAILINGS IN THE ARGUMENTS THAT
19 SOUTHERN BELL HAS USED TO SUPPORT ITS REQUEST FOR AN
20 ALTERNATIVE REGULATORY PLAN. WHAT ARE THE MAJOR
21 FAILINGS IN SOUTHERN BELL'S ARGUMENTS?

22

23 A. The major failings in Southern Bell's arguments in support of its claim that it
24 needs an alternative form of regulation relate to its analysis of its markets and the
25 "problems" it faces. Southern Bell has put forward an inappropriate claim of
26 losses to competition, has described incorrectly how other firms in the market or

1 that might enter the market would behave, and appears to be requesting regulatory
2 relief because of increased efficiency in how end users use services provided by
3 Southern Bell.

4
5 Q. SOUTHERN BELL SAYS THAT IT NEEDS ITS PROPOSED PLAN TO BE
6 ABLE TO RESPOND TO COMPETITIVE LOSSES, AND THAT WITHOUT
7 THE ABILITY TO RESPOND, THE COMPETITIVE LOSSES THREATEN ITS
8 ABILITY TO CONTINUE TO OFFER LOW COST SERVICES TO
9 RESIDENTIAL CONSUMERS. IS SOUTHERN BELL CORRECT?

10
11 A. No. Southern Bell has proposed a most peculiar version of "loss." It claims as a
12 loss every sale made by a competitor. When American Airlines reports losses in
13 a quarter, this is not the definition of a loss. American Airlines means that it took
14 in less in revenues than it incurred in costs, using standard accounting measures
15 for costs. American Airlines does not define its losses as including the sales made
16 by United Airlines, Delta, or any other airline. Moreover, when American
17 Airlines discusses what its losses mean for new orders, future fares, and the like,
18 it bases its discussion on the same definition of loss that it uses to report the
19 numbers. Southern Bell should do the same. Southern Bell can afford a
20 particular rate structure no matter what its market share for any particular service
21 or set of services so long as that rate structure provides Southern Bell sufficient
22 revenues over its costs so that it can continue to attract capital.

23 More fundamentally, the implicit premise behind this definition of "loss"
24 is faulty. It assumes that Southern Bell should have a 100% market share for all
25 of the services it offers. It is impossible to have competition if the system is
26 structured to try to ensure that Southern Bell retains 100% of all

1 telecommunications services it is allowed to provide. Telecommunications
2 services are not the kinds of services where effective competition can be provided
3 by potential entrants. It takes real entrants, building facilities of their own in
4 many cases, to put sufficient market pressure on Southern Bell to prevent abuse
5 of market power.

6

7 Q. WHAT IS THE PROBLEM WITH HOW WITNESSES FOR SOUTHERN BELL
8 HAVE DESCRIBED LIKELY BEHAVIOR OF OTHER FIRMS IN THE
9 MARKET?

10

11 A. There are several problems with the discussion contained in Ms Obuchowski's
12 testimony about how other firms behave. On pages 23-26, she discusses a concern
13 that failure to grant Southern Bell the pricing flexibility it seeks could result in
14 entry of other firms whose costs are higher, but which are able to charge lower
15 prices than Southern Bell. She then goes on to cite the history of the
16 interexchange industry as somehow supporting that concern. She is wrong. Even
17 if there had been a less efficient entrant into the interexchange market at the time
18 of the ENFIA proceeding, with that entrant expecting to be able to take advantage
19 of noneconomic pricing, no entrant today would make such an error. The history
20 of pricing changes since the period of the ENFIA tariff shows that an entrant is
21 far more likely to face a price squeeze than a favorable opportunity to exploit
22 uneconomic pricing by the local exchange company.

23

24

25

26

Moreover, the history of the interexchange industry does not support her
concerns. At the time of the ENFIA tariffs, interexchange service was in essence
a new industry, as competitive provision had previously been impossible. As with
all new industries, a larger number of firms entered than would ultimately

1 survive. In every industry of which I am aware, the very same kinds of
2 consolidations have occurred as the industry has matured. The history of such
3 consolidations in the interexchange industry proves nothing about entry being
4 induced because of regulators forcing incorrect pricing by the incumbent firm.

