

BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

In re: Complaint of the Florida Competitive Carriers	)	
Association Against BellSouth Telecommunications,	)	Docket No. 020507-TP
Inc. and Request for Expedited Relief	)	

REBUTTAL TESTIMONY

OF

WILLIAM E. TAYLOR, Ph.D.

ON BEHALF OF

BELLSOUTH TELECOMMUNICATIONS, INC.

DECEMBER 23, 2002



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1 **I. INTRODUCTION AND SUMMARY**

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT**  
3 **POSITION.**

4 A. My name is William E. Taylor. I am Senior Vice President of National Economic Research  
5 Associates, Inc. ("NERA"), head of its Communications Practice, and head of its Cambridge  
6 office located at One Main Street, Cambridge, Massachusetts 02142.

7 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL, PROFESSIONAL, AND BUSINESS**  
8 **EXPERIENCE.**

9 A. I have been an economist for over thirty years. I earned a Bachelor of Arts degree from Harvard  
10 College in 1968, a Master of Arts degree in Statistics from the University of California at  
11 Berkeley in 1970, and a Ph.D. from Berkeley in 1974, specializing in Industrial Organization and  
12 Econometrics. For the past twenty-five years, I have taught and published research in the areas  
13 of microeconomics, theoretical and applied econometrics, and telecommunications policy at  
14 academic and research institutions. Specifically, I have taught at the Economics Departments of  
15 Cornell University, the Catholic University of Louvain in Belgium, and the Massachusetts Institute  
16 of Technology. I have also conducted research at Bell Laboratories and Bell Communications  
17 Research, Inc.

18 I have participated in telecommunications regulatory proceedings before many state public  
19 service commissions, including the Florida Public Service Commission ("Commission"). Before  
20 the Commission, I have testified in Docket Nos. 900633-TL, 920260-TL, 920385-TL,  
21 960786-TP, 980000-SP, 980696-TP, 990750-TP, 000075-TP, 000121-TP, 020119-TP and

1 020578-TP.

2 In addition, I have filed affidavits before the Federal Communications Commission (“FCC”)  
3 and the Canadian Radio-television Telecommunications Commission on matters concerning  
4 incentive regulation, price cap regulation, productivity, access charges, local competition,  
5 interLATA competition, interconnection and pricing for economic efficiency. Recently, I was  
6 chosen by the Mexican Federal Telecommunications Commission and Telefonos de Mexico  
7 (“Telmex”) to arbitrate the renewal of the Telmex price cap plan in Mexico.

8 I have also testified on market power and antitrust issues in federal court. In recent years, I  
9 have studied—and testified on—the competitive effects of mergers among major  
10 telecommunications firms and of vertical integration and interconnection of telecommunications  
11 networks.

12 My curriculum vita is attached as Exhibit WET-1:

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

14 A. I have been asked by BellSouth Telecommunications, Inc. (“BellSouth”)—an incumbent local  
15 exchange carrier (“ILEC”)—to respond to the economic issues raised in the direct testimony of  
16 Joseph Gillan filed by the Florida Competitive Carriers Association (“FCCA”).<sup>1</sup> Mr. Gillan and  
17 the FCCA are requesting that this Commission order BellSouth to provide its enhanced retail  
18 high-speed DSL-based Internet access service<sup>2</sup> to any requesting end user (including an end user  
19 that is not an existing BellSouth FastAccess customer as well as a current FastAccess customer  
20 that is changing voice providers) (Issues 4 and 5). FCCA members want the ability to serve an  
21 end user over a UNE-P line or an unbundled loop. If in the future that end user wants  
22 BellSouth’s FastAccess service, then FCCA members want to force BellSouth to provide its

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<sup>1</sup> Although the reference here is to the customers of the 13 competitive carriers that are members of the FCCA, I use “FCCA” in this testimony as shorthand to mean one or more of those carriers. On other occasions, I refer to competitive carriers generally by the established acronym “ALECs” (alternative local exchange carriers).

<sup>2</sup> This retail service is BellSouth® FastAccess<sup>®</sup> Internet Service (“FastAccess<sup>®</sup>”), of which the regulated wholesale DSL transport service is a component. The retail FastAccess<sup>®</sup> service itself is a non-regulated enhanced service.

(continued...)

1 broadband service to their voice customer. The FCCA completely disregards the fact that a  
2 multitude of available options exist for such an end user customer to obtain broadband service.  
3 In addition, the FCCA wants the Commission to mandate the circumstances in which BellSouth  
4 (as opposed to any other broadband provider) must provide broadband service. Contrary to  
5 Mr. Gillan's contentions, from an economic perspective such relief, rather than BellSouth's  
6 practices, is anticompetitive.

7 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

8 A. If the Commission were to order BellSouth to provide its FastAccess service to any requesting  
9 end user, then the economic impact would be:

- 10 • *Anti-consumer*: The requirement would reduce consumer choice for broadband access  
11 because ALECs could rely on mandatory BellSouth-provided services instead of  
12 supplying their own broadband service or obtaining broadband service from another DSL  
13 or cable provider. By using BellSouth to supply broadband access to its customers, the  
14 FCCA is denying its voice customers the benefits of purchasing broadband access and  
15 basic exchange service from the FCCA as a package.
- 16 • *Anti-competitive*: BellSouth would be required to invest to supply FastAccess<sup>®</sup> service  
17 in circumstances which it determined to be unprofitable. No other broadband access  
18 provider would have this responsibility, although the broadband market is served by  
19 standalone broadband providers, such as Covad, and by cable providers, such as the  
20 merged AT&T/Comcast company. Imposing this requirement would distort competitive  
21 outcomes in the broadband access market among wireline suppliers and across  
22 technologies (wireline, cable, wireless and satellite). In addition, injecting a regulated  
23 supplier-of-last-resort requirement into a well-functioning competitive (broadband access)  
24 market would expand the role of regulation, and the process of competition in the  
25 broadband access market would deteriorate inevitably.
- 26 • *Contrary to public policy*: Under the FCCA's proposal, ALECs would not have to  
27 invest in broadband access facilities because their voice customers could use FastAccess<sup>®</sup>  
28 service. In addition, BellSouth's incentives to develop such services would be reduced  
29 because whatever competitive advantage it could gain from investing in infrastructure and

(...continued)

See the Direct Testimony of John Ruscilli, on behalf of BellSouth, filed November 26, 2002, at 3.

1 developing new broadband services would be offset by the requirement to provide the  
2 service to ALEC customers.

3 Because the broadband access market is effectively competitive and functioning well in Florida,  
4 any proposal to mandate that any carrier supply service to particular customers will have bad  
5 consequences for competition and for consumers.

6 Moreover, the claim that BellSouth's FastAccess<sup>®</sup> service gives BellSouth a competitive  
7 advantage in the voice market, even if true, does not merit the relief requested. Presumably some  
8 BellSouth voice customers also like its inside wire maintenance plans, its calling card plans, or its  
9 voice mail services. For those customers, their experience with those BellSouth services arguably  
10 confers a competitive advantage on BellSouth in the basic exchange market—an arguable  
11 competitive advantage which is *earned* and which would be anticompetitive to remove. And, of  
12 course, for good economic reasons, few if any LECs (ALEC or ILEC) would consider supplying  
13 those particular services, which it supplies to its basic exchange customers, on a standalone basis  
14 to the basic exchange customers of competing LECs. For example, I am not aware of MCI  
15 offering to provide local service to customers who do not also subscribe to MCI's long distance  
16 service.

17 **II. FCCA'S POSITION ON BELL SOUTH'S DSL POLICY**

18 **Q. WHAT SPECIFIC ALLEGATIONS HAS THE FCCA MADE IN THIS PROCEEDING**  
19 **AGAINST BELL SOUTH'S DSL POLICY AND DO THESE ALLEGATIONS HAVE**  
20 **MERIT?**

21 A. The FCCA alleges that BellSouth's DSL policy conflicts with Florida's laws designed to promote  
22 competition. Specifically, Mr. Gillan makes the following erroneous assertions [at 3]:

- 23 1. BellSouth's policy denies consumers the opportunity to determine for themselves what  
24 combination of service providers best meets their needs.
- 25 2. BellSouth is seeking to protect its voice monopoly by frustrating prospects for greater  
26 penetration of advanced services.
- 27 3. BellSouth's policy discriminates among customers for data based on who provides their voice  
28 services.

1 4. BellSouth's policy represents a classic "tying arrangement" which provides BellSouth leverage  
2 in the market for voice and data services and enables it to foreclose competition.

3 5. The end result of BellSouth's policy is to raise barriers to competitive entry in the local  
4 exchange market.

5 As I explain in greater detail below, none of Mr. Gillan's assertions has any merit.

6 **III. RESPONSE TO FCCA'S POSITION**

7 **A. FCCA Allegation 1: BellSouth's DSL Policy Denies Consumers Choice**

8 **Q. PLEASE ADDRESS MR. GILLAN'S ASSERTION THAT BELL SOUTH'S POLICY**  
9 **DENIES CONSUMERS THE OPPORTUNITY TO DETERMINE THEIR MOST**  
10 **PREFERRED COMBINATION OF SERVICE PROVIDERS.**

11 A. Mr. Gillan's testimony disregards the fact that consumers cannot mandate service provider  
12 choices. In competitive markets, the metric that matters most—and best determines which firms  
13 survive in the long run—is profit, followed closely by firms' ability to offer consumers choice and  
14 attract their interest. No firm can maximize profit and develop any competitive advantage by  
15 *denying* consumers that choice. However, by the same token, if a service provider heedlessly  
16 provides any and all services to consumers and such choices are unprofitable, then eventually that  
17 service provider will perish.

18 Moreover, in the case of broadband Internet access, BellSouth's service and the wholesale  
19 DSL transport service are far from being the "only shows in town." Consumers are free to  
20 choose any number of broadband providers. However, if BellSouth – and not other broadband  
21 provider -- is compelled to offer broadband service in circumstances that negatively impact its  
22 profit, then ultimately BellSouth will be faced with a dilemma as to whether it desires to offer such  
23 a service at all.

24 **Q. MR GILLAN STATES [AT 8, ISSUE 3] THAT "IN A COMPETITIVE MARKET,**  
25 **THE CONSUMER IS MADE SOVEREIGN BECAUSE IT IS THE CONSUMER**  
26 **(BECAUSE OF ITS ABILITY TO CHOOSE AN ALTERNATIVE) THAT PUNISHES**

1           **UNRESPONSIVE FIRM BEHAVIOR.” DOES THIS MEAN THAT BELLSOUTH**  
2           **SHOULD BE FORCED TO PROVIDE FASTACCESS<sup>®</sup> SERVICE OVER UNE-P**  
3           **FACILITIES OR OVER UNE LOOPS THAT ALECS USE TO PROVIDE LOCAL**  
4           **EXCHANGE SERVICE?**

5    A. Not at all. The consumer, as Mr. Gillan puts it, has the “ability to choose an alternative.” Mr.  
6    Gillan, however, ignores this choice. Because consumers have the ability to choose from several  
7    alternatives, and because BellSouth has no particular corner on the market for advanced  
8    broadband services, it is disingenuous to claim that BellSouth’s policy denies consumers, in some  
9    material way, the freedom of choice that Chapter 364.01(3) of the Florida Statutes aspires to  
10   provide consumers in Florida.

11           The direct testimonies of BellSouth witnesses John Ruscilli and Keith Milner demonstrate that  
12   there are several public policy and, more importantly, technical reasons which make the provision  
13   of FastAccess<sup>®</sup> service over ALEC-served UNE-P facilities infeasible or uneconomical for  
14   BellSouth. In these circumstances, it is understandable for BellSouth to be unwilling to serve as a  
15   cog in the FCCA’s scheme to compete in the markets for packages of voice and advanced  
16   services.

17           **B. FCCA Allegation 2: BellSouth is Hindering Penetration of Advanced**  
18           **Services in Order to Preserve its Voice Monopoly**

19    Q. **IS THERE ANY TRUTH TO MR. GILLAN’S CLAIM [AT 3] THAT BELLSOUTH’S**  
20    **DSL POLICY IS DESIGNED TO FAVOR ITS OWN “VOICE MONOPOLY” AT THE**  
21    **EXPENSE OF THE NATIONAL GOAL OF WIDESPREAD DIFFUSION OF**  
22    **ADVANCED SERVICES?**

23    A. No. It is true that Section 706 of the Telecommunications Act of 1996 (“1996 Act”) and  
24    subsequent laws and policies enacted at the state level have sought to promote the diffusion of  
25    advanced, i.e., broadband Internet access, services. However, although I am not a lawyer, I do  
26    not believe that these laws and policies placed a particular onus on either a particular service  
27    provider (like BellSouth) or a particular form of advanced services (like DSL) to accomplish that

1 goal. Unlike the market for voice services, the market for advanced services was just beginning  
2 at the time these laws and policies were enacted. Therefore, the sensible course of action was to  
3 provide the necessary economic incentives to *all* service providers (not just ILECs or even just  
4 telecommunications service providers) to devote resources to the deployment of advanced  
5 services. Thus, the cable industry as well as providers of broadband Internet access through  
6 other means (such as optical fiber, satellite, or fixed wireless) have invested in providing advanced  
7 services, just as BellSouth and others have invested in providing those services over DSL  
8 facilities.

9 The important point to note is that *all* providers of advanced services started with a blank  
10 slate and that BellSouth possessed no particular corner on the market for these services. Rather,  
11 there is increasing evidence (some documented in the testimony of BellSouth witness John  
12 Ruscilli)<sup>3</sup> that the supply of broadband Internet access services by various means is growing  
13 rapidly in both Florida and the rest of the nation, and that DSL service providers (of whom  
14 BellSouth is just one) are locked in strenuous competition with providers of inter-modal  
15 alternatives like cable modem service. In these circumstances, it would make little economic  
16 sense for BellSouth to subvert its own developing broadband access business in order to favor its  
17 established voice services. It makes no economic sense to attempt to leverage a competitive  
18 service (namely, broadband access) to favor an allegedly monopoly service (namely, local  
19 exchange service).<sup>4</sup> Tying only works to favor a competitive service by leveraging a monopoly

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<sup>3</sup> Also see the FCC report, *High-Speed Services for Internet Access: Status as of June 30, 2002* (“*FCC Advanced Services Report*”), Industry Analysis and Technology Division, Wireline Competition Bureau, December 2002. Although this report distinguishes between “high-speed” Internet access service (speed above 200 kbps in one direction) and “advanced” service (speeds above 200 kbps in both directions), I treat them interchangeably for present purposes.

<sup>4</sup> Even there, I disagree completely with Mr. Gillan’s gratuitous characterization of BellSouth as having a “voice monopoly.” The term monopoly has been used loosely and inappropriately here. By definition, a firm is a monopoly when it is the *sole* supplier of a good or service. It is, by now, a well-established fact that numerous ALECs offer competing local exchange voice services in Florida, and that their collective share of the market (measured in switched access lines and as self-reported by a limited number of ALECs) was at least 9 percent as of the end of last year. See FCC, *Local Telephone Competition. Status as of June 30, 2002* (“*FCC Local Competition Report*”), Industry Analysis and Technology Division, Wireline Competition Bureau, December 2002, Table 6. This ALEC share—which was up from only 6 percent in December 1999 (see Table 7)—ranked

(continued...)

1 service, which is the other way around from what Mr. Gillan contends.

2 **Q. WHAT IS THE EMPIRICAL EVIDENCE ON BROADBAND COMPETITION IN**  
3 **FLORIDA, AND HOW DOES THAT EVIDENCE PERTAIN TO MR. GILLAN'S**  
4 **CONCLUSION [AT 7, ISSUE 3] THAT BELL SOUTH IS "VIRTUALLY A**  
5 **MONOPOLY" IN THE PROVISION OF DSL SERVICE IN FLORIDA?**

6 A. The fact that BellSouth has deployed DSL-based services in Florida only proves BellSouth's  
7 commitment to developing an important and fundamentally new segment of the market for  
8 communications services in the state. Mr. Gillan's point, of course, is to cast BellSouth's alleged  
9 99.3 percent share of the market for DSL-based services in Florida as conclusive proof of  
10 BellSouth's stranglehold over consumers, which supposedly enables it to indulge in anti-consumer  
11 and discriminatory strategies. This is counter-intuitive in itself: if BellSouth is so anti-consumer  
12 when it comes to advanced services, then why would it commit itself to ensuring that its annual  
13 growth rate for such services in 2001 was, in Mr. Gillan's words, the "fastest" in the country?

14 The more relevant discussion should be not about DSL-based services (or BellSouth's share  
15 of those services), but rather about the market for advanced broadband services of which DSL  
16 services are just one component. It is well known that cable modem, satellite, optical fiber, and  
17 fixed wireless technologies offer substantial inter-modal alternatives to DSL technology in the  
18 delivery of high-speed Internet access services. Therefore, the real issue is how the market has  
19 grown for all of these services, and the position that DSL-based services have secured in this  
20 market.

(...continued)

Florida as having the 21st highest ALEC penetration of all states in 2002. Table 8 of this report shows that, of the 1,035,417 ALEC-served lines in Florida, 29 percent were ALEC-owned and 47 percent were UNE or UNE-P based, as of June 2002.

Whatever other term he could have used instead, Mr. Gillan's unfortunate choice of the term "voice monopoly" is a loaded one, and perhaps designed to invoke negative connotations about BellSouth's actual market position for local exchange services. From an economic standpoint, there is a very big difference between a pure monopoly that is able to completely shut down competitive entry and a firm with a large market share that is, however, in no position to raise barriers to competitive entry.

1 According to the *FCC Advanced Services Report*, Table 7 (attached as exhibit JAR-2 to  
2 Mr. Ruscilli's rebuttal testimony), the number of lines capable of broadband Internet access in  
3 Florida (from all technologies) rose from 190,700 in December 1999 to 1,119,693 in June 2002  
4 (an increase of 487 percent in just two and a half years). Moreover, in June 2002, there were  
5 391,188 lines providing DSL-based service in Florida and 728,505 lines providing comparable  
6 service over inter-modal alternatives. Thus, the share of DSL-based lines was only 35 percent,  
7 while that of inter-modal alternatives was 65 percent. This clearly establishes that, Mr. Gillan's  
8 skewed presentation of market growth statistics notwithstanding, advanced service customers in  
9 Florida have significant alternatives to DSL services (or, even to BellSouth's FastAccess<sup>®</sup>  
10 service).

