ATTACHMENT 1

DECLARATION OF GARY B. LINDSEY

August 8, 2007

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

In the Matter of	)	
Special Access Rates for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

DECLARATION OF GARY B. LINDSEY

1. My name is Gary B. Lindsey and I am Director of Access Solutions for Sprint Nextel Corporation ("Sprint Nextel"). I have been with Sprint Nextel and its predecessor Sprint Corporation for over 20 years and have held various positions in Accounting, Finance and Access Operations. Prior to joining Sprint, I held accounting positions with companies in the telecommunications, trucking and insurance industries. I graduated *cum laude* from Kansas State University in 1976 with a Bachelor of Science degree in Business Administration with an emphasis in Accounting and in 2000 completed with distinction the Executive Fellows MBA Program offered by Rockhurst University. I am also a Certified Public Accountant.

2. As Director of Access Solutions for Sprint Nextel, I have a number of responsibilities including, as is relevant to this proceeding, access cost management. This responsibility requires me, among other things, to negotiate contracts with local exchange carriers and alternative access vendors ("AAVs") for interconnection, special access and unbundled

network elements. I also analyze telecommunications policy issues so as to inform the positions taken by Sprint Nextel's legal and government affairs representatives before the United States Congress, the Federal Communications Commission, state legislatures and state regulatory commissions. I make this declaration to explain several of the data points that support the factual underpinnings for Sprint Nextel's position that there generally are no effective alternatives to the incumbent local exchange carriers ("ILECs") for special access facilities, including especially DS1 and DS3 special access facilities, between Sprint Nextel's cell sites and its Mobile Switching Centers ("MSCs"), *i.e.,* backhaul facilities.

3. Recently, I directed members of my staff to determine whether there were any AAVs willing and able to provide backhaul facilities between Sprint Nextel cell sites and Sprint Nextel MSCs. Obtaining this information would enable Sprint Nextel to learn if the market had changed so as to enable Sprint Nextel to reduce its nearly total dependence on ILECs, particularly AT&T, Inc. ("AT&T") and Verizon Communications Inc. ("Verizon"), for such backhaul. It also would enable Sprint to determine if it had some leverage, however slight, in negotiating contracts with the ILECs for reasonably priced backhaul facilities.

4. In January 2007, my staff sent emails to 77 of the AAVs in Sprint Nextel's access vendor database that either had facilities co-located at one of Sprint Nextel's fiber points of presence; were providing access facilities to Sprint Nextel in other contexts, *e.g.,* facilities from a Sprint Nextel metropolitan area network fiber ring to a customer's premises or interoffice transport trunks; had entered into a Master Services Agreement for Sprint Nextel services; or had entered into a non-disclosure agreement with Sprint

Nextel. Among other questions, the email asked each AAV to inform Sprint Nextel as to whether it had fiber facilities located at a Sprint Nextel cell site (referred to as "on-net" facilities). Attached to the email was a spreadsheet showing the location of over 52,000 Sprint Nextel cell sites.

5. Thirty-three AAVs responded to Sprint Nextel's email and of that total only sixteen reported that they have fiber facilities located at one or more of Sprint Nextel's cell sites. But there were only 569 Sprint Nextel's cell sites – about 1% of the over 52,000 cell sites included in the questionnaire –in this on-net grouping.

6. It is important to note, however, that the fact that an AAV has fiber facilities at a Sprint Nextel cell site does not mean that the AAV is a viable alternative to the ILEC for the provision of backhaul facilities from the cell site to the serving MSC. The data showed that none of the responding AAVs had large enough footprints in any market so that Sprint Nextel could use the AAV's on-net facilities for any meaningful level of competition for backhaul and still be able to optimize the use of its network in such market.

7. Certainly, Sprint Nextel would much prefer to have competitive choices when securing backhaul facilities if for no other reason than that competition would put downward pressure on the rates that Sprint Nextel is now being charged for ILEC backhaul facilities. Because Sprint Nextel's backhaul costs make up about 33% of the costs of operating a cell site,[1] reducing the rates that Sprint Nextel now pays for backhaul to cost-based levels would result in significant savings for Sprint Nextel.

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[1] The costs of operating a cell site include such costs as rent, utilities and maintenance as well as backhaul. The 33% figure was derived by dividing Sprint Nextel's total backhaul costs incurred in 2006 by the total costs incurred in operating its cell sites.

8. Other data compiled by my staff provide additional evidence that there are very few competitive alternatives to the ILECs for special access facilities. For example, in 2001, 88% of the DS1 circuits and 74% of the DS3 circuits Sprint purchased for its wireline business in the top 50 MSAs were obtained from the ILEC.[2] By 2006, those numbers had risen to over 96% and over 84%, respectively.

9. Overall, for both its wireline and wireless businesses, Sprint Nextel relied on ILECs' special access services for 96.4% of all DS1 and DS3 customer terminating circuits (including circuits terminating at cell sites) in the top 50 Metropolitan Statistical Areas ("MSAs") in 2006, including both areas in which the ILECs have been granted pricing flexibility as well as those areas where the ILECs are still subject to price caps. The breakdown of the 96.4% figure across services and products for Sprint Nextel in 2006 is as follows:

- 97% of all DS1s were purchased from the incumbent LEC;
- 88.4% of all DS3s were purchased from the incumbent LEC;
- In Phase I price flexibility areas:
  - 96.9% of all Sprint Nextel's DS1s were purchased from the incumbent LEC;
  - 88.7% of all Sprint Nextel's DS3s were purchased from the incumbent LEC;
- In Phase II price flexibility areas:
  - 97.2% of all Sprint Nextel's DS1s were purchased from the incumbent LEC;
  - 88.6% of all Sprint Nextel's DS3s were purchased from the incumbent LEC.

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[2] The 2001 statistics do not count AT&T and MCI circuits as ILEC circuits because, in 2001, AT&T and MCI were not owned by Bell Operating Companies ("BOCs"). Had AT&T and MCI been owned by BOCs in 2001, Sprint Nextel's ILEC purchases would have reflected 91% of DS1 circuits and 82% of DS3 circuits.

10. Even in large urban areas, Sprint Nextel remains dependent on ILEC special access to meet its DS1 and DS3 needs. For example, in 2006, 98% of Sprint Nextel's DS1 and DS3 circuits in Chicago were purchased from AT&T; 97% of Sprint Nextel's DS1 and DS3 circuits in Boston were purchased from Verizon; and 99% of Sprint Nextel's DS1 and DS3 circuits in San Francisco were purchased from AT&T.

11. Based on an analysis of its invoices from its special access suppliers, Sprint Nextel's use of AAV facilities is *de minimis,* despite the fact that Sprint Nextel constantly asks AAVs for bids to supply special access facilities. Indeed, Sprint Nextel's main AAV accounts for only 1% of Sprint Nextel's current special access spending.[3]

12. This concludes my declaration.

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[3] Before they merged with Verizon and SBC, respectively, MCI and AT&T collectively accounted for 21% of Sprint Nextel's DS1 purchases from alternative access vendors and 19.4% of its DS3 purchases from alternative access vendors in the top 50 MSAs.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Executed on August 8, 2007

Gary B. Lindsey

ATTACHMENT 2

DECLARATION OF BRIDGER M. MITCHELL

CRA INTERNATIONAL

August 8, 2007

Before the

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Washington, D.C. 20554

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Declaration of

Bridger M. Mitchell

August 8, 2007

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Attachment A: Curriculum Vitae

I. QUALIFICATIONS AND SUMMARY

1. My name is Bridger M. Mitchell and I am a Vice President at CRA International, an economics, finance, and business consulting firm with 23 offices across North America, Europe, Asia Pacific, and the Middle East. I am an expert in competition and pricing in the telecommunications industry and have provided expert testimony, litigation support, and economic consulting services to numerous business and government clients. My research on major regulatory issues encompasses the theory and practice of telecommunications pricing, competition, and equal access in local telephone markets, interconnection in telecommunications networks, international telephone rates, and broadcasting and cable television. I have developed pioneering models of the cost structure of a cable television firm and the incremental costs of local telephone networks. I previously taught economics at Stanford University and UCLA and was a senior economist at The RAND Corporation. I have a Ph.D. in Economics from the Massachusetts Institute of Technology. My CV is included as Attachment A to this declaration.

2. I have been asked by Sprint Nextel to review and update the declaration that John Woodbury and I filed in this proceeding in 2005 on behalf of Nextel.[1] In that declaration we reviewed comments filed in this proceeding for the purpose of evaluating the effects of the Commission's triggers for granting the Bell Operating Companies (BOCs) flexibility in the pricing of special access services.

3. I update our 2005 analysis to assess "whether actual marketplace developments support the predictive judgments that underlie the special access pricing flexibility

[1] Declaration of Bridger M. Mitchell and John R. Woodbury, filed as Attachment 1 to Reply Comments of Nextel Communications, Inc., WC Docket No. 05-25, (July 29, 2005) (2005 Mitchell-Woodbury Decl. and 2005 Nextel Reply).

rules."[2] Based upon developments since that original analysis, I conclude that, in fact, in those Metropolitan Statistical Areas (MSAs) in which the BOCs received pricing flexibility, competition has not emerged or had the salutary effects anticipated by the Commission.

4. The special access services of principal concern here are channel termination (CT) and channel mileage (CM). CT provides the link between the end customer location and the BOC central office. CTs have the same basic economic characteristics as a local loop, requiring high fixed and sunk costs to serve an individual customer location. CM provides interoffice transport between two BOC central offices.[3] For Sprint Nextel and other Commercial Mobile Radio Service (CMRS) customers, CTs and CMs are required to connect individual cell sites located throughout an MSA to the wireless customer's mobile switching center.

5. In the discussion that follows, I review the analytic steps required to evaluate whether or not competitive conditions in Phase II pricing-flexibility MSAs have emerged and have successfully constrained the BOC rates for these special access services. The first step is to define the relevant markets, both product and geographic. Among other issues, I explain why the geographic and product market definitions used by the current FCC pricing flexibility rules are flawed. Instead, for purposes of developing criteria that indicate whether or not competition is supportable, I conclude that the product market should distinguish

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[2] *Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593, Order and Notice of Proposed Rulemaking, 20 FCC Rcd 1994, ¶5 (2005) (footnote omitted) (*2005 Special Access NPRM*).

[3] I use CT to refer to the circuit connecting the cell site to the serving wire center, and CM to refer to the circuit connecting the wire center to either another central office or to a point of interconnection. In a BOC tariff, the recurring monthly charge for a CM circuit is comprised of two Universal Service Order Code (USOC) rate elements: a fixed charge, and a per-mile charge for transport times the mileage between the wire center and the other central office or point of interconnection.

between the different CTs and CMs (and their capacities), and that the geographic market should be much narrower than the MSA.

6. Having defined the relevant markets, I then briefly consider the barriers to emerging competition in these markets and conclude that such barriers can be substantial, particularly on routes with thin traffic demands.

7. The existence of substantial entry barriers leads to the inference that on many routes, the degree of competition in special access is likely to be quite limited. Sprint Nextel's own experience in the purchase of special access services (as well as the experience of other parties) provides empirical evidence of the lack of competition.

8. The combination of substantial entry barriers and the general lack of special access competition leads to the prediction that the BOCs can maintain or increase prices of special access to supra-competitive levels in the absence of any regulatory constraint. The evidence that has been provided to the Commission clearly supported such an inference in 2005 and more recent information reconfirms this inference. In those MSAs where the BOCs have been granted pricing flexibility, special access rates have not fallen; in many cases they have increased. Moreover, the gap between the price-capped rates and the unconstrained BOC rates has typically increased over time, and the price-flexibility rates have remained substantially above the incremental costs of at least one set of comparable offerings: high-capacity unbundled network element (UNE) loops and transport.[4]

9. Thus, the evidence indicates that purchasers of special access services, like Sprint Nextel and other CMRS carriers, have been paying prices significantly higher than the levels an effectively competitive marketplace likely would have produced

[4] Direct comparisons of the prices of specific services for the different commitment terms, rather than the average revenue measures used by the BOCs, are the appropriate basis for drawing inferences about the extent to which the current pricing flexibility triggers have resulted in competitive special access prices.

and higher than would have been the case had the FCC's prior price-cap regime remained in force in those MSAs where the BOCs have obtained pricing flexibility. In short, the pricing flexibility triggers did not result in lower special access rates for purchasers.

10. I conclude that the entry barriers to the provision of special access services are substantial and the existence of those barriers has prevented special access competition from emerging throughout the MSA. And the effect of allowing the BOCs flexibility in pricing special access in areas where competition is non-existent or nearly so has elevated special access rates further above competitive levels. As a result, consumers have been harmed through these higher prices. The Commission should revise its pricing flexibility rules so that they properly reflect product markets distinguished by type of special access service and capacity; geographic markets that are route-specific; and criteria that reflect the extent of sunk costs and the attainment of scale economies required for competitive entry.

11. The next section addresses questions of market definition. Subsequent sections examine the extent of entry barriers to new competition; the extent to which competition in the provision of special access services has in fact emerged; the incentives of integrated BOCs to raise wireless, wireline and broadband rivals' costs; and the pricing effects of the Commission's pricing flexibility rules.

II. MARKET DEFINITION ISSUES

12. The FCC established appropriate market definitions in the *TRRO*[5] for unbundled network elements, and should use those same definitions in assessing competition for special access services. This section summarizes the special access product and geographic markets that are relevant to CMRS carriers and other purchasers of special access.

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[5] *Unbundled Access to Network Elements*, Order on Remand, 20 FCC Rcd 2533, ¶¶ 78-80 (2005) (*Triennial Review Remand Order* or *TRRO*).

A. Product Market

1. Channel Termination Services and Channel Mileage Services are Distinct Product Markets

13. The definition of a market requires a demand-side analysis, querying whether a hypothetical monopolist of special access services can profitably raise price, holding other things equal, including the number and extent of service supplied by all firms in a market.[6]

14. A CT is required to provide a circuit from a customer's premises (*e.g.*, a Sprint Nextel cell site) to the serving wire center. CM service is required to extend that circuit from the serving wire center to a more distant wire center or central office, from which it can then be connected to a customer's point of interconnection (*e.g.*, Sprint Nextel's mobile switching center). For the customer, CTs and CMs are not substitutes. A small increase in the price of CMs by a hypothetical monopolist will not lead customers to increase their purchases of CTs so as to render that price unprofitable. Similarly, a small increase in the price of CTs will not lead customers to increase their purchases of CMs. This is so because CTs connecting cell sites to serving wire centers cannot substitute for CMs connecting BOC central offices, and *vice versa*. CT and CM services are therefore distinct product markets. Indeed, CT and CM services are more likely complements than substitutes.

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[6] U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines § 1.0 (1992, as revised in 1997), *available at:* <http://www.ftc.gov/bc/docs/horizmer.htm> (*Horizontal Merger Guidelines*). Note that the implementation of this test assumes that special access prices are not already set at a monopoly profit-maximizing level. If prices were at the monopoly level, then any further price increase would be unprofitable, and so performing the test would then tell little about market definition, only that prices higher than those that maximize profits are less profitable.

2. *Channel Termination Services and Channel Mileage Services Should be Treated as if DS1 and DS3 Circuits are in Distinct Product Markets*

15. Special access circuits are also distinguishable by differences in capacity (*e.g.*, DS1 vs. DS3).[7] The competitive availability of DS1 service and DS3 service will likely differ markedly by geographic area. Distinguishing between DS1 service and DS3 service is critical to evaluating the extent to which competition may or could exist in different geographic areas, and thus these distinctions are critical in adopting criteria that will more accurately indicate the availability of likely competition in CTs and CMs.

16. As the Commission already found in the context of the *TRRO*, competitive supply of stand-alone DS1 CTs is uneconomic.[8] Instead, when competitive carriers provide DS1 CTs they do so by channelizing their own DS3 facilities (or by leasing DS1 channelized services from a DS3 provider). When another customer in the same building is already served by competitive fiber, the incremental costs of channelizing a DS3 facility to provide DS1 loops are minimal.[9] By contrast, deployment of a fiber lateral to a building in order to serve fewer than seven DS1s would likely be uneconomic.[10]

17. As a result, the availability of competitive DS1 loops throughout a particular geographic area will be highly correlated with the availability of competitive DS3 loops and the level of demand for those DS3 services by carriers such as Sprint Nextel. The availability of competitive DS3 CTs in individual buildings will

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[7] The capacity of one DS3 is equivalent to 28 DS1s. *TRRO* ¶170. Because of this functional equivalence, the application of the hypothetical monopoly test to either CTs or CMs could lead one to a conclusion that for any particular geographic market, DS1 prices would ultimately constrain the prices of DS3s and vice-versa. *Horizontal Merger Guidelines* § 1.0. Thus, one could conclude that there is a "high-capacity" CT market comprising both DS1s and DS3 services and similarly a "high capacity" CM market. Yet, for reasons explained in the text, that does not mean that the Commission should focus on only on the availability of "high capacity" special access services.

[8] *TRRO* ¶¶ 166, 170-171.

[9] *TRRO* ¶¶ 154, 170.

[10] *TRRO* ¶181 n.490.

depend on the demand for DS3 and higher-capacity services in those buildings and the area served by the relevant serving wire center. A large number of business lines in a wire center service area increases the potential revenue opportunities for DS3 service within the individual buildings located in that area.

