LONGSTANDING REGULATORY TOOLS CONFIRM BOC MARKET POWER:

A Defense of ARMIS

Prepared for the

AdHoc Telecommunications Users Committee

by

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Preface

LONGSTANDING REGULATORY TOOLS CONFIRM BOC MARKET POWER

The Ad Hoc Telecommunications Users Committee is a group of large corporate telecommunications customers whose members collectively purchase more than $2-billion worth of local and long distance, voice and data, conventional and advanced telecommunications services annually. Committee members include some of the nation's largest and most sophisticated corporate buyers of telecommunications services, thirteen of which are in the Fortune 500 and nine of which are in the Fortune 100. The members of Ad Hoc represent a broad range of industry sectors (including manufacturing, financial services, insurance, retail, and information technology).

As an active participant on behalf of large user concerns in FCC rate and policymaking proceedings for nearly three decades, the Ad Hoc Committee has consistently advocated policies aimed at facilitating the development of competition in all telecom sectors, and has supported a variety of deregulatory initiatives wherever competition has obviated the continuing need for regulation as a means for assuring competitive market outcomes. Indeed, no customers would likely benefit more from the development of robust competition and the reliance upon markets rather than regulation than Ad Hoc's members. However, where effective and sustainable competition is not present or not feasible, the Committee believes that ongoing and effective regulation is essential, both to afford entrants a fair opportunity to compete and to assure customers fair, just and reasonable prices where competition is not capable of assuring that result.

To be sure, competition has arisen in a number of telecom industry sectors, but one key area that remains monopolized by incumbent local exchange carriers is the market for access services – switched and dedicated "last mile" connections between interexchange carrier networks and local end users. In the Committee members' experience, deregulatory initiatives with respect to access services – in the form of ILEC pricing and earnings flexibility – have been premature, and have often resulted in persistently excessive prices, operating to frustrate, rather than to facilitate, competition in this sector. AdHoc has repeatedly pointed to the excessive earnings generated by special access services as an indicator of the BOCs abuse of market power in the provision of special access services.

In that context, the Ad Hoc Committee has asked Economics and Technology Inc. (ETI), as its economic and policy advisors, to re-examine BOC earnings for special access services in light of criticisms that have been levied at data reported in ARMIS (the "Automated Reporting and Management Information System." This paper sets forth the results of that effort.

This paper was prepared by Susan M. Gately, Helen E. Golding, Lee L. Selwyn and Colin B. Weir. The authors gratefully acknowledge the contributions and assistance provided by the Committee's legal counsel, James S. Blaszak and Colleen L. Boothby of Levine, Blaszak, Block and Boothby, LLP, as well as the invaluable assistance of numerous Committee members.

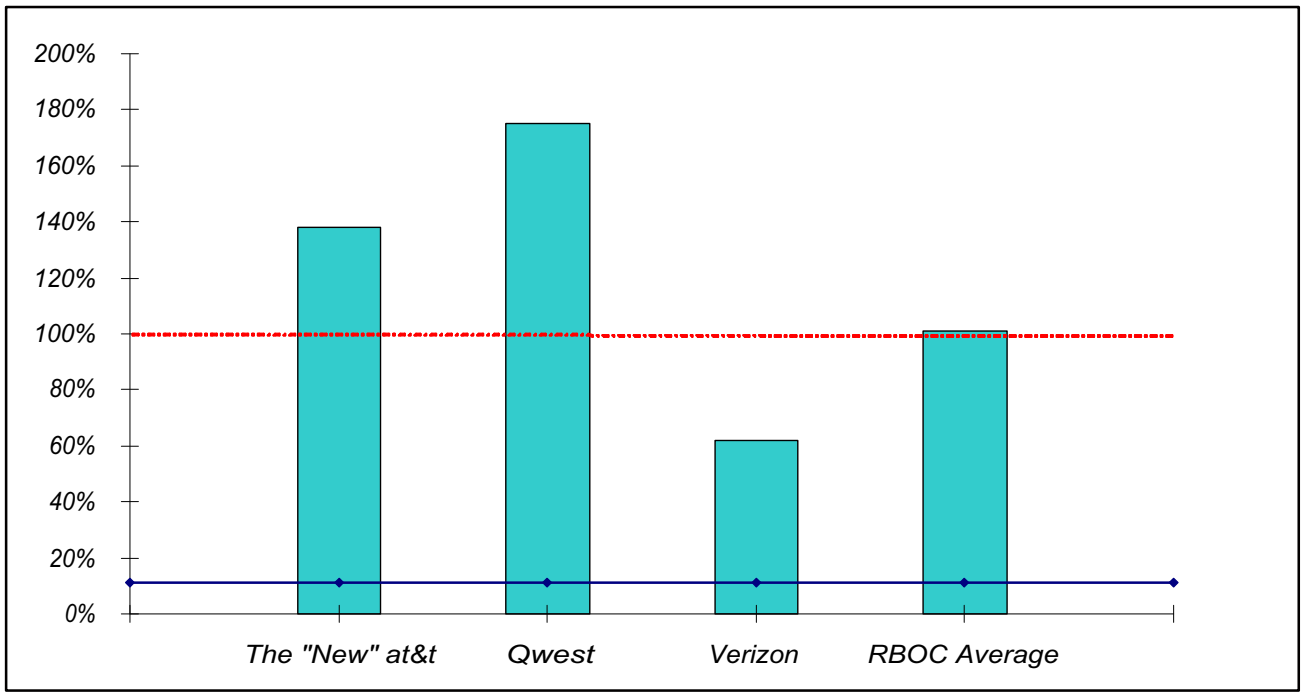
Boston, Massachusetts
January 2010

Executive Summary

LONGSTANDING REGULATORY TOOLS CONFIRM BOC MARKET POWER

RBOC Profit Levels on Special Access Demonstrate that the BOCs retain significant market power

ARMIS data provide strong evidence that the Bell Operating Companies ("BOCs") have earned excessive returns from the provision of special access services and that neither market forces nor the current regulatory regime have protected consumers from excessive special access prices. The fact that RBOC special access rates are not even remotely constrained by competition is reflected in the actual rates of return that these companies have been able to earn since the FCC lifted the price caps for these services. The average return on interstate special access services has been climbing steadily since 1996, such that in the most recent reporting period there were RBOCs whose earnings were more than *ten times* the 11.25% earnings level last approved by the FCC. Six years ago, we reported that the average special access rate of return for 2003 taken across the (then) four RBOCs was 43.7%. For

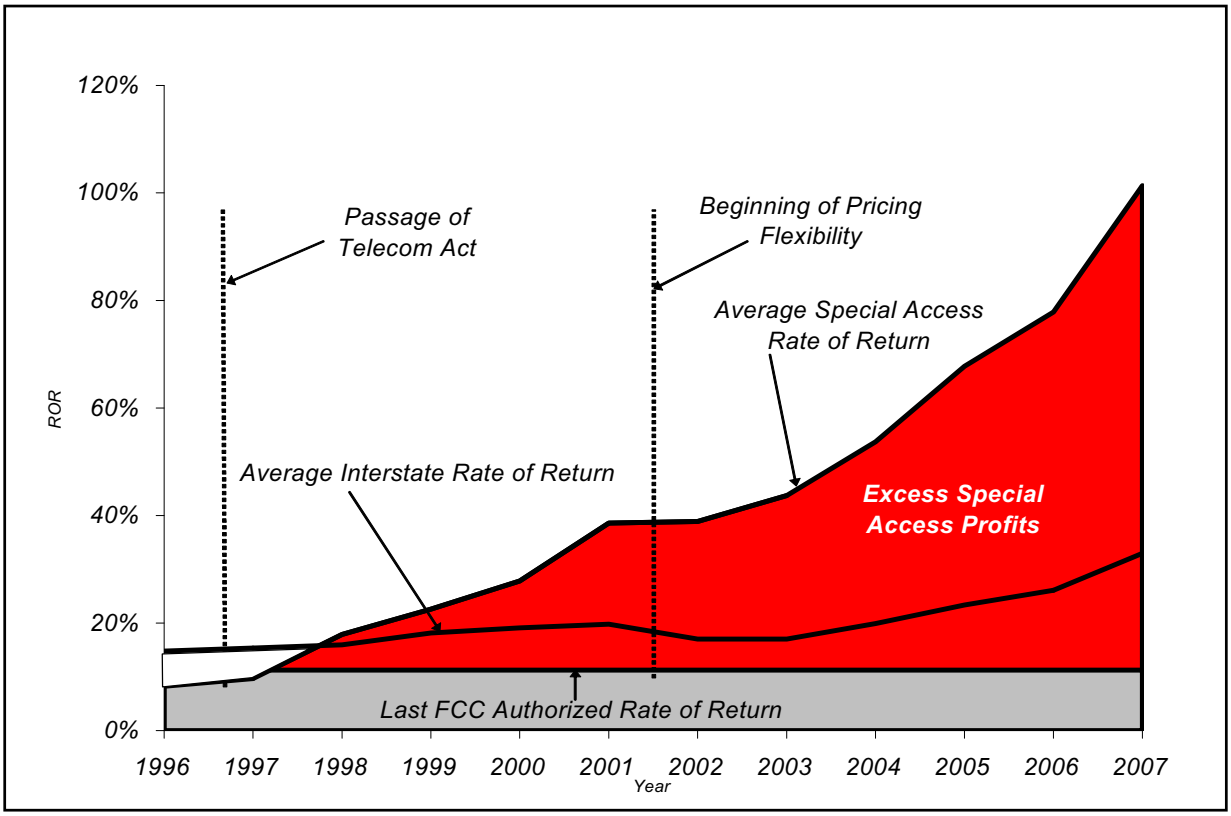


RBOC realized rates of return on Interstate Special Access Services, 2007.

2007, that composite figure has skyrocketed to 101%! In the face of this evidence, the BOCs claim that ARMIS data are inaccurate and unreliable but this paper demonstrates that those claims are without merit

"Special access" is the FCC's name for certain broadband services provided by incumbent local exchange carriers ("ILECs") and used by high-volume customers, information service providers, and other carriers as the building blocks of their voice and data networks. Special access services include a diverse range of services that are in high demand – from the familiar DS1 and DS3 workhorses of corporate networks to newer favorites like DSL, Ethernet, and MPLS – which partly explains why special access revenues account for nearly half of the ILECs' total revenues from interstate service. Special access is to the information economy what highway on- and off-ramps, railroad sidings, and similar transportation infrastructure are to manufacturing industries. The Internet and all of the economic activity that rides on it, along with banking, credit card, ATM, and most other financial and business transactions that drive the US economy, depend critically upon the capabilities that secure, dedicated access provides. The box on the following page describes common uses of special access facilities by large and small business customers, internet access service providers, and wireless carriers.

