Missouri Public Service Commission

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September 21, 2001

Mr. Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

RE: Case No. TA-99-47

Dear Mr. Roberts:

Enclosed for filing in the above-captioned case are an original and eight (8) conformed copies of the **STAFF MOTION TO LATE FILE ATTACHMENT 2 TO ITS REPLY.**

This filing has been mailed or hand-delivered this date to all counsel of record.

Thank you for your attention to this matter.

Sincerely yours,

Marc Poston

Marc D. Poston
Senior Counsel
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MP/lb
Enclosure
cc: Counsel of Record

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

FILED[2]
SEP 21 2001
Missouri Public Service Commission

In the Matter of the Application of Southwestern Bell Communications Services, Inc., d/b/a Southwestern Bell Long Distance for a Certificate of Service Authority to Provide Interexchange Telecommunications Services Within the State of Missouri.	)))))))	Case No. TA-99-47

STAFF MOTION TO LATE FILE
ATTACHMENT 2 TO ITS REPLY

COMES NOW the Staff of the Missouri Public Service Commission and states as follows:

1. On September 20, 2001, the Staff filed a Staff Reply to Southwestern Bell Long Distance, AT&T Communications of the Southwest, Inc. and the Missouri Independent Telephone Group (Staff Reply). Under 4 CSR 240-2.080(16), the Staff had until 4:00 p.m. on September 20, 2001 to respond to Southwestern Bell Long Distance's (SBLD) September 10, 2001 response to the Staff's Recommendation. The Staff Reply references two attachments, Attachment 1 and Attachment 2. Due to the large size of Attachment 2, the Staff was unable to make the necessary copies of Attachment 2 prior to the 4:00 p.m. filing deadline. However, the Staff was able to file its pleading with Attachment 1 by the filing deadline. The Staff hereby moves to late file Attachment 2 pursuant to 4 CSR 240-2.050(3)(B).

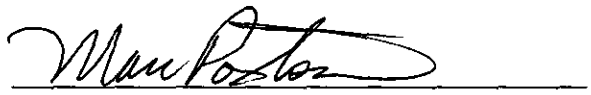
2. On September 20, 2001, the Staff sent copies of the Staff Reply, including both attachments, via electronic mail to all parties of record and, therefore, no party should be prejudiced.

WHEREFORE, the Staff respectfully moves to late file Attachment 2.

lcl

Respectfully submitted,

DANA K. JOYCE
General Counsel



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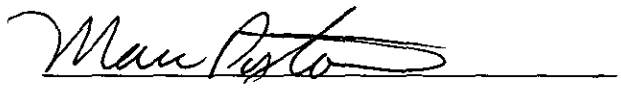
Certificate of Service

I hereby certify that copies of the foregoing have been mailed or hand-delivered to all counsel of record as shown on the attached service list this 21st day of September 2001.



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January 11, 2001

Honorable Members of the Seventy-Seventh Texas Legislature:

We are pleased to submit our 2001 Report on the Scope of Competition in Telecommunications Markets, as required by Section 52.006 of the Public Utility Regulatory Act (PURA).

Since we issued our previous report on telecommunications competition in January 1999, the Commission has continued to make significant progress in managing the transition to competitive local telecommunications markets. Numerous new providers have entered the market, and the market share held by competitive providers has increased significantly. Recent developments, however, have shown that some of the new providers are having difficulties staying in the residential local exchange market.

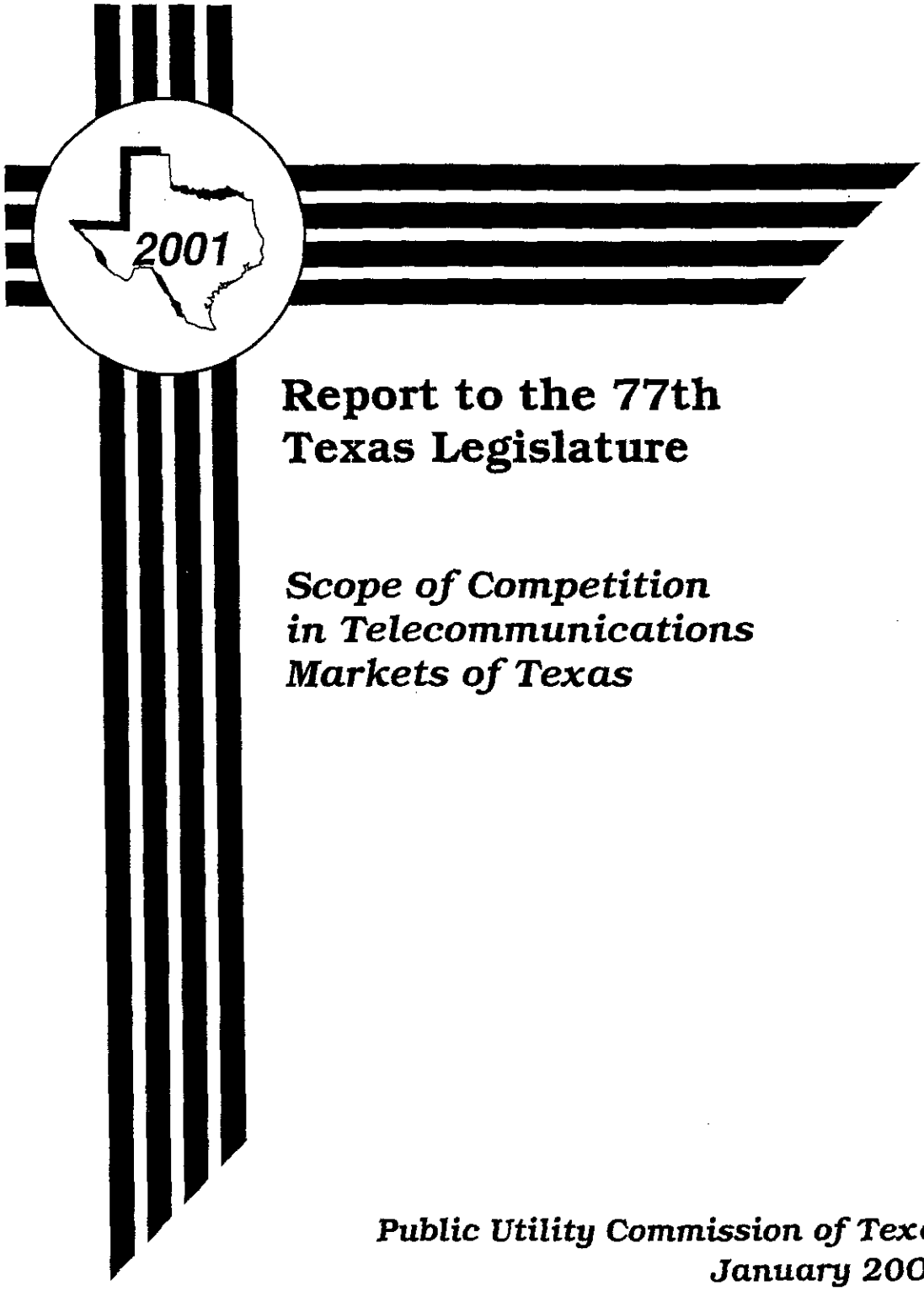
In the four largest metro areas of Texas, facilities-based competitors have developed increased capacity for long-run competition with incumbent providers. As a result, the market for business customers in these metro areas has strong potential for genuine competition, although market penetration levels are too low to conclude that full competition has arrived. Whether residential and rural customers will have competitive choices is more uncertain.

Chapter 6 presents an economic diagnosis for why residential and rural customers have largely been left behind in the move to competition. The regulatory tradition of maintaining low (often below cost) rates for residential local telephone service is the key reason. As outlined in the Executive Summary and discussed in its first legislative recommendation, the Commission presents the Texas Legislature with several alternative strategies to create greater opportunity for residential and rural customers to benefit from local exchange competition.

We look forward to continuing to work with you on this and other policy objectives. If you need additional information about any issues addressed in the report, please call on us.

