11. The BOCs will have an economic incentive to lower long distance prices from their current levels. Lower prices of long distance through an expansion of output, not a restriction of output, will be in the BOCs' best interests. This outcome of lower prices helps consumers and is pro-competitive, as economic theory demonstrates.

II. Market Definition

12. The NPRM correctly puts forward the concept of dominance in the economic context of maintaining prices above the competitive level. (¶ 114) The Commission then considers whether it should narrow its previous market definition of the Competitive Carrier proceeding to provide a "more refined analytical tool" to attempt to evaluate market power. (¶ 116) The primary goal of market definition is to set the boundaries of an investigation into market power. Thus, it should consider both the effects of demand and supply. Secondarily, market definition also allows calculation of market shares which provide at best, a rough guide to the possible presence of market power.

A. Product Market Definition

13. As the NPRM notes, the 1992 Merger Guidelines (MG) focuses on demand substitution factors, and brings in supply response through the "uncommitted entrant" section of ¶ 1.32ff. While I have significant doubts about the MG approach to market definition, even the MG recognizes that market share data provides "only the starting point for analyzing the competitive impact of a merger".[1] (¶ 2.0) The MG instead focus on the potential

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[1] See J. Hausman et. al. "Market Definition Under Price Discrimination", Antitrust Law Journal, 1996 and "Competitive Analysis with Differentiated Products," Annales, D'Economies et de Statistique, 1994. Note that if only demand factors were considered, a separate market for left handed golf clubs might exist, because right handed clubs do not provide an adequate substitute for left handed golfers. Also, separate markets might exist for different types of beer (e.g. premium, imported, light, ice, etc.) which is counter to established judicial opinions. Similar results might be found in automobiles and many other products which again is counter to judicial opinions. Thus, supply response must be taken into account. The MG accounts for the supply response through the participation of firms who can respond quickly so that

competitive effects of a merger, which should also be the focus of the Commission's decisions in terms of dominance.

14. Competitive effects analysis takes account of both demand factors and supply factors in determining the potential ability of a firm to exercise significant market power. The finding of a presence or absence of significant market power should be based on demand conditions, supply (cost) conditions, and competitive conditions. Market definition based on only demand conditions followed by market share calculation would omit supply factors and competitive conditions and could well come to an incorrect conclusion about the presence of significant market power.

15. Thus, I agree with the NPRM's tentative conclusion (¶ 119) that all interstate domestic interexchange telecommunications services provide the appropriate product market definition. Particular situations can arise where anti-competitive actions may arise (e.g. anti-competitive price discrimination in cellular long distance by IXCs), but the competitive effects of these situations can be analyzed within the overall market definition proposed in the NPRM. Because of the importance of potential supply responses in interstate interexchange telecommunications services which arises from the use of common facilities such as transmission and switches by IXCs for numerous different services, the proposed market is especially well suited to current and possible future inquires into the existence and exercise of market power.

16. I also agree with the tentative conclusion that international services should be treated as a separate market. International agreements and regulation create different conditions than exist for domestic interexchange services. Both demand and supply factors can be affected significantly by these agreements and regulations. Thus, separate treatment of international

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the final outcome of the analysis still focuses on the potential to exercise market power.

services is appropriate.

B. Geographic Market Definition

17. However, I disagree with the NPRM that it would be useful to define separate point-to-point geographic markets. (¶ 123) Customers primarily purchase their domestic interexchange telecommunications services from a single carrier. Thus, I choose AT&T for all my long distance calls; my employer MIT chooses MCI. Note that the situation differs markedly from the airline choice (fn. 228) referred to by the NPRM, where each choice is done separately. For instance, I choose US Air for Boston to Washington, but US Air does not even provide service from Boston to Chicago. Since customers buy their long distance service in a bundle (or cluster), a point-to-point market definition would not provide the best basis to analyze competition in long distance.

18. Furthermore, current competition in the long distance market demonstrates the absence of point-to-point markets. InterLATA pricing is done on a nationwide basis where prices do not differ with access charges or other cost factors which might cause prices to differ. Even the distance component of interLATA prices is becoming less important with offerings such as Sprint Sense and MCI Minutes. This change has arisen, in part, because of the use of fiber optic transmission networks which are much less cost sensitive to distance. Indeed, I expect the distance component over time to become redundant in pricing of interLATA calls.

19. The NPRM's proposed approach of separate evaluation of separate point-to-point markets for in-region originating calls would not serve any analytical purpose, but it would complicate matters significantly. The determination of market shares for, say, Boston to St. Louis, Boston to San Francisco, Boston to Washington, and Boston to San Antonio would be complicated and it would be difficult to gather the required information. Nor

would it aid an inquiry into the possible exercise of market power. Since the BOCs are extremely likely to sell their services to customers, not on a point-to-point basis, but on a nationwide terminating basis just as their IXC competitors do, any market definition that attempts to limit the terminating end to a single city or region is not consistent with the Commission's definition of the interexchange product market.