11 **Q. MR. GILLAN SEES BELLSOUTH'S DSL POLICY [AT 11, ISSUE 3] AS**  
12 **SOMETHING THAT "EFFECTIVELY FORECLOSES VOICE COMPETITION FOR**  
13 **THOSE CUSTOMERS DESIRING FASTACCESS SERVICE." AS A MATTER OF**  
14 **ECONOMICS, COULD THIS BE TRUE?**

15 A. No. Customers should be free to choose their most preferred combination of services and  
16 service providers *from among those being offered*, but there can never be any circumstance—  
17 and there are none in unregulated, competitive markets—in which consumers can *force* unwilling  
18 suppliers to enter into specific selling arrangements with them. Markets operate on the basis of  
19 voluntary transactions, with offer prices serving as a guiding mechanism for buying and selling.  
20 Thus, customers cannot be punished by denial of an arrangement that was never offered in the  
21 first place. When a customer has established service with an ALEC and later seeks to add DSL  
22 service, the ALEC must decide whether to offer DSL service. The ALEC has the ability to  
23 proactively offer that customer an inexpensive voice service, which service the customer can  
24 accept from the outset with the understanding that an overlay DSL service is not available.  
25 Alternatively, the ALEC can explore any number of options to provide broadband service to its  
26 customers. In the case of a customer that has existing FastAccess<sup>®</sup> service, the customer can be  
27 advised at the outset that BellSouth only offers its FastAccess<sup>®</sup> service in combination with its

1 local exchange service (retail or resold) as long as the customer receives service over BellSouth's  
2 facilities. If that customer prefers to have a more flexible serving arrangement, the customer can  
3 elect to purchase voice services from another carrier.

4 Customers often prefer to purchase different telecommunications services from the same  
5 provider (e.g., the FCCA's packages of local and long distance services), and frequently it is  
6 cheaper for a single firm to provide a package of different services to a customer than for  
7 different firms to provide the services (i.e., through economies of scope). Whenever either of  
8 these cases occurs, customers are better off if they can buy such packages, and firms that offer  
9 the full set of services have a competitive advantage over firms that do not. While Mr. Gillan [at  
10 10] interprets BellSouth's policy as "imposing a Hobson's choice on consumers—either the  
11 consumer is discouraged from using a competitive voice provider, or it must sacrifice its advanced  
12 services purchased from BellSouth," in reality, it is the FCCA that is seeking to limit consumer  
13 choice. If it succeeds in its Complaint, the FCCA's voice customers will be unable to buy a  
14 complete package of voice and DSL services from it because the FCCA would have no incentive  
15 to provide DSL services, and whatever additional utility or cost advantage that accrues to  
16 customers from joint supply of voice and DSL services from a single provider will be lost to the  
17 FCCA's voice customers as well.



18 **Q. SHOULD BELLSOUTH BE REQUIRED TO PROVIDE ITS FASTACCESS<sup>®</sup>**  
19 **SERVICE OVER AN ALEC'S UNE OR UNE-P FACILITIES SO THAT THE ALEC'S**  
20 **CUSTOMER IS NOT SOMEHOW PENALIZED?**

21 A. No. To understand why, it is necessary to consider the economics of joint provision of services.  
22 When BellSouth provides both voice (local exchange) service and FastAccess<sup>®</sup> service over  
23 different frequency ranges of the same access line, it incurs no incremental loop cost to provide  
24 one service *in addition to* the other. That is because the costs of providing these services are  
25 joint, i.e., the two services are provided in fixed proportions, and one cannot be provided without

1 it being possible to provide the other.<sup>5</sup> Therefore, if BellSouth is already providing one of the  
2 services over an access line, say, voice local exchange service, then it can also have available to it  
3 at no extra loop cost the means to provide the other service, namely, broadband Internet access  
4 service.

5 When BellSouth provides the access line, it currently has an obligation to share the high-  
6 frequency portion of the line with any ALEC that requests it in order for the ALEC to provide its  
7 own broadband service. However, when BellSouth has sold the entire access line (not just a  
8 portion of its frequency spectrum) to the ALEC, such as in a UNE or  
9 UNE-P arrangement, the ALEC may, of its own volition, provide its own local exchange service  
10 or its own broadband service, or a combination of the two. It also *may* contract with BellSouth  
11 or some other service provider to deliver broadband Internet access service over the high-  
12 frequency portion of the UNE or UNE-P access line with which it serves its customer. But, it  
13 certainly *may not* compel BellSouth to be that provider, and there can be no economic basis to  
14 *require* BellSouth to provide such service. If BellSouth were required to offer broadband access  
15 to an ALEC's voice customers because not doing so disadvantaged the ALEC in the voice  
16 market, where would the line be drawn? Would BellSouth be required to offer its inside wire  
17 maintenance contracts to ALEC customers? Its calling card services? For good economic  
18 reasons revolving around customer choice and cost, local exchange carriers in Florida offer some  
19 services exclusively to their basic exchange customers and other services more widely.

20 On the other hand, as Messrs. Milner and Fogle make clear, requiring BellSouth to provide its  
21 FastAccess<sup>®</sup> service in those circumstances would cause BellSouth to incur non-trivial  
22 operational difficulties and costs. These additional costs would be extraneous—imposed upon  
23 BellSouth by a policy to compel it to provide FastAccess<sup>®</sup> service over ALEC-purchased UNE  
24 or UNE-P facilities—rather than costs caused by BellSouth's own customers or costs arising  
25 from its own business and operational decisions. This would place an asymmetric burden on

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<sup>5</sup> Classic examples of such joint production are wool and mutton, beef and hide, and egg white and yolk.

1 BellSouth and be, in effect, anti-competitive. Moreover, Mr. Gillan suggests [at 15] that not only  
2 should BellSouth be required to provide its FastAccess service, he also suggests that BellSouth  
3 should provision such service “under the same terms, conditions, and prices.” Such a suggestion  
4 would entail price and quality regulation of a competitive service and completely disregards the  
5 additional costs imposed on BellSouth by such a requirement. If adopted, this suggestion would  
6 result in additional, asymmetric regulation and an economic burden placed on BellSouth.

7 **Q. DOES BELLSOUTH’S POLICY CONTRAVENE NATIONAL**  
8 **TELECOMMUNICATIONS PRIORITIES?**

9 A. No. Although Mr. Gillan alleges [at 9] that BellSouth is violating a federal policy goal of  
10 “increased broadband penetration,” this is simply untrue. On the contrary, BellSouth is investing  
11 heavily in facilities to provide broadband access to its customers. It is the FCCA that chooses  
12 not to contribute towards this federal policy goal by refusing to participate in the provision of  
13 broadband access to its voice customers.

14 **C. FCCA Allegation 3: BellSouth’s DSL Policy Discriminates Among**  
15 **Different Groups of Customers for Advanced Services**

16 **Q. PLEASE COMMENT ON MR. GILLAN’S ASSERTION [AT 10, ISSUE 3] THAT**  
17 **BELLSOUTH’S POLICY DISCRIMINATES AMONG SIMILARLY-SITUATED**  
18 **CUSTOMERS FOR ADVANCED SERVICES.**

19 A. The very basis for Mr. Gillan’s claim in this regard is flawed. Consider his argument about “two  
20 customers currently subscribing to FastAccess<sup>®</sup>” [at 10]:

21 One customer decides to subscribe to WorldCom’s new residential offering, the  
22 “Neighborhood,” while the other intends to remain with BellSouth. The *same*  
23 network facilities will be used to serve the customer choosing WorldCom’s voice  
24 service as are used today (or would be used to serve the customer staying with  
25 BellSouth for local voice service). Thus, there can be no question that the customers

1 are similarly situated—they are each being served over identical facilities.<sup>6</sup>

2 When Mr. Gillan refers to one customer's decision to subscribe to WorldCom's residential  
3 exchange service, he fails to clarify that this can only happen if the access line in question is either  
4 leased by WorldCom (as UNE or UNE-P) from BellSouth or deployed by WorldCom from out  
5 of its own facilities. In either instance, the access line *belongs* to WorldCom, even if, under the  
6 UNE lease arrangement, it is physically still a part of BellSouth's network. The important fact is  
7 that BellSouth has already been compensated—at least in theory—for the use of the line by  
8 WorldCom (and its customer). That transfer of ownership means that any delivery of service—  
9 whether voice or advanced—can only be initiated by WorldCom.<sup>7</sup> That is, the costs that arise  
10 from that point on to provide any service are those experienced solely by WorldCom. For  
11 example, once the customer has switched to WorldCom for local exchange service, WorldCom  
12 has to set about recovering the incremental cost of providing that service over the leased UNE or  
13 UNE-P line. At the customer's request, WorldCom can certainly offer its own version of  
14 broadband Internet access service over the *same* line at no (or trivial) additional line-related cost.  
15 However, if the customer desires BellSouth's FastAccess<sup>®</sup> service instead, over a line that is no  
16 longer in BellSouth's control, then (as explained in Mr. Milner's and Mr. Fogle's testimony)  
17 BellSouth would have to first solve the complex operational problems of delivering service over  
18 such a line, and then deal with having to recover the additional costs that doing so would entail.  
19 This cannot be—and is not—the most efficient way for a customer to receive both local exchange  
20 service and broadband Internet access service over the same access line. Also, the customer that  
21 migrates to WorldCom's facilities (whether leased or owned) cannot be similarly situated to a  
22 customer that remains with BellSouth, even if the access line used to serve WorldCom's  
23 customer remains physically a part of the same network to which the access line to serve  
24 BellSouth's customer belongs. WHY?

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<sup>6</sup> Emphasis in original.

<sup>7</sup> This situation differs fundamentally from total service resale under which WorldCom or some other competitor does *not* receive ownership of the underlying facilities.

1 **Q. WHAT OPTION COULD AN FCCA CUSTOMER THEN HAVE IF THE FCCA IS**  
2 **UNWILLING, AS MR. GILLAN STATES [AT 11], TO “DUPLICATE**  
3 **BELLSOUTH’S DSL-FOOTPRINT”?**

4 A. Local exchange competition entails that different service providers find ways to offer similar and  
5 competing underlying functionalities (that customers want) through their own sources.  
6 Recognizing how expensive entrants may find it to duplicate the incumbent’s existing network, the  
7 1996 Act saw the creation and availability of UNEs as one of three crucial means of competitive  
8 entry.<sup>8</sup> This was, however, an attempt to save entrants the large and potentially sunk costs of  
9 *facilities*, i.e., the *means* of service provision, but never of *services* themselves.

10 I noted earlier that when it came to advanced broadband services, *all* service providers—  
11 incumbents and entrants alike—started from a blank slate. Incumbency provided no economic or  
12 technical advantage at all in the construction and delivery of these services. Nor did incumbency  
13 guarantee an installed base of consumers for advanced services.<sup>9</sup> Moreover, BellSouth and other  
14 incumbents have had to invest heavily in upgrading their existing networks to be able to provide  
15 DSL services, as have alternative providers of DSL services and inter-modal competitors that  
16 provide alternatives to DSL services. The race to serve consumers of DSL services has involved  
17 investment, innovation, and change by incumbents and entrants alike. Public policy should *not* be  
18 redesigned to change these facts after the investment has already occurred.

19 Contrary to Mr. Gillan’s assertion, there is no reason why the FCCA (and others like it)  
20 should not have to bear the same burden as that borne by BellSouth and other incumbents when  
21 it comes to services for which all competing service providers started from scratch. The rules that  
22 currently apply to BellSouth for its supposed incumbency advantages with respect to voice  
23 services should not be extended to cover advanced services for which no such advantage exists.  
24 Doing otherwise would be a misguided application of public policy that, in the end, would only

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<sup>8</sup> As is well known, the other two are total service resale and facilities-based provision

<sup>9</sup> The word “incumbents” encompasses local exchange incumbents or ILECs, long distance incumbents (e.g., AT&T or WorldCom) and cable incumbents.

1 serve the self-interest of ALECs. This is readily evident from Mr. Gillan's statement [at 2]:

2 [T]he Commission should prohibit BellSouth from refusing to provide FastAccess ...  
3 to any customer that has chosen an alternative voice provider.

4 This is a naked attempt by the FCCA to secure for itself all the benefits of serving customers who  
5 want broadband Internet access service, while shifting all of the costs and risks of providing that  
6 service to BellSouth. This is decidedly not the model of competition to which the 1996 Act  
7 aspired.

8 **D. FCCA Allegation 4: BellSouth's DSL Policy Amounts to Illegal Tying**

9 **Q. WHAT IS "TYING" IN ANTITRUST ECONOMICS?**

10 A. Tying means that a monopoly supplier of service A refuses to supply that service by itself and  
11 requires customers to also purchase service B, for which it faces competition. Under some  
12 circumstances, the monopolist can make more money by following such a strategy and competing  
13 suppliers of service B can be placed at a competitive disadvantage. That is because any  
14 customer who buys the competitors' services must find a substitute for the monopolist's service  
15 A, which is, by definition, nearly impossible to do. Technically, tying is a form of monopoly  
16 leveraging in which market power in one market (A) is leveraged to give a competitive advantage  
17 in a more competitive market (B).

18 **Q. GIVEN THIS DEFINITION OF TYING, DOES MR. GILLAN'S THEORY [AT 3]  
19 THAT BELLSOUTH'S DSL POLICY "REPRESENTS A CLASSIC 'TYING  
20 ARRANGEMENT'" MAKE SENSE?**

21 A. No. Mr. Gillan has reversed the economic definition of "tying." In order for BellSouth's business  
22 plans to impair the FCCA's ability to compete for residential local exchange customers,  
23 BellSouth would have to be essentially a monopoly provider of broadband Internet access  
24 services to residential customers who are on the margin between subscribing to the FCCA or  
25 BellSouth for basic exchange service. Otherwise, the actions of which Mr. Gillan complains  
26 would have no effect on its business: potential FCCA customers would simply buy broadband

1 Internet access services from a service provider other than BellSouth. Earlier, I showed that  
2 customers have available to them many substitutes for BellSouth's FastAccess<sup>®</sup> service. Thus,  
3 the wholesale or retail provision of BellSouth's DSL services is not necessary for the FCCA to  
4 compete for local exchange customers, and their absence does not impair the process of local  
5 exchange competition in Florida.

6 **Q. DOES THIS THEORY OF TYING APPLY TO THE FCCA'S COMPLAINT?**

7 A. No. BellSouth's business decision not to supply DSL services as stand-alone retail services is  
8 the very opposite of monopoly leveraging or tying, so none of the theory of tying applies in this  
9 case. Tying occurs when a firm forces customers of its *less-competitive* service to also buy its  
10 *more-competitive* service. In this case, BellSouth is requiring customers of its *more-*  
11 *competitive* service (FastAccess<sup>®</sup>) to also buy its competitive, although arguably less  
12 competitive, service (basic exchange voice service). Such a strategy is not tying, and it is not anti-  
13 competitive because any FastAccess<sup>®</sup> customer that prefers not to buy BellSouth voice service  
14 can readily find another supplier of broadband access. BellSouth can extract no additional profits  
15 from its FastAccess<sup>®</sup> service by combining it with its basic exchange services because customers  
16 have viable substitutes for BellSouth's FastAccess<sup>®</sup> service. Any attempt effectively to increase  
17 the prices of that service would cause customers to switch suppliers. Thus, because BellSouth  
18 has no monopoly position or dominant market power in the supply of broadband access, there  
19 can be no harm to competition or competitors in the local exchange market from its business  
20 decision not to supply its DSL services on either a wholesale or stand-alone retail basis.<sup>10</sup>

21 **Q. WOULD THIS CONCLUSION BE AFFECTED IF BELL SOUTH WERE FOUND TO**  
22 **HAVE MARKET POWER FOR RESIDENTIAL AND SMALL BUSINESS BASIC**  
23 **LOCAL EXCHANGE SERVICES?**

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<sup>10</sup> Moreover, since BellSouth's prices for its local exchange services are generally regulated, it could not charge a higher-than-market price for local service even if it were able to require its local exchange customers to buy its DSL services.

1 A. No. Even if BellSouth had market power in local exchange markets, it would gain nothing by  
2 requiring its FastAccess<sup>®</sup> customers to also buy its local exchange services. FastAccess<sup>®</sup>  
3 customers who wanted to buy ALEC local exchange services could do that simply by switching  
4 broadband access suppliers.

5 What may be confusing in these circumstances is that, while requiring FastAccess<sup>®</sup> customers  
6 to buy local exchange service isn't profitable, the *opposite* strategy—requiring BellSouth local  
7 exchange customers to also buy FastAccess<sup>®</sup> service—could be profitable. If BellSouth had  
8 market power for basic exchange service and those prices were regulated, it is possible that  
9 requiring basic exchange customers (who, by assumption, have limited competitive alternatives) to  
10 also buy FastAccess<sup>®</sup> service could conceivably be profitable and anti-competitive. However,  
11 that strategy is emphatically *not* what BellSouth is doing and *not* what Mr. Gillan is complaining  
12 about.

13 **Q. IF BELL SOUTH ISN'T ENGAGING IN ANTI-COMPETITIVE TYING, WHY DOES**  
14 **IT CHOOSE NOT TO SUPPLY FASTACCESS<sup>®</sup> SERVICE TO THE FCCA'S LOCAL**  
15 **EXCHANGE CUSTOMERS?**

16 A. From the fact that BellSouth does not voluntarily supply FastAccess<sup>®</sup> service to the FCCA's  
17 local exchange customers, we can infer that it believes its profits in the long run will be higher  
18 under such a plan. However, such higher profits need not—and, in fact, cannot—stem from anti-  
19 competitive tying. They *cannot* be ascribed to anti-competitive tying because, as described  
20 above, BellSouth has no market power in the broadband access markets to attempt to leverage  
21 into local exchange markets. Indeed, there are a number of other, competitively benign,  
22 explanations.

23 First, such bundling of services should not be surprising because this behavior is prevalent in  
24 the industry. There are marketing and cost advantages associated with bundling, and few local  
25 exchange carriers offer stand-alone retail telecommunications services. For example, no local  
26 exchange carrier supplies stand-alone vertical services: the cost to supply call-waiting to another  
27 LEC's basic exchange customer—particularly the network costs and the costs of establishing,

1 measuring and billing the account—would be prohibitive.