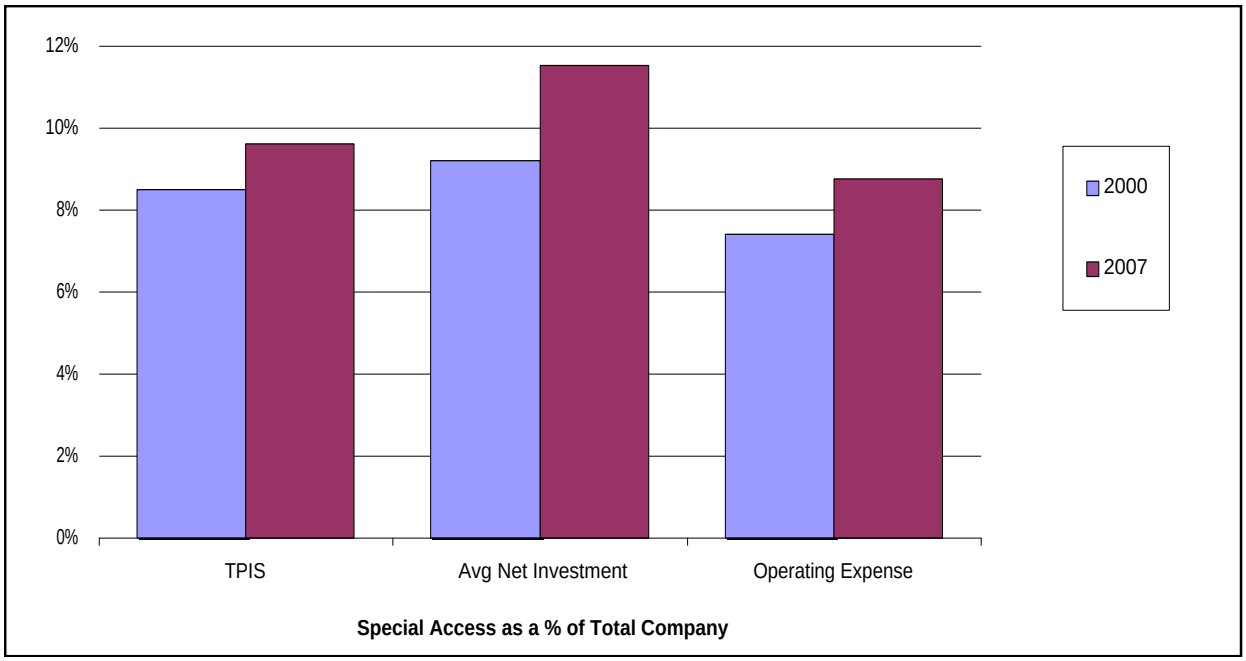
Sustained – and escalating – earnings at these levels could not occur under the kind of competitive market conditions that are implicit in the many of the FCC's deregulatory policies that have been enacted to date. As the figure below, RBOC rates of return on interstate special access have been rising steadily since 1996 – confirming that the FCC's decision to afford pricing flexibility to these services was premature. Sustained – and escalating – earnings at these levels could not occur under the kind of competitive market conditions that are implicit in the FCC's deregulatory policies.



The RBOCs' unsubstantiated claims that the earnings results generated from the ARMIS data are overstated do not stand up to scrutiny as demonstrated below. Significantly, the "freezing" of certain allocators used in the development of the separated cost data has not resulted in a "freeze" in investment and expenses attributed to the special access category (data used in the calculation of special access earnings). Precisely the opposite has occurred. Analysis of ARMIS data from 2000 to present reveals that portion of total investment and expenses allocated to the special access category has grown measurably. The BOCs other spurious claims about the ARMIS data are similarly flawed. In fact the BOCs have used the data with regulators and the courts when the results suit their purposes.

Those who invoke references to the "separations freeze" that occurred in 2001 claiming that ARMIS data became somehow fatally flawed and hence unnecessary as a result of that action (it is not), ignore why the Commission and the Federal-State Joint Board opted to evaluate Separations and to initiate the freeze in the first place. If the ARMIS data were no longer relevant (or would not be relevant following the freeze), there would have been no reason to freeze the allocators rather than simply discontinuing the entire process or freezing the results. It is precisely because the Separations and cost accounting results quantified in ARMIS do have a real world effect that the allocators were frozen in 2001, and that the FCC choose to extend that freeze in 2006 and again in 2009. To believe otherwise is to believe that the Commission would knowingly and purposefully implement changes to its Separations rules that would make the results meaningless. While parties may differ on the efficacy of the 2001 freeze, there can be no doubt but that the purpose of freezing rather than eliminating Separations was so that state and federal regulators would have the separated accounting data that are necessary to fulfill their regulatory responsibilities to ensure just and reasonable rates.

The figure below documents that rather than being frozen, special access investments and expenses today account for a larger portion of overall RBOC expenditures – as one would expect.



We address each of the RBOCs' claims in the remainder of this paper and show them to be without merit. Indeed, as we also document here, the RBOCs have initiated large-scale investment programs aimed at constructing facilities needed to support various *nonregulated* broadband "information services" (i.e., high-speed Internet access) and video distribution services, yet for regulatory accounting purposes these capital outlays are being carried "above the line" – i.e., as regulatory "rate base" assets. In so doing, the RBOCs inflate the value of assets assigned to *regulated services*, and correspondingly *understate* the net return on those (inflated) assets being derived from regulated telecommunications services. To the extent that a portion of these broadband facilities investment programs are being allocated to the special access category, special access category rates of return, as reported in ARMIS, are being understated, perhaps by a substantial amount.

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1 THE BOCS' ARMIS DATA IS A RELIABLE INDICATOR OF MARKET POWER AND EXCESSIVELY HIGH PRICES FOR SPECIAL ACCESS SERVICES

ARMIS[1] data provide strong evidence that the Bell Operating Companies ("BOCs") have earned excessive returns from the provision of special access services and that neither market forces nor the current regulatory regime have protected consumers from excessive special access rates. In the face of this evidence, the BOCs claim that ARMIS data are inaccurate and unreliable but this paper demonstrates that those claims are without merit.

Introduction

"Special access" is the FCC's name for certain broadband services provided by incumbent local exchange carriers ("ILECs") and used by high-volume customers, information service providers, and other carriers as the building blocks of their voice and data networks. Special access services include a diverse range of services that are in high demand – from the familiar DS1 and DS3 workhorses of corporate networks to newer favorites like DSL, Ethernet, and MPLS – which partly explains why special access revenues account for nearly half of the ILECs' total revenues from interstate service. Special access is to the information economy what highway on- and off-ramps, railroad sidings, and similar transportation infrastructure are to manufacturing industries. The Internet and all of the economic activity that rides on it, along with banking, credit card, ATM, and most other financial and business transactions that drive the US economy, depend critically upon the capabilities that secure, dedicated access provides. The box on the following page describes common uses of special access facilities by large and small business customers, internet access service providers, and wireless carriers.

Despite the dominant role that special access plays in corporate networks (and in ILEC revenue streams), however, corporate customers like the members of the AdHoc Telecommunications Users Committee have for several years confronted a special access market in which there is very little competition. The recurring marketplace experience of business customers confirms that the ILECs, and only the ILECs, provide the last-mile access facilities at more than 95% of all commercial locations nationwide. In the absence of competition to discipline their pricing, the BOCs have set special access prices so high over the past several years that their special access earnings, on average,

[1] ARMIS stands for the "Automated Reporting and Management Information System." A description of ARMIS and the date reported therein is found beginning at page 5 *infra*.

exceeded 100% in 2007.[2] At the same time, the Federal Communications Commission has been removing its price cap regulation of interstate special access prices so that today, neither competition nor regulation is available to protect special access customers from excessive special access rates.

Common Uses of Special Access Services

Small and Medium Business Users: Although frequently thought of as a service for only the largest corporations and governmental units, broadband last-mile facilities and the services provided over them are now commonly used by businesses of all sizes. Small law firms, grocery stores, insurance agents, physicians' offices, hospitals, and even local public schools and libraries are all increasingly connected to the world via special access facilities. The lowest capacity of the business offerings, known as DS-1, can provide up to 24 voice-grade equivalent circuits, but it is frequently economical for businesses needing as few as 5 or 6 lines to purchase a DS-1 rather than individual access lines and to dedicate a portion of its capacity for access to the Internet. In an increasingly information-based economy, even the smallest businesses use the Internet and thus are candidates for services provided over dedicated last-mile broadband facilities.

Satellite and Branch Operations of Large Enterprise and Government Users: Few large companies confine their entire operations to a single headquarters location, and their branch and satellite operations utilize dedicated broadband to connect both to headquarters and to the world. When the teller at a local branch records a transaction, it is most likely transmitted over a dedicated broadband facility. When a department store uses point of sale terminals to update its inventory or a consumer withdraws funds from her bank ATM, a dedicated broadband facility is usually involved. Virtually every interaction that consumers have with major corporate entities involves the transmission of data over special access type facilities – ATM machines, automobile dealerships, retail operations, the airline gate agent at the airport, credit card swipe machines – all are frequently connected via the dedicated special access connections and individual corporate users can have many thousands of individual locations nationwide.

***Internet access providers*:** Dedicated broadband access is also essential to the provisioning of Internet access services. US rural ILECs who seek to provide Internet access services have complained to the FCC about the unsustainable burden of special access overpricing by large ILECs. Time Warner Telecom, a pioneer in the US with respect to the offering of "next-generation" services, has likewise complained that "ILECs are exploiting their control over bottleneck end user connections to control the pace at which competitors roll out next-generation facilities."* As the importance of electronic commerce continues to expand in our nation's economy, the cost of putting Internet access in place becomes an increasingly potent economic driver.

***Wireless providers*:** While the last leg of the transmission to a customer's wireless handset occurs over the airwaves the transmission between each of the roughly 185,000 wireless transceiver cell sites in the US and the wireless carriers' local mobile telephone switching office ("MTSO") uses a dedicated broadband facility usually obtained from the ILEC most of the time. Sprint Nextel reported to the FCC that it relied upon 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 MSAs in 2006." According to Sprint Nextel, special access costs account, on average, for *one-third* of the total costs of operating each of its over 52,000 cell sites.** While precise data is not generally available, in aggregate, US wireless carriers likely spend from $1- to as much as $2.5-billion annually on special access services.

*Time Warner Telecom Comments filed May 16, 2007 in Broadband Deployment Inquiry, at 11 - 12
**Sprint Comments at 30.

[2] See Figure 1.1 following. Earnings data are not available for 2008 because the BOCs petitioned the Commission to forbear from enforcing its cost accounting and ARMIS reporting rules on the grounds that competition made those rules unnecessary. The FCC granted those petitions in 2008.

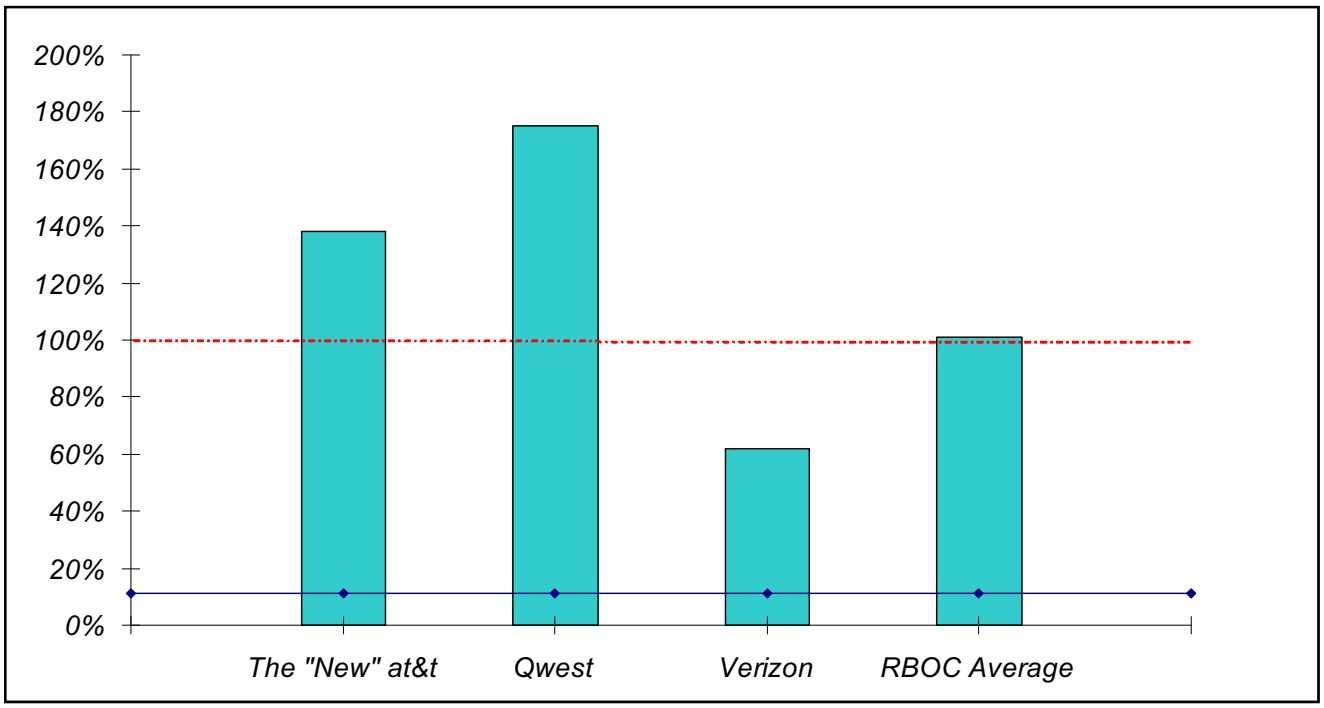


Figure 1.1 Analysis of Individual RBOC Rates of Return on Special Access Services: 2007