20. The point to point framework also makes the implicit assumption, which seems extremely unlikely to occur, that a BOC could obtain and exercise market power on calls from say Boston to St. Louis only. Given modern telecommunications networks, all locations can be served by all competitors either through their own networks or through resale of other firms' capacity. I would not find it remotely possible that capacity would become sufficiently limited among city pairs that separate competitive conditions could become important in terms of overall competition. Other factors also make this outcome extremely likely: (1) BOCs will begin with zero market share and will compete with entrenched firms such as AT&T, which has well over 50% of the market, (2) the 1996 Telecommunications Act requires structural separation and other regulatory safeguards, and (3) the possibly "bottleneck" facilities are comprehensively regulated. All of these factors tend to create a relatively uniform competitive framework without differentiating economic factors important in separate point to point markets.

III. Dominance Determination

21. Determination of dominance has two aspects: (1) does a BOC have significant market power given the regulation already in place on its bottleneck facilities and (2) will a finding of dominance increase or decrease competition? The NPRM takes the correct approach (¶ 132) by taking into account current regulation of access and asking whether a BOC could raise interstate service prices by restricting output of those services. Both price

cap regulation and regulation against discrimination are designed to stop other anti-competitive actions that a BOC might theoretically attempt. Dominance would provide another redundant layer of regulation beyond these well-established current regulations.

22. For instance, all the BOCs (except US West) have chosen price caps without sharing for FCC price cap regulation. Thus, price caps as well as the Commission's well-established cost accounting rules minimize the possibility of cross subsidy. Furthermore, the 1996 Telecommunications Act establishes structural safeguards and nondiscrimination provisions. The most important consideration is to remember why regulation is used--the purpose of regulation is to stop the exercise of market power by a dominant carrier. A determination of dominance would add little or nothing to current regulation in terms of the exercise of market power, and it could likely hinder competition as I discuss subsequently.

A. Demand Conditions, Supply Conditions, and Competitive Conditions

23. BOCs would be extremely unlikely to be able to restrict long distance to raise prices. As the NPRM notes (¶ 133) the BOCs' affiliates will begin with zero market share, and the presence of AT&T, along with the other IXCs, makes it unlikely that the BOCs could gain market share quickly enough to allow them to exercise market power by restriction of output. Furthermore, the existence of competitors' networks provides a significant amount of supply capability to stop price increases.

24. Moreover, the BOCs will have an economic incentive to lower long distance prices from their current levels.[2] Since prices for both access and long distance are well above incremental (marginal) cost (including access), a BOC has an incentive to lower prices both to gain share from rival IXCs and

[2] This basic point calls into question the discussion in fn. 241, p. 63 of the NPRM. Lowering prices is the opposite of the use of monopoly power in one market to leverage it into another market.

also to expand the use of long distance so that access minutes increase. IXCs do not have this same incentive because they do not provide access. Thus, lower prices of long distance through an expansion of output, not a restriction of output, will be in the BOCs' best interests. This outcome of lower prices helps consumers and is pro-competitive, as common sense and economic theory demonstrate.

25. An empirical example can be useful here. Assume that the interstate long distance price elasticity is about -0.7 which is near both the Gatto (AT&T) study from 1988 and the more recent Taylor and Taylor study from 1993.[3] This approximate price elasticity has been found in numerous studies over the past 20 years. Next take the average price of interstate access at $.057 per minute and, to be conservative, I will assume that the incremental cost of this access is $0.02 per minute. Again to be conservative, I will assume that average price minus incremental cost of loss distance (net of access) is about $0.04 per minute.[4] Solving for the best price for the BOC leads to an estimated decrease in long distance prices of about 23.3% (compared to AT&T prices). Note that this estimate is not much different from the discounts that I estimated for Southern New England Telephone Company (SNET) which I presented at the FCC Forum on July 23. I estimated that SNET's discount relative to AT&T is about 22.1% over all residential customers. Thus, both a calculation based on elasticities and prices and costs, as well as actual experience from SNET, indicate that residential long distance prices could decrease in the range of 20-25%.

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[3] See J.P. Gatto, J. Langin-Hooper, P. Robinson, and H. Tyan, "Interstate Switched Access Demand Analysis," Information Economics and Policy, 1988, 3, 283-309 and W. Taylor and L. Taylor, "Postdivestiture Long-Distance Competition in the United States," American Economic Review, 1993, 185-190.

[4] Lower cost of access increases the incentive of the BOC to raise prices as does a larger price cost margin for long distance service.