2 Second, as explained in Mr. Milner's and Mr. Fogle's testimony, mandatory provision of  
3 FastAccess<sup>®</sup> service on a stand-alone retail basis to the FCCA's local exchange customers  
4 would entail operational problems and costs above and beyond those incurred in supplying the  
5 service to BellSouth's own local exchange customers.

6 In sum, there are generally thought to be large economies of scope in the supply of local  
7 exchange telecommunications and information services: that is, it is thought to be significantly  
8 cheaper to supply them together through one firm than to supply them separately through different  
9 sources. This technological fact is an important reason for a series of FCC decisions that made it  
10 possible for basic telephone and enhanced information services to be provided by the same  
11 entity, essentially regulating the underlying telecommunications network components while leaving  
12 the retail information service unregulated. In its complaint, the FCCA is asking the Commission  
13 to impose the *opposite* approach (re-regulating retail information services) on top of the  
14 regulatory structure established by the FCC. Imposing such conflicting regulations in Florida  
15 would raise difficulties for multi-state telecommunications providers. Economically, requiring  
16 BellSouth (and no other service provider) to supply ancillary information services on a stand-  
17 alone basis irrespective of their cost and profitability would significantly distort regulation as well  
18 as incentives to compete and invest in the markets for the ancillary and basic exchange services.

19 **1. Effects on Competitors**

20 **Q. HOW DOES BELL SOUTH'S DSL POLICY AFFECT THE ABILITY OF ALECS TO**  
21 **COMPETE FOR RESIDENTIAL AND SMALL BUSINESS CUSTOMERS IN THE**  
22 **MARKET FOR BASIC LOCAL EXCHANGE SERVICE?**

23 A. It does not. As documented earlier, Florida customers have many alternatives to BellSouth's  
24 retail FastAccess<sup>®</sup> service, and competitors have alternative mechanisms to provide those  
25 services if they wish to compete in those markets or to provide bundles of broadband access and  
26 local exchange services.

1 **Q. IS PROVISION OF BELL SOUTH'S FASTACCESS® SERVICE THROUGH RESALE**  
2 **A VIABLE SOLUTION FOR THE FCCA'S PROBLEM?**

3 A. Of course. The whole purpose of total service resale (as envisioned by the 1996 Act) was to  
4 enable competitors and new entrants to first gain a foothold and some traction in the market (by  
5 gaining customers on the strength of superior retail service), and then to move to serving  
6 customers out of some combination of leased or their own facilities. This transition would allow  
7 those entrants to grow their market presence without first having to commit to risky and large  
8 (and possibly sunk) investments in their own facilities.

9 Mr. Gillan has observed in a similar proceeding in Georgia that “[r]esale has never proved  
10 effective on a mass-market basis and is in decline in Georgia and throughout BellSouth’s  
11 region.”<sup>11</sup> That is certainly true, but not for the reason Mr. Gillan appears to imply, namely, that  
12 resale is inherently a failing strategy for growth in the local exchange market. Rather, resale  
13 should only be viewed as a temporary growth strategy (for reasons mentioned above), and a  
14 general decline in resale that corresponds to a general growth in UNE or facilities-based service  
15 from ALECs is a sign that what the 1996 Act intended is indeed coming true. It is hardly  
16 surprising that the FCCA and others have increasingly migrated to UNE and UNE-P for  
17 competing in the local exchange market. ALECs, particularly those that can bundle long distance  
18 services along with their local exchange services, stand to collect access charges under the UNE  
19 or UNE-P option, but not under resale. Mr. Gillan also claims that resale is “not effective”  
20 because it yields “substantially lower margins” than the UNE or UNE-P strategy.

21 It is not worthwhile for me to second-guess the FCCA’s apparent business decision to opt for  
22 UNE or UNE-P over resale. Being a profit-maximizer (at least, as it appears to me, in the short  
23 run), the FCCA may have chosen the strategy that best fits that goal. However, by not first using  
24 resale to secure an installed base of DSL service users, the FCCA has perhaps chosen to pass  
25 up the opportunity to maximize profits in the longer term. This the FCCA could have done by

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<sup>11</sup> Direct Testimony of Joseph Gillan [at 13], on behalf of MCI WorldCom, in Georgia Public Service Commission Docket No. 11901-U, October 21, 2002.

1 offering its own version of broadband Internet access service that either it, or a partner under a  
2 line-splitting arrangement, could offer through its leased or owned facilities. Rather, the FCCA  
3 has apparently gambled on the continuing availability of BellSouth's FastAccess<sup>®</sup> service even  
4 over its UNE and UNE-P lines. Now that BellSouth has refused to oblige the FCCA in carrying  
5 out such a strategy, the FCCA is crying foul. However, from an economic standpoint, the FCCA  
6 has nothing more than a claim of non-cooperation from its rival BellSouth to bring before the  
7 Commission at this point. There is no anti-competitive conduct on the part of BellSouth (for  
8 reasons explained above), and the FCCA can hardly expect a rival like BellSouth to play willing  
9 handmaiden to its own short-sighted profit-maximizing strategy. Non-cooperation by a  
10 competitor is hardly conduct worthy of litigation; rather, it is conduct that must be expected in  
11 competitive markets. The FCCA cannot expect to coerce BellSouth into offering the missing  
12 piece in the FCCA's grand strategy when there is no evidence of any economic malfeasance on  
13 BellSouth's part.

14 **Q. WHY DOES THE FCCA NOT PROPOSE TO USE LINE SPLITTING AS A MEANS**  
15 **TO OFFER ITS OWN COMPETING PACKAGE AND DSL SERVICE?**

16 A. As I noted earlier, no LEC—not even BellSouth—has been exempt from the need to invest  
17 heavily in network facilities and upgrades to permit the transport and delivery of broadband or  
18 advanced services. In fact, providers of inter-modal alternatives to DSL-based Internet access  
19 (primarily cable service providers) have been rewarded for such investments by market shares  
20 that exceed those of DSL service providers. As a long run business model, the FCCA and other  
21 such well-financed firms cannot expect to achieve success in the highly competitive market for  
22 advanced services if they choose to operate only by proxy, i.e., by attempting to bundle  
23 FastAccess<sup>®</sup> and similar services with their own voice services.

24 In reality, the FCCA could readily collaborate with a DSL service provider to offer a  
25 combination of voice and advanced services to its existing or potential customers. BellSouth's  
26 legal obligations should not be altered by the FCCA's apparently voluntary decision not to  
27 engage in line splitting.

1 In effect, the FCCA is asking the Commission to compel BellSouth to adjust its business plans  
2 for its retail information services to accommodate whatever business plan the FCCA might elect  
3 to follow. Whatever might result from such a requirement, it would not be competition in the  
4 markets for broadband Internet access or local exchange services. Such a requirement would  
5 also turn Federal and State policies favoring development of competition in telecommunications  
6 markets on their heads, and there can be no economic or policy basis for the Commission to turn  
7 back the clock in this manner.

8 **Q. WHY WOULD COMPETITION BE HARMED BY THE FCCA'S REQUEST?**  
9 **WOULDN'T COMPETITION BE ENHANCED BY PUTTING EVERY LOCAL**  
10 **EXCHANGE CARRIER ON AN EVEN FOOTING WITH RESPECT TO**  
11 **BROADBAND INTERNET ACCESS SERVICES?**

12 A. No. First, the costs of engaging in "managed competition" by regulators—particularly in markets  
13 subject to vigorous competition and rapid technical change—are immense, and it can be difficult  
14 to tell which firms, or which technologies, will gain or lose in this process. Second, competitors in  
15 the broadband Internet access market would not welcome the mandatory provision of  
16 BellSouth's FastAccess<sup>®</sup> service over the FCCA's UNE or UNE-P lines. Those competitors  
17 have already invested in their own infrastructure and marketed their products and services,  
18 presumably planning to sell broadband Internet access services to new local exchange  
19 competitors. Under the FCCA's plan, ALECs would have the option of using BellSouth services  
20 on the cheap rather than provisioning their own.

21 **2. Effects on Consumers**

22 **Q. BUT WOULDN'T THE FCCA'S CUSTOMERS BE BETTER OFF IF THEY COULD**  
23 **CONTINUE TO RECEIVE BELL SOUTH INFORMATION SERVICES AFTER**  
24 **SWITCHING TO FCCA'S LOCAL EXCHANGE SERVICE?**

25 A. No. In the long run, consumers would be injured by actions that have the effect of stifling  
26 competition for broadband Internet access service. Neither BellSouth nor its competitors would

1 have any incentive to invest in new facilities and technologies because (1) BellSouth would be  
2 forced to share the benefits from its investment and its research and development and (2) by  
3 being able to take advantage of BellSouth's investment and new service development, entrants  
4 would have diluted incentives to develop their own services. Such competitive distortions could  
5 have particularly large effects in high-investment, high-technology industries where investment is  
6 sunk and risky, and where the market outcomes among competing technologies are  
7 unpredictable.

8 **E. FCCA Allegation 5: BellSouth's DSL Policy Raises Barriers to**  
9 **Competitive Entry**

10 **Q. HOW DOES THE FCCA EXPLAIN ITS BELIEF THAT BELL SOUTH'S DSL**  
11 **POLICY THREATENS TO RAISE BARRIERS TO COMPETITIVE ENTRY?**

12 A. Mr. Gillan expresses this belief [at 3] but offers an explanation that is, at best, tangential. For  
13 example, he argues [at 11] that no ALEC can hope to create "a DSL-footprint of comparable  
14 scale and scope as BellSouth" because of the allegedly "prohibitive costs" of doing so, and  
15 concludes from that entrants must "forego competing for customers" that desire the voice and  
16 advanced services that BellSouth can offer in packaged form.

17 By portraying the ALEC's "predicament" in such stark terms, indeed by declaring this as  
18 "artificially constricting the available market, particularly in the residential marketplace," Mr. Gillan  
19 attempts to rationalize the need to compel BellSouth to change its competitive policies to serve  
20 the FCCA's (and like-minded ALECs') interests.

21 The real situation, however, is neither as stark nor as polarized as Mr. Gillan depicts it.  
22 Barriers to competitive entry are typically raised by the need to make large and risky sunk  
23 investments prior to entry. Since, by definition, sunk costs are unrecoverable in the event of  
24 failure, no firm would commit to such costs without a reasonable expectation or assurance of their  
25 recovery eventually. The 1996 Act correctly recognized that entry into local exchange markets  
26 for voice services was fraught with exactly such a barrier and, therefore, prescribed total service  
27 resale and unbundling by incumbent networks as ways to mitigate or lower the sunk costs of

1 fledgling entrants. In this manner, new entrants did not have to face the specter of competing with  
2 dominant incumbents who experienced no corresponding costs of entry (or who had long since  
3 recovered, in full or part, their *own* costs of entry).

4 The story with respect to advanced services is radically different. No single firm enjoys an  
5 inherent advantage (as a first-comer or being an innovator) in providing these services. No  
6 incumbent has the ability to leverage whatever market power it may enjoy for any of its less-  
7 competitive services to favor its own offering of advanced services. All competitors—incumbents  
8 and entrants alike—start from scratch, including by having to make significant new network  
9 investments and upgrades, and having to develop customer interest in the advanced services. The  
10 new costs—whether sunk or not—are experienced symmetrically by all firms competing. In the  
11 absence of asymmetric costs to enter or compete, the specter of entry barriers for advanced  
12 services cannot be taken seriously.

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

14 **A. Yes.**



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Dr. Taylor received a B.A. *magna cum laude* in Economics from Harvard College, an M.A. in Statistics and a Ph.D. in Economics from the University of California at Berkeley. He has taught economics, statistics, and econometrics at Cornell and the Massachusetts Institute of Technology and was a post doctoral Research Fellow at the Center for Operations Research and Econometrics at the University of Louvain, Belgium.

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- 1975-1983 BELL TELEPHONE LABORATORIES  
Member, Technical Staff, Economics Research Center: basic research on theoretical and applied econometrics, focusing on small sample theory, panel data and simultaneous equations systems.
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“Revising Price Caps: The Next Generation of Incentive Regulation Plans,” Chapter 2 in M.A. Crew (ed.) *Pricing and Regulatory Innovations under Increasing Competition*, Boston: Kluwer Academic Publishers, May 1996 (with T. Tardiff).

“An Analysis of the State of Competition in Long-Distance Telephone Markets,” *Journal of Regulatory Economics*, May, 1997, pp. 227-256 (with J.D. Zona).

“An Analysis of the Welfare Effects of Long Distance Market Entry by an Integrated Access and Long Distance Provider”, *Journal of Regulatory Economics*, March, 1998, pp. 183-196 (with Richard Schmalensee, J.D. Zona and Paul Hinton).

“Market Power and Mergers in Telecommunications,” *Proceedings of the Institute of Public Utilities; 30<sup>th</sup> Annual Conference: Competition in Crisis: Where are Network Industries Heading?*, The Institute of Public Utilities, Michigan State University, 1999.

“The Baby and the Bathwater: Utility Competition, But at What Price?,” *Public Utilities Fortnightly*, Vol. 137, No.21, November 15, 1999, pp. 48-56 (with Anne S. Babineau and Matthew M. Weissman).

## TESTIMONIES

### 1. Alabama

1. Alabama Public Service Commission (Docket No. 25677), on behalf of BellSouth Telecommunications, Inc., direct testimony regarding economic aspects of avoided costs of services supplied for resale. Filed November 26, 1996.
2. Alabama Public Service Commission, on behalf of BellSouth Long Distance, Inc., (Docket No. 25835): direct testimony regarding the probable economic benefits to consumers in Alabama from entry by BellSouth into the interLATA long distance market. Filed June 18, 1997. Rebuttal testimony filed August 8, 1997.
3. Alabama Public Service Commission, on behalf of BellSouth Telecommunications, Inc., (Docket No. 26029): rebuttal testimony of intervenor testimonies in BellSouth’s cost and unbundled network element pricing docket in Alabama. Filed September 12, 1997.
4. Alabama Public Service Commission (Docket No. 25980), on behalf of BellSouth Telecommunications: rebuttal testimony regarding revenue benchmarks and other matters in universal

service funding. Filed February 13, 1998.

5. Alabama Public Service Commission (Docket No. 27091), on behalf of BellSouth Telecommunications, rebuttal testimony regarding intercarrier compensation for Internet-bound traffic, filed October 14, 1999.
6. Alabama Public Service Commission (Docket No. 25835), on behalf of BellSouth Telecommunications, Inc., economic aspects of service quality penalty plans. Rebuttal testimony filed June 19, 2001.
7. Alabama Public Service Commission (Docket Nos. 15957 and 27989), on behalf of BellSouth Telecommunications, Inc.: economic support for promotional offerings. Direct testimony filed August 3, 2001, rebuttal testimony filed August 13, 2001. Additional rebuttal testimony filed August 17, 2001.
8. Alabama Public Service Commission (Docket No. 25835), on behalf of BellSouth Telecommunications, Inc., economic aspects of structural separations. Surrebuttal testimony filed July 24, 2001.

## **2. Alaska**

9. Alaskan Public Utilities Commission, (Docket Nos. U-98-140/141/142 and U-98-173/174), testimony regarding the economic effects on competition of the acquisitions of Telephone Utilities of Alaska, Telephone Utilities of the Northland, Inc., and PTI Communications of Alaska by ALEC Acquisition Sub Corporation and of Anchorage Telephone Utility and ATU Long Distance, Inc. by Alaska Communications Systems, Inc. Filed February 2, 1999. Rebuttal testimony filed March 24, 1999.

## **3. Arizona**

10. Arizona State Air Pollution Control Hearing Board (Docket No. A-90-02) on behalf of Arizona Public Service Company. A statistical study of SO<sub>2</sub> emissions entitled, "Analysis of Cholla Unit 2 SO<sub>2</sub> Compliance Test Data," (October 24, 1990) and an Affidavit (December 7, 1990).
11. Arizona Corporation Commission (Docket Nos. T-02432B-00-0026, T-01051B-00-0026), on behalf of US WEST Communications, Inc., direct testimony regarding intercarrier compensation for Internet-bound traffic. Filed March 27, 2000.
12. Arizona Corporation Commission (Docket No. T-01051B-99-0497), on behalf of US West Communications, Inc., rebuttal testimony regarding economic issues arising in the proposed merger between U S WEST and Qwest. Filed April 3, 2000.
13. Arizona Corporation Commission (Docket No. T-01051B-99-105), on behalf of Qwest Corporation., rebuttal testimony regarding rate design. Filed August 21, 2000.
14. Arizona Corporation Commission (Docket Nos. T-03654A-00-0882, T-01051B-00-0882), on behalf of Qwest Corporation, direct testimony regarding intercarrier compensation for internet-bound traffic. Filed January 8, 2001.

15. Arizona Corporation Commission (Docket No. T-00000A-00-0194, Phase 2), on behalf of Qwest Corporation., direct testimony regarding intercarrier compensation for Internet-bound traffic. Filed March 15, 2001.

#### **4. Arkansas**

16. Arkansas Public Service Commission (Docket No. 83-042-U) on behalf of Southwestern Bell Telephone Company: economic analysis of non-traffic sensitive cost recovery proposals. Filed October 7, 1985.

#### **5. California**

17. California Public Utilities Commission (Case 88-04-029) on behalf of Pacific Bell: commission payment practices, cross-subsidization of pay telephones, and compensation payments to competitive pay telephone suppliers. Filed July 11, 1988.

18. California Public Utilities Commission (Phase II of Case 90-07-037) on behalf of Pacific Bell: economic analysis of the effects of FAS 106, (accrual accounting for post-retirement benefits other than pensions) under state price cap regulation, (with Timothy J. Tardiff). Filed August 30, 1991. Supplemental testimony filed January 21, 1992.

19. California Public Utilities Commission, (Docket No. I.87-11-033), on behalf of Pacific Bell, "The New Regulatory Framework 1990-1992: An Economic Review," (with T.J. Tardiff). Filed May 1, 1992.

20. California Public Utilities Commission, (Docket No. I.87-11-033), on behalf of Pacific Bell, "Pacific Bell's Performance Under the New Regulatory Framework: An Economic Evaluation of the First Three Years," (with T.J. Tardiff). Filed April 8, 1993, reply testimony filed May 7, 1993.