The evidence of ILEC overearnings

The fact that RBOC special access rates are not constrained by competition is demonstrated by the actual rates of return that these companies have been able to attain since the FCC lifted its price cap regulation. The average return on interstate special access services has been climbing steadily since 1996. In the most recent reporting period, some RBOCs' earnings were more than ten times the 11.25%[3] earnings level last approved by the FCC. Figure 1.1 above provides the results of an earnings analysis for each of the RBOC's special access services category for the year ended 2007, the last year for which data is available.[4] Verizon's return on special access for 2007 was 62% (more than five times the last authorized return level); the "new" AT&T's return (including BellSouth) was 138% (more than ten times the last authorized return level); and Qwest's RoR was 175% (more than fifteen times the last authorized return).[5]

[3] The last time that FCC established an "authorized rate of return" for the RBOCs was some twenty years ago – in 1990 - and the Commission set the rate at 11.25%. *(Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers*, CC Docket No. 89-624, Order, FCC No. 90-315, 5 FCC Rcd 7507 (1990)) That rate was intended to be a proxy for what the RBOC could earn in a market where its rates were constrained by competition, based on then-current market conditions (including capital costs). At the time the 11.25% rate was set, market interest rates were considerably higher than they are today: the prime rate was 10% and the 10-year US Treasury Bond rate was 8.89% compared to 3.25% and 3.83% respectively today Competition-constrained earnings could be expected to be much lower today – so any use of the 11.25% return level is quite conservative. (Interest rate data taken from the Federal Reserve Board, *Statistics: Releases and Historical Data*, http://www.federalreserve.gov/releases/h15/data.htm#fn3 , for Sept.1990 and Jan 8, 2010 (accessed January 16, 2010)).

[4] See footnote 2 *supra*.

[5] ROR calculated with data from: FCC ARMIS Report 43-04, Access Report: Table I YE 2007. Available at http://www.fcc.gov/wcb/eafs/ (accessed December 18, 2008).

These earnings levels are not a short-term phenomenon resulting from a one-time change in circumstance, but are the culmination of a long-term trend of escalating profit levels that has not been constrained by competition as it would have been in a well-functioning market. Sustained– and mushrooming – earnings at these levels could not occur under the kind of competitive market conditions presumed by the FCC's deregulatory policies. Using the enactment of the *Telecom Act of 1996* as a starting point (a time widely heralded as flinging open the monopoly gates to competitors), Figure 1.2 below illustrates the steadily increasing "average" earnings level in the special access category from 1996 to the present.

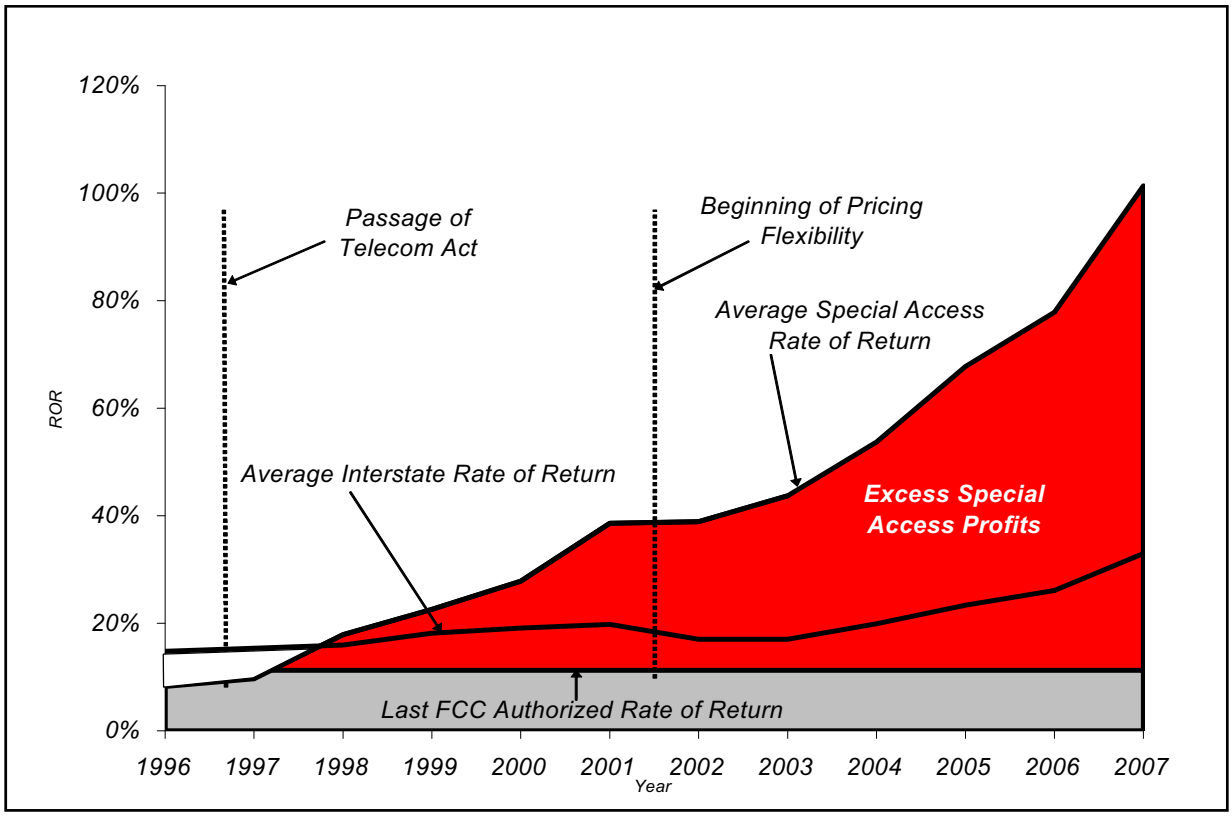


Figure 1.2 Average RBOC Special Access rates of return: 1996 – 2007

The Role of Earnings Analysis in Modern Economic Regulation

Traditionally, economic regulation of dominant telecommunications carriers focused upon assuring that the company's earnings – expressed in terms of return on its net investment – were consistent with levels ordinarily expected to arise in competitive markets. In competitive markets, excessive earnings would stimulate additional entry, ultimately forcing prices and earnings down. Excess earnings therefore could not be sustained beyond the relatively short period of time required for entry to occur and for prices to be bid down toward cost. Where competition and the potential for entry are not present, however, regulation is designed to substitute for competition by constraining prices (and earnings) to competitive levels. The persistence of excessive earnings over a protracted period of time is compelling evidence that (1) competition is not sufficient to constrain the service provider's prices and (2) regulation has not been an effective surrogate for competition. Earnings analysis therefore provides a useful tool for diagnosing competitive problems in a particular market.

An ARMIS and Separations Primer: What they are and why policymakers should care.

ARMIS – the "Automated Reporting and Management Information System" – is a reporting system and nothing more. ARMIS doesn't change, process or manipulate the RBOCs' cost data; it is simply a uniform reporting, filing, and electronic interface system that the FCC developed to ensure that it receives the accounting data it needs to perform its statutory responsibilities. The various ARMIS forms are analogous to the forms required by the Securities and Exchange Commission ("SEC") – the 10-Ks and 10-Qs that publicly traded corporations are required to file. The data reported in ARMIS consists of the dollars spent, dollars earned, and quantities of service provided during each annual accounting period. The term "ARMIS data" as used in this report, and in discussions of the special access issue throughout the industry, is simply a shorthand for "regulatory accounting data." ARMIS is not a black box process that spits out arcane and irrelevant data of no use. ARMIS is anything but that.

The cost and revenue data reported through ARMIS does – and is intended to – differ from the "financial" accounting data reported by the RBOCs to their shareholders and to the SEC. The relevant differences are principally with respect to two areas – depreciation and asset valuation. Ironically, if the RBOCs used financial accounting instead of regulatory accounting, the likely outcome would be even higher rates of return than those being reported to the FCC.[6]

The cost accounting data reported through ARMIS is reported at the total company level and then by jurisdictional categories (regulated/non-regulated and state/interstate). The jurisdictionally interstate regulated service data is then reported by service category levels. The breaking down of revenues, expenses and costs into these different categories (a task that happens before the data ever makes it to the ARMIS reporting mechanism) requires that certain categories of revenues and costs that are associated with plant or personnel jointly used to provide multiple services be allocated or '*separated*' among the several different services. The rules that specify how the actual expense and investment dollars spent by the RBOCs in any given year are allocated between the state and interstate jurisdictional categories are referred to as "jurisdictional separations" and are found in Part 36 of the Commission's Rules.[7] Costs and revenues that have been "separated" into the interstate jurisdiction per Part 36 are then assigned or allocated into individual interstate service categories (*e.g.,* switched access or special access) by Part 69 of the Commission's rules.[8] Although the nature of the separations allocations – which are accomplished at an aggregate level – produces results that are not necessarily *precise,* they are nevertheless accurate and useful for purposes of regulatory analysis. Indeed, the

[6] This is because regulatory depreciation rates are generally lower than those used for financial reporting, resulting in higher net book values in regulatory asset accounts than in corresponding financial accounting asset accounts. Additionally, under financial accounting, impaired assets – those whose economic values have fallen below their book values – are required to be written down to the lower amount. Because net asset values in financial accounting reports are typically lower than those in regulatory accounting reports, the same dollar amount of earnings will, all else being equal, translate into a higher realized rate of return in financial accounting reports than the realized rate of return in regulatory accounting reports.

[7] The initial split between regulated and non-regulated investments and expenses is done pursuant to Part 64 of the Commission's rules.

[8] While the Part 69 allocations and assignments are not technically "jurisdictional separations," the term "separations" has come to refer to service category as well as jurisdictional assignments as well.

BOCs' criticisms of ARMIS data disappear when they use the data to support one of their own positions. [9]

These allocations are necessary because they produce data relevant to the lawfulness of rates and the fairness of competition. By way of example, consider Verizon's entry into the residential video market, in competition with traditional cable companies. When Verizon rolls a truck down a residential street to install fiber optic facilities to the homes on that street so that it can provide video programming, the cost allocation rules and ARMIS reports are designed to ensure that the capital investment and expenses associated with the residential video plant is not recovered from regulated services, *e.g.* from a business subscriber in an office park two miles away that needs a DS-1 facility provided over copper plant already in place. When the cost accounting results are ignored (as they have been) or the requirements for capturing that cost data are eliminated (as they have also recently been), customers of existing monopoly services are overcharged in order to pay forVerizon's expansion into other, unrelated markets and the competitive playing field is tilted. Sticking with FiOS, Verizon offers "FiOS" service providing 15-megabits of capacity to residential customers for $50 per month while charging more than $150 per month for DS-1 (1.544 megabit) capacity to business customers with no cable company to provide an alternative. Something is wrong with this picture – and criticizing or ignoring the accounting data reported through the ARMIS mechanism cannot overcome this reality.

RBOC attempts to disown and discontinue providing the data only serves to underscore its importance

Confronted repeatedly with evidence of their excessive special access earnings, the RBOCs have attempted to explain away what was almost $10-billion in overcharges in 2007 alone.[10] While the RBOC rhetoric has evolved over the past several years, the basic thrust remains essentially the same: ARMIS contains arcane and irrelevant regulatory accounting data; ARMIS data were never meant to "set" prices; ARMIS data is meaningless in the face of new "digital" technologies; ARMIS overstates BOC earnings because the revenues from residential broadband services (DSL and possibly FiOS and U-Verse) are booked to special access but not the costs; a "freeze" of the allocators in certain cost categories implemented several years ago has rendered the data unusable;[11] and on and on.[12] The balance of this paper exposes the fallacies of the RBOCs' arguments.

