



# **AVOIDING THE MISSTEPS MADE SOUTH OF THE BORDER:**

## **Learning from the US Experience in Competitive Telecom Policy**

prepared for

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by

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# Preface

## AVOIDING THE MISSTEPS MADE SOUTH OF THE BORDER

The Canadian Government's proposed *Order under Section 8 of the Telecommunications Act – Policy Direction to the Canadian Radio-television and Telecommunications Commission* (the “Proposed Order”), as described by Industry Canada Minister Maxime Bernier, in general calls for “the CRTC to rely on market forces the maximum extent feasible under the *Telecommunications Act* and regulate – where there is still a need to do so – in a manner that interferes with market forces to the minimum extent necessary.” Section 1(c)(ii) of the *Proposed Order* directs the CRTC to “conduct a review of its regulatory framework regarding mandated access to wholesale services, in order to determine the extent to which mandated access to wholesale services that are not essential services should be phased out and the appropriate pricing of mandated services to encourage investment and innovation in network infrastructure.” The “wholesale services” to which this section refers are those purchased from incumbent local carriers (“ILECs”) by competitive local telecommunications service providers (“CLECs”) and interexchange carriers (“IXCs”) and are incorporated into the competitive carriers’ retail services.

The Canadian *Telecommunications Act*’s mandated provision of access to wholesale services parallels similar provisions of the United States’ *Telecommunications Act of 1996* (“TA96”). TA96 obligated ILECs to provide CLECs with access to those components of the ILECs’ networks where “access to such network elements as are proprietary in nature is necessary; and [where] the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.” The US Congress established the ILECs’ obligation to provide CLECs access to their network elements as an ongoing, permanent feature of US telecommunications policy because it recognized that replication by entrants of existing ILEC networks would require enormous infusions of capital and a protracted time frame, and that in many cases such replication would be so inefficient that it would be unlikely ever to occur. The years immediately following the 1996 legislation saw a flurry of competitive activity and investment. By 2001, CLECs had invested some \$64-billion in their own networks. Using a combination of their own facilities and network elements obtained from ILECs, by 2003 CLECs were serving some 13.6% of residential customers and 24.3% of business access lines nationwide. Rather than taking on the entrants in the marketplace, the incumbent Bell companies responded instead by pursuing an

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aggressive, highly coordinated, and ultimately successful *political* strategy aimed at gutting the wholesale services obligations of the 1996 law. In 2004, the Bells succeeded in persuading a federal appellate court that CLECs were not “impaired” without access to certain network elements, yet subsequent events “on the ground” have shown the court’s finding to have been tragically wrong. Within months of that ruling, the two largest competitive carriers – AT&T and MCI – announced that they were scaling back and in some cases abandoning their activities in certain putatively competitive segments, and initiated the process of becoming acquired by the very same ILECs whose political tactics had been responsible for that outcome. Capital to support other competitive telecom ventures has by now all but dried up, and following the mergers of AT&T into SBC and MCI into Verizon and the impending combination of AT&T/SBC/BellSouth, the US telecom industry will soon be almost as highly concentrated as it had been prior to the 1984 break-up of the “old” AT&T.

The US experience incontrovertibly confirms that mandated access to wholesale network elements at cost-based rates lies at the cornerstone of a competitive telecommunications policy, and sadly demonstrates that competition will be “impaired” right out of existence when such access is denied. Any CRTC review of mandated access to wholesale services and the identification of “essential services” will benefit from a detailed examination of the US experience, so as to avoid the numerous policy missteps that have all but dismantled competitive telecom in the US. With this in mind, MTS Allstream has asked Economics and Technology, Inc. (“ETI”) to draw on our extensive hands-on involvement in the various regulatory, judicial and legislative processes that have created the present state of affairs in the US, and based thereon to prepare this report detailing the major post-TA96 US telecom policy events and their consequences for competition in the principal telecom market segments. The report was written by Dr. Lee L. Selwyn, President of ETI, and Helen E. Golding, Vice President. Assisting with the research for this report were Susan M. Gately, Hillary A. Thompson, and Colin B. Weir. The views expressed in this report are those of the authors.

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# Executive Summary

## AVOIDING THE MISSTEPS MADE SOUTH OF THE BORDER

In 1996, the US launched what was intended to be its final push to remove barriers to competition in telecommunications. With competition successfully launched in the long distance market, the US Congress passed the landmark *Telecommunications Act of 1996*, with the objective of encouraging competition for local exchange and exchange access services. The TA96 framework established three separate, but not mutually exclusive, entry paths by which a CLEC could serve a local market: facilities-based entry, unbundled network elements, and total service resale. The 1996 Act also contained provisions intended to safeguard the quality of wholesale service, prevent discrimination by ILECs in favor of their own competitive services and affiliates, and encourage the deployment of advanced services.

In the years immediately following the enactment of TA96, competitive local exchange carriers (CLECs) made major investments in their own network facilities, while they simultaneously used large quantities of wholesale facilities obtained from incumbent local telcos to serve customers in locations where facilities deployment was not economical or practical. By 2001, CLECs had invested some \$64-billion in their own networks and, by 2003, served 13.6% of residential customers and 24.3% of business access lines. Often, the CLEC could justify building facilities *near* the customer (e.g., to the customer's serving wire center or on the customer's street), but still could not justify the investment necessary to extend its wires all the way to the customer's building. Decisions regarding the deployment of switches to serve residential and small business customers were also made on a case-by-case basis, depending upon factors such as the number of customers and the costs involved in physically connecting the wholesale Unbundled Network Element (UNE) loop facilities leased from the ILEC to the CLEC's switch. While facilities deployment by CLECs occurred at a measured pace – neither instantaneously nor ubiquitously – it nonetheless represented (1) new, incremental investment, (2) investment by diverse suppliers (that could lead to innovation), and (3) competitive investment (that could eventually lead to lower prices).

The heyday of CLEC growth and investment was, unfortunately, short-lived in the US. Pointing to the CLECs' ability to deploy facilities in *some* locations, the US ILECs succeeded in convincing the FCC (with respect to digital "last mile" facilities) that CLECs' access to ILEC facilities at cost-based

rates was no longer a prerequisite for competition. The ILECs subsequently used this same argument to convince a federal court that unbundled wholesale switching – which CLECs used extensively to serve their residential and small business customers – could be replaced by CLEC facilities and was thus no longer essential to competition. Although the court’s ruling should have been quite vulnerable to legal challenge, the large ILECs were able to use their considerable political clout to dissuade the Bush administration and the FCC from challenging it at the US Supreme Court.

*Did either of these conclusions fairly reflect the existing competitive conditions?* Absolutely not. Under the FCC’s “pricing flexibility” regime, the ILECs’ wholesale last mile digital services (“Special Access”) rates in markets deemed to be “competitive” have *risen* (not fallen) and have actually *increased more rapidly* than rates in “noncompetitive” markets still subject to the FCC’s price cap rules. If competition existed, or if additional entry were as simple as the ILECs suggest, prices for Special Access would have been forced down. As to the impact of losing cost-based UNE rates for switching as well as the bundled UNE-platform (UNE-P) switching-loop combination), the two largest competitors – AT&T and MCI – could not even bear to contemplate the inevitable competitive harm they would suffer when the ILECs were no longer required to offer certain UNEs at cost-based rates, and elected instead to be acquired by what had previously been their most formidable rivals. Making the massive investment to provide exclusively facilities-based service was not remotely feasible. Thus, faced with the loss of UNE-P, the two largest US competitors (both as CLECs and as interexchange carriers) – AT&T and MCI – exited from significant segments of the local market and became takeover targets for the two largest ILECs, SBC and Verizon. Of the remaining competitors, those that have not failed entirely have suffered from an inability to attract capital, while faced with escalating wholesale prices.

Not only did cutting off CLECs’ access to critical wholesale services fail to spur more investment in telecommunications, the resulting collapse of competition has also permitted the ILECs to claim to be the industry’s big investors when, in reality, they are investing less in their networks than in earlier years and investing far less than the amount they write down their capital plant each year through depreciation accruals. The ILECs’ *disinvestment* in recent years does not square with their claims that they alone are prepared to build a ubiquitous broadband infrastructure. Moreover, the ILECs’ past practices show that they may promise to increase investment in exchange for deregulation, but the investments never materialize. What this (premature) deregulation has created is a pattern of anti-competitive pricing practices, which in turn foil competitors’ attempts to gain a foothold when they are able to invest in new, alternative facilities.

As a result of driving out the largest CLECs (and IXC), the large ILECs have once again become entrenched as dominant providers of local exchange and access services and have reestablished themselves as the dominant providers of long distance services as well. This has not inhibited them from continuing to claim that competition is thriving – although with the decimation of their wireline competitors, the ILECs now point to cable telephony, wireless, and VoIP as constituting the “competition.” In reality, only a small percentage of residential customers – and even fewer business customers (due to technical, security, and availability constraints) – are willing or able to substitute these “intermodal”

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services for the ILECs' wireline offerings. What's more, in the US, the ILECs' own affiliates are their largest wireless "competitors."

What are the key lessons from the US experience? Above all, the implosion of competitive telecommunications in the US demonstrates that failure to ensure cost-based wholesale access to components of the ILECs' local exchange networks undermines the ability of competing carriers to build their customer base and, over time, to make new investments in network infrastructure. Without an effective regulatory structure that requires ILECs to provide wholesale services *and* limits what they can charge to recovery of their own incremental costs plus a reasonable profit, competition is foreclosed and consumers of all types are deprived of its many benefits. In addition, the failure in the US to successfully launch and then sustain nationwide telecommunications competition has resulted in the loss of important opportunities for investment and economic growth, since a highly concentrated telecommunications industry structure – as has now developed in the US – compares very unfavorably with a robustly competitive industry when it comes to providing the necessary incentives for investment in advanced network infrastructure, service innovation, and price competition. Any CRTC review of mandated access to wholesale services and the identification of "essential services" should not ignore this US experience, and should make every effort to avoid the numerous policy missteps that have all but dismantled competitive telecom in the US.

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# 1

## THE 1996 US TELECOMMUNICATIONS ACT: WHERE LAW AND POLICY DISCONNECT

Facilities-based entry was not the exclusive vision of the 1996 US Telecommunications Act, and for good reason. To compete effectively, competitors require the availability of cost-based wholesale local facilities from incumbent local carriers that have deployed ubiquitous networks under the protection of monopoly franchises and funded primarily by monopoly ratepayers. The elimination of the requirement that incumbents offer wholesale local services at cost-based rates has caused the largest US telecommunications competitors to fail and has raised the barriers to entry and expansion for the few competitors that have, for the moment, survived.

### The path to telecom competition

In 1996, the US Congress passed the *Telecommunications Act of 1996* (“TA96”), a key goal of which was to promote and facilitate the development of competition in local telephone and access markets. Previously, local exchange competition was either prohibited outright or (where permitted in some states) was frustrated by the inability of would-be entrants to interconnect with the dominant incumbents. TA96 barred state regulators from restricting competitive entry in the local telephone market, but beyond merely making local competition *possible* as a legal matter, the legislation included a number of measures designed specifically to *facilitate and encourage* entry with the expectation that increased competition and reduced regulation would work to “secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.”<sup>1</sup>

The US Congress recognized that in order for robust local exchange competition to arise, it must be feasible for multiple competitive local exchange carriers (“CLECs”) to enter the market and to sustain and expand their market presence. Congress also recognized, however, that replication of the

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1. Preamble, *Telecommunications Act of 1996*, P. L. 104-104.

incumbent carriers' installed base of network facilities would require enormous infusions of capital and a protracted time frame to accomplish, and that in many cases such replication would be so inefficient that it would be unlikely ever to occur. Accordingly, TA96 created three separate, but not mutually exclusive, paths by which a CLEC could gain entry into the local market:

- (1) *Facilities-based entry*. An entrant could acquire and construct its own transmission and switching facilities, and be assured the right to interconnect these to the incumbents' networks.<sup>2</sup> Facilities-based entry gives the CLEC the greatest control of its network and to control costs – once it can justify the large up-front investment that is required. However, facilities-based entry involves high fixed costs the recovery of which requires that a relatively large volume of business (i.e., revenue) be derived from such facilities.

Because an entrant will typically serve only a small fraction of the total market, the *unit cost* to serve each individual customer will often exceed – and sometimes by a considerable amount – the incumbent's per-customer unit cost. In many situations, the level of revenue potentially available from that relatively small portion of the market that an entrant can reasonable expect to capture over a given route may be insufficient to justify the cost of an overbuild of the incumbent's existing network. For this reason, TA96 created two alternative means by which the CLEC can provide local service using the incumbent's facilities – by leasing individual network components (“unbundled network elements”) or by purchasing a total service for resale to retail customers.

- (2) *Unbundled Network Elements (“UNEs”)*. Competitive carriers could lease, on a wholesale basis, individual components (“elements”) of the incumbents' network and combine them with the competitor's own facilities or with other unbundled elements, to form a complete service that the competitor could market to its retail customers.<sup>3</sup> TA96 required incumbents to price these elements at cost, including a reasonable profit.

Because it takes time to construct a network, even where such investment can be justified economically, *leasing unbundled network elements* could be used to complement the CLEC's facilities, enabling it to offer service across a much larger geographic footprint than would be possible if it were confined solely to its own network assets. Where CLEC facilities overbuilds would be uneconomic, the availability of UNEs leased from the incumbent would make competition feasible. Moreover, demanding that a CLEC deploy facilities when it is uneconomic to do so benefits neither the CLEC nor the ILEC. When the ILEC's existing network has all of the capacity required to serve the total demand (its own plus CLECs'), *requiring* the construction of redundant facilities through a CLEC overbuild creates a situation in which neither network is

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2. 47 U.S.C. §251(c)(2)

3. 47 U.S.C. §251(c)(3)

likely to be deployed in an economically efficient manner. To undermine the economic viability of both ILEC and CLEC investments in this manner is clearly not in the public interest.

- (3) *Total Service Resale (“TSR”)*. Any service that the incumbent offered on a retail basis could be purchased – stripped of its retail functions – at a discount that reflected the incumbent’s avoided retailing costs. The competitor could then rebrand the service and market it to its own retail customers.<sup>4</sup> This approach offered the CLEC the least control of its network and costs, but had the advantage of permitting more rapid and flexible expansion, with minimal investment.