21. California Public Utilities Commission, (Investigation No. I.95-05-047), on behalf of Pacific Bell, "Incentive Regulation and Competition: Issues for the 1995 Incentive Regulation Review," (with R.L. Schmalensee and T.J. Tardiff). Filed September 8, 1995, reply testimony filed September 18, 1995.

22. California Public Utilities Commission, (U 1015 C) on behalf of Roseville Telephone Company, testimony regarding productivity measures in Roseville's proposed new regulatory framework. Filed May 15, 1995. Rebuttal testimony filed January 12, 1996.

23. California Public Utilities Commission, on behalf of Pacific Bell: Comments on the economic principles for updating Pacific Bell's price cap plan. Filed February 2, 1998.

24. California Public Utilities Commission, on behalf of Pacific Bell: reply comments regarding proposed changes to the price cap plan, filed June 19, 1998.

25. California Public Utilities Commission on behalf of California American Water Company, RWE AG, Thames Water Aqua Holding GmbH, Thames Water Plc and Apollo Acquisition Company, economic support regarding the merger between American Water Company and Thames Water, direct testimony filed May 17, 2002, rebuttal testimony filed July 15, 2002.

## **6. Colorado**

26. Colorado Public Utilities Commission (Docket No. 97A-540T), on behalf of U S WEST: testimony concerning the economic effects of a proposed price regulation plan. Direct testimony filed January 30, 1998. Rebuttal testimony filed May 14, 1998.
27. Colorado Public Utilities Commission (Docket No. 99A-001T), on behalf of US WEST, regarding US WEST's interconnection arbitration with AirTouch Paging in Colorado. Rebuttal testimony filed March 15, 1999.
28. Colorado Public Utilities Commission (Docket No. 99A-407T), on behalf of US West Communications, Inc., rebuttal testimony regarding the effects of the proposed Qwest-US West merger on economic welfare, filed December 7, 1999.
29. Colorado Public Utilities Commission (Docket No. 00B-011T), on behalf of US West Communications, Inc., direct testimony regarding intercarrier compensation for Internet-bound traffic. Filed March 28, 2000.
30. Colorado Public Utilities Commission (Docket No. 00B-103T), on behalf of US West Communications, Inc., rebuttal testimony regarding intercarrier compensation for Internet-bound traffic in arbitration with ICG. Filed June 19, 2000.
31. Colorado Public Utilities Commission (Docket No. 00B-601T), on behalf of Qwest. Rebuttal testimony regarding intercarrier compensation for internet-bound traffic in arbitration with Level 3. Filed January 16, 2001.

## **7. Connecticut**

32. State of Connecticut, Department of Public Utility Control, (DPUC Docket No. 95-03-01) on behalf of Southern New England Telephone Company, testimony concerning productivity growth targets in a proposed state price cap regulation plan. Filed June 19, 1995.
33. State of Connecticut, Department of Public Utility Control, (DPUC Docket No. 95-06-17) on behalf of Southern New England Telephone Company: testimony concerning economic principles of costing and cost recovery. Filed July 23, 1996.
34. Connecticut Department of Public Utilities (DPUC Docket No. 96-09-22), on behalf of the Southern New England Telephone Company. Rebuttal testimony regarding alternative models of cost. Filed January 24, 1997.
35. Connecticut Department of Public Utilities (DPUC Docket No. 96-11-03), on behalf of the Woodbury Telephone Company, statement regarding the effects of resale and the provision of unbundled network elements on a rural telephone company. Filed February 11, 1997.
36. State of Connecticut, Department of Public Utility Control (Docket Nos. 95-03-01, 95-06-17 and 96-09-22), on behalf of Southern New England Telephone Company: direct testimony discussing economic principles the DPUC should use in evaluating SNET's joint and common overhead and network support expenses. Filed August 29, 1997. Rebuttal testimony filed December 17, 1998.
37. State of Connecticut. Department of Public Utility Control (Docket No. 96-04-07) on behalf of Southern New England Telephone Company: direct testimony regarding economic principles guiding

access charge reform. Filed October 16, 1997.

38. State of Connecticut, Department of Public Utility Control (Docket No. 98-02-33), on behalf of Southern New England Telephone Company: direct testimony regarding reclassification of custom calling services as emerging competitive. Filed February 27, 1998.

39. Connecticut Department of Public Utility Control, on behalf of SBC Communications Inc. and Southern New England Telecommunications Corporation: direct testimony regarding the SBC-SNET merger, filed June 1, 1998.

40. Connecticut Department of Public Utility Control (Docket No. 95-06-17RE02), on behalf of The Southern New England Telephone Company, rebuttal testimony regarding local competition and reseller market. Filed June 8, 1999.

41. Connecticut Department of Public Utilities (Docket No. 99-03-17), on behalf of The Southern New England Telephone Company, rebuttal testimony regarding market power and termination liabilities in contracts. Filed June 18, 1999.

42. Connecticut Department of Public Utilities (Docket No. 00-07-17), on behalf of The Southern New England Telephone Company, testimony regarding local competition and pricing. Filed November 21, 2000.

## **8. Delaware**

43. Delaware Public Service Commission (Docket No. 86-20, Phase II) on behalf of The Diamond State Telephone Company: appropriate costing and pricing methods for a regulated firm facing competition. Filed March 31, 1989. Rebuttal testimony filed November 17, 1989.

44. Delaware Public Service Commission (Docket No. 89-24T) on behalf of The Diamond State Telephone Company: rebuttal testimony describing the appropriate costing and pricing methods for the provision of contract Centrex services by a local exchange carrier. Filed August 17, 1990.

45. Delaware Public Utilities Commission, (Docket No. 33), on behalf of Diamond State Telephone Company, "Incentive Regulation of Telecommunications Utilities in Delaware," filed June 22, 1992.

46. Delaware Public Utilities Commission, (Docket No. 33), on behalf of Diamond State Telephone Company, analysis of productivity growth and a proposed incentive regulation plan: "Reply Comments," June 1, 1993, "Supplementary Statement," June 7, 1993, "Second Supplementary Statement," June 14, 1993.

47. Delaware Public Utilities Commission, (Docket No. 42), on behalf of Bell Atlantic - Delaware, rebuttal testimony concerning the historical effects of equal access competition in interstate toll markets and the likely future effects of competition under 1+ presubscription in Delaware. Filed October 21, 1994.

48. Delaware Public Utilities Commission, on behalf of Bell Atlantic - Delaware, direct testimony regarding costs and pricing of interconnection and network elements. Filed December 16, 1996. Rebuttal testimony (proprietary) filed February 11, 1997.

49. Delaware Public Utilities Commission, on behalf of Bell Atlantic - Delaware: statement regarding costs and benefits from Bell Atlantic entry into interLATA telecommunications markets. Filed

February 26, 1997. Rebuttal testimony filed April 28, 1997.

50. Delaware Public Service Commission (PSC Docket No. 00-205), on behalf of Bell Atlantic - Delaware, direct testimony responding to the Petition for Arbitration of Focal Communications Group. Filed April 25, 2000.

## **9. District of Columbia**

51. Affidavit to the U.S. District Court for the District of Columbia on behalf of Bell Atlantic Corporation in *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, re relief from the interLATA restrictions of the MFJ in connection with the pending merger with Tele-Communications, Inc. and Liberty Media Corporation. Filed January 14, 1994, (with A.E. Kahn).

52. Affidavit to the U.S. District Court for the District of Columbia on behalf of Southwestern Bell in *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, regarding provision of telecommunications and information services across LATA boundaries outside the regions in which its local exchange operations are located. Filed May 13, 1994, (with A.E. Kahn).

53. District of Columbia, Public Service Commission (Case No. 962), on behalf of Bell Atlantic - Washington, D.C., direct testimony regarding costing and pricing of interconnection and network elements. Filed January 17, 1997. Rebuttal testimony filed May 2, 1997.

54. Public Service Commission of the District of Columbia (Case No. 962), on behalf of Bell Atlantic - Washington, D.C., direct testimony regarding costing and pricing of interconnection and network elements. Filed July 16, 2001. Rebuttal testimony filed January 11, 2002.

55. United States District Court for the District of Columbia, (MDL No. 1285, Misc. No 99-0197 (TFH)), Declaration regarding statistical issues in measuring damages from price fixing in the vitamin industry, filed October 31, 2002.

## **10. Florida**

56. Florida Public Service Commission (Docket No. 820537-TP) on behalf of Southern Bell Telephone and Telegraph Company: economic analysis of premium intraLATA access charges. Filed July 22, 1983.

57. Florida Public Service Commission (Docket No. 820400-TP) on behalf of Southern Bell Telephone and Telegraph Company: economic principles underlying a proposed method for calculating marginal costs for private line services. Filed June 25, 1986.

58. Florida Public Service Commission (Docket No. 880069-TL) on behalf of Southern Bell Telephone and Telegraph Company: economic incentives for firms under the proposed Florida Rate Stabilization Plan. Filed June 10, 1988.

59. Florida Public Service Commission (Docket No. 900633-TL) on behalf of Southern Bell Telephone and Telegraph Company: alternative measures of cross-subsidization. May 9, 1991.

60. Florida Public Service Commission (Docket No. 920260-TL) on behalf of Southern Bell

Telephone and Telegraph Company: economic analysis of a proposed price cap regulation plan. December 18, 1992.

61. Florida Public Service Commission (Docket No. 920385-TL) on behalf of Southern Bell Telephone and Telegraph Company: the economic relationship between depreciation rates, investment, and infrastructure development. September 3, 1992.
62. Florida Public Service Commission on behalf of BellSouth, "Local Telecommunications Competition: An Evaluation of a Proposal by the Communications Staff of the Florida Public Service Commission," filed November 21, 1997 (with A. Banerjee).
63. Florida Public Service Commission (Docket No. 980000-SP) on behalf of BellSouth Telecommunications, Inc.: "Costing and Pricing Principles for Determining Fair and Reasonable Rates Under Competition," economic principles for pricing local exchange services, filed September 24, 1998.
64. Florida Public Service Commission (Docket No. 980000-SP) on behalf of BellSouth Telecommunications, Inc.: "Determining Fair and Reasonable Rates Under Competition: Response to Major Themes at the FPSC Workshop," economic principles for pricing local exchange services, filed November 13, 1998.
65. Florida Public Service Commission (Docket No. 980696-TP) on behalf of BellSouth Telecommunications, Inc.: rebuttal testimony regarding measurements of cost for sizing a universal service fund, filed September 2, 1998.
66. Florida Public Service Commission (Docket No. 990750-TP), on behalf of BellSouth Telecommunications, rebuttal testimony regarding intercarrier compensation for Internet-bound traffic, filed September 13, 1999.
67. Florida Public Service Commission (Docket No. 000075-TP) on behalf BellSouth Telecommunications, Inc.: rebuttal testimony regarding intercarrier compensation for Internet-bound traffic, filed January 10, 2001.
68. Florida Public Service Commission (Docket No. 0000121-TP) on behalf BellSouth Telecommunications, Inc.: direct testimony regarding properties of a service quality performance assurance plan. Filed March 1, 2001. Rebuttal filed March 21, 2001.
69. Florida Public Service Commission (Docket No. 000075-TP) on behalf BellSouth Telecommunications, Inc., rebuttal testimony regarding efficient intercarrier compensation, filed April 12, 2001.
70. Florida Public Service Commission (Docket No. 960786-TL) on behalf BellSouth Telecommunications, Inc.: surrebuttal testimony regarding the state of local competition in Florida, filed August 20, 2001.
71. Florida Public Service Commission (Docket Nos. 020119-TP and 020578-TP) on behalf of BellSouth Telecommunications, Inc., regarding competitive promotional offerings. Direct testimony filed October 23, 2002, rebuttal filed November 25, 2002.

## **11. Georgia**

72. Georgia Public Service Commission (Docket No. 3882-U) on behalf of Southern Bell Telephone and Telegraph Company: analysis of incentive regulation plans. Filed September 29, 1989.
73. Georgia Public Service Commission (Docket No. 6863-U) on behalf of BellSouth Long Distance, Inc., direct testimony concerning benefits from BellSouth participation in long distance service markets. Filed January 3, 1997. Rebuttal testimony filed February 24, 1997.
74. Georgia Public Service Commission (Docket No. 10767-U), on behalf of BellSouth Telecommunications, rebuttal testimony regarding intercarrier compensation for Internet-bound traffic, filed October 25, 1999.
75. Georgia Public Service Commission (Docket No. 10854-U), on behalf of BellSouth Telecommunications, direct testimony regarding intercarrier compensation for Internet-bound traffic, filed November 15, 1999, rebuttal testimony filed November 22, 1999.
76. Georgia Public Service Commission (Docket No. 7892-U), on behalf of BellSouth Telecommunications, rebuttal testimony regarding implementation of service quality standards, filed June 27, 2000.
77. CPR Institute for Dispute Resolution Arbitral Tribunal, Rebuttal Affidavit in Arbitrations III and IV between BellSouth Telecommunications and Supra Telecommunications & Information Systems. Filed November 5, 2001.
78. Georgia Public Service Commission (Docket No. 11901-U) on behalf of BellSouth Telecommunications, Inc., regarding the provision of DSL service to competitors' voice customers. Rebuttal testimony filed November 8, 2002.

## **12. Idaho**

79. Idaho Public Utilities Commission (Case No. GST-T-99-1), on behalf of US West Communications, Inc., direct testimony regarding intercarrier compensation for ISP-bound traffic, November 22, 1999, rebuttal testimony filed December 2, 1999.

## **13. Illinois**

80. Illinois Commerce Commission (Docket No. 88-0412) on behalf of Illinois Bell Telephone Company: analysis of pricing issues for public telephone service. Filed August 3, 1990. Surrebuttal testimony filed December 9, 1991.
81. United States Bankruptcy Court, Northern District of Illinois, Eastern Division *TeleSphere Liquidating Trust vs. Francesco Galesi*, Adv. Proc. Nos. 95 A 1051 & 99 A 131: expert opinion regarding the condition of alternative operator service provider and 900 service markets. Report filed August 23, 2002.

## **14. Iowa**

82. Iowa Utilities Board, on behalf of US West Inc. & Qwest Communications Intl, Inc., rebuttal testimony regarding public interest effects of the proposed merger, filed December 23, 1999.

## **15. Kentucky**

83. Kentucky Public Service Commission on behalf of South Central Bell Telephone Company, testimony concerning telecommunications productivity growth and price cap plans, April 18, 1995.

84. Kentucky Public Service Commission (Administrative Case No. 96-608) on behalf of BellSouth Long Distance, Inc., testimony regarding the economic effects of BellSouth entry into interLATA services. Filed April 14, 1997. Rebuttal testimony filed April 28, 1997, supplemental rebuttal testimony filed August 15, 1997.

85. Kentucky Public Service Commission (Docket No. 98-292), on behalf of Cincinnati Bell Telephone Company, direct testimony regarding proposed price regulation plan containing earnings sharing requirements. Filed April 5, 1999.

86. Kentucky Public Service Commission (Docket No. 99-218), on behalf of BellSouth Telecommunications, direct testimony regarding intercarrier compensation for Internet-bound traffic, filed October 21, 1999. Rebuttal testimony filed November 19, 1999.

87. Kentucky Public Service Commission (Docket No. 99-296), on behalf of GTE & Bell Atlantic, direct testimony on the effects of the Bell Atlantic-GTE merger on competition in Kentucky and on the benchmarking abilities of regulators. Filed July 9, 1999, rebuttal testimony filed August 20, 1999.

88. Kentucky Public Service Commission (Docket No. 2001-105), on behalf of BellSouth Telecommunications, Inc.: local competition in Kentucky and BellSouth's performance measurements plan to support its application for interLATA authority. Rebuttal testimony filed July 30, 2001. Surrebuttal testimony filed September 10, 2001.

## **16. Louisiana**

89. Louisiana Public Service Commission (Docket No. U-17949, Subdocket E) on behalf of South Central Bell Telephone Company, rebuttal testimony concerning productivity growth accounting and other aspects of a price regulation plan, July 24, 1995.

90. Louisiana Public Service Commission (Docket No. U-17949, Subdocket E) on behalf of South Central Bell Telephone Company, supplemental and rebuttal testimony concerning economic issues in depreciation accounting in the presence of competition and price cap regulation, November 17, 1995. Surrebuttal testimony, December 13, 1995, Further Surrebuttal testimony, January 12, 1996.

91. Louisiana Public Service Commission (Docket No. U-20883) on behalf of South Central Bell Telephone Company, "Price Regulation and Local Competition in Louisiana," affidavit evaluating a framework for local competition and price regulation in Louisiana, November 21, 1995.

92. Louisiana Public Service Commission (Docket No. U-20883, Subdocket A) on behalf of South Central Bell Telephone Company. rebuttal testimony concerning methods for measuring the cost of

providing universal service, August 16, 1995.

93. Louisiana Public Service Commission (Docket No. U-U-22020) on behalf of South Central Bell Telephone Company, testimony concerning economic principles determining wholesale prices for resold services. Filed August 30 1996. Rebuttal testimony filed September 13, 1996.

94. Louisiana Public Service Commission, on behalf of BellSouth Long Distance, Inc. (Docket No. U-22252), direct testimony regarding the probable economic benefits to consumers in Louisiana from entry by BellSouth into the interLATA long distance market. Filed March 14, 1997. Rebuttal testimony filed May 2, 1997. Supplemental testimony filed May 27, 1997.

95. Louisiana Public Service Commission (Docket No. U-24206), on behalf of BellSouth Telecommunications, direct testimony regarding intercarrier compensation for Internet-bound traffic. Filed September 3, 1999, rebuttal filed September 17, 1999.

96. Louisiana Public Service Commission (Docket No. U-22632) on behalf of BellSouth Telecommunications, rebuttal testimony concerning payphone access services, July 17, 2000.

97. Louisiana Public Service Commission (Docket No. U-22252, Subdocket E), on behalf of BellSouth Telecommunications, economic properties of service quality penalty plans. Reply affidavit filed June 25, 2001.

## **17. Maine**

98. State of Maine Public Utilities Commission (Docket No. 89-397) on behalf of New England Telephone & Telegraph Company: theoretical and historical analysis of incentive regulation in telecommunications, entitled "Incentive Regulation in Telecommunications," filed June 15, 1990.

