

BELLSOUTH REPLY COMMENTS

WC Docket No. 05-25
RM-10593

July 29, 2005

Attachment 1

**Before the
Federal Communications Commission
Washington, D.C. 20554**

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

Reply Declaration of

Harold Furchtgott-Roth and Professor Jerry Hausman

A review of initial comments filed in this proceeding reveals the following:

(1) no set of filed comments contradicts the primary points made in our declaration;¹ (2) only two sets of comments provide attempts at an empirical basis for price regulation of special access services,² and those explanations are deficient in several respects; and (3) several comments contain misplaced emphases on rate-of-return regulation. We examine each of these topics in turn.

¹ Declaration of H. Furchtgott-Roth and J. Hausman, June 10, 2005.

² Declaration of S. J. Wilkie, June 13, 2005. Comments of Comptel/ALTS, Global Crossing North America, Inc. and NuVox Communications, June 13, 2005.

I. Our findings remain valid

After a review of the other comments filed in this proceeding, we find none that undermines the economic foundation of our findings:

- For the FCC to continue, much less expand, its rate regulation of special access services, the Commission should have a rational economic basis for such regulation. Price regulation cannot possibly be effective unless certain conditions are met. We find that special access services do not meet any, much less all, of the standard characteristics that economists would use to demonstrate a rational basis for price regulation. Indeed, distortions on investment and other harms are likely to outweigh any conceivable benefits from price regulation.
- Much of the BellSouth territory has substantial competition for special access services. Even in those areas with limited competition, the unprofitability of losing even a few customers in a large fixed cost, relatively small incremental cost market such as special access services means that ILECs have little incentive to raise prices. Further, existing non-discrimination regulation should be sufficient to protect customers from any plausible market power abuses.
- Price cap regulation, of the form that currently governs special access services, is economically more rational than rate-of-return regulation. Nonetheless, as discussed throughout our Reply Declaration, special access services do not lend themselves easily to price regulation, even price cap regulation. Services with heterogeneous technologies that are constantly changing and with geographic networks that are also constantly changing cannot rationally be regulated. The productivity offset for a service with rapidly changing technology cannot

rationality be calculated with any reasonable degree of accuracy. Price caps cannot defensibly be adjusted for changes in technology or changes in competitive market conditions.

- The very nature of the questions the FCC raises in the NPRM illustrates the complexity, often unquantifiable, of special access markets, even for modifications of existing price cap regulation. New forms of price regulation along the lines implied in the FCC NPRM make little sense under these conditions.

Several comments suggest a need for expanded price regulation of special access services. These comments lack:

- Any comprehensive statement of the economic basis for the proper form of price regulation;
- Any economic basis to continue or to modify current price regulation;
- Any detailed, verifiable description of competitive conditions in any market, much less all markets;
- Any explanation of how proposed new forms of regulation would result in the “right” economic price instead of an arbitrary price without economic foundation; and
- Any consideration that setting the wrong prices through regulation can do substantial harm to competitive conditions in markets.

II. Suggestions for price regulation lack economic foundation

Of the comments submitted in this proceeding, we have found only two that attempt to provide an empirical basis for price regulation: the comments submitted by Comptel/ALTS, Global Crossing North America, Inc. and NuVox Communications (Comptel/ALTS comments) with the supporting Declaration of Janet S. Fischer; and the Declaration of Dr. Simon J. Wilkie on behalf of T-Mobile USA, Inc. Neither set of comments, however, contains sufficient economic foundation to form a basis for FCC price regulation of special access services.

A. The Comptel/ALTS comments are not a reliable basis for price regulation of special access services.

The Comptel/ALTS comments correctly recognize the inadequacy of rate-of-return and price cap regulation, particularly in a competitive environment.³ The Comptel/ALTS comments also discuss a method to regulate special access service rates charged by ILECs by benchmarking those rates to rates offered by CLECs, presumably in the same region.⁴ The Comptel/ALTS suggestion has at least five deficiencies:

- The presence of competitors eliminates the need for price regulation;
- The Comptel/ALTS proposal inaccurately compares services where competition is not present with services where competition is present;
- The Comptel/ALTS proposal involves significant measurement problems and ignores the difficulties experienced with previous benchmark price regulatory schemes;

³ Comptel/ALTS comments at 21-25.

⁴ Comptel/ALTS comments, particularly at 25-28.

- The Comptel/ALTS proposal would create perverse incentives for CLEC pricing of special access services; and
- The Comptel/ALTS proposal will potentially discourage competitive entry.

1. The presence of competitors eliminates the need for price regulation

The Comptel/ALTS comments focus on benchmark price regulation in regions where at least one CLEC offers end-to-end special access services:

Comptel/ALTS thus respectfully suggests an alternative approach to setting special access rates – benchmarking base (i.e., monthly) BOC special access rates at the prices charged by competitors that have been able to enter the market and offer services over their own facilities, i.e., on-net services.⁵

The Comptel/ALTS proposal appears to be basing price regulation on the premise that competitive entry has been successful. Each of the examples Comptel/ALTS cites is in a region with at least one competitive entrant.⁶ If competitive facilities-based entry in a market is not only feasible but actually achieved—and thus at least one competitor is present—it is difficult to understand the economic basis for price regulation. Indeed, as we presented in our Initial Declaration, most regions in the BellSouth area have several facilities-based carriers already.⁷

2. The Comptel/ALTS proposal inaccurately compares services where competition is not present with services where competition is present

In those regions or sub-regions where competition is not present, the benchmark pricing methodology is difficult to interpret in an economic framework. Differences in market conditions, particularly cost conditions, cannot necessarily be accurately captured by comparing rates in those markets where competitors have entered to rates in those

⁵ Ibid., at 25-26.

⁶ Declaration of Janet S. Fischer, Tables 8, 9, and 10.

⁷ Furchtgott-Roth and Hausman Declaration, at 12-16.

markets without entry. Indeed, it would be reasonable to infer that cost conditions do differ significantly, which explains in part the differing competitive outcomes.

Firms will rationally choose to enter markets and invest in facilities for special access services where market conditions are expected to be profitable: that is, where expected revenues will compensate the entrant for the expected costs of entry and subsequent service. The absence of entry where there are no legal barriers to entry suggests that expected revenues in that market are insufficient to cover the expected costs of entry and subsequent service after accounting for the risk involved in sunk investment. Where entry is observed in one market and not in another, cost conditions may differ (e.g., higher construction costs for plant in one market than another); demand conditions may differ (different demand conditions for special access services); or both. Without detailed information about market conditions, it is impossible to conclude that competitive prices in each market would necessarily be the same. Indeed, even in the tables of competitive special access rates in the Fischer Declaration, one observes a range of rates rather than a single rate.⁸ Adoption of this proposal would result in a type of average pricing, which contradicts the observed market facts of different prices and different competitive conditions across different geographic markets.

3. The Comptel/ALTS proposal involves significant measurement problems and ignores the difficulties experienced with previous benchmark price regulatory schemes

As noted in our earlier declaration, special access services are heterogeneous, geographically-specific, technologically-evolving services offered jointly with other services on common facilities and facing rapidly changing demand.⁹ While these

⁸ Fischer Declaration at Tables 8,9,and 10

⁹ Furchtgott-Roth and Hausman Declaration at 26-30.

conditions can be estimated, in principle, with econometric techniques, government experience with using benchmark pricing formulas to regulate prices has not yielded consistent results. The Comptel/ALTS comments suggest no specific form of benchmarking for price regulation with good reason: past usage of benchmark prices at the FCC has largely failed.

In the mid-1990s, the Commission used benchmark pricing techniques to regulate rates for cable services. The techniques left the Commission with substantial and unpredictable discretion to alter rates.¹⁰ The cable industry claimed that low and uncertain rates associated with benchmark pricing regulation led to reduced investment in cable facilities. The Commission's experiment with benchmark pricing regulation was so unsuccessful that Congress abolished most forms of rate regulation for cable services in the Telecommunications Act of 1996.

The great disparity between ILEC and CLEC special access rates presented in the Fischer Declaration¹¹ begs the following question: if ILEC special access rates are actually a large multiple of CLEC rates, why is there not more facilities-based entry for special access services to capture apparent opportunities for profits? There are three possible explanations: first, CLECs are economically irrational, which is unlikely; second, severe capital constraints are present in the U.S. economy, which is not currently the case; or third, serious problems exist related to measuring rates for special access services. The last explanation is far more likely than the former, and these measurement problems further complicate the mechanics of using a benchmark pricing technique.

¹⁰ See R. Crandall and H Furchtgott-Roth, *Cable TV: Competition or Regulation?*, Brookings, 1996, particularly at 39-43.

¹¹ Fischer Declaration at Tables 8,9, and 10.

4. The Comptel/ALTS proposal would create perverse incentives for CLEC pricing of special access services

An FCC benchmarking scheme for the price regulation of special access services could lead to perverse incentives and strategic behavior by CLECs. If regulated ILEC special access rates were calculated based directly on CLEC access rates, a CLEC would be economically irrational not to consider the effect on regulated prices in its own pricing decisions. Depending on the regulation formula, a CLEC might have an incentive to raise its rates above (or reduce its rates below) what it would otherwise competitively offer. But in no instance would a CLEC have an incentive to set prices independent of the regulatory structure.

5. The Comptel/ALTS proposal will potentially discourage competitive entry

Finally, the Comptel/ALTS proposal, to the extent it substantially reduced ILEC special access prices through regulation, would have the potential to discourage competitive entry. Recall that an economically rational business will enter a market and build facilities to offer special access services if such entry is expected to be profitable.

We can distinguish two separate effects of price regulation discouraging entry. First, the ILEC price structure is part of the determination of whether a CLEC enters a market to build facilities, with higher ILEC prices encouraging CLEC entry. Artificially lower ILEC prices thus directly discourage facilities-based entry. Second, lower special access rates may encourage some CLECs, that otherwise would have built their own facilities, to lease from the ILEC instead. Thus, artificially lower ILEC prices have the effect of increasing substitution to leasing of those services rather than permitting facilities-based competition to increase.

B. The Wilkie Declaration is not a reliable basis for price regulation of special access services.

The Wilkie Declaration also attempts to provide an empirical basis for price regulation of special access. The report has several shortcomings that render it inadequate as a basis for FCC consideration of price regulation of special access.

Specifically, it:

- Inadequately describes the relevant market;
- Improperly imputes competitive rates; and
- Inappropriately compares special access rates, UNE rates, and ARMIS data.

1. The Wilkie Declaration inadequately describes the relevant market

Dr. Wilkie focuses on the base-station-to-central-office link as the relevant product market and observes that it has the “same economic characteristics as a local loop. Specifically, there is only one customer location served by the link, namely the CMRS carrier’s base station; the link typically carries low volumes of traffic; and most of the costs incurred to provide the link are sunk costs.”¹² No evidence is provided to substantiate any of these assertions.

As with other portions of telecommunications networks, the thousands of base-station-to-central-office links around the country are heterogeneous in their characteristics. Many, if not most, tower sites around the country host equipment owned by more than one carrier, and many, if not most, of these tower sites are owned by companies unaffiliated with an ILEC. Thus, it is inaccurate to claim, as Dr. Wilkie does, that “any firm that enters and loses the sole customer will lose its sunk investment”¹³

¹² Wilkie Declaration at ¶ 5.

¹³ Ibid.

because more than one carrier often operates a base station at that cell site and because non-CMRS customers may be at or near the same location. There can be multiple base-station-to-central-office links, either as part of a landline network or a fixed wireless link, particularly with high-frequency spectrum. As demonstrated in our Initial Declaration, metropolitan areas have multiple facilities-based wireline and wireless CLECs.¹⁴

Even in those instances where substitution possibilities are not available for an individual link, Dr. Wilkie's characterization of sunk cost investments is incorrect. Dr. Wilkie does not consider the possibility of a long-term contract. A contract between a cellular company and a CLEC removes much of the risk of a sunk investment. Indeed, the *Department of Justice and Federal Trade Commission Merger Guidelines*¹⁵ discuss this approach to evaluating entry conditions. Thus, Dr. Wilkie's conclusion that the LEC can act as a "natural monopoly" as a result of sunk costs is incorrect even in those limited instances where a base station is served by only one carrier.¹⁶

Whether a particular CMRS carrier at one of its base stations has access to one or many alternative local exchange carriers is an empirical matter, but no legal barriers prevent any firm from offering base-station-to-central-office links. On the other hand, for each of the thousands of links in the United States, it is an empirical matter: (1) whether the link carries high or low volumes of traffic; and (2) whether the link has sunk costs specific only to that base station or whether the costs are part of the normal routing of the network. Dr. Wilkie provides no evidence to verify the characteristics of even one base-station-to-central-office link, much less evidence to support the characteristics he ascribes to all links in the United States.

¹⁴ Furchtgott-Roth and Hausman Declaration, particularly at 14-17.

¹⁵ *Department of Justice and Federal Trade Commission Merger Guidelines*, (1992), at ¶ 3.3.

¹⁶ Wilkie Declaration at ¶ 6.