5

6 Q. YOU SAID THAT SOUTHERN BELL APPEARS TO BE REQUESTING
7 REGULATORY RELIEF BECAUSE END USERS ARE USING SOUTHERN
8 BELL SERVICES MORE EFFICIENTLY. TO WHAT WERE YOU
9 REFERRING?

10

11 A. Mr. Lombardo, in describing what he calls increased competition, notes the loss
12 of WATS lines and the move to inward services that use the subscriber's regular
13 business line instead of a dedicated line. Both of these changes increase the
14 efficiency of the telephone network, by reducing the number of access lines
15 needed for a given number of calls. These are beneficial to society, as they
16 permit greater productivity in the businesses that are the major subscribers to such
17 services. It is ironic that Southern Bell wants to claim that its plan will benefit
18 economic development in Florida, yet simultaneously complains about increased
19 efficiency in the use of its own network by its customers.

20

21 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

22

23 A. Yes.

24

25

BIOGRAPHY

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EXPERIENCE

- 10/88-Present Private consultant. Microeconomic consulting, primarily in fields of telecommunications, antitrust, broadcasting, and environmental economics.
- 2/82 - 10/88 President: Cornell, Pelcovits & Brenner Economists Inc. Microeconomic consulting, primarily in fields of telecommunications, broadcasting, environmental, and antitrust economics. Assignments have included serving as an expert witness before State and Canadian regulatory agencies on many emerging issues in telecommunications such as: the appropriate structure of access charges to interexchange companies; the public interest benefits of competition and of resale; the need to separate the unregulated from the regulated activities of telephone companies; appropriate telephone costing methodology, market rules, and industry structure; the proper costing of Centrex service; the setting of appropriate prices for the sale of embedded terminal equipment; and the appropriate application of cost and demand studies to the design of telephone tariffs; assisting in the cross examination of opposing witnesses and preparation of information requests; sponsoring cellular tariffs in cellular applications to the FCC; and testifying before Congressional committees on the economics of home taping, copyright, and the First Sale Doctrine.
- 3/81 - 2/82 Vice President: Owen, Cornell, Greenhalgh & Myslinski Economists Inc. Microeconomic consulting in telecommunications, broadcasting, environmental, and antitrust economics. Assignments included serving as expert witness in court cases, including U.S. v. AT&T, and before the Public Service Commission of the State of Florida on the public interest benefits of competition in long haul services and of resale, and on standards for access charges for competitors; assisting in preparation of depositions and cross examination of opposing witnesses; preparing an analysis of the economic impact of the broadcasting regulations on the video industry; preparing a cost-benefit analysis of proposed water pollution control regulations for the steel industry and defending it before EPA.
- 5/78 - 2/81 Chief: Office of Plans and Policy, Federal Communications Commission. Responsible for proposing policy and directing medium and long-range planning for the Commission. During this period, developed an in-house economics capability and functioned as chief economist for the Commission, sat at all Commission meetings, and advised the Commissioners on economic policy issues and alternatives. Directed a staff of 28-35 of mixed disciplines, mainly economics and engineering. Projects of the Office covered such topics as appropriate regulation for common carriers, including involvement in developing a new cost manual, further extensions of resale to switched intercity services, appropriate instances to require separate subsidiaries, and proper regulatory treatment of non-dominant common carriers; direct broadcast satellites; public coast stations; and radio; appropriate policies to achieve an improved UHF TV service; children's television; and how to improve spectrum management.

- 2/77 - 5/78 Senior Staff Economist: Council of Economic Advisors. Covered all areas of regulation except energy for the Council. Some major areas of activity were development of the regulatory analysis requirement in Executive Order 12044; the Regulatory Analysis Review Group; development of policy on various EPA activities such as prevention of significant deterioration of air quality; beverage container deposit legislation; revisions to the Clean Air, and the Clean Water Acts; minerals policy; and carcinogen regulation; also amendments of the laws governing civil aviation, trucking and communications.
- 6/76 - 2/77 Senior Economist: Council on Wage and Price Stability. Worked on energy issues. Major activity was as lead economist on the Presidential Task Force on Reform of Federal Energy Administration Regulation.
- 8/72 - 4/76 Research Associate: The Brookings Institution. First two years were in Foreign Policy Studies working as the economist on an interdisciplinary study on international institutions for managing oceans, outerspace, and weather modification. Last two years were in Economic Studies working with Charles L. Schultze on energy policy and working on safety and health regulation.
- 9/65 - 6/67 Teaching Assistant: Department of Economics, University of Illinois at Urbana-Champaign.