99. State of Maine Public Utilities Commission (Docket Nos. 94-123/94-254) on behalf of New England Telephone & Telegraph Company: analysis of appropriate parameters for a price regulation plan. Filed December 13, 1994. Rebuttal testimony filed January 13, 1995.

100. Maine Public Utilities Commission (Docket No. 96-388) on behalf of NYNEX, testimony regarding the economic effects of the proposed merger between Bell Atlantic and NYNEX, Direct Testimony filed September 6, 1996. Rebuttal Testimony filed October 30, 1996.

101. Maine Public Utilities Commission (Docket No. 97-505) on behalf of NYNEX: direct testimony regarding economic principles for setting prices and estimating costs for interconnection. Filed April 21, 1997. Rebuttal testimony filed October 21, 1997.

102. Maine Public Utilities Commission on behalf of NYNEX: affidavit regarding competitive effects of NYNEX entry into interLATA markets. Filed May 27, 1997 (with Kenneth Gordon, Richard Schmalensee and Harold Ware).

103. Maine Public Utilities Commission (Docket No. 99-851) on behalf of Verizon: direct testimony regarding the review of Maine's alternative regulation plan. Filed January 8, 2001. Rebuttal filed February 12, 2001.

## **18. Maryland**

104. Maryland Public Service Commission (Case No. 8462) on behalf of The Chesapeake and Potomac Telephone Company of Maryland: competition and the appropriate regulatory treatment of Yellow Pages. Filed October 2, 1992.
105. Maryland Public Service Commission (Case No. 8584) on behalf of The Chesapeake and Potomac Telephone Company of Maryland: appropriate pricing and regulatory treatment of interconnection to permit competition for local service. Filed November 19, 1993, (with A.E. Kahn). Rebuttal testimony filed January 10, 1994, surrebuttal testimony filed January 24, 1994.
106. Maryland Public Service Commission (Case No. 8584, Phase II) on behalf of Bell Atlantic - Maryland: geographically deaveraged incremental and embedded costs of service. Filed December 15, 1994. Additional direct testimony concerning efficient rate structures for interconnection pricing filed May 5, 1995. Rebuttal testimony filed June 30, 1995.
107. Maryland Public Service Commission (Case No. 8659) on behalf of Bell Atlantic - Maryland: appropriate pricing of interconnection among competing local exchange carriers. Filed November 9, 1994.
108. *FreBon International Corp. vs. BA Corp. Civil Action*, No. 94-324 (GK): Defendants' Amended Expert Disclosure Statement, regarding markets for teleconferencing services. Filed under seal February 15, 1996.
109. Maryland Public Service Commission (Case No. 8715), on behalf of Bell Atlantic - Maryland: rebuttal testimony on the economic criteria for the reclassification of telecommunications services. Filed March 14, 1996, surrebuttal testimony filed April 1, 1996.
110. Maryland Public Service Commission, on behalf of Bell Atlantic - Maryland, (Case No. 8731-II), statement regarding costing and pricing of interconnection and unbundled network elements. Filed January 10, 1997. Rebuttal testimony filed April 4, 1997.
111. Maryland Public Service Commission, on behalf of Bell Atlantic - Maryland: statement regarding consumer benefits from Bell Atlantic's provision of interLATA service, filed March 14, 1997.
112. Maryland Public Service Commission (Case No. 8786), on behalf of Bell Atlantic - Maryland: rebuttal testimony regarding economic principles underlying costs and prices for non-recurring services and access to operations support systems. Filed November 16, 1998.
113. Maryland Public Service Commission (Case No. 8745), direct testimony on behalf of Verizon Maryland Inc. regarding efficient pricing of carrier access charges. Filed March 23, 2001. Rebuttal filed May 21, 2001. Surrebuttal filed June 11, 2001.
114. Before the Public Service Commission of Maryland (Case No. 8879), direct testimony on behalf of Verizon Maryland Inc. regarding costing principles for network elements. Filed May 25, 2001. Rebuttal testimony filed September 5, 2001. Surrebuttal filed October 15, 2001.

## **19. Massachusetts**

115. Massachusetts Department of Public Utilities (Docket No. D.P.U. 94-50), on behalf of

NYNEX: analysis of appropriate parameters for a price regulation plan. Filed April 14, 1994.

Rebuttal testimony filed October 26, 1994.

116. Massachusetts Department of Public Utilities (Docket No. D.P.U. 94-185) on behalf of NYNEX: economic analysis of terms and conditions for efficient local competition. Filed May 19, 1995. Rebuttal testimony filed August 23, 1995.

117. Affidavit to the Superior Court Department of the Trial Court (Civil Action No. 95-6363F), on behalf of New England Telephone and Telegraph Company, d/b/a NYNEX: in opposition to Plaintiffs' Motion for Class Certification. Filed July 1996.

118. Massachusetts Department of Public Utilities (Docket Nos. D.P.U. 96-73/74, 96-75, 96-80/81, 96-83, 96-94) on behalf of NYNEX: economic analysis of costs avoided from resale of local exchange services. Testimony filed September 27, 1996. Rebuttal Testimony filed October 16, 1996.

119. Massachusetts Department of Public Utilities (Docket Nos. D.P.U. 96-73/74, 96-75, 96-80/81, 96-83, 96-94) on behalf of NYNEX: Arbitration of interconnection agreements under the Telecommunications Act of 1996. Filed October 11, 1996. Rebuttal Testimony filed October 30, 1996.

120. Massachusetts Department of Public Utilities (Docket No. DTE 98-15), on behalf of Bell Atlantic – MA: direct testimony regarding the method used to determine wholesale (avoided cost) discount that applies to resold retail services. Filed January 16, 1998.

121. Massachusetts Department of Public Utilities (Docket No. D.P.U./D.T.E. 94-185-C) on behalf of Bell Atlantic: economic analysis of the usefulness of a regulatory price floor for wholesale services. Affidavit filed February 6, 1998. Reply Affidavit filed February 19, 1998.

122. Massachusetts Department of Telecommunications and Energy (D.P.U. 96-3/74, 96-75, 96-80/81, 96-83, & 96-94), on behalf of Bell Atlantic – Massachusetts: rebuttal testimony discussing the types of costs for OSSs, filed April 29, 1998.

123. Massachusetts Department of Telecommunications and Energy (Docket No. 85-15, Phase III, Part 1), on behalf of Bell Atlantic – Massachusetts: rebuttal testimony discussing appropriate forward-looking technology for costing network elements, filed August 31, 1998.

124. Massachusetts Department of Telecommunications and Energy (Docket No. 98-15, Phase II), on behalf of Bell Atlantic – Massachusetts: rebuttal testimony concerning the avoided costs of resold services, filed September 8, 1998.

125. Massachusetts Department of Telecommunications and Energy (Docket No. 98-67), on behalf of Bell Atlantic-Massachusetts: direct testimony regarding regulatory rules/economic principles pertaining to exogenous adjustment factors in Bell Atlantic's price cap formula, filed September 25, 1998.

126. Massachusetts Department of Telecommunications and Energy (Docket No. 98-85), on behalf of Bell Atlantic-Massachusetts: direct testimony regarding efficiency changes from intraLATA presubscription, filed October 20, 1998.

127. Massachusetts Department of Telecommunications and Energy (Docket No. D.T.E. 97-116-B), on behalf of Bell Atlantic-Massachusetts, affidavit regarding consequences for economic efficiency of different intercarrier compensation rules for ISP-bound traffic. Filed March 29, 1999.

128. Massachusetts Department of Telecommunications & Energy (Docket No. 94-185-E), on behalf of Bell Atlantic, rebuttal testimony re: inclusion of overhead costs in the calculation of price floors for BA-MA services. Filed July 26, 1999.

129. Massachusetts Department of Telecommunications and Energy (Docket DTE –1-20), on behalf of Verizon New England Inc., D/B/A/ Verizon Massachusetts, direct testimony regarding cost concepts and pricing principals for UNEs, filed May 4, 2001. Rebuttal testimony filed December 17, 2001.

130. Massachusetts Department of Telecommunications and Energy, testimony on behalf of Verizon New England Inc. d/b/a/ Verizon Massachusetts, regarding benefits of alternative regulation in Massachusetts since adoption of price cap plan.. Filed April 12, 2001. Rebuttal testimony filed September 21, 2001. Reply filed November 14, 2001.

## 20. Michigan

131. Testimony before the Michigan Circuit Court (Case No. 87-709234-CE and 87-709232-CE) on behalf of Combustion Engineering, Inc., in *Her Majesty the Queen, et al., v. Greater Detroit Resource Recovery Authority, et al.*, re statistical analysis of air pollution data to determine emissions limits for the Detroit municipal waste-to-energy facility, February, 1992.

132. Michigan Public Service Commission (Case No. U-11756), on behalf of Ameritech Michigan: direct testimony regarding efficient prices for services supplied to independent phone payers, filed October 9, 1998.

## 21. Minnesota

133. Minnesota Public Utilities Commission (Docket No. P3009, 3052, 5096, 421, 3017/PA-99-1192), on behalf of US WEST Communications, Inc., rebuttal affidavit regarding the effects of the proposed Qwest-US West merger on economic welfare. Filed January 14, 2000.

134. Minnesota Public Utilities Commission (Docket No. P3009, 3052, 5096, 421, 3017/PA-99-1192), direct testimony regarding the effects of the proposed Qwest-US West merger on economic welfare. Filed March 29, 2000.

135. Minnesota Public Utilities Commission (PUC Docket No. P-421/C1-01-1372, OAH Docket No. 7-2500-14487-2) on behalf of Qwest Corporation, economic aspects of separate affiliate requirements, affidavit filed December 28, 2001, Surrebuttal Affidavit filed January 16, 2002.

## 22. Mississippi

136. Mississippi Public Service Commission (Docket No. 95-UA-313) on behalf of BellSouth Telecommunications, Inc. d/b/a South Central Bell Telephone Company, rebuttal testimony addressing cost issues, as they pertain to price regulation raised in the direct testimony by intervenors. Filed

October 13, 1995.

137. Mississippi Public Service Commission (Docket No. 95-UA-358) on behalf of BellSouth Telecommunications, Inc. d/b/a South Central Bell Telephone Company, testimony regarding universal service fund issues. Filed January 17, 1996. Rebuttal testimony filed February 28, 1996.

138. Mississippi Public Service Commission (Docket No. 97-AD-0321), on behalf of BellSouth Long Distance, Inc., direct testimony regarding the likely economic benefits to consumers in Mississippi from entry by BellSouth into the interLATA long distance market. Filed July 1, 1997. Rebuttal testimony filed September 29, 1997.

139. Mississippi Public Service Commission (Docket No. 97-AD-544), on behalf of BellSouth Telecommunications: rebuttal testimony regarding economic issues of costing and pricing unbundled network elements. Filed March 13, 1998.

140. Mississippi Public Service Commission (Docket No. 98-AD-035), on behalf of BellSouth Telecommunications: direct testimony regarding universal service funding and price benchmark issues. Filed February 23, 1998, rebuttal testimony filed March 6, 1998.

141. Mississippi Public Service Commission (Docket No. 99-AD-421), on behalf of BellSouth Telecommunications, direct testimony regarding intercarrier compensation for Internet-bound traffic, filed October 20, 1999. Rebuttal testimony filed November 12, 1999.

142. Mississippi Public Service Commission (Docket No. 97-AD-321), on behalf of BellSouth Telecommunications, Inc.: local competition in Mississippi and BellSouth's performance measurements plan to support its application for interLATA authority. Rebuttal testimony filed August 2, 2001.

## **23. Montana**

143. Montana Public Service Commission (Docket No. 90.8.46) on behalf of US West Communications: theoretical and historical analysis of incentive regulation plans in telecommunications. Filed October 4, 1990.

144. Montana Public Service Commission (Docket No. 90.12.86) on behalf of US West Communications: economic analysis of a proposed incentive regulation plan. Filed November 4, 1991. Additional testimony filed January 15, 1992.

145. Montana Public Service Commission (Docket No. D99.8.200), on behalf of US West Communications, Inc., rebuttal testimony regarding the effects of the proposed Qwest-US West merger on economic welfare. Filed February 22, 2000.

146. Montana Department of Public Service Regulation (Docket No. D2000.6.89), on behalf of US West Communications, Inc., direct testimony regarding efficient intercarrier compensation for Internet-bound traffic. Filed July 24, 2000. Rebuttal testimony filed February 7, 2001.

147. Montana Department of Public Service Regulation (Docket No. D2000.8.124), on behalf of Qwest Corporation., direct testimony in arbitration with TouchAmerica regarding efficient intercarrier compensation for Internet-bound traffic. Filed October 20, 2000. Rebuttal testimony filed December 20, 2000.

## **24. Nebraska**

148. Nebraska Public Service Commission, on behalf of US WEST, (Application No. C-1628), economic analysis of local exchange and exchange access pricing, direct testimony filed October 20, 1998; reply testimony filed November 20, 1998.

149. Nebraska Public Service Commission, *In the Matter of the Petition of Sprint Communications Company L.P. for Arbitration of Interconnection Rates, Terms, Conditions, and Related Arrangements with U S WEST Communications, Inc. N/K/A Qwest Corporation*, (Docket No. C-2328), Direct testimony regarding intercarrier compensation for Internet-bound traffic filed September 25, 2000. Rebuttal testimony filed October 4, 2000.

## **25. Nevada**

150. United States District Court, District of Nevada (Case No. CV-S-99-1796-KJD(RJJ) on behalf of Broadwing Communications Services, Inc., affidavit regarding damages from alleged misuse of trade secret information. Filed December 28, 2000.

## **26. New Hampshire**

151. New Hampshire Public Service Commission (Docket 89-010)) on behalf of New England Telephone & Telegraph Company: appropriate level and structure of productivity adjustments in a proposed price regulation plan. Filed March 3, 1989.

152. New Hampshire Public Service Commission, (Docket DE 90-002), on behalf of New England Telephone & Telegraph Company: the appropriate relationship between carrier access and toll prices. Filed May 1, 1992. Reply testimony filed July 10, 1992. Rebuttal testimony filed August 21, 1992.

153. Science, Technology and Energy Committee of the New Hampshire House of Representatives on behalf of New England Telephone Company, "An Economic Perspective on New Hampshire Senate Bill 77," an analysis of resale of intraLATA toll services. April 6, 1993

154. New Hampshire Public Service Commission, (Docket DE 96-252) on behalf of NYNEX: economic analysis of costs avoided from resale of local exchange services. Filed October 1, 1996.

155. New Hampshire Public Service Commission (Docket DE 96-220) on behalf of NYNEX, testimony regarding the economic effects of the proposed merger between Bell Atlantic and NYNEX. Filed October 10, 1996.

156. New Hampshire Public Service Commission, (Docket DE 96-252) on behalf of NYNEX: Arbitration of interconnection agreements under the Telecommunications Act of 1996. Filed October 23, 1996.

157. New Hampshire Public Service Commission (Docket No. 97-171, Phase II), on behalf of Bell

Atlantic – New Hampshire: direct testimony discussing the basic economic principles regarding costs and prices of interconnection and unbundled network elements, filed March 13, 1998. Rebuttal filed April 17, 1998.

158. New Hampshire Public Utilities Commission (Docket No. 99-018), on behalf of Bell Atlantic, direct testimony regarding the use of Total Element Long Run Incremental Cost (TELRIC) methodology as the basis for prices in special contracts. Filed April 7, 1999. Rebuttal testimony filed April 23, 1999.

## **27. New Jersey**

159. New Jersey Board of Public Utilities (Docket No. TX90050349) on behalf of New Jersey Bell Telephone Company: theoretical and empirical analysis of the Board's intraLATA compensation policy. Filed December 6, 1990.

160. New Jersey Board of Regulatory Commissioners, (Docket No. TX93060259), Affidavit analyzing statistical evidence regarding the effect of intraLATA competition on telephone prices. Filed October 1, 1993.

161. New Jersey Board of Public Utilities (Docket Nos. TX90050349, TE92111047, TE93060211) on behalf of Bell Atlantic-New Jersey: economic impacts of intraLATA toll competition and regulatory changes required to accommodate competition. Filed April 7, 1994. Rebuttal testimony filed April 25, 1994. Summary Affidavit and Technical Affidavit filed April 19, 1994.

162. New Jersey Board of Public Utilities (Docket No. TX94090388) on behalf of Bell Atlantic - New Jersey: economic analysis of issues regarding proposed presubscription for intraLATA toll traffic in New Jersey. Amended direct testimony filed April 17, 1995. Rebuttal Testimony filed May 31, 1995.

163. New Jersey Board of Public Utilities on behalf of Bell Atlantic - New Jersey: "Economic Competition in Local Exchange Markets," position paper on the economics of local exchange competition filed in connection with arbitration proceedings, August 9, 1996 (with Kenneth Gordon and Alfred E. Kahn).

164. New Jersey Board of Public Utilities (Docket No. TX95120631) on behalf of Bell Atlantic - New Jersey, incremental costs of residential basic exchange service. Filed August 15, 1996. Rebuttal testimony filed August 30, 1996.

165. New Jersey Board of Public Utilities (Docket No. TO96070519) on behalf of Bell Atlantic - New Jersey: evaluation of proxy models of the incremental cost of unbundled network elements, testimony filed September 18, 1996.

166. New Jersey Board of Public Utilities (Docket No. TX95120631) on behalf of Bell Atlantic - New Jersey: economic analysis of the avoided costs from resale of local exchange services. Rebuttal testimony filed September 27, 1996.

167. New Jersey Board of Public Utilities (Docket No. T096080621: MCI/Bell Atlantic Arbitration) on behalf of Bell Atlantic-New Jersey. Rebuttal testimony concerning the pricing of unbundled network elements, November 7, 1996.