18. In areas outside the central business district, the demand for special access services is likely to be for DS1, but not DS3, levels of capacity. The Commission itself concluded in the *TRRO* that "the majority of small and medium-sized business customers occupy single tenant commercial buildings and that the building of laterals for DS1 services requires many customers at a single location to justify their costs."[11] In these areas, there will likely be relatively few business lines and only limited fiber collocation by competitive carriers. Consequently, there is a low likelihood of competitive DS3 facilities at a large proportion of the customer locations. An increase in price by a hypothetical monopolist of DS1 CTs is therefore unlikely to be defeated because it is unlikely that competitive DS3s will be available at those locations. Instead, the BOC is likely to be the dominant provider in markets with limited demand for high-capacity circuits because it can provide stand-alone DS1 CTs over its legacy copper facilities.

19. Now consider a price increase by a hypothetical monopolist of DS3 CTs. Such an increase could be rendered unprofitable only if there were providers of channelized DS1 services already serving the building served by the DS3 providers and if those providers of DS1 services reconfigured the electronics on their DS3 facilities to provide DS3 services. But, as a practical matter, this means focusing on the availability of DS3 facilities only, as those DS1 providers would exist only if there were sufficient demand to warrant the construction of competitive DS3 facilities in the first place. Many markets outside the central business district lack the revenue opportunities that would lead competitive local exchange carriers (CLECs) or other providers to enter and sink the costs of DS3

[11] *TRRO* ¶170 n.469.

facilities, resulting in the incumbent local exchange carrier (ILEC) being the dominant provider of DS3 CTs over its existing facilities.

20. The same kinds of capacity distinctions should be made with respect to CM markets. On many routes outside the central business district, lesser demands for transport are more likely to require only DS1 rather than DS3 service. In less densely populated areas, the transport lengths are likely to be longer than in more densely populated areas, increasing the costs of deploying a DS1 circuit. In these markets, the likelihood that there will competitive alternatives to the BOCs' transport facilities may be quite remote. Were DS3 transport available, it could be channelized to offer DS1 transport (so that DS1s and DS3s might be substitutes from a demand/functional equivalence perspective). However, there will not likely be any DS3 transport providers in these areas, including wholesalers, to constrain a hypothetical monopolist of DS1 transport services. In markets characterized by limited demands for high-capacity transport, competitive DS1 transport may not be profitable and the ILEC is likely to be the dominant provider of DS1 services.

21. On routes with greater demands for high-capacity transport, both DS3 transport services and DS1 transport (channelized on a DS3) may be available. In these markets, an increase in the price of DS3 service by a hypothetical DS3 monopolist could result in providers of channelized DS1s using their DS3 capacity to compete with the hypothetical DS3 monopolist; similarly, an increase in the price of DS1 service by a hypothetical DS1 service monopolist could lead DS3 providers to channelize their capacity to provide DS1 service. However, in both cases, it is the availability of sufficient demand to support sinking the costs into DS3 transport capacity that allows such competition. Thus focusing on the likelihood of actual or emerging DS3 transport competition is appropriate in such markets. In markets with insufficient demand to support DS3 competition, the ILEC will be the sole provider of DS3 service.

22. These observations echo the conclusions of the Commission in the *TRRO* with respect to high-capacity loops and transport, conclusions that are equally relevant for CTs and CMs. With regard to CTs, the practical question is whether it is likely that other competitive carriers have already deployed, or will likely deploy, DS3 facilities throughout the wire center serving area, thereby making (channelized) DS1-level supply of those deployed facilities potentially viable.[12] As the Commission also noted,[13] where demand for high-capacity loops exists only at the DS1 level of service, there is insufficient traffic for competitive suppliers to enter with DS3 facilities and supply DS1 loops, and the analogous conclusion can be reached for channelized DS1 CTs.[14]

23. The Commission reached similar conclusions with respect to interoffice transport that should pertain to CMs as well. For example, in the *TRRO*, the Commission concluded that "a carrier requiring only DS1-capacity transport between two points typically does not have a large enough presence along a route (generally loop traffic at a central office) to justify incurring the fixed and sunk costs of self-providing just that DS1 circuit."[15] While the Commission was referring to competitive carriers, the position of carriers like Sprint Nextel with respect to self-provisioning is similar to that of a competitive carrier.[16]

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[12] *TRRO* ¶171.

[13] *Id.*

[14] A key reason why stand-alone DS1s are not profitable is because at the level of traffic that they carry, the CLEC will invariably have higher unit costs than the BOC. The BOC already has numerous DS1 loops that are provided over copper or hybrid copper-to-fiber facilities. And where the BOC does provide DS1 loops over fiber, it can aggregate that DS1 traffic with other traffic to support deployment of a DS3 facility to the wire center. Thus, in the *TRRO*, the Commission described its transport impairment test as one that "examines the feasibility of duplicating dedicated transport facilities connecting incumbent LEC wire centers." *TRRO* ¶ 91.

[15] *TRRO* ¶126 (citation omitted).

[16] To be sure, the prospects for CM competition may be better than for CT competition. In contrast to the generally limited volume of traffic over a channel termination circuit, the volume of traffic that is aggregated and transported between two wire centers (or central offices) generally requires the capacity of one or more DS3s.

24. Thus, in evaluating the extent of competition in the provision of DS3 service, one only need assess existing DS3 capacity. In markets where the demand for high-capacity services is limited and the competitive deployment of DS3 facilities is unlikely, there will be no competitive DS1 constraint on DS3 prices. In such markets, the BOC may be the only, or dominant, provider of DS3 services.

25. Where the demand for high-capacity services is limited, the rates for DS1-capacity CTs and transport will not be constrained by competitive DS3s because competitive DS3 capacity is not likely to be deployed. In these markets, the BOC is likely to be the dominant provider of DS1 and DS3 services. Thus, as a practical matter, in determining appropriate criteria for supportable competition for CTs and CMs, the Commission should distinguish between the viability of competition for DS1 service and for DS3 service.

B. Geographic Market

1. The Wire Center is a Useful Approximation of the Relevant Geographic Market

26. In revisiting the standards for requiring access by competitive carriers to unbundled network elements, the Commission posed the demand-side question with respect to the geographic scope of the market and (referring back to earlier decisions) concluded that customers' demand was route-specific.[17] For example, a customer seeking transport between points A and B would not find transport between A and C a good substitute. Similarly, the FCC found that "a loop serves a specific location and cannot economically be transferred to serve another customer location."[18] Thus, the FCC determined that competition at the level of the wire center would be a reasonable proxy for competition for customers seeking services originating, terminating or going through that geographic point.

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[17] *TRRO* ¶¶ 79-80.

[18] *TRRO* ¶152.

27. The Commission should use that same analysis here to conclude that using the MSA as a geographic market definition is inappropriate for special access as well. Indeed, in the *TRRO*, the Commission soundly rejected the notion that regions at least as large as MSAs are the appropriate geographic market – finding that "an MSA-wide approach … would require … lumping together areas in which the prospects for competitive entry are widely disparate."[19]

28. The experience of CMRS carriers in purchasing special access services illustrates the limitations of using the MSA as the relevant market. CMRS carriers don't just offer service in the central business district – they offer service with a national footprint that includes areas within an MSA with only limited demands for high-capacity circuits. It remains as true today as it was in 2005 that CMRS carriers such as Sprint Nextel require special access services for circuits that connect their cell sites to mobile switching centers, and those cell sites are spread widely throughout an MSA.

III. THERE ARE SIGNIFICANT BARRIERS TO THE EMERGENCE OF COMPETITION IN THE PROVISION OF SPECIAL ACCESS SERVICES

29. The ability of BOCs to raise and maintain special access prices above competitive levels depends critically on the profitability of entry by new competitors and the profitability of expansion by existing competitors. However, sunk costs and the need to achieve economies of scale and scope constitute significant barriers to profitable entry and expansion by competitors and thus to effective competition in most of the markets for DS1 and DS3 special access services. Sprint Nextel's experience in purchasing special access services reflects this lack of competition.

30. The Commission, in its extensive examination of competition in loops and interoffice transport in its *TRRO*, has already found that there are significant barriers to competitive supply of loop and transport services (analogous to CTs and CMs, respectively). The FCC found that loop investments require large sunk

[19] *TRRO* ¶155.

costs and therefore pose substantial barriers to competition for high-capacity loops.[20] This conclusion is consistent with a pre-merger AT&T analysis that quantified the importance of sunk costs and found that competitive carriers must have at least three DS3s of demand at the potential location to justify deploying CTs.[21]

31. That analysis found that the lion's share of the cost of transmission facilities required by a competitive carrier is sunk and would be stranded and lost if it is unable to offer service profitably.[22] And pre-merger AT&T's analysis found that deployment of transport facilities to a particular point of aggregation is only economic when there are at least 18 DS3s of traffic available.[23]

32. Moreover, as discussed previously, CLEC investments in the most profitable areas of an MSA do not enable competitors to provide CT or CM service in many or most of the other areas within the MSA. Consequently, in the great majority of the areas, sunk costs constitute a sufficient barrier to entry to make the BOC an effective natural monopoly in CT service. Moreover, in their analysis Drs. Ordover and Willig found that sunk costs and limited traffic concentration also provide the conditions for what is effectively natural monopoly in many interoffice CM markets.[24]

33. In addition to significant sunk costs, special access services are supplied under conditions of economies of scale and scope. Fixed costs of trenching and laying cable, combined with lower unit costs of both higher-capacity fiber and electronics, provide the supplier who achieves greater aggregate demand in a geographic market with a significant cost advantage over competitors with lesser demand. BOCs enjoy economies of scale by aggregating the demands of

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[20] *TRRO* ¶¶ 150, 152-153.

[21] Reply Declaration of Janusz A. Ordover and Robert D. Willig on Behalf of AT&T Corp., RM-10593, ¶29 (Jan. 23, 2003) (*Ordover/Willig Reply Declaration*).

[22] *Id.* ¶26.

[23] *Id.* ¶29.

[24] *Id.* ¶¶ 26-27.

customers located along a route. In addition, they achieve economies of scope on high-capacity transport facilities by combining special access traffic with traffic from other BOC-supplied services (local telephone, long-distance, data and IP-based services, etc.).[25]

34. Since the filing of comments in 2005, the mergers of MCI and Verizon, SBC and AT&T, and AT&T and BellSouth have increased the economies of scale and scope that are achievable by BOCs and provided them an increased competitive advantage over other suppliers of special access services. All of these incumbents have cited cost savings as benefits of their respective combinations. Verizon expects benefits of its merger with MCI to make it a more efficient competitor and to realize financial benefits from eliminating overlapping network facilities.[26] SBC expects synergies of merging with AT&T to reduce costs of network operations as facilities and operations are consolidated.[27] And AT&T cited its ability to integrate wireless and wireline IP networks with BellSouth to realize substantial cost savings.[28]

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[25] The FCC's record in the *TRRO* established that "the cost of construction does not vary significantly by loop capacity" and "[t]he most significant portion of the costs incurred in building a fiber loop results from deploying the physical fiber infrastructure into underground conduit to a particular location, rather than from lighting the fiber-optic cable. . . . [F]or these reasons, LECs do not typically construct fiber loop facilities at lower capacity levels, such as DS1 or DS3, but rather install high-capacity fiber-optic cables and then use electronics to light the fiber at specific capacity levels, often 'channelizing' these higher-capacity offerings into multiple lower-capacity streams." *TRRO* ¶150.

[26] *See* Verizon Communications Inc. S-4 filed with the Securities and Exchange Commission (SEC) on April 12, 2005 at 44-5, *available at*: <http://www.sec.gov/Archives/edgar/data/732712/000119312505074187/ds4.htm#rom96342_40>.

[27] *See* AT&T Inc. S-4. filed with the SEC on March 11, 2005 at 26, *available at*: <http://www.sec.gov/Archives/edgar/data/732717/000095012305003016/y04651sv4.htm#132>.

[28] *See* AT&T Inc. S-4. filed with the SEC on March 31, 2006 at 26, *available at*: <http://www.sec.gov/Archives/edgar/data/732717/000095012306004024/y34320sv4.htm#139>.

IV. AS A RESULT OF BARRIERS TO ENTRY, THERE IS LITTLE COMPETITION IN THE SUPPLY OF SPECIAL ACCESS SERVICES.

35. The barriers to entry by competitive suppliers of special access services reviewed above have resulted in only limited competition in the supply of special access services. In this section, I test the BOCs' claims that competition is extensive[29] against the evidence of the actual extent of competition.

36. Sprint Nextel's nationwide CMRS network encompasses virtually every MSA. Overall, Sprint Nextel purchased 97 percent of DS1 circuits for both its wireless and wireline networks from ILECs in 2006.[30] For DS3 circuits, the corresponding percentage is 88.4 percent.[31] Thus, most of the markets in which Sprint Nextel requires special access services in fact have only very limited competitive alternatives.

37. In 2004 Nextel issued a request for information (RFI) for the provision of high-capacity CTs and CMs in the New York City metropolitan area. The responses provide further evidence of the lack of competitive alternatives. Nextel had over 1,500 cell sites that were the focus of the RFI. Even though New York City is arguably the most fertile ground for the development of special access competition, CLECs responded by offering to provide special access for only 43 of those 1,500 cell sites.[32]

38. Sprint Nextel's experience is not atypical. In a 2005 filing, another CMRS carrier, T-Mobile, similarly reported that it has depended on ILECs for over 96%

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[29] *See, e.g.*, "Special Access 101," a presentation by US Telecom to Congressional staff on July 27, 2007, at page 5.

[30] Declaration of Gary B. Lindsey, Attachment 1 to Comments of Sprint Nextel Corporation, WC Docket No. 05-25, ¶ 9 (August 8, 2007) (*Lindsey Declaration* and 2007 Sprint Nextel Comments).

[31] *Id.*

[32] Declaration of Steven Sachs, filed as Attachment 2 to 2005 Nextel Reply, ¶¶ 10-11 (July 29, 2005) (*Sachs Declaration*).

of its CT links.[33] Even pre-merger AT&T, at that time one of the largest CLEC suppliers of special access, obtained 93% of its DS1-level transport from incumbent carriers, according to a 2003 Declaration submitted by pre-merger AT&T.[34]

39. The record in this proceeding contains substantial reliable information regarding the lack of competition in special access. The most extensive evidence has been developed by ETI. In a 2003 declaration on behalf of pre-merger AT&T, Lee Selwyn determined that in MSAs that have some Phase II pricing flexibility, pre-merger AT&T relied on ILECs for special access services in about 94% of the buildings served by pre-merger AT&T.[35] In MSAs where there is no pricing flexibility, that percentage rose to 97%.[36] Thus, pre-merger AT&T's reliance on CLECs was nearly the same in both categories of MSAs, suggesting that the availability of competitive alternatives to the BOC is equally limited in both types of MSAs. Even in what is arguably the most promising metropolitan area for CLEC competition, the New York MSA, no non-ILEC facilities were available at nearly 86% of the business locations served by pre-merger AT&T.[37] And in New York City, only 900 of 220,000 buildings (mixed use, commercial, industrial, and public) were served by CLEC fiber at the time of the Selwyn Declaration in 2003.[38] Indeed, as the subsequent ETI study highlighted, non-ILECs provided

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[33] Declaration of Chris Sykes, filed as Attachment C to Comments of T-Mobile USA, Inc., WC Docket No. 05-25, ¶ 5 (June 13, 2005) (*Sykes Declaration*).

[34] *Ordover/Willig Reply Declaration* ¶30.

[35] Reply Declaration of Dr. Lee Selwyn, ¶ 20, attached as Exhibit 3 to Reply Comments of AT&T Corp., RM-10593, Table 7 (Jan. 23, 2003) (*Selwyn Declaration*).

[36] *Id.*

[37] *Id.* Table 8.

[38] *Id.* ¶ 48, citing *Proceeding on Motion of the Commission to Investigate Methods to Improve and Maintain High Quality Special Services Performance by Verizon New York, Inc., Opinion and Order Modifying Special Services Guidelines for Verizon New York, Inc., Conforming Tariff, and Requiring Additional Performance Reporting,* NY PSC Case 00-C-2051, at 7-8 (June 15, 2001).

facilities-based service to no more than 1% of the commercial buildings in the United States.[39]

40. The competitive landscape has not improved measurably since that time. In January, 2007 Sprint Nextel queried 77 alternative access providers asking whether they could provide special access services to any of more than 52,000 Sprint Nextel cell sites nationwide. Just 16 vendors had such capability at any of those Sprint Nextel cell sites and those competitive vendors were equipped to serve only some 1% of the cell sites with on-net facilities.[40] The responses confirm the lack of competitive alternatives in most areas of Sprint Nextel's network.

41. Even if transport services were supplied in competitive markets (conditions that may occur more frequently than for CTs), the BOCs may be able to capture the monopoly profits from the sale of price-capped CTs. Specifically, wireless carriers typically (but not always) purchase CTs and CMs for the same circuit from a single vendor and at separate prices for CTs and CMs. I understand that wireless carriers do this because (among other reasons) if they were to purchase CTs and CMs from separate vendors, they would incur greater difficulties in fault-tracing/restoration when there is an outage on a circuit provided by more than one carrier.[41]

42. Sprint Nextel uses CT and CM in combination to provide a circuit from a cell site to a wire center and then on to a more distant wire center or BOC central office.