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- In re: Petition of MCI Telecommunications Corporation for a Certificate of Public Convenience and Necessity, Docket No. 820450-TP, 3/21/83.
- In the Matter of: Resale of Wide Area Telephone Service and Message Toll Service, Docket No. 1 810239-TP, 1/22/82.
- Application of Microtel, Inc. for a Certificate to Construct and Operate a Microwave System, Docket No. 800333-TP, 11/5/81.

Georgia Public Service Commission:

- Docket No. 3522-U, 8/15/85.
- Application of MCI to Provide Intrastate Toll Service, Docket No. 3446-U, 2/29/84 (Direct testimony only).

State of Illinois, Illinois Commerce Commission:

- In the Matter of: Independent Coin Payphone Association and Total Communication Services, Inc. Complaint to Reclassify Illinois Bell Telephone Company Pay Telephone Service as a Competitive Service in Illinois Market Service Area 1 (MSA 1), Docket No. 88-0412, 11/14-15/91, 2/5/92.
- Centel Network Communications, Inc., Application for Certification of Service Authority Pursuant to Sec. 13-404; and For Other Authority and Waivers of Commission Rules and Regulations, Docket No. 89-0132, 1/16/90.
- In the Matter of Illinois Bell Telephone Company and Commonwealth Edison Company, Illinois Power Company, Central Illinois Light Company, Central Illinois Public

Service Company, and the Illinois Telephone Association and Illinois Cable Television Association, Docket Nos. 86-0192, 86-0228, 86-0229, 3-15-88, 3-22-88.

- In the Matter of the Application of GTE Sprint Communications Corporation for a Certificate of Public Convenience and Necessity pursuant to section 55 of the Illinois Public Utilities Act, to Provide INTRA-MSA Telecommunications Services Within the State of Illinois, No. 83-0634, 11/14/84.
- In the Matter of the Application of AT&T Communications of Illinois, Inc. for the issuance of a Certificate of Public Convenience and Necessity to provide interexchange/INTER-MSA telephone and telecommunications services between and among Market Service Areas in the State of Illinois, 83-0648, 6/15/84.
- Satellite Business Systems Application for a Certificate of Public Convenience and Necessity pursuant to Section 55 of the Illinois Public Utilities Act, to provide INTER-MSA Telecommunications Services Within the State of Illinois, 84-0025, 4/30/84.
- GTE Sprint Communications Corporation Application for a Certificate of Public Convenience and Necessity pursuant to Section 55 of the Illinois Public Utilities Act, to Provide INTER-MSA Telecommunications Services Within the State of Illinois, 83-0633, 2/16/84.

Public Service Commission of Indiana:

- Petition of MCI Telecommunications Corporation for a Certificate of Territorial Authority to Provide Intercity Telecommunications Services Within Indiana, Cause No. 37240, 10/3/83 and 11/21/83.

Iowa Utilities Board

- In re: IntraLATA Presubscription, Discounted Access Charges, and Imputed Access Charges, Docket No. INU-90-1, 8/13/90.
- Docket No. RPU-84-2, 10/17/84.

Public Service Commission of the Commonwealth of Kentucky

- In the Matter of An Inquiry into IntraLATA Toll Competition, an Appropriate Compensation Scheme for Completion of IntraLATA Calls by Interexchange Carriers, and WATS Jurisdictionality, Administrative Case No. 323, 12/13/89, 10/29/90.

Louisiana Public Service Commission

- In the Matter of Investigation of the Revenue Requirements, Rate Structures, Charges, Services, Rate of Return and Construction Program of South Central Bell Telephone Company of its Louisiana Intrastate Operations, the Appropriate Level of Access Charges, and All Matters Relevant to the Rates and Service Rendered by the Company, Docket No. U-17949-B (Generic Phase), 12/10/90 and 5/8/91.
- In the Matter of US Sprint Custom Network Services Tariff (UltraWATS Service), Docket No. U-17644, American Telephone and Telegraph Communications of South Central States Inc. (Megacom Service, Docket No. U-17578, and MCI Telecommunications Company Custom Network Services Tariff (Prism I and II), Docket No. U-17767,

Public Service Commission of Maryland:

- In the Matter of the Investigation by the Commission on its own Motion into the Rates and Charges of AT&T Communications of Maryland, Inc., Case No. 7941, 6/4/86, 7/10/86.