168. New Jersey Board of Public Utilities on behalf of Bell Atlantic - New Jersey (Docket No. T097030166) economic analysis of costs and benefits from Bell Atlantic provision of interLATA services, statement filed March 3, 1997, reply affidavit filed May 15, 1997.
169. New Jersey Board of Public Utilities (Docket No. TX95120631) on behalf of Bell Atlantic - New Jersey: economic analysis of proposed universal service funds. Direct testimony filed September 24, 1997. Rebuttal testimony filed October 18, 1997.
170. New Jersey Board of Public Utilities (BPU Docket No. TO97100808, OAL Docket No. PUCOT 11326-97N) on behalf of Bell Atlantic - New Jersey: economic analysis of imputation rules for long distance services. Direct testimony filed July 8, 1998, rebuttal testimony filed September 18, 1998.
171. The New Jersey Board of Public Utilities (OAL DOCKET Nos. PUCOT 11269-97N, PUCOT 11357-97N, PUCOT 01186-94N AND PUCOT 09917-98N) on behalf of Bell Atlantic - New Jersey: economic issues regarding alleged subsidization of payphone services. Rebuttal testimony filed March 8, 1999; surrebuttal testimony filed June 21, 1999.
172. New Jersey Board of Public Utilities (Docket No. TO 00031063), on behalf of Bell Atlantic - New Jersey, direct testimony regarding the measurement of economic costs of ISP-bound traffic and economic issues concerning intercarrier compensation for such traffic. Filed April 28, 2000. Rebuttal testimony filed May 5, 2000.
173. New Jersey Board of Public Utilities (Docket No. TO 99120934), on behalf of Bell Atlantic - New Jersey, direct testimony regarding reclassification of services as competitive. Filed May 18, 2000.
174. New Jersey Board of Public Utilities (Docket No. TO00060356), on behalf of Bell Atlantic - New Jersey, affidavit regarding the measurement of economic costs for unbundled network elements. Filed July 28, 2000.
175. The New Jersey Board of Public Utilities (Docket No. TO01020095), on behalf of Verizon - New Jersey, panel testimony regarding parameters in an incentive regulation plan. Filed February 15, 2001. Rebuttal filed June 15, 2001. Supplemental rebuttal filed September 25, 2001.
176. The New Jersey Board of Public Utilities (Docket No. TO01020095), on behalf of Verizon - New Jersey, panel testimony regarding measurement of cross-subsidies. Filed February 15, 2001. Rebuttal filed June 15, 2001.
177. The New Jersey Board of Public Utilities (Docket No. TO01020095), on behalf of Verizon - New Jersey, panel testimony regarding reclassification of business services as competitive. Filed February 15, 2001. Rebuttal filed June 15, 2001.

## **28. New Mexico**

178. New Mexico Public Regulation Commission (Case No. 3131), On behalf of U S WEST Communications, direct testimony regarding intercarrier compensation for Internet-bound traffic, filed October 14, 1999. Rebuttal testimony filed October 18, 1999.
179. New Mexico Public Regulation Commission (Utility Case No. 3147), on behalf of US West

Communications, Inc., direct testimony regarding efficient pricing and policies towards investment and new service implementation, filed December 6, 1999, rebuttal testimony filed December 28, 1999.

180. New Mexico Public Regulation Commission, on behalf of US West Communications, Inc., direct testimony regarding pricing flexible and alternatives to rate of return regulation, filed December 10, 1999.

181. New Mexico Public Regulation Commission (Case No. 3008), On behalf of U S WEST Communications, rebuttal testimony regarding local exchange rate levels and structure, filed May 19, 2000.

182. New Mexico Public Regulation Commission (Case No. 3225), on behalf of Qwest Corporation, direct testimony regarding the subsidy in existing telephone rates. Filed August 18, 2000.

183. New Mexico Public Regulation Commission (Case No. 3300), on behalf of Valor Telecommunications of New Mexico, LLC, rebuttal testimony regarding the subsidy in existing telephone rates. Filed October 19, 2000.

## 29. New York

184. New York State Public Service Commission (Case 28961 - Fifth Stage) on behalf of New York Telephone Company: appropriate level and structure of productivity adjustments in a proposed price regulation plan. Filed September 15, 1989.

185. Testimony before the United States District Court, Eastern District of New York on behalf of Jancyn Manufacturing Corp., in *Jancyn Manufacturing Corp. v. The County of Suffolk*. Commercial damages. Depositions: September 19, 1991, November 22, 1993; Testimony and Cross-Examination: January 11, 1994.

186. New York Public Service Commission (Case No. 28425) on behalf of New York Telephone Company, "Costs and Benefits of IntraLATA Presubscription," (with T.J. Tardiff). Filed May 1, 1992.

187. New York State Public Service Commission (Case 92-C-0665, Proceeding on Motion of the Commission to Investigate Performance-Based Incentive Regulatory Plans for New York Telephone Company) on behalf of New York Telephone Company: appropriate level and structure of productivity adjustments and competitive pricing safeguards in a proposed incentive regulation plan. Filed as part of panel testimony, October 3, 1994.

188. New York Public Service Commission (Case 94-C-0017) on behalf of New York Telephone Company, testimony regarding competition and market power in intrastate toll markets. Filed August 1, 1995.

189. New York Public Service Commission (Case Nos. 95-C-0657, 94-C-0095, 91-C-1174) on behalf of New York Telephone Company, costing principles for resold services. Filed May 31, 1996. Costing and pricing principles for unbundled network elements. Filed June 4, 1996. Rebuttal testimony filed July 15, 1996.

190. New York Public Service Commission (Case Nos. 93-C-0451 and 91-C-1249) on behalf of New York Telephone Company, statistical issues in the calculation of damages in the provision of

Mass Announcement Services: Rebuttal testimony filed July 23, 1996.

191. New York Public Service Commission (Case 96-C-0603) on behalf of NYNEX and Bell Atlantic, *Initial Panel Testimony*, regarding the economic effects of the proposed merger between Bell Atlantic and NYNEX. Filed November 25, 1996. *Reply Panel Testimony* filed December 12, 1996.
192. Affidavit to the U.S. District Court, Southern District of New York, on behalf of Multi Communication Media Inc., *Multi Communications Media Inc., v. AT&T and Trevor Fischbach*, (96 Civ. 2679 (MBM)) regarding the application of the filed tariff doctrine to contract tariffs in telecommunications. Filed December 27, 1996.
193. New York Public Service Commission on behalf of New York Telephone Company, "Competitive Effects of Allowing NYNEX To Provide InterLATA Services Originating In New York State," public interest analysis of NYNEX's proposed entry into in-region long distance service. Filed February 18, 1997 (with Harold Ware and Richard Schmalensee).
194. State of New York Public Service Commission (Case 94-C-0095 and 28425), on behalf of NYNEX, *Initial Panel Testimony*: direct testimony regarding InterLATA Access Charge Reform. Filed May 8, 1997. *Rebuttal Panel Testimony* filed July 8, 1997.
195. State of New York Public Service Commission (Cases 95-C-0657, 94-C-0095, 91-C-1174 and 96-C-0036), on behalf of Bell Atlantic, *Panel Testimony of Bell Atlantic – New York on Costs and Rates for Miscellaneous Phase 3 Services*: panel testimony regarding statistical sampling issues in cost studies for non-recurring charges. Filed March 18, 1998. Rebuttal filed June 3, 1998.
196. New York Public Service Commission, (Case 98-C-1357), on behalf of Bell Atlantic-New York, Panel Testimony on costs for wholesale services, Panel Testimony filed February 7, 2000. Panel Rebuttal Testimony filed October 19, 2000.
197. New York Public Service Commission, (Case 00-C-1945), on behalf of Verizon-New York, Panel Testimony on price regulation, filed May 15, 2001.
198. New York Public Service Commission, (Case 00-C-1945), on behalf of Verizon-New York, Panel Testimony on the New York competitive marketplace, filed May 15, 2001.
199. American Arbitration Association, New York, MCI WorldCom Communications Inc. v. Electronic Data Systems, Corporation, Expert Report on prices and incentives in a disputed contract filed June 25, 2001. Supplemental Expert Report filed July 13, 2001.
200. New York Public Service Commission (Case 01-C-0767), on behalf of Verizon-New York, panel testimony regarding incremental costs and pricing of mobile interconnection services. Filed October 31, 2001.
201. New York Public Service Commission, (Case 00-C-1945), economic issues in renewing the New York incentive regulation plan, (panel testimony), filed February 11, 2002.

### **30. North Carolina**

202. North Carolina Utilities Commission (Docket No. P-7, Sub 825; P-10, Sub 479) on behalf of Carolina Telephone and Telegraph Company and Central Telephone Company. direct and rebuttal

testimony regarding price cap regulation for small telephone companies, February 9, 1996.

203. North Carolina Utilities Commission (Docket No. P-55, Sub1022) on behalf of BellSouth Long Distance, Inc.: direct testimony regarding the likely economic benefits to consumers in North Carolina from entry by BellSouth into the interLATA long distance market. Filed August 5, 1997. Rebuttal testimony filed September 15, 1997.

204. North Carolina Utilities Commission (Docket No. P-100, SUB 133d), on behalf of BellSouth Telecommunications: direct testimony on the proper economic basis for determining costs and prices of interconnection, unbundled network elements, and operating support systems. Filed December 15, 1997. Rebuttal filed March 9, 1998.

205. North Carolina Utilities Commission (Docket No. P-100, SUB 133g), on behalf of BellSouth Telecommunications: direct testimony on appropriate economic principles for sizing the state universal service fund. Filed February 16, 1998. Rebuttal filed April 13, 1998.

206. North Carolina Utilities Commission, *In re: Petition for Arbitration of ITC^DELTA COM Communications, Inc., with BellSouth Telecommunications, Inc., Pursuant to the Telecommunications Act of 1996*, (Docket No. P-500, Sub 10), testimony regarding economic interconnection issues, filed July 9, 1999.

207. North Carolina Utilities Commission, *In the Matter of Bell South Telecommunications, Inc., Complainant vs. US LEC of North Carolina, Respondent*, (Docket No. P-561, Sub 10), rebuttal testimony regarding economic efficiency and reciprocal compensation. Filed July 30, 1999.

208. North Carolina Utilities Commission (Docket No. P-100, SUB 133k), on behalf of BellSouth Telecommunications: rebuttal testimony regarding properties of a service quality performance assurance plan. Filed May 21, 2001.

209. North Carolina Utilities Commission (Docket No. P-55, SUB 1022), on behalf of BellSouth Telecommunications: rebuttal testimony regarding status of local competition in North Carolina. Filed October 8, 2001.

## **31. North Dakota**

210. North Dakota Public Service Commission, on behalf of US WEST Communications, rebuttal testimony in support of US WEST's filing for a residential basic local service rate increase, filed May 30, 2000.

## **32. Ohio**

211. The Public Utilities Commission of Ohio (Case No. 94-1695-TP-ACE) on behalf of Cincinnati Bell Telephone Company: economic analysis of terms and conditions for efficient local competition. Filed May 24, 1995.

212. Ohio Public Utility Commission (Case No. 96-899-TP-ALT) on behalf of Cincinnati Bell Telephone Company: direct testimony regarding CBT's proposed rate rebalancing and price

regulation plan. Filed February 19, 1997.

213. Ohio Public Utility Commission (Case No. 97-152-TP-ARB), on behalf of Cincinnati Bell Telephone Company: direct testimony regarding the application of MCI Telecommunications Corporation Petition for Arbitration Pursuant to Section 252 (b) of the Telecommunications Act of 1996. Filed April 2, 1997.

214. Ohio Public Utility Commission (Docket No. 98-1398-TP-AMT), on behalf of Bell Atlantic and GTE, rebuttal testimony concerning economic effects of the proposed merger of Bell Atlantic and GTE. Filed June 16, 1999, substitute rebuttal testimony filed October 12, 1999.

### **33. Oregon**

215. Oregon Public Utility Commission (ARB 154) on behalf of US WEST Communications, direct testimony regarding intercarrier compensation for ISP-bound traffic, November 1, 1999, rebuttal testimony filed November 5, 1999.

### **34. Pennsylvania**

216. Pennsylvania Public Utility Commission, (Docket No. P-009350715), on behalf of Bell Atlantic: a study of inflation offsets in a proposed price regulation plan. Filed October 1, 1993. Rebuttal testimony filed January 18, 1994.

217. Pennsylvania Public Utility Commission, (Docket No. I-940034) on behalf of Bell Atlantic: issues regarding proposed presubscription for intraLATA toll traffic. Filed as part of panel testimony, December 8, 1994. Reply testimony filed February 23, 1995. Surrebuttal testimony filed March 16, 1995.

218. *US WATS v. AT&T*: Retained by counsel for US WATS, a reseller of AT&T long distance services, plaintiff in an antitrust suit alleging monopolization and conspiracy in business long distance markets. Antitrust liability and damages. Confidential Report, August 22, 1995. Depositions September 30, October 1, October 12, December 3, 1995. Testimony October 18-20, 25-27, 30, 1995. Rebuttal testimony December 4, December 11, 1995.

219. Pennsylvania Public Utility Commission (Docket Nos. A-310203F0002, A-310213F0002, A-310236F0002 and A-310258F0002), on behalf of Bell Atlantic - Pennsylvania: rebuttal testimony to evaluate costing and pricing principles and cost models. Filed March 21, 1996.

220. Pennsylvania Public Utility Commission (Docket No. P-00961024), on behalf of Commonwealth Telephone Company: economic appraisal of a price cap regulation proposal, Direct testimony filed April 15, 1996. Rebuttal testimony filed July 19, 1996.

221. Pennsylvania Public Utility Commission (Docket No. R-00963550), on behalf of Bell Atlantic - Pennsylvania: economic consequences of rate rebalancing, Direct testimony filed April 26, 1996. Rebuttal testimony filed July 5, 1996.

222. Pennsylvania Public Utility Commission (Docket No. R-963550 C0006), on behalf of Bell Atlantic - Pennsylvania: economic consequences of rate rebalancing, Direct testimony filed August

30, 1996.

223. Pennsylvania Public Utility Commission (Docket No. A-310258F0002 - Interconnection Arbitration, Eastern Telelogic Corporation/Bell Atlantic) on behalf of Bell Atlantic-Pennsylvania, direct and rebuttal testimony on economic costs of interconnection and unbundled network elements, September 23, 1996.

224. Pennsylvania Public Utility Commission, on behalf of Bell Atlantic-Pennsylvania, statement regarding costs and benefits from Bell Atlantic entry into interLATA telecommunications markets. Filed February 10, 1997. Rebuttal testimony filed March 21, 1997.

225. Pennsylvania Public Utility Commission (Docket No. I-00960066), on behalf of Bell Atlantic: direct testimony providing an economic framework for the intrastate carrier switched access rates charged by Bell Atlantic. Filed June 30, 1997. Rebuttal testimony filed July 29, 1997. Surrebuttal testimony filed August 27, 1997.

226. Pennsylvania Public Utility Commission (Docket No. I-00940035), on behalf of Bell Atlantic: direct testimony regarding the relationship between access charge reform and universal service funding. Filed October 22, 1997.

227. Pennsylvania Public Utility Commission (Docket No. P-00971307), on behalf of Bell Atlantic: direct testimony concerning the classification of Bell Atlantic's business services in Pennsylvania as competitive and the calculation of an imputation price floor for those services. Filed February 11, 1998. Rebuttal filed February 18, 1998.

228. Pennsylvania Public Utility Commission (Docket No. P-00981410), on behalf of The United Telephone Company of Pennsylvania: direct testimony regarding role of productivity offset in a price cap plan, filed October 16, 1998. Rebuttal testimony filed February 4, 1999.

229. Pennsylvania Public Utility Commission, on behalf of Bell Atlantic-Pennsylvania: A report entitled "Promises Fulfilled; Bell Atlantic-Pennsylvania's Infrastructure Development." Filed January 15, 1999 (with Charles J. Zarkadas, Agustin J. Ros, and Jaime C. d'Almeida).

230. Pennsylvania Public Utility Commission (Docket Nos. A-310200F0002, A-311350F0002, A-310222F0002, A-310291F0003), on behalf of Bell Atlantic Corporation and GTE Corporation, rebuttal testimony regarding economic issues raised in the proposed merger of Bell Atlantic and GTE. Filed April 22, 1999.

231. Pennsylvania Public Utility Commission (Docket No. A-310630F0002), on behalf of Bell Atlantic, direct testimony regarding the measurement of economic costs of ISP-bound traffic and economic issues concerning intercarrier compensation for such traffic. Filed April 14, 2000. Rebuttal testimony filed April 21, 2000.

232. Pennsylvania Public Utility Commission, (Docket No. M-00001435) on behalf of Verizon-Pennsylvania, Inc.: affidavit regarding the public interest benefits of Verizon entry into interLATA services. Filed January 8, 2001.

233. Pennsylvania Public Utility Commission (Docket No. P-00981449), on behalf of Verizon North, testimony regarding parameters in a Chapter 30 price cap plan. Filed October 31, 2000. Rebuttal testimony filed February 20, 2001.

### **35. Rhode Island**

234. Rhode Island Public Utilities Commission (Docket No. 1997) on behalf of New England Telephone & Telegraph Company, "Rhode Island Price Regulation Plan," analysis of proposed price regulation plan and evidence of the effects of incentive regulation on prices and infrastructure development. Filed September 30, 1991.

235. Rhode Island Public Utilities Commission on behalf of NYNEX (Docket No. 2252), testimony addressing the economic conditions under which competition in the local exchange and intraLATA markets will bring benefits to customers. Direct testimony, November 17, 1995.

236. Rhode Island Public Utilities Commission (Docket No. 2370), on behalf of New England Telephone and Telegraph Company, D/B/A NYNEX: economic review and revision of the Rhode Island price cap plan. Direct testimony, February 23, 1996. Rebuttal testimony filed June 25, 1996.

237. Rhode Island Public Utilities Commission, on behalf of Bell Atlantic – Rhode Island: direct testimony discussing basic economic principles regarding costs and prices of interconnection and unbundled network elements. Filed November 25, 1997.

238. Rhode Island Public Utilities Commission (Docket No. 2681), on behalf of Bell Atlantic - Rhode Island: rebuttal testimony regarding costs for OSSs, filed September 18, 1998.

239. Rhode Island Public Utilities Commission (Docket No. 2681), on behalf of Bell Atlantic: rebuttal testimony regarding entry into the local services telecommunications market. Filed January 15, 1999.

240. Rhode Island Public Utilities Commission (Docket No. 2681), on behalf of Bell Atlantic Rhode Island, direct testimony regarding incremental costs and switched access rates. Filed October 22, 1999.

241. Rhode Island Public Utilities Commission (Docket No. 2681), on behalf of Verizon Rhode Island, direct testimony regarding incremental costs and switched access rates. Filed May 1, 2002.

242. Rhode Island Public Utilities Commission (Docket No. 3179), on behalf of Verizon Rhode Island, direct testimony regarding alternative regulation. Filed July 1, 2002.