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[39] Economics and Technology Incorporated, *Competition in Access Markets: Reality or Illusion*, Table 2.1 (August 2004) (*ETI Competition in Access Markets*), filed as Attachment A to Comments of the Ad Hoc Telecommunications Users Committee, WC Docket No. 05-25 (June 13, 2005) (2005 Ad Hoc Comments). Updated data for New York and Washington metropolitan areas, Denver, San Francisco, Dallas, Oakland and Florida are consistent with this picture. Declaration of Susan M. Gately, filed as Attachment B of the 2005 Ad Hoc Comments, ¶¶ 17-19 (June 13, 2005) (*Gately Declaration*).

[40] *Lindsey Declaration* ¶¶ 4-5.

[41] *Sachs Declaration* ¶ 7.

As a result of these complementary purchases, even when the BOCs have Phase II pricing flexibility only for CMs but not for CTs, and even though Sprint Nextel purchases those services separately at separate prices, the BOCs may be able to set the unconstrained rate of CMs to extract the monopoly profit from CTs. Thus, the sum of the two prices that Sprint Nextel pays for CT and CM will equal the sum of the unregulated monopoly prices for both, and in that way the BOC can reap the monopoly profits from the sale of both CMs and CTs.[42]

43. In summary, Sprint Nextel's experience and that of other special access customers indicates that the emergence of competition anticipated by the Commission under the current price flexibility triggers did not occur, and today competition is not sufficiently robust to regulate the special access rates charged by the BOCs.

V. INTEGRATED BOCS HAVE INCENTIVES TO RAISE WIRELESS RIVALS' COSTS OF SPECIAL ACCESS

44. CMRS carriers use special access purchased from the BOCs to link their cell sites to their own networks. At the same time these CMRS carriers also compete with the wireless affiliates of BOCs. A BOC that supplies CT and CM services to a CMRS competitor can raise that rival's costs by increasing special access rates in price flexibility areas where there are limited alternative sources of special access. By doing so the BOC's wireless affiliate benefits from weaker competition and an increased demand for its own wireless services.

45. In the case of Verizon, partial ownership of its affiliate Verizon Wireless enables the BOC to realize a portion of the benefit of raising wireless rivals' costs through higher special access rates. In 2005, AT&T, which held a 60% interest in Cingular, was in a similar position.

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[42] The BOC's ability to price in this way will depend in part on the extent to which special access customers tend to purchase CTs and CMs for joint usage, and the efficacy of any non-discrimination provisions.

46. Now, as a result of its merger with Bell South, AT&T has full ownership of the Cingular (now AT&T Mobility) wireless operation. For a BOC that fully owns its wireless affiliate an increased price of special access is an internal transfer that does not affect the profit-maximizing calculation of its wireless division. As a result, AT&T's incentive to raise the costs of its wireless competitors, including Sprint Nextel, through higher special access rates has increased since 2005.

VI. THE EXERCISE OF MARKET POWER: THE PRICING EVIDENCE

47. The previous sections have illustrated the general absence of competition faced by the BOCs in the provision of special access. Thus, the structural conditions necessary for supracompetitive pricing exist in the markets for special access services. And it is the case that in areas where the BOCs have been granted pricing flexibility, the prices of special access services appear to have remained significantly above competitive levels. As I discuss below, that pricing behavior is evident from data that have been previously provided to the Commission.

A. Comparing Rates Under Pricing Flexibility and Those Under Price Caps

48. A meaningful analysis of rates requires comparisons that eliminate differences due to changes in spending on special access services that result from differences in volume purchased, duration of contract, and aggregation and bundling of services subject to different price regulations. Evaluating the effect of pricing flexibility on special access rates thus requires looking at a rate for a particular service for a particular term, with otherwise identical contractual provisions. The Commission has available to it the relevant comparisons from several sources.

49. For example, in his Declaration in 2005 Dr. Joseph Stith, a mathematical statistician at pre-merger AT&T, calculated *pro forma* price flexibility rates (*i.e.*, rates no longer subject to price caps), price-capped rates, and the UNE rate for each BOC in effect on July 1, 2004.[43] The *pro forma* rates provide a meaningful

[43] Declaration of M. Joseph Stith, WC Docket No. 04-313; filed as Attachment H to Comments of AT&T Corp. (Oct. 4, 2004), Attachment 1 at 4, "Comparison of costs (10-mile Standalone Circuit) Rates in Effect on July 1, 2004" (*Stith Declaration*).

comparison by examining for the same commitment period exactly the same service offered for each capacity – a stand-alone circuit consisting of two channel terminations, a fixed mileage transport charge, a variable mileage transport charge, and an assumed 10 miles of transport.[44]

50. While Dr. Stith's review shows that there is considerable variation in prices across BOCs, in no instance does the *pro forma* price flexibility rate for either a DS1 or DS3 comparison (for both month-to-month and 3-year optional pricing plans) fall below the *pro forma* price-capped rate.[45] When rates included in his review are averaged across all BOCs and all geographic areas, for month-to-month DS1 service the pricing flexibility rates are 19% above the price cap, and are nearly three times the UNE rates. For DS3s, the average month-to-month pricing flexibility rate is 15% greater than the price-capped rate and more than three times the UNE rate.[46]

51. In her 2005 Declaration on behalf of Global Crossing, Janet Fischer charted service-specific comparisons between the BOCs' price flexibility and price-capped rates over the 1997-2005 period across various states and BOCs. The comparison for BellSouth reveals that as soon as pricing flexibility became available in 2001, the BOC immediately raised DS1 rates (for both CTs and CMs). And in three of Ms. Fisher's four comparisons for BellSouth, the price flexibility rate remained above the price-capped rate.[47] For the other BOCs examined by Ms. Fischer, the pricing flexibility rate remained constant or

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[44] *Stith Declaration* ¶5. If a BOC has zoned rates, the calculation used the Zone 1 rate.

[45] *Stith Declaration*, Attachment 1, at 1-20.

[46] In order to calculate the differences in prices, a simple average of the percentage differences was taken in which each observation was the percentage difference between a state's rates as reported by Stith. In cases were UNE rates were not reported in Stith's tables, the observation was treated as a missing value and ignored in the UNE rate calculation.

[47] Declaration of Janet S. Fischer on behalf of Global Crossing North America, Inc., attached to Comments of CompTel/ALTS, *et al.*, WC Docket No. 05-25, Table 4 (June 13, 2005). In the one exception, the price flexibility rate for DS1 month-to-month channel terminations converges to the price-capped rate because of an increase in the price-capped rate, not because of a fall in the price flexibility rate.

increased while the gap between the pricing flexibility rates and the price-capped rates increased.

52. These results were updated and confirmed in 2006 by the Government Accountability Office (GAO). The GAO analyzed data on dedicated access from 16 MSA – four metropolitan areas in the geographic areas broadly served by each of the four BOCs (AT&T, BellSouth, Qwest, and Verizon).[48] It analyzed 1,152 list prices for CTs and CMs for monthly, 3-year, and 5-year term commitments and found that "as of June, 2006 the price-flex list price was on average higher than the price-cap price, regardless of whether the price was for channel terminations, interoffice mileage, DS-1 or DS-3 service, different term arrangements, or different density zones."[49] Adjusting prices for inflation using the producer price index for wired telecommunications carriers "does not change the result that prices are higher in Phase II areas on average, or that prices have increased over time in Phase II areas."[50]

53. In order to capture the effect of contract discounts, GAO also compared average revenue for special access services in 56 MSAs – 27 MSAs with Phase II flexibility for CTs and 29 with Phase I.[51] As of 2005, average revenue in the Phase II areas is about 4 percent higher for DS1 CTs, and 24 percent higher for DS3 CTs, compared with average revenue in the Phase I areas.[52] Adjusting the average revenue data for inflation and weighting the data on the basis of the

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[48] United States Government Accountability Office (GAO), Report to the Chairman, Committee on Government Reform, House of Representatives, *Telecommunications: FCC Needs to Improve its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, at 10 (Nov. 30, 2006), *available at*: <http://www.gao.gov/new.items/d0780.pdf> (GAO Report).

[49] *Id.* at 28.

[50] *Id.*

[51] *Id.* at 62.

[52] *Id.* at 32.

number of businesses in an MSA did not change the finding that Phase II average revenue was higher than Phase I average revenue.[53]

54. Sprint Nextel has systematically compared special access tariffs in effect in July 2007 in Verizon territories. For a representative circuit consisting of two CTs and 10 miles of CM, Sprint Nextel's analysis confirms the patterns found in earlier studies. For DS1 circuits in the Verizon states, the month-to-month price flexibility rates are 21% to 33% greater than the month-to-month price cap rates, and the 5-year term price flexibility rates are 20% to 33% greater than the 5-year term price cap rates.[54]

55. For DS3 circuits, Sprint Nextel finds that in the Verizon states the month-to-month price flexibility rates are 13% to 52% greater than the month-to-month price cap rates, and the 5-year term price flex rates are 6% to 42% greater than the 5-year term price cap rates.

56. Pursuant to a commitment AT&T made to the Commission in seeking approval of its merger with BellSouth, in 2007 AT&T reduced special access rates in Phase II areas to the level of its rates in price cap areas.[55] Prior to this, AT&T's rates for DS1 10-mile circuits in 2006 were as much as 32% higher than the corresponding price-cap rates, and its rates for DS3 were also as much as 32% higher than the corresponding price-cap rates.[56]

57. Sprint Nextel has also compared 5-year term price-cap rates for DS1 and DS3 10-mile circuits with UNE rates in AT&T and Verizon territories. Across five states (WI, TX, OH, MI, CA) AT&T's price-cap rates for DS1 circuits are from 53% to 248% greater than AT&T's comparable UNE rates. In four states (PA, NY, MA,

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[53] *Id.* at 62.

[54] "Comparison of Price Cap and Pricing Flexibility Rates," Exhibit 1 to 2007 Sprint Nextel Comments (Exhibit 1).

[55] *See AT&T Inc. and BellSouth Corporation, Application for Transfer of Control,* Memorandum Opinion and Order, 22 FCC Rcd 5662, Appendix F, Special Access Condition 6 (2007); Order on Reconsideration, 22 FCC Rcd 6285, ¶ 1 (2007).

[56] Exhibit 1.

MD) Verizon's price-cap rates for DS1 circuits are 24% to 126% greater than its comparable UNE rates. For DS3 circuits (except for a single density zone in California) the price cap rates for AT&T's DS3 circuits in the five states are greater than UNE rates, exceeding them by up to 165%. In the four Verizon states the price cap rates for DS3 circuits are from 4% to 59% greater than the UNE rates.[57]

58. In summary, these data indicate that pricing flexibility has allowed the BOCs to increase prices above the levels that price caps otherwise would have allowed and far above the comparable UNE rates. Moreover, it appears that the onset of pricing flexibility was more likely to cause prices to increase rather than fall. This is hardly what one would have expected if the supply of special access services were effectively competitive.

B. Contract Pricing Plans Enable BOCs to Extend Market Power

59. Dr. Joseph Farrell, Professor of Economics at the University of California, Berkeley and a former Chief Economist at the FCC, showed that ILEC special access tariffs include pricing schemes that provide loyalty discounts, volume commitments and termination penalties that blunt the incentive for a customer to contract with a competitive carrier whose long-run cost is below the ILEC's price.[58] Dr. Farrell analyzed the incentives created by SBC's "Managed Value Plan" (MVP) Tariff. The MVP establishes a "Minimum Annual Revenue Commitment" (MARC) that the customer must maintain with the BOC for a five-year term in order to receive annual discounts that increase from 9% in the first year to 14% in the fifth year. He finds that the MARC combined with a termination penalty "sets up an automatic and sometimes drastic price cut for any portion of the customer's business that the customer is considering switching to a

[57] "Comparison of AT&T and Verizon Special Access Rates and Unbundled Network Element Rates," attached as Exhibit 3 to 2007 Sprint Nextel Comments.

[58] Reply Declaration of Joseph Farrell, attached to Reply Comments of CompTel, *et al.*, WC Docket No. 05-25, ¶ 4 (July 29, 2005).

competitor."[59] Such pricing plans can have the effect of requiring a competitive carrier to beat a marginal price that is well below the average price that special access customers pay the BOC. As a result, special pricing terms can have the effect of excluding competitors unless they are able to enter the market on a large scale and serve all of the business of a sufficient number of customers.

60. The GAO likewise found that many contracts that provide for discounts off the list price include revenue guarantees, requirements for shifting business away from competitors, and severe termination penalties. "Unless a competitor can meet the customer's entire demand, the customer has an incentive to stay with the incumbent and to purchase additional circuits from the incumbent, rather than switch to a competitor or purchase a portion of their demand from a competitor – even if the competitor is less expensive."[60]

C. Summary

61. The rigorous *pro forma* comparisons of special access prices that have been provided to the Commission (as well as those of the GAO) are consistent with a conclusion that the effect of pricing flexibility has been to allow the BOCs to exercise market power. Those comparisons reveal that the DS1 and DS3 rates charged by the BOCs exceed the equivalent price-capped rates and are far higher than one reasonable measure of costs of service, the comparable UNE rates. Moreover, the terms of special access contracts that the BOCs offer in price flexibility areas have the effect of excluding all but the largest competitors.

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[59] *Id.* ¶ 11.

[60] GAO Report at 30.

VII. CONCLUSION

62. Previous sections have described some key "stubborn facts" that should lead the Commission to implement a more refined special access regulatory regime. The entry barriers to the provision of CT and CM services are substantial and only likely to be overcome in some parts of an MSA, not all of the MSA. The existence of those barriers has prevented special access competition from emerging throughout the MSA. And the effect of allowing the BOCs flexibility in pricing special access services in areas where competition is non-existent or nearly so has elevated special access rates further above competitive levels. As a result, consumers have been harmed through these higher prices.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Executed on August 8, 2007

B Mitchell

Bridger M. Mitchell

Attachment A

to

Declaration of Bridger M. Mitchell

Curriculum Vitae

INTERNATIONAL

BRIDGER M. MITCHELL

Vice President

Ph.D. Economics,
Massachusetts Institute of Technology

A.B. Economics
Stanford University

Bridger M. Mitchell, Vice President, is the director of CRA's Palo Alto office. He is an expert in competition and pricing in the telecommunications industry and is the author of five books and numerous articles in professional journals. He has researched regulatory issues involving the theory and practice of telecommunications pricing, competition, and equal access in local telephone markets, interconnection of wireless and wire line telecommunications networks, international telephone rates, and broadcasting and cable television. Dr. Mitchell has testified and/or consulted on a number of litigation and regulatory matters involving telecommunications, including market definition, interconnection costing and pricing, incentive regulation, anticompetitive behavior, telecommunications cost modeling, and fair cost distribution, as well as damages from breach of contract and misappropriation of trade secrets. Prior to joining CRA, he taught economics at Stanford University and UCLA, and was a senior economist at the RAND Corporation. Dr. Mitchell's international experience includes projects in Argentina, Australia, Brazil, Canada, Hong Kong, India, Malaysia, Mexico, New Zealand, Peru, Thailand, Trinidad and Tobago, the United Kingdom, and the European Union; residence at research centers in Berlin and Delft; as well as consulting assignments with the World Bank.

PROFESSIONAL EXPERIENCE

1994–Present	*Vice President*, CRA International, Palo Alto, CA
1972–1994	*Senior Economist*, Social Policy Department, RAND Corporation, Santa Monica, CA
1977–1979	*Research Fellow*, International Institute of Management, Science Center, Berlin
1976	*Acting Associate Professor of Economics*, Stanford University
1973–1975	*Lecturer in Economics*, UCLA
1972	*Director*, National Health Insurance Analysis Staff, Department of Health, Education, and Welfare, Washington, D.C.
1971–1972	*Brookings Economic Policy Fellow*, Office of the Secretary, Department of Health, Education, and Welfare, Washington, D.C.
1971–1972	*Economic Policy Fellow*, The Brookings Institution, Washington, D.C.

1966–1971 *Assistant Professor of Economics*, Stanford University

RESEARCH AREAS

Telecommunications

Analysis of interconnection of telecommunications networks.

Analysis of competition and equal access in local telephone markets.

Comprehensive study of theory and practice of telecommunications pricing.

Methodology for estimating the incremental costs of local exchange telephone service.

First model of the cost structure of a cable television firm.

Analysis of major regulatory issues in broadcasting and cable television.

Studies of costs and benefits of usage-sensitive pricing for local telephone service.

Comparative international study of telephone rates.

Evaluation of peak-load and capacity pricing for network services.

Economics of universal service in email networks.

Energy

Studies of consumer demand for electricity and forecasts of electricity demand.

Analysis of structure of electric utility rates in the United States and abroad.

Assessment of peak-load pricing in electric utilities in six European countries and its potential effects in the United States.

Co-direction of a major five-year experiment to test the costs and benefits of peak-load electricity rates for residential customers in Los Angeles.

Analysis of results from electricity rate structure experiments for the design of new tariffs.

Health

Development of demand model for employer-provided health insurance.

Study of alternative methods of financing national health insurance plans and distribution of the costs and insurance benefits across consumer groups.