Sincerely,

Pat Wood, III	Judy W. Walsh	Brett A. Perlman
Chairman	Commissioner	Commissioner



Report to the 77th Texas Legislature

Scope of Competition in Telecommunications Markets of Texas

Public Utility Commission of Texas
January 2001

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EXECUTIVE SUMMARY

Competitive local exchange carriers now have the regulatory framework to challenge Southwestern Bell and Verizon for market share in Texas. The Public Utility Commission of Texas (Commission) has certified several hundred new entrants, and those in operation have gained visible market share. While the potential for genuine competition is strong for some markets in Texas, it is less likely to flourish in others. At this time, residential and rural customers are better served by existing price cap regulation of traditional nonbasic local service until more viable and sustainable competitive choices become available to them. The Commission recommends finding the proper balance between protecting residential customers in the short run and promoting competition in the long run for the local exchange residential market.

Progress in Local Exchange Competition

During the last few years, the Commission successfully implemented federal and state legislation to open the service territories of the incumbent local exchange carriers, and competitors have responded to the opportunity. As part of the proceedings that led to the approval of Southwestern Bell's application to enter the long distance market, the Commission approved the Texas 271 Interconnection Agreement (T2A), which provides for a standardized, efficient, and quick way for competitors to enter Southwestern Bell's service territories. The availability of such an agreement is a necessary first step to facilitate the entrance of new competitors into the marketplace. Sprint has voluntarily agreed to develop a standard agreement, but other incumbent local exchange carriers – those serving primarily rural areas – are not similarly situated due to the federal exemption for rural carriers from most competition-related requirements. Survey data show that, as of the end of 1999, competitive providers rapidly gained market share in local telephony, as measured in telephone lines operated and in revenues earned. Market penetration is highest in the large metro and suburban areas of Austin, Dallas, Houston, and San Antonio, with more than 30 competitive providers in each metro area by late 2000. Many smaller and medium-sized metro areas, such as Abilene, Beaumont, and Longview, had six to ten competitive providers offering services. Market penetration by competitors in rural areas is very limited, although increasing relative to 1997.

Competitors gained market share among business customers more than among residential customers. Facilities-based competition in the four largest metro areas has provided increased capacity for competitors to compete with incumbent providers in the long run. As a result, the market for business customers in the large metro areas of Texas has strong potential for genuine competition, although the levels of market penetration as of 1999 are too low to declare that full competition has arrived. Whether residential and rural customers will have sustainable competitive choices in the near future is less certain.

Events in the year 2000 have changed conditions for local exchange competition in Texas and across the nation. Competitive local exchange company (CLEC or competitor) stocks have seen a slump in share prices. AT&T, Sprint, and Worldcom announced major company reorganizations with decreased focus on serving residential mass markets. These events suggest that competitors may be heading for a period of consolidation – between companies and within markets. A number of key competitors that were expected to challenge Southwestern Bell and Verizon now seem to be limiting their entry into general residential voice markets.

Because Southwestern Bell can now compete for long distance customers in Texas, the company has made a strong push in 2000 to bundle its offerings to provide residential customers with various options for "one-stop shopping." Using the pricing and packaging flexibility that SB 560 provided, Southwestern Bell raised prices on the majority of its vertical (nonbasic) telephone services for both residential and business customers while lowering prices for nearly a third of those services listed in this report. Southwestern Bell also gained a sizeable portion of the long distance market just months after offering long distance service for the first time. Southwestern Bell's largest and strongest competitors have not been offering substantial competition in vertical services or in bundling local residential services with long distance or other services and have lost market share in long distance service.

While opportunities are in place for CLECs to compete in most areas of Texas, the Commission recognizes that differences in customer characteristics and population density among various regions of Texas affect where CLECs decide they can profitably compete and the type of customers they serve. The willingness of the incumbent local exchange company to work with CLECs is also a factor. At the same time, cross-subsidies that have traditionally kept residential rates artificially low now contribute to the lack of competition for residential customers. The same cross-subsidies have provided cream-skimming opportunities in large metro and business markets.

While the possibilities of competition for local service using traditional wireline are mixed at best, technology is reshaping the competitive landscape of telecommunications. New technologies such as cable, wireless, satellite, and voice over Internet Protocol likely will create new avenues and providers for customers to receive traditional local and long distance voice services, profoundly changing the market structure from the customers' point of view at some point in the future.

Next Step for Local Competition in Texas

The *2001 Scope of Competition Report* summarizes the path taken to open century-old monopolies as well as the use of new tools for facilitating competition that the Texas Legislature provided last session. As detailed above, the response has been good in some markets and disappointing in others. The conclusion today is that competition looks viable in the business and urban markets, but may not be as viable for certain rural and residential customers. The *Report* offers an economic diagnosis for why this pattern has developed, with the primary causes rooted in underlying market conditions and in the historical regulatory pricing system for local telephone service.

Texas has had a long-standing public policy to provide universal service and to maintain low rates for basic residential local service. However, continuing this policy means that some segments of the market may not receive rates that reflect the true cost of the service. In the short term, these segments - most notably residential and rural customers - may need protection from price increases if the market does not effectively moderate them. Indeed, further action may be necessary to ensure that competition comes to these markets at all. The Commission recognizes that short-term remedies are not long-term solutions in regulating a telecommunications industry that is rapidly evolving away from selling simple voice service.

There are a number of ways Texas can go from here. Approaches can be passive or active. The Commission suggests that the Legislature consider the following options for addressing the lack of competition in Texas local residential and rural markets:

Option A: Passive Erosion (no change to current pricing structures).

This is the de facto policy now in effect. If the market is left to behave under current policies, residential customers will continue to have low rates for basic service, but incumbent carriers likely will raise rates further on nonbasic services with little competition under the pricing flexibility granted in SB 560. The economic term for the process of aligning rates to reflect actual costs is called rebalancing. A benefit of allowing these rates to rise is that higher rates for the total set of residential services (even with basic service rates held artificially low) would provide CLECs incentives to offer competitive bundled service packages and to bring new technologies to more areas of Texas. As a result, CLECs may be able to erode the market share of incumbents over the long term.

However, a likely consequence of this approach is that CLECs will serve profitable high-end residential customers and the remaining customers, especially low-end residential and rural customers, may experience price increases for commonly used services for which there are no affordable substitutes at this time. So, while the bundled price of residential telephone services may move closer to its true cost for some customers, the burden of rebalancing prices would continue to be borne by the vertical services user, while basic local services remain subsidized below true cost. From the public's point-of-view, this arrangement may be preferable to having that burden be borne by all residential dial-tone customers.

Option B: Place a temporary, two-year price cap on popular nonbasic residential services that do not currently have competition, and evaluate whether further steps are necessary at the close of the cap to ensure competition in these markets.

This option borrows from both laissez-faire and regulatory economics. Placing caps on residential call forwarding, caller ID, and call return, - the prices of which have increased substantially since SB 560 became effective - would moderate the burden borne by residential customers during the transition to competition for local exchange markets.

Most residential and rural customers receive basic local services at rates well below their true cost (with the remainder of the cost subsidized by Texas and federal universal service payments and over-priced vertical or nonbasic services). The best hope

many of these customers have for competition is from alternate technologies – such as wireless, satellite, or cable – that are not yet cost-competitive with landline basic local service. Landline local exchange competitors may never be competitive with incumbent-provided basic local service at current, subsidized rates. Therefore, the primary benefit of price caps on nonbasic services would be to temporarily protect residential customers from further price increases for services that have already seen large price increases. Such a strategy would allow the opportunity to see if the bundled local service package is priced high enough to allow more competitors to serve more residential and rural customers.

A disadvantage of this approach is that competitive providers need sufficient profit to fight for and win market share from incumbent carriers. Caps on vertical services will also affect competitors' profits slowing innovation in telephony services. At the present time, the Commission has observed that incumbent carriers are often charging prices for nonbasic services that are 5 to 10 times higher than their costs and, in an extreme case, 100 times higher than their costs. Capping prices at these levels would not limit opportunities for competitors to enter the market profitably.

Option C: Authorize and direct the Commission to hold a proceeding to rebalance costs into a structure that gives competitive providers the incentive to compete in residential and rural markets.