Each competitive path presented the entrants with different economic challenges and opportunities. Importantly – and quite appropriately – *TA96 did not contain any preference or predisposition favoring one method of competitive entry over the others*; it left the choice of the optimal business model or entry strategy to each CLEC. Moreover, UNEs and TSR were never envisioned as “transitional” devices that would be phased out once the CLECs had an opportunity to deploy their own facilities. Instead, the continued use of the incumbents’ networks was seen as playing a critical role in promoting *and sustaining* local competition on a permanent basis.<sup>5</sup> Importantly, each of the two wholesale approaches was designed to be fully compensatory to the ILEC.

As with most laws, however, the 1996 Telecommunications Act’s success was dependent upon its implementation. Initially, the FCC took great pains to adopt regulations supportive of the pro-competitive provisions in the Act.<sup>6</sup> The U.S. Supreme Court upheld the progressive incremental cost methodology (“Total Element Long Run Incremental Cost” or “TELRIC”) that the FCC had adopted as the cost-based pricing standard for unbundled network elements.<sup>7</sup> As we discuss in Chapter 2 below, the early implementation of TA96 was followed by a period of robust competitive growth by CLECs and significant investment by these companies in their networks.

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4. 47 U.S.C. §251(c)(4)

5. Non-facilities based business models are the norm in most industries, not the exception. For example, in wireless non-facilities-based retail-level competition offers important benefits in terms of expanded choice, product innovation, and market discipline. Retailing activities may represent as much as 17-19% of an incumbent local telco's costs; even if limited solely to retailing activities, competition can produce significant consumer benefits by exploiting opportunities to increase retailing efficiency overall, and by introducing innovating service packages and pricing. The existence of competition at the retail level can help to stimulate additional facilities-based entry as well, affording nascent wholesale carriers with access to an established retail distribution channel that would otherwise be unavailable if all telecom retail activities were confined to vertically integrated incumbents and facilities-based CLECs.

6. *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, CC Docket Nos. 96-98, 96-185, *First Report and Order*, 11 FCC Rcd 15499 (1996) (“*Local Competition Order*”).

7. *Verizon Communications Inc. V. FCC* (00-511) 535 U.S. 467 (2002) 219 F.3d 744, affirmed in part, reversed in part, and remanded.

## The dismantling of the TA96 competitive framework

While the ink was still drying on the 1996 legislation, the incumbent LECs – and in particular, the large Regional Bell Companies (“RBOCs”) – launched a guerilla campaign to undermine many – and ultimately most – of its pro-competitive provisions. By early 2004, the Bells had succeeded in reversing large parts of the competitive framework established in TA96 and in the early FCC implementation orders. As the centerpiece of their response to CLEC market inroads, the Bells initiated and pursued an aggressive and highly coordinated *political* strategy whose purpose was to cut off their rivals’ use of the Bell networks at cost-based rates, by invoking a variety of regulatory, judicial and legislative devices. In the end, this tactic succeeded in assuring the persistence of the Bell monopoly where their more traditional market responses to competition had failed.

The Bells’ political strategy was remarkable both in its utter simplicity and ultimate effectiveness. Pointing to the presence of *some* CLEC facilities and notwithstanding their extremely limited actual deployment, the Bells argued that since CLECs had deployed such facilities in these few locations, it was reasonable to *infer* that such investments were profitable and that CLECs could profitably deploy their own facilities *everywhere*. Extending this erroneous premise, the Bells argued that if *some* CLECs are able to serve *some* customers without access to certain UNEs, this showed that CLECs could compete without access to the Bell’s network capabilities, i.e., that CLECs’ ability to compete would not be “impaired” if such UNEs were no longer available to them.<sup>8</sup> Without ever citing a word of statutory text or legislative history to support them (because there was none), the Bells repetitively portrayed the UNE provisions of the 1996 Act as “transitional” and claimed (again with no legal basis) that the only “true” competition was facilities-based competition.<sup>9</sup>

Chief among the UNEs on the Bells’ “hit-list” was the UNE-Platform (“UNE-P”) offering, which permitted a CLEC to purchase a combination of the local loop and local switching elements configured as a complete “dial tone” service. At the high-water mark for CLEC penetration (June 2004), some 53% of all CLEC service to mass market customers was being provided using UNE-P, affording the

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8. Sec. 251(d)(2) of the 1996 Act provides that “In determining what network elements should be made available for purposes of subsection (c)(3), the Commission shall consider, at a minimum, whether– (A) access to such network elements as are proprietary in nature is necessary; and (B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.”

9. The Review Panel was exposed to the Bells’ efforts to demonize and delegitimize non-facilities-based competition in the presentation by long-time Bell advocate, Prof. Alfred Kahn, at the Canadian Telecommunications Policy Review Panel in Ottawa on October 24-25, 2005. There, Prof. Kahn asserted “...the only continuously reliable competition must be facilities-based, at wholesale as well as at retail...”

CLECs a critical market presence and source of revenues.<sup>10</sup> The Bells also made this argument (less successfully) with respect to relatively low capacity local loop facilities used by business customers.

When the time came to reevaluate which unbundled network elements would continue to be available to CLECs (at cost-based rates) – a proceeding known as the *Triennial Review* – the US FCC was under a court directive to make this assessment on a “granular” (market-specific) basis. In an attempt to implement this granular approach, the FCC delegated to the individual state public utility commissions (“PUCs”) the responsibility for determining whether, and under what specific circumstances, CLECs in each of their respective states would be “impaired” without access to UNEs.<sup>11</sup> The PUCs began the task of addressing this question, but before any could complete its work, the Bells had succeeded in persuading a federal appeals court to find that the FCC lacked the statutory authority to delegate this determination to the states. On March 2, 2004, the D. C. Circuit Court of Appeals vacated the FCC’s order, effectively shutting down all of the pending state PUC “Triennial Review” impairment proceedings.<sup>12</sup>

But the appeals court did more than simply shut down the state PUC dockets. With respect to mass market residential and small business services, the court held that the FCC had failed to justify its finding that, *on a national basis*, CLECs were “impaired” without access to the ILEC “switching UNE” at cost-based rates.<sup>13</sup> Ironically, having earlier faulted the FCC for failing to assess entry barriers for unbundled switching at a more granular level, the same court now refused to send this issue back to the FCC for further proceedings to do just that (to take the place of the assessments that the FCC had

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10. FCC Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of December 31, 2005*, Tables 4, 5. UNE-P presence in the residential segment was likely much higher. As of June 2004, CLECs were purchasing about 17.1-million UNE-Ps and were providing a total of 20.9-million residential lines. *Id.*, Table 2. While the FCC’s report does not provide a breakdown of UNE-Ps as between residential and business uses, it is generally understood that a considerable majority of UNE-Ps were being used to provide residential service. UNE-Ps could thus have represented somewhere in the range of 65% to 75% of all CLEC residential lines.

11. *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carrier*, CC Docket No. 01-338; *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98; *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking*, FCC No. 03-36, 18 FCC Rcd 16978 (2003) (“*Triennial Review Order*”).

12. *United States Telecom Association v. FCC*, 359 F.3d 554 (D.C. Cir. 2004) (“*USTA I*”).

13. The FCC’s “national” impairment finding had focused primarily upon the issue of “hot cuts” (i.e., whether the ILEC was capable of migrating customers to CLEC service without disruption). *See, Triennial Review Order* at para 464. However, as the appeals court acknowledged, the overall criteria for assessing impairment – including those criteria that the FCC had delegated to the state PUCs – were far more comprehensive. *USTA II* at 568.

attempted unsuccessfully to delegate to the state PUCs).<sup>14</sup> In this manner, the court summarily put an end to the “impairment” debate but without actually addressing, let alone resolving, the underlying factual evidence that had been under examination in the various state PUC “impairment” proceedings.

Normally, such a complex and controversial federal court decision would have been appealed to and reviewed by the US Supreme Court. In fact, both the National Association of Regulatory Utility Commissions (NARUC), representing state regulators, and all of the major CLECs strongly urged the US Supreme Court to stay and then overturn this decision. In its Motion for a stay, NARUC told the Court, “The result [of the appeals court's action] is an order that effectively disables the [1996] Act's current leasing provision without any market analysis.”<sup>15</sup> The CLEC coalition (which included pre-merger AT&T, pre-merger MCI, and others) declared, “The D.C. Circuit has thus substituted its view of sound national telecommunications policy for that of the agency to which Congress designated policymaking authority on a matter of great technological and economic complexity.” CLECs also argued “that incumbent providers are poised to cause irreparable harm to competitive providers by their intention to ‘unilaterally cease’ providing network access at cost-based rates and shift to different and much costlier arrangements.”<sup>16</sup> However, under strong pressure from the large ILECs, the Solicitor General – who typically would have defended the FCC’s decision in such an appeal – refused to get involved in the case.<sup>17</sup> Seeing no “push-back” to this highly adverse decision from the agency whose policies it had decimated, the Supreme Court turned down private parties’ petitions to review the lower Court’s ruling.

The appeals court ruling, which essentially cut the legs out from under competition for mass market services, was the beginning of the end of competition in *both* the business and residential markets. AT&T Corp., by far the most successful competitor serving mass market customers via all three of the entry strategies that had been authorized by the *1996 Act*, publicly announced that the withdrawal of UNE-P made it *impossible* for it to continue to compete in this market. AT&T Corp. and MCI each advised the FCC that they would have no future as “stand-alone” long distance competitors or as local service providers. The *fact* that AT&T and MCI chose to merge with ILECs instead of simply continuing independent operation as business-only providers underscores not only the importance of residential UNEs, but of the advantage the Bells possessed in their control of the

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14. The court took a less drastic approach with respect to certain high-capacity digital last mile facilities that CLECs use in serving medium to large business (“enterprise”) customers, sending the issue back to the FCC for further examination. *Id.*, at 11-12.

15. “CLECs, State Regulators Seek Stay of Appeals Court’s TRO Decision,” TR Daily, June 10, 2004.

16. *Id.*

17. “CLECs’ Face Uphill Battle To Get UNE Rules Reinstated After Solicitor General Decision,” Telecommunications Reports, June 15, 2004.

wholesale “last mile” facilities used by medium and large “enterprise” business customers.<sup>18</sup> The withdrawal of AT&T and MCI from mass market services, and their decisions to merge into the two largest regional Bells, calls into serious doubt the viability of competitive carriers *smaller than AT&T or MCI* under current US telecom policy. Not surprisingly, many smaller carriers in the United States have chosen to exit the market, in some cases filing for bankruptcy protection, or simply selling-off their assets at fire-sale prices.<sup>19</sup>

### **A revisionist view of the US telecom policy landscape**

Perhaps the single largest explanation for the failure of local competition in the US is the success the Bells have had in cementing the political notion in the United States that the only time “real” competition occurs is when carriers use their own facilities *exclusively* in serving their customers, that competitors (despite paying cost-based rates) were somehow “freeloading” on the incumbents’ networks, and that competitors that were able to utilize portions of the incumbents’ networks (via UNEs priced at TELRIC-based rates) would not have the incentive to invest in their own facilities. This picture is, of course, completely at odds with the multiple entry paths established under the 1996 *Telecom Act*, but through their persistence, the incumbents’ extremely narrow (and exclusionary) vision of competition now dominates US telecom policy thinking. As part of their propaganda, the incumbent providers persuaded the FCC that competitors would “rise to the challenge” and deploy their own facilities once they could no longer get access to cost-based UNEs. Unfortunately for the US economy (and for its consumers), this mandate to competitors that they must “swim (build redundant networks) or sink” has turned out very badly. The result of reducing the multiple entry paths provided in the 1996 Telecom Act to a monolithic facilities-based approach has been the elimination of the most well-established players in the US competitive telecommunications industry and the weakening of most of the remaining competitors.

### **Competitive harms due to failure to regulate prices for wholesale “special access” services**

TA96 was heavily focused upon mass market (consumer and small business) services, and so left a conspicuous gap with respect to the pricing of ILEC wholesale facilities leased to competitors for the provision of services *other than* mass market local exchange service. Medium and large business, government and institutional telecom customers typically require some form of *digital* connectivity between their premises and the telecom service provider. These facilities are used for basic local and long distance telephone services, Internet access, and various other data communications applications,

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18. AT&T explained that “[a]s a result of recent changes in regulatory policy governing local telephone service, AT&T will no longer be competing for residential local and standalone long distance (LD) customers.” *AT&T Corp. July 22, 2004 News Release*, at p. 1.

19. E.g., Northpoint, WilTel, and GST Telecom.

and are available in capacities ranging from 1.544 megabits per second (mbps), the digital equivalent of 24 voice-grade channels (designated as DS-1), through ultra high capacity digital “pipes” with bandwidth capacities of up to 9,953 mbps, equivalent to 129,024 voice-grade channels (designated as OC-192). For most business locations with digital connectivity, service is provided at the DS-1 (24 voice channels) or DS-3 (672 voice channels) capacity levels. Initially, such services were available as UNEs, but if obtained as UNEs<sup>20</sup> the facility could not be used to carry *non-local* traffic. When a CLEC needs facilities to provide interexchange (long distance) services, either stand-alone or combined with local service, they generally have to obtain the necessary “last mile” ILEC wholesale service under the ILECs’ “Special Access” tariffs, at rates that are often considerably higher than the corresponding UNE rate for what is in all other (technical) respects the *identical* service.<sup>21</sup> To compete in the business markets, CLECs needed to either own (construct) interoffice transport and “last mile” facilities, or purchase the use of these from the ILEC as Special Access services.

During the same period in which the Bell companies succeeded in undermining the regulations supporting UNEs and local competition, and once again relying upon anecdotal evidence, they also persuaded the FCC that *some* competitive deployment of “last mile” digital facilities in a market meant that competitors were capable of deploying competitive facilities *throughout* that market – and that therefore the market was thoroughly competitive. Based upon this (erroneous) claim, the ILECs were able to obtain significant pricing flexibility (up to and including complete price deregulation in some markets) for Special Access services.

The ILECs were particularly successful in using this pricing flexibility to thwart competitive entry. First, rather than responding to the purported competition by lowering prices, they raised them. This increased the ILECs’ revenues and their competitors’ costs – making it far more difficult for the interexchange carriers (“IXCs”) to effectively compete for customers. Moreover, with a higher percentage of their revenues necessarily going to pay the ILECs for Special Access, the IXCs had less capital to invest in their own networks. Second, the ILECs *selectively* lowered prices for services purchased under contracts with long-term and/or high-volume purchase commitments. If an IXC wanted to lower its costs, it would agree to these longer, higher-volume commitments, but in so doing,

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20. ILECs were required to provide digital last mile and interoffice transport facilities as UNEs only where facilities were already in place – i.e., they were not required to construct new or additional facilities solely to provide a UNE. In practice, most very high capacity facilities were constructed in response to a specific customer order. Hence, for the most part, only the lowest capacity DS-1 and DS-3 services were generally available as UNEs.