Analysis of effect of national insurance financing on unemployment and federal expenditures.

Economic evaluation of national health insurance legislation.

Economic Regulation

Analysis of federal regulation of cable television.

Assessment of effects of copyright requirements on cable television service.

Econometrics

Development of new methods for estimating large-scale simultaneous equation models.

Time-series analysis of economic data.

Design of experiment for time-of-day electricity pricing.

Measurement of technological change.

PROFESSIONAL ORGANIZATIONS

American Economics Association.

International Telecommunications Society

Member, Editorial Board, Information Economics and Policy, 1985–2004

Member, Organizing Committee, Telecommunications Policy Research Conference, 1990

Chair, Organizing Committee, Telecommunications Policy Research Conference, 1991–1993

Chair, Board of Directors, Telecommunications Policy Research Conference, 1993–1994

HONORS

Phi Beta Kappa, 1962

Danforth Fellow, 1962–1966

Woodrow Wilson Fellow, 1962–1963

National Science Foundation Research Fellow, 1965–1966

Brookings Economic Policy Fellow, 1972–1972

German Marshall Fund Fellow, 1977–1979

Alexander von Humboldt Foundation Research Fellow, 1977–1979

CONSULTANCIES

World Bank, 1991–1994

California Public Utilities Commission, 1992

Social Security Administration, 1977–1978

Office of Telecommunications Policy, 1976–1978

Department of Health, Education, and Welfare, 1972–1978

Various law firms, corporations, and banks, 1965–1994

PUBLICATIONS

Books

Telecommunications Competition: The Last Ten Miles. With I. Vogelsang. Cambridge, MA: MIT Press and AEI Press, 1997. (Also published in Korean, Korean Information Society Development Institute, 1998.)

Universal Access to E-Mail: Feasibility and Societal Implications. With R. H. Anderson, T. K. Bikson and S. A. Law. Santa Monica, CA: RAND, 1995.

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"Emerging Network Technologies." With D. Hatfield and P. Srinagesh. *Handbook of Telecommunications Economics, Vol. 2,* S. K. Majumdar, M. Cave, I. Vogelsang, (eds.), 2005.

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- Expert reports and deposition testimony on behalf of TeraBeam Networks in its claim for damages from misappropriation of trade secrets and unfair competition by Dominion Communications, and evaluation of reasonable royalty damages from alleged patent infringement claimed by Dominion.

- Expert reports on behalf of Telstra Corporation to the Australian Competition Tribunal in a review of a regulatory determination concerning the pricing of originating and terminating access services.

- Expert report and deposition testimony on behalf of plaintiffs in their claim for damages for misrepresentation of wireless telephone coverage by Los Angeles Cellular Telephone Company.

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- Expert report (with Adonis Yatchew) and testimony on behalf of the Electricity Distributors Association and the Canadian Electricity Association concerning the fair distribution of the costs of joint-use power poles before the Ontario Energy Board.

- Expert report (with John R. Woodbury) on behalf of Sprint Nextel submitted to the Federal Communications Commission concerning regulatory triggers for granting local exchange carriers flexibility in the pricing of special access services.

- Expert report (with Adonis Yatchew) and testimony on behalf of New Brunswick Power Distribution and Customer Service Corporation (DISCO) concerning the fair distribution of the costs of joint-use power poles before the New Brunswick Board of Commissioners of Public Utilities.

- Direct and rebuttal testimony on behalf of Sprint Communications Company concerning termination of the rural exemption of Consolidated Communications' local exchange carriers in Texas.

- Expert report (with Stanley M. Besen) filed before the Federal Communications Commission on behalf of Time Warner Telecom, Inc. concerning the effect of the proposed merger of AT&T Inc. and BellSouth Corporation on the increased footprint of the merged entity and the use of regulatory benchmarks.

- Economic study (with P. Paterson, M. Dodd, P. Reynolds, A. Jung, P. Waters, R. Nicholls, E. Ball) on IP interworking on behalf of the GSM Association.

EXHIBIT 1

COMPARISON OF PRICE CAP AND
PRICING FLEXIBILITY RATES

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Southwestern Bell

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Non-Plan	$ 195.00	$ 215.00	10%	$ 112.00	$ 115.00	3%	$ 90.00	$ 100.00	11%
Zone 1	$ 195.00	$ 215.00	10%	$ 112.00	$ 112.00	0%	$ 92.00	$ 92.00	0%
Zone 2	$ 200.00	$ 225.00	13%	$ 116.00	$ 116.00	0%	$ 100.00	$ 100.00	0%
Zone3	$ 205.00	$ 240.00	17%	$ 125.00	$ 125.00	0%	$ 110.00	$ 110.00	0%
DS3									
Zone 1	$ 1,900.00	$ 1,950.00	3%	$ 1,150.00	$ 1,250.00	9%	$ 800.00	$ 975.00	22%
Zone 2	$ 1,950.00	$ 2,100.00	8%	$ 1,200.00	$ 1,300.00	8%	$ 825.00	$ 1,050.00	27%
Zone 3	$ 2,000.00	$ 2,100.00	5%	$ 1,250.00	$ 1,400.00	12%	$ 850.00	$ 1,125.00	32%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 62.00	$ 75.00	21%	$ 39.00	$ 39.00	0%	$ 34.00	$ 34.00	0%
Zone 2	$ 65.00	$ 80.00	23%	$ 42.50	$ 42.50	0%	$ 37.50	$ 37.50	0%
Zone 3	$ 68.00	$ 85.00	25%	$ 45.00	$ 45.00	0%	$ 40.00	$ 40.00	0%
DS3									
Zone 1	$ 725.00	$ 725.00	0%	$ 505.00	$ 550.00	9%	$ 395.00	$ 450.00	14%
Zone 2	$ 750.00	$ 750.00	0%	$ 525.00	$ 575.00	10%	$ 400.00	$ 475.00	
Zone 3	$ 775.00	$ 775.00	0%	$ 535.00	$ 600.00	12%	$ 410.00	$ 500.00	
Channel Mileage - Per Mile									
DS1									
Zone 1	$ 15.70	$ 16.00	2%	$ 13.00	$ 13.00	0%	$ 10.00	$ 10.00	0%
Zone 2	$ 15.70	$ 17.00	8%	$ 13.50	$ 13.50	0%	$ 10.50	$ 10.50	0%
Zone 3	$ 15.70	$ 18.00	15%	$ 14.00	$ 14.00	0%	$ 11.00	$ 11.00	0%
DS3									
Zone 1	$ 100.00	$ 100.00	0%	$ 60.00	$ 70.00	17%	$ 36.00	$ 45.00	25%
Zone 2	$ 105.00	$ 105.00	0%	$ 68.00	$ 75.00	10%	$ 38.25	$ 50.00	31%
Zone 3	$ 110.00	$ 110.00	0%	$ 72.00	$ 80.00	11%	$ 41.00	$ 55.00	34%
Total Circuit									
DS1									
Non-Plan	$ 609.00	$ 665.00	9%	$ 393.00	$ 399.00	2%	$ 314.00	$ 334.00	6%
Zone 1	$ 609.00	$ 665.00	9%	$ 393.00	$ 393.00	0%	$ 318.00	$ 318.00	0%
Zone 2	$ 619.00	$ 685.00	11%	$ 401.00	$ 401.00	0%	$ 334.00	$ 334.00	0%
Zone3	$ 629.00	$ 715.00	14%	$ 419.00	$ 419.00	0%	$ 354.00	$ 354.00	0%
DS3									
Zone 1	$ 5,525.00	$ 5,625.00	2%	$ 3,405.00	$ 3,750.00	10%	$ 2,355.00	$ 2,850.00	21%
Zone 2	$ 5,700.00	$ 6,000.00	5%	$ 3,605.00	$ 3,925.00	9%	$ 2,432.50	$ 3,075.00	26%
Zone 3	$ 5,875.00	$ 6,075.00	3%	$ 3,755.00	$ 4,200.00	12%	$ 2,520.00	$ 3,300.00	31%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
Rates include the Term Payment Plan rates for 3 and 5 year and monthly rates are the Optional Payment Plan (individual terms - no portability)
FCC No. 73, sections 7.3.10 & 39.5.2.7 (DS1s) and sections 20.5.1, 20.5.3, 20.5.4 & 39.5.2.12 (DS3s)
Pre Merger Condition Prices

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Pac Bell

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Zone 1	$ 130.00	$ 152.50	17%	$ 121.00	$ 112.50	-7%	$ 113.00	$ 100.00	-12%
Zone 2	$ 137.00	$ 170.00	24%	$ 123.75	$ 122.50	-1%	$ 115.00	$ 110.00	-4%
Zone3	$ 145.25	$ 180.00	24%	$ 133.50	$ 132.50	-1%	$ 121.50	$ 120.00	-1%
DS3									
Zone 1	$2,200.00	$2,500.00	14%	$ 850.00	$1,145.00	35%	$ 740.00	$ 970.00	31%
Zone 2	$2,200.00	$2,500.00	14%	$ 900.00	$1,195.00	33%	$ 765.00	$ 990.00	29%
Zone3	$2,200.00	$2,500.00	14%	$ 950.00	$1,245.00	31%	$ 790.00	$1,010.00	28%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 49.00	$ 62.50	28%	$ 43.00	$ 40.00	-7%	$ 38.00	$ 35.00	-8%
Zone 2	$ 49.00	$ 67.50	38%	$ 45.50	$ 42.50	-7%	$ 40.50	$ 37.50	-7%
Zone3	$ 49.00	$ 75.00	53%	$ 46.00	$ 45.00	-2%	$ 41.00	$ 40.00	-2%
DS3									
Zone 1	$ 412.75	$ 500.00	21%	$ 405.00	$ 405.00	0%	$ 400.00	$ 400.00	0%
Zone 2	$ 422.75	$ 550.00	30%	$ 415.00	$ 415.00	0%	$ 410.00	$ 410.00	0%
Zone3	$ 447.75	$ 600.00	34%	$ 440.00	$ 440.00	0%	$ 435.00	$ 435.00	0%
Channel Mileage - Per Mile									
DS1									
Zone 1	$ 10.10	$ 12.75	26%	$ 9.90	$ 9.25	-7%	$ 9.75	$ 8.50	-13%
Zone 2	$ 10.10	$ 13.75	36%	$ 9.90	$ 9.75	-2%	$ 9.75	$ 9.00	-8%
Zone3	$ 10.15	$ 14.75	45%	$ 10.00	$ 10.25	2%	$ 9.85	$ 9.25	-6%
DS3									
Zone 1	$ 19.25	$ 30.96	61%	$ 18.50	$ 18.50	0%	$ 14.50	$ 17.50	21%
Zone 2	$ 21.70	$ 41.00	89%	$ 21.00	$ 21.00	0%	$ 20.00	$ 20.00	0%
Zone3	$ 24.20	$ 41.00	69%	$ 23.50	$ 23.50	0%	$ 22.50	$ 22.50	0%
Total Circuit									
DS1									
Zone 1	$ 410.00	$ 495.00	21%	$ 384.00	$ 357.50	-7%	$ 361.50	$ 320.00	-11%
Zone 2	$ 424.00	$ 545.00	29%	$ 392.00	$ 385.00	-2%	$ 368.00	$ 347.50	-6%
Zone3	$ 441.00	$ 582.50	32%	$ 413.00	$ 412.50	0%	$ 382.50	$ 372.50	-3%
DS3									
Zone 1	$5,005.25	$5,809.60	16%	$ 2,290.00	$2,880.00	26%	$2,025.00	$2,515.00	24%
Zone 2	$5,039.75	$5,960.00	18%	$ 2,425.00	$3,015.00	24%	$2,140.00	$2,590.00	21%
Zone3	$5,089.75	$6,010.00	18%	$ 2,575.00	$3,165.00	23%	$2,240.00	$2,680.00	20%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
DS1 rates are from the Term Payment Plan from sections 7.5.9 & 31.5.2.7
DS3 FiberAdvantage rates from FCC No. 1, 7.5.9 & 31.5.2.7
Pre Merger Condition Prices

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Ameritech

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Zone 1	$ 250.00	$ 255.00	2%	$ 117.00	$ 126.00	8%	$ 104.00	$ 113.00	9%
Zone 2	$ 260.00	$ 268.00	3%	$ 127.00	$ 135.00	6%	$ 112.00	$ 122.00	9%
Zone 3	$ 275.00	$ 275.00	0%	$ 138.00	$ 149.00	8%	$ 121.00	$ 134.00	11%
Zone 4	$ 300.00	$ 326.00	9%	$ 141.00	$ 160.00	13%	$ 124.00	$ 145.00	17%
Zone 5	$ 320.00	$ 346.00	8%	$ 144.00	$ 170.00	18%	$ 126.00	$ 153.00	21%
DS3									
Zone 1	$ 3,100.00	$ 3,200.00	3%	$1,045.00	$1,200.00	15%	$ 850.00	$ 960.00	13%
Zone 2	$ 3,300.00	$ 3,400.00	3%	$1,055.00	$1,210.00	15%	$ 860.00	$ 970.00	13%
Zone 3	$ 3,500.00	$ 3,600.00	3%	$1,115.00	$1,270.00	14%	$ 910.00	$1,020.00	12%
Zone 4	$ 3,700.00	$ 3,800.00	3%	$1,145.00	$1,300.00	14%	$ 930.00	$1,040.00	12%
Zone 5	$ 3,900.00	$ 4,000.00	3%	$1,155.00	$1,310.00	13%	$ 940.00	$1,050.00	12%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 102.50	$ 97.50	-5%	$ 40.25	$ 46.20	15%	$ 24.15	$ 30.30	25%
Zone 2	$ 104.50	$ 99.50	-5%	$ 42.55	$ 47.10	11%	$ 24.73	$ 30.90	25%
Zone 3	$ 104.50	$ 99.50	-5%	$ 44.85	$ 56.50	26%	$ 26.45	$ 37.10	40%
Zone 4	$ 110.00	$ 105.00	-5%	$ 47.15	$ 68.00	44%	$ 28.75	$ 59.50	107%
Zone 5	$ 113.00	$ 108.00	-4%	$ 49.45	$ 70.50	43%	$ 31.05	$ 61.50	98%
DS3									
Zone 1	$ 625.00	$ 600.00	-4%	$ 250.00	$ 264.00	6%	$ 200.00	$ 240.00	20%
Zone 2	$ 635.00	$ 610.00	-4%	$ 260.00	$ 270.00	4%	$ 210.00	$ 245.00	17%
Zone 3	$ 355.00	$ 630.00	77%	$ 270.00	$ 294.00	9%	$ 220.00	$ 270.00	23%
Zone 4	$ 725.00	$ 700.00	-3%	$ 280.00	$ 346.00	24%	$ 230.00	$ 322.00	40%
Zone 5	$ 735.00	$ 710.00	-3%	$ 290.00	$ 350.00	21%	$ 240.00	$ 325.00	35%
Channel Mileage - Per Mile									
DS1									
Zone 1	$ 27.90	$ 26.90	-4%	$ 15.24	$ 19.35	27%	$ 12.65	$ 17.20	36%
Zone 2	$ 29.00	$ 28.10	-3%	$ 15.47	$ 19.95	29%	$ 12.77	$ 17.40	36%
Zone 3	$ 32.10	$ 31.10	-3%	$ 15.81	$ 20.35	29%	$ 12.88	$ 17.50	36%
Zone 4	$ 35.10	$ 34.10	-3%	$ 15.93	$ 20.95	32%	$ 13.00	$ 17.70	36%
Zone 5	$ 37.90	$ 36.90	-3%	$ 16.16	$ 22.30	38%	$ 13.11	$ 17.90	37%
DS3									
Zone 1	$ 189.00	$ 186.00	-2%	$ 55.00	$ 58.75	7%	$ 27.70	$ 33.60	21%
Zone 2	$ 199.00	$ 196.00	-2%	$ 57.50	$ 61.25	7%	$ 29.70	$ 34.90	18%
Zone 3	$ 216.00	$ 213.00	-1%	$ 60.00	$ 63.75	6%	$ 31.70	$ 38.40	21%
Zone 4	$ 229.00	$ 226.00	-1%	$ 62.50	$ 73.50	18%	$ 35.70	$ 48.00	34%
Zone 5	$ 234.00	$ 231.00	-1%	$ 65.00	$ 75.00	15%	$ 37.70	$ 49.00	30%
Total Circuit									
DS1									
Zone 1	$ 881.50	$ 876.50	-1%	$ 426.65	$ 491.70	15%	$ 358.65	$ 428.30	19%
Zone 2	$ 914.50	$ 916.50	0%	$ 451.25	$ 516.60	14%	$ 376.43	$ 448.90	19%
Zone 3	$ 975.50	$ 960.50	-2%	$ 478.95	$ 558.00	17%	$ 397.25	$ 480.10	21%
Zone 4	$ 1,061.00	$ 1,098.00	3%	$ 488.45	$ 597.50	22%	$ 406.75	$ 526.50	29%
Zone 5	$ 1,132.00	$ 1,169.00	3%	$ 499.05	$ 633.50	27%	$ 414.15	$ 546.50	32%
DS3									
Zone 1	$ 8,715.00	$ 8,860.00	2%	$2,890.00	$3,251.50	13%	$2,177.00	$2,496.00	15%
Zone 2	$ 9,225.00	$ 9,370.00	2%	$2,945.00	$3,302.50	12%	$2,227.00	$2,534.00	14%
Zone3	$ 9,515.00	$ 9,960.00	5%	$3,100.00	$3,471.50	12%	$2,357.00	$2,694.00	14%
Zone 4	$10,415.00	$ 10,560.00	1%	$3,195.00	$3,681.00	15%	$2,447.00	$2,882.00	18%
Zone 5	$10,875.00	$ 11,020.00	1%	$3,250.00	$3,720.00	14%	$2,497.00	$2,915.00	17%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
DS3s do not have month to month rates - min is 12 months. MTM in this comparison are the monthly *extension* rates.
DS3s from FCC No. 2, sections 7.5.9 & 21.5.2.7
DS1 rates are from the Discount Commitment Program, FCC No. 2, sections 7.5.9 & 21.5.2.7
Pre Merger Condition Prices