Most residential customers get a majority of their basic local services below cost. Rebalancing of rates would establish residential and rural rates that more closely, reflect the true costs of service. CLECs would have greater incentives to enter new markets in Texas with a wider range of sophisticated services for customers outside the large metro areas. Higher, rebalanced local rates would give local service providers much more economic headroom to deploy advanced telecommunications technologies and services for rural and residential customers.

This approach, however, has several drawbacks. After years of subsidized low rates, many customers would face increases in basic service rates as a result of rate rebalancing. Determining the proper, cost-based price for basic service in a given area would be difficult. Raising the rates for basic local services to meet costs might not permit competition anyway, as lower income and sparsely populated areas of Texas may never be profitable enough to attract competitors in traditional local service for reasons other than retail pricing.

Option D: Combine Options B and C

Combine Options B and C for a comprehensive solution that includes the short-term protection of price caps and the long-term incentives of rebalancing prices to more fully reflect costs. The advantage of this approach is that any negatives associated with the moratorium on certain residential service prices under Option B can be evaluated and adjusted in the course of rate rebalancing. Furthermore, such a proceeding and its implementation are likely to take most of the two years of the Option B moratorium. The cap on prices may mollify negative public reactions that otherwise could result from higher prices, while allowing residential and rural customers to reap the benefits of a wider range of telephone services in the future.

While one of these approaches may be desirable, the Commission believes that long-term re-regulation of residential and rural markets should not be necessary. While monopoly power is still a factor in residential and rural markets at this time, new technologies appear to have the potential to stimulate vigorous competition in a number of parts of Texas in the years to come. Until then, the Legislature's price cap on traditional phone services serves as an appropriate customer protection.

CHAPTER 1: LEGISLATIVE PARAMETERS FOR LOCAL COMPETITION

The beginning of local exchange competition in Texas is evident. Competitive telecommunications providers now have fair access to networks to provide local exchange service in Texas. Over the past two years, the Commission and interested parties have hammered out the details of a procedural and structural framework for local competition that gives competitors ready access to the Texas markets. The transformation is sufficient to firmly position Texas for the development of long-term, sustainable competition and for increased customer choices in telecommunications services.

Texas met the challenges of federal laws and regulations regarding local competition, which give state commissions great responsibility for their implementation. For example, state commissions must approve or reject agreements among competitors and incumbent providers to interconnect their networks, and they have primary responsibility for arbitrating and mediating such agreements if asked to do so by the negotiating parties. State regulators are also charged with developing and implementing cost-based prices for many provisions of interconnection agreements. While the basic blueprint for local competition is established on the federal level, the front line for implementation is the state level.

A number of the implementation developments in Texas are quite extraordinary, as reflected in the fact that they have been closely watched and are now routinely mirrored by other states. They are the result of contributions by many people representing many constituencies, including new market entrants, incumbent local telephone companies, the U.S. Department of Justice, the Federal Communications Commission (FCC), and the Texas Commission commissioners and staff. All shared a vision of a competitive future for telecommunications in Texas, although each viewed the details from different perspectives and interests. These entities contributed thousands of hours to deliberations and/or negotiations. The result is that many of Texas' nearly 20 million people have at least some choice in the provision of local telephone service.

How and why did we get here? Formative legislation at both state and federal levels set the stage for this transformation. Chapter 1 highlights the relevant history and directives of that the threshold legislation.

Key Legislation

TEXAS HOUSE BILL 2128 (A.K.A. PURA 95)

In 1995, the Texas Legislature adopted House Bill 2128 (HB 2128), which significantly amended the Public Utility Regulatory Act (PURA) with regard to telecommunications. It mandated the opening of local exchange telecommunications markets in Texas, particularly in areas served by Southwestern Bell Telephone Company (SWBT) and GTE Southwest Incorporated. The law provided a framework for competitive local exchange carriers (CLECs)[1] to obtain authority from the Commission to provide local exchange service through any of three avenues, including by building network facilities,[2] leasing local loops,[3] or reselling another company's telecommunications services.[4] Additionally, HB2128 established the duty of telecommunications providers to "interconnect" their networks with each other.[5]

FEDERAL TELECOMMUNICATIONS ACT OF 1996

On February 8, 1996, Congress enacted the federal Telecommunications Act of 1996 (FTA),[6] which paralleled HB 2128 in numerous ways, and fundamentally changed telecommunications markets for the entire nation. The FTA was the most dramatic change in telecommunications law since Congress passed the Communications Act of 1934. Three principal goals established by the telephony provisions of the 1996 Act were (1) opening the local exchange and exchange access markets to competitive entry; (2) promoting increased competition in telecommunications markets that were already open to competition, including the long-distance services market; and (3) reforming the system of universal service so that universal service would be preserved and advanced as the local exchange and exchange access markets move from monopoly to competition.

TEXAS SENATE BILL 560 AND SENATE BILL 86

The transition from monopoly to competition could not and did not occur quickly. In 1999, the Texas Legislature revised PURA by enacting two bills dealing with the provision of local exchange telephone service. SB 560 increased flexibility for incumbent local exchange companies (ILECs) in pricing and packaging telecommunications services. The Texas Legislature also passed SB86 to ensure customer choices and protections.

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[1] Perspectives on CLEC market share are discussed in Chapter 3. Certificated CLECs are listed in Appendix G.

[2] PURA95 § 3.2531. The remaining part of this section is now in PURA Ch. 54, Subchapter C.

[3] PURA95 § 3.453 (now PURA Ch. 60, Subchapter C). In addition, PURA95 § 3.453 (now PURA § 60.021) directed ILECs to unbundle their networks to the extent ordered by the FCC.

[4] PURA95 § 3.453 (now PURA Ch. 60, Subchapter C).

[5] PURA95 §3.458 (now PURA Ch. 60, Subchapter G).

[6] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) (1996 Act). The 1996 Act amended the Communications Act of 1934. 47 U.S.C. §§ 151 *et seq.* (FTA).

Key Features of the FTA

THE TRILOGY: LOCAL COMPETITION, UNIVERSAL SERVICE, & ACCESS CHARGES

The FCC views the FTA as a trilogy, *i.e.* a three-pronged plan. The first prong of the trilogy consisted of opening local exchange and exchange access markets to competition.[7] The FTA requires all local exchange carriers (LECs), not just incumbents, to interconnect so that competing carriers can provide service.[8] The second prong of the trilogy is universal service reform. Consistent with FTA §254, *Universal service*, the FCC believes the universal service support system must guarantee affordable telephone service to all Americans in an era in which competition will be the driving force in telecommunications (*see* Appendix A). The third prong of the trilogy is access charge reform.[9] Because a competitive market drives prices toward cost, the then-existing system of access charges was unsustainable because access charges were widely believed to be significantly higher than the cost of providing access (*see* Appendix B).

METHODS OF COMPETITIVE MARKET ENTRY

The FTA §251(a)(1) requires all telecommunications carriers to interconnect with the facilities and equipment of other telecommunications carriers, allowing competitors three ways to serve customers.

- Resale – Under this entry method, competitors have the option to purchase telecommunications services from another LEC at wholesale rates and resell those services to their own customers at retail rates.[10] Competitors often use resale as a transitional entry strategy while building a proprietary network over a period of months or years.
- Access of Unbundled Network Elements – This entry method enables competitors to lease discrete parts of an ILEC's network – facilities and equipment that are used to provide telephone service – at cost-based rates. These leased parts of the ILEC network are referred to as "unbundled network elements" (UNEs). Competitors can combine leased UNEs with their own facilities and/or resold services.

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[7] Opening local markets was accomplished primarily through FTA § 251, *Interconnection,* and § 252, *Procedures for negotiation, arbitration, and approval of agreements.* Additionally, special provisions for opening local markets contained in FTA § 271, *Bell operating company entry into interLATA services*, pertain only to Bell Operating Companies.

[8] FTA §251(a)(1).

[9] Access charges are per-minute charges billed by LECs to long distance companies for access to the local exchange network so that long distance companies can originate and terminate long distance calls.

[10] All LECs are required to make their telecommunications services available for resale pursuant to FTA § 251(b)(1). However, only *incumbent* LECs are required, pursuant to FTA § 251(c)(4), to make their retail telecommunications services available for resale at a wholesale discount.