21. The FCC had earlier determined that Unbundled Network Elements, which were intended to provide CLECs with connectivity to the incumbents’ *local* markets, could not be purchased by CLECs to provide long distance (interexchange) services. The ILECs have taken the position that where the competitively-provided service will be used for both local and long distance calling, UNEs may not be used. In the *Triennial Review Order*, at paras. 132-153, the FCC authorized the use of high-capacity (DS-1 or greater) UNEs for long distance service that is furnished in conjunction with a customer’s local service, but subject to a specific set of “eligibility criteria” so as “to obtain favorable rates or to otherwise engage in regulatory arbitrage.” *Id.*, at para. 591. Of course, this potential for “gaming” arises directly from the arbitrary *regulatory* distinction between what are in all technical respects identical UNEs and Special Access services.

the IXC would reduce its own flexibility to migrate its customers off of ILEC Special Access facilities and onto the competitor's own network.

For several years before it was acquired by SBC, AT&T repeatedly appealed to the FCC to address the harms to competition and large business customers as a result of excessive pricing flexibility for Special Access services.<sup>22</sup> When the FCC failed to act for a year, AT&T sought and obtained the intervention of a federal court to order the FCC to address this pressing matter, whereupon the FCC issued a second call for comments. Today, some four years after the pre-merger AT&T Corp. had initially petitioned the FCC, the two largest nationwide IXCs – AT&T and MCI – no longer exist as ILEC competitors and the BOCs' rates of return for special access services (discussed in greater detail in Chapter 3) have soared to between 41.6% and 109.4%.

In the chapters that follow, we explore the missteps that occurred in the US implementation of competition and deregulation. Chapter 2 discusses how the initial pro-competitive implementation of TA96 resulted in the expansion of CLEC investment but also revealed that facilities-based competition – even by the largest CLEC firms – faced very significant entry barriers. Chapter 3 discusses how the ILECs have dramatically reduced their investment in facilities while continuing to promise increased investment in exchange for reduced regulation. Chapter 4 discusses other myths concerning the status of competition and in particular the notion that “intermodal” services, such as wireless and cable, provide viable alternatives for large business users.

As the experience in the US has demonstrated, it is simply unrealistic to expect facilities-based competition at the local level to arise except in exceedingly limited niche market situations. The pursuit of a telecommunications policy that presupposes the widespread development of facilities-based competition will not produce that economically irrational outcome. And to the extent that any unrealistic assessments as to the prospects for widespread facilities-based entry operate to minimize the critical importance of maintaining effective regulation of *wholesale* services for which no economically realistic alternatives exist, the prospects for non-facilities-based or hybrid forms of competitive entry will be fatally compromised. The 1996 US legislation got it right: Effective regulation of wholesale services and interconnection is *critical* to the development of competition. If such regulation is dismantled on the basis of ILEC mischaracterizations as to the actual extent of competitive presence, the likely outcome will be virtually no competition at all.

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22. AT&T's *Petition* was supported by a number of other competitive carriers. In addition, a group of large corporate telecommunications consumers, the *Ad Hoc Telecommunications Users Committee*, actively supported AT&T's efforts to bring special access prices down to “competitive” levels. See *AT&T Corp. Petition for Rulemaking To Reform Regulation of Incumbent Local Exchange Carrier Rates For Interstate Special Access Services*, RM Docket No. 10593, *Comments of Ad Hoc Telecommunications Users Committee*, filed December 2, 2002; *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, *Comments of Ad Hoc Telecommunications Users Committee*, filed June 13, 2005.

## 2 | THE UNREALISTIC AND UNREALIZABLE GOAL OF FACILITIES-ONLY COMPETITION

With an appropriate wholesale framework in place, CLECs made substantial investments in local facilities, but formidable economic barriers to widespread facilities-based entry made the retention of UNEs and the realignment of Special Access rates key prerequisites for long-term CLEC viability. Unfortunately, these critical prerequisites were not ensured, and the CLECs' ability to attract the capital needed to support their ongoing investments ultimately dried up.

### Optimism and investment

Enactment of the 1996 federal legislation set off a flurry of entrepreneurial activity and investment in telecommunications across the US. Spurred by the “dot-com” Internet frenzy of the late 1990s, CLECs of all sizes and pursuing all varieties of business models were formed. While many pursued regional and/or segment-specific entry strategies, the two largest interexchange carriers – AT&T Corp. and MCI – embarked upon ambitious nationwide investment programs aimed at penetrating the local telephone service market. By 2001, industry estimates put aggregate facilities-based CLEC investment at some \$64-billion.<sup>23</sup>

Initially, many CLECs embraced the idea of building their own facilities to serve business customers. Fiber optic “rings” were constructed in a number of major business centers as a means for avoiding the need to lease services from the incumbents. Where facilities were not in place and/or where the cost of constructing a “lateral” connection to a particular customer location was deemed to be uneconomic, CLECs could expand the reach of their services by leasing “high capacity” digital facilities from the incumbent local telcos. The initial market response to the 1996 legislation was thus

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23. New Paradigm Resources Group, *CLEC Report 2004*. This figure does not include AT&T purchases of TCI, TCG, MediaOne, McCaw, or MCI's purchase of MetroFiber.

to embrace Congress' three-entry-method approach and pursue facilities-based entry in those situations where it appeared to make economic sense to do so.

In the years immediately following the 1996 Act, CLECs made large-scale investments in “last mile” local distribution and interoffice network facilities, utilizing a variety of technologies including fiber rings, fixed and mobile wireless, coaxial cable, as well as a limited amount of traditional twisted-pair copper. AT&T Corp. purchased competitive access providers Teleport Communications Group (TCG), and MCI acquired Metropolitan Fiber Systems (MFS). To enable interconnection between their own facilities and those of the incumbent, CLECs established and constructed “collocation” arrangements at many ILEC wire centers, creating physical points of connectivity between their owned facilities and ILEC networks.<sup>24</sup>

Investment was not solely limited to business services. Over the period between 1998-2000, AT&T Corp. spent over a hundred billion dollars to purchase multi-system cable television operators Tele-Communications, Inc. (TCI) and MediaOne in support of AT&T's effort to acquire last mile facilities to large numbers of residential consumers. By the end of 2001, CLECs across the US had invested more than \$64-billion in pursuit of a variety of entry strategies, many of which involved the acquisition and/or *de novo* construction of last mile facilities. Complementing their facilities investments, US CLECs made extensive use of leased ILEC facilities (as UNEs) to expand the geographic reach of their retail service offerings so as to permit market-wide competition with the incumbents. By the end of 2003, CLECs were serving some 13.6% of residential customers nationwide, and were providing (at retail) some 24.3% of all business access lines.<sup>25</sup>

Despite these massive investments, CLECs were able to deploy facilities at only a small minority of business locations nationwide. As of January 2003, (pre-merger) AT&T was providing service at the DS-1 or higher capacity level to approximately 186,000 commercial buildings across the US. Of these, only about 6,700 buildings were being served using AT&T-*owned* facilities, and another 3,300 locations were being served using facilities leased from other CLECs. Thus, competitive alternatives to ILEC special access service are available at only about 10,000 locations, or roughly 5.7% of the

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24. The significance of such collocation points has been widely misportrayed by the ILECs and misunderstood by regulators. Collocations are not indicative of the widespread presence of CLEC-owned facilities. To the contrary, a collocation enables a CLEC to interconnect the extremely limited number of customer sites that it is able to serve via its own facilities with the ubiquitous ILEC local distribution infrastructure, enabling the CLEC to offer service at retail across the entire geographic reach of the ILEC network. But in order to reach any building not connected to its own facilities, the CLEC is wholly dependent upon wholesale facilities leased from the ILEC and interconnected at the collocation point.

25. Industry Analysis and Technology Division, Federal Communications Commission, *Local Telephone Competition: Status as of June 30, 2005*, at Table 2.

186,000 AT&T enterprise customer locations, and at less than 0.4% of the 3- to 4-million commercial buildings nationwide.<sup>26</sup>

### **Why have so few CLEC “last mile” facilities been built?**

Two diametrically opposed theories emerged for the limited deployment of CLEC-owned facilities connecting directly to medium and large businesses. The explanation that was documented extensively in FCC proceedings was that CLECs were highly motivated to deploy their own local facilities, but frequently could not garner the level of revenues necessary to justify constructing facilities to serve a particular building. The opposing view – advanced by the large Bell companies – was that CLECs would remain “unmotivated” to deploy their own facilities so long as they could rely upon wholesale purchases from ILECs at what the Bells characterized as “subsidized” prices. According to this theory, the CLECs should be “cut loose” from their dependency upon cost-based wholesale facilities. It is now clear that Congress and the FCC got it right, and that the ILECs’ “theory” could not withstand real-world experience.

#### *Entry barriers and the continued need for cost-based wholesale facilities to support expansion by competitors*

The reasons for the limited CLEC facilities deployment were explored extensively in several FCC proceedings and fully support the CLECs’ claims that the economic barriers to deployment fully justify the measured pace at which competitive local exchange facilities were being constructed. The vast majority of digital connectivity at the DS-1 and DS-3 levels is provided over incumbent local exchange carrier (ILEC) facilities, either as a retail service furnished directly to the ILEC’s customer, or as a wholesale service furnished to an interexchange carrier (IXC) or competitive local carrier (CLEC). CLECs and so-called Competitive Access Providers (CAPs) in the US have constructed “last mile” digital facilities, typically utilizing local fiber optic “rings” that provide redundancy and hence increased reliability, to approximately 22,000 individual commercial buildings nationwide.<sup>27</sup>

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26. Reply Declaration of Lee L. Selwyn on behalf of AT&T Corp., *AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Federal Communications Commission RM No. 10593, filed January 23, 2003, at para. 18.

27. RBOCs have estimated that CLECs (including the former AT&T Corp. And MCI had established facilities-based access to approximately 34,500 buildings nationwide. Removing AT&T and MCI, both of which are now owned by Regional Bell companies, from this estimate (6,500 and 6,000 connections, respectively) puts the remaining CLEC-served “lit” on-net buildings at approximately 22,000. (See *AT&T Corp. Petition for Rulemaking To Reform Regulation of Incumbent Local Exchange Carrier Rates For Interstate Special Access Services*, RM Docket No. 10593, *Opposition of Verizon*, filed December 2, 2002 (“*RM 10593 Opposition of Verizon*”) at p. 13.)

Construction of CLEC fiber systems was begun in the mid-1980s by pioneering firms like Teleport Communications Group, subsequently acquired by AT&T Corp., and Metropolitan Fiber Systems, subsequently acquired by MCI. The current 22,000 “lit” building level of deployment, which required roughly two decades to accomplish, reaches a minuscule fraction of the roughly 3-million commercial premises in the US. In order for a CLEC or IXC to furnish service to any location *not* connected to CLEC-owned facilities, the use of “last mile” facilities owned by the incumbent are the only option.

Incumbent LECs both provide essential inputs to CLEC services and compete directly with those same CLECs for retail customers. The CLEC incorporates the purchased wholesale services into its own retail offerings, and thus incur both the costs involved in purchasing the wholesale service from the ILEC and the additional costs to create the retail service and bring it to the market.<sup>28</sup> The ILECs’ control of the *wholesale* market for such essential services, if not constrained by regulation, gives them both the incentive and the ability to dictate CLEC retail price levels, profit margins, market shares and, ultimately, CLEC earnings levels. If the ILEC’s wholesale price is set sufficiently close to – or worse, *above* – its retail price for the service that incorporates the wholesale element so as to eradicate any profit opportunity for the CLEC, the result is a classic “price squeeze” that will operate to foreclose the CLEC from competing for that service.

Some have argued that the ILECs’ ability to engage in such price squeeze practices can be constrained by imposing “pricing parity” and “imputation” requirements upon the ILEC. “Pricing parity” requires that the ILEC charge or impute to itself whatever wholesale price it charges to its competitors for any element that the CLEC purchases that the ILEC uses in constructing its own retail service. Besides being extremely difficult to monitor and enforce, a pricing parity/imputation requirement cannot prevent the ILEC from shifting most or all of its profits into the wholesale service element, thereby raising its rivals’ costs and in so doing squeezing out their profit opportunities. Moreover, under this strategy, the ILEC can be largely indifferent as to whether it loses individual customers to competitors, since it will continue to realize essentially the same profit whether it sells the service at retail directly to the end user or sells the service at wholesale to a CLEC. Failure to regulate *wholesale* rates will ultimately eliminate any real possibility of retail competition *except in those few situations in which deployment of CLEC-owned facilities is economically feasible*.

In practice, the conditions that permit CLECs to deploy their own, redundant facilities rarely exist. A brief review of the economics of facilities-based entry will be useful in understanding why this is the case. CLEC fiber systems consist of several principal components:

- (1) *Interoffice fiber*, providing connectivity among multiple CLEC points of interconnection at ILEC wire centers;

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28. These consist of, among other things, costs associated with the CLEC’s own network facilities that may be combined with the ILEC wholesale service, sales and marketing costs, customer service costs, and the like.

*The Unrealistic Goal of Facilities-only Competition*

- (2) *Distribution fiber*, facilities along city streets that “pass” potential customer locations;
- (3) *Laterals*, connections between the distribution facility and individual “lit” buildings where service is to be furnished; and
- (4) *Collocations*, physical interconnection points at ILEC wire centers where the CLEC’s interoffice facilities are interconnected with “last mile” and interoffice facilities leased from the ILEC.

Each of these components involve significant up-front capital investment, lengthy construction intervals, and high fixed costs. In order for a business model involving these types of facilities investments to be economically justified, there must be sufficient revenue available for recovery of investment, ongoing operating costs, and a risk-appropriate level of profit. Of the four principal components, items (1), (2) and (4) involve common facilities that are used to serve multiple customers and, as such, their associated costs are recoverable across the aggregate operating revenues of the carrier. Item (3) – the *laterals* providing service to specific buildings – are dedicated facilities that serve only the customer or customers physically located within the building to which they are connected. If there is insufficient demand for service within a building to justify the investment involved in constructing a lateral connection, *it is immaterial that there is CLEC fiber on the street on which the building is located.*

In its August 2003 *Triennial Review Order*, the FCC recognized this specific economic reality both with respect to DS-3 and DS-1 levels of service:

... The inability to recover the significant fixed and sunk construction costs of DS3 loops, coupled with the additional barriers to loop deployment associated with accessing rights-of-way; obtaining and paying for building access; and other service provisioning delays impair the ability of requesting carriers to self-provision single DS3 loops. Unlike deployment at even the lowest OCn level, the record indicates that a single DS3 loop, generally, can not provide a sufficient revenue opportunity to overcome these barriers.