- In the Matter of the Application of MCI City Telecommunications Corporation for Authority to Provide Intercity Telecommunications Service within the State of Maryland, Case No. 7719, 8/29/83 and 11/29/83.

Commonwealth of Massachusetts, Department of Public Utilities:

- Petition for an Advisory Ruling as to the Competitive Nature of Public Pay Telephone Service, D.P.U. 88-45, November or December, 1988.
- Investigation by the Department of the cost studies filed by New England Telephone and Telegraph Company on April 18, 1986, pursuant to the Department's Orders in D.P.U. 1731, D.P.U. 86-33, 5/22-23/88.
- Investigation by the Department on its own motion as to the propriety of the rates and charges set forth in the following rates schedules: DPU Mass. No. 10, Part C - Sec. 7, Original of table of contents, page 1, Original of pages 1 thru 6, filed with the Department on December 15, 1987 to become effective January 14, 1988 by the New England Telephone and Telegraph Company, D.P.U. 88-13, 5/21-22/88.
- In the Matter of New England Telephone Company, Re: D.P.U. 86-33, D.P.U. 86-124, 9/16/86, 6/18-19-87, 8/3-4/87.
- Petition of the Attorney General for a Generic Adjudicatory Proceeding Concerning Intrastate Competition by Common Carriers in the Transmission of Intelligence by Electricity, Specifically as with Respect to IntraLATA Competition, and Related Issues, Filed with the Department on December 20, 1983, D.P.U. 1731, 7/19-20/84.
- Investigation by the Department on its Own Motion as to the Propriety of the Rates and Charges Set Forth in a Tariff for Carrier Access Charges filed by the New England Telephone and Telegraph Company with the Department on October 21, 1983, to Become Effective November 20, 1983, D.P.U. 1661, 2/22/84.

Public Service Commission of the State of Michigan:

- An Inquiry, on the Commission's Own Motion Into the Status of Competition in the Provision of Telecommunications Services, Case No. U-8716, 6/10/87.
- In the Matter of the Applications of MCI Telecommunications Corporation for special temporary authority or alternatively, for a finding of no jurisdiction over its proposed service, Case No. U-7853, and In the Matter of the Application of GTE Sprint Communications Corporation for a Certificate of Public Convenience and Necessity to Offer Intercity Telecommunications Services to the Public in the State of Michigan, Case No. U-7873, 5/8/84.

Minnesota Public Utilities Commission:

- In the matter of a consolidated proceeding to investigate the provision of intrastate intercity telecommunications services within the State of Minnesota, Docket No.P-422, P-442, P-444, P-421, P-433/NA-84-212, 2/5-6/85.

Missouri Public Service Commission:

- In the matter of Southwestern Bell Telephone Company's Application for Classification of its Non-Basic Services, Case No. TO-89-56, 11/2/90.
- The Staff of the Missouri Public Service Commission, Complainant, v. Southwestern Bell Telephone Company, A Missouri Corporation, Respondent, Case No. TC-89-14, et al., 1/31/89 and 4/11/89.
- CyberTel Cellular Telephone Company, Complainant v. Southwestern Bell Telephone Company, Respondent, Case No. TC-86-158; Midwest Cellular Telephone Company, Complainant v. Southwestern Bell Telephone Company, Respondent, Case No. TC-87-39; and In the Matter of the Applications of Southwestern Bell Telephone Company for

Approval of a New Radio Common Carrier Interconnection Service Tariff, Case No. TR-87-58, 7/1/87.

- In the Matter of the Application of MCI Telecommunications Corporation for a Certificate of Public Convenience and Necessity to offer telecommunications service in Missouri, Case No. TA-84-82, and In the Matter of the Application of GTE Sprint Communications Corporation for a Certificate of Public Convenience and Necessity to Offer Intercity Telecommunications Services to the Public in the State of Missouri, Case No. TA-84-114, 8/8-9/84.

Nebraska Public Service Commission:

- In the Matter of the Application of GTE Sprint Communications Corporation For a Certificate of Public Convenience and Necessity to Offer Intercity Telecommunications Services to the Public in the State of Nebraska, Docket C-497, 3/7/85.
- In the Matter of the Application of Northwestern Bell Telephone Company, Omaha, Nebraska, for Approval of Tariff Sheets of its General Exchange Tariff, Application No. C-353, 5/5/83.
- In the Matter of the Effect of Competition in Inter-exchange Telephone Service, Application No. C-506, 9/6/84.