In the case of one CMRS carrier at one base station served by only one local exchange carrier, Dr. Wilkie posits a scenario in which the ILEC incurs the sunk cost of building the link first.¹⁷ Dr. Wilkie's subsequent analysis of the advantages of building sunk cost facilities first, if true, would also hold if the owner of the facilities were the cell site owner or the CMRS carrier. Dr. Wilkie's discussion of the inherent advantages that ILECs enjoy relative to CMRS carriers in terms of "skilled labor," "other in-house expertise," and "capital budget[s]" is surprising given that T-Mobile, on whose behalf Dr. Wilkie has submitted his statement, is owned by Deutsche Telekom with substantially more resources than most U.S. ILECs including BellSouth.

Sunk investments have higher risk under competition.¹⁸ Dr. Wilkie does not observe that a CMRS carrier such as T-Mobile can get a lower price by negotiating a long-term contract with an ILEC thereby removing the risk involved in a new sunk investment. To the benefit of all parties, the market mechanism of contracts can efficiently resolve the risks associated with sunk cost investments.

Regulations that do not reflect the long-term nature of contracts in the presence of sunk costs may inadvertently result in a "free option," which causes new investments to be uneconomic.¹⁹

Dr. Wilkie also erroneously defines the market in terms of a particular consumer, "the CMRS carrier."²⁰ Antitrust economists and the courts have recognized repeatedly

¹⁷ Ibid.

¹⁸ See e.g. J. Hausman, "Valuation and the Effect of Regulation on New Services in Telecommunications," *Brookings Papers on Economic Activity: Microeconomics*, 1997 and "Regulated Costs and Prices in Telecommunications," in G. Madden ed. *International Handbook of Telecommunications*, 2003.

¹⁹ J. Hausman, *ibid.* An option gives an economic agent the opportunity but not the obligation to buy or sell a service or product at a given price. Options on stocks are traded at values set by the market. A "free option" occurs in regulation when regulators require a company to make a long-lived sunk cost investment and to provide services to customers from that investment but without any obligations on customers to enter long-term contracts.

²⁰ Wilkie Declaration at ¶ 22-26.

that market definition based on a particular consumer is incorrect.²¹ Dr. Wilkie's claims of a natural monopoly²² are contradicted by the fact of CLEC entry in many medium and small cities as demonstrated in our Initial Declaration.²³

Antitrust economists define markets in terms of the "hypothetical monopolist."²⁴ This approach has been adopted by antitrust agencies and regulatory agencies throughout the world, and these agencies conduct detailed empirical analyses to determine geographic markets. Yet Dr. Wilkie does no such analysis. Instead he makes an unsupported claim that the "geographic market for loops and transport is point-to-point or route-by-route."²⁵ This assertion does not appear to be correct.

Consider that Cingular, a CMRS carrier, has a cell site along Route 128 outside Boston. Cingular connects that cell site to its network via a transport facility purchased from Verizon and routed through a Verizon central office in Boston. Alternatively, Cingular can use its own transport facilities or those of competitive providers to connect its cell sites to its own nearby mobile telephone switching office, where the traffic can be aggregated and then sent to the same Verizon central office or another central office in Boston. Cingular will choose the least-cost alternative where numerous competitors to Verizon provide competing transport services. The relevant geographic market cannot be

²¹ Only in the situation of "price discrimination markets" can this approach be correct. Dr. Wilkie's approach of a customer-based market was recently rejected in an important antitrust case, *U.S. v. Oracle (2004)*, where the District Court rejected the customer-based market approach. The Department of Justice did not appeal the Court's rejection of a customer-based market definition.

²² Wilkie Declaration at ¶ 23.

²³ Furchtgott-Roth and Hausman Declaration at 12-17. Dr. Wilkie repeats his rate-of-return claims (¶ 24) and his comparison to long-haul services, but neither comparison has any conceivable connection to market definition.

²⁴ See e.g. *Department of Justice and Federal Trade Commission Merger Guidelines* (1992), ¶ 1.0.

²⁵ Wilkie Declaration at ¶ 24.

point-to-point in this case because there is not necessarily a single point to which Cingular seeks to route traffic.

2. The Wilkie Declaration improperly imputes competitive rates

Dr. Wilkie's proposed method to use intercity transport rates after division by mileage as a benchmark for competitive special access rates within an MSA has three shortcomings: (1) it fails to account for fixed costs;²⁶ (2) it fails to account for all market factors that affect prices; and (3) it is based on flawed empirical analysis.

a. Accounting for fixed costs

Dr. Wilkie takes the New York City (NYC) to Los Angeles transport price and divides by mileage. For a DS3 line, he calculates \$1.40 per mile.²⁷ In this exercise, Dr. Wilkie completely missed the mileage insensitive costs associated with DS3 services and many other services, as he subsequently acknowledges.²⁸ The issue, however, is not marginal cost pricing and the insensitivity of marginal cost pricing to mileage as suggested by Dr. Wilkie.²⁹ To use an analogy, one can buy an airline round-trip ticket from Boston to Los Angeles (non-stop) for \$496 or \$0.095 per mile. Boston to Baltimore, considered a highly competitive route, is \$0.304 per mile, or over 3 times higher. Reasonable economists would not conclude that Boston to Baltimore is set at a supra-competitive price. Airline flights, like many services, have fixed costs. Thus, Dr. Wilkie's entire approach of finding that New York City-to-Los Angeles transport costs are less expensive on a per-mile basis than Verizon's transport costs in New York City makes absolutely no economic sense.

²⁶ Wilkie Declaration at ¶ 11.

²⁷ Wilkie Declaration at ¶ 12.

²⁸ Wilkie Declaration at ¶ 15.

²⁹ Wilkie Declaration at ¶ 15.

b. *Market factors affecting prices*

Market prices reflect demand conditions, cost conditions or technology, and competitive conditions in that market.³⁰ The simplistic exercise of calculating average transport rates per mile does not account for differences in any of these three sets of characteristics. Even if the mileage were the same, one would not necessarily expect the price of a DS3 line between New York and Los Angeles to be the same as the price of a DS3 line between New York and the Azores. Demand, technology, and competitive conditions would be different along the routes.

Further, Dr. Wilkie's attempted use of an average mileage rate between New York City and London is even less appropriate.³¹ Substantial excess capacity was built on international routes in the late 1990s. Many companies such as Global Crossing and WorldCom entered Chapter 11 bankruptcy in part because of deficient demand for the capacity. Competitive conditions became especially difficult because the marginal cost of service was low and companies with excess capacity competed for the available traffic. One cannot necessarily assume that the same demand and supply conditions that characterized the New York-London route were replicated identically within New York City.

Market prices for telecommunications services can and do change rapidly over time, particularly in response to changes in technology. Dr. Wilkie gives a perfect illustration with the more than 90% reduction in the price of DS3 transport between New

³⁰ Only under perfect competition is price determined only by cost. The idea that competitive prices are determined only by cost in the real world of imperfect competition is the "*regulatory fallacy*." See J. Hausman, "Regulated Costs and Prices in Telecommunications," in G. Madden ed. *International Handbook of Telecommunications*, 2003, for a further discussion.

³¹ Wilkie Declaration at ¶ 12.

York and Los Angeles between June 1999 and February 2004.³² Dr. Wilkie, properly, does not claim that the price reduction reflects exclusively differences in competition or differences in demand or even exclusively changes in technology. The price decline represents some combination of the three, although mostly changes in technology.

Dr. Wilkie states that “in a competitive market, prices are determined by *marginal cost*.”³³ This claim is only true under perfect competition conditions with constant or decreasing returns to scale. A firm that charges marginal cost on a technology with significant fixed costs (increasing returns to scale) will go bankrupt since it will not cover its fixed costs. Fixed costs are a large part of total costs of telecommunications networks.

c. Empirical Analysis

Dr. Wilkie’s regression approach is inconsistent with well-established principles of econometrics by failing to take account of demand conditions or competitive conditions.³⁴ Thus, his regression estimation results are biased and inconsistent.

The regression also implicitly assumes a uniform cost structure across markets. Such similarity of cost conditions has no empirical basis. The price of a liter bottle of soda is more expensive at a New York City supermarket than at a supermarket in a lower-cost geography. No economist would conclude that supermarkets in New York City are non-competitive based on this simplistic comparison.

Most surprising, however, is that Dr. Wilkie can find no better proxy for competitive special access service rates than long-haul transport. As we noted in our Initial Declaration, many web sites offer free quotes for competitive special access

³² Wilkie Declaration at ¶ 12.

³³ Wilkie Declaration at ¶ 15.

³⁴ Wilkie Declaration at ¶ 16.

services in any metropolitan area of the country.³⁵ Instead, he relies on regression results with the following problems:

- The data for the regressions are not presented;
- The underlying data for the regressions are from a proprietary database that cannot easily be replicated;
- The underlying data for the regressions are drawn from contracts that may have many different provisions and include many different services such that comparisons of individual services could be difficult;
- The regression structure ignores all demand and competitive information and reduces the information necessary for all DS3 lines in the country to a price equation with one variable and two parameters;
- Dr. Wilkie uses OC-3 lines as a proxy multiplied by a simple factor because he does not have sufficient information on DS3 lines; and
- The summary statistics of the regressions are not presented.

3. The Wilkie Declaration inappropriately compares special access rates, UNE rates, and ARMIS data

Dr. Wilkie compares special access rates and price-regulated unbundled network element rates.³⁶ He finds special access rates substantially higher than unbundled network element (UNE) rates in several states. Dr. Wilkie, however, does not note that this relationship likely holds both in regions with and without pricing flexibility for special access rates. It is unclear exactly what inference Dr. Wilkie would have the Commission draw for comparison of a regulated UNE rate with a special access rate that

³⁵ Furchtgott-Roth and Hausman Declaration, at fn. 21.

³⁶ Wilkie Declaration at ¶ 18-19 and Appendix 2.

is sometimes unregulated. The economic issues are: (1) whether there is an economically rational basis for price regulation; and (2), if so, whether an economically rational method of calculating regulated rates is available. The comparisons offered by Dr. Wilkie address neither issue.

As we explained throughout our Initial Declaration, regulated prices that are too high or too low can distort investment decisions and impede entry and competition in markets.³⁷ Dr. Wilkie offers no explanation of how to determine the “right” regulated price for special access services, and the Commission is left without a rational basis to determine whether the regulated rate for unbundled network elements in one region or the regulated rate for special access services is the proper regulated rate or too high or too low.

Dr. Wilkie then considers calculated rates of return based on ARMIS data.³⁸ Economists have long recognized that rates of return calculated using accounting allocations make no economic sense. Telecommunications networks produce many services and the accounting allocations to calculate rates of return are inherently arbitrary. Economists have further known that because of difficulties in determining economic depreciation that rate-of-return calculation cannot give useful information on supra-competitive price or market power.³⁹ Indeed since the Federal Trade Commission (FTC) lost the cereals case in the early 1980s based on a ruling that accounting rates of

³⁷ Declaration of H. Furchtgott-Roth and J. Hausman, June 10, 2005, particularly at 21-26.

³⁸ Wilkie Declaration at ¶ 20-21.

³⁹ Probably the best known paper that demonstrates that accounting rates of return cannot be used is Fisher, F., and J. J. McGowan (1983) “On the misuse of accounting rate of return to infer monopoly profits.” *American Economic Review* 73 (March): 82-97. For an analysis of the problems and large biases that arise by not doing economic calculations in setting regulated telecommunications prices, see e.g. J. Hausman, “Valuation and the Effect of Regulation on New Services in Telecommunications,” *Brookings Papers on Economic Activity: Microeconomics*, 1997 and “Regulated Costs and Prices in Telecommunications,” in G. Madden ed. *International Handbook of Telecommunications*, 2003.

return could not be used to infer market power, the FTC and Department of Justice rarely, if ever, use accounting rates of return in a monopolization case.⁴⁰ Since these are the expert agencies in evaluating market power, the Commission should take note of their non-use of accounting rates of return to infer market power.

III. Rate-of-Return Price Regulation

Several commenters state that the Commission should establish caps on special access pricing based on the FCC's last approved rate of return of 11.25%. Note that this rate of return was set in 1990, when local competition was usually unlawful, well before the Telecommunications Act of 1996. The Telecommunications Act of 1996 provides no "regulatory guarantee" of earning a specific rate of return.

Further, economists recognize that investment "hurdle rates" have to be established, not on a company-wide basis, but on an individual investment project basis.⁴¹ Telecommunications carriers, both ILECs and CLECs, have made, and continue to make, substantial investments in fiber in their networks to provide high-capacity services such as DS1, DS3 and fiber-optic (OCn) based services. These investments are long-lived, fixed-cost investments with potentially high risk over a significant period of time given the continuing advance of competitive technologies. The future looks quite risky for these types of services both as alternative technologies become available and as cable companies expand their service offerings to businesses.⁴²

⁴⁰ See *Kellogg Company – Shared Monopoly Case (Federal Trade Commission)*. For example, the DOJ never attempted to use accounting rates of return in *U.S. v. Microsoft*.