- Construction of New Facilities – A competitor may enter a local telephone market by building entirely new facilities. Under a full "facilities-based" method of entry, a competitor builds all of the network that it needs to serve customers, including the "last mile" or "local loop" – the connection to a customer's premise. Because telecommunications networks are capital-intensive, there are relatively few facilities-based carriers compared to the number of resellers and UNE-based carriers.

THE SECTION 271 "CARROT"

Section 271 of the FTA allows a Bell Operating Company (BOC) to enter the long distance market after the BOC *proves* that it has opened its local market to competition.

Bell Operating Companies were created in 1984 with the divestiture of AT&T, and were granted monopoly status to provide local service, subject to regulation by the states.[11] At that time, BOCs were prohibited from competing in the interLATA long distance market to prevent them from committing anti-competitive practices against long distance providers.

Clearly, the FTA's requirement that the former monopoly BOCs open their networks to competitors, resulting in a loss in market share and power, was a tall order. Because entry into the long distance market would allow a BOC to offer its customers "one stop shopping," the Section 271 provisions created an incentive to BOCs to cooperate with the FTA mandate to open their networks to local competition.

FEDERAL-STATE SHARED RESPONSIBILITY FOR IMPLEMENTATION

Implementation of the FTA has led to parallel proceedings at state and federal levels, covering similar issues, in similar time frames, affected by court challenges. Often, interplay across proceedings occurred.

The FTA's blueprint for encouraging local exchange competition placed great responsibility on the FCC and state commissions to implement the law.[12] Only six months after adoption of the FTA, the FCC produced two comprehensive documents charting a course for implementation. Some of the FCC's interpretations were challenged in federal court, and many of the FCC's interpretations of FTA requirements were affirmed. Where specific FCC findings were not affirmed, federal and state regulators adjusted through regulatory rule and other processes.[13]

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[11] In 1984, there were seven Regional BOCs, made up of a total of 29 BOCs.

[12] Although the FCC establishes nationwide guidelines, state regulators play a major role in implementing key provisions of the FTA. For example, state Commissions must approve or reject interconnection agreements, and they have primary responsibility for arbitrating and mediating such agreements if asked to do so by the negotiating parties. State regulators are also charged with developing and implementing cost-based prices for interconnection and UNEs.

[13] In its initial Order implementing the local competition provisions of the FTA in August 1996, the FCC established rules about how interconnection between incumbent and competitive carriers would be accomplished, how the competitors would be allowed to collocate equipment in the incumbent's structures,

Implementation of the FTA was and continues to be a phenomenal undertaking - the magnitude of which could not have been realized when the FTA was adopted. The web of multi-faceted and concurrent activities that produced the framework for and growth of local competition in Texas is a story told in Chapter 2.

which parts of the incumbent's network would be open to competitors, and through which states would be able to establish rates for competitors' interconnection. After the FCC released its ruling, several parties, including some state regulators, challenged the decision before the U.S. Court of Appeals for the Eighth Circuit. The Eighth Circuit overturned many of the FCC's rules on the grounds that the FCC had exceeded its authority and misinterpreted the Act. In early 1999, the U.S. Supreme Court issued a decision that noted that the Act was vague in some respects, affirmed the FCC's rulemaking authority to implement the local competition provisions of the Act, and upheld most of the FCC's rules. The case was sent back to the lower court for further proceedings consistent with the Supreme Court's decision. While court challenges raged on, state regulators and the FCC moved forward with the implementation of competition in local exchange markets.

CHAPTER 2: THE IMPLEMENTATION STORY

The contested case in which Southwestern Bell Telephone Company (SWBT) sought the Commission's support to enter the long distance telecommunications market is often simply called "271" because the issue at hand was whether and how SWBT met the conditions set forth in Section 271 of the FTA. The case became longer and more complex than anticipated in the early stages, and grew to encompass developments in numerous concurrent proceedings.

While working through the ever-widening details, the 271 case moved a reluctant incumbent into a mode of cautious cooperation to make the local exchange service market accessible to competitors. The monopoly and its competitors were linked together by unavoidable technical, operational and legal issues, and persevered to engineer the beginning of local competition.

The FTA and Texas statutes[14] provided the initial directive and the basic components of a framework for implementing local exchange competition in Texas. The forum for implementing these laws became the 271 case. It is the centerpiece of the story, and where we begin this chapter. With hundreds of millions of dollars at stake, both for incumbents and new market entrants, the 271 case will perhaps have the most far-reaching effect on telephony of any single case in the Commission's history.

Chapter 2 tells the story of the 271 case and other regulatory developments of the past two years that are central to the framework of local exchange competition in Texas.

Implementation of FTA Section 271

Section 271 is the section of the FTA that allows a Bell Operating Company (BOC) to enter the long distance market[15] after the BOC proves that it has opened its local exchange markets to competition from other local exchange providers. The long distance market was the carrot Congress dangled in front of the BOCs to encourage cooperation in opening local exchange markets to competition.[16] (The second-largest ILEC in Texas, GTE Southwest Incorporated, was also obligated to open its networks to competitors via interconnection agreements, but the Section 271 incentive to do so was not applicable since it was not a BOC). SWBT, eager to offer one-stop shopping to its

[14] *See* FTA §§271 and 251, SB 560 and SB 86.

[15] In this context, the BOC is permitted to enter the in-region, interLATA long distance market. In other words, it is allowed to offer long distance service across LATA boundaries within its own region.

[16] The BOCs were created in 1984, as a result of the divestiture of AT&T, and were granted exclusive franchises to provide local service, subject to regulation by the states. At that time, BOCs were prohibited from competing in the interLATA long distance market.

Texas customers, was the second BOC in the U.S. to meet the requirements of Section 271.[17]

The FTA obligated SWBT to open its network to local competition regardless of its interest in becoming a competitor in the long distance market.[18] However, because SWBT, the BOC of Texas, was quick to initiate its application to enter the Texas long distance market, SWBT's 271 proceeding became the venue where the implementation issues for other FTA provisions were identified, negotiated, and resolved.

SWBT's 271 Application

On March 2 1998, SWBT delivered its *Notice of Intent to File Section 271 Application for interLATA Authority in Texas* (the 271 application) to the Commission.[19] To support the application, forty-seven affidavits were provided by dozens of SWBT witnesses; including the economist Alfred Kahn, to argue that SWBT's application met the requirements of Section 271 of the FTA and was in the public interest. The Commissioners presided over a lengthy hearing. CLECs alleged, through dozens more affidavits, that SWBT had engaged in anti-competitive and discriminatory behavior, thwarting their efforts to enter local exchange markets. SWBT responded to some allegations and denied others.

After the hearing concluded, the Commission found that SWBT had done much to open the local market to competition. Nevertheless, the Commission determined that SWBT's application did not fully comply with the requirements of Section 271 of the FTA. While denying the application, the Commission gave SWBT recommendations on how to meet the requirements of Section 271 (sometimes referred to as the "roadmap"). The first and most important recommendation was to establish a collaborative process to address all issues in dispute. Through the collaborative process, agreement eventually was reached between the parties on 129 specified issues.

What SWBT Had to Prove

Section 271 of the FTA requires a BOC to establish the following before it is allowed to offer long-distance services.

- the presence of a facilities-based competitor providing local service to residential and business customers under an Interconnection Agreement

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[17] Bell Atlantic, the BOC for New York state, was the first to gain FCC approval to provide in-region interLATA long distance. Bell Atlantic has since merged with GTE to form Verizon.

[18] FTA § 251 requires a BOC to open its network to local competition by developing agreements with competitors to "interconnect" its network with the competitors' networks (pursuant to interconnection agreements). The arbitration provisions included in § 252 for achieving the § 251 interconnection mandate, combined with the fact that interconnection was a threshold condition in § 271 for a BOC to enter the long distance market, created the result in Texas that many of the specific terms and conditions necessary to fulfill the § 251 mandate were actually negotiated in the context of SWBT's § 271 proceeding. (*See* "FTA Sections 251 and 252" subsection of this chapter.)