\* \* \*

... The record contains little evidence of competitive LECs’ ability to self deploy single DS1 capacity loops and scant evidence of wholesale alternatives for serving customers at the DS1 level. ... Indeed, incumbent LECs recognize a distinction between provisioning DS1 level loops and other higher capacity loops. ... Customers demanding services over DS1 loops possess significantly different economic characteristics for competitive carriers than large enterprise market customers. In particular, small and medium enterprise

customers served by DS1 loops provide much lower revenue opportunities than large enterprise market customers and, generally, resist long-term contract obligations.<sup>29</sup>

Based upon these findings, the FCC determined that CLECs are impaired without access to UNEs where the total capacity to be provided at a single location is less than three (3) DS-3s.<sup>30</sup> Evidence on this subject provided by (pre-merger) AT&T Corp. in the *Triennial Review Remand* proceeding underscored the problem. Even with a fiber distribution facility in close physical proximity to a particular building, the cost associated with constructing a lateral connection is sufficiently high that such an expenditure cannot be justified at low levels of demand.<sup>31</sup>

Figure 1 below demonstrates just how limited the number of “lit” CLEC buildings turns out to be, even in areas with high concentrations of business customers, such as San Francisco financial district, *where CLEC distribution facilities are present*. (In the Figure, locations marked with a square are CLEC customers served directly via CLEC-owned fiber. Locations marked with a triangle are CLEC customers served over ILEC (AT&T/SBC California) facilities.) This area is served by a large AT&T/SBC California wire center that easily satisfies the FCC business line “triggers” (see footnote 31) – which the FCC assumes to show that “last mile” DS-1 and DS-3 connectivity is available throughout this area from multiple CLECs. As Figure 1 demonstrates, this is clearly *not* the case. Despite the presence of CLEC fiber facilities on virtually every street in downtown San Francisco, roughly 94% of all CLEC-served buildings *on streets with CLEC fiber* nevertheless are being served via *ILEC* facilities. Why would a CLEC choose to take service from the ILEC where the CLEC itself has facilities that “pass” the customer’s location? Because at the level of capacity demand required by

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29. *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carrier*, CC Docket No. 01-338; *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98; *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking*, FCC No. 03-36, 18 FCC Rcd 16978 (2003) (“*Triennial Review Order*”) at paras. 320, 325.

30. *Id.*

31. In its Order on Remand from the *USTA II* D.C. Circuit Court decision, the FCC modified its original finding, concluding this time that the DS-1 and DS-3 impairment condition was not present in areas served by ILEC wire centers with very large business service populations or with significant CLEC collocation presence. It established specific “triggers” that, if satisfied, could relieve the ILEC of the requirement to provide DS-1 and DS-3 UNEs in such areas. “Triggers” of this sort are intended to serve as surrogates for more direct measures of competitive presence and ILEC market power. They represent a type of “shadow evidence” of competition, and often fail to reflect actual marketplace conditions “on the ground.” Here, the business line counts and collocation “triggers” adopted by the Commission in actuality have nothing whatever to do with the costs and cost/revenue relationships associated with constructing lateral fiber connections at the DS-1 and DS-3 levels. A specific building with insufficient demand to justify the cost of constructing a lateral fiber connection can just as easily exist in a district with high business concentration as in areas with lower business density, and the mere fact that the ILEC wire center serving that area happens to have a large business line count has no bearing upon the revenue/cost conditions at a specific location. Whereas the FCC’s initial “less than three DS-3s” standard directly addressed this revenue/cost relationship, the “triggers” that were ultimately put in place have the ironic result of actually enhancing ILEC market power in precisely those areas of greatest business concentration.



**Figure 1.** SBC map of Downtown San Francisco showing CLEC enterprise customers being served using Special Access and CLEC “lit” buildings.

the customer, the CLEC would not realize sufficient revenue to justify the investment to make a dedicated connection into the building.

### **Harm to competition due to the FCC’s failure to maintain cost-based Special Access rates**

Competing carriers obtain wholesale digital “last mile” services from ILECs either as unbundled network elements or as “Special Access” services. Whereas UNEs, where available, are rated under a pricing standard known as Total Element Long Run Incremental Cost (“TELRIC”), Special Access service rate levels are not required to be cost-based and are typically considerably higher than the corresponding UNE rate. However, under FCC rules, UNEs may only be used by a CLEC to furnish

local service; if the service will be used for both local and interexchange services, UNEs may be substituted for Special Access under certain limited and narrowly defined conditions.<sup>32</sup> Thus, even in areas where ILECs are still required to provide DS-1 and DS-3 UNEs, CLECs' ability to use them will be severely limited.

Up until about 2001, Special Access rates had been subject to the FCC's "price cap" regime, where they were adjusted annually based upon the economy-wide inflation rate (less a so-called "productivity offset" or "X" factor). Although the FCC's price cap rules provided for periodic review of the productivity offset (which, in theory, should have prevented special access earnings from significantly exceeding "normal" profits), under price caps the ILECs' rate of return on special access services began to edge upward. (See Figure 3). Arguments by interexchange carriers and large users that a higher productivity offset was required to maintain reasonable (i.e., lawful) rate levels were largely ignored.<sup>33</sup> The fact that special access prices could rise in this manner was itself *prima facie* evidence that the ILECs did not face effective price-constraining competition for these services.

Notwithstanding this evidence and not satisfied with their already supracompetitive earnings, the ILECs launched a campaign to extricate special access services from the constraints of the price cap system and to replace regulation with a "pricing flexibility" framework. The ILECs justified this deregulation by arguing that the *existence* of CLEC fiber, albeit at a very small number of locations, showed that this market was competitive. In 1999, the FCC adopted "pricing flexibility" rules that removed special access from price cap constraints on a market-by-market basis whenever certain "triggers" were satisfied. As with the more recent "business line count" triggers, the "pricing flexibility" triggers (tied to the percentage of ILEC wire centers where CLECs had collocated) assess a condition that has little to do with the actual extent of CLEC presence at individual buildings within the subject market.<sup>34</sup>

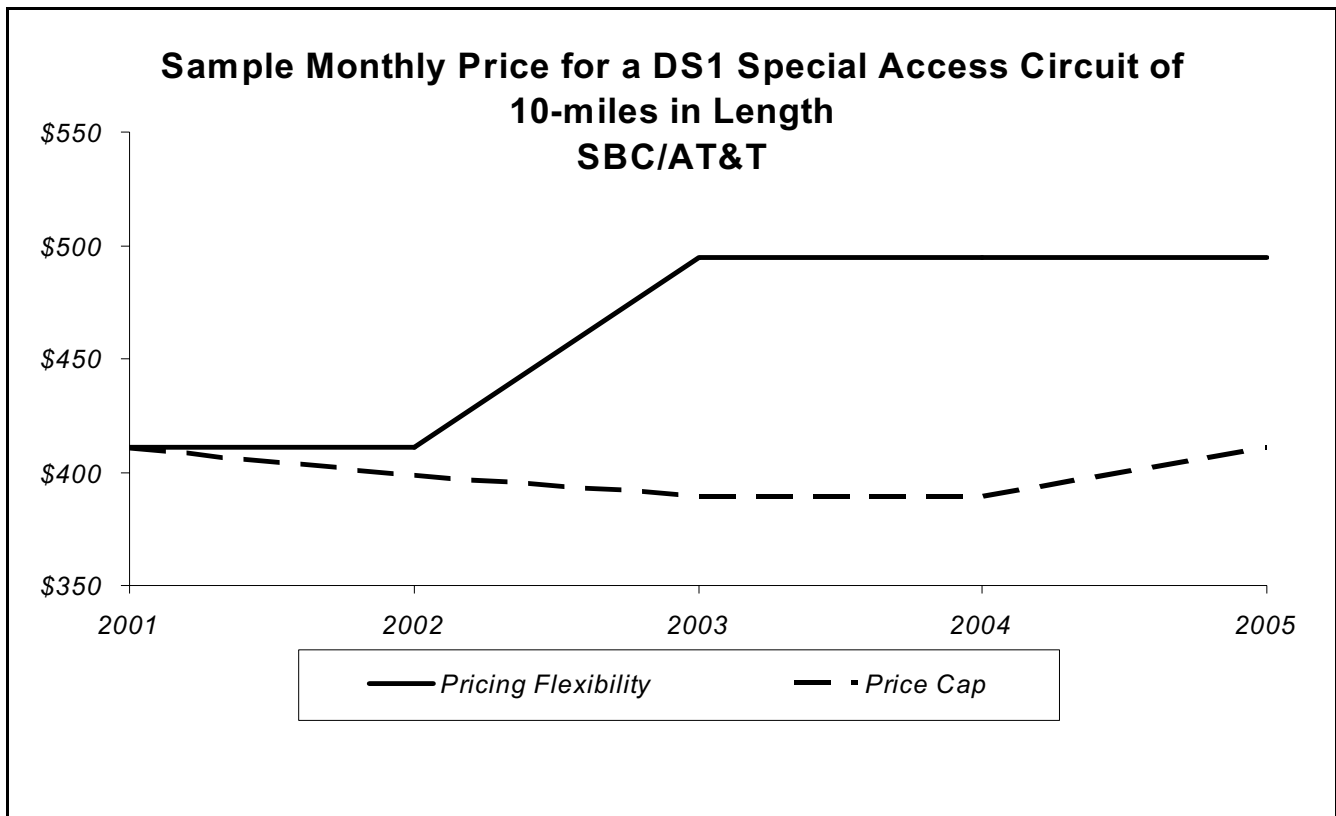
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32. See footnote 21, *supra*.

33. *Price Cap Performance Review for Local Exchange Carriers, Access Charge Reform*; CC Docket Nos. 94-1 and 96-262, *Fourth Report and Order in Docket 94-1 and Second Report and Order in 96-292*, 12 FCC Rcd 16642 (1997) at paras. 133-143.

34. The fact that one or several CLECs maintain a collocation at a particular wire center teaches *nothing* as to the availability of CLEC-owned last mile facilities at specific business premises within the area served by that ILEC wire center. A CLEC requires a collocation as a means for creating physical interconnections between whatever limited facilities it has deployed and the ubiquitous ILEC distribution and interoffice transport infrastructure. If a CLEC had facilities at every customer location at which it provided service, *it would not need to effect such interconnections and would thus not even need the collocation*. Adoption of a "trigger" that is incapable of reflecting the actual extent of facilities-based competition operates to deregulate prices notwithstanding the persistence of substantial ILEC market power. The ensuing escalation of prices and earnings for Special Access services that have become subject to "pricing flexibility" clearly bears this out.

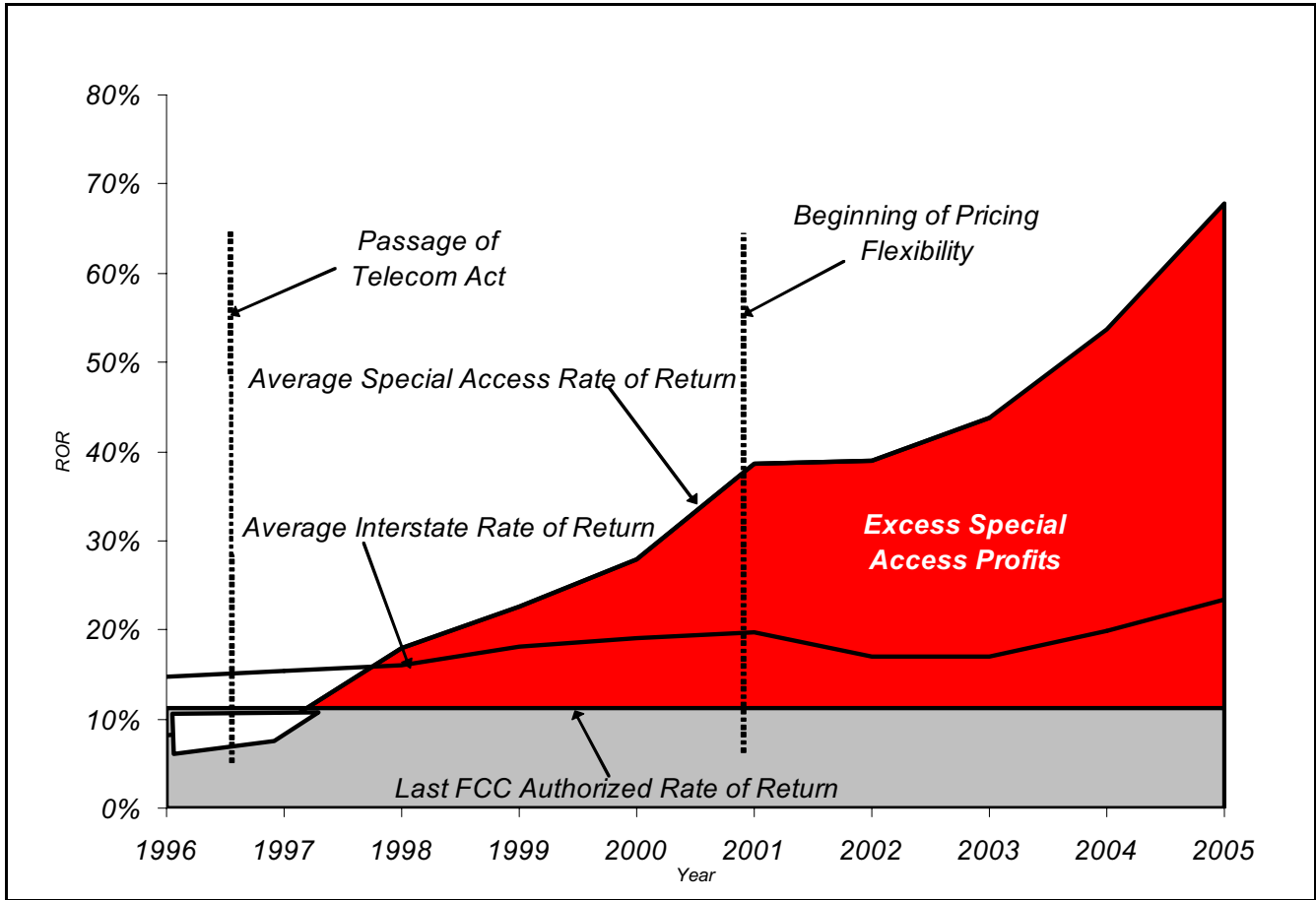
The actual experience in multiple markets has demonstrated that the use of this “trigger” type of indirect shadow evidence as an indicator of the extent of competition is seriously off the mark. In each market that was found to be “competitive” based upon conditions that satisfied the FCC’s pricing flexibility trigger (but which were incapable of directly reflecting the extent of ILEC market power), the ILEC’s special access rate levels are now higher – in some cases substantially higher – than those still under price caps. Through the rate increases implemented in these purportedly competitive markets, the ILECs have dramatically increased these rates and by so doing have escalated special access *earnings* levels to astronomical heights.