⁴¹ See e.g. R. Brealey and S.C. Myers *Principles of Corporate Finance*, 6th ed. Irwin McGraw-Hill, 2000.

⁴² For example, fixed wireless access technologies have become widely used in a number of countries, e.g. New Zealand.

Another way to consider this problem is the distribution of possible economic returns on a new investment by a regulated company. The expected return on an investment is usually a positive value, for instance EV, but the actual return on an investment is one of a wide range of possible outcomes. The return may be zero or even negative. Absent the previous “used and useful rule” of rate-of-return regulation, the ILEC will not recover its investment if returns are negative or not sufficiently positive. On the other hand, the project may be successful and have positive returns. The ILEC or any firm will evaluate an individual investment based on the value EV, the distribution of the range of possible outcomes for the investment, and alternative investment opportunities. The greater the value of EV, the more likely a firm will invest in the project.

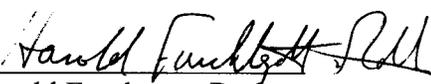
If regulation artificially caps the potential returns on an investment at a point c , the entire range of possible returns above c are foreclosed to the investor. The new expected return on the investment with truncated returns is not EV but a value substantially less than EV, regardless of whether c is greater than or less than EV. The economic incentives to invest will be decreased. These economic incentives will be decreased for both the incumbent, whose expected return has fallen, and for potential new facilities-based competitors, for whom the investment incentive will also have decreased. The result will be less facilities-based competition.

Several parties suggest the use of price caps with a productivity factor established in 1990. Again these suggestions demonstrate how difficult a task it is for the Commission to determine correct regulated prices. Productivity conditions in the late 1980s (used to set the factor in 1990) and technological conditions have changed greatly

over the intervening 15-20 years. No competitive industry would ever attempt to set its prices based on conditions of 20 years ago. Indeed, if a regulatory commission based a required price change on conditions from 15-20 years ago in a technologically changing market, economists would view such regulated prices as having no rational economic foundation. Despite the enthusiasm for the *concept* of a productivity adjustment factor, no party submitted an updated productivity factor based on empirical analysis that has any relationship to the technology used in providing special access today or, more importantly, the technology to provide special access in the future. Thus, the Commission lacks the necessary information to re-impose a price cap with a relevant productivity factor, even if it were appropriate to do so (which is not the case).

The difficulty for the Commission to determine the “correct price,” as we discussed in our Initial Declaration, is demonstrated in the comments. Indeed, even comments that call for low prices have no agreement on what the “correct” low price should be. Nor do they offer suggestions of how to get to the correct destination. We continue to believe that the Commission does not have the necessary information to set prices in such a way that will not distort future investment incentives and stifle competition in providing special access services.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.


Harold Furchtgott-Roth

Subscribed and sworn to before me

This 22nd Day of July, 2005.


Verdetta Coltrane
Notary Public District of Columbia
My Commission Expires 10/31/09

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

J. A. Hausman July 24, 2004

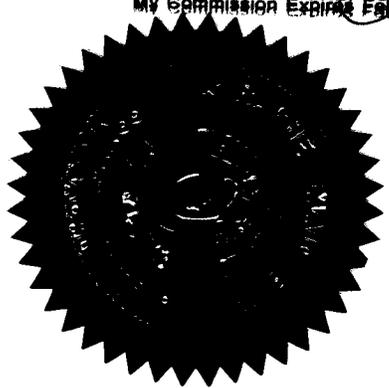
Jerry A. HAUSMAN

Subscribed and sworn to before me

On this 24 day of July, 2005, before me, the undersigned notary public, personally appeared Jerry Hausman and proved to me through satisfactory evidence of identification, which were

known personally to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Rachel Maire
RACHEL MAIRE, Notary Public
My Commission Expires February 18, 2012



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AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services)	RM-10593
)	
)	

REPLY DECLARATION OF STEPHANIE BOYLES

Comes now the declarant, and swears under oath as follows:

1. This Declaration is being filed to report on the results of the analysis by 10th Street Advisors (“10th Street”) of the deployment of fiber facilities that are used to serve customers in the BellSouth region and to explain the methodology that 10th Street employed in developing this report.

2. I am the Stephanie Boyles who made a Declaration that was previously filed in this proceeding as Attachment 6 to the Comments of BellSouth. The information regarding my qualifications and employment that was contained in that Declaration continue to be accurate, with one exception: I am currently employed as the Managing Director of 10th Street Advisors. Effective June 17, 2005, the owner of RHK Associates sold the marketing research department of that firm. The remaining portions of the firm, including the consulting services department in which I and all others who worked on the subject analysis are employed, has been renamed 10th Street Advisors. Although the name of the firm has changed, the team that worked on the analysis attached to my prior

Declaration and that worked on the analysis attached to this Reply Declaration are exactly the same.

3. The purpose of the analysis performed by 10th Street was to identify the buildings in BellSouth's region that are not BellSouth Central office buildings, which have fiber-based services (i.e., "lit buildings"). The identified buildings have been categorized as having fiber facilities offered by (i) competitive carriers only, (ii) both BellSouth and competitive carriers, and (iii) BellSouth only. The identification of lit buildings was accomplished by analyzing data mined from Telcordia's "CLONES" database and data contained in BellSouth's Remote Fiber Terminal database according to the methodology described below.

4. **Telcordia's CLONES Database:** Telcordia maintains a database referred to as CLONES (Central Location On-Line Entry System) to manage the assignment of Common Language Location Identification ("CLLI") codes for the U.S. telecommunications industry. (A CLLI Code is an eleven character alphanumeric descriptor used to identify switches, points of interconnection, and other categories of telephony network elements and their locations.) To obtain the assignment of a CLLI code to a piece of equipment, the carrier requests from Telcordia a CLLI Code assignment.

5. **GeoResult's Data-Mining of CLONES:** GeoResults, Inc. (a telecom database marketing and consulting firm) mined the data resident in Telcordia's CLONES database to identify the carriers that have OCN equipment in each building in BellSouth's region that is connected to fiber facilities. CLONES has a field in the database called the "Created By" field. The "created by" field indicates in most cases the owner of the

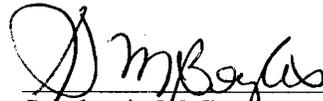
equipment. If the equipment is optical, then, generally speaking, the company identified in the “created by” field is the provider of the optical fiber to that building. Accordingly, in the subject analysis, the provider of the equipment is treated as being the provider of the fiber. However, there are exceptions. For example, some of the smaller carriers do not participate in CLONES (e.g., PalmettoNet). In this event, BellSouth could request a CLLI code from Telcordia for one of these pieces of equipment owned by a small carrier to perform loopback testing of that equipment. If this occurred, it would appear that BellSouth fiber is in place when the fiber in place actually belongs to the small carrier. These cases do not occur frequently, but they do occur occasionally, and in these cases, the number of CLEC lit buildings would be understated.

6. **Categorizing Buildings as BLS-only Lit Buildings, BLS & CLEC Lit Buildings, CLEC-only Lit Buildings:** Again, the GeoResults data mining of the CLONES database provides for BellSouth’s territory a view of which buildings have BellSouth fiber only, which have both BellSouth and CLEC fiber, and which have CLEC fiber only. 10th Street performs a validation of these results by independently reviewing the buildings categorized as “CLEC-only” to ensure that BellSouth does not also provide fiber to these buildings. This validation involves comparing the CLLI codes associated with each “CLEC-only” building to those in BellSouth’s Remote Fiber Terminal database. If there is a match, then 10th Street reclassifies the building as a “BellSouth and CLEC lit building.”

7. Attached hereto as Exhibit A is a Powerpoint presentation that provides the results of the analysis performed by using the methodology explained above.

8. This concludes my Declaration.

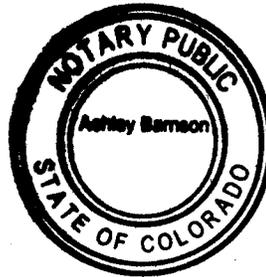
I, Stephanie Boyles, hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge, information, and belief.


Stephanie M. Boyles

Dated: July 28, 2005

on the 28th of July 2005 Stephanie Boyles appeared before me with drivers license.





My commission expires
11/05/07

Attachment 2

Exhibit A



Lit Buildings in BellSouth's Territory

Stephanie Boyles
Mike Podsedly
Kevin Duffy-Deno
Mike Doscher

July 28, 2005

Lit Buildings* in the BellSouth Region

Distribution of Lit Buildings - April 2005 -

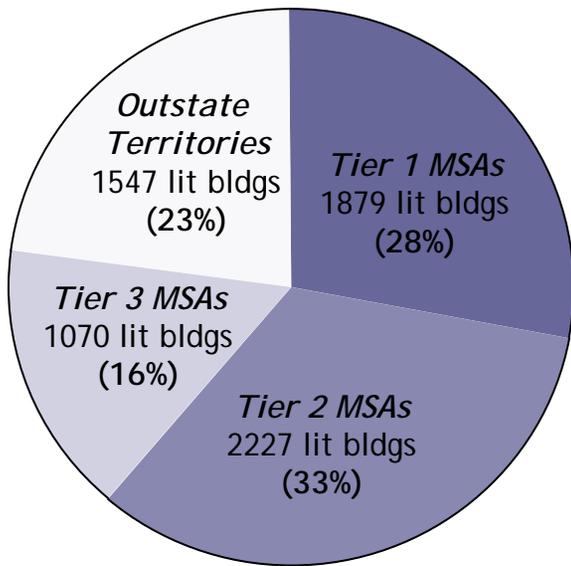


- *CLECs have a presence in 39% of the lit buildings*
- *And 23% of lit buildings are lit only by CLECs: BellSouth offers no fiber-enabled service to customers in these buildings*

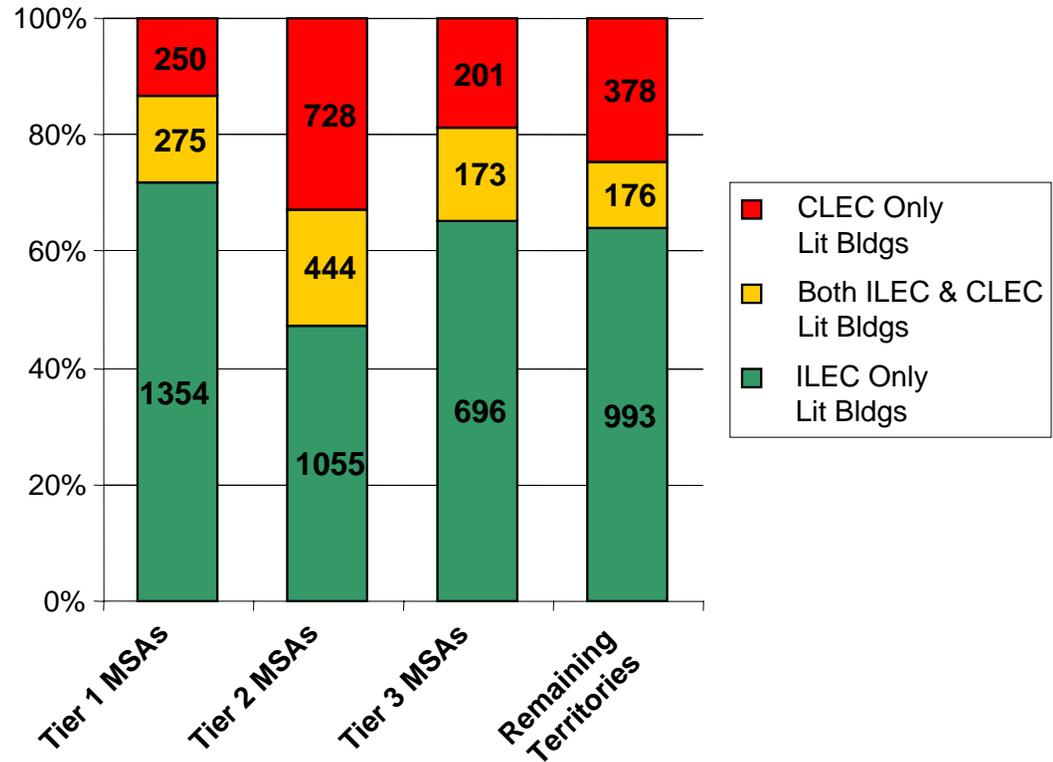
Note: "Lit building" is a non ILEC Central Office building that has a CLLI-code assigned fiber-node resident