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Bellsouth

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Zone 1	$ 168.00	$ 168.00	0%	$ 124.00	$ 126.00	2%	$ 120.00	$ 123.00	2%
Zone 2	$ 175.00	$ 175.00	0%	$ 126.00	$ 126.00	0%	$ 123.00	$ 123.00	0%
Zone3	$ 180.00	$ 180.00	0%	$ 126.00	$ 126.00	0%	$ 123.00	$ 123.00	0%
DS3									
Zone 1	$ 1,840.00	$ 2,070.00	13%	$ 1,105.00	$ 1,440.00	30%	$ 977.50	$ 1,290.00	32%
Zone 2	$ 1,840.00	$ 2,070.00	13%	$ 1,105.00	$ 1,440.00	30%	$ 977.50	$ 1,290.00	32%
Zone3	$ 1,840.00	$ 2,070.00	13%	$ 1,105.00	$ 1,440.00	30%	$ 977.50	$ 1,290.00	32%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 75.00	$ 85.00	13%	$ 70.00	$ 70.00	0%	$ 65.00	$ 65.00	0%
Zone 2	$ 80.00	$ 90.00	13%	$ 75.00	$ 75.00	0%	$ 70.00	$ 70.00	0%
Zone3	$ 85.00	$ 96.00	13%	$ 80.00	$ 80.00	0%	$ 75.00	$ 75.00	0%
DS3									
Zone 1	$ 1,450.00	$ 1,600.00	10%	$ 786.25	$ 925.00	18%	$ 658.75	$ 775.00	18%
Zone 2	$ 1,450.00	$ 1,600.00	10%	$ 786.25	$ 925.00	18%	$ 658.75	$ 775.00	18%
Zone3	$ 1,450.00	$ 1,600.00	10%	$ 860.25	$ 925.00	8%	$ 720.75	$ 775.00	8%
Channel Mileage - Per Mile (Band 9-25)									
DS1									
Zone 1	$ 16.00	$ 18.00	13%	$ 4.90	$ 10.00	104%	$ 3.90	$ 8.00	105%
Zone 2	$ 18.65	$ 21.00	13%	$ 7.20	$ 14.00	94%	$ 5.45	$ 12.00	120%
Zone3	$ 19.60	$ 21.40	9%	$ 10.85	$ 16.00	47%	$ 10.12	$ 15.00	48%
DS3									
Zone 1	$ 95.00	$ 130.00	37%	$ 38.25	$ 60.00	57%	$ 29.75	$ 50.00	68%
Zone 2	$ 95.00	$ 130.00	37%	$ 38.25	$ 60.00	57%	$ 29.75	$ 50.00	68%
Zone3	$ 95.00	$ 130.00	37%	$ 41.85	$ 60.00	43%	$ 32.55	$ 50.00	54%
Total Circuit									
DS1									
Zone 1	$ 571.00	$ 601.00	5%	$ 367.00	$ 422.00	15%	$ 344.00	$ 391.00	14%
Zone 2	$ 616.50	$ 650.00	5%	$ 399.00	$ 467.00	17%	$ 370.50	$ 436.00	18%
Zone3	$ 641.00	$ 670.00	5%	$ 440.50	$ 492.00	12%	$ 422.20	$ 471.00	12%
DS3									
Zone 1	$ 6,080.00	$ 7,040.00	16%	$ 3,378.75	$ 4,405.00	30%	$ 2,911.25	$ 3,855.00	32%
Zone 2	$ 6,080.00	$ 7,040.00	16%	$ 3,378.75	$ 4,405.00	30%	$ 2,911.25	$ 3,855.00	32%
Zone3	$ 6,080.00	$ 7,040.00	16%	$ 3,488.75	$ 4,405.00	26%	$ 3,001.25	$ 3,855.00	28%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
Price cap rates are in section 7 and price flex rates are in section 23 of the Bellsouth interstate access tariff
Pre Merger Condition Prices

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Verizon - Massachusetts

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Zone 1	$ 197.00	$ 225.63	15%	$ 147.75	$ 169.22	15%	$ 128.05	$ 146.66	15%
Zone 2	$ 218.16	$ 283.55	30%	$ 163.62	$ 212.66	30%	$ 141.80	$ 184.31	30%
Zone3	$ 231.49	$ 293.06	27%	$ 173.62	$ 219.80	27%	$ 150.47	$ 190.49	27%
DS3									
Zone 1	$ 1,700.96	$ 1,871.06	10%	$ 1,530.86	$ 1,530.86	0%	$ 1,105.62	$ 1,105.62	0%
Zone 2	$ 1,786.01	$ 1,964.61	10%	$ 1,607.41	$ 1,607.41	0%	$ 1,160.91	$ 1,160.91	0%
Zone3	$ 1,871.06	$ 2,058.17	10%	$ 1,683.95	$ 1,683.95	0%	$ 1,216.19	$ 1,216.19	0%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
Zone 2	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
Zone3	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
DS3									
Zone 1	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone 2	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone3	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Channel Mileage - Per Mile (Band 8-25)									
DS1									
Zone 1	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
Zone 2	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
Zone3	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
DS3									
Zone 1	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone 2	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone3	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Total Circuit									
DS1									
Zone 1	$ 632.82	$ 779.96	23%	$ 474.62	$ 584.97	23%	$ 411.33	$ 506.97	23%
Zone 2	$ 675.14	$ 895.80	33%	$ 506.36	$ 671.85	33%	$ 438.84	$ 582.27	33%
Zone3	$ 701.80	$ 914.82	30%	$ 526.35	$ 686.12	30%	$ 456.17	$ 594.63	30%
DS3									
Zone 1	$ 5,420.97	$ 6,117.42	13%	$ 4,878.87	$ 5,199.50	7%	$ 3,523.63	$ 3,755.19	7%
Zone 2	$ 5,591.07	$ 6,304.52	13%	$ 5,031.96	$ 5,352.59	6%	$ 3,634.20	$ 3,865.76	6%
Zone3	$ 5,761.17	$ 6,491.64	13%	$ 5,185.05	$ 5,505.68	6%	$ 3,744.76	$ 3,976.32	6%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
Verizon – FCC#11 – Price Cap rates are in Section 31 and Price Flex is in Section 30 but the term discount plan % discounts are explained in Section 25

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Verizon - New York

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Zone 1	$ 177.12	$ 193.88	9%	$ 132.84	$ 145.41	9%	$ 115.13	$ 126.02	9%
Zone 2	$ 218.16	$ 283.55	30%	$ 163.62	$ 212.66	30%	$ 141.80	$ 184.31	30%
Zone3	$ 231.49	$ 293.06	27%	$ 173.62	$ 219.80	27%	$ 150.47	$ 190.49	27%
DS3									
Zone 1	$1,700.96	$1,871.06	10%	$1,530.86	$1,530.86	0%	$1,105.62	$1,105.62	0%
Zone 2	$1,786.01	$1,964.61	10%	$1,607.41	$1,607.41	0%	$1,160.91	$1,160.91	0%
Zone3	$1,871.06	$2,058.17	10%	$1,683.95	$1,683.95	0%	$1,216.19	$1,216.19	0%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
Zone 2	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
Zone3	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
DS3									
Zone 1	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone 2	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone3	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Channel Mileage - Per Mile (Band 8-25)									
DS1									
Zone 1	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
Zone 2	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
Zone3	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
DS3									
Zone 1	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone 2	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone3	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Total Circuit									
DS1									
Zone 1	$ 593.06	$ 716.46	21%	$ 444.80	$ 537.35	21%	$ 385.49	$ 465.70	21%
Zone 2	$ 675.14	$ 895.80	33%	$ 506.36	$ 671.85	33%	$ 438.84	$ 582.27	33%
Zone3	$ 701.80	$ 914.82	30%	$ 526.35	$ 686.12	30%	$ 456.17	$ 594.63	30%
DS3									
Zone 1	$5,420.97	$6,117.42	13%	$4,878.87	$5,199.50	7%	$3,523.63	$3,755.19	7%
Zone 2	$5,591.07	$6,304.52	13%	$5,031.96	$5,352.59	6%	$3,634.20	$3,865.76	6%
Zone3	$5,761.17	$6,491.64	13%	$5,185.05	$5,505.68	6%	$3,744.76	$3,976.32	6%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
Verizon – FCC#11 – Price Cap rates are in Section 31 and Price Flex is in Section 30 but the term discount plan % discounts are explained in Section 25

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Verizon - Maine, New Hampshire, Rhode Island and Vermont

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Zone 1	$ 231.49	$ 293.06	27%	$ 173.62	$ 219.80	27%	$ 150.47	$ 190.49	27%
Zone 2	$ 231.49	$ 293.06	27%	$ 173.62	$ 219.80	27%	$ 150.47	$ 190.49	27%
Zone3	$ 231.49	$ 293.06	27%	$ 173.62	$ 219.80	27%	$ 150.47	$ 190.49	27%
DS3									
Zone 1	$1,871.06	$2,058.17	10%	$1,683.95	$1,683.95	0%	$1,216.19	$1,216.19	0%
Zone 2	$1,871.06	$2,058.17	10%	$1,683.95	$1,683.95	0%	$1,216.19	$1,216.19	0%
Zone3	$1,871.06	$2,058.17	10%	$1,683.95	$1,683.95	0%	$1,216.19	$1,216.19	0%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
Zone 2	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
Zone3	$ 47.12	$ 55.00	17%	$ 35.34	$ 41.25	17%	$ 30.63	$ 35.75	17%
DS3									
Zone 1	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone 2	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone3	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Channel Mileage - Per Mile (Band 8-25)									
DS1									
Zone 1	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
Zone 2	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
Zone3	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 12.46	$ 17.79	43%
DS3									
Zone 1	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone 2	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone3	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Total Circuit									
DS1									
Zone 1	$ 701.80	$ 914.82	30%	$ 526.35	$ 686.12	30%	$ 456.17	$ 594.63	30%
Zone 2	$ 701.80	$ 914.82	30%	$ 526.35	$ 686.12	30%	$ 456.17	$ 594.63	30%
Zone3	$ 701.80	$ 914.82	30%	$ 526.35	$ 686.12	30%	$ 456.17	$ 594.63	30%
DS3									
Zone 1	$5,761.17	$6,491.64	13%	$5,185.05	$5,505.68	6%	$3,744.76	$3,976.32	6%
Zone 2	$5,761.17	$6,491.64	13%	$5,185.05	$5,505.68	6%	$3,744.76	$3,976.32	6%
Zone3	$5,761.17	$6,491.64	13%	$5,185.05	$5,505.68	6%	$3,744.76	$3,976.32	6%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
Verizon – FCC#11 – Price Cap rates are in Section 31 and Price Flex is in Section 30 but the term discount plan % discounts are explained in Section 25

Sprint Nextel Comments
Exhibit 1

Comparison of Price Cap and Price Flex Rates
Verizon - Bell Atlantic States

	Month to Month			3 Year Term Plan			5 Year Term Plan		
	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference	Price Cap	Price Flex	% Difference
Channel Termination									
DS1									
Zone 1	$ 197.00	$ 225.63	15%	$ 147.75	$ 169.22	15%	$ 128.05	$ 146.66	15%
Zone 2	$ 218.16	$ 283.55	30%	$ 163.62	$ 212.16	30%	$ 141.80	$ 184.31	30%
Zone3	$ 231.49	$ 293.06	27%	$ 173.62	$ 219.80	27%	$ 150.47	$ 190.49	27%
DS3									
Zone 1	$1,700.96	$2,911.37	71%	$1,530.86	$2,382.03	56%	$1,105.62	$1,720.36	56%
Zone 2	$1,786.01	$3,056.94	71%	$1,607.41	$2,501.14	56%	$1,160.91	$1,806.38	56%
Zone3	$1,871.06	$3,202.51	71%	$1,683.95	$2,620.23	56%	$1,216.19	$1,892.39	56%
Channel Mileage - Fixed									
DS1									
Zone 1	$ 46.66	$ 55.00	18%	$ 38.89	$ 41.25	6%	$ 34.45	$ 35.75	4%
Zone 2	$ 46.66	$ 55.00	18%	$ 38.89	$ 41.25	6%	$ 34.45	$ 35.75	4%
Zone3	$ 46.66	$ 55.00	18%	$ 38.89	$ 41.25	6%	$ 34.45	$ 35.75	4%
DS3									
Zone 1	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone 2	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Zone3	$ 701.25	$ 825.00	18%	$ 631.13	$ 742.50	18%	$ 455.81	$ 536.25	18%
Channel Mileage - Per Mile (Band 8-25)									
DS1									
Zone 1	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 10.19	$ 14.00	37%
Zone 2	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 10.19	$ 14.00	37%
Zone3	$ 19.17	$ 27.37	43%	$ 14.38	$ 20.53	43%	$ 10.19	$ 14.00	37%
DS3									
Zone 1	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone 2	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Zone3	$ 131.78	$ 155.03	18%	$ 118.60	$ 139.53	18%	$ 85.66	$ 100.77	18%
Total Circuit									
DS1									
Zone 1	$ 632.36	$ 779.96	23%	$ 478.19	$ 584.99	22%	$ 392.45	$ 469.07	20%
Zone 2	$ 674.68	$ 895.80	33%	$ 509.93	$ 670.87	32%	$ 419.95	$ 544.37	30%
Zone3	$ 701.34	$ 914.82	30%	$ 529.93	$ 686.15	29%	$ 437.29	$ 556.73	27%
DS3									
Zone 1	$5,420.97	$8,198.04	51%	$4,878.87	$6,901.83	41%	$3,523.63	$4,984.66	41%
Zone 2	$5,591.07	$8,489.18	52%	$5,031.96	$7,140.04	42%	$3,634.20	$5,156.70	42%
Zone3	$5,761.17	$8,780.32	52%	$5,185.05	$7,378.24	42%	$3,744.76	$5,328.73	42%

NOTES: Total Circuit (2 CT plus 10 miles Channel Mileage)
Verizon – FCC#1 (Bell Atlantic States) -- Price Cap and Price Flex in section 7 but the term discount plan % discounts are explained in section 25

EXHIBIT 2

UPDATED ETI STUDY

Exhibit 2
Updated ETI Study

Economics and Technology, Inc. (ETI) prepared a total factor productivity (TFP) study for the Ad Hoc Telecommunications Users Committee in the prior rounds of comments in this proceeding.[1] That study examined economy and Bell Operating Company (BOC) data through 2004, and found the average X factor for interstate special access service in 2000 through 2004 to be 11.01 percent. Data are now available from the BOCs through 2006. In addition, the ETI Study uses data from the Bureau of Labor Statistics and the Bureau of Economic Analysis on economy wide productivity and inputs, which have now been updated through 2006. Using this additional data, we have updated the ETI Study and find that the BOCs' interstate special access productivity continues to outstrip productivity gains in the economy as whole, resulting in an average X factor for interstate special access services in 2000 through 2006 of 16.95 percent.

The attached tables provide the updated data and computations that yield this result. In addition to updating the previous study with data through 2006, this study made the following changes from the original ETI Study.

1. Data for all the BOCs as they are currently constituted are included. Specifically, data for all AT&T, Qwest, and Verizon operating entities are included. ETI's original study excluded Southern New England Telephone (now part of AT&T) and all of GTE (now part of Verizon), because those entities had been excluded from the Commission's original ETI Study. Since

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[1] Economics and Technology Incorporated, *Competition in Access Markets: Reality or Illusion*, Table 2.1 (August 2004) (*ETI Competition in Access Markets*), filed as Attachment A to Comments of the Ad Hoc Telecommunications Users Committee, WC Docket No. 05-25 (June 13, 2005) (2005 Ad Hoc Comments), amended by Declaration of Susan M. Gately, filed as Attachment B of the 2005 Ad Hoc Comments ("ETI Study").

data for those companies are available and they are under price cap regulation, they have been included in this study.

2. The Special Access revenue used by ETI in Table 6 was taken from ARMIS 43-02 Table I1. That data includes state special access and private line revenue as well as interstate Special Access revenue. Since this study is examining only the productivity for interstate special access services, the state data should not be included. Interstate special access revenues are available in ARMIS 43-01, row s, column 1090, and those data are used in this study.
3. For 1992 through 2006, Table 10 uses Labor Compensation and Employee counts from ARMIS 43-02, Table I1. These data are not available in the Commission's online ARMIS database for 1991, so the data for that year was taken from the Statistics of Communications Common Carriers, Table 2.9.
4. Benchmark Special Access Telephone Plant in Service for 1991 in Table 12, column A was taken from ARMIS 43-01, column s, row 1690. The ETI Study used the results of a previous iteration of the TFP model for this benchmark. Because that iteration did not reflect all the companies included in this study, the ARMIS data was used.