B. FCC Regulation and Basic Economics Demonstrate that BOC Market Power Will Not Arise in Long Distance Markets

26. As the NPRM notes correctly, cross subsidy or improper cost allocation creates a problem in the current context only if the BOC affiliate sets retail interLATA prices at predatory levels, drives out its rivals, and sets prices at above competitive levels. (¶ 135) These events could not occur. First, for BOC cross subsidy to have an adverse competitive effect, the BOCs would need to succeed in forcing AT&T and other IXCs to exit interLATA markets. The BOCs could not hope to succeed because the marginal cost of interLATA traffic is around 1-2 cents per minute (excluding access). Given the very low marginal costs compared to fixed costs, the BOCs would have to keep the price extremely low and suffer huge financial losses while engaged in a predatory strategy. Alternatively, the BOCs would need to misallocate huge amounts of costs which also could not escape detection by regulators.

27. Furthermore, such a predatory strategy could not succeed. The fiber optic networks would remain in place since they are the essence of sunk costs.[5] Thus, if the BOCs attempted to raise their interLATA prices to supra-competitive levels, there would be no barrier to re-entry. In these economic circumstances, predation cannot hope to succeed. Predation is an extremely unlikely strategy which has little prospect of success given the substantial sunk costs in telecommunications.[6]

28. Next, most regulation of interLATA traffic will be done by the FCC, which regulates interstate traffic. The FCC has adopted price cap regulation

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[5] Sunk costs are costs which are not recovered if a firm subsequently decides to exit the industry. For their potential importance in entry and exit decisions see, e.g., the 1992 Merger Guidelines, para. 3.0.

[6] In a recent case in which I was involved, the District Court found that "the Government could not cite one modern example of successful predatory pricing...". U.S. v. Eastman Kodak: 853 F. Supp. 1454, 1478 (W.D.N.Y 1994), aff'd ___, F.3d (2d Cir. Aug. 4, 1995). Also, in spite of numerous private lawsuits, pre-divestiture AT&T was never found to have engaged in predatory pricing.

for the BOCs so that cross subsidy can no longer occur since price (cap) regulation, rather than cost of service regulation, is being used. In the absence of cost-of-service regulation, no misallocation of costs can occur because there is no cost basis to misallocate. Thus, cross subsidy largely disappears as a problem under the correct form of FCC regulation. Given the absence of sharing in price caps, the cross subsidy problem is even less than previous under price caps. At the state level, about 36 states use or have initiated proceedings to establish price caps. These regulators would not permit cost misallocation and could change to price caps regulation modeled after the FCC, if they believe that cross subsidy posed a serious problem. Thus, cross subsidy leading to predation is not a realistic possibility since it would be an economically irrational strategy by a BOC.

29. Discrimination remains a theoretical possibility, but the Commission has long and successful experience in implementing rules to stop discrimination. Furthermore, the Telecommunications Act of 1996 has specific nondiscrimination safeguards. Most importantly, the experience in cellular telephone has demonstrated conclusively that the BOCs do not have the ability to distort competition through discrimination.[7] The B block (wireline) cellular carrier in most MSAs is a BOC, and the A block (non wireline) carrier depends on the BOC for local exchange access and often for long distance access. However, A block carriers have not been disadvantaged by their dependence on the local BOC as the success of McCaw/AT&T cellular has demonstrated. My research has demonstrated that cellular prices are <u>lower</u> where an in-region BOC provides the B block cellular service, holding other economic factors equal, than when a non-BOC (e.g. GTE) is the B block carrier. Thus, prices are not higher, as the anti-competitive exercise of market power would cause. If anything, prices are lower. Thus, the Commission should rely on its successful experience in cellular and CPE to conclude that anti-competitive effects which lead to the exercise of market power are extremely

[7] Experience in CPE and Centrex also demonstrate the same point.

unlikely to occur.

C. Imputation Rules Provide Proper Safeguards Against Price Squeezes

30. The NPRM raises the possibility of an increase in access rates which could lead to an increase in long distance prices. (¶ 141) This possibility of a price squeeze has long been recognized by regulators and appropriate regulation has been designed to stop it from occurring. Of course, even without providing long distance service BOCs have an incentive to increase their access rates but Commission regulation stops them from doing so. Furthermore, Section 272 (e)(3) of the 1996 Act has an imputation requirement that a BOC must charge its affiliate an amount no lower than what it charges competitors. In this situation a price squeeze cannot occur.

31. A price squeeze occurs when the BOCs' price is below its marginal cost of access plus long distance service plus the contribution from the bottleneck service, here long distance access.[8] It is somewhat analogous to predation, and it will not occur for similar reasons. The BOC would have to lose money on its provision of long distance service since it receives the access amount whether it or its competitor provides retail long distance service. If it engages in a price squeeze, the BOC will be selling the long distance component below cost and thus losing money on the provision of this service. This strategy is economically irrational unless the BOC believes it can drives its competition from the long distance market and charge supra-competitive prices. However, for the same reasons that I discussed above, this outcome could not occur given the continued existence of the IXC networks, and the inability of the BOC to charge above competitive prices.