Before engaging technical details of what ARMIS is or how reliable its results may be a preliminary and overarching argument of the BOCs must be refuted. That argument, which is the easiest to refute, is that the sheer magnitude of the over-earnings reported by BOCs in ARMIS is an indicator that ARMIS is unreliable. The concept of monopoly profits is, of course, not new. The

[9] See discussion in Chapter 2 at pages, *infra*.

[10] Appendix 1, *infra*, contains the derivation of the $10-billion in overcharges. See specifically Table A-1.

[11] This particular criticism has of late been voiced by several state regulators and state consumer advocates as well. State regulators' blossoming interest in investigation of the earnings levels of a specific service category of federally-regulated services is likely driven by unfounded fears that any revenue reductions that might be ordered for the interstate special access category would, of necessity, need to be made up from increases in state regulated rates.

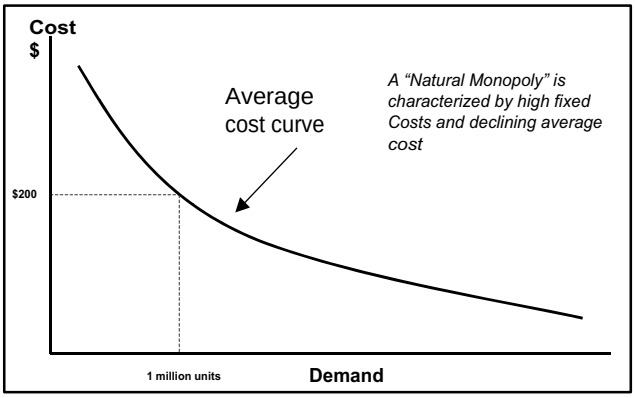
[12] As is discussed in some detail in Chapter 2, while the RBOCs find the ARMIS results distasteful when it comes to analyzing the excess profits being earned on special access services, they claim that the data is reliable in other contexts when it supports the position they advance.

tutorial box found on the following page documents how monopoly-level profits of the kind seen in the special access market can occur.

AdHoc has repeatedly pointed to the BOCs' unprecedented profit levels for special access services as *prima facie* evidence of a market not constrained by either competition or regulation. The BOCs have responded to this evidence of market power by insisting that the ARMIS data upon which the earnings calculations are based – data that the ILECs have themselves extracted from their books of account as maintained in accordance with long established FCC regulations – are not reliable and should therefore be dismissed and denied. This remarkable position is advanced by the RBOCs notwithstanding their active involvement and participation in the creation of ARMIS and the specification of the accounting and reporting requirements underlying it. The Bells' discomfort with what ARMIS data now show about their pricing excesses – rather than any inherent infirmities in the ARMIS data itself –appear to be driving their current rhetoric. In the sections that follow we present evidence regarding the suitability of ARMIS data for use in an earnings analysis, and rebut the arguments that have been put forth by the ILECs (and others) about the purported unsuitability of the data.

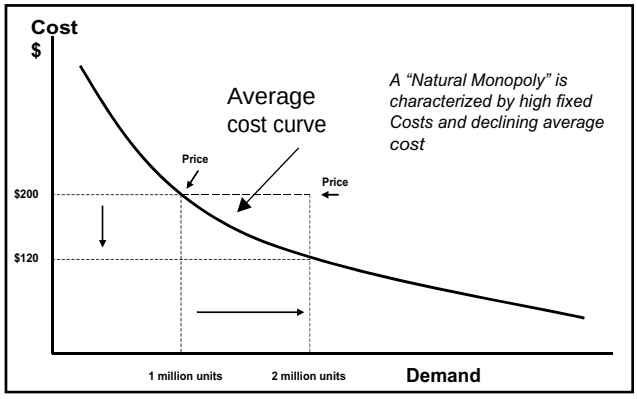
Economic Tutorial: Why monopoly-level profits are credible

Critics and skeptics of the ARMIS data say that the sheer magnitude of the reported special access profits strain credulity, that the seemingly extreme profits by themselves indicate that the data must be flawed. A quick review of the economics underpinning the provision of special access services and the current regulatory environment demonstrates that not only are the extreme levels of profit revealed in the ARMIS results possible – they are quite plausible. In fact, the types of escalating special access category returns as revealed in ARMIS are the expected result based upon the economic conditions applicable to these services. The first figure below illustrates the kind of declining average cost condition found in the capital-intensive telecom industry. Cost curves of this kind, reflecting extreme economies of scale, are described in virtually every economics textbook. As demand increases (as it has for special access) the average cost (including a reasonable profit) of providing each unit of service declines. In a competitive industry (or a regulated industry where cost reductions are required to be flowed through in reduced prices via regulatory adjustments) price is roughly equal to cost – meaning that as you move down the cost curve and to the right, both costs and prices decline – and profitability (return on investment) remains constant. In the case of special access, demand has grown significantly over time – moving the RBOCs down and to the right on the average cost curve. However, there is nothing (competition nor regulation) pushing prices down toward costs, so prices have remained constant or have actually increased. As a result, profits have skyrocketed.



Declining average cost curve - demonstrating unit cost of $200 per month at 1-million units per month of demand

A simple example using the declining cost curve illustrates what happens when, for example, demand is doubled and price is not reduced. Assume a high fixed cost product with 1-million units being demanded each month. At the 1-million demand level, the monthly cost is $200 per unit – an annual cost (including a reasonable profit) of $2.4-billion for the 1-million units per month. In a competitive market, or a market subject to cost-based price regulation, one would expect, over time, that the price for each unit to be set at $200 per unit as well, i.e., the same $2.4-billion in revenues. Suppose that demand increases (as it has in the special access market), and that the number of units demanded doubles from 1-million to 2-million per month. At this level of output, the average cost per unit drops to $120, resulting in a total annual cost for this increased output of $2.88-billion. If competition or regulation force pries down to the new $120 per unit cost level, annual revenues would also be $2.88-billion. If, however, competition is insufficient to discipline pries (as is the case with special access) and regulation does not require price reductions (as has been the with special access for the last five years), the price will remain at $2.00. As a result, annual revenues of $4.8-million will be generated from the 2-million monthly units being sold, resulting in almost $2-billion in excess profits.



Declining average cost curve: An increase in demand result in excess profits unless either competitive forces or cost-based price regulation force prices down to new cost levels.

2 ARMIS RESULTS REMAIN RELIABLE DESPITE CLAIMS OF INHERENT FLAWS BY MADE BY THE BOCS

The RBOCs' unsubstantiated claims that the earnings results generated from the ARMIS data are overstated do not stand up to scrutiny as demonstrated below. Significantly, the "freezing" of certain allocators used in the development of the separated cost data has not resulted in a "freeze" in investment and expenses attributed to the special access category (data used in the calculation of special access earnings). Precisely the opposite has occurred. Analysis of ARMIS data from 2000 to present reveals that portion of total investment and expenses allocated to the special access category has grown measurably. The BOC's other spurious claims about the ARMIS data are similarly flawed. In fact the BOCs have used the data with regulators and the courts when the results suit their purposes.

The RBOCs Have Not Presented Alternative Data That Discredits ARMIS Data.

Frequent repetition of a claim, even an unsubstantiated one, can make it seem true. Such is the case with the RBOCs' claims about ARMIS data. AT&T, Verizon and Qwest have waged a seemingly relentless campaign to convince policymakers and the public that ARMIS results based on the data they have provided to the ARMIS system are unreliable– particularly the separated ARMIS data for the special access category.[13] Though they made a number of claims regarding flaws in ARMIS, the RBOCs have never provided alternate cost data that would substantively refute the ARMIS results that they claim are unreliable.

The notion that the ILECs have no internal cost data specific to special access services other than the supposedly flawed ARMIS data, when special access represents some $17-billion in annual RBOC revenue, strains credulity beyond all reasonable limits. Companies in competitive markets closely monitor product-specific costs, and incorporate that information into their pricing decisions. Similar product-level cost accounting is also used to assess the relative profitability of individual products and product lines and to support capital budgeting and other business case decision-making.

[13] Others have also made this argument. As is discussed in more detail below, NRRI recently released a report in 2009 that concluded that the 2001 separations freeze had rendered the ARMIS results less than reliable, but nonetheless concluding that special access earnings were substantially above what would be considered 'reasonable.' (See discussion at page 71 of the NRRI report) . NRRI's analysts went to the extreme in making 'adjustments' to the ARMIS results – re-assigning investments and costs to the special access service category - and still found indefensible earnings levels. Peter Bluhm & Dr. Robert Loube, National Regulatory Research Institute, Competitive Issues in Special Access Markets, 09-02 (Jan. 21, 2009) ("NRRI Report").

There can be no reasonable doubt that AT&T and Verizon know how much it costs them to turn on and to provide, on an ongoing basis, special access service to a business customer. Yet the RBOCs have yet to offer alternative cost views, despite their persistent challenges to ARMIS and regulatory accounting. Absent plausible alternative data, the BOCs have provided no rational justification for abandoning widely-accepted and long-standing regulatory accounting practices that have been fully vetted in multiple FCC rulemaking proceedings and whose results are certified as accurate by senior officers of each of the reporting ILECs.

Central to the RBOCs' complaints about separated ARMIS data is a claim that while "separations" may have worked in the past, there is something new and unique about the way the public switched network works today that invalidates these long-standing accounting practices. RBOCs have claimed the "new" digital facilities make ARMIS cost allocations arbitrary.[14] There is nothing about the use of "digital" technology or "fiber optic" facilities that creates any fundamental or conceptual difference between the RBOC networks as these exist today and the multi-service, multi-jurisdictional network infrastructure that has been in place for more than a century.[15] The public telephone network has always migrated to new technologies and has always been comprised of extensive amounts of joint and common plant that were – and are – used to support the provision of multiple and different services to individual customers, requiring a cost allocation exercise to set prices.

At other times claims have been made that residential broadband (DSL) revenues are being booked to the special access category while the corresponding residential broadband (DSL) costs are being carried elsewhere, causing special access return levels to be overstated by those DSL revenues. If and to the extent those claims are correct (as claimed, but never actually documented, by any of the RBOCs), it begs the question as to why no carrier making that claim has ever undertaken the relatively simple task of subtracting those DSL revenues from the special access category so as to calculate a rate of return based on the BOCs' view of correctly aligned special access revenues and costs.[16]

[14] This notion is among the factors that the FCC believed needed to be investigated when it instituted the freeze.

[15] More than forty years ago, the preface to a book published by the Michigan State University *Institute of Public Utilities* explained that "[t]elephony is an industry of joint and common costs." That underlying characteristic of telephone service is no different today with digital and fiber optic facilities than it was then. Richard Gable, *Development of Separations Principles in the Telephone Industry*, Institute of Public Utilities, Division of Research, Graduate School of Business Administration, Michigan State University, East Lansing, Michigan, 1967.

[16] Five years ago a Qwest declarant submitted the only relevant evidence that we have seen on this issues in the FCC's *Special Access Rulemaking.* (WC Docket No. 05-25, RM-10593) relative to the level of Qwest's DSL revenues and DSL investment at the time – although quite notably he did not perform the calculation discussed above. ETI did perform that calculation (subtracting out the DSL revenues that were purported to have been included in the special access category) and found that Qwest's special access earnings for 2004 were still in excess of 60% (down from 77% before the adjustment). See AdHoc Reply Comments filed July 29, 2005 at 14 – 18.

BOC claims regarding the impact of the "separations freeze" cannot withstand close scrutiny

The RBOCs often argue that category level earnings results derived from ARMIS data are inaccurate because the jurisdictional "Separations" process was "frozen" in 2001, rendering the current results useless. An examination of the relevant accounting and allocation rules reveals, however, that the RBOCs' criticism grossly overstates the impact of the freeze which in no way undermined the fundamental accuracy and reliability of category earnings results drawn from ARMIS data.