Public Service Commission of Nevada:

- The Application of Centel Network Communications, Inc., for a Certificate of Public Convenience and Necessity, to Operate as an Intrastate and InterLATA Resale Carrier, Docket No. 88-1156, 4/20-21/89.

New Hampshire Public Utilities Commission

- Re: DE 90-002 - Generic Competition Docket, 9/24/92.

New Jersey Department of Energy, Board of Public Utilities:

- In the Matter of the Application of New Jersey Bell Telephone Company of Approval of its Plan for an Alternative Form of Regulation, Docket No. T092030358, 10/5/92.
- In the Matter of Investigation of Intrastate Tele-communications Competition, BPU Docket 8312-1126, Direct and Rebuttal Testimony, 1/31/84.

New York State Public Service Commission:

- Proceeding on Motion of the Commission to Review Regulatory Policies for Segments of the Telecommunications Industry Subject to Competition, Case No. 29469, 9/28-29/87.

North Carolina Utilities Commission:

- In the Matter of Investigation to Consider Whether Intrastate Offerings of Long Distance Telephone Service Should be Allowed in North Carolina and What Rules and Regulations Should be Applicable to Such Competition if Authorized, P-100, Sub 72, 10/24/84.
- In the Matter of: Resale of Intrastate Telecommunications Services, Docket No. P-100, Sub 61, 11/16/82.

Public Utilities Commission of Ohio:

- In the Matter of the Commission's Investigation Relative To Establishment of Intrastate Access Charges, Case No. 83-464-TP-COI, 10/17/83.

Oklahoma Corporation Commission:

- In re: Inquiry of the Oklahoma Corporation Commission Concerning the Regulation of Intrastate InterLATA Carriers, Cause No. 29217, 11/16/84.
- In re: Application of MCI Telecommunications Corporation, Cause No. 28713, 3/26/84.

Public Utility Commission of Oregon:

- In the Matter of the Revised Rate Schedules Filed by U S West Communications, Inc. for toll service. Advice No. 1291, Docket No. UT 94, 8/30/90.
- In the Matter of the Investigation into the Revenue Requirements and Rate Spread of Pacific Northwest Bell Telephone Company, dba U S West Communications, Docket No. UT 85, 6/8/89.
- In the Matter of the Petition of Pacific Northwest Bell Telephone Company d/b/a U S West Communications, Inc., to Price List Telecommunications Services Other Than Essential Local Exchange Services, Docket No. UT 80, 6/8/89.
- In the Matter of an Investigation Into Presubscription, Exchange Carrier Toll Rates, and Antitrust Implications of the "IntraLATA Access Charges Agreement" Proposed by Pacific Northwest Bell Telephone Company and the Oregon Independent Telephone Association, Docket No. UT-47, 3/18/87.

Pennsylvania Public Utilities Commission:

- Generic Access Charge Investigation, Docket No. P-830452, 11/3/83, 3/21-22/84.

South Carolina Public Service Commission:

- In re: Application of MCI Telecommunications Corporation for a Certificate of Public Convenience and Necessity, Docket No. 84-181-C, 7/23-24/84.

Public Utilities Commission of the State of South Dakota:

- In the Matter of the Inquiry into the Competitive Status of Private Line and Special Access Services in South Dakota, F-3741; In the Matter of the Inquiry into the Competitive Status of Cellular Radio Services, Premise Cable and Inside Wire, Centron and Centron-Like Services, and Billings and Collections Services in South Dakota, F-3742; In the Matter of the Inquiry into the Competitive Status of MTS, WATS, and New Products and Services in South Dakota, F-3743; In the Matter of the Inquiry into the Competitive Status of Optional Services in South Dakota, F-3744, 1/16 & 1/19/89.

Public Service Commission, State of Tennessee:

- South Central Bell Telephone Company v. Southeastern Telecommunications, Inc. and Intercall, Inc. TPSC Docket No. U-82-7167 (on resale), 7/3/82 and 7/7/82.