32. Furthermore, imputation has worked well in intraLATA market

[8] See J. Hausman and T. Tardiff, "Efficient Local Exchange Competition", Antitrust Bulletin, 1995 for a further discussion of regulation designed to prevent price squeezes and proper imputation regulation.

situations. For instance, California adopted an imputation standard in CPUC decision 94-09-065. IntraLATA long distance competition has been especially fierce in California with PacBell now holding only about 50-60% of all business customers' intraLATA long distance traffic. Thus, no price squeeze problems have occurred at the state level, and the BOCs begin in a much weaker position in interLATA long distance traffic because they begin with a zero percent share.

33. Requiring access to be priced at incremental cost would be an incorrect action to take because of possible price squeeze problems. The shared and common costs of the network must be recovered by contribution of prices above incremental cost or the BOCs will go out of business. Similarly, long distance service price is expected to be priced in excess of marginal cost because IXCs must cover their shared and common costs.[9] As I have pointed out in previous affidavits, price above marginal cost is the expected outcome in situation of imperfect competition where fixed costs are high relative to total costs, e.g. DRAMs or microprocessors. Imperfect competition is the usual situation in modern U.S. industries.

IV. Dominant Regulation Would Decrease InterLATA Competition

34. The use of dominant firm regulation by the Commission would not add significant safeguards to the regulation against cross subsidy and discrimination already in place. However, dominant firm regulation would likely decrease interLATA competition in two respects: (1) price competition and (2) new service competition. Price competition would be reduced because

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[9] Recent BOC purchases of bulk long distance service are at prices in the range of about 1.5 cents per minute. MCI in a recent submission to the Commission acknowledged that the average retail price of long distance (excluding access) exceeds ten cents per minute. (MCI, "Survey of Wholesale-Retail Differentials for Services Provided by Incumbent Local Exchange Carriers", p. 8) However, I expect long distance prices to decrease to residential consumers with BOC entry because of the increased facilities based competition that BOCs would create in the long distance market.

the BOCs would have to give advance notice to their competitors of their future price strategies. Since the competitors could react to the advance notice with similar plans of their own, the economic incentive to decrease prices or offer innovative rate plans will decrease. Indeed, the Commission has repeatedly recognized that tariff requirements may lead to decreased competition among both cellular providers and long distance providers. Economists have analyzed the effects on competition of price announcements in concentrated industries, and often found them to facilitate oligopolistic price setting. I believe it would be extremely bad economic policy to impose advance notice and tariff requirements on the BOCs since lower prices help consumers and the BOCs will not be able to charge higher prices than their well known competitors such as AT&T.

35. New service competition is an important form of competition which is likely to be extremely important in a technologically dynamic industry such as telecommunications. I would not be surprised to see innovative service packages which remove distance sensitive long distance pricing and perhaps offer extended calling scope for flat rate calls. Some cellular carriers have adopted these strategies successfully. I would also expect to see combinations of service offerings of, for instance, voice, cellular, and Internet long distance. If BOCs must provide cost support data to offer new services and if the BOCs' competitors can delay the introduction of these new services by regulatory protest, competition will decrease. Consumers will be injured and only competitors will benefit.

36. Thus, I strongly recommend to the Commission that it consider the effect on price competition and new service innovation when considering whether to apply dominant regulation to BOC long distance. The additional benefits from such regulation seem very small or zero, while the potential costs in lower long distance competition or delayed new services will cost

consumers billions of dollars per year.

37. Dominant regulation is designed to ameliorate market power that results from the ability of a firm to increase prices above the competitive level by restricting output. BOCs will not have this ability in the long distance market. Potential problems of cross subsidy and cost shifting as well as discrimination are already treated by other regulation. Dominant firm regulation will not significantly affect these potential problems. However, dominant firm regulation is very likely to decrease competition and harm consumers. Thus, the Commission should not impose dominant firm regulation on the BOCs' affiliates in-region long distance services.

Jerry A. Hausman

Reply Statement of Professor Jerry A. Hausman

1. My qualifications have been given in my previous submission. In this reply statement I first respond to claims of AT&T and LDDS who want to impose dominant carrier regulation on BOC provision of interexchange long distance services. I also explain the fundamental economic error in the submission by MFS, who claims that a BOC could gain an "unfair advantage" in long distance markets through the provision of long distance access.

2. I also respond to arguments of AT&T and MCI who recommend excessively stringent structural separation and nondiscrimination safeguards. These proposed restrictions are in no way "costless" since they reduce or eliminate economies of scope leading to higher BOC costs and higher consumer service prices. I consider the tradeoff between economies of scope and the efficient provision of long distance and other services by the BOCs versus possible competitive distortions which could arise because of regulation. The Commission, if it adopts excessively stringent regulatory restrictions on the BOCs, is likely to (1) decrease innovation in long distance service, (2) create economic inefficiency, and (3) create higher prices for consumers. The Commission recognized these problems many years ago in the Computer II and Computer III proceedings, and nothing has changed in economics or telecommunications technology which makes the potential problems any less important today.