The first step in the cost accounting process (even before 'Separations') is the assignment of investments, expenses, and revenues into *functional* categories. As an example, loop plant (copper wire, fiber optic strands, telephone poles) is assigned to *functional* categories different from the switching equipment used to process calls.[17] This functional accounting – arguably the most important piece of the entire cost accounting process – was not impacted by the 2001 "freeze" of the separations allocators and other allocators that are eventually applied to the functional cost categories. The actual investment and expense dollars being spent by each of the carriers continue to be *assigned* to a specific functional category – with very little room for error or even interpretation. A truck is a truck. The cost of purchasing it and operating it goes into the motor vehicle functional category. End of story. There is no basis to believe that the BOCs provided 2007 Total Company functional accounting data that is anything less than 100% accurate. Any inaccuracy is squarely within the control of the reporting carriers themselves. Table 2.1 excerpts examples of the "functional categories" that continue to apply.

Table 2.1
Examples of FCC Part 32 Functional Accounts

2210	Central Office-Switching
2211	Non-digital switching
2212	Digital electronic switching
2212.1	Circuit switching
2212.2	Packet switching
2220	Operator Systems
2230	Central Office-Transmission
2231	Radio systems
2232	Circuit equipment
2232.1	Electronic circuit
2232.2	Optical circuit
2310	Information Origination/Termination
2311	Station apparatus
2321	Customer premises wiring
2341	Large private branch exchanges
2351	Public telephone terminal equipment
2362	Other terminal equipment
2410	Cable and Wire Facilities
2411	Poles
2421	Aerial cable
2422	Underground cable
2423	Buried cable
2424	Submarine and deep sea cable
2426	Intrabuilding network cable
2431	Aerial wire
2441	Conduit systems

[17] The functional accounting rules are found in Part 32 of the FCC's rules. 47 CFR Part 32.

The 2001 separations "freeze" addresses what portion of the capital and expense dollars associated with each functional category (*e.g.*, the truck in our example above) are *allocated* to the various jurisdictional categories established by Part 36 of the Commission's rules. The "freeze" impacts how much of the truck expense is allocated to non-regulated services, how much to the intrastate jurisdiction, and how much to the interstate jurisdiction. The portion of those results (performed using the "frozen" allocators") assigned to the interstate jurisdiction is then allocated among the various interstate service categories, one of which is special access.

In an ideal world, the driver of the truck would track, on a minute-by-minute basis, the actual use of the truck. If this were done, a truck used only to string fiber optic cable in residential neighborhoods for FiOS video service would have all of its expense allocated to the non-regulated category, and the entire investment cost of that truck would be assigned to the non-regulated category as well. Similarly, a truck used for general repair purposes (rolling to fix residential DSL problems, plain old telephone service (POTS) service calls, and special access outages) would have the time spent on each service accurately reported and that reporting would be used to allocate both the expense and investment dollars associated with that particular truck. However, the FCC determined long ago that the data collection and processing costs would far outweigh the benefits that would inure from that kind of detailed, facility-by-facility use tracking. Instead, the Commission approved a series of *allocators* to reflect service-by-service facility usage and to provide accurate, albeit less than *precise*, service-level cost assignments. Staying with the truck example, the total cost of both trucks – the one used exclusively for deploying FiOS *and* the one used for general repair purposes – would be *assigned* to the motor vehicle functional category. The total of all costs assigned to that category would then be *allocated* first between the various jurisdictional 'separations' categories and then among the various interstate service categories, meaning that a portion of both trucks – even the one used exclusively for FiOS deployment – would be allocated to special access.

Different allocation factors exist for each of the various functional categories. For example, no central office switching costs are allocated to the special access service category, and no loop plant is allocated to the switched access traffic-sensitive switching service category. Historically, the allocators were adjusted annually based upon various usage and other statistics. Recognizing that the allocation factors didn't actually change all that much from year to year and that it might be appropriate to adjust the manner in which some of the allocators were calculated to reflect changes in technology, the FCC "froze" the separations allocators in 2001 for a five year period[18] (subsequently extended to July 2010[19]) to allow investigation of the issue and development of new allocators.

According to the RBOCs, since special access *demand* has been growing and the jurisdictional 'separations' allocators have been frozen since 2001, the results of that process as reported in ARMIS have become unreliable. There is no dispute as to the fact that special access demand has been growing and that separations allocators have been frozen. But it is an unsupported leap in logic to conclude from these undisputed facts that ARMIS data are no longer reliable and – even more of a stretch – to conclude that the effects of these two conditions is to *overstate* ARMIS-based estimates of special access profitability.

[18] *Jurisdictional Separations Reform and Referral to the Federal State Joint Board,* . CC Docket No. 80-286, Order and Further Notice of Proposed Rulemaking, (2001)

[19] *Jurisdictional Separations Reform and Referral to the Federal State Joint Board,* . CC Docket No. 80-286, Report and Order (May 15, 2009) .

Even if the individual *allocators* have been frozen, the *allocations* themselves generally reflect and capture changing demand and cost conditions. Analysis of just a few metrics derived from ARMIS data demonstrates this point. For example, rather than being frozen at the 2001 ratios, the portion of total company costs and investments allocated to the special access category has been steadily increasing, although at a slower rate than the growth in special access demand.[20] The portion of total plant in service (or "TPIS" – the standard measure of *gross cumulative investment* that is still in place) allocated to the special access category is higher in 2007 than in 2000. The portion of average net investment (net plant after retirements and depreciation) allocated to the special access category also is higher in 2007 than in 2000. Likewise, the portion of total operating expenses allocated to the special access category is higher in 2007 than in 2000. As Figure 2.1 below illustrates, the RBOC claims that the freeze of the 'separations' allocators – a single piece of the overall regulatory cost accounting process – has kept the special access investment and expense ratios constant despite growth in the use of special access services are clearly, and undisputedly, false.

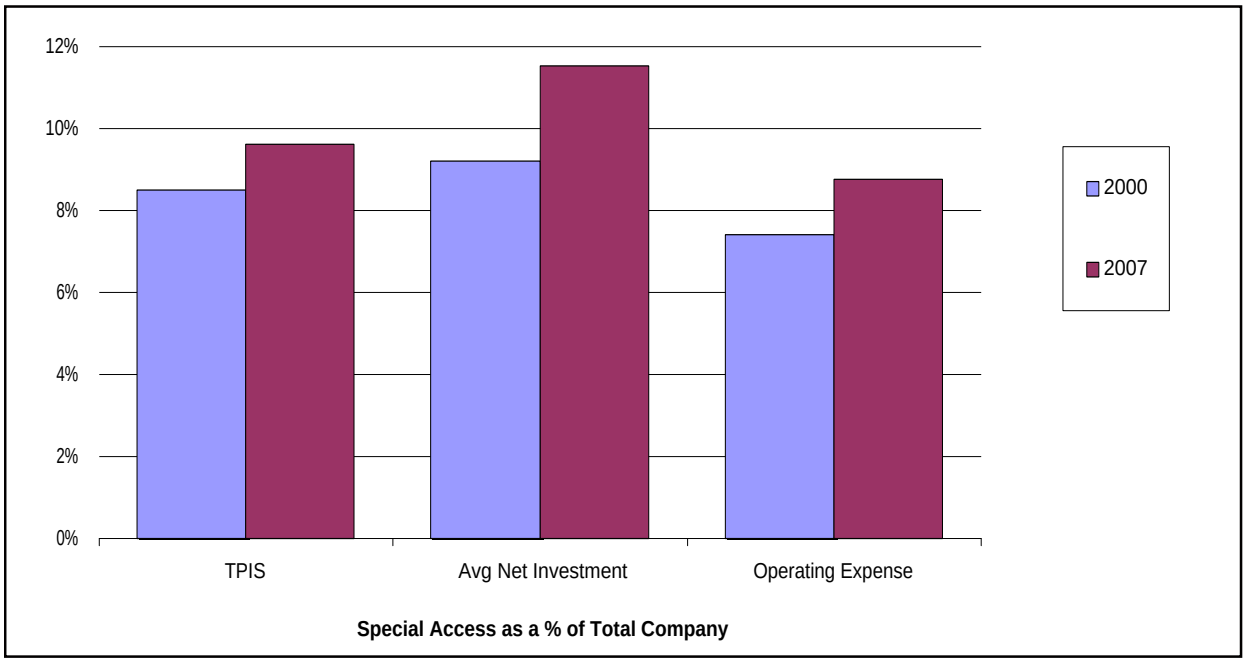


Figure 2.1 The 2001 Separations "freeze" has not stopped the proportion of total investment and expenses allocated to the Special Access category from increasing.

The RBOCs, nevertheless, have argued that as a result of the separations "freeze," growth in special access demand (lines or revenues) has been greater than the recorded growth in special access investment dollars, and that the different growth rates prove that special access investment and expenses have been under allocated to the special access category. Although this argument might initially have some superficial appeal, closer examination reveals that there should be no expectation that the rates of change in special access demand and investment levels will be in the same proportion.

[20] This is hardly surprising. See discussion *infra* at 15.

One contention is that comparisons of the growth rates in switched access minutes and special access lines as reported to the FCC, on the one hand, with the corresponding growth rates in investment and expense levels for those categories, on the other hand, indicate that "far too little investment is being recorded as special access investment and excessive amounts of investment are being recorded in other accounts."[21] This claim was first raised in an analysis sponsored by the "Joint Public Advocates" in 2006, and recently revised – this time with reference to special access "revenues" instead of lines – in the most recent National Regulatory Research Institute ("NRRI") analysis. But the entire premise of the original 'Joint Public Advocate' analysis and others like it is flawed by reliance upon what are described as special access "line counts." Comparisons of switched access lines to what are represented as "special access lines" are misleading because, whereas most switched access lines represent discrete physical subscriber loops running between the ILEC wire center and the customer's premises, each "special access line" is only a unit of bandwidth capacity expressed in terms of DS-0 *(i.e.,* 64 kbps) equivalents. Thus, where 24 individual voice grade residential or small business switched access lines requires 24 separate 2-wire copper loops, 24 voice-grade (DS-0) equivalent digital lines can be supported by just two 2-wire copper loops as a DS-1 (sometimes called a T-1) special access service. Thus, if one counts "lines," the addition of 24 switched access lines is the same as the addition of one DS-1 special access line. But if one counts "loops," the addition of 24 switched access lines requires twelve times as many physical facilities as one DS-1.

Special access services involve physical facilities each capable of carrying large-capacity bandwidths ranging from a minimum of 24 (DS-1), 672 (DS-3), or even as many as 129,024 (OC-192) voice grade equivalents ("VGEs"). Costs do increase with bandwidth, but not in proportion to bandwidth capacity. Thus, a given increment of special access demand will typically have a far lesser impact upon total special access investment than would a comparable percentage change in switched access line demand. As an example, a special access customer subscribing to a single OC-3 line (2,016 VGEs) who decides to purchase additional bandwidth and replaces the OC-3 with an OC-12 (8,064 VGEs) increases its "special access line" equivalents by 300%, yet an OC-12 costs only a small amount (as little as 5% to 10%) more than an OC-3 to provide.[22]

Equally flawed are some of the more recent critiques of ARMIS that focus upon the rate of growth in special access revenues.[23] A change in special access revenues would be matched by an

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[21] See Declaration of Robert Loube at 41, attached to the Comments of NASUCA, NJRPA, and ME OPC dated August 22, 2006 filed *In the Matter of Jurisdictional Separations and Referral to the Federal-State Joint Board,* CC Docket 80-286.

[22] The Commission has found that higher capacity services can often be provided by an exchange of electronics, and has observed that "[m]ost of the cost of providing a special access line is in the support structure, *i.e.*, the trenches, manholes, poles and conduits, the rights-of-way, and the access to buildings." The Commission also noted that these costs "vary little" with different capacity needs. Special Access Rates for Price Cap Local Exchange Carriers, *Order and Notice of Proposed Rulemaking* (2005) ("*2005 Special Access NPRM*") at para 4 , para 26 & n.10.