[19] Pursuant to § 271, a BOC files its notice of intent with the state regulatory agency first and, only after receiving support from state regulators, files an application with the FCC for approval.

pursuant to FTA Section 252[20] ***or*** a statement of generally available terms and conditions;

- that it is providing the 14 "checklist" items;[21]
- that the BOC's entry into the long distance market is consistent with the public interest, convenience, and necessity; and
- that the provision of long distance service meets the separate affiliate and nondiscriminatory safeguards requirements of FTA Section 272.

THE 14-POINT CHECKLIST

1. Interconnection
2. Access to UNEs
3. Access to poles, ducts, conduits and rights-of-way
4. Unbundled local loops
5. Unbundled local transport
6. Unbundled local switching
7. Access to 911, directory assistance, and operator services
8. White pages directory listings
9. Access to telephone numbers
10. Access to databases and associated signaling
11. Number portability
12. Local dialing parity
13. Reciprocal compensation
14. Resale

THE COLLABORATIVE PROCESS

The collaborative process was the term coined to describe a series of round-table, face-to-face discussions held with all interested parties present and commission staff facilitating. Not only did ILECs, CLECs and the Commission staff participate in the collaborative process, but representatives from the U.S. Department of Justice also participated at pivotal points in the negotiations.

The collaborative process proved to be a successful forum for bridging philosophical and operational chasms. For more than nine months, dozens of 'collaborative work sessions' were held to hammer out the minutiae of opening local markets. This effort culminated with the Commission's approval of a Memorandum of Understanding on April 29, 1999 and approval of the Texas 271 Agreement (T2A) on October 13, 1999. Finally, on December 16, 1999, upon review of actual wholesale performance data, the Commission determined that local markets were irreversibly open to competition in Texas and, therefore, voted to send a recommendation to the FCC supporting SWBT's Section 271 application.[22] To reach its conclusion, the Commission determined that SWBT's application and commercial performance met the requirements of Section 271 of the FTA. Similarly, the Department of Justice later supported the application. The FCC concluded that local markets were irreversibly open to competition

[20] The Texas 271 Agreement (T2A), discussed later in this chapter, was developed in compliance with FTA Section 252. The fact that several competitors signed a T2A agreement with SWBT gave SWBT basis to meet this Section 271 requirement.

[21] Of these items, the most difficult to resolve were No. 1, Interconnection, including trunking and collocation issues; No. 2, Access to UNEs, especially as pertained to the non-discriminatory provision of UNE combinations and the provision of operations support systems; and No. 4, Unbundled local loops, especially as pertained to xDSL and hot cut loop provisioning.

[22] Before determining if approval should be given, the FCC is required to consult with the relevant state commission. The FCC depends upon the state commission to develop a detailed and extensive factual record and to resolve all factual disputes.

and, thus, approved SWBT's 271 application on June 30, 2000. SWBT began offering interLATA long distance to its local exchange customers on July 10, 2000.

PERFORMANCE MEASURES

State and federal directives require that an ILEC may not unreasonably discriminate against another provider, with numerous specific prohibitions.[23] The critical, market-opening provisions of FTA Section 251 are incorporated in FTA Section 271 as conditions for a BOC to enter the long distance market. In particular, the BOC must demonstrate that it is offering interconnection and access to network elements on a nondiscriminatory basis. A BOC must provide *parity* access that is equal to the level of access that the BOC provides itself, its customers, or its affiliates, in terms of quality, accuracy, and timeliness. For the functions that have no retail equivalent, the BOC must demonstrate that the access it provides to competing carriers would offer a *meaningful opportunity to compete.*

To ensure that parity and meaningful opportunity to compete would be ongoing after 271, the Commission implemented performance measures. During the mega-arbitrations conducted in 1997 and 1998,[24] issues related to performance measures were highly disputed, but 66 performance measures were established.

During the 271 proceeding this biennium, new issues became the subject of dispute and generated the development of more performance measures. A CLEC coalition that included CLECs that did not participate in the mega-arb identified processes and activities not captured by the first performance measures, including the need for a remedy plan when SWBT fails to meet the measures. The Commission used the collaborative process to address such interests and to fine-tune the performance measurement system based on the experience in the market place.

Performance measures now number 132. A critical policy decision was made to break down each measure by geographic region of the state in order to ensure that the standards are not ignored in some areas by a company and averaged out by high performance in other regions.[25] The major categories of performance measures to be met in each region (further broken down by service) are pre-ordering, ordering, provisioning, maintenance, collocation, and database accuracy.

Concurrent with establishment of standards by the collaborative process, the Commission approved a Performance Remedy Plan. The Plan is two-pronged:

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[23] Specifically, an ILEC may not unreasonably discriminate against another provider by refusing access to the local exchange; refusing or delaying interconnection; degrading the quality of access; impairing the speed, quality, or efficiency of the line used by the provider; failing to fully disclose in a timely manner all available information necessary to design equipment to meet specifications of the network; or refusing or delaying access by a person to another provider. PURA § 60.161.

[24] *See* Appendix K.

[25] SWBT must meet the performance measures in each of the following geographic regions of Texas in which it operates: (1) Houston, (2) Dallas Fort Worth, (3) Central and West Texas, and (4) South Texas.

- Tier 1 measures are those that are "customer affecting." If it fails such a measure (allowing for statistical variance), SWBT pays the CLEC liquidated damages to compensate for substandard performance.
- Tier-2 measures are both "competition and customer affecting," and therefore are subject to assessments payable to the Texas State Treasury in the event the performance delivered to CLECs is non-compliant for three consecutive months. The goal of Tier-2 is to incent parity performance and disincent anti-competitive behavior; that is, to make the cost of non-compliance more than the "cost of doing business."

Payment amounts are classified as high, medium, and low based on the measures' impact on CLECs and competition. SWBT is required to file monthly performance measure reports on a password protected Internet site. Payments are due 30 days from the report date. By the end of October 2000, SWBT made $4.2 million in payments for non-compliance with performance measure standards. This total reflects good performance in light of the fact that the annual cap for tier-1 liquidated damages and tier-2 assessments is set at $298 million.

THE TEXAS 271 AGREEMENT (T2A)

For SWBT to qualify under Section 271 and for CLECs to be able to compete, there must be interconnection agreements with ILECs in all areas in which they wish to compete. The process of individually negotiating agreements was time consuming and very costly. During the collaborative process, most such agreements were about to expire, leaving no guarantee of sustainable competition. The Commission and SWBT negotiated an interconnection agreement that complied with the FTA. As a condition of receiving 271 approval, SWBT agreed to offer that standard interconnection agreement to all CLECs for a period of four years. The creation of this Texas 271 Agreement, or T2A, reflects pro-competitive policies and terms that few CLECs could have negotiated on their own. The T2A is being widely replicated as a standard interconnection agreement in other states. The T2A is a comprehensive contract including in part:

- A performance remedy plan with 132 performance measures relating to all aspects of SWBT's wholesale operations. The performance measures are reviewed by the Commission staff every six months and refined, to the extent necessary.
- Prices, terms and conditions for resale, interconnection and the use of UNEs (individually and in combination). As reflected in the T2A, SWBT agreed during the collaborative process to provide combinations of UNEs, including in part the unbundled network element platform for existing and new lines and Enhanced Extended Loops.
- Specific provisions for Digital Subscriber Line (xDSL) service, although DSL needs were not anticipated when the 271 process began in 1998.[26]

[26] DSL is a high-speed digital service that appeals to a significant number of customers in Texas. xDSL refers to a generic version of DSL.

- Operations Support Systems (OSS) - OSS refers to the systems, databases, and personnel that ILECs use to provide service to their customers. SWBT demonstrated that its OSS systems provide CLECs with parity or a meaningful opportunity to compete.
- Hot Cut Loop Provisioning—Hot cut loop provisioning is used when a CLEC owns its own switch and purchases a UNE loop from SWBT in order to convert a SWBT customer to a CLEC customer. In that situation, the loop must be disconnected from SWBT's switch and connected to the CLEC's switch. SWBT agreed that service disruptions that affect end use customers would be minimized.