Lit Building Penetration by Market Density

Distribution of Lit Buildings
By Market Density
April '05



Variance in CLEC vs BLS Lit Building Penetration
by Market Density
April '05

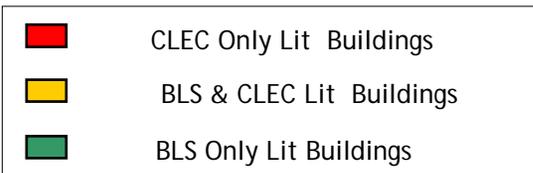
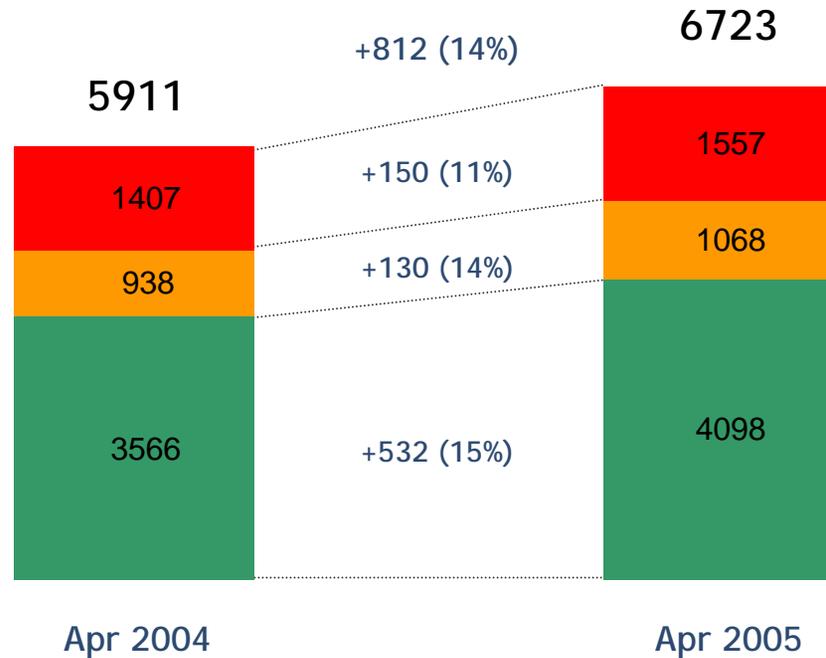


- Over 70% of the lit buildings are outside BLS' Tier 1 MSAs

- Lit building penetration by CLECs is greater in BellSouth's lower tier markets than in BellSouth's Tier 1 markets

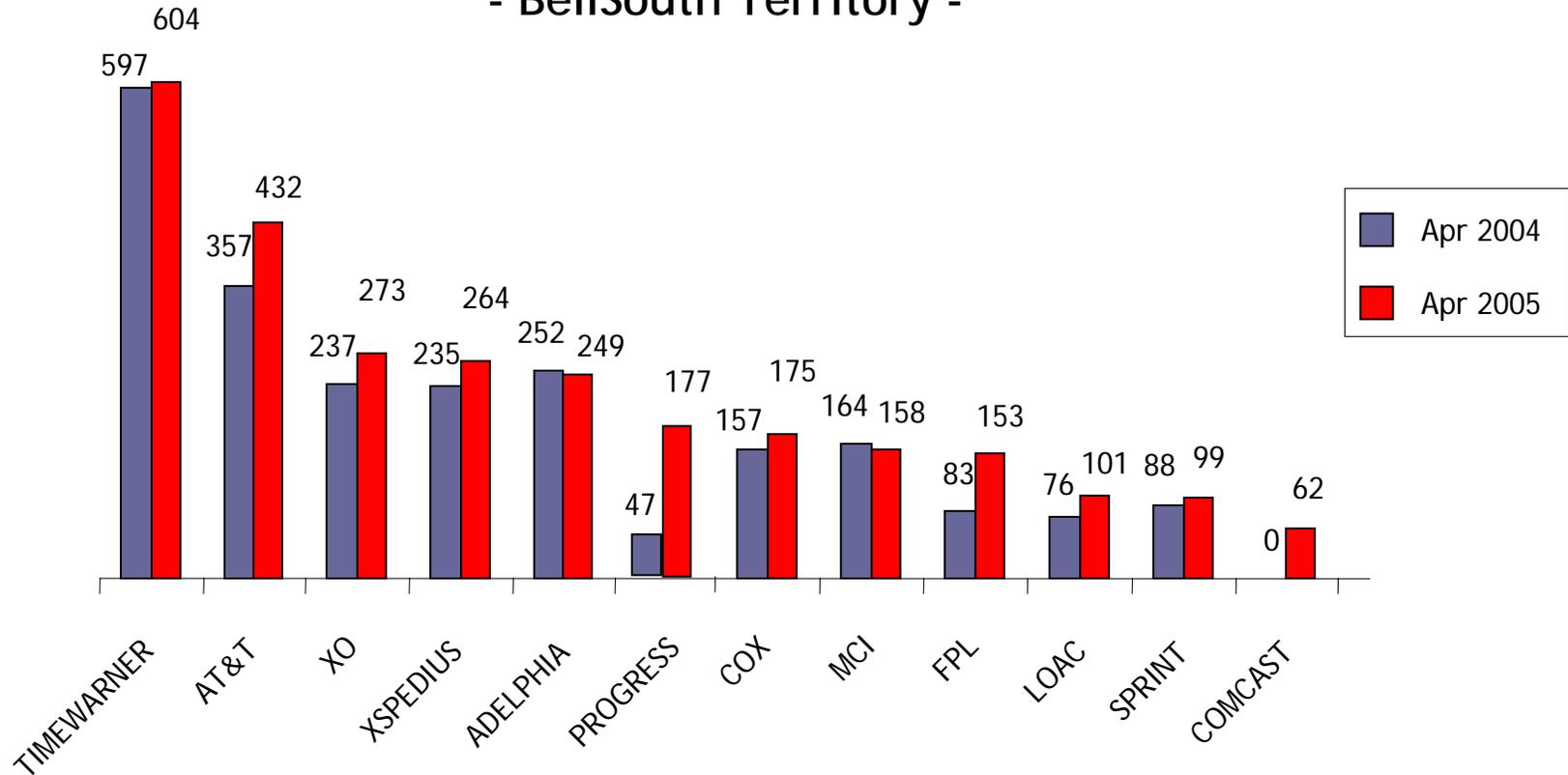
Growth in Lit Buildings

Change in Lit Building Distribution



Lit Building Penetration by Major CLEC Fiber Providers

Number of CLEC "Lit" Buildings Per Provider
- BellSouth Territory -

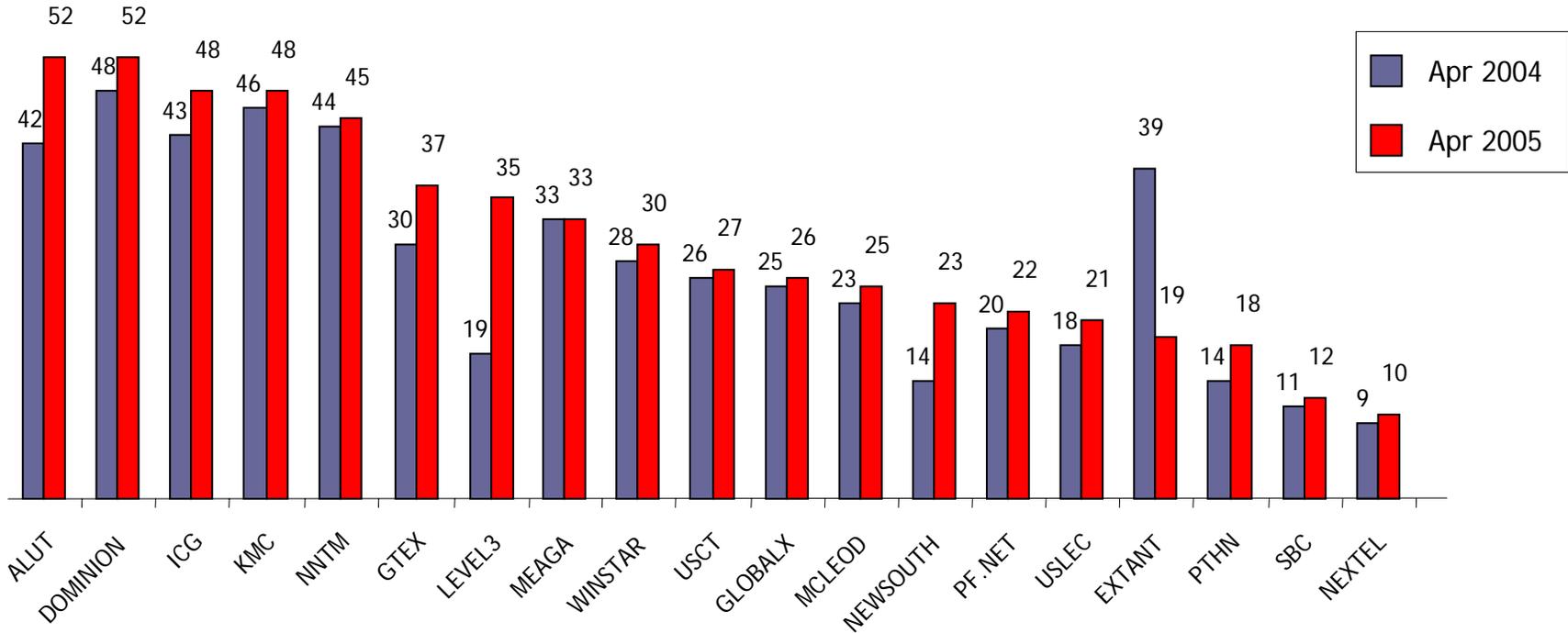


- *Collectively the larger CLEC fiber providers grew their lit building presence 20% from April 2004 to April 2005*

• Source: 10th Street analysis of data generated from Telcordia's CLONES database. Does not include lit buildings of fiber providers who do not participate in CLONES, e.g., Memphis Networkx

Lit Building Penetration by Smaller CLEC Fiber Providers

Number of CLEC "Lit" Buildings Per Provider
- BellSouth Territory -

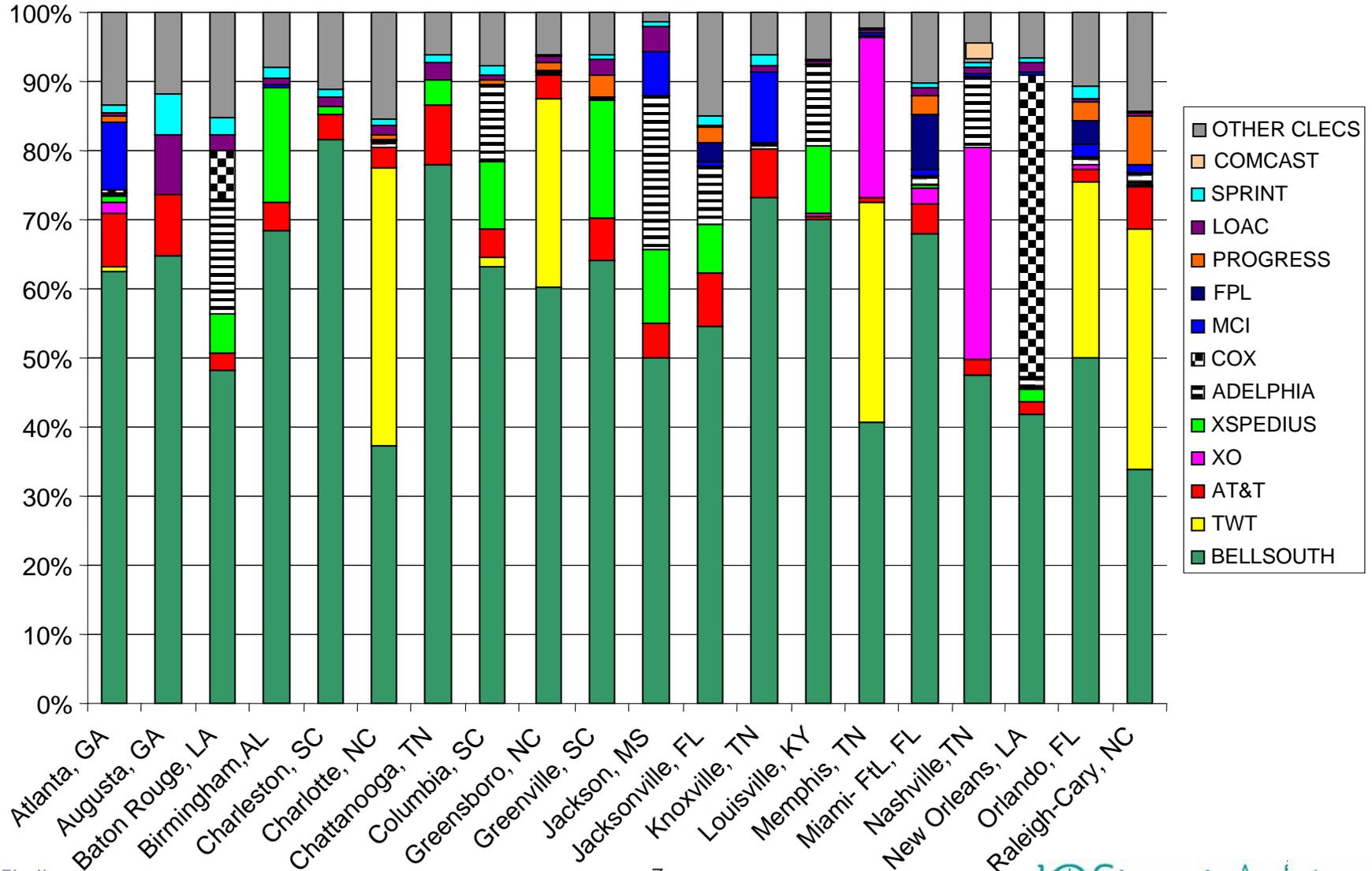


- *Collectively the smaller CLEC fiber providers grew their lit building presence 8% from April 2004 to April 2005*