Table 1 displays the results from 1993 through 2006. The X factor used in the price cap formula is the sum of the differentials in TFP between the BOCs and the economy as a whole and in the input prices for the BOCs and the economy. The results evidence some year over year variation in the X factor. However, in the fourteen years covered by this study, only three years had an X factor of less than 10 percent. Clearly, the BOCs' productivity has consistently and substantially outstripped the economy-wide productivity.

Table 1

Summary Table of Annual Company Special Access Productivity Growth

Year	Total Factor Productivity Differential A = Table 2	Input Price Differential B = Table 2	Annual Productivity Growth C = A+B
1993	41.7	3.9	45.6
1994	24.7	-2.4	22.3
1995	8.2	-2.1	6.1
1996	18.6	-6.1	12.4
1997	4.1	-2.3	1.8
1998	29.8	-9.5	20.2
1999	26.9	-9.1	17.9
2000	21.3	-5.6	15.7
2001	13.9	-7.8	6.2
2002	11.9	-0.8	11.0
2003	5.9	3.2	9.1
2004	13.7	-2.0	11.7
2005	46.0	2.3	48.3
2006	10.8	5.9	16.7
Avg. (00 - 06)	**17.64**	**-0.69**	**16.95** **(X-Factor)**

Table 2

Annual Company Special Access Productivity Growth

Year	U.S. Nonfarm Business Sector TFP Growth Rate	LECs' Interstate Special Access Output Growth Rate	LECs' Input Growth Rate	LECs' TFP Growth Rate	LECs' TFP Differential	U.S. Nonfarm Business Sector Input Price Growth Rate	LECs' Input Price Growth Rate	Input Price Differential	Total Company Productivity Growth
	A	B = Table 4	C = Table 7	D = +B-C	E = +D-A	F	G = Table 8	H = +F-G	I = +E+H
1992									
1993	0.286	40.511	-1.437	41.947	41.661	2.605	-1.338	3.943	45.604
1994	0.809	33.541	8.035	25.506	24.697	2.477	4.923	-2.446	22.251
1995	-0.010	15.001	6.782	8.219	8.229	1.653	3.742	-2.089	6.139
1996	1.398	24.710	4.733	19.978	18.579	2.886	9.032	-6.146	12.433
1997	0.678	17.384	12.582	4.802	4.123	2.025	4.366	-2.341	1.783
1998	1.298	25.838	-5.249	31.087	29.788	2.004	11.552	-9.548	20.241
1999	1.123	35.993	7.956	28.038	26.915	2.478	11.529	-9.051	17.864
2000	1.205	36.384	13.907	22.478	21.273	3.298	8.864	-5.567	15.706
2001	0.132	13.923	-0.153	14.076	13.944	1.985	9.763	-7.778	6.166
2002	1.740	16.865	3.240	13.625	11.885	2.203	3.045	-0.843	11.042
2003	2.471	12.980	4.611	8.369	5.898	3.717	0.556	3.161	9.059
2004	2.555	11.147	-5.099	16.246	13.691	4.870	6.828	-1.958	11.733
2005	1.820	43.045	-4.755	47.800	45.980	5.269	2.990	2.279	48.259
2006	0.983	16.031	4.271	11.760	10.777	3.609	-2.287	5.896	16.673
Avg. (00 - 06)					**17.64**			**-0.69**	**16.95**

Sources: U.S. Nonfarm Business Sector TFP Growth Rate and U.S. Nonfarm Business Sector Input Price Growth Rate, from Table XG 4b"Net Mulitfactor Productivity and Costs, 1948 - 2006 (SIC 1948-87 linked to NAICS 1987-2006) Private Non-Farm Business Sector (Excluding Government Enterprises)"; 2006 U.S. Nonfarm Business Sector Input Price Growth Rate, based upon five-year average growth.

Table 3

LEC Total Company Output Index

	Revenue Shares			Quantities			Output Indices				
	Local	Intrastate Toll	Interstate	Local DEMs (000s)	Intrastate DEMs (000s)	Interstate Quantity Index	Laspeyres Output Index	Paasche Output Index	Fisher Ideal Output Index	Total Company Output Index	Growth Rate %
Year	A= Table 5	B = Table 5	C = Table 5	D	E	F=Table 4	G	H	I	J	K
1992	0.000	0.000	1.000	0.000	0.000	0.000					
1993	0.000	0.000	1.000	0.000	0.000	0.000					
1994	0.000	0.000	1.000	0.000	0.000	0.000					
1995	0.000	0.000	1.000	0.000	0.000	0.000					
1996	0.000	0.000	1.000	0.000	0.000	0.000					
1997	0.000	0.000	1.000	0.000	0.000	0.000					
1998	0.000	0.000	1.000	0.000	0.000	0.000					
1999	0.000	0.000	1.000	0.000	0.000	0.000					
2000	0.000	0.000	1.000	0.000	0.000	0.000					
2001	0.000	0.000	1.000	0.000	0.000	0.000					
2002	0.000	0.000	1.000	0.000	0.000	0.000					
2003	0.000	0.000	1.000	0.000	0.000	0.000					
2004	0.000	0.000	1.000	0.000	0.000	0.000					
2005	0.000	0.000	1.000	0.000	0.000	0.000					
2006	0.000	0.000	1.000	0.000	0.000	0.000					

Notes:
Laspeyres Output Index (Column G) calculation: A(previous) * D(current) / D(previous) + B(previous) * E(current) / E(previous) + C(previous) * F(current) / F(previous)
Paasche Output Index (Column H) calculation: 1/(A(current) * D(previous) / D(current) + B(current) * E(previous) / E(current) + C(current) * F(previous) / F(current))
Fisher Ideal Output Index (Column I) calculation: Square root of (H*G)
Total Company Output Index (Column J) calculation: J(previous) * I(current)

Table 4

LEC Interstate Output Index

	Revenue Shares			Quantities			Output Indices				
Year	End User A =Table 6	Interstate Switched Access B =Table 6	Special Access C =Table 6	Switched Access Lines D	Switched Access Minutes E	Special Access Lines F	Laspeyres Output Index G	Paasche Output Index H	Fisher Ideal Output Index I	Interstate Output Quantity Index J	Growth Rate % K
1992	0.000	0.000	1.000	0.000	0.000	7,079,326				1.000	
1993	0.000	0.000	1.000	0.000	0.000	10,615,188				1.499	40.511
1994	0.000	0.000	1.000	0.000	0.000	14,845,480				2.097	33.541
1995	0.000	0.000	1.000	0.000	0.000	17,248,195				2.436	15.001
1996	0.000	0.000	1.000	0.000	0.000	22,083,087				3.119	24.710
1997	0.000	0.000	1.000	0.000	0.000	26,275,836				3.712	17.384
1998	0.000	0.000	1.000	0.000	0.000	34,022,611				4.806	25.838
1999	0.000	0.000	1.000	0.000	0.000	48,762,366				6.888	35.993
2000	0.000	0.000	1.000	0.000	0.000	70,161,673				9.911	36.384
2001	0.000	0.000	1.000	0.000	0.000	80,642,715				11.391	13.923
2002	0.000	0.000	1.000	0.000	0.000	95,457,167				13.484	16.865
2003	0.000	0.000	1.000	0.000	0.000	108,688,060				15.353	12.980
2004	0.000	0.000	1.000	0.000	0.000	121,504,848				17.163	11.147
2005	0.000	0.000	1.000	0.000	0.000	186,867,837				26.396	43.045
2006	0.000	0.000	1.000	0.000	0.000	219,358,644				30.986	16.031

Sources: Special Access Lines: ARMIS Report 43-08: Table III.

Table 5

LEC Total Revenue by Type of Service (Excluding Miscellaneous Services)

Year	Local Service	Intrastate Toll and Intrastate Access	Interstate	Total
	A	B	C = Table 6	D = A+B+C
1991	$0.000	$0.000	$2,471,819,000	$2,471,819,000
1992	$0.000	$0.000	$2,522,362,000	$2,522,362,000
1993	$0.000	$0.000	$2,448,938,000	$2,448,938,000
1994	$0.000	$0.000	$2,581,654,000	$2,581,654,000
1995	$0.000	$0.000	$2,905,658,000	$2,905,658,000
1996	$0.000	$0.000	$3,428,306,000	$3,428,306,000
1997	$0.000	$0.000	$4,286,773,000	$4,286,773,000
1998	$0.000	$0.000	$5,510,028,000	$5,510,028,000
1999	$0.000	$0.000	$7,110,891,000	$7,110,891,000
2000	$0.000	$0.000	$9,583,894,000	$9,583,894,000
2001	$0.000	$0.000	$12,395,608,000	$12,395,608,000
2002	$0.000	$0.000	$12,944,022,000	$12,944,022,000
2003	$0.000	$0.000	$13,334,245,000	$13,334,245,000
2004	$0.000	$0.000	$14,152,124,000	$14,152,124,000
2005	$0.000	$0.000	$15,076,528,000	$15,076,528,000
2006	$0.000	$0.000	$15,528,084,000	$15,528,084,000

Table 6

LEC Interstate Revenues

Year	End User A	Interstate Switched Access B	Special Access C	Total Interstate D = A+B+C
1991	$0.000	$0.000	$2,471,819,000	$2,471,819,000
1992	$0.000	$0.000	$2,522,362,000	$2,522,362,000
1993	$0.000	$0.000	$2,448,938,000	$2,448,938,000
1994	$0.000	$0.000	$2,581,654,000	$2,581,654,000
1995	$0.000	$0.000	$2,905,658,000	$2,905,658,000
1996	$0.000	$0.000	$3,428,306,000	$3,428,306,000
1997	$0.000	$0.000	$4,286,773,000	$4,286,773,000
1998	$0.000	$0.000	$5,510,028,000	$5,510,028,000
1999	$0.000	$0.000	$7,110,891,000	$7,110,891,000
2000	$0.000	$0.000	$9,583,894,000	$9,583,894,000
2001	$0.000	$0.000	$12,395,608,000	$12,395,608,000
2002	$0.000	$0.000	$12,944,022,000	$12,944,022,000
2003	$0.000	$0.000	$13,334,245,000	$13,334,245,000
2004	$0.000	$0.000	$14,152,124,000	$14,152,124,000
2005	$0.000	$0.000	$15,076,528,000	$15,076,528,000
2006	$0.000	$0.000	$15,528,084,000	$15,528,084,000

Source: Special Access Revenues: ARMIS Report 43-01, column s, row 1090

Table 7

LEC Total Company Input Quantity Index

	Input Shares			Quantities			Input Quantity Indices				
	Labor	Materials	Capital	Labor Quantity	Material Quantity Index	Capital Quantity Index	Laspeyres Input Quantity Index	Paasche Input Quantity Index	Fisher Ideal Input Quantity Index	Fisher Ideal Chained Input Quantity Index	Growth Rate %
Year	A = Table 9	B = Table 9	C = Table 9	D = Table 10	E = Table 10	F = Table 12	G	H	I	J	K
1991	0.275	0.212	0.514	16,461	1.000	1.000	1.00	1.00	1.000	1.00	
1992	0.268	0.204	0.529	15,237	0.907	1.003	0.962	0.961	0.961	0.961	-3.937
1993	0.288	0.204	0.508	14,671	0.881	1.008	0.986	0.985	0.986	0.948	-1.437
1994	0.264	0.246	0.490	14,988	1.196	1.019	1.085	1.082	1.084	1.027	8.035
1995	0.264	0.254	0.482	16,240	1.366	1.048	1.071	1.070	1.070	1.099	6.782
1996	0.298	0.210	0.492	18,582	1.270	1.106	1.047	1.050	1.048	1.152	4.733
1997	0.270	0.233	0.497	21,185	1.633	1.183	1.136	1.132	1.134	1.307	12.582
1998	0.297	0.091	0.612	23,935	0.673	1.286	0.942	0.956	0.949	1.240	-5.249
1999	0.299	0.038	0.663	27,895	0.340	1.445	1.080	1.085	1.083	1.343	7.956
2000	0.278	0.013	0.709	32,589	0.144	1.705	1.148	1.150	1.149	1.543	13.907
2001	0.277	-0.095	0.817	32,200	-1.156	1.978	0.994	1.003	0.998	1.541	-0.153
2002	0.263	-0.077	0.814	28,781	-0.988	2.102	1.035	1.031	1.033	1.591	3.240
2003	0.263	-0.036	0.773	26,864	-0.486	2.172	1.049	1.046	1.047	1.666	4.611
2004	0.269	-0.090	0.821	26,529	-1.219	2.190	0.949	0.952	0.950	1.584	-5.099
2005	0.298	-0.158	0.860	25,860	-2.094	2.256	0.954	0.954	0.954	1.510	-4.755
2006	0.266	-0.138	0.872	24,841	-1.849	2.351	1.043	1.044	1.044	1.576	4.271

Notes:

Laspeyres Input Quantity Index (Column G) calculation: A(previous) * D(current) / D(previous) + B(previous) * E(current) / E(previous) + C(previous) * F(current) / F(previous)

Paasche Input Quantity Index (Column H) calculation: 1/(A(current) * D(previous) / D(current) + B(current) * E(previous) / E(current) + C(current) * F(previous) / F(current))

Fisher Ideal Input Quantity Index (Column I) calculation: Square root of (H*G)

Fisher Ideal Chained Input Quantity Index (Column J) calculation: J(previous) * I(current)

Growth Rate (Column K) calculation: LN (I(current)/I(previous))

Table 8

LEC Company Input Price Index

Year	Input Shares			Input Quantities			Input Price Indices				Growth Rate %
	Labor A = Table 9	Material B = Table 9	Capital C = Table 9	Labor Price Index D = Table 10	Materials Price Index E = Table 11	Capital Price Index F = Table 13	Laspeyres Input Price Index G	Paasche Input Price Index H	Fisher Ideal Input Price Index I	Fisher Ideal Chained Input Price Index J	K
1991	0.275	0.212	0.514	1.000	1.000	1.000	1.000	1.000	1.000	1.00	
1992	0.268	0.204	0.529	1.006	1.012	0.979	0.993	0.993	0.993	0.993	-0.716
1993	0.288	0.204	0.508	1.093	1.015	0.911	0.987	0.986	0.987	0.980	-1.338
1994	0.264	0.246	0.490	1.118	1.027	0.988	1.052	1.049	1.050	1.029	4.923
1995	0.264	0.254	0.482	1.144	1.030	1.052	1.039	1.038	1.038	1.068	3.742
1996	0.298	0.210	0.492	1.294	1.053	1.167	1.093	1.096	1.095	1.169	9.032
1997	0.270	0.233	0.497	1.222	1.075	1.306	1.046	1.043	1.045	1.222	4.366
1998	0.297	0.091	0.612	1.266	1.081	1.575	1.114	1.131	1.122	1.371	11.552
1999	0.299	0.038	0.663	1.330	1.086	1.844	1.120	1.125	1.122	1.539	11.529
2000	0.278	0.013	0.709	1.327	1.092	2.099	1.091	1.094	1.093	1.681	8.864
2001	0.277	-0.095	0.817	1.476	1.107	2.297	1.098	1.107	1.103	1.854	9.763
2002	0.263	-0.077	0.814	1.668	1.117	2.291	1.033	1.029	1.031	1.911	3.045
2003	0.263	-0.036	0.773	1.879	1.120	2.218	1.007	1.004	1.006	1.922	0.556
2004	0.269	-0.090	0.821	1.982	1.132	2.376	1.069	1.072	1.071	2.057	6.828
2005	0.298	-0.158	0.860	2.213	1.141	2.375	1.030	1.030	1.030	2.120	2.990
2006	0.266	-0.138	0.872	2.095	1.151	2.358	0.977	0.978	0.977	2.072	-2.287

Notes:

Laspeyres Input Price Index (Column G) calculation: A(previous) * D(current) / D(previous) + B(previous) * E(current) / E(previous) + C(previous) * F(current) / F(previous)

Paasche Input Price Index (Column H) calculation: 1/(A(current) * D(previous) / D(current) + B(current) * E(previous) / E(current) + C(current) * F(previous) / F(current))

Fisher Ideal Input Price Index (Column I) calculation: Square root of (H*G)

Fisher Ideal Chained Input Price Index (Column J) calculation: J(previous) * I(current)

Growth Rate (Column K) calculation: LN (I(current)/I(previous))