**Figure 2.** The Price for a 10-mile DS1 Special Access Service Channel is Higher in Areas Where AT&T Has Been Granted Pricing Flexibility Than in Areas in Which AT&T Pricing is Still Subject to Price Caps.

Figure 2 compares AT&T/SBC’s rate for a 10-mile DS-1 special access facility in a market still under price caps with the corresponding rate in a market under pricing flexibility. Here, the “pricing flexibility” rate (in a supposedly competitive market) is roughly 25% *higher* than the price applicable where monopoly conditions are presumed to persist. Not surprisingly, permitting the ILECs to increase rates without any regulatory constraint (and with no *de facto* market constraint either) has propelled

ILEC Special Access category rates of return to near and, in some cases into, three-digit levels (see Figure 3 and Table 1).



**Figure 3.** Average RBOC Special Access realized rates of return. 1996-2005.

Obviously, the succession of price increases and the resulting extraordinary rates of return are not consistent with a competitive market.<sup>35</sup> Moreover, if the market for these services were as competitive

35. Several of the Bells have attempted to “explain” these high earnings levels as mechanical anomalies attributable to regulatory accounting and FCC service classification regulations. These extrinsic claims are easily dismissed, and ignore the fact that because net asset values are typically *lower* under financial accounting, the use of regulatory accounting – if anything – actually *understates* Bell returns on special access services.

<b>Table 1</b>					
<b>RBOC Special Access Rates of Return</b>					
	<b>BellSouth</b>	<b>Qwest</b>	<b>AT&amp;T/SBC</b>	<b>Verizon</b>	<b>ALL RBOCs</b>
2003	69.1%	68.1%	63.2%	23.5%	44.0%
2004	81.9%	76.8%	76.2%	31.6%	53.7%
2005	98.4%	109.4%	91.7%	41.6%	67.8%

Source: Federal Communications Commission, ARMIS Report 43-04, Access Report: Table I, YE 2005  
 Accessed April 25, 2006. Available at <http://www.fcc.gov/wcb/eafs/>

as the Bells have sought to portray or that the FCC’s “triggers” are supposed to reflect, the current Bell profit levels should easily stimulate competitive entry on a mass scale, which in turn should push prices down toward cost and earnings down toward “competitive” levels. But all of the direct and indirect measures of competitive activity confirm that none of this is taking place. The two largest facilities-based CLECs that had been serving the enterprise market (AT&T and MCI) have been eliminated through mergers. The flow of capital into the remaining CLECs has slowed to a trickle. And special access prices (along with ILEC earnings from these services) continue to rise.

Is this situation irreversible? Of course not. Under US federal law, common carriers are required to charge just, reasonable and non-discriminatory rates.<sup>36</sup> The FCC could (and should) be actively intervening to reestablish the necessary regulatory controls to restore special access rates to cost-based levels. This action is precisely what the (old) AT&T had demanded in a petition filed with the FCC in 2002.<sup>37</sup> Having twice asked for comments on this matter,<sup>38</sup> the FCC has yet to act. As a result of the FCC’s failure to regulate effectively (and, in some instances, at all), exorbitant ILEC earnings on special access continue to harm both competitors who purchase these services as necessary wholesale inputs and retail customers.

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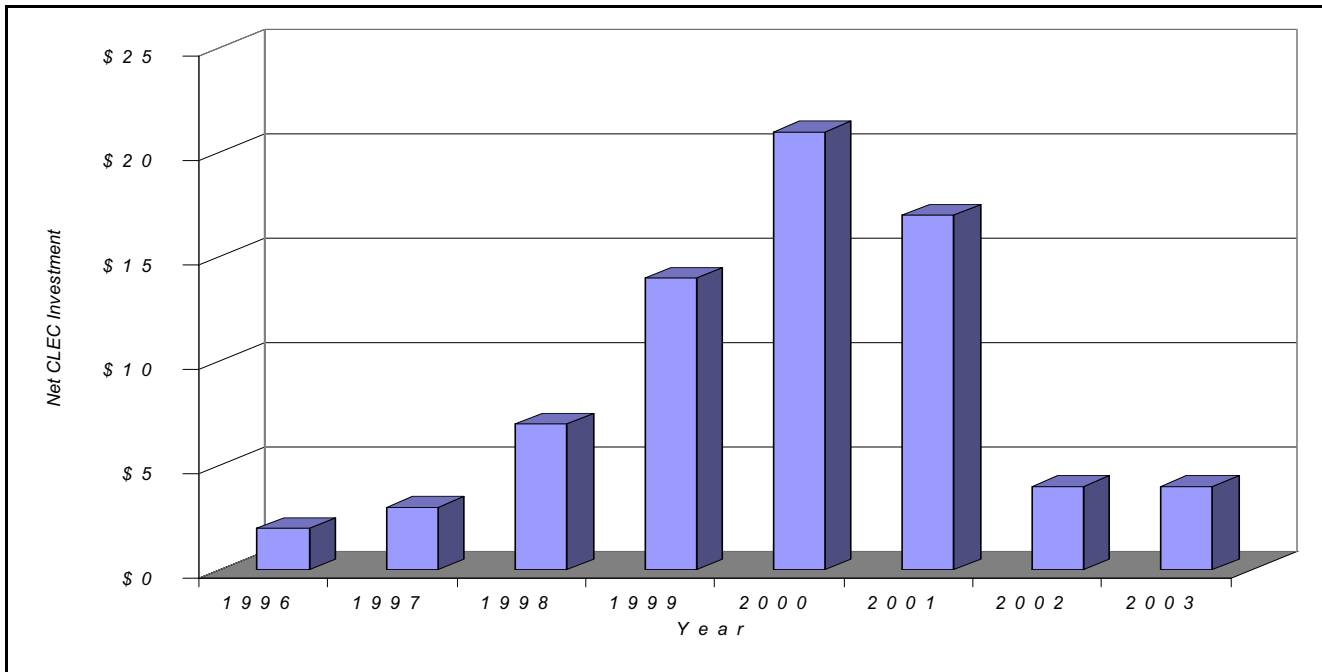
36. 47 U.S.C. 201(b), 202(a).

37. *AT&T Corp. Petition for Rulemaking To Reform Regulation of Incumbent Local Exchange Carrier Rates For Interstate Special Access Services*, RM Docket No. 10593, *Petition for Rulemaking of AT&T Corp.*, filed October 15, 2002.

38. Public Notice, *Wireline Competition Bureau Seeks Comment on AT&T.s Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, RM No. 10593 (rel. October 29, 2002); *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, *Order and Notice of Proposed Rulemaking*, Rel. January 31, 2005.

*Failure to maintain cost-based wholesale UNE and special access rates ultimately causes collapse in CLEC ability to make further significant investments in own facilities*

The theory that exorbitant special access prices or the elimination of cost-based UNEs would force CLECs to invest in facilities has proven to be disastrous for the competitive US telecommunications industry. As shown in Figure 4, during the initial years following the implementation of the 1996 *Telecom Act* – and prior to the adverse regulatory actions described above – U.S. CLECs were making major investments in their own facilities. With rising special access prices and the prospect of losing their access to cost-based UNEs, the CLECs’ profitability was seriously impaired, causing them to lose their access to the capital necessary to invest in competitive facilities. As is demonstrated in Table 2 below, investors have been running away from CLEC ventures, a process that has been under way for more than half a decade.



**Figure 4.** Net additional annual CLEC investment, 1996-2003.

### **Effective regulation of wholesale services is the key to effective competition**

Thus, after a propitious start, CLECs’ viability was undercut by the Bells’ success on two regulatory fronts – both of which dramatically increased competitors’ costs. The first was the elimination of the requirement that ILECs provide competitors with critical wholesale UNEs at cost-based rates. The second was the expansion of Special Access pricing flexibility, which allowed the Bells to dramatically increase both their own profits and their competitors’ costs. It is this failure to recognize the ongoing need to maintain effective regulation of *wholesale* services – essential inputs to

the provision of competitive services that only the ILECs can realistically provide – that is the single most important explanation for the failure of sustainable local service competition to arise in the US.

The 1984 break-up of the Bell System, which barred the Bell ILECs from competing in the long distance, manufacturing and information services markets, catalyzed the development of intense competition in all three of these sectors. The 1996 Act sought to replace the 1984 structural separation with a process that would lead to competition in the local market and, in so doing, would protect the adjacent competitive markets from becoming remonopolize by the incumbent local carriers. With the near collapse of meaningful local competition, the potential for such remonopolization in adjacent markets has become sufficiently real that it deserves serious concern. Upon receiving authorization to reenter long distance on a state-by-state basis beginning in late 1999, the Bells rapidly recaptured long distance share, which today likely exceeds 70% within each of the RBOC regions. In the same way that Bell control of the retail local telephone exchange service market permitted it to rapidly expunge both retail and wholesale long distance competition, the Bell/cableco control of the consumer Internet access market has the potential to result in the elimination of non-integrated Internet Backbone Providers (“IBPs”) that do not serve end users. In the US, the three largest RBOCs – AT&T, BellSouth and Verizon – collectively control some 63% of those wireless carriers with nationwide footprints.

Maintaining effective local service competition *at the retail level* both in mass market and enterprise customer segments is critical to the ongoing survival of competition in all telecom sectors. And the key to that outcome is the effective regulation of essential wholesale services.

**Table 2**  
**The Precipitous Collapse in CLEC Market Capitalization**  
**1999 – 2006**

Company	September 30, 1999			July 12, 2006			Change from 9/30/99 to 7/12/2006
	Stock Price	Shares Outstanding (millions)	Market Cap (\$millions)	Stock Price	Shares outstanding (millions)	Market Cap (\$millions)	
Allegiance	\$63.00	64.9	\$4,086.5	Acquired by XO in 2004 for \$356.38-million			
AT&T Corp. <sup>1</sup>	\$47.44	3,195.6	\$151,592.9	Acquired by SBC in 2005 for \$16-billion			
Broadwing <sup>2</sup>	\$84.72	31.6	\$2,677.2	\$8.70	86.9	\$756.4	NMF
CoreComm	\$37.19	72.1	\$2,679.4	Restructured in 2001 to become ATX.			
CTC Communications	\$16.44	14.6	\$239.2	Filed for bankruptcy in 2003, acquired and taken private by Columbia Ventures Corp.			
CTCI	\$47.00	19.9	\$936.5	\$23.95	19.2	\$460.3	-50.85%
Intermedia	\$25.00	51.0	\$1,274.6	Acquired by Worldcom in 2001			
Focal	\$23.94	60.7	\$1,451.7	Acquired by Broadwing in 2004 for \$189-million			
Global Crossing <sup>3</sup>	\$26.50	434.8	\$11,521.4	\$15.03	24.4	\$366.9	-98.26%
GST Telecomm Inc	\$7.03	37.7	\$265.2	\$0	0	\$0	-100%
McLeodUSA <sup>4</sup>	\$41.06	155.30	\$6,376.6	Filed for bankruptcy in 2002, relisted, taken private			
Northpoint	\$24.31	125.24	\$3,044.9	\$0	0	\$0	-100%
ICG Communications	\$15.56	47.34	\$736.8	Filed for bankruptcy in 2000, acquired by Level3			
Level 3 Communications	\$52.22	341.08	\$17,810.6	\$4.23	846.84	\$3,582.1	-79.89%
Worldcom (MCI)	\$76.88	1,880.22	\$144,541.8	Filed for bankruptcy in 2002, reorganized as MCI, acquired by Verizon in 2006 for \$8-billion			
RCN <sup>3</sup>	\$49.69	76.18	\$3,785.4	\$23.88	36.83	\$879.5	-76.77%
Time Warner Telecom	\$20.88	104.54	\$2,182.8	\$13.86	119.88	\$1,661.5	-23.88%
Winstar Comm Inc	\$39.06	54.93	\$2,145.9	Filed for bankruptcy in 2001, now operates as a small government contractor.			
XO/Nextlink <sup>3</sup>	\$80.00	133.08	\$10,646.4	\$4.25	181.93	\$773.2	-96.00%

Source: carrier 10Q reports, [www.thedigest.com/stocks/](http://www.thedigest.com/stocks/), [finance.yahoo.com](http://finance.yahoo.com)

Notes: – Indicates that a carrier has filed for bankruptcy protection or has been delisted from public exchanges.

1: 1999 Stock price includes cable and wireless properties that were subsequently divested.

2: Formerly Corvis, market cap reflected at close of Corvis IPO, first publicly traded on July 28, 2000; Acquired by Cincinnati Bell, then spun-off by Cincinnati Bell, 1999 and 2006 market caps not directly comparable.

3: Filed for bankruptcy, restructured, and was relisted.

4: Stock price as of March, 1999.

# 3 | “DISINVESTMENT” IN INCUMBENT CARRIER INFRASTRUCTURE

Perpetuating the notion that they continue to confront robust competition even as they acquire their largest competitors, the US Bells continue to press for deregulation. Deregulation, they say, is necessary to give them the financial incentive to make the large-scale investments in network infrastructure that they claim to be undertaking. In reality, the Bells are engaged in modest technology substitution, on a selective and incremental basis, and are spending decidedly *less* on their network facilities than the amount of capital they extract each year through annual depreciation accruals and the payment of dividends well in excess of current earnings to their corporate parents.