I. Potential Competitors of the BOCs Long Distance Services Do Not Raise Realistic Problems which Would Allow the BOCs to Exercise Market Power in the Market for Long Distance Telecommunication Services

A. AT&T

3. AT&T confuses market definition and makes a claim of market power because of BOC control of the local network. (p. 61) But, AT&T's statement that, "The proper markets to analyze here, therefore, are the markets for local and access services--the market where those bottlenecks exist--rather than the interexchange market." (pp. 61-62) is incorrect as a matter of economics and is also incorrect as a matter of law. The correct market to consider is the market for long distance services, and whether the BOCs will have market power there. Opponents to BOC provision of information services made similar claims to AT&T's claim here during the MFJ proceedings, but the DC Circuit correctly posed the question as whether the BOCs could exercise

market power in the market provision of information services if they entered. (U.S. v. Western Electric, 900 F.2d 283, DC Dir. 1990). Similarly, claims about potential leverage of the local network are treated in the same manner.[1] Thus, as I explained in my first Statement in this proceeding, the correct question for the Commission to consider here is whether the BOCs could raise the price of long distance service by restricting output. The BOCs cannot exercise market power in this market because of their competitors' existing long distance networks. AT&T's focus on the local exchange market is incorrect.

4. AT&T's claims that the BOCs could exercise market power in the interexchange market (pp. 62-63) do not consider the effect of Commission regulation of the BOCs. For instance, AT&T claims that the BOCs could exercise market power by "the charging of excessive prices for access". Of course, BOCs are not unconstrained in their access prices (as the Commission recognized in the NPRM). Nowhere does AT&T recognize the effects of FCC price cap regulation on BOCs' access prices. The correct question to answer is whether given current regulation the BOCs could use their control of the local network to exercise market power in the market for long distance services. AT&T does not attempt to answer this straightforward question.

5. AT&T takes issue with the NPRM's analysis of the effect of possible cost misallocation on long distance competition (pp. 63-64).[2] First, AT&T misunderstands how competition works. AT&T states, "An affiliate that receives favored treatment should be paying the BOC more than it is in fact paying for the services it receives..." (p. 63) AT&T never explains where the word "should" comes from. So long as the price of long distance service offered by a BOC exceeds its incremental cost, no damage to competition will occur. AT&T seems to be assuming implicitly that Rate of Return regulation still is used by the Commission. However, under price caps the price that an

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[1] AT&T, in an earlier submission, has attempted to use the outdated definition of leveraging and claimed that "any advantage in the local market can be leveraged into the interexchange market." (AT&T Comments on Market Definition Separations, Rate Averaging and Rate Integration, CC Docket No. 96-61, April 19, 1996, p. 11-12). Note that leveraging is not gaining an advantage in a separate market as AT&T claims, leveraging is exercising market power in the related market. Indeed, competitive advantages in other markets typically lead to consumer benefits as firms can offer lower prices (from economies of scope) or more innovative services in the associated markets.

[2] LDDS advances the same arguments (p. 23).

affiliate "should pay" for the services it receives from a BOC is a figment of a regulatory accountant's imagination since it has no effect on the regulatory outcomes. AT&T again attempts to return to the world of Rate of Return regulation by claiming that sharing is in force (p. 64, fn. 56), but the Commission well knows that no BOC, except US West, any longer has a sharing provision in its price cap formula. Especially with no sharing present, claims of cost misallocation have no economic effect since a regulated cost basis does not affect competitors prices charged by the BOCs.

6. AT&T's claims here have once again been recognized as incorrect by economists. First, AT&T never explains why the BOCs would be able to misallocate costs or raise access prices any more if they provide long distance service than they could now. Nor does AT&T explain why the BOCs would want to waste these misallocations in a doomed effort to attempt predation. As I explained in my original statement, since barriers to exit are high and the IXCs' networks would remain to eliminate the possibility of BOC recoupment, a predation attempt would be economically irrational.

7. AT&T calls for dominant carrier regulation of the BOCs long distance services (p. 65). However, AT&T gives no explanation of how dominant carrier regulation would affect the BOCs control over the local network. BOC control over the local network is currently addressed by Commission price cap and other regulations. Dominant carrier regulation for long distance services addresses a different economic market and a different locus of competition. The Commission correctly did not declare the BOCs dominant in the provision of information services, CPE, or cellular, although AT&T's argument would have led to such an illogical regulatory outcome. Nor have the BOCs gained monopoly power in the provision of information services, CPE, or cellular, despite similar claims by BOC opponents over the past 15 years. If the Commission adopts AT&T's proposal for dominant carrier regulation for BOC provision of long distance, the Commission will create an outcome of <u>decreased</u> competition in long distance markets and less innovation in long distance services. While such an outcome would favor AT&T, consumers would be injured by this regulatory outcome.[3]