### **36. South Carolina**

243. South Carolina Public Service Commission, on behalf of BellSouth Long Distance, Inc., (Docket No. 97-101-C) : direct testimony regarding the probable economic benefits to consumers in South Carolina from entry by BellSouth into the interLATA long distance market. Filed April 1, 1997. Rebuttal testimony filed June 30, 1997.

244. South Carolina Public Service Commission (Docket No. 97-374-C), on behalf of BellSouth Telecommunications, Inc.: rebuttal testimony concerning general economic principles for the pricing and costing of interconnection and unbundled network elements. Filed November 25, 1997.

245. South Carolina Public Service Commission (Docket No. 97-124-C), on behalf of BellSouth Telecommunications, Inc.: rebuttal testimony concerning economic principles for pricing interconnection services supplied to payphone providers. Filed December 7, 1998.

246. South Carolina Public Service Commission, *In re: Petition for Arbitration of*

*ITC^DELTA*COM Communications, Inc., with BellSouth Telecommunications, Inc., Pursuant to the Telecommunications Act of 1996, (Docket No1999-259-C), on behalf of BellSouth Telecommunications, testimony regarding economic interconnection issues. Filed August 25, 1999.

247. South Carolina Public Service Commission (Docket No. 2001-209-C), on behalf of BellSouth Telecommunications, Inc.: economic aspects of BellSouth's application to provide long distance services in South Carolina. Rebuttal testimony filed July 16, 2001.

### **37. Tennessee**

248. Tennessee Public Service Commission (*In re: The Promulgation of Agency Statements of General Applicability to Telephone Companies That Prescribe New Policies and Procedures for Their Regulation*) on behalf of South Central Bell Telephone Company: theoretical analysis and appraisal of the proposed Tennessee Regulatory Reform Plan. Filed February 20, 1991.
249. Tennessee Public Service Commission (Docket No. 95-02499) on behalf of BellSouth Telecommunications, Inc. d/b/a BellSouth Telephone Company, testimony addressing the definition and measurement of the cost of supplying universal service. (Direct testimony filed October 20, 1995. Rebuttal testimony filed October 25, 1995). Additional testimony regarding economic principles underlying the creation of a competitively-neutral universal service fund: direct testimony filed October 30, 1995. Rebuttal testimony filed November 3, 1995.
250. Tennessee Public Service Commission (*In re: The Avoidable Costs of Providing Bundled Services for Resale by Local Exchange Telephone Companies*) on behalf of BellSouth Telecommunications, Inc. (Docket No. 96-00067): economic costing and pricing principles for resold and unbundled services. May 24, 1996. Refiled with the Tennessee Regulatory Authority (Docket No. 96-00067), August 23, 1996.
251. Tennessee Regulatory Authority (*In re: The Avoidable Costs of Providing Bundled Services for Resale by Local Exchange Telephone Companies*) on behalf of BellSouth Telecommunications, Inc. (Docket No. 96-01331): economic costing and pricing principles for resold and unbundled services. Filed September 10, 1996. Rebuttal testimony filed September 20, 1996.
252. Tennessee Regulatory Authority (*In re: Petition to Convene a Contested Case Proceeding to Establish "Permanent Prices" for Interconnection and Unbundled Network Elements*) on behalf of BellSouth Telecommunications, Inc. (Docket No. 97-01262): rebuttal testimony regarding costing principles on which to base prices of unbundled network elements. Filed October 17, 1997.
253. Tennessee Regulatory Authority (Docket No. 97-00888), on behalf of BellSouth Telecommunications, Inc.: direct testimony regarding appropriate economic principles for sizing the state universal service fund, Filed April 3, 1998. Rebuttal filed April 9, 1998.
254. Tennessee Regulatory Authority (Docket No. 99-00377), on behalf of BellSouth Telecommunications, direct testimony regarding intercarrier compensation for Internet-bound traffic in Arbitration with ICG Telecom Group, filed October 15, 1999. Rebuttal testimony filed October 25, 1999.
255. Tennessee Regulatory Authority (Docket No. 99-00430), on behalf of BellSouth

Telecommunications, direct testimony regarding intercarrier compensation for Internet-bound traffic in Arbitration with ITC-DeltaCom, filed October 15, 1999. Rebuttal testimony filed October 25, 1999.  
256. Tennessee Regulatory Authority, (Docket No. 97-00409), on behalf of BellSouth Telecommunications, rebuttal testimony regarding efficient pricing for pay telephone services. Filed October 6, 2000.

257. Tennessee Regulatory Authority, (Docket No. 01-00193), on behalf of BellSouth Telecommunications: rebuttal testimony regarding performance measurements and self-effectuating penalties. Filed August 10, 2001.

### **38. Texas**

258. *Darren B. Swain, Inc. d/b/a U.S. Communications v. AT&T Corp.*, United States District Court for the Northern District of Texas, Dallas Division, Civil Action 394CV-1088D: Retained by counsel for U.S. Communications, a reseller of AT&T long distance services, plaintiff in an antitrust suit alleging monopolization in inbound business long distance markets. Antitrust liability and damages. Confidential Report, November 17, 1995.

259. Public Utility Commission of Texas (Docket No. 8585) on behalf of Southwestern Bell Telephone Company: analysis of Texas intrastate switched access charges and bypass of switched access. Filed December 18, 1989.

260. Texas Public Utility Commission (Docket No. 21982), on behalf of Southwestern Bell Telephone Company, direct testimony regarding CLEC's rate for transport and termination of ISP-bound traffic. Filed March 13, 2000. Rebuttal testimony filed March 31, 2000.

### **39. Utah**

261. Utah Public Service Commission (Docket No. 99-049-41), on behalf of US West Communications, Inc., rebuttal testimony regarding the effects of the proposed Qwest-US West merger on economic welfare. Filed February 28, 2000.

262. Utah Public Service Commission (Docket No. 00-999-05), on behalf of Qwest Corporation, direct testimony regarding intercarrier compensation for Internet-bound traffic. Filed February 2, 2001. Rebuttal testimony filed March 9, 2001.

263. Utah Public Service Commission on behalf of Qwest Corporation, direct testimony regarding productivity offsets in a price cap plan. Filed October 5, 2001. Rebuttal testimony filed November 22, 2001.

### **40. Vermont**

264. Vermont Public Service Board, Petition for Price Regulation Plan of New England Telephone on behalf of New England Telephone Company, Dockets 5700/5702: analysis of appropriate parameters for a price regulation plan. Filed September 30, 1993. Rebuttal testimony filed July 5,

1994.

265. Vermont Public Service Board, (Open Network Architecture Docket No. 5713) on behalf of New England Telephone Company, economic principles for local competition, interconnection and unbundling, direct testimony filed June 7, 1995. Rebuttal testimony filed July 12, 1995.

266. Vermont Public Service Board (Docket No. 5713), on behalf of Bell Atlantic – Vermont, direct testimony regarding economic principles for setting prices and estimating costs for interconnection. Filed July 31, 1997. Rebuttal testimony filed January 9, 1998. Surrebuttal testimony filed February 26, 1998. Supplemental rebuttal testimony filed March 4, 1998.

267. Vermont Public Service Board (Docket No. 5900) on behalf of NYNEX, testimony regarding the economic effects of the proposed merger between Bell Atlantic and NYNEX. Filed September 6, 1996.

268. Vermont Public Service Board (Docket no. 6000), on behalf of Bell Atlantic: direct testimony examining the likely benefits from adopting a price regulation plan. Filed January 19, 1998.

269. Vermont Public Service Board (Docket No. 6077), on behalf of Bell Atlantic-Vermont: rebuttal testimony regarding application of imputation standard, filed November 4, 1998.

270. Vermont Public Service Board (Docket No. 6167), on behalf of Bell Atlantic, rebuttal testimony regarding reduction of access charges & pricing of new services. Filed May 20, 1999. Supplemental testimony filed May 27, 1999.

## 41. Virginia

271. Affidavit to the U.S. District Court for the Eastern District of Virginia (Alexandria Division) on behalf of United States Telephone Association, *United States Telephone Association, et al., v. Federal Communications Commission, et al.*, (Civil Action No. 95-533-A) regarding the Section 214 process for local exchange companies providing cable television services. Filed October 30, 1995, (with A.E. Kahn).

272. State Corporation Commission of Virginia (Case No. PUC 950067) on behalf of Bell Atlantic Virginia, Inc., rebuttal testimony concerning economic standards for the classification of services as competitive for regulatory purposes, January 11, 1996.

273. State Corporation Commission of Virginia, on behalf of Bell Atlantic-Virginia, (Case No. PUC960), direct testimony regarding costing and pricing of interconnection and unbundled network elements. Filed December 20, 1996. Rebuttal testimony filed June 10, 1997 (Case No. PUC970005).

274. State Corporation Commission of Virginia *In re: Joint Petition of Bell Atlantic Corporation and GTE Corporation for approval of agreement and plan of merger*, economic effects of the proposed merger of Bell Atlantic and GTE. Filed May 28, 1999, rebuttal testimony filed October 8, 1999.

275. Virginia State Corporation Commission, (Case No. PUC000079) on behalf of Bell Atlantic-Virginia, direct testimony regarding intercarrier compensation for Internet-bound traffic in arbitration with Focal Communications Group. Filed April 25, 2000.

276. Virginia State Corporation Commission, (Case No. PUC 000003) on behalf of Bell Atlantic -

Virginia, direct testimony regarding efficient pricing of carrier access charges. Filed May 30, 2000.

## **42. Washington**

277. Washington Public Utilities Commission (Docket No. UT-990300), on behalf of US WEST, regarding US WEST's interconnection arbitration with AirTouch Paging in Washington. Direct testimony filed February 24, 1999; rebuttal testimony filed March 8, 1999.

278. Washington Utilities and Transportation Commission (Docket No. UT-991358), on behalf of US West Communications, Inc., rebuttal testimony regarding the effects of the proposed Qwest-US West merger on economic welfare. Filed February 22, 2000.

279. Washington Utilities and Transportation Commission (Docket No. UT-003006), on behalf of US West Communications, Inc., direct testimony regarding intercarrier compensation for internet-bound traffic. Filed April 26, 2000. Rebuttal testimony filed May 10, 2000.

280. Washington Transportation and Utilities Commission, *In the Matter of the Petition of Qwest Corporation for Competitive Classification of Business Services in Specified Wire Centers*, Docket No. UT-000883. Rebuttal testimony regarding economic criteria for classification of services as competitive. Filed October 6, 2000.

## **43. West Virginia**

281. Public Service Commission of West Virginia (Case No. 94-1103-T-GI) on behalf of Bell Atlantic - West Virginia: economic analysis of issues regarding proposed presubscription for intraLATA toll traffic in West Virginia, March 24, 1995.

282. Public Service Commission of West Virginia (Case Nos. 96-1516-T-PC, 96-1561-T-PC, 96-1009-T-PC, and 96-1533-T-T) on behalf of Bell Atlantic - West Virginia: direct testimony regarding costing and pricing of interconnection and unbundled network elements. Filed February 13, 1997. Rebuttal testimony filed February 20, 1997.

283. Public Service Commission of West Virginia on behalf of Bell Atlantic - West Virginia: economic analysis of issues regarding Bell Atlantic's entry into the interLATA long distance market. Filed March 31, 1997.

## **44. Wyoming**

284. Wyoming Public Service Commission (Docket No. 70000-TR-99), on behalf of US West Communications, direct testimony evaluating proposed prices of non-competitive US West services with regards to cost, pricing, competition, & regulation. Filed April 26, 1999.

285. Wyoming Public Service Commission (Docket Nos. 74142-TA-99-16, 70000-TA-99-503, 74037-TA-99-8, 70034-TA-99-4, 74089-TA-99-9, 74029-TA-99-43, 74337-TA-99-2, Record No. 5134). on behalf of US West Communications, rebuttal testimony regarding economic issues arising in

the proposed merger between U S WEST and Qwest. Filed April 4, 2000.

## **1. Canada**

286. Canadian Radio-Television and Telecommunications Commission (Docket No. 1990-73) on behalf of Bell Canada: "The Effect of Competition on U.S. Telecommunications Performance," (with L.J. Perl). Filed November 30, 1990.

287. Canadian Radio-Television and Telecommunications Commission (Docket No. 92-78) on behalf of Alberta General Telephone: "Lessons for the Canadian Regulatory Structure from the U.S. Experience with Incentive Regulation," and "Performance Under Alternative Forms of Regulation in the U.S. Telecommunications Industry," (with T.J. Tardiff). Filed April 13, 1993.

288. Canadian Radio-Television and Telecommunications Commission (Application of Teleglobe Canada for Review of the Regulatory Framework of Teleglobe Canada Inc.): on behalf of Teleglobe Canada, Inc., structure of a price regulation plan for the franchised supplier of overseas telecommunications services in Canada. Filed December 21, 1994.

289. Canadian Radio-Television and Telecommunications Commission, Response to Interrogatory SRCI(CRTC) 1Nov94-906, "Economies of Scope in Telecommunications," on behalf of Stentor. Filed January 31, 1995.

290. Canadian Radio-Television and Telecommunications Commission, Implementation of Regulatory Framework and Related Issues, Telecom Public Notices CRTC 94-52, 94-56 and 94-58, "Economic Welfare Benefits from Rate Rebalancing," on behalf of Stentor. Filed February 20, 1995.

291. Canadian Radio-Television and Telecommunications Commission, "Imputation Test to be Applied to Competitive Local Exchange Services," position paper on imputation for local exchange services filed in response to Telecom Public Notice CRTC 95-36 on behalf of Stentor on August 18, 1995.

292. Canadian Radio-Television and Telecommunications Commission, in response to CRTC Telecom Public Notice CRTC 96-8, "Economic Aspects of Canadian Price Cap Regulation," on behalf of the Stentor companies. Filed June 10, 1996.

293. Canadian Radio-Television and Telecommunications Commission, in response to CRTC Telecom Public Notice CRTC 96-8, "Economic Aspects of Price Cap Regulation for MTS NetCom Inc.," on behalf of MTS Net Com, Inc. Filed June 10, 1996.

294. Canadian Radio-Television and Telecommunications Commission, in response to CRTC Telecom Public Notice CRTC 2000-108, "MTS Communications Inc., Recovery of 2000 and 2001 Income Tax Expense" on behalf of MTS Communications, Inc. Oral panel testimony, January 11, 2001.

295. Canadian Radio-Television and Telecommunications Commission (Public Notice CRTC 2001-37) on behalf of Aliant Telecom Inc., Bell Canada, MTS Communications Inc., and Saskatchewan Telecommunications: "Price Cap Review and Related Issues," filed May 31, 2001. Rebuttal evidence filed September 20, 2001.

## **2. Federal Communications Commission**

### **1988**

296. Federal Communications Commission (Docket No. 87-313) on behalf of Bell Communications Research, Inc.: empirical analysis of price cap regulation of interstate access service, entitled "The Impact of Federal Price Cap Regulation on Interstate Toll Customers." Filed March 17, 1988.

297. Federal Communications Commission (Docket No. 87-313) on behalf of Bell Communications Research, Inc.: "The Impact of the FCC Proposed Price Cap Plan on Interstate Consumers," Filed August 18, 1988. Rebuttal analysis filed November 18, 1988.

### **1989**

298. Federal Communications Commission (Docket No. 87-313) on behalf of Cincinnati Bell Telephone Company, "Incentive Regulation and Estimates of Productivity," (with J. Rohlfs), June 9, 1989.

299. Federal Communications Commission (Docket No. 87-313) on behalf of the United States Telephone Association: "Analysis of AT&T's Comparison of Interstate Access Charges Under Incentive Regulation and Rate of Return Regulation." Filed as Reply Comments regarding the FCC's Report and Order and Second Further Notice of Proposed Rulemaking in CC Docket 87-313, August 3, 1989.

300. Federal Communications Commission (Docket No. 87-313) on behalf of Southwestern Bell Telephone Company, "Taxes and Incentive Regulation," filed as Exhibit 3 to the Reply Comments of Southwestern Bell regarding the FCC's Report and Order and Second Further Notice of Proposed Rulemaking in CC Docket 87-313, August 3, 1989.

### **1990**

301. Federal Communications Commission (Docket 87-313) on behalf of the United States Telephone Association: "Local Exchange Carrier Productivity Offsets for the FCC Price Cap Plan," May 3, 1990.

302. Federal Communications Commission (Docket 87-313) on behalf of the United States Telephone Association: "Productivity Offsets for LEC Interstate Access," June 8, 1990.

303. Federal Communications Commission (Docket 87-313) on behalf of the United States Telephone Association: "Interstate Access Productivity Offsets for Mid-Size Telephone Companies," June 8, 1990.

304. Federal Communications Commission (Docket 87-313) on behalf of the United States Telephone Association: analysis of total factor productivity calculations, entitled "Productivity Measurements in the Price Cap Docket," December 21, 1990.

### **1991**

305. Federal Communications Commission (Docket 87-313) on behalf of BellSouth Corporation, "The Treatment of New Services under Price Cap Regulation," (with Alfred E. Kahn), June 12, 1991.

306. Federal Communications Commission (Docket 91-141, Expanded Interconnection with Local



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Telephone Company Facilities) on behalf of Bell Atlantic, "Effects of Competitive Entry in the U.S. Interstate Toll Markets." August 6, 1991.

307. Federal Communications Commission (Docket 91-141, Expanded Interconnection with Local Telephone Company Facilities) on behalf of Southwestern Bell, "Economic Effects of the FCC's Tentative Proposal for Interstate Access Transport Services." Filed September 20, 1991.

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308. Federal Communications Commission, (Pacific Bell Tariff F.C.C. No. 128, Transmittal No. 1579) on behalf of Pacific Bell, "The Treatment of FAS 106 Accounting Changes Under FCC Price Cap Regulation," (with T.J. Tardiff). Filed April 15, 1992. Reply comments filed July 31, 1992.

309. Federal Communications Commission, (CC Docket 92-141, In the Matter of 1992 Annual Access Tariff Filings) on behalf of Bell Atlantic, "Effects of Competitive Entry in the U.S. Interstate Toll Markets: An Update," filed July 10, 1992.

310. Federal Communications Commission (ET Docket 92-100) on behalf of BellSouth Corporation, "Assigning PCS Spectrum: An Economic Analysis of Eligibility Requirements and Licensing Mechanisms," (with Richard Schmalensee). Filed November 9, 1992.