Public Utilities Commission of Texas:

- Complaint of Intellicall, Inc Against Private Coin Phone Rates and Practices of Southwestern Bell Telephone Company; Complaint of Advanced Telecom Systems, Inc., Against Private Coin Phone Rates and Practices of Southwestern Bell Telephone Company; Complaint of Intellicall, et al. Against Private Coin Phone Rates and Practices of Southwestern Bell Telephone Company; Application of Southwestern Bell Telephone Company to Revise its Private Coin Service Tariff, Docket Nos. 7122, 7123, 7124, 7152, 6/29-30/87 (Deposition - case subsequently settled.)
- In re: Petition of the PUC of Texas for an Inquiry Concerning the Effects of the Modified Final Judgment and the Access Charge Order upon Southwestern Bell Telephone

Company and the Independent Telephone Companies of Texas, Docket No. 5113, 11/8/83.

- In the Matter of the Petition of Southwestern Bell Telephone Company for Authority to Change its Rates, Docket No. 4545, 11/3/82.

Utah Public Service Commission:

- In the Matter of the Application of U S West Communications for Approval of an Incentive Regulation Plan, Docket No. 90-049-03, and In the Matter of the Investigation into the Reasonableness of the Rates and Charges of U S West Communications, Docket No. 90-049-06, 3/7/91.
- In the Matter of Mountain States Telephone and Telegraph Company, Case No. 88-049-07, 5/24/89.

Vermont Public Service Board:

- Investigation of Proposed Second Vermont Telecommunications Agreement, Docket No. 5540, 2/14/92.
- Joint Petition of New England Telephone and Telegraph Company and the Vermont Department of Public Service Requesting Approval of the Vermont Telecommunications Agreement of October 14, 1987, Docket No. 5252, 5/2-3/88.

Virginia State Corporation Commission:

- Ex Parte, in re: Investigation to Consider the Impact of Modified Final Judgment in United States v. American Telephone & Telegraph Company, Civil Nos. 74-1698 and 82-0192, 552 F. Supp. 131 (D.D.C. 1972) and In the Matter of MTS and WATS Market Structure, FCC Docket No. 78-72 (Feb. 28, 1983) on the Provision of Toll Service in Virginia, Case No. PUC830020, 9/10-11/86.
- Petition of AT&T Communications of Virginia for Authority to Set Rates and Charges Pursuant to 1 of the Code of Virginia, Virginia Case No. PUC 840023, 7/30-31/84.
- Application of MCI Telecommunications of Virginia for a certificate of public convenience and necessity to provide inter-LATA, inter-exchange telecommunications service and to have rates established on competitive factors, Virginia Case No. PUC 840022, 7/27/84.

Washington Utilities and Transportation Commission:

- Washington Utilities and Transportation Commission, Complainant, vs. U. S. West Communications, Respondent, Docket Nos. UT-911488, UT-911490, and UT-920252, 9/28-29/92.
- In the Matter of Pacific Northwest Bell D/B/A U S West Communications Petition for an Alternative Form of Regulation, Docket No. U-89-3245-P, 11-28-89.
- Washington Utilities and Transportation Commission vs. Pacific Northwest Bell Telephone Company, Docket No. U-87-1083-T, 3-7-88.
- In the Matter of the Petition of AT&T Communications of the Pacific Northwest, Inc. for Classification as a Competitive Telecommunications Company, Cause No. U-86-113, 4/6/87.
- Washington Utilities and Transportation Commission, Complainant, vs. Pacific Northwest Bell Telephone Company, Petitioner and Respondent, Consolidated Cause Nos. U-86-34, U-86-35, U-86-36, U-86-86, U-86-90, 12/14-17/86, 2/9/87.
- In the Matter of the Petition of MCI Telecommunications Corporation for Classification as a Competitive Telecommunications Company, Cause No. U-86-79, 9/2-3/86.