## **With competition not a threat, the incumbent carriers have been extracting capital from their ILEC networks**

At the same time as they have claimed CLECs are fully capable of making a go of facilities-based service, the ILECs have attempted to convince policymakers that the ILECs are the only companies with the resources and inclination to deploy a ubiquitous broadband infrastructure. Moreover, despite huge incumbency advantages, the ILECs claim that they cannot be expected to make this type of investment without significant financial and deregulatory incentives.<sup>39</sup> Put in its starkest terms, this position boils down to the twin ultimatums “no regulatory relief, no broadband” and “no broadband from the ILECs, no broadband from anyone.” These seemingly dire threats raise several key questions:

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39. A collateral argument holds that since they have *already* invested so much in deploying broadband, the Bells shouldn't be required to “share” the fruits of that investment. The Bells claim that in order for them to economically justify investment in a ubiquitous broadband network, they must be exempted from any obligations to make those networks available to competitors, while at the same time they must also be relieved of any regulatory constraints on discrimination, pricing and earnings.

## Disinvestment in ILEC Infrastructure

- Is the overall magnitude of the ILECs' broadband investment "commitment" actually anywhere near as large as it is claimed to be?
- Is the overall level of risk being confronted by ILECs to fulfill these broadband investment "commitments" actually anywhere near as high as some have sought to portray it to regulators?
- Is there any reason to believe that regulatory incentives can accelerate or expand the planned rollout of broadband technologies by the major ILECs?
- Finally, will broadband deployment on the terms proposed by major ILECs be compatible with the larger goals of fostering competition and innovation, while ensuring reasonable rates (so that, in the long run, regulation can be reduced).

In the United States, the answers to each and all of these questions is a resounding "no."

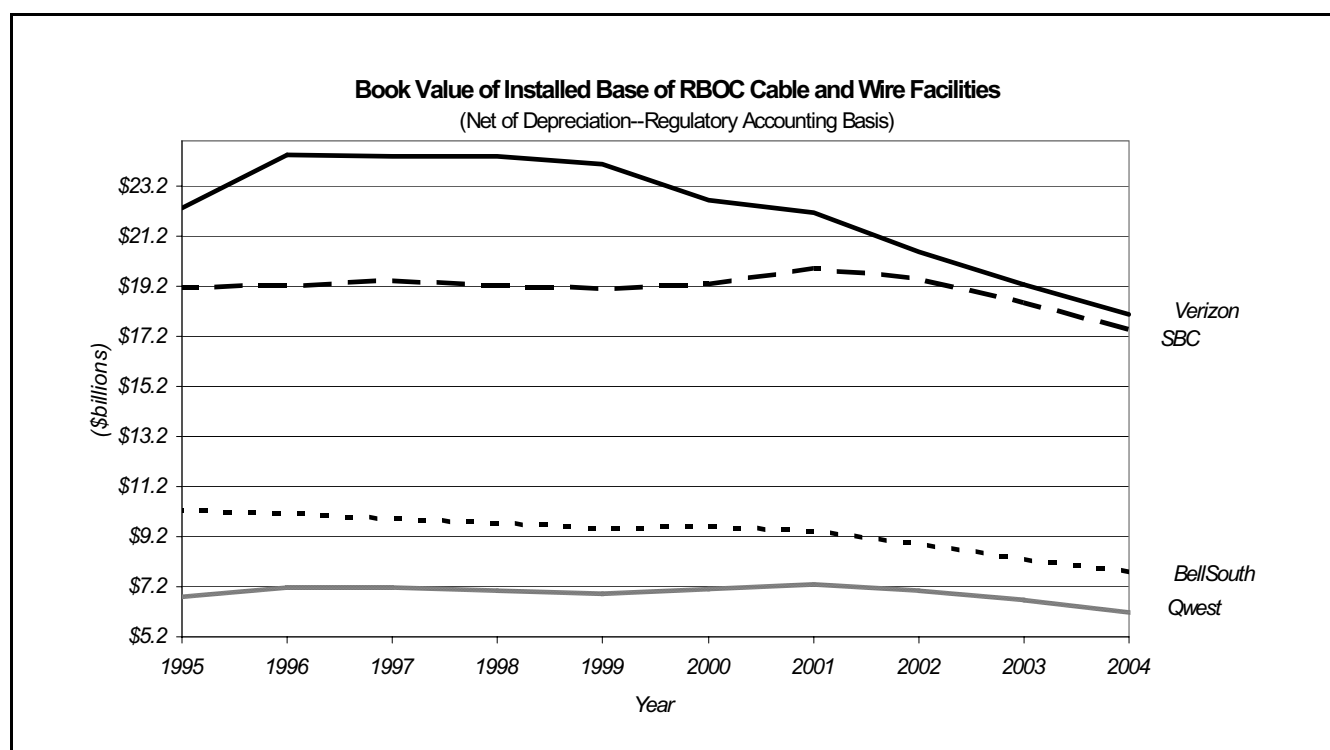


Figure 5. Book Value of Installed Base of RBOC Cable and Wire Facilities

## **Bell Company investments in the plant required to deploy broadband have been shrinking, not growing.**

Actions speak louder than words, and over the past several years, US regional Bell companies have invested successively *smaller* amounts in their local networks and have allowed their net outside plant investment to erode by as much as 26% over the past decade.<sup>40</sup> Figure 5 above shows the drop in investment for each of the four RBOCs. As shown, the combined net book value of the outside plant on Verizon's books dropped from \$24.5-billion in 1996<sup>41</sup> to \$18.1-billion by the end of 2004 – a decrease in value of 26.1%. During the same period, BellSouth's net outside plant investment decreased by 22.8%, and SBC and Qwest (US West) allowed their net outside plant investment to drop by 9.1% and 13.9%, respectively. When the rate of new plant acquisitions ("gross plant additions") falls below the annual rate of erosion in the *value* of the existing asset base (approximated by the annual depreciation expense accrual) in any accounting period, the company is actually taking more dollars out of its infrastructure than it is putting in. This can be described as a negative investment or *disinvestment*.

Simply looking at the Bells' overall capital budget levels in recent years provides additional insight. The RBOCs' reporting of Annual Gross Plant Additions to the FCC (disaggregated on a category-by-category basis) provides a good indication of how their capital budgets for each year are being allocated. Gross plant additions represent the total expenditures on new plant (for example, outside plant including broadband fiber) during a given year. As shown on Figure 5, all four of the RBOCs scaled back on their annual expenditures on outside plant for the period 2001-2004 – and leading the downward trend are Verizon and SBC, the two RBOCs that have been most vocal about committing massive amounts of capital to fiber-to-the-premises (Verizon) and fiber-to-the-curb (SBC) broadband networks. In the three years (2002-2004) reflected in Figure 5, Verizon's gross outside plant additions dropped by 36.8%, while SBC's plummeted by 44.9%. In fact, Figure 5 shows that each of the RBOCs invested *more* on its outside plant during the peak of FCC regulation than in recent years, after much of the price regulation regime adopted in the early 1990s had been eliminated.

## **All four RBOCs are pursuing a measured, incrementalist approach to broadband investment**

Despite their rhetoric, none of the four major US ILECs is pursuing an aggressive strategy of ubiquitous broadband deployment. Rather, each has adopted what financial analysts have dubbed an "incrementalist" approach – i.e., those taking a series of slow, measured, baby steps to broadband

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40. Outside plant investment accounts include all investment associated with wires, cables, conduit and poles, including broadband fiber investment.

41. Verizon was formed by the mergers of several 1996 entities – NYNEX, Bell Atlantic and GTE. To compute 1996 outside plant investment, the figures for these companies have been summed.

deployment that are barely distinguishable from their “business as usual” technology deployment strategies.

**The two largest RBOCs – the ones that are also the most boastful of their broadband plans – are not implementing a revolutionary transition to ubiquitous broadband in their networks**

Verizon and SBC/AT&T have generated considerable PR about their planned broadband services (branded as “FiOS” and “Project Lightspeed,” respectively). Placing the fiber facilities closer to (or, in Verizon’s case, *into*) the customer’s home will support higher speed broadband access and eventually video programming over the RBOCs’ facilities, both of these companies’ ultimate goal. Yet for all of the hype, the deployment strategies of each of these mammoth companies represents more an “evolutionary” network change – reminiscent of the long-term development of their telephone networks – than a revolutionary technology deployment (and investment) strategy.

The measured and selective pace of Verizon’s FiOS rollout is quite telling, and is representative of SBC/AT&T’s efforts with Project Lightspeed as well as the smaller broadband initiatives that have been undertaken by BellSouth and Qwest. Verizon’s characterization of its investment program for broadband is overblown relative to the actual and planned deployment. Verizon has stated that its “FiOS” project will purportedly make fiber-to-the-premises facilities available to 50% of Verizon subscribers by 2009, with a claimed total cost of approximately \$20-billion, i.e., about \$3.3 billion annually over that period.<sup>42</sup> But closer examination reveals that this expenditure is not earmarked as new, incremental investment. According to Verizon Chairman and CEO Ivan Seidenberg, this investment is actually Verizon’s “total capital spending in this portion [telecom] of our business. ... What we’ll do is we will consistently rearrange our spending to focus it more on fiber so it becomes success-based.”<sup>43</sup> It would thus seem that, far from committing any large *new* outlay of capital to *FiOS*, the \$3.3-billion per year investment is roughly comparable to Verizon’s *total* projected *wireline* capital spending, comprising everything that Verizon buys for its wireline telecom business (i.e., electronics, copper, fiber, poles, conduits, and even motor vehicles) over the 2004-2009 FiOS roll-out period (with the bulk of the investment happening in 2006 and 2007).<sup>44</sup> What portion Verizon is actually spending on FiOS is left ambiguous, but it is clear that Verizon’s attempt to portray “FiOS

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42. Searcey, Dionne, “Moody’s Cuts Verizon’s Ratings,” *The Wall Street Journal*, December 22, 2005, at C4. Verizon reported approximately 49-million switched access lines in service at the end of 2005. Applying the 50% deployment figure to that number reveals that while approximately 25-million subscribers in Verizon territory are targeted to have FiOS service available by the end of 2009, another 25-million subscribers are not. On the other hand, Verizon is currently attempting to divest several million access lines in the northeast and midwest, so 50% of what will be left of Verizon after such divestitures have been completed will be an even smaller number.

43. Citigroup Global Entertainment, Media & Telecommunications Conference, Speech of Ivan Seidenberg, January 9, 2006.

44. Citigroup Global Entertainment, Media & Telecommunications Conference, Speech of Ivan Seidenberg, January 9, 2006.

investment” as consuming the full \$20-billion of the company’s capital spending is highly misleading.<sup>45</sup>

Verizon has also sought to create the impression that it is increasing its investment in its wireline services by commingling rhetoric about a planned 15% growth in investments *company-wide*<sup>46</sup> (including *wireless* spending in addition to wireline). By blurring any distinction between its wireline and wireless spending, Verizon creates the (false) impression that this 15% growth is entirely directed at FiOS. But Verizon’s *Telecom Segment* capital expenditure for 2005 was less than \$8-billion out of its total capital budget, and as shown above, its FiOS investment was likely only a quarter of that – but certainly nothing close to \$15-billion in a single year.

Table 3 Verizon Operating Telephone Companies Gross Value of Annual Cable and Wire Facilities Additions – 1995-2005 (\$ millions)										
1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
\$2,019	\$2,305	\$2,681	\$2,792	\$2,672	\$2,472	\$2,657	\$2,136	\$1,770	\$1,677	\$3,482
Source: FCC Report 43-02, ARMIS USOA Report, Table B-1.B. Balance Sheet Accounts, Cable and Wire Facilities, 1995-2005.										

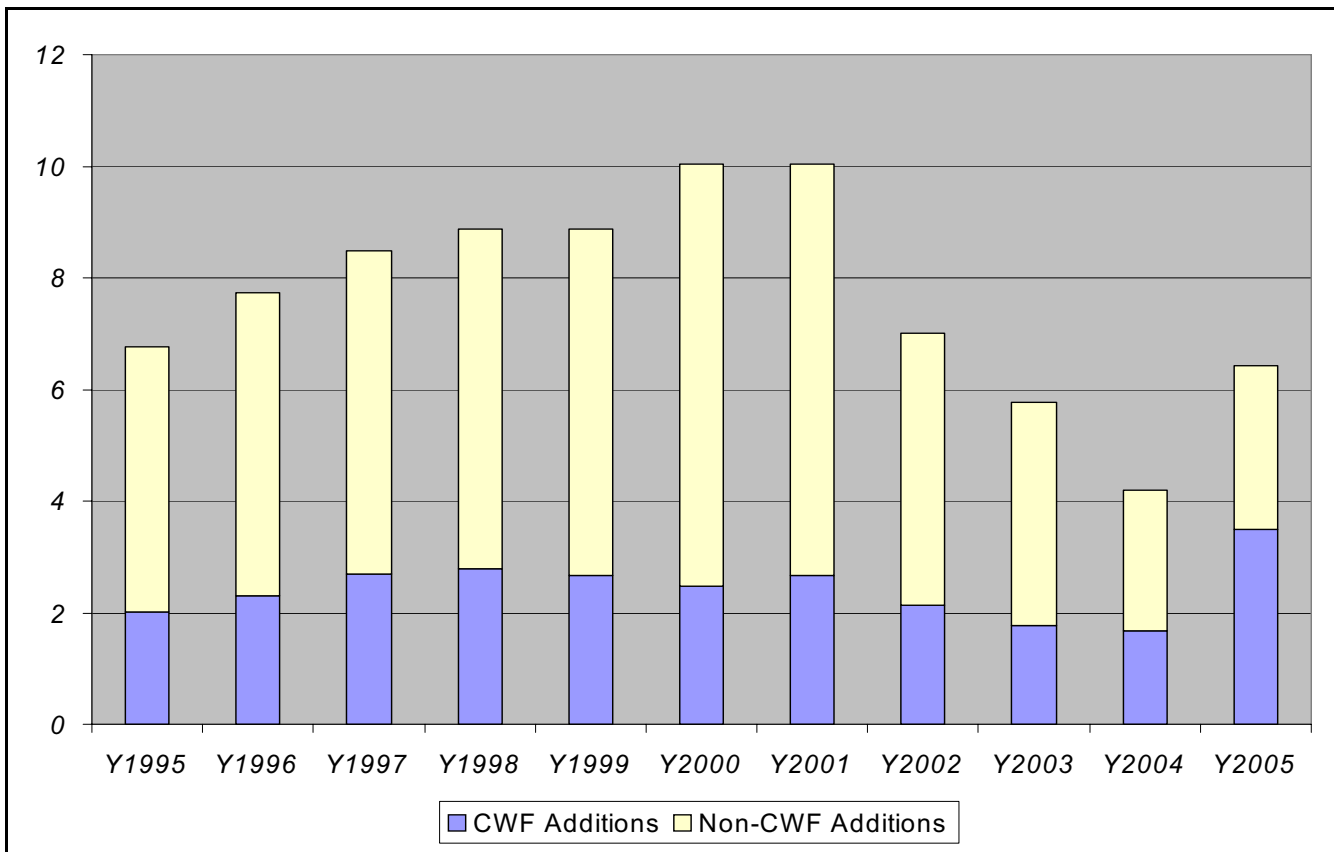
Like the other RBOCs, Verizon’s investment in cable and wire facilities has actually dropped off significantly through year-end 2004 (see Table 3) and an increase in its in 2005 investment appears much larger than it otherwise would. Verizon’s *overall* capital investments in its “telecom” segment in 2005 (an increase of \$1.2-billion from \$7.1- to \$8.3-billion) was in fact smaller than the increase in the outside plant category in which most FiOS investment would be found (a \$1.8-billion increase, from \$1.7- to \$3.5-billion) -- supporting Seidenberg’s statements quoted above that Verizon will be “rearranging” its investment dollars to put somewhat more towards FiOS (See Figure 6 below). It should be noted however, that even with this “rearrangement” the average capital expenditures in the CWF category for the first two years of Verizon’s “FiOS” roll-out (\$2.58-billion) simply brings capital expenditures in this category back to the levels that Verizon has historically been spending on outside plant (See Table 3). Even after the 2005 increase in CWF investment, the “net” value (net of depreciation) of Verizon’s CWF plant is still lower than at any point in the last decade.