COLLOCATION

To establish a pro-competitive policy framework for telecommunications, one of the FTA's core provisions requires ILECs to provide for physical collocation of equipment needed for interconnection or access to UNEs at the premises of the ILEC. The rates, terms, and conditions of the collocation must be just, reasonable, and nondiscriminatory. If it is shown that physical collocation is not practical, virtual collocation may be provided. In a physical collocation arrangement, a competitor leases space at an ILEC's premises for its equipment. The CLEC has physical access to this space to install, maintain, and repair its equipment. In a virtual collocation arrangement, the CLEC designates the equipment to be placed at the ILEC's premises, but does not have physical access to the incumbent's premises. Instead, the equipment is under the physical control of the ILEC, which is responsible for installing, maintaining, and repairing equipment designated by the CLEC.

The FCC's rules require ILECs to provide physical collocation on a "cageless" basis. In a "caged" physical arrangement, a CLEC leases and has direct physical access to caged space at an ILEC structure for its equipment. Cageless physical collocation eliminates the cage surrounding the CLEC's equipment. FCC rules also require ILECs to provide "adjacent" physical collocation, in which the CLEC's equipment is located within a vault or similar structure that the CLEC or its contractor constructs on property leased from the ILEC.

Early versions of interconnection agreements in Texas required CLECs to obtain "caged" collocation. The T2A and collocation tariffs developed during the collaborative process resulted in an obligation by SWBT to provide cageless collocation under some of the most aggressive terms and timeframes in the nation.

POST-271 ACTIVITIES

While Section 271 approval was initially a powerful incentive for SWBT to cooperatively open its local exchange markets to competition, the Commission recognized that lasting customer/supplier business relationships are needed to sustain local competition. In that regard, the Commission established a number of structured processes to foster the development of a healthy provider-customer relationship between SWBT and CLECs.

As part of the collaborative process, SWBT committed to participate in forums designed to address specific areas of potential concern. SWBT agreed to a trunking users group, a change management process and working group, an xDSL working group, and a general users group. Also, in recognition of the fact that **operational issues** between companies often need immediate attention, the Commission established Project No. 21000 to allow CLECs or SWBT to file a request for expedited, informal dispute resolution.

- **Trunking Forum**. The trunking forum was established as one vehicle for addressing trunk blockage problems. Through the trunking forum, SWBT and CLECs share in network planning. The trunking forum meets on a regular basis, with Commission staff participation, to ensure that adequate planning will forestall blockage problems.[27]
- **Change Management Process**. The change management process controls the dynamic environment of OSS systems using a negotiated document, *Interface Change Management Process: SWBT and Competitive Local Exchange Carrier*. The change management document outlines processes for accomplishing changes to existing network interfaces, introducing new interfaces, retirement of existing interfaces, and testing. The document also explains each outstanding issue solution and the process for a "go/no go" vote before release of a process change.
- **DSL Working Group**. The DSL working group establishes competitively neutral spectral compatibility standards and spectrum management rules and practices for deployment of loop technology absent national industry standards.
- **General Users Group**. SWBT and the CLECs formed a general users group to address issues other than trunking, DSL, and OSS. The Commission also has developed an informal resolution process to address post-interconnection agreement disputes resolution process to expeditiously handle issues not mutually resolved by SWBT and its wholesale customers.
- **Performance Measure Review**. Finally, SWBT, CLECs and commission staff conduct a review of the performance measurements every six months to ensure that they continue to adequately measure SWBT's provision of wholesale telecommunications service to CLECs. In August of 2000, the Commission completed its first six-month review and approved changes to the performance measures and the Performance Remedy Plan. Commission staff members monitor SWBT's performance data on a monthly basis to determine whether SWBT continues to provide CLECs with parity performance[28] or a meaningful opportunity to compete. Telcordia, the third-

[27] The meetings are taped; the audiotape and agenda of each meeting is filed in PUC Project No. 20400.

[28] In this context, parity means that SWBT's provision of services to CLECs must be equivalent to the services SWBT provides to itself and its affiliates.

party vendor that conducted SWBT's original OSS testing, is conducting limited follow-up to its original testing.

Many of the major issues fleshed out in the SWBT 271 proceeding were negotiated in accordance with other provisions of the FTA, discussed in the following subsection of this chapter.

FTA Sections 251 and 252

ARBITRATIONS AND DISPUTE RESOLUTION

Under Section 252 of the FTA, an ILEC and a telecommunications carrier have two options for securing an interconnection agreement. The first option is that an agreement may be arrived at through voluntary negotiation between the two parties. When two parties reach agreement on their own, FTA §252(a)(1) requires that the negotiated agreement be submitted to the state commission. Between September 1, 1998 and August 31, 2000, 616 negotiated interconnection agreements were filed at the Commission. The second option is for an ILEC and a telecommunications carrier to request compulsory arbitration, if the parties are not able to reach agreement on any or all of the rates, terms and conditions in an interconnection agreement.[29] FTA §252(b) places responsibility for such arbitrations on state commissions. Between September 1, 1998 and August 31, 2000, twenty-five requests for arbitration and twenty-three post-interconnection disputes were filed at the Commission. FTA Section 251 contains many of the overarching guidelines relevant to the arbitration of interconnection agreements.

The arbitration of interconnection agreements is a top priority for the Commission. The Commission's first step to comply with the FTA Section 251 mandate to open local markets began when five would-be competitors of SWBT filed for arbitration of interconnection issues in 1996. The Commission consolidated the proceedings and completed the initial and primary arbitration just prior to the issuance of the *1997 Scope Report*. Decisions on additional issues were made in the second phase of the arbitrations. The results of these consolidated proceedings, known as the "mega-arb," provided the foundation for many more arbitrated agreements this biennium.

Following is a description of a few high profile arbitrations that resulted in precedential decisions on interconnection issues during the 1999-2000 biennium.

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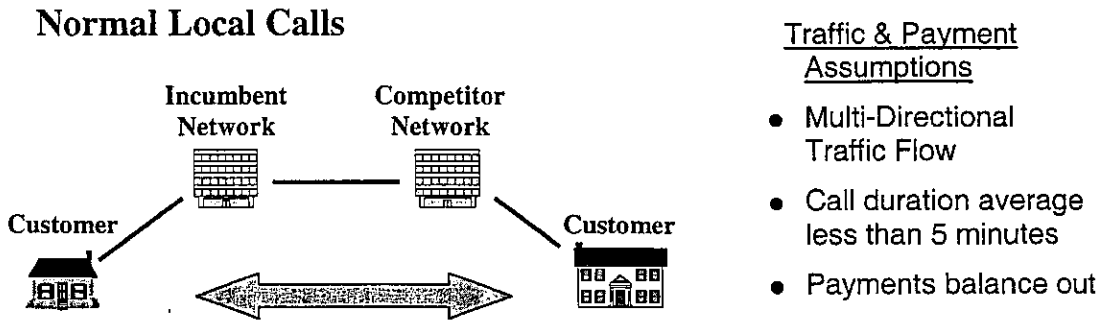
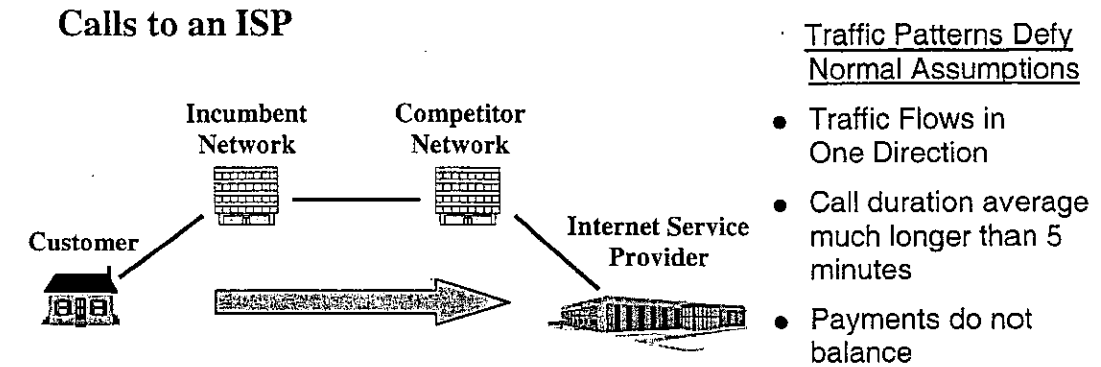
[29] Pursuant to FTA authority, the Commission promulgated procedural rules for dispute resolution and approval of agreements. The rules set out procedures for mediation, compulsory arbitration, the review and approval of both negotiated and arbitrated interconnection agreements, and post-interconnection disputes. A proceeding filed pursuant to the FTA and/or the Commission's dispute resolution rule is not considered a "contested case" under the Texas Administrative Procedures Act. Disputes that arise after parties have entered into an interconnection agreement may be filed at the Commission pursuant to the procedures set out in Subchapter Q of the Commission's procedural rules. The rules provide various options for seeking resolutions of disputes, including informal settlement conferences, formal dispute resolution, expedited final rulings, and interim rulings.