### **1993**

311. Federal Communications Commission (Petition for Declaratory Ruling and Related Waivers to Establish a New Regulatory Model for the Ameritech Region) on behalf of Ameritech: "Price Cap Regulation and Enhanced Competition for Interstate Access Services," filed April 16, 1993, Reply Comments, July 12, 1993.

312. Federal Communications Commission (Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems) PR Docket No. 93-61 on behalf of PacTel Teletrac, "The Economics of Co-Channel Separation for Wideband Pulse Ranging Location Monitoring Systems," (with R. Schmalensee). Filed June 29, 1993.

313. Federal Communications Commission (In the Matter of Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorization Therefor) on behalf of four Regional Bell Holding Companies, Affidavit "Interstate Long Distance Competition and AT&T's Motion for Reclassification as a Nondominant Carrier," filed November 12, 1993, (with A.E. Kahn).

### **1994**

314. Federal Communications Commission (CC Docket 94-1) on behalf of the United States Telephone Association: "Economic Performance of the LEC Price Cap Plan," filed as Attachment 5 to the United States Telephone Association Comments, May 9, 1994, "Economic Performance of the LEC Price Cap Plan: Reply Comments," filed as Attachment 4 to the United States Telephone Association Reply Comments, June 29, 1994.

315. Federal Communications Commission (CC Docket 94-1) on behalf of the United States Telephone Association: "Comments on the USTA Pricing Flexibility Proposal," filed as Attachment 4 to the United States Telephone Association Comments, May 9, 1994, "Reply Comments: Market Analysis and Pricing Flexibility for Interstate Access Services," filed as Attachment 3 to the United States Telephone Association Reply Comments, June 29, 1994 (with Richard Schmalensee).

316. Federal Communications Commission (File Nos. W-P-C 6912 and 6966) on behalf of Bell Atlantic Corporation, affidavit supporting Section 214 applications to provide video dialtone services, August 5, 1994.

317. Federal Communications Commission (File Nos. W-P-C 6982 and 6983) on behalf of NYNEX: affidavit supporting Section 214 applications to provide video dialtone services in Massachusetts and Rhode Island, September 21, 1994.

### **1995**

318. Federal Communications Commission on behalf of Bell Atlantic Corporation, affidavit examining cost support for Asymmetric Digital Subscriber Loop (ADSL) video dialtone market trial. Filed February 21, 1995.

319. Federal Communications Commission on behalf of Bell Atlantic Corporation, affidavit examining cost support for Bell Atlantic's video dialtone tariff. Filed March 6, 1995.

320. Federal Communications Commission on behalf of the United States Telephone Association, study entitled "Competition in the Interstate Long-Distance Markets: Recent Evidence from AT&T Price Changes," *ex parte* filing in CC Docket No. 94-1, March 16, 1995.

321. Federal Communications Commission (CC Docket No. 79-252) on behalf of Bell Atlantic, BellSouth, SBC, and Pacific Telesis, "An Analysis of the State of Competition in Long-Distance Telephone Markets," study attached to *ex parte* comments examining the competitiveness of interstate long-distance telephone markets, (with J. Douglas Zona), April 1995.

322. Federal Communications Commission (File Nos. W-P-C 7074) on behalf of Southern New England Telephone Company, affidavit supporting Section 214 applications to provide video dialtone services, July 6, 1995.

323. Federal Communications Commission (CC Docket No. 95-145) on behalf of Bell Atlantic Corporation, affidavit examining economic issues raised in the investigation of Bell Atlantic's video dialtone tariff. Filed October 26, 1995. Supplemental Affidavit filed December 21, 1995.

324. Federal Communications Commission (CC Docket No. 94-1) on behalf of the United States Telephone Association, "Economic Evaluation of Selected Issues from the Fourth Further Notice of Proposed Rulemaking in the LEC Price Cap Performance Review," Attachment C to the United States Telephone Association "Comments," filed December 18, 1995 (with T. Tardiff and C. Zarkadas). Reply Comments filed March 1, 1996.

### **1996**

325. Federal Communications Commission (CC Docket No. 95-185) on behalf of NYNEX, "Affidavit Concerning Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers," filed March 4, 1996.

326. Federal Communications Commission (CC Docket No. 96-45) on behalf of BellSouth Corporation, "Comments on Universal Service," (with Kenneth Gordon), analysis of proposed rules to implement the universal service requirements of the Telecommunications Act of 1996, filed April 12, 1996.

327. Federal Communications Commission (CC Docket No. 96-46), on behalf of Bell Atlantic, BellSouth, GTE, Lincoln, Pacific Bell and SBC Communications, Inc., *ex parte* affidavit on costing

principles and cross-subsidization in broadband, joint-use networks, April 26, 1996.

328. Federal Communications Commission (CC Docket No. 96-98) videotaped presentation on economic costs for interconnection, FCC Economic Open Forum, May 20, 1996.

329. Federal Communications Commission (CC Docket No. 96-112), on behalf of the Southern New England Telephone Company: cost allocation between telephony and broadband services, Affidavit filed May 31, 1996.

330. Federal Communications Commission (CC Docket No. 96-112), on behalf of Bell Atlantic: reply comments concerning cost allocations between telephony and broadband services, Affidavit filed June 12, 1996.

331. Federal Communications Commission (CC Docket No. 96-46), on behalf of Bell Atlantic, BellSouth, GTE, Lincoln, Pacific and SBC, Declaration concerning the use of efficient component pricing in open video systems. Filed July 5, 1996.

332. Federal Communications Commission (CC Docket No. 96-98), on behalf of the United States Telephone Association, Affidavit concerning technical qualities of the Staff Industry Demand and Supply Simulation Model. Filed July 8, 1996; *ex parte* letters filed July 22, 1996 and July 23, 1996.

333. Federal Communications Commission (CC Docket No. 96-45), on behalf of BellSouth Corporation, comments concerning the use of proxy cost models for measuring the cost of universal service. Filed August 9, 1996 (with Aniruddha Banerjee).

334. Federal Communications Commission (CC Docket No. 96-149), on behalf of Bell Atlantic, Affidavit concerning safeguards for in-region supply of interexchange services by local exchange carriers. Filed August 15, 1996.

335. Federal Communications Commission (CC Docket No. 96-45), on behalf of the United States Telephone Association, "Not the Real McCoy: A Compendium of Problems with the Hatfield Model." Filed October 15, 1996

336. Federal Communications Commission (Tracking No. 96-0221) on behalf of NYNEX and Bell Atlantic, affidavit concerning the competitive effects of the proposed NYNEX-Bell Atlantic merger. Filed October 23, 1996 (with Richard Schmalensee).

337. Affidavit to the Federal Communications Commission, on behalf of SBC Communications, Inc., (Docket No. 96-149), regarding Commission's proposed rules and their impact on joint marketing. Filed November 14, 1996 (with Paul B. Vasington).

### **1997**

338. Federal-State Joint Board on Universal Service, on behalf of the United States Telephone Association, *Remarks on Proxy Cost Models*, CC Docket No. 96-45 (videotape filed in docket). Filed January 14, 1997.

339. Federal Communications Commission, on behalf of Bell Atlantic: "An Analysis of Conceptual Issues Regarding Proxy Cost Models", a response to FCC Staff Report on issues regarding Proxy Cost Models. Filed February 13, 1997.

340. Federal Communications Commission (CC Docket No. 96-262 et. al.), statement on behalf of United States Telephone Association, "Economic Aspects of Access Reform." Filed on January 29, 1997 (with Richard Schmalensee). Rebuttal filed on February 14, 1997.

341. Federal Communications Commission (CC Docket 96-262 et al.), on behalf of USTA: a report entitled, "An Analysis of the Welfare Effects of Long Distance Market Entry by an Integrated Access and Long Distance Provider", *ex parte* filed March 7, 1997 (with Richard Schmalensee, Doug Zona and Paul Hinton).
342. Federal Communications Commission (CC Docket 96-262 et al.), on behalf of the United States Telephone Association: a report entitled, "An Update of the FCC Short-Term Productivity Study (1985-1995)", *ex parte* filed March 1997.
343. Federal Communications Commission (CC Docket No. 96-149), on behalf of Bell Atlantic, BellSouth, NYNEX, Pacific Bell and SBC: affidavit concerning economic issues raised by the BOC supply of interLATA services to an affiliate. Filed April 17, 1997.
344. Federal Communications Commission (CC Docket Nos. 93-193, Phase 1, Part 2, 94-65), on behalf of Bell Atlantic: affidavit concerning allocation of earnings sharing and refunds in the local exchange carrier price cap plan. Filed May 19, 1997.
345. Federal Communications Commission (File No. SCL-97-003), on behalf of ATU Long Distance: affidavit concerning the economic effects of classifying a proposed undersea cable between Alaska and the lower 48 states as a private carrier. Filed December 8, 1997.
346. Federal Communications Commission (CC Docket No. 80-286), on behalf of Bell Atlantic: affidavit concerning proposed reforms of jurisdictional separations. Filed December 10, 1997.

### **1998**

347. Federal Communications Commission (*ex parte* CC Docket No. 96-262 et. al.), "The Need for Carrier Access Pricing Flexibility in Light of Recent Marketplace Developments: A Primer," research paper prepared on behalf of United States Telephone Association. Filed on January 21, 1998 (with Richard Schmalensee).
348. Federal Communications Commission, *In the Matter of Applications of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.* (CC Docket No. 97-211), affidavit on behalf of GTE Corporation analyzing the likely economic effects of the proposed acquisition of MCI by WorldCom, (with R. Schmalensee), March 13, 1998, reply affidavit filed May 26, 1998.
349. Federal Communications Commission, *In the Matter of Customer Impact of New Access Charges* (CC Docket Nos. 96-262 and 96-45), affidavit on behalf of the United States Telephone Association analyzing long distance price reductions stemming from recent access charge reductions. Filed March 18, 1998.
350. Federal Communications Commission, *In the Matter of MCI Telecommunications Corp. Petition for Prescription of Tariffs Implementing Access Charge Reform* (CCB/CPD 98-12), affidavit on behalf of Bell Atlantic analyzing economic issues in MCI's petition for changes in the level and structure of interstate access charges. Filed March 18, 1998.
351. Federal Communications Commission, Merger of SBC Communications Inc. and Ameritech Corporation, comments on behalf of SBC and Ameritech analyzing the likely effects of the proposed merger on competition. (with R. Schmalensee ) Filed July 21, 1998, reply affidavit filed November 11, 1998.

352. Federal Communications Commission, *In the Matter of United States Telephone Association Petition for Rulemaking—1998 Biennial Regulatory Review*, “Economic Standards for the Biennial Review of Interstate Telecommunications Regulation,” economic rationale for regulatory simplification, Attachment to the Petition for Rulemaking of the United States Telephone Association, filed September 30, 1998 (with Robert W. Hahn).
353. Federal Communications Commission, (CC Docket No. 96-262), “Assessment of AT&T’s Study of Access Charge Pass-Through,” study of long distance pricing, filed *ex parte* on behalf of the United States Telephone Association, October 22, 1998 (with P.S. Brandon)
354. Federal Communications Commission, (CC Docket No. 96-262), “AT&T, MCI, and Sprint Failed to Pass Through the 1998 Interstate Access Charge Reductions to Consumers,” study of long distance pricing, filed *ex parte* on behalf of the United States Telephone Association, October 16, 1998 (with P.S. Brandon)
355. Federal Communications Commission, (CC Docket No. 98-137), Affidavit on behalf of the United States Telephone Association, Review of Depreciation Requirements for Incumbent Local Exchange Carriers, November 23, 1998. (with A. Banerjee).
356. Federal Communications Commission, (CC Docket Nos. 96-262, 94-1, 97-250 and RM 9210), “Access Reform Again: Market-Based Regulation, Pricing Flexibility and the Universal Service Fund,” Attachment A to the Comments of the United States Telephone Association, filed October 26, 1998; “Productivity and Pricing Flexibility: Reply Comments,” Attachment A to the Reply Comments of the United States Telephone Association, filed November 9, 1998.

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357. Federal Communications Commission (Docket No. 99-24), affidavit on behalf of Bell Atlantic: economic requirements for regulatory forbearance for special access services. Filed January 20, 1999 (with Karl McDermott). Reply affidavit responding to claims that Bell Atlantic retains market power in the provision of special access filed April 8, 1999.
358. Federal Communications Commission, *In the Matter of Application by Bell Atlantic New York for Authorization Under Section 271 of the Communications Act to Provide In-Region, InterLATA Service in the State of New York* (CC Docket No. 99-295), Declaration on behalf of Bell Atlantic analyzing public interest issues in connection with Bell Atlantic long distance entry in New York. Filed September 29, 1999.
359. Federal Communications Commission (Docket No. 96-262), on behalf of United States Telephone Association, comments regarding rate structures for the local switching service category of the traffic-sensitive basket and common line basket, filed October 29, 1999. Reply comments filed November 29, 1999.
360. Federal Communications Commission (Docket No. 99-68), “An Economic and Policy Analysis of Efficient Inter-carrier Compensation Mechanisms for Internet-Bound Traffic,” on behalf of U S WEST Communications, *ex parte* analysis of inter-carrier compensation plans for ISP-bound traffic, November 12, 1999 (with A. Banerjee and A. Ros). Reply Comments: “Efficient Inter-Carrier Compensation for Internet-Bound Traffic,” (with A. Banerjee), October 23, 2000.

## **2000**

361. Federal Communications Commission (Docket Nos. 94-1, 96-26), comments on behalf of the United States Telecom Association regarding the proposed reprscription of the productivity offset in the FCC's price cap plan, January 7, 2000. Reply comments filed January 24, 2000, Ex parte presentation filed May 5, 2000.
362. Federal Communications Commission, *In the Matter of Reciprocal Compensation for CMRS Providers* (CC Docket Nos. 96-98, 95-185, WT Docket No. 97-207), "Reciprocal Compensation for CMRS Providers," on behalf of United States Telecom Association, reply comments regarding interconnection with CMRS providers, June 13, 2000 (with Charles Jackson).
363. Federal Communications Commission, *In the Matter the Remand of the Commission's Reciprocal Compensation Declaratory Ruling by the U.S. Court of Appeals for the D.C. Circuit* (CC Docket Nos. 96-98, 99-68), on behalf of Verizon, declaration regarding intercarrier compensation for Internet-bound traffic, filed July 21, 2000. Reply declaration filed August 4, 2000.
364. Federal Communications Commission, *In the Matter of Application by Verizon New England Inc., et. al. for Authorization to Provide In-Region, InterLATA Services in Massachusetts*, on behalf of Verizon New England, Appendix A, declaration regarding competition in Massachusetts and the public interest benefits of interLATA entry, September 19, 2000, Reply Declaration filed November 3, 2000. Supplemental Reply Declaration filed February 28, 2001.

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365. Federal Communications Commission, *In the Matter of Application by Verizon New England Inc., et. al. for Authorization to Provide In-Region, InterLATA Services in Connecticut*, on behalf of Verizon New England, Appendix A, declaration regarding competition in Connecticut and the public interest benefits of interLATA entry, May 24, 2001.
366. Federal Communications Commission, *In the Matter of Application by Verizon Pennsylvania Inc., et. al. for Authorization to Provide In-Region, InterLATA Services in Pennsylvania*, on behalf of Verizon Pennsylvania, Appendix A, declaration regarding competition in Pennsylvania and the public interest benefits of interLATA entry, June 21, 2001.
367. Federal Communications Commission (CC Docket No. 01-92), on behalf of BellSouth Corporation: Reply Declaration (with Aniruddha Banerjee) on a unified regime of inter-carrier compensation (calling party's network pays or bill and keep?). Filed November 5, 2001.
368. Federal Communications Commission (CC Docket No. 01-277), on behalf of BellSouth Corporation: Reply Affidavit on BellSouth's application for interLATA authority in Georgia and Louisiana. Filed November 13, 2001.

## **2002**

369. Federal Communications Commission (CC Docket Nos. 01-338, 96-98, 98-47), on behalf of BellSouth Corporation: Reply Declaration (with Aniruddha Banerjee, Charles Zarkadas and Agustin Ros) regarding unbundling obligations of local exchange carriers. Filed July 17, 2002.
370. Federal Communications Commission (RM No. 10593) on behalf of BellSouth Corporation, Qwest Corporation, SBC Communications, Inc., and Verizon, regarding pricing flexibility for interstate

special access services (with A.E. Kahn), filed December 2, 2002.

### **3. Mexico**

371. Mexican Secretariat of Communications and Transport on behalf of Southwestern Bell International Holdings Corporation, affidavit on interconnection regulation (with T.J. Tardiff). Filed October 18, 1995.

372. Comisión Federal de Telecomunicaciones de México (“Cofetel”), “Economic Parameter Values in the Telmex Price Cap Plan,” arbitrator’s report on behalf of COFETEL and Telmex regarding the renewal of the price cap plan for Telmex, February 15, 1999.

373. Comisión Federal de Telecomunicaciones de México, on behalf of the Commission, “Telmex’s 2003-2006 Price Cap Tariff Proposal,” expert report regarding the renewal of the price cap plan for Telmex, (with A. Ros, G. Martinez and A. Banerjee), filed December 13, 2002.

### **4. New Zealand**

374. Commerce Commission of New Zealand on behalf of New Zealand Telecom, “Review of CostQuest Associates’ Benchmarking Survey” En banc hearings May 13-17, 2002.

### **5. United States Department of Justice**

375. Affidavit to the U.S. Department of Justice on behalf of NYNEX in *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, regarding provision of telecommunications services across LATA boundaries for traffic originating or terminating in New York State. Filed August 25, 1994.

376. Affidavit to the U.S. Department of Justice on behalf of SBC Communications Inc. in *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, regarding Telefonos de Mexico’s (Telmex’s) provision of interexchange telecommunications services within the United States. Filed May 22, 1995.

377. Affidavit to the U.S. Department of Justice on behalf of SBC Communications Inc. in *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, regarding provision of interexchange telecommunications services to customers with independent access to interexchange carriers. Filed May 30, 1995.

### **6. United States Senate**

378. Subcommittee on Communications of the Senate Committee on Commerce, Science and Transportation, *Statement* and oral testimony regarding long distance competition and Section 271 of

the Telecommunications Act of 1996. Filed March 25, 1998.

December, 2002