45. Verizon 4<sup>th</sup> Quarter 2005 Selected Financial Results, available at: <http://investor.verizon.com/financial/quarterly/VZ/4Q2005/4Q05Bulletin.pdf>

46. Banc of American Equity Research, Wireline and Wireless Telecommunications Services, Verizon Communications, Inc., September 22, 2005, at 1. The total company-wide investment data being discussed at the time was \$15.2-billion

*Disinvestment in ILEC Infrastructure*

Like the other RBOCs, Verizon is actually “disinvesting” in its wireline business – spending *less* on new facilities each year than the annual erosion in the value (depreciation) of its existing plant. Even the \$8.3-billion 2005 investment level, while higher than Verizon’s capital expenditures for each of the prior three years, is slightly *below* the average for the past five years, and is more than 25% *below* the capital investment levels for 2000 and 2001. Over the three years between 2002 and 2005, Verizon actually *disinvested* more than \$7-billion in its Telecom segment. (It should be noted that the Table 3 data (above) on investment in Cable and Wire Facilities is a subset of the total telecom sector investment reported on Table 4.)



**Figure 6.** Comparison of Verizon’s ARMIS Gross Cable and Wire Facility and Non-CWF Plant Additions, 1995-2005.

Year	Capital Expenditures on New or Upgraded Facilities	Depreciation Expenses to Recoup Loss of Older Facilities	Net Investment (Disinvestment)
2000	\$12.1-billion	\$8.752-billion	\$4.348-billion
2001	\$11.5-billion	\$9.260-billion	\$2.240-billion
2002	\$7.0-billion	\$9.456-billion	(\$2.456-billion)
2003	\$6.820-billion	\$9.217-billion	(\$2.497-billion)
2004	\$7.118-billion	\$8.939-billion	(\$1.828-billion)
2005	\$8.267-billion	\$8.801-billion	(\$0.534-billion)

Source: Verizon 10-K, YE 2002; Verizon 10-K, YE 2004; Verizon 10 Q, 4th Q 2005

If Verizon continues to accrue depreciation expenses at roughly this same rate, then even with the projected \$8.3-billion infusion of “new” capital, the Company’s total net investment in the Telecom segment will continue to decline.

Category	Y2001	Y2002	Y2003	Y2004	Y2005	TOTALS	CHANGE
Total Stockholders' Equity	\$63,492	\$58,356	\$46,691	\$42,493	\$36,572		(\$26,920)
Net Income	\$10,352	\$7,620	\$4,243	\$7,023	\$6,534	\$35,773	
Dividends Declared	\$11,723	\$10,208	\$14,996	\$10,960	\$10,989	\$58,876	
Total Plant	\$360,125	\$367,318	\$368,251	\$372,382	\$377,162		\$17,037
Return on Shareholder Equity	16.3%	13.1%	9.1%	16.5%	17.9%		
Total Depreciation and Amortization	\$194,291	\$209,892	\$221,975	\$237,627	\$253,516		\$59,225
Net Plant	\$165,834	\$157,426	\$146,276	\$134,755	\$123,647		(\$42,188)
Employment	385,887	332,959	303,028	295,051	286,055		-99,832

## Rhetoric, not Reality

Despite their persistent rhetoric about the need for regulatory concessions as a predicate to their pursuit of a broadband infrastructure, *none of the RBOCs is actually proposing or even promising to build a ubiquitous broadband infrastructure* capable of providing next-generation capabilities and services to all customers in their respective service areas. Nor are any of the RBOCs suggesting any broadband investment beyond the boundaries of their respective ILEC footprints. And by their repeated contention that without these investments no broadband network will be built at all, it is also

clear that none of the RBOCs anticipate entry by any of the others either as competitors or to fill in the gaps left unserved by the incumbent RBOC's own construction plans.

Review of RBOC statements and plans also show quite clearly that their plans will most certainly not bring broadband to *all* of their customers – with lower income customers and those located in the least densely populated RBOC service areas the most likely not to see broadband service offerings.<sup>47</sup> Verizon, whose operating areas include the most densely populated parts of the US, readily concedes that under its present plans FiOS would be limited to only 50% of its subscribers.<sup>48</sup> From a financial and economic perspective, the per-home passed cost of deploying broadband fiber should be lowest in densely populated areas. So if fiber-based broadband deployment only makes sense for 50% of Verizon's subscribers, it is even less likely that most rural subscribers – whether served by RBOCs or by other carriers – will see any broadband service at all.

### **Different day, same empty promises**

The RBOCs' current campaign to extract significant deregulatory concessions by promising broadband investments is nothing new, but experience suggests extreme caution in relying on these promises. Throughout the 1990s, the RBOCs each embarked upon highly publicized and ambitious plans to undertake massive investments in broadband network facilities. In a number of cases, specific commitments were made to state legislatures and state regulators to accelerate network modernization efforts in exchange for a variety of financial incentives, the deregulation of advanced services, and the approval of alternative forms of regulation (AFORs), as well as to facilitate approval by regulators of several RBOC mergers. Once having received the sought-after accommodations, virtually none of these promises have been kept.

Policymakers should reflect carefully on past experiences before giving much credence to the RBOCs' current pleas for regulatory concessions. Experience shows that RBOC commitments to make infrastructure investments – conditional on regulatory concessions – are unreliable. Experience also shows that when the RBOCs consider an investment worthwhile, they will pursue it with or without regulatory concessions. There is no reason to believe that the RBOCs either need deregulation as an incentive to invest or that they will live up to future commitments to build advanced telecommunications infrastructure only if they are permitted to do so in an unregulated environment.

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47. Since its 2000 acquisition of GTE, Verizon has divested several million access lines, mostly in former GTE service areas – one of which was the entire state of Hawaii. Verizon recently announced its interest in selling off additional access lines in upstate New York and in northern New England. However, limited the geographic scope of its FiOS plans may be, it seems certain that no such facilities will be deployed in communities that have been or that will ultimately be divested by Verizon. See, Dionne Searcey and Dennis K. Berman, *Verizon Fields Offers for Phone Lines*, The Wall Street Journal, May 10, 2006.

48. Dionne Searcey, *Moody's Cuts Verizon's Ratings*, The Wall Street Journal, December 22, 2005, at C4.

In fact, competition has had far more of a motivating effect than regulatory concessions when it comes to spurring ILECs to accelerate the deployment of advanced services. For many years, ILECs had the technical capability to offer services (such as ISDN and later DSL) that would permit high-speed Internet access over the customer's existing voice-grade telephone line, but they were slow to extend these offerings (or intentionally overpriced them) because they feared "cannibalizing" their lucrative business in residential second access lines that customers had been using for dial-up Internet access. Only when cable companies began active deployment and marketing of their cable modem service did the ILECs ramp up their own efforts in residential broadband services. Faced with competition from cable modem service, the ILECs have staged a remarkable comeback; in its most recent report on *High-Speed Services for Internet Access* (based on data for the year ending December 2005), the FCC notes that "[f]or the first time in our data collection, the increase in asymmetric DSL (ADSL) lines exceeded the increase in cable modem connections."<sup>49</sup>

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49. *High-Speed Services for Internet Access: Status as of December 31, 2005*, FCC Industry Analysis and Technology Division, Wireline Competition Bureau, July 2006, p. 3. In fact, ADSL increased by twice as many (3.2 million lines) during the second half of 2005 as cable modem service (1.6 millions lines). *Id.*

# 4

## THE MYTH OF INTERMODAL COMPETITION

In the face of growing evidence that wireline telecommunications competition has been seriously undermined, how can the large ILECs continue to claim that they face robust competition? They point to telecommunications via alternative technologies, such as cable, wireless, and VoIP. But closer examination reveals that these “intermodal” services are neither as widely available nor as suitable for substitution as the ILECs suggest (and this is even more the case with respect to services required by medium and large business customers).

### **“Intermodal competition” – the rationale *du jour* for deregulation**

The number of competitive local service entrants has dropped precipitously, while the RBOCs have rapidly increased their long distance customers and market shares. The competition that was supposed to have been fostered by the 1996 federal legislation has not arrived and is not likely to emerge any time soon. With no evidence of effective competition from their wireline competitors, the RBOCs have increasingly relied upon claims of “intermodal” competition – from technologies such as wireless and cable – as the new competitive force that, they assert, will constrain their ability to increase wireline rates.

As discussed in more detail below, there are several key differences between wireline telephony and service provided over these alternative technologies. These key differences have a substantial impact upon the extent to which the “intermodal” services can be considered true substitutes for wireline telephone services. Moreover, the limitations on the use and availability of wireless and cable telephone services – affecting their suitability as substitutes for wireline service – are even greater with respect to services used (and required) by medium and large business customers.

*Cable telephony*

Cable is the most often cited intermodal competitor. One of the catalysts for the 1996 Act was the promise, or at least the potential, that monopoly cable operators and monopoly ILECs would enter each other's business, introducing competition in both sectors. Cable TV providers had been flirting with telephony for a number of years and, indeed, it was the prospect of cable serving as the second wire into the home that prompted AT&T's disastrous foray into cable TV in 2000.

Cable TV operators like Comcast, Time Warner and RCN offer retail local telephone service to their (primarily residential) cable subscribers. However, unlike the ILECs, US cable companies do not and are not required to make components of their networks available to CLECs on an unbundled or even on a bundled resale basis.<sup>50</sup> Thus, while cable TV companies compete with the incumbent LECs on a *retail* basis, they are not a source of *wholesale* competition for access to facilities to a customer's premises.

Cable telephony has been slow to develop. Upgrading cable systems from their traditional one-way analog video distribution capability to a network architecture capable of supporting digital video and two-way services such as high-speed Internet access and circuit switched telephony is a costly undertaking. Cable passes some 107.1-million US homes, of which 61% (i.e., 66.1-million) currently subscribe to cable TV service. Not all of the cable service that passes US homes is telephony-capable, however. By mid-2004, cable systems were providing basic local phone service to about 3.34-million customers nationwide<sup>51</sup> – representing only 3.1% of all homes passed by cable, 5% of all cable TV subscribers, and only about 1.85% of all local telephone access lines.

Moreover, these statistics address primarily the status of cable telephony offered to *residential* customers. Cable services are simply not an option for most business lines. First and foremost, they are generally not available at business locations. The networks constructed by cable companies are largely designed to reach residential dwellings, not business areas. With the possible exception of local retail shopping districts interspersed within or adjacent to residential neighborhoods, cable infrastructures generally do not “pass” business locations and thus cannot readily serve the vast

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50. Under TA96, the duty to offer wholesale unbundled network elements and total service resale applies only to incumbent local exchange carriers. Section 251(c)(3) and (4). Thus, even in those instances where cable companies are deemed to be offering telecommunications services subject to the FCC's Title II jurisdiction, they are not required to provide wholesale access to their networks. Additionally, the US Supreme Court upheld a ruling by the FCC that a cable company's offering of Internet access via cable modem service is an integrated information service and that the cable company cannot be required to disaggregate the service into separate telecommunications and information service components. *National Cable & Telecomm. Ass'n. v. Brand X Internet Services*, 125 S. Ct. 2688, 2704 (2005).

51. *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 04-227, *Eleventh Annual Report*, rel. February 4, 2005.

majority of office buildings and other business sites. Secondly, the facilities, when available, have important technical shortcomings that make them unsuitable for business customers' applications.<sup>52</sup>

Even the FCC has been skeptical of claims about cable alternatives to traditional ILEC services for enterprise customers. In its 2004 *Triennial Review Remand Order*, the FCC noted the following fallacies in the ILEC's assertions regarding intermodal competition from cable providers with respect to high-capacity loop facilities used by enterprise customers:

- “First, the record before us contains little evidence that cable companies are providing service at DS1 or higher capacities. ... [M]ost of the businesses served by cable companies are not large enterprise customers, but mass market small businesses that would never generate enough traffic to require a high-capacity loop.”<sup>53</sup>
- “In addition, the record suggests that where cable companies do provide service to business customers, they provide cable modem service, rather than service that is comparable to service provided over high-capacity loops. Competitive LEC commenters explain that bandwidth, security, and other technical limitations on cable modem service render it an imperfect substitute for service provided over DS1 loops. Commenters also note that businesses that do require DS1 loops are willing to pay significantly more for them than the cost of a cable modem connection, which also indicates that the two are not interchangeable.”<sup>54</sup>
- Finally, at least two competitors maintain that, based on their internal data, they rarely lose enterprise customers to cable providers.<sup>55</sup>

In any event, whatever minimal competitive impact cable telephony may have with respect to the residential telephone market, it is all but nonexistent in the enterprise business segment. Cable MSOs that are offering business services do so as CLECs, using the same technology and network architecture as other CLECs, subject to the same facilities deployment impediments as confront other CLECs, and in no way can such entry be considered “intermodal.” Except for little more than a handful of specific business locations offering a level of demand sufficient to overcome the economic barriers otherwise present for the construction of last mile facilities, the ILECs maintain an essentially unchallenged last

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52. Some cable operators have constructed fiber optic rings specifically to provide telecom services to larger businesses. However, these networks do not employ coaxial cable technology, do not constitute part of the cable TV distribution system, and are physically and functionally no different from CLEC fiber rings such as those constructed by TCG, Metro Fiber, and other competitive access providers.