- *Source: 10th Street analysis of data generated from Telcordia's CLONES database. Does not include lit buildings of fiber providers who do not participate in CLONES, e.g., Memphis Networkx*
- *LOAC is a code assigned for internal Telcordia use in the CLONES database. Telcordia uses this code when establishing CLLI codes on behalf of carriers who are not licensed to directly interface with the CLONES database.*

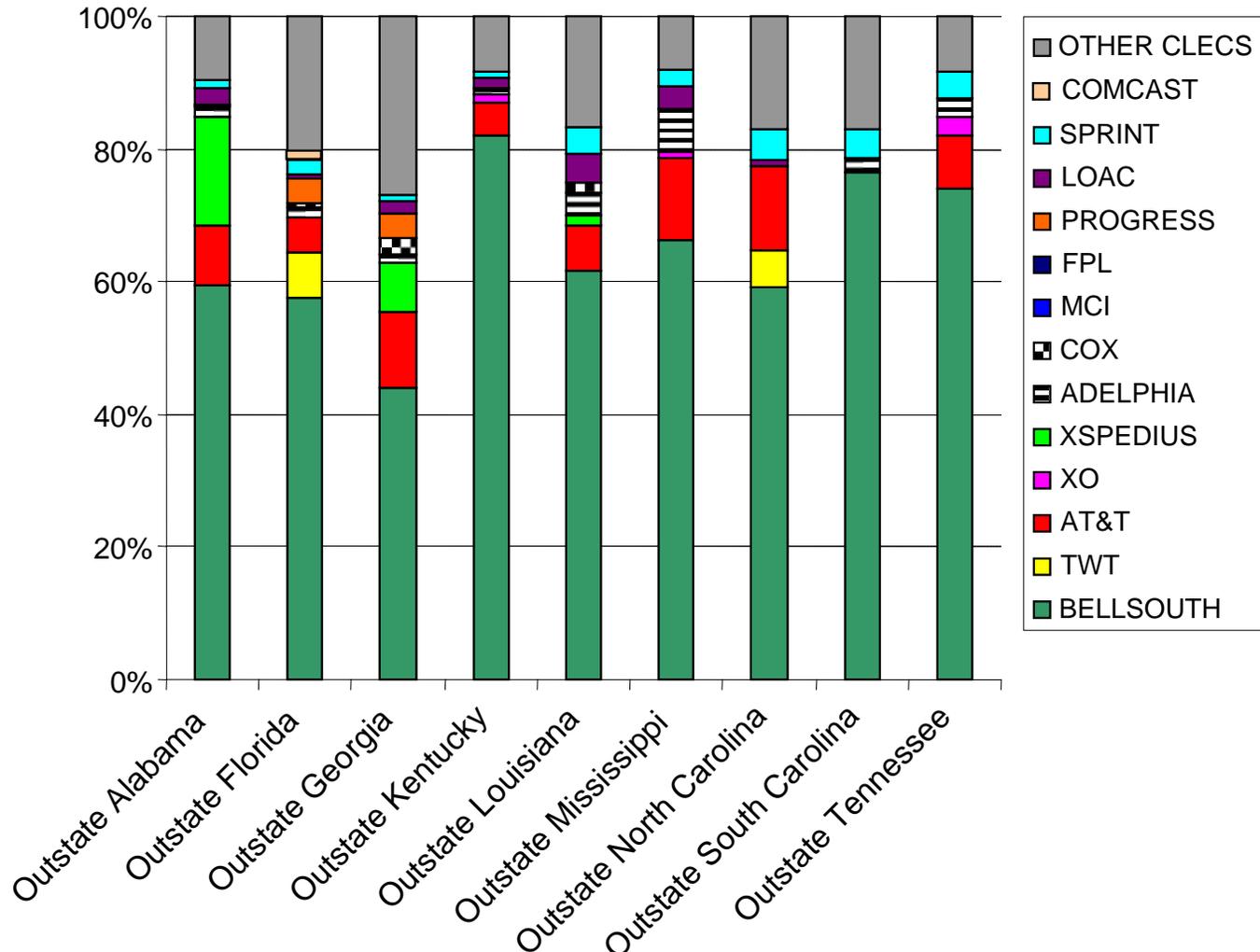
Competitive Intensity : Top 20 MSAs

Lit Buildings



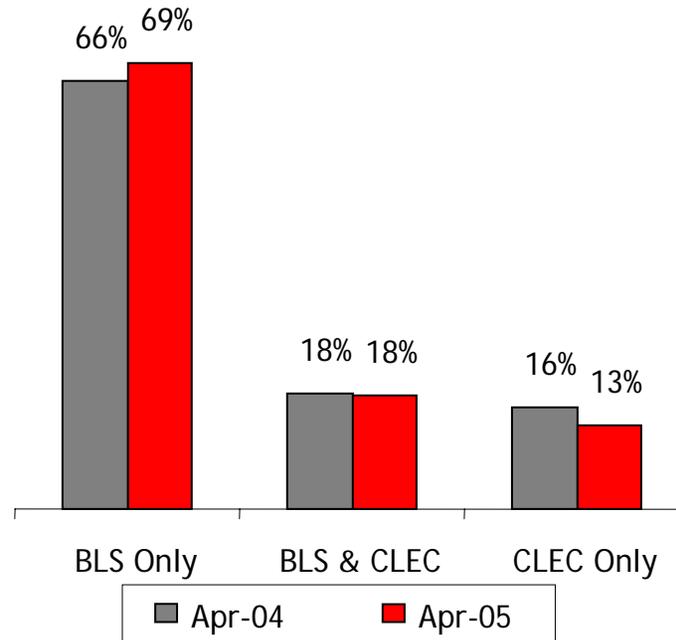
Competitive Intensity: Outside Top 20 MSAs

Lit Buildings



Atlanta, GA

Lit Building Share Distribution Atlanta, GA



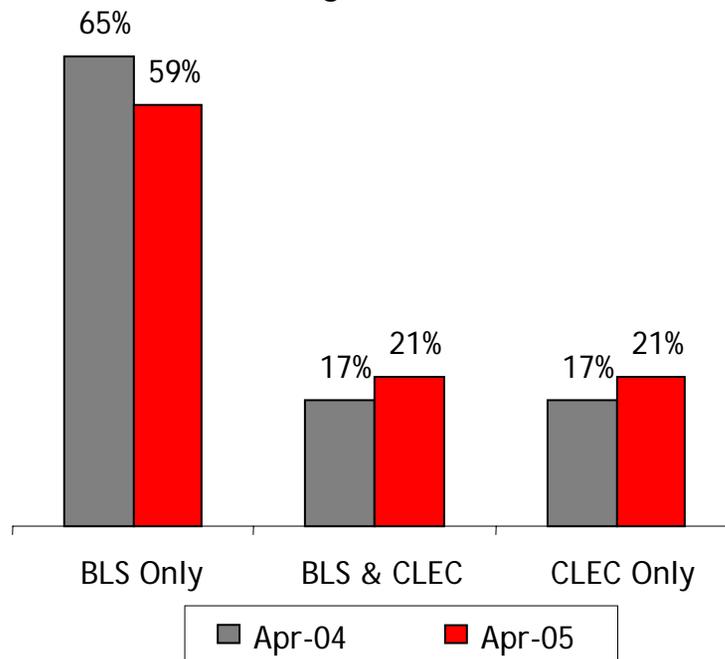
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	490	132	115	737
Apr-05	543	139	102	784
Change	11%	5%	-11%	6%

Augusta, GA

Lit Building Share Distribution Augusta, GA



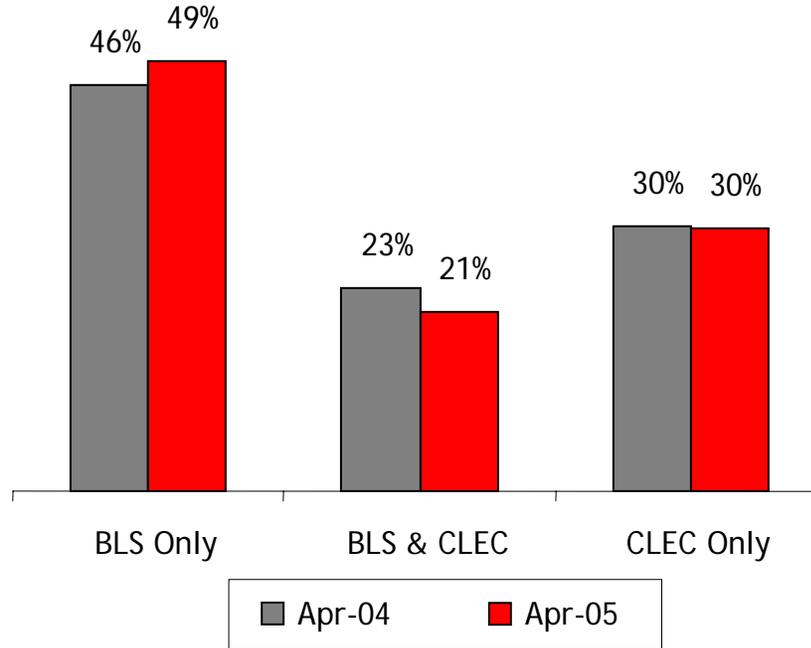
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Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	15	4	4	23
Apr-05	17	6	6	29
Change	13%	50%	50%	26%

Baton Rouge, LA

Lit Building Share Distribution Baton Rouge, LA



Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

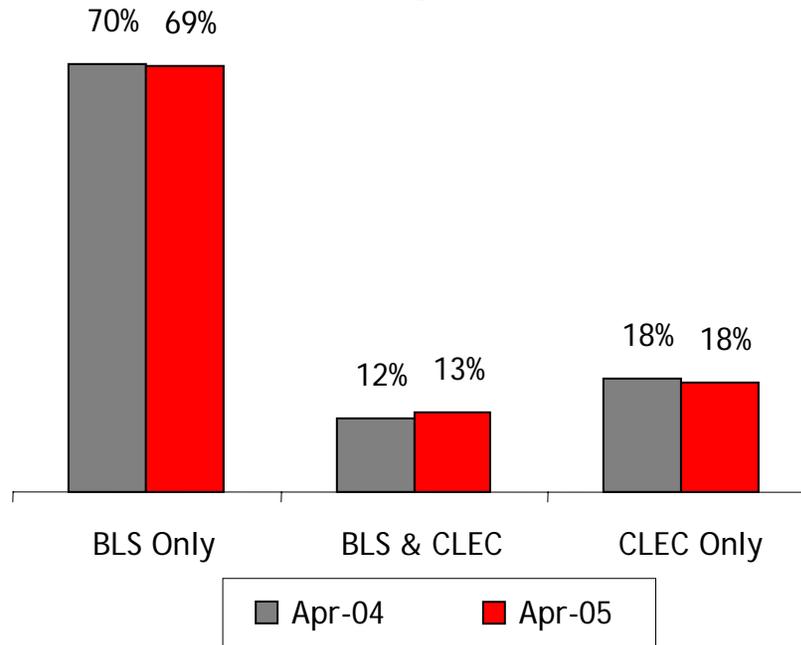
Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	26	13	17	56
Apr-05	31	13	19	63
Change	19%	0%	12%	13%

Birmingham, AL

Lit Building Share Distribution

Birmingham, AL



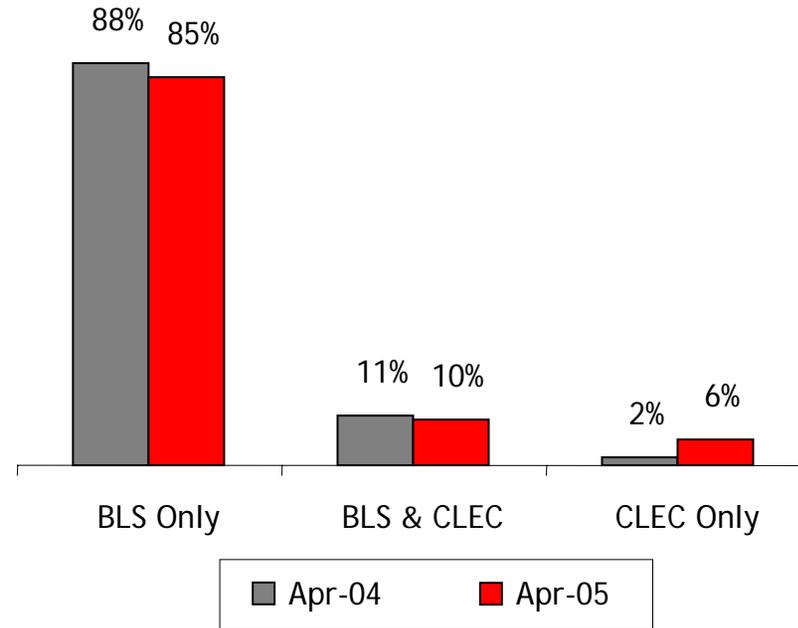
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	106	18	28	152
Apr-05	117	22	30	169
Change	10%	22%	7%	11%