Table 9

Factor Shares of Total Payments

Year	Special Access Labor Compensation	Adjusted Material Payment	New Property Income with Depreciation and Taxes	Total Factor Payment	Labor Compensation Share	Material Payment Share	Property Income with Depreciation and Taxes Share
	A = Table 11	B = Table 11	C = Table 13	D = A+B+C	E = A/D	F = B/D	G = C/D
1991	678,524,816	523,100,184	1,270,194,000	2,471,819,000	0.275	0.212	0.514
1992	631,878,855	480,408,431	1,247,164,170	2,359,451,456	0.268	0.204	0.529
1993	660,698,915	467,854,325	1,166,334,410	2,294,887,650	0.288	0.204	0.508
1994	690,862,993	642,306,612	1,279,223,372	2,612,392,976	0.264	0.246	0.490
1995	766,068,664	736,418,067	1,399,837,875	2,902,324,606	0.264	0.254	0.482
1996	991,428,023	699,244,851	1,639,965,574	3,330,638,447	0.298	0.210	0.492
1997	1,066,823,636	917,932,315	1,961,024,925	3,945,780,875	0.270	0.233	0.497
1998	1,249,499,346	380,816,395	2,572,177,540	4,202,493,280	0.297	0.091	0.612
1999	1,528,757,955	192,967,306	3,384,829,437	5,106,554,698	0.299	0.038	0.663
2000	1,782,447,589	81,992,449	4,547,965,943	6,412,405,981	0.278	0.013	0.709
2001	1,958,589,047	(669,608,611)	5,770,244,478	7,059,224,914	0.277	-0.095	0.817
2002	1,978,351,379	(577,437,635)	6,116,237,267	7,517,151,011	0.263	-0.077	0.814
2003	2,080,457,989	(284,572,197)	6,119,910,363	7,915,796,155	0.263	-0.036	0.773
2004	2,167,200,383	(721,855,369)	6,608,489,061	8,053,834,075	0.269	-0.090	0.821
2005	2,359,205,939	(1,250,449,186)	6,804,202,212	7,912,958,965	0.298	-0.158	0.860
2006	2,144,763,571	(1,113,081,547)	7,039,782,703	8,071,464,727	0.266	-0.138	0.872

Table 10

Price of Labor

Year	Special Access Labor Compensation	Special Access Number Of Employees	Labor Price	Labor Price Index	Labor Price Change
	A	B	C = A/B	D	E
1991	678,524,816	16,461	41,220	1.000	
1992	631,878,855	15,237	41,470	1.006	0.604
1993	660,698,915	14,671	45,034	1.093	8.245
1994	690,862,993	14,988	46,094	1.118	2.327
1995	766,068,664	16,240	47,172	1.144	2.310
1996	991,428,023	18,582	53,354	1.294	12.316
1997	1,066,823,636	21,185	50,357	1.222	-5.781
1998	1,249,499,346	23,935	52,204	1.266	3.601
1999	1,528,757,955	27,895	54,804	1.330	4.861
2000	1,782,447,589	32,589	54,695	1.327	-0.200
2001	1,958,589,047	32,200	60,826	1.476	10.625
2002	1,978,351,379	28,781	68,738	1.668	12.229
2003	2,080,457,989	26,864	77,444	1.879	11.925
2004	2,167,200,383	26,529	81,692	1.982	5.340
2005	2,359,205,939	25,860	91,230	2.213	11.043
2006	2,144,763,571	24,841	86,340	2.095	-5.509

Source: Labor Compensation, Number of Employees: for all years except 1991, ARMIS Report 43-02, Table I1, for 1991 from 1991 Statistics of Communications Common Carriers, Table 2.9, allocated to Special Access based on Special Access share of total TPIS reported in ARMIS Report 43-01, Table I1.

Table 11

Materials Input Quantity

Year	Material Price Index	Special Access Operating Expense	Adjusted Special Access Operating Expense	Special Access Depreciation & Amortization Expense	Special Access Labor Compensation	Special Access Material Expense	Special Access Material Quantity	Special Access Material Quantity Index
	A	B	C	D	E = Table 10	F = C - D - E	G = F / A	H
1991	1.000	1,762,753,000	1,762,753,000	561,128,000	678,524,816	523,100,184	523,100,184	1.000
1992	1.012	1,730,408,000	1,684,699,286	572,412,000	631,878,855	480,408,431	474,670,477	0.907
1993	1.015	1,761,432,000	1,718,209,240	589,656,000	660,698,915	467,854,325	460,827,425	0.881
1994	1.027	2,017,691,000	2,026,315,605	693,146,000	690,862,993	642,306,612	625,685,508	1.196
1995	1.030	2,336,376,000	2,335,440,731	832,954,000	766,068,664	736,418,067	714,787,162	1.366
1996	1.053	2,715,574,000	2,688,170,874	997,498,000	991,428,023	699,244,851	664,235,172	1.270
1997	1.075	3,262,717,000	3,167,042,951	1,182,287,000	1,066,823,636	917,932,315	854,032,950	1.633
1998	1.081	3,389,926,000	3,023,063,741	1,392,748,000	1,249,499,346	380,816,395	352,160,526	0.673
1999	1.086	3,968,595,000	3,406,227,261	1,684,502,000	1,528,757,955	192,967,306	177,608,209	0.340
2000	1.092	4,866,386,000	3,976,544,038	2,112,104,000	1,782,447,589	81,992,449	75,067,781	0.144
2001	1.107	5,110,615,000	3,613,356,436	2,324,376,000	1,958,589,047	(669,608,611)	(604,736,360)	-1.156
2002	1.117	5,404,608,000	3,881,960,744	2,481,047,000	1,978,351,379	(577,437,635)	(517,040,160)	-0.988
2003	1.120	6,015,129,000	4,494,844,792	2,698,959,000	2,080,457,989	(284,572,197)	(254,122,539)	-0.486
2004	1.132	5,896,807,000	4,185,776,014	2,740,431,000	2,167,200,383	(721,855,369)	(637,669,654)	-1.219
2005	1.141	5,893,125,000	3,883,202,753	2,774,446,000	2,359,205,939	(1,250,449,186)	(1,095,573,627)	-2.094
2006	1.151	5,779,934,000	3,687,789,024	2,656,107,000	2,144,763,571	(1,113,081,547)	(967,236,031)	-1.849

Note:

Adjusted Operating Expenses (Column B) Calculation: Change in Property Income (The difference between the New Property Income, Table 9, and the Original Property Income, Table 12) multiplied by an adjustment factor of .39, and then added to Special Access Operating Expenses. The .39 represents .34 Federal and .5 state taxes, See, FCC, *Price Cap and Access Reform Further Notice of Proposed Rulemaking,* at 47.

Sources: Material Price Index: Input/Output Tables compiled by the Bureau of Labor Statistics. 2001 Material Price Index based upon 1996-2000 average growth; Special Access Operating and Depreciation and Amortization Expenses: ARMIS Report 43-01.

Table 12

Capital Quantity and Imputed Cost of Capital

Year	Benchmark	Special Access TPIS Capital Additions	BEA Composite Asset Price Index	Capital Stock Quantity (000s)	Capital Input Quantity Index	Original Property Income with Depreciation and Taxes	Depreciation and Amortization	Special Access Operating Taxes	Property Income without Depreciation and Taxes	Imputed Cost of Capital
	A	B	C	D	E	F	G = Table 11	H	I = F-G-H	J = I/D/1000
1991	7,443,091	550,807	1.0000	7,443,091	1.000	1,270,194,000	561,128,000	261,293,000	447,773,000	0.0602
1992		551,942	0.995	7,468,217	1.003	1,364,366,000	572,412,000	286,707,000	505,247,000	0.0677
1993		559,681	0.994	7,499,730	1.008	1,277,162,000	589,656,000	265,743,000	421,763,000	0.0562
1994		615,385	0.991	7,587,051	1.019	1,257,109,000	693,146,000	219,171,000	344,792,000	0.0454
1995		747,417	0.994	7,798,627	1.048	1,402,236,000	832,954,000	222,500,000	346,782,000	0.0445
1996		986,605	0.997	8,233,504	1.106	1,710,230,000	997,498,000	291,230,000	421,502,000	0.0512
1997		1,150,682	0.997	8,801,568	1.183	2,206,343,000	1,182,287,000	419,990,000	604,066,000	0.0686
1998		1,337,226	0.960	9,568,447	1.286	3,512,850,000	1,392,748,000	850,662,000	1,269,440,000	0.1327
1999		1,733,097	0.927	10,757,104	1.445	4,826,798,000	1,684,502,000	1,260,797,000	1,881,499,000	0.1749
2000		2,457,203	0.909	12,694,158	1.705	6,829,612,000	2,112,104,000	1,854,983,000	2,862,525,000	0.2255
2001		2,621,114	0.894	14,723,478	1.978	9,609,369,000	2,324,376,000	2,832,495,000	4,452,498,000	0.3024
2002		1,740,072	0.884	15,643,210	2.102	10,020,461,000	2,481,047,000	3,006,966,000	4,532,448,000	0.2897
2003		1,430,641	0.873	16,168,408	2.172	10,018,075,000	2,698,959,000	2,938,170,000	4,380,946,000	0.2710
2004		1,111,066	0.866	16,300,706	2.190	10,995,748,000	2,740,431,000	3,443,269,000	4,812,048,000	0.2952
2005		1,414,802	0.857	16,790,851	2.256	11,957,849,000	2,774,446,000	3,647,604,000	5,535,799,000	0.3297
2006		1,628,600	0.857	17,495,497	2.351	12,404,257,000	2,656,107,000	3,912,005,000	5,836,145,000	0.3336

Notes:

BEA Composite Asset Price Index (Column C): The single composite asset price index that incorporates prices for three Bureau of Economic Analysis National Income and Product Account (NIPA) asset prices, including Communication Equipment, Telecommunication Structures, and Producer Durables.

Capital Stock Quantity (Column D) calculation: prior year Capital Stock (Column D) less depreciation(Table 14, Column J) plus current year Capital Additions (Column B) deflated by current year BEA Composite Asset Price (Column C).

Capital Input Quantity Index (Column E): D(current)/A(base year. 1991=1.0)

Original Property Income with Depreciation and Taxes (Column F): This is a residual value found by subtracting labor compensation and material payments from Total Factor Payments/Total Revenues. Mathematically, the formula is Special Access Revenues minus Special Access Operating Expenses plus Special Access Depreciation and Amortization Expense. *See, Price Cap Performance Review Fourth Report and Order,* 1997 TFP Model.

Sources: Special Access TPIS Capital Additions, ARMIS Report 43-02, allocated to special access based on the special access share of total TPIS reported in ARMIS report 43-01; BEA Composite Asset Price Index: Bureau of Economic Analysis National Income and Product Accounts (Table 1.5.4, 5.4.4a, 5.4.4b, and 5.5.4); Special Access Operating Taxes, ARMIS Report 43-04, Table 1.

Table 13

Competitive Cost of Capital

Year	Moody's Baa Corporate Bond Rate	Imputed Competitive Cost of Capital	Capital Stock Quantity	Original Property Income without Depreciation and Taxes	Adjusted Property Income without Depreciation and Taxes	Excess Profits	Original Property Income with Depreciation and Taxes	Adjusted Property Income with Depreciation and Taxes	Adjusted Imputed Cost of Capital	Competitive Cost of Capital Index
	A	B	C = Table 12	D = Table 12	E = B*C*1000	F = D-E	G = Table 12	H = G-F	I = (H/C)/1000	J
1991	9.80	0.0602	7,443,091	447,773,000	447,773,000	0	1,270,194,000	1,270,194,000	0.171	1.000
1992	8.98	0.0520	7,468,217	505,247,000	388,045,170	117,201,830	1,364,366,000	1,247,164,170	0.167	0.979
1993	7.93	0.0415	7,499,730	421,763,000	310,935,410	110,827,590	1,277,162,000	1,166,334,410	0.156	0.911
1994	8.62	0.0484	7,587,051	344,792,000	366,906,372	-22,114,372	1,257,109,000	1,279,223,372	0.169	0.988
1995	8.20	0.0442	7,798,627	346,782,000	344,383,875	2,398,125	1,402,236,000	1,399,837,875	0.179	1.052
1996	8.05	0.0427	8,233,504	421,502,000	351,237,574	70,264,426	1,710,230,000	1,639,965,574	0.199	1.167
1997	7.86	0.0408	8,801,568	604,066,000	358,747,925	245,318,075	2,206,343,000	1,961,024,925	0.223	1.306
1998	7.22	0.0344	9,568,447	1,269,440,000	328,767,540	940,672,460	3,512,850,000	2,572,177,540	0.269	1.575
1999	7.87	0.0409	10,757,104	1,881,499,000	439,530,437	1,441,968,563	4,826,798,000	3,384,829,437	0.315	1.844
2000	8.36	0.0458	12,694,158	2,862,525,000	580,878,943	2,281,646,057	6,829,612,000	4,547,965,943	0.358	2.099
2001	7.95	0.0417	14,723,478	4,452,498,000	613,373,478	3,839,124,522	9,609,369,000	5,770,244,478	0.392	2.297
2002	7.80	0.0402	15,643,210	4,532,448,000	628,224,267	3,904,223,733	10,020,461,000	6,116,237,267	0.391	2.291
2003	6.77	0.0299	16,168,408	4,380,946,000	482,781,363	3,898,164,637	10,018,075,000	6,119,910,363	0.379	2.218
2004	6.39	0.0261	16,300,706	4,812,048,000	424,789,061	4,387,258,939	10,995,748,000	6,608,489,061	0.405	2.376
2005	6.06	0.0228	16,790,851	5,535,799,000	382,152,212	5,153,646,788	11,957,849,000	6,804,202,212	0.405	2.375
2006	6.48	0.0270	17,495,497	5,836,145,000	471,670,703	5,364,474,297	12,404,257,000	7,039,782,703	0.402	2.358

Notes:

Imputed Competitive Cost of Capital (Column B) calculation: Table 12 provides the 1991 Cost of Capital Index, which is used as a base point. Years 1992 - 2004 are calculated by adding the change in the Baa Corporate Bond Rate to the previous year Competitive Cost of Capital.

Source: Moody's Baa Corporate Bond Rate from Council of Economic Advisors, *Economic Report of the President*, February 2005, Table B-73.

Table 14

Capital Stock Adjustments and the Average Depreciation Rate

Year	Special Access TPIS.BOY	Capital Additions	Special Access TPIS.EOY	Retires	Adjustment Factor	Adjusted Capital Additions	Adjusted TPIS	Special Access Depreciation Accruals	Adjusted Depreciation Rate (%)
	A	B	C	D =A+B-C	E	F = B*E	G = A+F-D	H	I
1992	7,130,572	0.000	7,205,015	0.000	1.000	0.000	0.000	471,097	6.57
1993	7,274,752	0.000	7,525,913	0.000	1.000	0.000	0.000	511,420	6.91
1994	7,569,569	0.000	8,501,521	0.000	1.000	0.000	0.000	598,542	7.45
1995	8,524,815	0.000	10,212,193	0.000	1.000	0.000	0.000	709,797	7.58
1996	10,587,348	0.000	12,523,656	0.000	1.000	0.000	0.000	881,264	7.63
1997	12,523,656	0.000	14,888,609	0.000	1.000	0.000	0.000	1,039,502	7.58
1998	14,890,080	0.000	17,579,587	0.000	1.000	0.000	0.000	1,230,233	7.58
1999	17,579,587	0.000	21,374,168	0.000	1.000	0.000	0.000	1,471,103	7.55
2000	21,374,168	0.000	26,459,078	0.000	1.000	0.000	0.000	1,805,389	7.55
2001	26,459,079	0.000	29,650,501	0.000	1.000	0.000	0.000	1,973,838	7.04
2002	29,566,320	0.000	31,538,861	0.000	1.000	0.000	0.000	2,070,749	6.78
2003	31,216,209	0.000	32,546,853	0.000	1.000	0.000	0.000	2,145,390	6.73
2004	32,546,853	0.000	33,380,026	0.000	1.000	0.000	0.000	2,203,382	6.68
2005	33,202,346	0.000	33,942,682	0.000	1.000	0.000	0.000	2,254,432	6.72
2006	33,942,682	0.000	34,837,900	0.000	1.000	0.000	0.000	2,206,907	6.42
Avg. (92-06)									**7.12**

Note:
Adjustment Factor (Column E): Capital/expense shift factor, employed in the *1997 Price Cap Review Order.*
Adjusted Depreciation Rate (Column I) calculation: H/((A+C)/2)*100

Source: BOY and EOY total company TPIS reported in ARMIS Report 43-02, Table B1b, allocated to special access based on the special access share of total company TPIS reported in ARMIS 43-01, Table 1.; Total company depreciation accruals reported in ARMIS Report 43-02, Table B5, allocated to special access, based on the special access share of total company accumulated depreciation reported in ARMIS Report 43-01, Table 1.