53. *TRRO*, at para. 193, footnotes omitted.

54. *Id.*

55. *Id.*

mile monopoly over the network facilities that are required to serve business customers at the DS-1 service and above.

*Wireless substitution*

The vast expansion of wireless phone subscribership in recent years has occurred with little corresponding drop in wireline service demand. This would *not be the case* if consumers or businesses *in general* viewed wireless as a substitute for their wireline phone. By subscribing to *both* services, consumers are confirming that, if anything, they see the products as complements,<sup>56</sup> not substitutes. Indeed, it is the utter *lack* of substitution of wireless for wireline by the vast majority of (indeed, very close to all) households – and by virtually all businesses of every size – that provides compelling, essentially *irrefutable* evidence that wireless and wireline are *not in the same relevant product market* and that *wireless is not an “intermodal competitor” for traditional wireline telephone service.*

A recent paper examining the extent of wireless substitution, and its demographics based upon data from the National Health Interview Survey, January-December 2003, reported that only about 3.1% of civilian, non-institutionalized adults have only a wireless phone, and 3.7% of all households are wireless-only.<sup>57</sup> Moreover, the small number of customers willing to substitute wireless for wireline service is by no means evenly distributed. 7.1% of adults between the ages of 18 and 24 years are “wireless-only” (and indeed, many may not have “cut the cord” so much as never had a wireline phone at all), but the substitution rates drop off dramatically in the “post-college” population (4.3% for those 25 through 44 years old and 1.6% for those 45 through 65 and 0.5% for those over 65). Renters (7.5%) and adults living with roommates (8.7%) or alone (6.2%) reflect relatively higher wireless substitution rates (but still below 10%), but only 2.6% of households with children are willing to go without a wireline telephone. To be sure, some RBOCs have cited studies (conducted by or for them) that

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56. Formally, two products/services are “complementary” if a decrease(increase) in the price of one results in an increase(decrease) in the demand for both. While services that are not “substitutes” need not be “complements,” in this case wireline and wireless likely are complementary. The enormous penetration of wireless phones results in *usage* of the PSTN that might otherwise not take place, involving both originations and terminations on wireline networks. Thus, whatever usage substitution of wireless for wireline that may exist is offset by the net *stimulation* of usage of wireline services that is specifically attributable to the proliferation of wireless phones.

57. Currently, health surveys done by these, and other, organizations use random digit dialing frames consisting of wireline-only telephone numbers. To ensure the accuracy of health surveys, researchers must control for “unreachable” customers who have substituted wireless for wireline services, including the specific demographics (and health characteristics) of the substituting populations. The authors of this paper utilized a series of questions added by the National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention to the National Health Interview Survey (NHIS) to ascertain the prevalence and demographics of households that have substituted wireless telephone service for their residential landline telephones. Luke, Julian V., Blumberg, Steven J., and Cynamon, Marcie L., “The Prevalence of Wireless Substitution,” presented at 59th Annual Conference of the American Association for Public Opinion Research, May 15, 2004; and updates from slide presentation.

purport to show somewhat higher, but typically still single-digit, substitution rates.<sup>58</sup> However, even these likely exaggerated statistics still confirm that well in excess of 90% of all households do not consider wireline and wireless to be substitutes, and hence not in the same relevant product market.<sup>59</sup> Indeed, even conservative estimates indicate that 94% of all wireless households also have a wireline phone.<sup>60</sup>

To the extent that consumers seem willing to shift their calling entirely or primarily to a wireless phone, but nevertheless retain their wireline service, there is cause for continued skepticism about whether such consumers truly perceive the two services as “substitutes.” In any event, the low single-digit substitution rates and skewed demographics for wireline substitution cannot conceivably impose any consequential constraints on the incumbent LECs’ market power or prices, and there is no evidence that further growth in wireless/wireline substitution will come quickly enough or be widespread enough to discipline wireline ILEC conduct.

Moreover, describing wireless services as “competitors” to the US ILECs – and to the RBOCs in particular – ignores the extensive cross-ownership of wireless carriers by the ILECs and their efforts to jointly market wireline/wireless service bundles. AT&T/SBC, BellSouth and Verizon together control

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58. *Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements; 2000 Biennial Regulatory Review of the Separate Affiliate Requirements of Section 64.1903 of the Commission’s Rules*, WC Docket No. 02-112 and CC Docket No. 00-175, Ex Parte Submission of Qwest Communications, filed October 28, 2003; *Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements; 2000 Biennial Regulatory Review of the Separate Affiliate Requirements of Section 64.1903 of the Commission’s Rules*, WC Docket No. 02-112 and CC Docket No. 00-175, Ex Parte Submission of Verizon Inc., filed October 15, 2003.

59. Former FCC Chairman Michael Powell, along with numerous ILECs, have cited to the substitution of wireless for wireline services as proof that the ILECs’ bottleneck market power is eroding. This perception of substitution has been reinforced by the popular media, which have carried any number of stories about individuals who have “cut the cord” and now use only their wireless phone, both at home and away. Various studies have attempted to quantify this phenomenon, yet have presented widely varying results, with estimates of substitution varying from 2.5% to as much as 20% (the high end of the range is found in surveys of very limited geographic scope). Much of the variation is due to the study methodology and, where that involved customer surveys and interviews, the manner in which the specific questions were framed. For example, a study performed by RoperASW asked about households using cell phones only to make and receive calls. Other studies asked about the customer’s “primary” phone, or where they make “most” of their calls. These surveys typically result in a higher rate of substitution – it is also likely that they pick up many respondents who maintain their wireline connections for incoming calls, emergencies, and occasional use.

60. For example, one data source indicates that 70% of US households have wireless phones, and 96% of US households have wireline phones. See, <http://www.tnstelecoms.com/press-10-20-04.html>. Based upon US Census data, there are 108-million households in the country, from which we can estimate 76-million wireless households and 4-million households without wireline service. Even if we assume that 100% of all households without wireline service have wireless service, this still results in more than 94% of wireless households retaining wireline service.

some 63% of the market served by the four national wireless service providers,<sup>61</sup> and likely enjoy even larger market shares within their home ILEC regions due to the historical grants to the RBOCs in the mid-1980s of the so-called “B-block” wireline set-aside cellular licenses and more recently to aggressive joint marketing efforts by the BOCs and their wireless affiliates.<sup>62</sup> Thus, for the RBOCs, a “loss” of a wireline phone to wireless – in the rare event that it occurs – is in most instances is *not a loss* of the customer.

#### *Voice-over-Internet-Protocol (VoIP)*

The hype over VoIP services has been escalating dramatically over the past several years, as the FCC and state commissions grapple with unresolved regulatory concerns arising from VoIP providers’ efforts to integrate their services into the public switched telephone network. To be sure, some of the claims being made for VoIP are accurate – VoIP services do offer some functionalities that are not available with traditional voice services – but for the most part VoIP services do not yet offer the level of quality and robust reliability that consumers have come to expect from their local wireline telco are generally less expensive to purchase than traditional voice services. The quality of the connection is not as reliable, access to 911 emergency services is less certain and in some cases not even available, alarm and medical monitoring equipment may not work, directory listings may not be available, and service loss in the event of a power outage are all areas where wireless and VoIP services are not functionally equivalent to landline service. All of these differences affect consumers’ view of whether a VoIP line is a substitute or a complement to traditional landline service, and explain why VoIP substitution is not widespread. Indeed, the *underwhelming* response to Vonage’s May 24, 2006 Initial Public Offering (“IPO”), with the shares losing roughly one-third of their value within two days and nearly 60% after two months, provides further confirmation of investor skepticism as to the financial and market viability of stand-alone VoIP offerings.<sup>63</sup>

In order to use VoIP, a consumer must subscribe to high-speed (DSL or cable modem) Internet access, the price of which, when combined with the charge for the VoIP phone service itself, greatly exceeds the typical price of wireline residential phone service. VoIP service also competes for bandwidth with other uses of the consumer’s high-speed Internet access service, such that voice quality may be seriously degraded when, for example, a family member is sending or receiving e-mail or surfing the ‘Net.

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61. Wireless Competition Bureau, Federal Communications Commission, *Tenth Annual CMRS Report*, September 26, 2005, at Appendix A, Table 4. The subscribers of all national carriers from the table are summed, and divided into the combined subscribers of Verizon Wireless and Cingular Wireless (Combined Cingular Wireless and AT&T Wireless).

62. For example, Verizon offers its Massachusetts customers a \$5 discount if they combine their wireline and wireless billing into a single account. Verizon New England Inc., DTE MA No. 10, Part M, Section 1, 12<sup>th</sup> Revised Page 64, Effective January 15, 2005.

63. See, Shawn Young and Lynn Cowan, “Vonage Lacks Voltage in Its IPO, With Weakest Debut in 2 Years,” *The Wall Street Journal*, May 25, 2006.

While these service quality and technical shortcomings of consumer VoIP services are probably not present when provided over dedicated facilities to business and enterprise customers, business VoIP cannot be considered an “intermodal competitor” to wireline services because the necessary last mile dedicated connections are themselves provided as special access type services by the ILEC. As we have discussed previously (in Chapter 2), the persistent and pervasive ILEC monopoly over special access type services has resulted in a succession of price increases since the FCC’s adoption of “pricing flexibility,” and has produced high double-digit, and even triple-digit, ILEC rates of return on special access services. With this choke-hold over special access firmly entrenched, business VoIP is clearly not a competitive threat to the incumbent LECs.

*WiMax, WISPs, and other fixed wireless “solutions” are not the answer.*

RBOCs try to point to fixed wireless and other intermodal alternatives to the last mile monopoly. Fixed wireless service is more easily deployed than cable, but like cable is a wholly inadequate substitute for high capacity wireline access for business customers. Fixed wireless was introduced in the late 1990s as yet another highly touted technology, but like many of the others it has not lived up to initial expectations. Since its inception, fixed wireless has been bogged down with operational difficulties, including both security and transmission problems. According to one network research firm, “[t]here are important issues that network executives will need to resolve before signing up for fixed wireless, including security and possible performance degradation from interference with other service providers.”<sup>64</sup> When real-time communication is essential, this technology is a liability. In addition to security and service quality issues, fixed wireless also struggles with connection problems. The technology requires line-of-sight transmission. This means that all of the microwave dishes tend to be set up in the same places, namely on towers, roofs of high-rise office buildings, or hillsides – and the concentration of this equipment at these sites exacerbates the interference problems. In analyzing competitive alternatives available to enterprise customers in the context of its market analysis for the *Triennial Review*, the FCC all but dismissed fixed wireless as an alternative for enterprise customers, finding that “while there was some fixed wireless entry in the enterprise market, it has been limited.”<sup>65</sup>

Fixed wireless has remained a marginal technology for serving the needs of enterprise customers (and the fixed per-customer cost makes it prohibitive for mass market adoption). Current deployment in the enterprise market is minimal – a little over 25,000 lines across the US.<sup>66</sup> Indeed, even if one were (unrealistically) to assume that all of those fixed wireless lines were being used as substitutes for

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64. Jim Geier, *Fixed Wireless Fills a Niche*, Network World Fusion, October 22, 2001. Available at <http://www.nwfusion.com/techinsider/1022broadband/feat.html> (accessed June 4, 2004).

65. *Triennial Review Order* at 18 FCC Rcd 17012, fn. 144.

66. *High Speed Services for Internet Access: December 31, 2003*, Table 1 and 3.

ILEC special access, they would account for *two one-hundredths of one percent* of the 103.8-million special access lines (measured in voice grade equivalents).<sup>67</sup>

## **The future is not today**

Someday, technology may truly permit consumers to “cut the cord” and still access a full range of reliable, high-quality, and innovative telecommunications services at prices set by robust competitive market forces. This is a laudable goal, but it is far from today’s reality. As we have demonstrated, wireless services are not true substitutes for wireline basic local exchange services and are not perceived that way by consumers because of a host of differences in their quality, reliability, and price. The extent to which wireless develops as a competitive force will also depend upon whether mega-ILEC conglomerates are permitted to continue expanding their already considerable ownership of spectrum and of wireless providers. As to VoIP, which has also yet to overcome various quality and security concerns, consumers and businesses must still rely upon wireline (or, in the case of residential consumers, cable) “last-mile” facilities. Thus, for the present and for some time to come, wireless and VoIP may offer some overlap with wireline local and long distance services, but they cannot fairly be included within the same relevant market for purposes of assessing the ability of CLECs to present effective competitive challenges to the dominant ILEC monopolies.

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67. Industry Analysis and Technology Division, Wireline Competition Bureau, *Statistics of Communication Common Carriers 2002/2003*, March 2, 2004.

# 5 | CONCLUSION

The US experience incontrovertibly confirms that mandated access to wholesale network elements at cost-based rates lies at the cornerstone of a competitive telecommunications policy. Competition was growing and competitive telecom ventures were attracting large infusions of investment capital *during precisely the period in which entrants could obtain the full range of unbundled network elements from the incumbent LECs*. Telecommunications is a network-based industry, and the value of a network and its attractiveness to customers varies directly with its extensiveness. It is unrealistic to expect that entrants will reproduce the embedded networks of the incumbent carriers, which took more than a century to construct and whose investors were protected by franchised monopoly and economic regulation.

The fact that entrants may be able to efficiently construct *some* facilities of their own in *some* geographic or service markets in no way creates an inference that corresponding elements of the incumbents' networks *in all geographic areas and in all service markets* are “non-essential.” Trivializing the “essential facilities” debate by focusing upon narrow attributes of isolated network components ignores the fundamental economics of network-based industries and network externalities generally. Rather than stimulate and encourage competitor investment in facilities, the elimination of certain UNEs had precisely the opposite effect. It has led to the near collapse of telecom competition *across all major market segments* (local, long distance, enterprise, broadband, and the Internet backbone) and portends the rapid reconcentration of the US telecom industry.

The “on-the-ground” outcome of the various US regulatory and judicial determinations freeing ILECs of certain wholesale services obligations sadly demonstrates that competition will be “impaired” right out of existence when such access is denied. Any CRTC review of mandated access to wholesale services and the identification of “essential services” should not ignore this US experience, and should make every effort to avoid the numerous policy missteps that have all but dismantled competitive telecom in the US.

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