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[3] LDDS states, (p.24) that the BOCs might have an advantage in the "provision of packages of local exchange and interLATA services." So might AT&T given its name recognition among consumers. So might LDDS with its purchase of MFS. But LDDS never even attempts to answer the question of

8. Lastly, AT&T's continued claims of possible predation (p. 66) cannot be taken seriously by the Commission as a matter of economics. The BOCs begin with a 0% long distance share and face the largest telecommunications company in the world, AT&T. No rational individual would believe that the BOCs could successfully predate against AT&T and the other facilities-based IXCs. AT&T remains the largest telecommunications company with unconstrained access to capital markets. Thus, even the "deep pockets" approach to predation doesn't work here. AT&T has put forward no credible economic support for how predation would be possible.

B. MFS

9. MFS in its Attachment 1 attempts to give a numerical illustration of how a "BOC can leverage its control over essential facilities to obtain a competitive advantage in vertical markets." The Attachment commits a fundamental economic mistake. LDDS makes a similar mistake (pp. 22-23).

The claim, to begin with is not credible. MFS claims that "so long as essential services contain any economic margin, a BOC can leverage that margin to gain an unfair competitive advantage over rivals..." (p. 1) Note that if this claim were true then antitrust law would allow no vertical integration where a firm provides an (essential) input to a competitor. Thus, Intel would not be allowed to manufacture computers since it provides microprocessors to Compaq. Microsoft would not be allowed to produce word processing programs or spreadsheet programs. Indeed, no vertical integration would be allowed by any company which earned a margin on their upstream product. Thus, no company that manufactured a product which had intellectual property or significant amounts of R&D involved would be permitted to integrate vertically.[4] A

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whether these "advantages" could allow a BOC to exercise market power in long distance services. It will only be successful in offering a packaged local and long distance service if it can offer consumers a better deal than purchase of the services separately. If consumers are made better off, the outcome is pro-competitive, even if LDDS does not have the "advantages" to compete.

[4] Indeed, an upstream margin of the type that MFS examines exists upstream in all markets which are imperfectly competitive. Since almost all markets in the U.S. economy are imperfectly competitive, MFS' example would demonstrate that vertical integration would reduce competition downstream. Actually, the reverse outcome of increased competition typically occurs as economists and the Courts have recognized for decades.

strange outcome indeed.

10. MFS' example assumes that the competitor is more efficient than the BOC at provision of long distance service. However, MFS' economic example posits non-profit maximizing behavior on the part of the BOC. If the competitor is actually more efficient than the BOC in terms of incremental costs, the BOC should buy the long distance component from its competitor and its profits will be higher. Indeed, the BOC can have higher profits of $100 million in the MFS example if it buys its long distance service from the competitor. The BOCS could still stimulate demand as in the MFS example (p. 4), but the BOC would still earn an extra $100 million.[5]

11. However, what MFS has discovered is the well known result in economics that a BOC would have an economic incentive to lower long distance prices if allowed to provide them. While MFS claims a price decrease of this type would be an "anticompetitive result" (p. 6), economists consider lower prices to be a pro-competitive result. Thus, MFS misuses the term "leverage", which leads to a higher price, not a lower prices as MFS' example creates. An anti-competitive result only occurs if prices in long distance market would increase, but MFS' own example causes them to decrease. Furthermore, if the example were done correctly, more efficient long distance competitors would continue to thrive because a BOC wants to maximize its value to shareholders which it does by only producing services where it is economically efficient to do so.

II. Economies of Scope and Structural Separation

12. Economists have long recognized that economies of scope are important in telecommunications. BOCs provide numerous services to consumers, and they can do so at lower cost and lower prices because of economies of scope. However, a small probability will always remain that some type of anti-competitive outcome can occur because regulation is never perfect. The Telecommunications Act of 1996 includes modified structural separation and nondiscrimination requirement to be in place for a transition period for

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[5] MFS seems to have made another mistake because it defines "common fixed costs" in Tables 1 and 2 to be a proportion of total costs, which includes the incremental cost of services. Costs cannot be common or fixed if they depend on total costs wince as incremental costs increase, common or fixed costs would increase which means they are not common or fixed.

specified BOC activities to minimize the chance of an anti-competitive outcome. The purpose of the statutory requirements is to prevent cross-subsidy and misuse of BOC control of the local network. However, as I discussed in my original statement, an analysis of proposals must take into account current regulation. For instance, price caps used by the FCC greatly attenuate or even eliminate the problem of cross subsidy, especially since none of the BOCs (except US West) are subject to sharing. (¶ 7 of NPRM) Other safeguards such as imputation also exist to prevent price squeezes as I discussed in my original statement. Lastly, market experience has demonstrated that the BOCs have not used either cross subsidy or discrimination to distort competition in markets they have been allow to enter such as CPE, cellular, and information services. Indeed, the BOCs' market shares in all of these businesses have remained quite modest, despite opponents previous claims that BOCs would come to dominate these markets.[6]

13. Thus, a benefit-cost tradeoff will exist. Too strict regulation will lead to fewer innovative services, decreased economic efficiency, decreased competition, and decreased consumer welfare. However, too loose regulation could lead to regulatory distortions. A balance between the costs of structural separation and the benefits of regulation exists. The Commission recognized the costs of structural separation moving from Computer II to Computer III. The benefit-cost tradeoff continues to exist, just as it did 10 years ago.