EXHIBIT 3

COMPARISON OF UNE AND
SPECIAL ACCESS RATES

Sprint Nextel Comments
Comparison of ATT and Verizon Special Access Rates and Unbundled Network Element Rates
Exhibit 3

LEC	STATE	ZONES	UNE DS1 Circuit	ACCESS DS1 Circuit	% ACCESS> UNE	UNE DS3 Circuit	ACCESS DS3 Circuit	% ACCESS> UNE
AT&T	WI	RURAL	$ 146.03	$ 398.50	173%	$ 2,284.83	$ 2,577.00	13%
		SUBURBAN	$ 149.21	$ 379.50	154%	$ 2,230.65	$ 2,437.00	9%
		METRO	$ 130.61	$ 339.50	160%	$ 2,009.87	$ 2,257.00	12%
AT&T	TX	RURAL	$ 162.24	$ 328.30	102%	$ 1,134.18	$ 2,520.00	122%
		SUBURBAN	$ 153.18	$ 312.50	104%	$ 1,111.57	$ 2,432.50	119%
		URBAN	$ 133.93	$ 302.50	126%	$ 1,128.90	$ 2,355.00	109%
AT&T	OH	RURAL	$ 131.95	$ 385.75	192%	$ 1,391.65	$ 2,537.00	82%
		SUBURBAN	$ 124.77	$ 367.75	195%	$ 1,163.31	$ 2,397.00	106%
		METRO	$ 94.73	$ 329.75	248%	$ 1,014.01	$ 2,217.00	119%
AT&T	MI	RURAL	$ 121.59	$ 385.75	217%	$ 1,163.96	$ 2,537.00	118%
		SUBURBAN	$ 108.00	$ 367.75	241%	$ 912.14	$ 2,397.00	163%
		URBAN	$ 100.59	$ 329.75	228%	$ 835.70	$ 2,217.00	165%
AT&T	CA	ZONE 3	$ 255.54	$ 390.00	53%	$ 3,502.96	$ 2,240.00	-36%
		ZONE 2	$ 176.40	$ 368.00	109%	$ 2,131.94	$ 2,140.00	0%
		ZONE 1	$ 147.36	$ 364.50	147%	$ 1,675.82	$ 2,055.00	23%
VERIZON	PA	CELL 4	$ 316.50	$ 437.29	38%	$ 3,381.20	$ 3,744.76	11%
		CELL 3	$ 257.16	$ 419.96	63%	$ 3,381.20	$ 3,634.20	7%
		CELL 2	$ 240.72	$ 419.96	74%	$ 3,381.20	$ 3,634.20	7%
		CELL 1	$ 189.28	$ 392.45	107%	$ 3,381.20	$ 3,523.63	4%
VERIZON	NY	ZONE 2	$ 334.00	$ 456.17	37%	$ 2,466.69	$ 3,744.76	52%
		ZONE 1B	$ 271.58	$ 438.84	62%	$ 2,466.69	$ 3,634.20	47%
		ZONE 1A	$ 241.06	$ 385.48	60%	$ 2,466.69	$ 3,523.63	43%
VERIZON	MA	RURAL	$ 357.13	$ 456.17	28%	$ 2,352.83	$ 3,744.76	59%
		SUBURBAN	$ 249.35	$ 438.84	76%	$ 2,362.83	$ 3,634.20	54%
		URBAN	$ 225.79	$ 438.84	94%	$ 2,372.83	$ 3,634.20	53%
		METRO	$ 181.71	$ 411.33	126%	$ 2,382.83	$ 3,523.63	48%
VERIZON	MD	DENSITY ZONE A1	$ 260.42	$ 437.29	68%	$ 2,441.98	$ 3,744.76	53%
		DENSITY ZONE A2	$ 263.64	$ 419.96	59%	$ 2,441.98	$ 3,634.20	49%
		DENSITY ZONE B1	$ 339.80	$ 419.96	24%	$ 2,441.98	$ 3,634.20	49%
		DENSITY ZONE B2	$ 300.56	$ 392.45	31%	$ 2,441.98	$ 3,523.63	44%
AT&T		SIMPLE AVERAGE	$ 142.41	$ 356.65	150%	$ 1,579.43	$ 2,354.37	49%
VERIZON		SIMPLE AVERAGE	$ 268.58	$ 424.33	58%	$ 2,677.61	$ 3,634.20	36%
TOTAL		SIMPLE AVERAGE	$ 205.49	$ 390.49	90%	$ 2,128.52	$ 2,994.28	41%

Tariff References for Access vs. UNE – All access rates are price cap 5 year term rates

PA/MD – Verizon #1 Sections 7 (MTM rates) and 25 (Term Discount %)
NY/MA – Verizon #11 Sections 31 (MTM rates) and 25 (Term Discount %)
WI/MI/OH – Ameritech #2 - Section 7
CA – Pacific Bell #1 - Section 7
TX – Southwestern Bell #73 - Section 7

Sprint Nextel Comments
Exhibit 3
Supporting Detail

STATE		UNE DS1 LOOP	ACCESS DS1 CT	% ACCESS> UNE	UNE DS3 LOOP	ACCESS DS3 CT	% ACCESS> UNE	UNE DS1 INTEROFFICE FIXED	ACCESS DS1 CMT	% ACCESS> UNE	UNE DS1 INTEROFFICE PER MILE	ACCESS DS1 CMF	% ACCESS> UNE	UNE DS3 INTEROFFICE FIXED	ACCESS DS3 CMT	% ACCESS> UNE	UNE DS3 INTEROFFICE PER MILE	ACCESS DS3 CMF	% ACCESS> UNE	UNE DS1 Circuit	ACCESS DS1 Circuit	% ACCESS> UNE	UNE DS3 Circuit	ACCESS DS3 Circuit	% ACCESS> UNE
WI	RURAL	$ 52.82	$126.50	139%	$ 880.30	$ 960.00	9%	$ 18.49	$ 29.00	57%	$ 2.19	$ 11.65	432%	$ 191.33	$ 260.00	36%	$ 33.29	$ 39.70	19%	$ 146.03	$ 398.50	173%	$ 2,284.83	$ 2,577.00	13%
	SUBURBAN	$ 54.41	$120.00	121%	$ 853.21	$ 930.00	9%	$ 18.49	$ 25.00	35%	$ 2.19	$ 11.45	423%	$ 191.33	$ 240.00	25%	$ 33.29	$ 33.70	1%	$ 149.21	$ 379.50	154%	$ 2,230.65	$ 2,437.00	9%
	METRO	$ 45.11	$102.00	126%	$ 742.82	$ 870.00	17%	$ 18.49	$ 23.00	24%	$ 2.19	$ 11.25	414%	$ 191.33	$ 220.00	15%	$ 33.29	$ 29.70	-11%	$ 130.61	$ 339.50	160%	$ 2,009.87	$ 2,257.00	12%
TX	RURAL	$ 63.41	$102.90	62%	$ 450.00	$ 850.00	89%	$ 34.08	$ 34.00	0%	$ 0.13	$ 8.85	6490%	$ 194.60	$ 410.00	111%	$ 3.96	$ 41.00	936%	$ 162.24	$ 328.30	102%	$ 1,134.18	$ 2,520.00	122%
	SUBURBAN	$ 59.77	$ 95.00	59%	$ 450.00	$ 825.00	83%	$ 32.55	$ 34.00	4%	$ 0.11	$ 8.85	7997%	$ 179.53	$ 400.00	123%	$ 3.20	$ 38.25	1094%	$ 153.18	$ 312.50	104%	$ 1,111.57	$ 2,432.50	119%
	URBAN	$ 49.58	$ 90.00	82%	$ 450.00	$ 800.00	78%	$ 33.76	$ 34.00	1%	$ 0.10	$ 8.85	8706%	$ 199.77	$ 395.00	98%	$ 2.91	$ 36.00	1136%	$ 133.93	$ 302.50	126%	$ 1,128.90	$ 2,355.00	109%
OH	RURAL	$ 50.38	$121.00	140%	$ 523.90	$ 950.00	81%	$ 14.79	$ 27.75	88%	$ 1.64	$ 11.60	607%	$ 127.75	$ 250.00	96%	$ 21.61	$ 38.70	79%	$ 131.95	$ 385.75	192%	$ 1,391.65	$ 2,537.00	82%
	SUBURBAN	$ 46.79	$115.00	146%	$ 409.73	$ 920.00	125%	$ 14.79	$ 23.75	61%	$ 1.64	$ 11.40	595%	$ 127.75	$ 230.00	80%	$ 21.61	$ 32.70	51%	$ 124.77	$ 367.75	195%	$ 1,163.31	$ 2,397.00	106%
	METRO	$ 31.77	$ 98.00	208%	$ 335.08	$ 860.00	157%	$ 14.79	$ 21.75	47%	$ 1.64	$ 11.20	583%	$ 127.75	$ 210.00	64%	$ 21.61	$ 28.70	33%	$ 94.73	$ 329.75	248%	$ 1,014.01	$ 2,217.00	119%
MI	RURAL	$ 51.71	$121.00	134%	$ 479.37	$ 950.00	98%	$ 13.17	$ 27.75	111%	$ 0.50	$ 11.60	2220%	$ 110.02	$ 250.00	127%	$ 9.52	$ 38.70	307%	$ 121.59	$ 385.75	217%	$ 1,163.96	$ 2,537.00	118%
	SUBURBAN	$ 44.01	$115.00	161%	$ 379.38	$ 920.00	143%	$ 12.28	$ 23.75	93%	$ 0.77	$ 11.40	1381%	$ 114.98	$ 230.00	100%	$ 3.84	$ 32.70	752%	$ 108.00	$ 367.75	241%	$ 912.14	$ 2,397.00	163%
	URBAN	$ 40.65	$ 98.00	141%	$ 321.94	$ 860.00	167%	$ 12.39	$ 21.75	76%	$ 0.69	$ 11.20	1523%	$ 129.82	$ 210.00	62%	$ 6.20	$ 28.70	363%	$ 100.59	$ 329.75	228%	$ 835.70	$ 2,217.00	165%
CA	ZONE 3	$ 102.76	$121.50	18%	$ 1,388.30	$ 790.00	-43%	$ 31.62	$ 49.00	55%	$ 1.84	$ 9.80	433%	$ 369.16	$ 435.00	18%	$ 35.72	$ 22.50	-37%	$ 255.54	$ 390.00	53%	$ 3,502.96	$ 2,240.00	-36%
	ZONE 2	$ 63.19	$115.00	82%	$ 702.79	$ 765.00	9%	$ 31.62	$ 40.50	28%	$ 1.84	$ 9.75	430%	$ 369.16	$ 410.00	11%	$ 35.72	$ 20.00	-44%	$ 176.40	$ 368.00	109%	$ 2,131.94	$ 2,140.00	0%
	ZONE 1	$ 48.67	$113.00	132%	$ 474.73	$ 740.00	56%	$ 31.62	$ 41.00	30%	$ 1.84	$ 9.75	430%	$ 369.16	$ 400.00	8%	$ 35.72	$ 17.50	-51%	$ 147.36	$ 364.50	147%	$ 1,675.82	$ 2,055.00	23%
PA	Cell 4	$ 131.51	$150.47	14%	$ 1,187.71	$1,216.19	2%	$ 47.48	$ 34.45	-27%	$ 0.60	$ 10.19	1598%	$ 492.68	$ 455.81	-7%	$ 51.31	$ 85.66	67%	$ 316.50	$ 437.29	38%	$ 3,381.20	$ 3,744.76	11%
	Cell 3	$ 101.84	$141.80	39%	$ 1,187.71	$1,160.91	-2%	$ 47.48	$ 34.45	-27%	$ 0.60	$ 10.19	1598%	$ 492.68	$ 455.81	-7%	$ 51.31	$ 85.66	67%	$ 257.16	$ 419.96	63%	$ 3,381.20	$ 3,634.20	7%
	Cell 2	$ 93.62	$141.80	51%	$ 1,187.71	$1,160.91	-2%	$ 47.48	$ 34.45	-27%	$ 0.60	$ 10.19	1598%	$ 492.68	$ 455.81	-7%	$ 51.31	$ 85.66	67%	$ 240.72	$ 419.96	74%	$ 3,381.20	$ 3,634.20	7%
	Cell 1	$ 67.90	$128.05	89%	$ 1,187.71	$1,105.62	-7%	$ 47.48	$ 34.45	-27%	$ 0.60	$ 10.19	1598%	$ 492.68	$ 455.81	-7%	$ 51.31	$ 85.66	67%	$ 189.28	$ 392.45	107%	$ 3,381.20	$ 3,523.63	4%
NY	Zone 2	$ 129.39	$150.47	16%	$ 801.75	$1,216.19	52%	$ 54.72	$ 30.63	-44%	$ 2.05	$ 12.46	508%	711.09	$ 455.81	-36%	15.21	$ 85.66	463%	$ 334.00	$ 456.17	37%	$ 2,466.69	$ 3,744.76	52%
	Zone 1B	$ 98.18	$141.80	44%	$ 801.75	$1,160.91	45%	$ 54.72	$ 30.63	-44%	$ 2.05	$ 12.46	508%	711.09	$ 455.81	-36%	15.21	$ 85.66	463%	$ 271.58	$ 438.84	62%	$ 2,466.69	$ 3,634.20	47%
	Zone 1A	$ 82.92	$115.13	39%	$ 801.75	$1,105.62	38%	$ 54.72	$ 30.63	-44%	$ 2.05	$ 12.46	508%	711.09	$ 455.81	-36%	15.21	$ 85.66	463%	$ 241.06	$ 385.48	60%	$ 2,466.69	$ 3,523.63	43%
MA	RURAL	$ 150.32	$150.47	0%	$ 877.08	$1,216.19	39%	$ 42.69	$ 30.63	-28%	$ 1.38	$ 12.46	803%	409.87	$ 455.81	11%	18.88	$ 85.66	354%	$ 357.13	$ 456.17	28%	$ 2,352.83	$ 3,744.76	59%
	SUBURBAN	$ 96.43	$141.80	47%	$ 877.08	$1,160.91	32%	$ 42.69	$ 30.63	-28%	$ 1.38	$ 12.46	803%	409.87	$ 455.81	11%	19.88	$ 85.66	331%	$ 249.35	$ 438.84	76%	$ 2,362.83	$ 3,634.20	54%
	URBAN	$ 84.65	$141.80	68%	$ 877.08	$1,160.91	32%	$ 42.69	$ 30.63	-28%	$ 1.38	$ 12.46	803%	409.87	$ 455.81	11%	20.88	$ 85.66	310%	$ 225.79	$ 438.84	94%	$ 2,372.83	$ 3,634.20	53%
	METRO	$ 62.61	$128.05	105%	$ 877.08	$1,105.62	26%	$ 42.69	$ 30.63	-28%	$ 1.38	$ 12.46	803%	409.87	$ 455.81	11%	21.88	$ 85.66	291%	$ 181.71	$ 411.33	126%	$ 2,382.83	$ 3,523.63	48%
MD	DZ A1	$ 113.03	$150.47	33%	$ 961.37	$1,216.19	27%	$ 30.61	$ 34.45	13%	$ 0.38	$ 10.19	2617%	414.74	$ 455.81	10%	10.45	$ 85.66	720%	$ 260.42	$ 437.29	68%	$ 2,441.98	$ 3,744.76	53%
	DZA2	$ 114.64	$141.80	24%	$ 961.37	$1,160.91	21%	$ 30.61	$ 34.45	13%	$ 0.38	$ 10.19	2617%	414.74	$ 455.81	10%	10.45	$ 85.66	720%	$ 263.64	$ 419.96	59%	$ 2,441.98	$ 3,634.20	49%
	DZB1	$ 152.72	$141.80	-7%	$ 961.37	$1,160.91	21%	$ 30.61	$ 34.45	13%	$ 0.38	$ 10.19	2617%	414.74	$ 455.81	10%	10.45	$ 85.66	720%	$ 339.80	$ 419.96	24%	$ 2,441.98	$ 3,634.20	49%
	DZB2	$ 133.10	$128.05	-4%	$ 961.37	$1,105.62	15%	$ 30.61	$ 34.45	13%	$ 0.38	$ 10.19	2617%	414.74	$ 455.81	10%	10.45	$ 85.66	720%	$ 300.56	$ 392.45	31%	$ 2,441.98	$ 3,523.63	44%
AT&T	SIMPLE AVERAGE	$ 53.67	$110.26	105%	$ 589.44	$ 866.00	47%	$ 22.20	$ 30.40	37%	$ 1.29	$ 10.57	721%	$ 199.56	$ 303.33	52%	$ 20.10	$ 31.90	59%	$ 142.41	$ 356.65	150%	$ 1,579.43	$ 2,354.37	49%
VZ	SIMPLE AVERAGE	$ 107.52	$139.59	30%	$ 967.33	$1,160.91	20%	$ 43.15	$ 32.67	-24%	$ 1.04	$ 11.25	984%	$ 493.50	$ 455.81	-8%	$ 24.95	$ 85.66	243%	$ 268.58	$ 424.33	58%	$ 2,677.61	$ 3,634.20	36%
TOTAL	SIMPLE AVERAGE	$ 80.60	$124.92	55%	$ 778.38	$1,013.45	30%	$ 32.67	$ 31.53	-3%	$ 1.16	$ 10.91	838%	$ 346.53	$ 379.57	10%	$ 22.52	$ 58.78	161%	$ 205.49	$ 390.49	90%	$ 2,128.52	$ 2,994.28	41%

Tariff Refergences for Access vs. UNE – All access rates are price cap 5 year term rates

PA/MD – Verizon #1 Sections 7 (MTM rates) and 25 (Term Discount %)

NY/MA – Verizon #11 Sections 31 (MTM rates) and 25 (Term Discount %)

WI/MI/OH – Ameritech #2 - Section 7

CA – Pacific Bell #1 - Section 7

TX – Southwestern Bell #73 - Section 7

Notes:

All access rates are price cap 5 year term rates. MI< WI and OH are Zones 1, 3 and 5 because of the 5 zone structure

For PA, MA and MD, the three access rate zone 2 is matched up with the two middle UNE zones.