[23] See, for example, the 2009 NRRI Report. 'Adjustments' were made to the ARMIS results premised on a flawed assumption that the rates of growth for special access investments should have equaled the rate of growth in revenues. It is hardly surprising, however, that revenues grew at a faster pace than investment in view of the escalating rates and profit levels for these services (see diagrams on page 11 infra). While attempting to 'correct' for perceived flaws in the ARMIS data in an effort to move the special access issue forward is commendable, there is no evidence – indeed no reason to believe – that investment and expense levels should move in lock step – unless of course competition is operating to continually push prices down to cost based levels – something that is not happening here. The 'adjustments' made in the Report to the 'separated' accounting data reported in ARMIS for each of the RBOCs essentially forced the ratio of special access investment to Total Company investment to match the ratio of special access expense to Total Company expense. To provide a numerical reference, the combined RBOC special access investment levels for 2007 would have been recalibrated to equal 18% of total investment (well up from the 11.6%

equal change in special access costs (investment and expenses) only if special access services were priced precisely in relation to cost. If a service were priced too high or too low, it would not take long for the rate of growth of revenues and expenses to diverge. Only in the case where prices (which generate revenues) are moving down and to the right along the cost curve along with costs as demand increased will the rate of change be consistent.

Investment in the RBOCs' telecom networks has been made over decades and only a small portion of that investment has been made during the period in which allocators have been 'frozen' and in which special access demand has been exploding - meaning that comparisons of the absolute ratios of revenues (special access to total) to the same ratios for investments (special access to total) is misleading. Intertemporal differences exist between when investment dollars are spent by the carriers (over years), and "annual" revenue ratios. As such, annual revenue ratios are not a valid tool to use in "adjusting" investment dollars. Comparisons of the relative proportion of special access revenue to the proportion of special access investment would only make sense if all of the investments were made in the year being analyzed. In a telephone network that has been constructed over the last 100 years, that is not the case.

Table 2.2
RBOC Special Access Ratio of Total Plant in Service:
2000 and 2007

	Total Plant in Service		
	Special Access	**Total Company**	**Ratio**
2000	$26.6-billion	$312.5-billion	9%
2007	$35.6-billion	$369.8-billion	10%
Change	$9.0-billion	$53.8-billion	16%

As stated above, the 'flaw' that some parties have seen in ARMIS results does not exist and is the result – at least in large part – of an inter-temporal misalignment of investment and revenues used in their analyses. That fact, combined with effects of demand growth, economies of scale, and the introduction of lower cost technology that should have contributed to a sizable drop in unit costs, demonstrates why Special Access expense and investment dollars should not be growing as fast as revenues. RBOC special access prices have not reflected these cost reductions. As a result, the relative growth in demand (expressed in terms of revenues) is far greater than the relative increase in the costs required to furnish these services.

More special access is being sold in 2007 than in 2000, prior to the freeze, but more investment and expense dollars are being allocated to special access. During the 2000 to 2007 period (when the separations 'allocators' were frozen), a larger percentage of new investment was allocated to the

reported in ARMIS) – this would have required that the average net investment booked to special access increase by 60% from $6.6-billion to $10.5-billion. This result was achieved by moving investment out of specific jurisdictional and service categories (for example intrastate) and into the special access category. This explanation dramatically oversimplifies the detailed and careful adjustments undertaken in the study but it does describe the essence of the adjustment.

special access category than had historically been the case. As Table 2.2 above reveals, between 2000 and 2007, 16% of the total new plant put in service was allocated to the special access category – substantially more than the historic special access portion of total plant in service (8.5%), and quite close to the special access revenue ratio of 18% referenced above.

A similar trend can be seen in the "net plant" statistics. During the period 2000 to 2007, substantial 'disinvestment'[24] occurred across the RBOC networks, so that only 50% of the network investment that was on the books at the end of 2000 remained on the books at the end of 2007. As Figure 2.2 below illustrates, most of those disinvested dollars were allocated to categories other than special access, so that the decline in net investment was not as steep for the special access category as for all others –with the total value of the RBOCs' special access plant declining by 36%, as compared to the average of 51% across all other plant categories. Finally, operating expenses allocated to the special access category *increased* by 14% during the 2000 to 2007 period while they *declined* by 5% on average for all other service categories. (See Figure 2-2 below).

Thus, not only have expenses and investments allocated to Special Access been growing, they have become a larger part of the total as is illustrated in Figures 2.2 and 2.3. For example, in 2001 only $11.7-billion of total $115.5-billion in RBOC average net investment was allocated to Special Access (10%), but by 2007, Special Access average net investment was $6.6-billion out of $57.3-billion (approx. 12%).

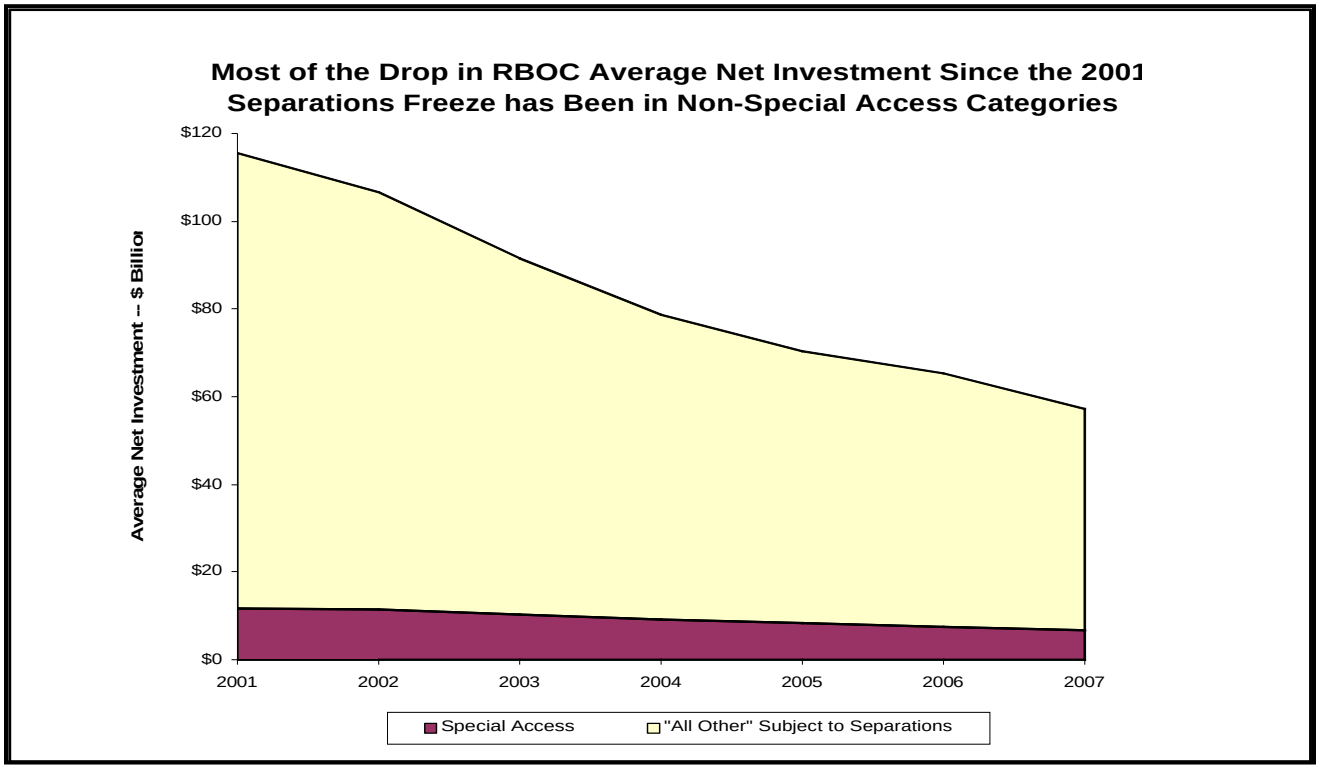

Figure 2.2 – Most of the Drop in RBOC Average Net Investment Since the 2001 Separations Freeze has Been in Non Special Access Categories

[24] Network disinvestment occurs when the depreciation charge in any given year is greater than the amount of new capital invested in the network.

Figure 2.3 – Indexed BOC Operating Expenses for Special Access and all other services 2000-2007

RBOCs have relied upon ARMIS data

In other contexts, the RBOCs have relied on ARMIS data to justify their requests to *raise prices*. Most of the examples of this behavior, discussed below, come from five or six years ago because the RBOCs' deregulatory agenda has been so successfully implemented that there has been little recent need for them to provide cost evidence since that time. Looking back to the 2003 time frame, however, SBC (now AT&T) relied specifically upon ARMIS results to support its contention that wholesale UNE (unbundled network element) rates were not covering their costs. SBC made the claim in Federal District Court in Chicago, Illinois, just five months after challenging the use of ARMIS data for evaluating the reasonableness of special access prices before the FCC. According to SBC's expert witness:

> SBC Illinois' average revenue per loop (for UNE-L) and revenue per line (for UNE-P) per month is substantially below the costs that SBC Illinois recognizes on its books to provide those UNEs. I used the FCC's financial accounting information as reported in its Automated Reporting Management Information System ("ARMIS") files to obtain the historical cost data specifically for SBC Illinois. These data are reported to the FCC for purposes of tracking the interstate rate of return and are subject to a highly detailed set of reporting guidelines.[25]

[25] *See,* Affidavit of Debra J. Aron on behalf of SBC in United States District Court for the Northern District of Illinois, Eastern Division, Case No. 03-C3290, filed May 27, 2003.

Several months later, in December 2003 – a year after criticizing the use of ARMIS for evaluating special access profitability –SBC was joined by USTA and other BOCs in lauding ARMIS as the source for the "actual" costs of UNEs in the response to the FCC's *TELRIC NPRM*.[26] Then, one month later, in January 2004, SBC and its sister RBOCs argued to the US Court of Appeals for the District of Columbia Circuit (in opposing AT&T's Petition for Writ of Mandamus) that "ARMIS data 'contain arbitrary allocations that are 'economically irrational.'"[27] However, flip-flopping yet again, in testimony filed with the Illinois Commerce Commission two months later in March 2004, SBC again defended the validity of ARMIS as the correct basis for benchmarking UNE costs. Its witness, Dr. Aron, stated,

> In the final analysis, ARMIS is no better or worse than any cost accounting system for a large, multiproduct firm. It is subject to strict reporting requirements and a consistent set of rules across carriers. Virtually all cost accounting systems will be subject to the criticism that they make allocations, and to the criticism that any full cost estimate (which, as I noted, includes TELRIC-based UNE prices as well) will reflect such allocations. However, the fact nevertheless remains that accounting systems are the basis for decision making in our economy, and that it is reasonable to look at accounting estimates of costs for benchmarking purposes such as this one.[28]

Review of the record above reveals that the RBOCs reject the use of ARMIS results when these indicate *excessive* earnings, yet advocate for it when ARMIS results suggest an earnings deficiency or "below cost" pricing. Moreover, the particular ARMIS cost allocations defended by the ILECs (ARMIS cost allocations *to* the Common Line category) are part and parcel of the very allocations they challenge in special access (ARMIS cost allocations *from* special access *to* the Common Line category). These claims cannot be reconciled.[29] 'Common Lines' and 'Special Access' facilities both are provisioned over last mile loop plant between the RBOC's Central Offices and customer premises. In other words, to explain away excessive profit levels for special access, the ILECs assert that in ARMIS, costs associated with special access are being mis-allocated to the Common Line category, but when the shoe is on the other foot, they staunchly defend the use of ARMIS Common Line data as the basis for UNE-Loop prices and claim that prices developed on this basis would include only costs actually attributable to switched access loops.[30] At least one of these two patently conflicting claims

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[26] *See, e.g., Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers,* WC Docket No. 03-173, *Comments of United States Telecom Association,* December 16, 2003, at p. 10; *Comments of the Verizon Telephone Companies,* at pp. 40, 46, 58, 94; *Opening Comments of SBC Communications, Exhibit A, "The Economics of UNE Pricing," prepared by Debra J. Aron, PhD and William Rogerson, PhD,* December 16, 2003, pp. 28-32.