14. The Commission in the NPRM considers returning to the "maximum separation" requirement of Computer II for the provision of information services, long distance and manufacturing. But economic evidence has already demonstrated that Computer II requirements led to consumer welfare losses in the billion of dollars. For example, consider the particular example of voice messaging services offered by the BOCs. AT&T first proposed to offer these services in the late 1970's. However, the FCC delayed its decision and then refused to allow the BOCs to offer these voice messaging services on an integrated basis with the rest of their telecommunications services under Computer II. In 1986 the FCC reversed its decision with Computer III.

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[6] In cellular with only two market participants in each MSA, BOCs market shares have been in the range of 45-60%. However, the Block A (non-wireline) competitors have done very well in cellular as McCaw's experience demonstrates.

However, by 1986 the AT&T divestiture decree, the Modification of Final Judgment (MFJ), forbade the BOCs from offering voice messaging services. In 1988 the MFJ Court vacated the restriction on information services, and the next year the BOCs began to offer the services, over ten years after they were first proposed to be offered. The services have been available for the past 6 years, and about 9 million consumers currently buy the service. For 1994 I estimate the consumer value from these services to be about $1.27 billion.[7] Thus, the "maximum separation" of Computer II cost consumers lost welfare of over $1 billion per year from this one service alone.

15. By proposing structural separation requirements well beyond what Congress proposed in the 1996 Act, the NPRM's proposals will likely lead to decreased innovation and fewer new services. The NPRM's total neglect of the importance of dynamic economic efficiency of new services which economies of scope and integration of services allows, is directly contradictory to the 1996 Telecommunications Act's purpose "to provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans..." Less advanced telecommunications and information technologies and services will be the result of overly restrictive regulation as the experience with Computer II demonstrates. Economic efficiency will also decrease.

16. The proposed restrictions will also lead to higher costs for the provision of services by the BOCs. In a previous submission to the Commission last year, I estimated that costs would be approximately 30% higher in the provision of voice messaging services using data from Bell Atlantic and US West, if Computer II-like restrictions were reimposed.[8] For voice messaging services alone these additional costs would exceed $100 million year. For other enhanced services and long distance, the total costs of the restrictions would be in the hundreds of millions or billions of dollars per year. This extra cost reduces economic efficiency and creates waste in the US economy as I explain below. The restrictions also decrease competition, and the

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[7] This calculation is explained in J. Hausman and T. Tardiff, "Valuation and Regulation of New Services in Telecommunications."

[8] J. Hausman and T. Tardiff, "Benefits and Costs of Vertical Integration of basic and Enhanced Telecommunications Services", report to the FCC, April 7, 1995, pp. 19-25.

resulting higher prices decrease consumer welfare.

A. Ownership of Facilities

17. MCI (p. 23) and AT&T (pp. 20-23) recommend that the BOC interLATA affiliate not use any transmission or switching facilities used by the BOC. (p. 23) This requirement would eliminate economies of scope, raise the BOCs' costs, and decrease competition. Currently, the BOCs use their transmission facilities and switching facilities to provide intraLATA long distance. Thus, market experience demonstrates that economies of scope lead to lower costs, or the BOCs would not use these facilities jointly.[9] If MCI's and AT&T's recommendation were adopted, the Commission would force the BOCs to operate in an economically inefficient manner.

18. Productive inefficiency of this type is well known to create the largest type of (first order) economic inefficiency in the economy. As the Nobel laureate Paul Samuelson explains in his introductory textbook:

> "Efficiency is a central (perhaps the central) concern in economics. Efficiency means there is no waste." (P.A. Samuelson and W.D. Nordhaus, Economics, (McGraw Hill, 12th ed., 1985, p. 28, emphasis in the original)

MCI and AT&T ask the Commission to impose a penalty on the BOCs which will lead to higher costs. This penalty leads to waste in the economy as Prof. Samuelson explains. Higher costs also leads to higher prices for consumers. Thus, MCI's and AT&T's recommendation is anti-competitive, leads to inefficient production, and harms consumers. The recommendation has little to recommend itself for adoption from an economic standpoint.