- **Washington Utilities and Transportation Commission v. Pacific Northwest Bell Telephone Company et al., Cause No. U-85-23 et al., 4/29/86.**

West Virginia Public Service Commission:

- **Case Nos. 85-259-T-SC, et al., 1/27/86, 2/18/86.**
- **Case Nos. 85-282-T-GI and 85-022-T-P, 10/29/85.**
- **Case No. 83-259-T-SC, 11/1/83.**

Public Service Commission, State of Wisconsin:

- **Investigation of Intrastate Interexchange Access Charges and Related IntraLATA and InterLATA Compensation Matters, Docket No. 05-R-5, Part C, 2/2/87.**
- **Investigation of Application of MCI Telecommunications Corporation for Certificate of Public Convenience and Necessity to Offer Intrastate Toll Services (Petition for Interim InterLATA Authority), Docket No. 3258-NC-1, 10/29/84.**
- **In the Matter of: Proposed Tariff of Wisconsin Telephone Company for Centrex-CO Rate Stability, Docket No. 6720-TR-35, 3/15/83.**

TESTIMONY — US CONGRESS

Before the:

- **House Judiciary Committee, Subcommittee on Courts, Civil Liberties, and the Administration of Justice, 10/27/83, [Economic Impacts of Repeal of the First Sale Doctrine for Audio-visual Works].**
- **Senate Committee on the Judiciary, Subcommittee on Patents, Copyrights and Trademarks, 10/25/83 [Home Taping of Audio and Video Works].**
- **Senate Committee on the Judiciary, Subcommittee on Patents, Copyrights and Trademarks, 4/29/83, [Economic Impacts of repealing the First Sale Doctrine for audio-visual Works].**
- **House Committee on the Judiciary, Subcommittee on Courts, Civil Liberties and the Administration of Justice, 9/22/82, Copyright Aspects of Home Audio Taping].**
- **Senate Committee on the Judiciary, 4/21/82, [Copyright Aspects of Home Videotaping].**
- **House Committee on the Judiciary, Subcommittee on Courts, Civil Liberties and the Administration of Justice, 4/13/82, [Copyright Aspects of Home Videotaping].**
- **Senate Committee on the Judiciary, 7/23/81, [Monopolization and competition in the Telecommunications Industry: Duties of the FCC under S.898].**
- **House Committee on Energy and Commerce, Subcommittee on Telecommunications, Consumer Protection, and Finance, 5/27/81, [Status of Competition and Deregulation in the Telecommunications Industry: Local Distribution].**
- **Senate Committee on Government Affairs, Subcommittee on Oversight of Government Management, 10/10/79, [FCC Compliance with Executive Order 12044].**
- **House Committee on Interstate and Foreign Commerce, Subcommittee on Communications, 6/6/79, [Communications Act of 1979].**
- **Senate Committee on Commerce, Science and Transportation, Subcommittee on Communications, 6/18/79, [Spectrum Management].**

TESTIMONY — COURT CASES

- **Clear Communications Limited v. Telecom Corporation of New Zealand Limited, et al., High Court of New Zealand, Wellington Registry, 6/24-26/92, 9/11/92.**

- United States Football League, et al., v. National Football League, et al., United States District Court Southern District of New York, 84 Civ. 7484 (PKL), 6/17-19/86.
- International Telemeter Corporation v. Hamlin International Corporation, U.S. District Court - Western District of Washington, No. C76-487, 9/9-10/81.
- U.S. v. AT&T, U.S. District Court for the District of Columbia, Civil Action No. 74-1698, 6/19/81.

FILINGS — FCC

"Accounting Separations: A Contradiction in Terms," with Michael D. Pelcovits, Appendix I to Reply Comments of Lee Enterprises, Incorporated, Before the FCC, January 21, 1986, in CC Docket No. 85-229 (Third Computer Inquiry), Attachment to the Written Testimony of Robert D. Ross, President, Call-It Co., Before the Subcommittee on Telecommunications, Consumer Protection & Finance, March 13 Hearing to Examine the Competitive Status of the Bell Operating Companies: Diversification and Its Impact upon Consumers.

EDUCATION

Ph. D. (Economics), University of Illinois at Urbana-Champaign, June 1972. Doctoral Dissertation: "The Role of the Nobility in Agricultural Change in Russia During the Reign of Catherine II".

M.A. (Economics), University of Illinois at Urbana-Champaign, June 1967.

A.B. (Economics), Swarthmore College, Swarthmore, Pennsylvania, June 1964.

AWARDS

1978-79 Harold and Margaret Sprout Award for the outstanding study on international ecological or environmental affairs.

PROFESSIONAL ASSOCIATION

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OTHER ACTIVITIES

1986-1988: Representative of the American Economic Association on the Executive Committee of the Consortium of Social Science Associations

1986-1988: Ex Officio Member, American Economic Association Committee on Economic Statistics

PERSONAL

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