Charleston, SC

Lit Building Share Distribution Charleston, SC



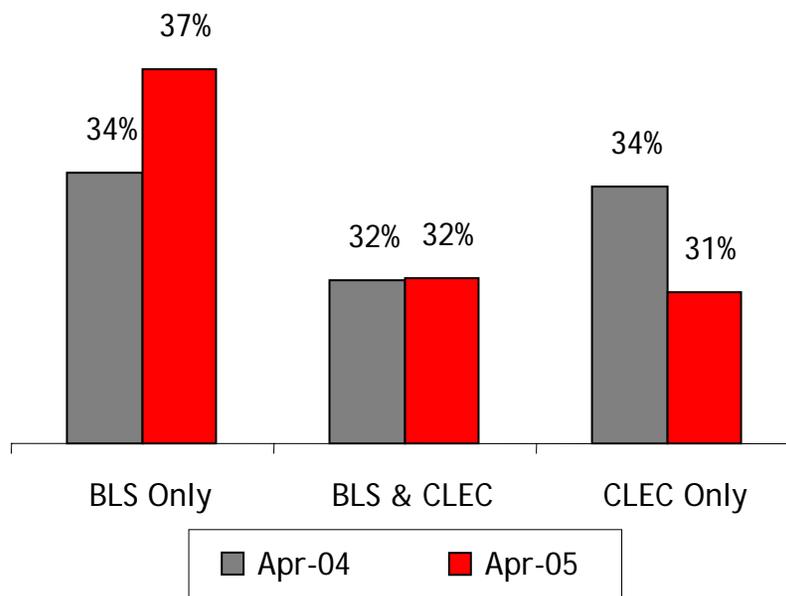
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	49	6	1	56
Apr-05	60	7	4	71
Change	22%	17%	300%	27%

Charlotte, NC

Lit Building Share Distribution Charlotte, NC



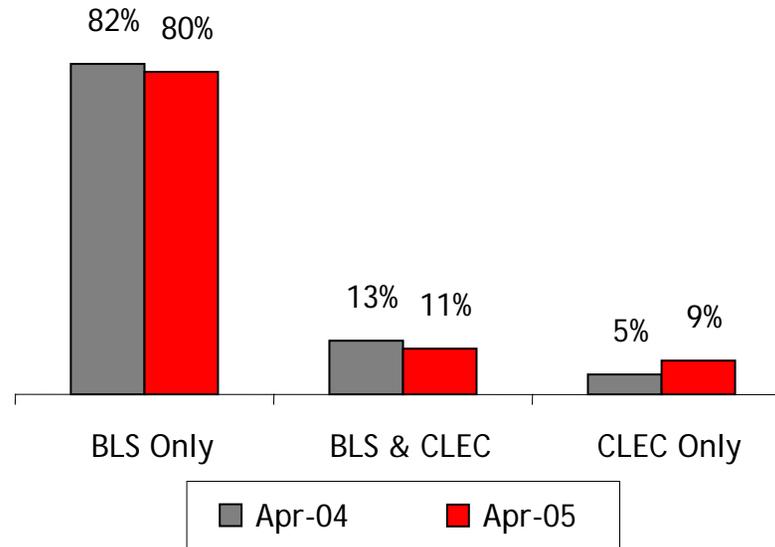
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Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	96	89	95	280
Apr-05	106	92	91	289
Change	10%	3%	-4%	3%

Chattanooga, TN

Lit Building Share Distribution Chattanooga, TN



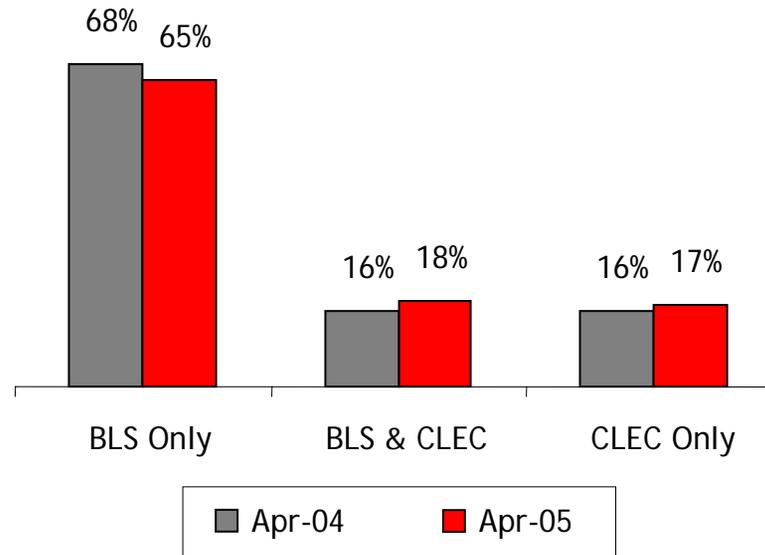
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC" lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	49	8	3	60
Apr-05	56	8	6	70
Change	14%	0%	100%	17%

Columbia, SC

Lit Building Share Distribution Columbia, SC



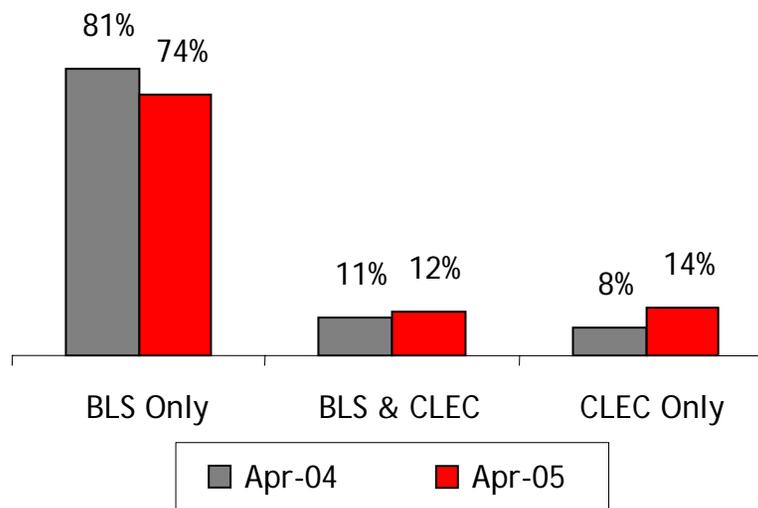
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC" lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	73	17	17	107
Apr-05	72	20	19	111
Change	-1%	18%	12%	4%

Miami/Ft. Lauderdale, FL

Lit Building Share Distribution Miami/Ft. Lauderdale, FL



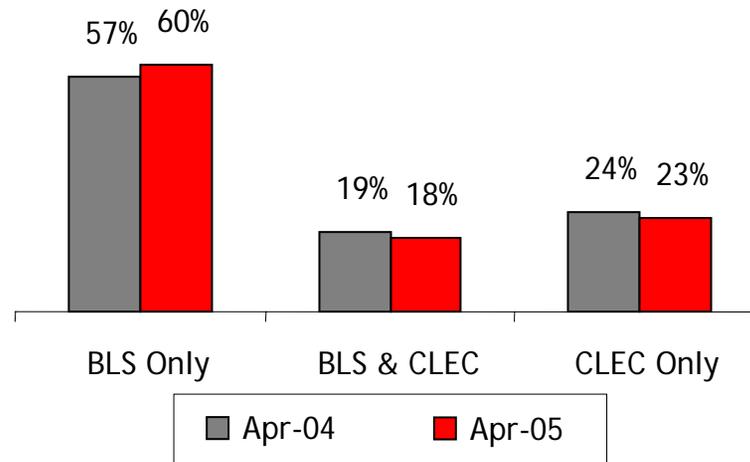
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	729	97	73	899
Apr-05	811	136	148	1095
Change	11%	40%	103%	22%

Greensboro, NC

Lit Building Share Distribution Greensboro, NC



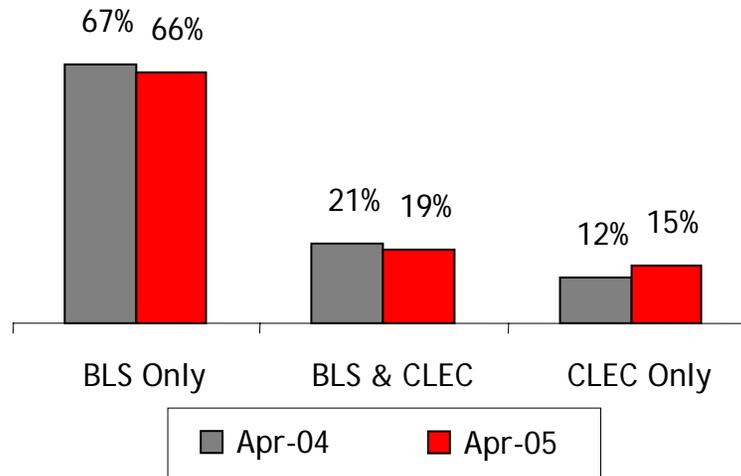
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC" lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	115	39	49	203
Apr-05	129	38	49	216
Change	12%	-3%	0%	6%

Greenville, SC

Lit Building Share Distribution Greenville, SC



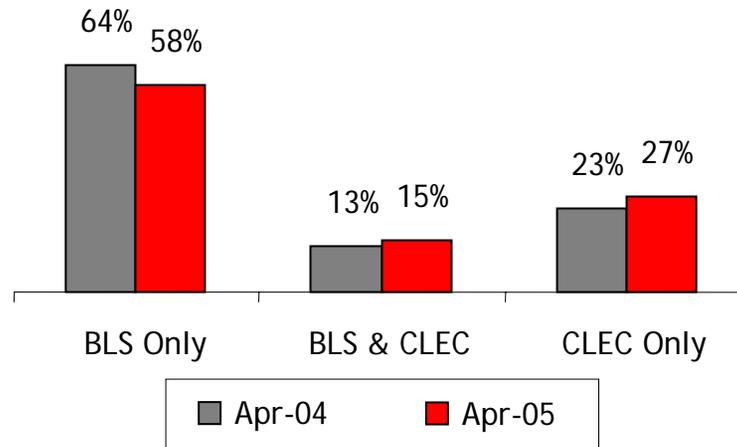
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Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	72	22	13	107
Apr-05	88	26	20	134
Change	22%	18%	54%	25%

Jacksonville, FL

Lit Building Share Distribution Jacksonville, FL



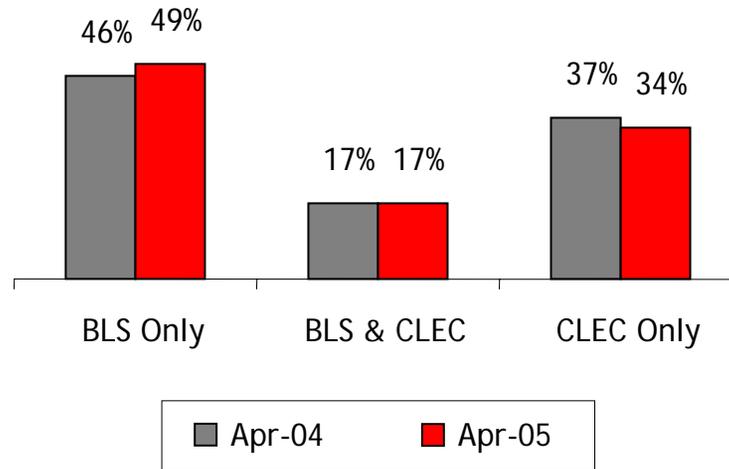
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Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	161	32	59	252
Apr-05	163	41	75	279
Change	1%	28%	27%	11%

Jackson, MS

Lit Building Share Distribution Jackson, MS



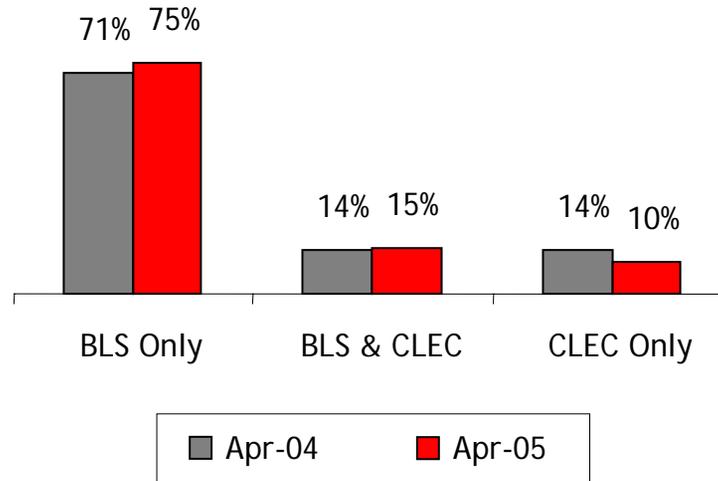
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	48	18	38	104
Apr-05	54	19	38	111
Change	13%	6%	0%	7%