B. Cost Misallocation

19. Sprint discusses the problem of "misallocation of costs' between the BOC interLATA affiliate and the BOC.(pp. 22 ff.) However, Sprint never explains how a problem can arise here in the absence of Rate of Return regulation. When Computer II was adopted, Rate of Return regulation was

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[9] Not only the BOCs, but every telecommunications company in the world that I am familiar with jointly uses facilities to provide both local and long distance service. Thus, market evidence demonstrates that important economies of scope are present in the provision of local and long distance services.

universally used.[10] Now the Commission regulates the BOCs with price caps, and no BOC has sharing except for US West. Thus, the effect of "cost misallocation" either does not exist or would have at most, a minor effect. Sprint's recommendation uses the chimera of cost misallocation, where costs do not affect price cap regulation of the BOCs, to attempt to eliminate economies of scope. Thus, Sprint's recommendation of no common use of switches and other facilities again would raise the BOCs cost, create economic inefficiency, and decrease competition.

C. Sharing of Administrative Services

20. MCI (pp. 27-28) and AT&T (pp. 24-26) propose that the BOC and its affiliate not be allowed to share administrative services. Administrative services are a classic example of a situation where common costs are an important component of overall costs. Thus, economies of scope are likely to be important. Indeed, almost every major US corporation that I have observed provides many administrative services in a centralized manner and purchases outside services as a company to achieve lower overall prices. A prohibition on these normal business activities would increase the BOC affiliate costs leading to less competition and higher prices to consumers.

21. The prohibition on sharing of administrative services seems especially puzzling since at most a problem of cross subsidy could arise (since no potential discrimination problem exists here). The use of price caps by the Commission, with no sharing by the BOCs (except US West) greatly attenuates, or even eliminates, potential problems raised by cross subsidy or cost misallocation, as I have explained in my original statement and again in the preceding paragraphs. Again, neither MCI nor AT&T do any economic analysis which considers the tradeoffs of the economies of scope versus possible regulatory distortions. The Commission should consider these tradeoffs because the future of innovative services, competition, and consumer welfare will be affected by the outcome.

D. Limitations on Joint Marketing

22. MCI (pp. 44-49) and AT&T (pp. 54-58) also propose strict

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[10] The GTE Consent Decree, to which Sprint's comments quote extensively, also took place during a period of Rate of Return Regulation. Thus, the regulation conditions have changed markedly since the entry of the decree.

limitations on joint marketing between the BOC and its affiliate. Joint marketing will be an important feature of competition between the BOCs and IXCs. MCI's proposed restrictions do not accord with the use of price caps since the BOCs prices for its regulated services will not be affected by how joint marketing is done. MCI also attempts to limit the size of discounts offered by BOCs (p. 49), but the economic test is well known here that the price of the bundled package must exceed the BOC's incremental costs of the package. This rule is used by antitrust authorities, and no reason for a different rule exists here. Also, MCI states that the BOC cannot make both type of service available from a single source (p. 49), but this restriction undermines the notion of joint marketing. So long as prices are set according to regulation, a single point of contact for "one stop" shopping will increase competition. Thus, MCI's proposals are anti-competitive.

23. AT&T also makes anti-competitive recommendations. It recommends (p. 55) that a BOC be forced to give 3 months notice of any joint marketing package. As the Commission has recognized numerous times and in the current NPRM, such advance notice requirement decreases competition, because it gives competitors time to respond. It would be equivalent to the Commission allowing AT&T to have a "company spy" at each BOC which would provide 3 months notice of future competitive activity. "First mover" advantages are the essence of competition; so not surprisingly, AT&T attempts to make the BOCs less competitive by having the Commission impose this requirement which would eliminate a potential first mover strategy of competition.

E. Conclusion

24. Economists stress the importance of economic efficiency. Production of goods and services in the economy in the lowest cost manner is the single most important aspect of a well-functioning economy. Sprint recognizes, as do most economists, that economies of scope are very important in modern telecommunications networks. Thus, if the Commission accedes to the IXCs' recommendation to ban joint use of switches, transmission facilities, and other joint facilities of BOC networks, the Commission rules will cost the US economy billions of dollars per year in economic waste. Other proposed restriction which I discussed above will have a similar effect. Reduced innovation will additionally cost further billion of dollars as the voice mail example demonstrates. Yet the Commission would levy this cost on the economy

because of remote possibilities, which have not occurred in information services and other services where the BOCs provide used shared facilities, that some regulatory distortions may occur. However, no one has demonstrated that the cost of these distortions, if they did occur, would be anywhere near the known additional cost due to the economic inefficiencies created by the elimination of economies of scope. Thus, the Commission's decision appears relatively straightforward. Should it increase regulation, increase BOC costs, reduce innovative services, and increase regulation, or should it attempt to meet the goals of the 1996 Telecommunications Act? The NPRM is silent on the costs to the U.S. economy of increased regulation and elimination of economies of scope. The Commission should be more attentive to these important economic matters.

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