RECIPROCAL COMPENSATION

When a customer of one local company calls the customer of another local company, compensation has traditionally been paid to the second company for use of its network to complete the call. This reciprocal compensation was reasonably balanced when phone customers were making local voice calls with approximately equal duration. However, it became an issue for Internet calls because these calls tended to be all incoming calls, and tended to be of long duration. Some CLECs saw an opportunity to profit from the peculiar nature of Internet traffic. The ILECs objected to paying compensation for these non-traditional calls.





The core issue regarding reciprocal compensation this biennium was whether local calls to access the Internet should be considered interstate in nature and, therefore, not subject to reciprocal compensation, or whether such calls should be considered local and, therefore, subject to reciprocal compensation. The Commission determined that

local calls to access the Internet are local calls subject to reciprocal compensation.[30] Additionally, the Commission decided other major issues, as outlined below.

The FTA provides that local telephone companies must compensate each other for terminating each other's local telephone calls. The FTA also requires that a determination be made by state commissions of the just and reasonable rates for local interconnection. Therefore a determination as to whether calls to the Internet are local or not is key. ILECs contend that Internet-bound traffic is not local traffic, as it does not terminate at the ISP server, and is therefore not subject to reciprocal compensation as local traffic under the FTA. CLECs, however, contend that Internet-bound traffic does terminate at the ISP server, making such calls local in nature.

In February 1999, the FCC determined that ISP-bound calls are predominantly interstate calls and not subject to reciprocal compensation under the FTA. Earlier this year, the United States Court of Appeals for the District of Columbia Circuit vacated the FCC's determination that Internet traffic is not subject to reciprocal compensation. The court remanded the case to the FCC for want of a better explanation of its reasoning. The FCC then ruled that, pending adoption of federal rules governing compensation for Internet traffic, state commissions may determine appropriate compensation for the termination of Internet calls. During this interim period, state commissions are free to require or not require compensation for Internet traffic. As stated previously, the Commission requires reciprocal compensation for Internet traffic.

In January of 2000, the Commission initiated a proceeding to thoroughly examine the policies, practices, procedures, rules, and rates applicable to reciprocal compensation pursuant to Section 252 of the FTA. It consolidated requests to arbitrate reciprocal compensation for the transport and termination of local telecommunications traffic between SWBT and CLECs desiring arbitration and interconnection.[31] The commission issued decisions on four major issues for which an extensive record was developed. The issues included the types of telecommunication traffic that should be subject to reciprocal compensation, the method to be used to determine intercarrier compensation, the rates that should be charged, and the appropriate method for billing all calls defined as local calls. On August 31, 2000, the Texas Commission released its Revised Order adopting new rate structure and rate levels for reciprocal compensation payments.[32]

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[30] *Complaint and Request for Expedited Ruling of Time Warner Communications*, Docket No. 18082, Order (Feb. 27, 1998).

[31] *Proceeding to Examine Reciprocal Compensation Pursuant to Section 252 of the Federal Telecommunications Act of 1996*, Docket No. 21982.

[32] Included in the Revised Order are the following rulings: 1) SWB will pay CLECs a 'tandem blended rate' for all "balanced" traffic within the 3:1 ratio; 2) the blended rate would be based on a bifurcated end office rate plus 42% of the sum of tandem switching and inter-office transport costs; 3) a bifurcated end office rate only will apply to out-of-balance traffic (over a 3:1 ratio); 4) upon determination of actual tandem or tandem-like functionality, the terminating carrier will receive, on a going forward basis, compensation in the range of 0% to 100% of the tandem rate. This rate shall prospectively apply to all traffic terminated on the terminating carrier's network, *i.e.*, traffic occurring before and after the 3:1 ratio; 5) SWBT may charge full tandem-served rate for traffic delivered to its tandems; 6) billing will be based on terminating records where available, and where not available, the terminating carrier will use a method agreed to by the parties; and 7) compensation is not due for FX-like traffic, or 8YY traffic.

DIGITAL SUBSCRIBER LINE SERVICE (DSL)

One of the stated goals of the FTA and the Texas Legislature is to foster availability of advanced services to all customers. One technology for providing advanced services is DSL. In an arbitration proceeding, the Commission established the terms and conditions for competitors to have access to SWBT network components necessary for them to offer competitive DSL. The award, issued in late 1999, together with an FCC decision to allow collocation of equipment in incumbent's offices was critical to making DSL available as a competitive offering.

LINE SHARING

In another precedential arbitration, the Commission determined that competing carriers may provide some DSL services to the same customer on the same copper loop facility used by the ILEC to provide voice telephone service to that customer. This technological advance is possible because some DSL services operate on separate and higher frequencies of the electromagnetic spectrum than voice services. In recognition of this fact, the FCC declared the high frequency portion of the loop to be an unbundled network element under FTA §251(c)(3). The arbitrator issued an order in June 2000 on the interim rates, terms and conditions. The Commission is currently arbitrating the rates, terms and conditions under which DSL providers may access the high frequency portion of the loop UNE on SWBT's and Verizon's networks.

RURAL EXEMPTION FROM FTA SECTION 251 INTERCONNECTION REQUIREMENTS

Nearly all of the smaller ILECs in Texas are exempt from the FTA's interconnection requirements. As stated in FTA § 251(f)(1)(A), the requirements do not apply to a rural ILEC until it has received a bona fide request from a competitor and the state commission determines that the request should be granted. Most of the smaller ILECs in Texas qualify for this exemption under one or more of the following criteria: (1) the company serves fewer than 50,000 access lines; (2) it serves incorporated areas of fewer than 10,000 inhabitants; (3) it serves a study area of under 100,000 access lines; or (4) it has under 15 percent of its access lines in communities of more than 50,000 as of February 8, 1996, when the FTA was enacted. This exemption means entry into a number of areas of Texas can involve extra difficulties and therefore is a barrier to the development of competition in rural areas of Texas.[33]

[33] FTA § 3(a)(47). FTA § 251(f)(2) also allows a LEC with less than two percent of the nation's access lines to petition the state commission for suspension or modification of the requirements of FTA § 251(b)-(c). In addition, PURA § 60.004 exempts ILECs with fewer than 31,000 access lines in Texas from having to comply with certain competitive safeguards dealing with unbundling, resale, and interconnection unless a certificated competitor submits a bona fide request to the ILEC.

Senate Bill 560 – Pricing and Packaging Flexibility

Senate Bill 560 (SB 560)[34] grants large ILECs new pricing and packaging flexibility and introduces new customer service protections. SB 560 placed the services offered by certain ILECs into two categories, including basic network services and nonbasic services, capped rates for certain services, extended incentive regulation for electing companies,[35] reduced in-state long distance access charges, required easy-to-read bill formats and established customer protection rules.

Pricing flexibility is an important benefit to ILECS as customer choice and competition develop in the market. Pricing flexibility includes customer specific contracts, volume, term or discount pricing, zone density pricing, and other forms of promotional pricing.

The Commission adopted extensive new rules to implement the pricing provisions of SB 560. The new rules:

- Establish pricing standards for flexible pricing of services, including individual services and packages of services;
- Give ILECs guidelines for the introduction of customer-specific contract pricing;
- Provide incentives for electing companies to introduce new, innovative services by expediting the process for such introduction;
- Implement competitive safeguards to protect competitors from anti-competitive practices that might result from packaging regulated services with unregulated services, particularly unregulated services provided by an affiliate of an ILEC;
- Require that a service be priced above its long run incremental cost;
- Provide a procedure for establishing the long run incremental cost of a service offered by small ILECs;
- Establish guidelines for separately tariffing services that are offered as part of a package; and
- Provide guidelines to implement certain rate increases requested by an ILEC.