Knoxville, TN

Lit Building Share Distribution Knoxville, TN



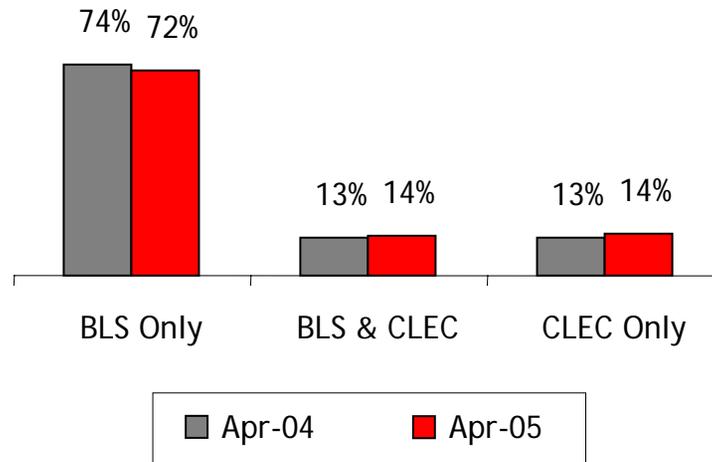
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	55	11	11	77
Apr-05	72	14	10	96
Change	31%	27%	-9%	25%

Louisville, KY

Lit Building Share Distribution Louisville, KY



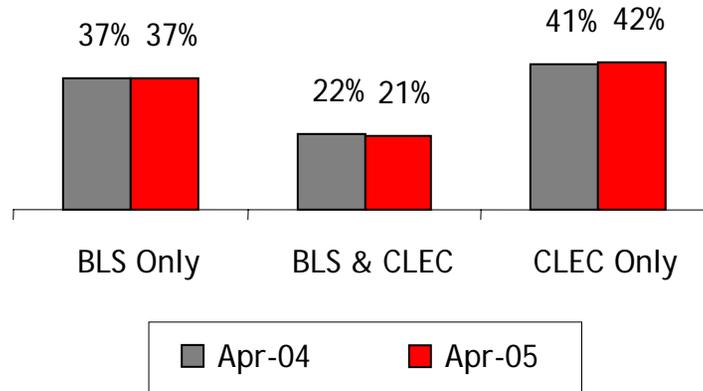
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC' lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	164	29	30	223
Apr-05	184	36	37	257
Change	12%	24%	23%	15%

Memphis, TN

Lit Building Share Distribution Memphis, TN



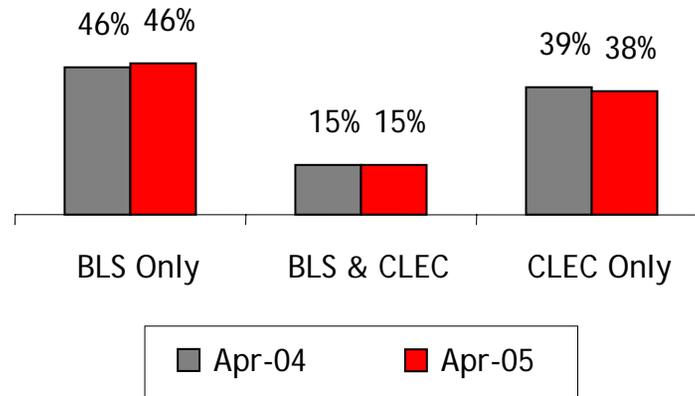
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Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	115	67	127	309
Apr-05	122	69	138	329
Change	6%	3%	9%	6%

Nashville, TN

Lit Building Share Distribution Nashville, TN



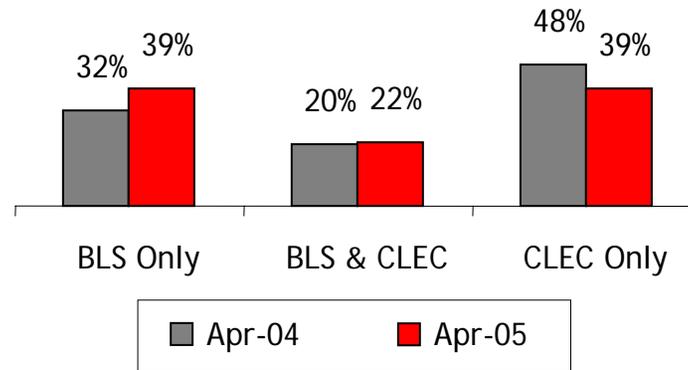
Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC" lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	134	45	115	294
Apr-05	150	50	123	323
Change	12%	11%	7%	10%

New Orleans, LA

Lit Building Share Distribution New Orleans, LA



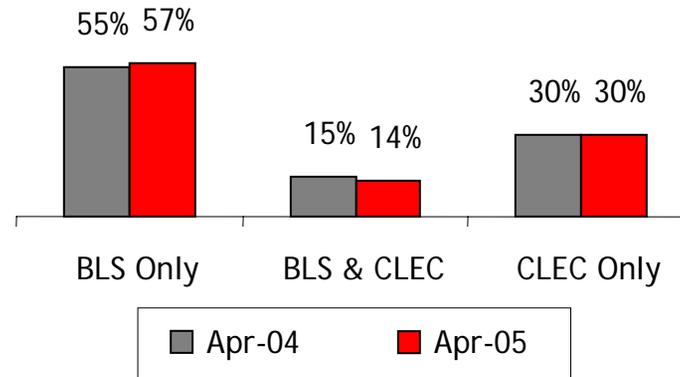
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Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	77	49	114	240
Apr-05	105	58	106	269
Change	36%	18%	-7%	12%

Orlando, FL

Lit Building Share Distribution Orlando, FL



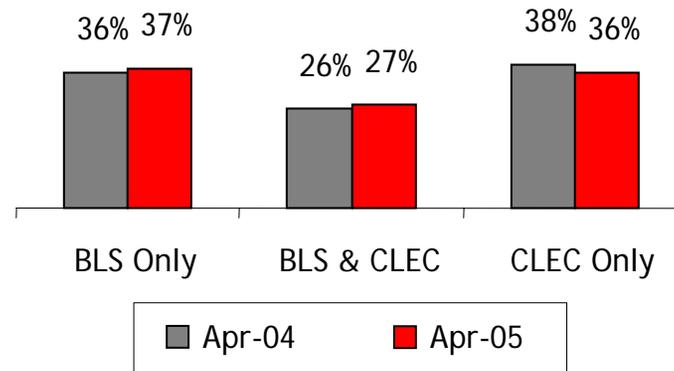
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Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	121	33	67	221
Apr-05	138	33	73	244
Change	14%	0%	9%	10%

Raleigh, NC

Lit Building Share Distribution Raleigh, NC



Note: The CLONES information on BLS Lit Buildings was supplemented with BLS' Remote Fiber Terminal Database information - "CLEC only" lit buildings were changed to 'Both BLS and CLEC" lit buildings if there was a CLLI match in BellSouth's Remote Fiber Terminal database for any of those buildings.

Lit Buildings Magnitude & Change by Category

	<u>BLS Only</u>	<u>BLS & CLEC</u>	<u>CLEC Only</u>	<u>Total</u>
Apr-04	82	60	87	229
Apr-05	87	65	85	237
Change	6%	8%	-2%	3%

Backup Data for Chart: Lit Building Penetration by Market Density

Tier 1	FT_LAUD
	ATLANTA
Tier 2	MEMPHIS
	NASHVILLE
	CHARLOTTE
	JACKSONVILLE
	NEW_ORLEANS
	LOUISVILLE
	ORLANDO
	RALEIGH
Tier 3	GREENSBORO
	BIRMINGHAM
	GREENVILLE
	COLUMBIA
	JACKSON_MS
	KNOXVILLE
	CHARLESTON
	CHATTANOOGA
	BATON_ROUGE
	AUGUSTA
Outstate	AL OUTSTATE
Territories	FL OUTSTATE
	GA OUTSTATE
	KY OUTSTATE
	LA OUTSTATE
	MS OUTSTATE
	NC OUTSTATE
	SC OUTSTATE
	TN OUTSTATE

Backup: Competitive Intensity Top 20 MSAs

	METRO	ATLANTA	AUGUSTA	BATON_ROUGE	BIRMINGHAM	CHARLESTON	CHARLOTTE	CHATTANOOGA	COLUMBIA	GREENSBORO	GREENVILLE	JACKSONVILLE	JACKSON_MS	KNOXVILLE	LOUISVILLE	MEMPHIS	MIAFT_LAUD	NASHVILLE	NEW_ORLEANS	ORLANDO	RALEIGH
NUMBER	BLS	647	22	41	137	66	148	64	91	159	105	194	70	85	216	168	913	192	144	163	111
LIT	TIMEWARNER	9	0	0	0	0	160	0	2	72	0	0	0	0	0	131	0	0	0	83	114
BLDGS	AT&T	80	3	2	8	3	11	7	6	9	10	28	7	8	2	3	59	9	6	6	20
	XO	15	0	0	0	0	0	0	0	0	0	0	0	0	1	96	29	124	0	2	1
	XSPEDIUS	10	0	5	33	1	0	3	14	0	28	25	15	0	30	1	8	0	6	0	0
	ADELPHIA	5	0	14	0	0	4	0	16	1	1	30	31	1	37	0	16	41	7	4	6
	PROGRESS	13	0	0	0	0	3	0	1	3	5	11	0	0	0	0	49	0	0	14	23
	COX	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	0	0
	MCI	101	0	0	1	0	1	0	0	1	0	2	9	12	0	2	14	2	1	6	4
	FPL	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	105	0	0	11	0
	LOAC	6	3	2	2	1	5	2	1	2	4	1	5	1	1	2	17	4	5	1	1
	SPRINT	11	2	2	3	1	4	1	2	1	1	5	1	2	1	1	10	3	2	6	1
	COMCAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	0	0	0	0
	OTHER CLECS	87	4	11	16	7	46	4	6	13	9	24	2	3	15	5	47	21	17	20	38
	TOTAL	989	34	83	200	79	382	81	139	261	163	330	140	112	303	409	1323	396	338	316	319
PERCENT	BLS	65%	65%	49%	69%	84%	39%	79%	65%	61%	64%	59%	50%	76%	71%	41%	69%	48%	43%	52%	35%
LIT	TIMEWARNER	1%					42%		1%	28%						32%				26%	36%
BLDGS	AT&T	8%	9%	2%	4%	4%	3%	9%	4%	3%	6%	8%	5%	7%	1%	1%	4%	2%	2%	2%	6%
	XO	2%														23%	2%	31%		1%	
	XSPEDIUS	1%		6%	17%	1%		4%	10%		17%	8%	11%		10%		1%		2%		
	ADELPHIA	1%		17%			1%		12%		1%	9%	22%	1%	12%		1%	10%	2%	1%	2%
	PROGRESS	1%					1%		1%	1%	3%	3%					4%			4%	7%
	COX	1%		7%															44%		
	MCI	10%			1%							1%	6%	11%			1%	1%		2%	1%
	FPL											3%					8%			3%	
	LOAC	1%	9%	2%	1%	1%	1%	2%	1%	1%	2%		4%	1%			1%	1%	1%		
	SPRINT	1%	6%	2%	2%	1%	1%	1%	1%		1%	2%	1%	2%			1%	1%	1%	2%	
	COMCAST																4%				
	OTHER CLECS	9%	12%	13%	8%	9%	12%	5%	4%	5%	6%	7%	1%	3%	5%	1%	4%	5%	5%	6%	12%

Backup: Competitive Intensity Out-state Territories

NUMBER LIT BUILDINGS

PERCENT LIT BUILDINGS

TERRITORY	NUMBER LIT BUILDINGS									PERCENT LIT BUILDINGS								
	AL OUTSTATE	FL OUTSTATE	GA OUTSTATE	KY OUTSTATE	LA OUTSTATE	MS OUTSTATE	NC OUTSTATE	SC OUTSTATE	TN OUTSTATE	AL OUTSTATE	FL OUTSTATE	GA OUTSTATE	KY OUTSTATE	LA OUTSTATE	MS OUTSTATE	NC OUTSTATE	SC OUTSTATE	TN OUTSTATE
BLS	225	239	117	166	143	81	52	36	54	61%	58%	44%	83%	67%	69%	60%	77%	75%
AT&T	34	22	31	10	16	15	11	0	6	9%	5%	12%	5%	8%	13%	13%		8%
XSPEDIUS	62	0	20	0	3	0	0	0	0	17%		8%		1%				
PROGRESS	0	27	15	0	0	0	8	5	0		7%	6%				9%	11%	
SPRINT	5	9	2	2	9	3	4	2	3	1%	2%	1%	1%	4%	3%	5%	4%	4%
ADELPHIA	5	6	3	2	8	8	0	1	2	1%	1%	1%	1%	4%	7%		2%	3%
LOAC	9	3	5	3	10	4	1	0	0	2%	1%	2%	2%	5%	3%	1%		
TIMEWARNER	0	28	0	0	0	0	5	0	0		7%					6%		
FPL	0	27	0	0	0	0	0	0	0		7%							
COX	0	3	7	0	4	0	0	0	0		1%	3%		2%				
COMCAST	0	6	0	0	0	0	0	0	0		1%							
MCI	0	0	0	0	0	0	0	2	0								4%	
XO	0	0	0	2	0	1	0	0	2				1%		1%			3%
OTHER CLECS	31	41	65	14	20	6	5	1	5	8%	8%	24%	8%	8%	6%	6%	2%	10%
TOTAL	371	411	265	199	213	118	86	47	72									