[27] See, *In re AT&T Corp. et al.,* No. 03-1397 (D.C. Cir.), *Response of Intervenors in Opposition to AT&T's Petition for a Writ of Mandamus*, filed January 9, 2004, ("*03-1397 BOC Opposition"*) at 13.

[28] *See,* Illinois Commerce Commission, Docket No. 02-0864 SBC Illinois Ex. 2.2 (Surrebuttal Testimony of Dr. Debra J. Aron) ("*Illinois - Aron Surrebuttal Testimony*") filed March 5, 2004, at p. 9

[29] In its Response to AT&T's Petition for Writ of Mandamus, ILECs (including SBC) claimed that the apparently high rates of return on special access arises because ARMIS rules require that certain special access-related costs be assigned elsewhere. See, *03-1397 BOC Opposition* at 14

[30] For example SBC submitted testimony in a UNE proceeding that claimed that ARMIS costs for the switched access loop are "fairly straightforward" and reliable indicators of the investment and associated expenses specifically associated with that category (and element)." SBC's witness stated, "... the costs that ARMIS associates with the loop are fairly straightforward and, except for the shared and common costs of the sort that affect TELRIC costs as well, these costs are reliable indicators of the investment and associated expenses specifically associated with that category (and element). The shared and common costs represent a portion of the costs associated with support assets (and expenses) such as land, buildings, trucks, tools, and personnel, a share of which are appropriately assigned to elements in ARMIS. These costs are also allocated to elements in a TELRIC analysis." *See, Illinois - Aron Surrebuttal Testimony,* at p. 9.

must be false. The Commission cannot ignore ARMIS earnings data on the basis of irreconcilable and patently self-serving claims that ARMIS is (1) reliable for determining the cost of a single disaggregated service element but (2) unreliable for calculating the aggregate (and excessive) rate of return for the entire special access category.

Average earnings for the totality of FCC regulated interstate access services are almost three times higher than the last authorized rate of return. Interstate earnings for each RBOC ranged from a low of 25.2% (for Verizon) to a high of 53.2% (for Qwest). Lacking any other tools for determining whether rates are "just and reasonable" the FCC should be compelled to look to the earnings results identified in the RBOCs' ARMIS data, and to bring interstate rates back to reasonable levels.

The RBOC's failure to offer up any alternative cost data or specific changes to the ARMIS data that they claim is flawed makes it impossible to evaluate the impact that their alleged flaws would have on the level of returns.

3 SUPPRESSED SPECIAL ACCESS RETURN LEVELS AS A RESULT OF MASS MARKET BROADBAND AND VIDEO INVESTMENT

ARMIS almost certainly understates rates of return for Special access and other regulated services because RBOC capital expenditures for unregulated broadband and video services are primarily assigned to regulated services investment categories – including the special access category – while the revenues generated by these services are primarily recorded to the unregulated category. The resulting mismatch of understated broadband revenues and overstated broadband costs (two key components of the rate of return calculation) consistently and systematically understate the rates of return for regulated services – special access in particular.

Investment made to provide unregulated services is inappropriately allocated to the interstate special access category – suppressing reported earnings

Although, as noted above, the RBOCs have advanced the notion that ARMIS-reported special access rates of return are overstated due to the effects of the purported "separations freeze," it is much more likely that these RORs are *understated* – perhaps by a significant amount.[31] This is because, beginning in about 2004, both Verizon and SBC (now AT&T Inc.) began wide scale deployment of broadband infrastructure targeted at mass-market residential and small business customers. Verizon's initiative, known as *FiOS* – employs a fiber-to-the-home ("FTTH") architecture. AT&T's *U-Verse* (formerly known as Project Lightspeed) design extends fiber close to the customer, but retains a portion of the existing copper distribution segment and the copper drop. Verizon has indicated that it is investing some $3-billion annually on *FiOS* construction;[32] AT&T's annual run rate on *Project Lightspeed* / *U-Verse* investment is in the $2-billion range.[33] Through the end of 2007, Verizon had

[31] It bears noting that Qwest, the RBOC that has refrained from massive deployments of fiber for the provision of mass-market broadband exhibits the highest special access earnings levels (175% in 2007) while Verizon, the RBOC with the largest mass-market fiber deployment exhibits the lowest return (62% in 2007) corroborating our findings here that mis-allocation of mass-market broadband investment has resulted in an understatement of special access profit levels.

[32] Standard and Poor's Industry Surveys, Telecommunications: Wireline report, February 8, 2007, at 8-9; Verizon Communications, 10K annual report, filed March 1, 2007.

[33] AT&T Inc., 10K annual report, filed February 26, 2007, at 2.

constructed roughly $12-billion in *FiOS* infrastructure;[34] AT&T's cumulative *U-Verse* build-out had amounted to about $8-billion.[35]

In its *Broadband Wireline Internet Access ("BWIA") Order*, the FCC specifically directed the RBOCs not to assign or allocate costs associated with new broadband services – services that were deregulated by the BWIA Order itself [36] – to the nonregulated category in ARMIS[37]. The recent and ongoing RBOC investments in DSL and mass market broadband infrastructure that is used to provide high-speed Internet access – such as Verizon's *FiOS* and AT&T's *U-Verse* — services that are not even classified as regulated telecommunications services by the FCC – are thus being carried "above the line" in the regulated services category per Order of the FCC and are *included* in aggregate reported special access category investments. Total investment in the special access category therefore necessarily includes investment dollars that were not spent in constructing special access plant – resulting in overstated special access investment and understated special access earnings.

Both *FiOS* and *U-Verse* are intended to support high-speed Internet and other IP-based services (such as VoIP and IPTV), *as well as the delivery of video services* to the residential market in competition with cable television multi-system operators (MSOs) such as Comcast and Time Warner. This plant is not used to provision services found in the special access category. As a result of the FCC's BWIA decision the retail revenues derived from these now unregulated information and video services are excluded from the BOC earnings as reported to the FCC while the investments and expenses are not. In addition, although there is no indication that the FCC intended to instruct the BOCs to treat video plant as regulated telecommunications investment, it appears that substantial video-based *FiOS* and *U-Verse* investments and operating costs being incurred by Verizon and AT&T are nonetheless appearing in ARMIS as rate base assets or operating expenses associated with regulated services. Analysis of both firms' ARMIS data together with their SEC financial reporting (10-Ks) and other public announcements compels the conclusion that the vast majority of these costs – if not *all* of them – are being booked to the *regulated telecommunications services* category, *even though the associated revenues are not*. Although the RBOCs are not currently subject to rate-of-return (ROR) regulation, inflating the value of their respective regulated service rate bases (that plant found in the regulated portion of the 'Telecommunications Plant in Service', or "TPIS" category) and

[34] Verizon Communications, 10K annual report, filed March 1, 2007; Searcey, Dionne, "Moody's Cuts Verizon's Ratings," *The Wall Street Journal*, December 22, 2005, at C4. While Verizon does not formally identify FiOS expenditures in its 10-K, it has provided order-of-magnitude amounts in other public disclosures. Standard & Poor's reports that, for 2006, "[w]e expect that Verizon will have spent more than one third of its wireline budget on its fiber deployment initiative in 2006. ..." In its 2007 Annual Report to investors, Verizon reported that "Including capitalized software, we invested $10,956 million in our Wireline business in 2007. ... The increase in capital spending at Wireline is mainly driven by increased spending in high growth areas such as fiber optics to the premises." [Verizon Annual Report, 2007 at 28.]

[35] AT&T Inc., 10K annual report, filed February 26, 2007, at 2 and AT&T Inc., Annual Report for 2007, at 44. Accessed at www.att.com/Investor/ATT_Annual/downloads/07_ATTar_FullFinalAR.pdf .

[36] *In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Universal Service Obligations of Broadband Providers; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 U.S.C. § 160©) with Regard to Broadband Services Provided Via Fiber to the Premises; Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided Via Fiber to the Premises; Consumer Protection in the Broadband Era*, CC Docket No. 02-33; CC Docket No. 01-337; CC Docket Nos. 95-20, 98-10; WC Docket No. 04-242; WC Docket No. 05-271, 20 FCC Rcd 14853, 14863-5 (2005).

[37] *Id.* at 14926,

"above-the-line" operating expenses has the effect of *understating* their realized rates of return, thus making their regulated special access operations *appear* to be far less profitable, overall, than they actually are.

Consider the following: According to Verizon's ARMIS filing, its total Telephone Plant in Service investment (including both regulated and non regulated plant) as of the end of 2007 was $147-billion.[38] Of this amount, only $5.7-billion, i.e., about 3.9%, was classified as "non-regulated."[39] Yet during just the four year period ending in 2007 Verizon's claimed capital expenditures for its FiOS broadband and video initiative were approximately $12.0-billion.[40] Absent the Commission's decision in the BWIA order that the BOCs need not go through the effort to separate out the non-regulated broadband plant, a decision to deploy plant to provide non-regulated information and video services should have resulted in at least $12-billion in non-regulated TPIS—something that clearly did not happen. Verizon invested $12-billion in deploying FiOS internet and video plant, but that $12-billion did not make its way into the non-regulated TPIS category.

Table 3.1

Verizon "Regulated" and "Non-Regulated" Plant in Service – 2003-2007
($ billions)

	2003	**2004**	**2005**	**2006**	**2007**
Total TPIS	$140.7	$142.6	$143.8	$148.0	$147.1
Non-Reg TPIS	$2.2	$2.4	$2.7	$3.8	$5.7
% Non Reg	1.6%	1.7%	1.9%	2.6%	3.9%

FCC, ARMIS Report 43-01, Access Report: Table I YE 2003, 2004, 2005, 2006, 2007.

should have been at least $12-billion in 'non-regulated' TPIS – but there, of course there was not. At a minimum the difference between the $12-Billion in FiOS investment made between 2004 and 2007, and the $5.7 billion assigned to the non-regulated category was, by default, inappropriately (even though legally) assigned to the regulated categories.[41] In fact, as Table 3.1 above illustrates, during the period between 2003 and 2007 the total amount of "TPIS" investment recorded in the "non-regulated" category by Verizon only increased by $3.5-billion. As Table 3.2 illustrates comparison of the $3.5-billion increase in non-regulated TPIS investment to the $12-billion that Verizon claimed to have invested in FiOS deployment during that time compels the conclusion that some $8.5-billion in FiOS investment that should have been categorized as "non-regulated" had to have been assigned to regulated services instead.

[38] Federal Communications Commission, ARMIS Report 43-01, Annual Summary Report: Table I YE 2007. Available at http://www.fcc.gov/wcb/eafs/ (accessed June 9, 2009).

[39] FCC rule 47 CFR §64.901 specifies the accounting treatment of non-regulated expenses.

[40] Verizon estimates it will invest $23-billion on FiOS through 2010.See *Verizon PolicyBlog,"2008 FiOS Facts"* http://policyblog.verizon.com/policyblog/blogs/policyblog/czblogger1/457/2008fiosfactsheet1stquarteredition.aspx Accessed June 11, 2009).

[41] In fact, the $5.7-billion in nonregulated telephone plant in service on Verizon's books includes *all* non-regulated investment for the company through the end of 2007 – not just investment made during the 2004 to 2007 period.