Backup: Lit Building Providers

1 2ND CENTURY COMMUNICATIONS	37 FOCAL COMMUNICATIONS	73 THE PHONE COMPANY
2 360NETWORKS	38 FPL FIBERNET	74 TIME WARNER TELCOM
3 ACTEL, INC.	39 GLOBAL CROSSING	75 TLGT
4 ADELPHIA	40 GLOBAL NAPS	76 T-MOBILE
5 ALEC	41 GTEX	77 US LEC
6 ALUT	42 HORRY TELEPHONE COOPERATIVE	78 USCT
7 AMERICAN METROCOMM	43 ICG	79 USTA
8 AT&T	44 IWLC	80 UW
9 ATS MOBILE TEL	45 KMC TELECOM	81 VARTEC
10 BELLSOUTH	46 LEVEL 3	82 VERIZON
11 BITT	47 LOAC	83 VERIZON WIRELESS
12 BR	48 MADISON RIVER COMMUNICATION	84 VLGC
13 BROADBAND OFFICE COMMUNICATIONS	49 MARIETTA FIBERNET	85 WINSTAR
14 BROADWING	50 MAXCESS	86 WORLD ACCESS COMMUNICATIONS
15 BTI TELECOMMUNICATIONS	51 MCI	87 XO
16 CABLE & WIRELESS	52 MCLEOD USA	88 XSPEDIUS
17 CBeyond COMMUNICATIONS	53 METRO FONE COMMUNICATIONS	
18 CENTENNIAL CELLULAR CORP	54 MGCC	
19 CENTURY TEL	55 MUN ELECTRIC AUT OF GA	
20 COMCAST	56 NCVA	
21 COMMONWEALTH TELECOM	57 NETWORK TELEPHONE	
22 COREEXPRESS	58 NEWSOUTH	
23 COX	59 NEXTEL	
24 CRICKET COMMUNICATIONS	60 NNTM	
25 CTCN	61 NTCA	
26 DIAL CALL COMMUNICATIONS	62 NWPS	
27 DIGITAL TELEPORT	63 ORLANDO TELEPHONE COMPANY	
28 DOMINION TELECOM	64 PAETEC COMMUNICATIONS	
29 EAGLE COMMUNICATIONS	65 PROGRESS	
30 EDS	66 PTHN	
31 ELECTRIC LIGHTWAVE	67 QWEST	
32 ENRON BROADBAND SERVICES	68 SLTD	
33 EVENTIS	69 SPRINT	
34 EXTANT	70 STRX	
35 FIBER SOUTH	71 SW	
36 FLORIDA DIGITAL NETWORKS	72 TDST	

BELLSOUTH REPLY COMMENTS

WC Docket No. 05-25
RM-10593

July 29, 2005

Attachment 3

Telecom Spending Distributions

Telecom Spend (\$)	Number of Customers		Number of Buildings	
	Total	% Total	Total	% Total
1-1000	1635799	89.78	1098314	85.60
1001-2000	112296	6.16	98486	7.68
2001-3000	33106	1.82	33493	2.61
3001-4000	15406	0.85	16795	1.31
4001-5000	8232	0.45	9658	0.75
5001-6000	4935	0.27	6217	0.48
6001-7000	2967	0.16	4020	0.31
7001-8000	1907	0.10	2841	0.22
8001-9000	1538	0.08	2155	0.17
9001-10000	1053	0.06	1631	0.13
> 10000	4709	0.26	9501	0.74
	1821948		1283111	

BELLSOUTH REPLY COMMENTS

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Attachment 4



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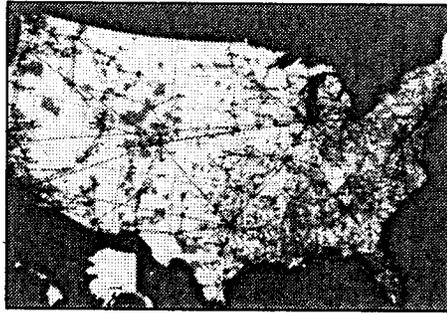
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New Edge Networks National Coverage

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New Edge Networks operates one of the largest ATM networks in the world. With 800 ATM switches deployed, we offer the greatest ATM switch density of any carrier on the North American continent. Our diverse network, with carrier-class multi-service Alcatel switches, enables us to deliver Frame Relay, ATM, IP, Private Line, and business-class DSL services to just about anywhere in the country.

Built around 21 regional aggregation points (RAPs) located in major metropolitan areas, our network extends into several hundred markets - including rural and semi-rural towns and cities. We house all of our RAP sites in "carrier hotels," or secure collocation facilities, and deploy all remaining terminal sites at local exchange carrier (LEC) central office locations.

The New Edge Networks backbone is a nationwide system of protected optical transport configured for redundant service. By coupling layer 1 protection with layer 2 dynamic rerouting, New Edge can provide a rock-solid base for transport. We have selected a variety of tier-1 transport providers, greatly reducing our exposure to fiber cuts and other catastrophic failures through diversification. Our national ATM network, paired with a parallel [IP backbone](#), offers customers an extremely flexible network capable of meeting almost any requirement.

When it comes to reliable performance New Edge delivers:

- Approximately 68 carrier-class Cisco routers serving locations in over 30 major metropolitan markets
- DSL services in over 11,700 Central Offices nationwide - largest DSL coverage in the country
- Dedicated Internet access services, including T-1, DS-3, OC-3, OC-12, OC-48, and Ethernet in over 30 metropolitan markets nationwide
- Frame Relay and Private Line access into 97% of all U.S. LATAs, and coverage in over 160 countries internationally
- 800-node ATM network connecting to the Internet at 27 points - no long backhauls, no latency issues
- Nationwide NNI coverage and connectivity with most major carriers on reliable 10+ year network
- Connectivity to three global Tier 1 providers: AT&T, Level 3, and Cable & Wireless
- Long-term agreements and buying power with fiber providers, allows us to choose diverse and low-cost pathways for Private Line traffic
- A state-of-the-art Network Operations Center, providing 24X7 network monitoring and end-to-end trouble shooting

New Edge Networks maintains network-to-network interfaces (NNIs) with every RBOC in the nation and supplemental coverage NNIs to a variety of independent LECs. We peer with national ISPs, large hosting providers, and regional telephone companies like Yahoo, Broadwing, Digex, and SBC Internet to further benefit our customers. When we promise Better Business Broadband - we deliver it!

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The ability to cost-effectively and reliably link nationwide networks to local networks is essential to a carrier's profitable growth. SCANA offers services to help shorten the last mile.

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SCANA's Special Access Services can provide customized high-bandwidth connections between key business locations. Highly secure and reliable connections are finally available at cost-effective rates.

Network Features

- Typically OC-48 SONET, fully ring protected backbones on SCANA metro fiber
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- Flexible bandwidth options
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- On-time installations
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SCANA Corporation

PRESS RELEASE

SCANA Communications Helps Wire Aiken County



Contact:
Mary Green Brown
803-217-8833

Columbia, S.C., Dec. 16, 2003 -- SCANA Communications Inc., a subsidiary of Columbia, S.C.-based SCANA Corporation (NYSE:SCG) has joined Aiken County in a public/private partnership to wire Aiken County for high-tech fiber optic services.

SCANA Communications is providing the county with the match needed to secure \$1.4 million in tobacco settlement funds from the S.C. Department of Commerce. SCANA Communications' match will come from use of existing fiber lines and other infrastructure. The \$2.3 million project will be used to attract high-tech industry by providing fiber optic connections between municipalities, schools and industrial parks.

"We are very pleased to partner with Aiken County in this exciting project to attract high-tech industry. Increasingly, industries and businesses require high-speed data connections to do business. The new fiber network will give Aiken County a tremendous economic development advantage," said George Bullwinkel, president of SCANA Communications and senior vice president of SCANA Corp.

SCANA Communications Inc. offers a wide range of leading edge communications solutions in South Carolina, North Carolina and Georgia, including wireless infrastructure and tower services, SONET-based and Metro Ethernet transport, and state-of-the art data center and co-location facilities.

###

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HOME : NETWORK

As the Backbone of the City, Memphis Networkx engineers and operates a state-of-the-art architecture that delivers the utmost reliability, availability and flexibility in the metropolitan Memphis and Shelby County area.

The Memphis Networkx architecture is comprised of Metro Core and Metro Access components. Metro Core is the area of the network which links traffic aggregation points such as Central Offices, Carrier Hotels, and Data Centers. Memphis Networkx creates a diversely routed, physical ring architecture that connects these aggregation points together over the most advanced DWDM, SONET and Ethernet equipment to enable the delivery of a full suite of connectivity solutions. Metro Access is the area of the network which connects enterprises to the Metro Core and to other enterprises. Leveraging next-generation technology, Memphis Networkx extends [SONET Transport](#), [Metro Ethernet](#), [Collocation](#), [Internet and Security](#) services from any business to any other business on our Metro Access network component, resulting in rapid 'grow on demand' transport for voice, video, or data applications.



CONTACT US

Memphis Networkx, LLC
 7620 Appling Center Drive
 Suite 101
 Memphis, TN 38133

901-213-5112

We have constructed a highly reliable and robust network as evidenced by our success during the recent wind storm that struck Memphis. While our competitors were working to bring their networks back online, we continued to operate as usual with no interruption in service to our customers. Because we built the utmost redundancy into our network and our operation, our customers' businesses did not suffer the network outages that our competitors' customers experienced.



DukeNet

The Company Overview

Welcome to DukeNet Communications - a company committed to providing the highest quality local and long haul connectivity. Whether you are a business requiring a DS-1 to connect your Local Area Network (LAN) or a carrier in need of an OC-192 optical window, DukeNet can meet your needs. DukeNet is the carrier delivering on-time connectivity at a reasonable price throughout the Southeast.

10011101010011100111001101011001110011010111001100
1001110101001110011100110101100111001101011100110

In 1994, DukeNet was formed as the telecommunications arm of Duke Energy Corporation, a global energy company with unsurpassed technical and operating expertise. Since 1981, Duke Energy has operated a private fiber network that supports the Wide Area Network (WAN) for the corporation. Building on this initial infrastructure and two decades of operational experience, DukeNet created a carrier quality Synchronous Optical Network (SONET) fiber optic network in the Southeast. The network provides reliable connectivity to both large and small cities and will eventually become a national network through continued fiber optic builds and strategic partnerships. Supported by a 24x7x365 Telecommunication Operation Center (TOC) in Charlotte, NC, DukeNet provides a complete service solution. All provisioning, monitoring and customer support is centrally located and just a phone call away.

The information age created a vast need for highly reliable, cost effective network connectivity. DukeNet understands this need and has built the network, operational support, technical management and monitoring systems necessary to provide the IXC, CLEC, ISP, Wireless, DSL and other customers with a reliable, secure and economical network solution. DukeNet is committed to providing your company with the highest quality network connectivity at a reasonable price.



A brief look into our technology

The DukeNet network is a fiber optic based SONET network that supports voice, data and video transport services and is designed to exploit the capabilities of SONET, integrating backbone transport with superior network management.

The majority of our fiber optic network is deployed within the overhead ground wire of electric transmission lines which makes the fiber extremely reliable. With multiple pathways, our highly reliable sonet ring topology enjoys the highest "in service" ratings from major Interexchange Carriers (IXC). The TOC monitors all circuits originating and terminating in the DukeNet fiber optic system. Our state-of-the-art 24x7x365 centralized network monitoring center allows timely detection of outages and timely resolution maintaining our Mean Time to Repair (MTTR) Objective of two hours or less.

Communications

Services we offer:

- Point to Point Local and Long Haul Connectivity
 - DS - 1, DS - 3
 - STS - 1, STS - 3
 - OC - 3, OC - 12, OC - 48, OC - 192
- Incumbent Local Exchange Carrier (ILEC) Central Office Access
 - Connectivity to numerous ILEC central offices in the southeastern United States
- Co-location Services
 - Leased rack / floor space within a Central Office quality facility (generator backup, redundant air conditioning, AC and DC power feeds, secure access, etc)
- Competitive rates including term and volume discounts
- Quick deployment - usually within 10 business days or less for on-net facilities

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- STS ExpressSM
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