Table 3.2

Verizon
Increase in "Non-Regulated" Plant in Service as Reported in ARMIS Does Not Begin to Cover the Total Broadband Investment During the Comparable Period: 2003 - 2007

	Increase in "non-regulated" TPIS 2003-2007 per ARMIS 4301	Reported investment in "broadband":2003-2007	Minimum "broadband" investment booked as "regulated" in ARMIS
Verizon	$3.5-billion	$12.0-billion	$8.5-billion

Analysis of Verizon's filings with the SEC for the entire corporation (wireline and wireless) in conjunction with filings made for the Verizon ILEC company with the FCC for just the year 2007 help illustrate the phenomenon. In 2007, total Verizon corporate capital expenditures ("capex") was $17.5-billion: $6.5-billion was reported as being associated with Verizon's wireless operations and $10.9-billion was reported as being associated with wireline operations.[42] Verizon's two largest wireline affiliates are the non-ILEC Verizon Business (legacy MCI) and the Verizon ILEC. Verizon's SEC filing did not provide a further breakdown of its 2007 wireline, but for 2006 it reported that $1.6-billion of the total was invested in the operations of the Verizon Business affiliate (the former MCI) - the Verizon Business investments are not included in the ARMIS reporting that is done for the ILEC affiliate. Assuming the 2007 investment levels for Verizon Business are in the same range that would leave something a little in excess of $9-billion of capex being spent on all of Verizon's other wireline business segments. For the same year, Verizon's ILEC affiliate reported $8.2-billion of gross plant additions to the FCC through the ARMIS reporting mechanism.[43] As discussed below, Verizon has claimed that it made more than $3-Billion in FiOS investment in 2007 – meaning that even if the entire difference of approximately $1-billion was associated with FiOS investment booked to a separate unregulated affiliate not specified in the 10K (which is highly unlikely[44]), that would still leave some $2-billion of 2007 FiOS costs being charged to the Verizon ILEC affiliates' telecom services.

Table 3.3

AT&T "Regulated" and "Non-Regulated" Plant in Service – 2003-2007
($ billions)

	2003	**2004**	**2005**	**2006**	**2007**
Total TPIS	$182.5	$184.6	$187.7	$191.7	$195.6
Non-Reg TPIS	$3.3	$3.4	$3.3	$3.5	$4.9
% Non Reg	1.8%	1.8%	1.8%	1.8%	2.5%

FCC, ARMIS Report 43-01, Access Report: Table I YE 2003, 2004, 2005, 2006, 2007.

[42] Verizon Communications, 10K annual report, filed March 1, 2008.
[43] ARMIS Report 43-02, Table B-1.B.
[44] The difference between 10-K and ARMIS reporting likely arises from differences between GAAP and regulatory accounting practices, or from inclusion of non-ILEC wireline segment affiliates' in the 10-K capex figure that are not included in the data reported to ARMIS.

A similar pattern exists for AT&T and the former SBC – with expenditures on U-Verse (originally Lightspeed) of roughly $2-billion annually, essentially all of which is carried in regulated TPIS. Only $4.8-billion (or 2.5%) of AT&T's $195.6-billion in total TPIS in 2007 was classified as non-regulated. Much like Verizon, according to its 10-K, AT&T had committed approximately $17.5-billion on capital expenditures in 2007, 77% (or $13.6-billion) which is attributable to the wireline segment - $8. of which is identified as investment made in support of the ILEC affiliate.[45] AT&T's 2007 ARMIS Total TPIS additions were $9.4-billion, matching its GAAP capex almost exactly. As with Verizon, this information compels the conclusion that any AT&T investment in Lightspeed was booked as additions to total TPIS in ARMIS, and most likely booked as additions to the Regulated Services category. In fact, as Table 3.3 above illustrates, during the period between 2003 and 2007 the total amount of additional "TPIS" investment recorded in the "non-regulated" category by AT&T increased by only $1.5-billion. As Table 3.4 illustrates comparison of the $1.5-billion increase in non-regulated TPIS investment to the $6-billion that AT&T claimed to have invested in U-Verse deployment during that time demonstrates that some $4.5-billion in U-Verse investment that should have been categorized as "non-regulated" had to have been assigned to regulated services instead.

Table 3.4

AT&T
Increase in "Non-Regulated" Plant in Service as Reported in ARMIS Does Not Begin to Cover the Total Broadband Investment During the Comparable Period: 2003 - 2007

	Increase in "nonegulated" TPIS 2003-2007 per ARMIS 4301	Reported investment in "broadband": 2003-2007	Minimum "broadband" investment booked as "regulated" in ARMIS
AT&T	$1.5-billion	$6.0-billion	$4.5-billion

While it is not directly possible to trace the FiOS or U-Verse capex that is being carried in the ARMIS Special Access category, there is every reason to believe that the portion of TPIS assigned to special access has been inflated due to the inclusion of these broadband investments. As Table 3.5 demonstrates, the proportion of total TPIS that has actually been assigned to special access has been increasing in recent years; in 2007, special access investments represented some 9.3% of total AT&T and Verizon assets held by the ILEC companies, up from 8.0% in 2000. As Table 3.5 below demonstrates, during the period 2000 to 2007 investment dollars assigned to the special access category grew by 35% - more than twice the rate of all other service categories combined.

[45] AT&T Inc., 10K annual report, filed February 26, 2007, at "Portions of AT&T's Annual Report" at 28.

Table 3.5

The Special Access Portion of AT&T and Verizon Telephone Plant In Service Has Increased In Recent Years
($billions)

$(millions)	2000	2007	Change	% Change
Special Access	$ 23.6	$ 31.9	$ 8.3	35.2%
Other	$ 270.2	$ 310.9	$ 40.7	15.1%
Total	$ 293.8	$ 342.7	$ 49.0	16.7%
Special Access %	8.0%	9.3%	16.9%	

Federal Communications Commission, ARMIS Reports 43-01, Annual Summary Report: Table I, and 43-04, Access Report: Table I YE 2000, 2007. Available at http://www.fcc.gov/wcb/eafs/ (accessed June 9, 2009).

Excluding *FiOS* and *Lightspeed* outlays from Verizon and AT&T special access rate of return calculations would substantially increase the results.

As discussed above, Verizon's FiOS and AT&T's Lightspeed initiatives support nonregulated "information services" the revenues from which are carried "below-the-line" and not reported as regulatory revenues to the FCC or included within the companies' respective ARMIS submissions while the underlying capital investments and operating costs appear to have been included in their FCC reporting. Hence, in order to obtain an accurate assessment of the companies' rates of return on their respective regulated telecommunications services and the Special Access category in particular, it is necessary to identify and to exclude the investments and operating costs that the RBOCs had co-mingled with the regulated services costs as reported in ARMIS. Table 3.6 illustrates the results of performing such an adjustment. In the case of Verizon, as of the end of 2007,

Table 3.6

Effect of Adjustments for FiOS and Lightspeed Investment on Special Access RoRs

	Verizon	AT&T
Special Access ROR per ARMIS	62%	138%
Adjusted ROR excluding misallocated broadband costs	99%	177%

See Table 3.7 for details of the calculations.

cumulative FiOS investment was approximately $12-billion, and special access Telephone Plant in Service ("TPIS") was $17.4-billion or about 11.8% of Total TPIS. If the same 11.8% of reported FiOS investment is excluded from the special access net investment reported in ARMIS, Verizon's actual realized ROR for special access increases to 99%. The details of this calculation are illustrated on Table 3.7. Similarly, for AT&T, cumulative U-Verse / Lightspeed investment is approximately $5-billion, and special access TPIS was $14.5-billion or about 7.4% of year-end 2007 Total TPIS. If the special access portion of AT&T's net investment is reduced by the special access share of Lightspeed investment, its realized ROR for special access increases to 177%. The assignment of FiOS and U-verse investment depress the special access service returns of Verizon and AT&T to a far greater extent than the increases that would result from adjustments that the RBOCs argue should be made to ARMIS allocations. Although we do not have access to the data needed to 'net out" the adjustments

with precision, we are confident that the RBOCs' special access service returns would be even higher at the end of the netting-out process.

Table 3.7

Effects of Removing FiOS and Lightspeed Investment from the Special Access Category

		Calculation	Verizon	AT&T
	Special Access TPIS	Note 1	$17,389,173,000	$14,489,249,000
	Total TPIS (reg and non-reg)	Note 1	$147,138,809,000	$195,622,428,000
	Special Access portion of TPIS	L1/L2	11.8%	7.4%
	Cumulative FiOS/Lightspeed Investment	Note 2	$12,000,000,000	$8,000,000,000
	Estimated cumulative depreciation accrual on FiOS/Lightspeed Investment	Note 2	$1,581,841,000	$1,018,157,000
	Estimate 2007 depreciation expense for FiOS/Lightspeed investment	Note 3	$692,055,000	$445,443,000
	Estimated FiOS/Lightspeed net Investment	L4-5	$10,418,159,000	$6,981,843,000
	Allocation to Special Access	L3*L7	$1,231,239,878	$517,127,114
	Special Access Average Net Investment	Note 1	$3,539,451,000	$2,399,463,000
0	Special Access Net Return	Note 1	$2,195,293,000	$3,301,481,000
1	Special Access Net Return excluding 2007 FiOS/Lightspeed depreciation expense	L10+L6*L3	$2,277,081,511	$3,334,473,815
2	Average Sp. Acc. Net Investment excluding FiOS/Lightspeed misallocation	L9-L8	$2,308,211,122	$1,882,335,886
3	Special Access ROR	L10/L9	62%	138%
4	Revised Special Access ROR to exclude FiOS/Lightspeed misallocation	L11/L12	99%	177%

Note 1: FCC, ARMIS Report 43-04, Access Report: Table I YE 2007 Available at http://www.fcc.gov/wcb/eafs/ (accessed June 9, 2009)

Note 2: Assumes $3-billion and $2-billion of annual FiOS/Lightspeed investment in each of four years. A depreciation accrual factor is calculated as: Total 2007 Depreciation Accruals / Total TPIS, which is then applied to the total FiOS/Lightspeed investment for each year, the results of which are summed for the total estimated FiOS/Lightspeed depreciation accrual over the four year period.

Note 3: Equal to the depreciation accrual per Note 2 for the fourth year of FiOS/Lightspeed investment.

Appendix 1 CALCULATION OF SPECIAL ACCESS RATE REDUCTION REQUIRED TO LOWER EARNINGS TO 11.25%

In order to simulate a competitive market outcome, access prices should be set based upon forward-looking costs, and absent that, a new, lower authorized return level would be appropriate As demonstrated below, reduction of existing special access prices to a level that would generate even the11.25% rate of return would result in elimination of more than $5-billion in excessive special access charges per year, or put differently, $15-million dollars per day. Reduction of the earnings in the interstate access category in total (as opposed to special access services in isolation) to the 11.25% level would require a reduction of $3-billion in annual billing ($8-million per day). Customer that are presently being overcharged in excess of $3-billion per year should not be held hostage to protracted proceedings addressing the costing standard itself (embedded vs. TELRIC) or the authorized rate of return. If forward-looking cost studies were to take two years to be developed, litigated, and approved, another $10-billion in excess special access payments would have been imposed on corporate, government and institutional telecommunications users. Every day that the Commission does not act to correct the current situation costs large business and government users some $15-million – and confers an unjustified windfall to the ILECs**.**

Table A-1
2007 Total RBOC Overcharges

		Calculation	Total Interstate	Special Access
1	Average Net Investment		$22,192,827	$6,645,364
2	Net Return		$7,313,996	$6,735,723
3	ROR	Line 2 / Line 1	32.96%	101.36%
4	Approved ROR	11.25%	11.25%	11.25%
5	Tax Rate	39.25%	39.25%	39.25%
6	Overearnings	(Line 3 - Line 4) * Line 1	$4,817,303	$5,988,120
7	Overcharging	Line 6 / (1-Line 5)	$7,929,717	$9,856,987
8	Daily Overcharges	Line 7 / 365	$21,725	$27,005
Sources:	Federal Communications Commission, ARMIS Report 43-04, Access Report: Table I YE 2003. Available at http://www.fcc.gov/wcb/eafs/ (accessed April 7, 2003). 39.25% is the composite tax rate currently used in the FCC's HCPM/HAI Synthesis Cost Proxy Model. http://www.fcc.gov/wcb/tapd/hcpm/welcome.html			

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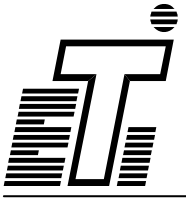

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