Under SB 560, ILECs must give the Commission ten days notice before changing their prices. This notice offers customers, competitors and the Commission an opportunity to comment on the actions taken by the ILEC. The Commission staff evaluates all such notices. The price of a service must be above the long run incremental

[34] Senate Bill 560, 1999 R.S., was authored by Senators David Sibley and Troy Fraser and Representatives Toby Goodman and Leticia Van de Putte.

[35] Electing companies are companies that elect incentive regulation pursuant to Chapter 58 of PURA (SWBT and Verizon) or Chapter 59 of PURA (Sprint/Centel, Sprint/United, Century of San Marcos, TXU Telecommunications, Sugar Land Telephone Company, Valor Communications, and Fort Bend Telephone Company).

cost of providing the service. If prices are above their long run incremental cost, they are presumed not to be predatory. The Commission received more than 200 such notices from September 1, 1999 to August 31, 2000. In the same time period, only four complaints have been filed with respect to the new price/service notices.

Senate Bill 86 – Customer Protection Standards

Implementation Process

As directed by Senate Bill 86[36] (SB86) from the 76th Texas Legislature, the Commission rewrote its existing customer protection rules to complement the new, competitive environment. Key issues addressed were:

(1) the applicability of rules to dominant and non-dominant certificated telecommunications utilities;

(2) emerging issues, such as failure of non-dominant providers to release lines;

(3) discrimination protections;

(4) prohibition of fraudulent, unfair, misleading, deceptive, and anti-competitive practices; and

(5) information disclosures.

Dominant certificated telecommunications utilities proposed, with the support of consumer groups, that the customer service and protection rules apply equally to all certificated telecommunications utilities, on the theory that uniform rules encourage reluctant customers to participate in the market.

Non-dominant certificated telecommunications utilities favored bifurcated rules with less restrictive requirements for themselves, on the basis that uniform standards would create substantial burdens and costs for non-dominant carriers, thus inhibiting competition.

The Commission adopted rules to provide strong protections for all customers, while allowing flexibility for non-dominant certificated telecommunications utilities to encourage increased competition. This approach reflected a belief that informed customer choice is essential to ensure that a highly competitive local telecommunications market will benefit all customers.

Slamming

The Commission continues to take a strong stance in combating slamming by strengthening its anti-slamming substantive rules, continuing to thoroughly investigate each slamming complaint, and taking enforcement action on slamming violators.[37]

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[36] Senate Bill 86, 1999 R.S., was authored by Senator Jane Nelson and Representative Debra Danburg.

[37] Slamming occurs when a telephone customer finds that his/her telephone service provider has been changed without his/her consent.

Slamming distorts the competitive telecommunications market because it rewards a company that changes customers' telephone services without their approval, unfairly increasing its customer base at the expense of companies that market in a lawful manner. Further, it takes the freedom of economic choice away from the customer. Customers often choose goods and services based upon cost and company reputation. Slamming removes such decision-making from the customer through fraudulent means.

The PUC modified its Substantive Rules to implement SB 86. The amendment to P.U.C. SUBST. R. § 26.130 (1) eliminates the distinction between carrier-initiated and customer-initiated changes, (2) eliminates the information package mailing (negative option) as a verification method, (3) absolves the customer of any liability for charges incurred during the first 30 days after an unauthorized telecommunications utility change, (4) prohibits deceptive or fraudulent practices, (5) requires consistency with applicable federal laws and rules, and (6) addresses the related issue of preferred telecommunications utility freezes.

Slamming complaints received by the Commission declined 52% from their Fiscal Year 1999 level to a total of 1952 complaints in Fiscal Year 2000.

Cramming

On October 21, 2000, the Commission adopted P.U.C. Subst. R. § 26.32, Protection Against Unauthorized Billing Charges ("Cramming"), to implement the provisions concerning unauthorized charges on telephone bills as set forth in SB86. The rule applies to all "billing agents" and "service providers." The rule includes requirements for billing authorized charges, verification requirements, responsibilities of billing telecommunications utilities and service providers for unauthorized charges, customer notice requirements, and compliance and enforcement provisions. The rule ensures protection against cramming without impeding prompt delivery of products and services, minimizes cost and administrative requirements, and ensures consistency with FCC anti-cramming guidelines.

Cramming complaints received by the Commission rose slightly, to a total of 1713 in Fiscal Year 2000.

Other Regulatory Activity

The Commission addressed other competitive market issues, as well. Fairness in costs facing all providers, whether established companies or new entrants, is another aspect of market structure that is essential to local competition, and one with which the Commission was charged with specific implementation duties last session, as follows.

HB 1777 – UNIFORM COMPENSATION METHOD FOR USE OF MUNICIPAL RIGHTS OF WAY

Telecommunications companies should find it easier to enter new markets in Texas now that the calculation of city franchise fees for use of municipal rights-of-way

are uniform statewide. With the passage of HB 1777,[38] the 76th legislature took a new step to level franchise fees within each city in Texas and thereby help stimulate competition in the telecommunications industry. The legislature charged the Commission with implementation of the bill.

Historically, telecommunications companies have paid franchise fees to cities for the use of public rights-of-ways based upon individually negotiated franchise agreements. The majority of those fees were based on a percentage of the telecommunication provider's gross revenues, while others were a flat rate, a per foot charge, or a per line charge. HB 1777 required that the Commission establish rates for each city in Texas, by March 1, 2000, for public right-of-way use based on a fee-per-access line method. The Commission developed rates for about 1110 incorporated municipalities in Texas.

This uniform method to compensate cities for public right-of-way use gives no provider an advantage over another, an important component of a healthy competitive marketplace. It also assures that cities' prior revenue base is protected under the new method. HB 1777 strikes a balance between the interest in ensuring fair and reasonable compensation and the need to encourage competition and reduce barriers to entry by developing a franchise fee methodology that is competitively neutral and non-discriminatory.

Beginning March 1, 2000, franchise fees in Texas have been based on these fee-per-access line rates. Each city is compensated by an amount equal to the number of lines by category in a city multiplied by the access line rate (chosen by the city and applied uniformly to every telephone service provider operating in that city) for each category in that city. Rate development took into consideration the number of residential, business and point-to-point customers in each city. Certificated telecommunications providers are required to compensate municipalities four times per year, based upon quarterly access line counts sent by telecommunications providers to the PUC. The commission has assigned an HB 1777 implementation coordinator to assist cities on an ongoing basis. The cities' ongoing work includes updating their access rates through an annual revision mechanism, establishing contacts between cities and providers to ensure fair and timely compensation, and preparing a quarterly line count to verify the accuracy of the compensation.

In the wake of implementing HB 1777 (*See* Chapter 2 of this *Report*), parties, including both telecommunications service providers and municipalities, have brought forward several remaining issues for further attention. The commission initiated Project Number 22909 to address the following outstanding issues related to HB 1777 implementation:

(i) The first issue is the need to distinguish between fees that are solely attributable to the use of Right-of-Way (ROW) (prohibited by HB 1777) versus fees that apply to any entity conducting similar activities within a city.

(ii) Another pending issue relates to telephone lines that pass through a city but do not provide services or have customers in that particular municipality. Telecommunications providers assert that no compensation should be required for

[38] HB 1777 was authored by Rep. Steve Wolens and Sen. Eddie Lucio.

lines that simply pass through a city. Cities contend that pass-through lines are outside of HB 1777 and subject to other compensation. HB1777 measures compensation by end use customers.

(iii) A third issue relates to compensation requirements for certificated telecommunications providers (CTPs) providing lines that do not meet the definition of "access line" (*i.e.* data or media lines). Cities maintain that compensation is required for the use of right-of-way and, therefore, other lines are subject to other forms of compensation

(iv) Fourth, a rule suggesting or requiring the existence of a city ordinance regarding right-of-way management issues may be prudent.

Commission staff conducted a discovery workshop and is reviewing briefs as a prelude to a draft rule. The Commission intends to publish the draft rule for comments in January 2001, which would be scheduled for final adoption in March. If the Commission finds that the best resolution for any of these issues would require legislative attention, it will communicate its recommendation to the legislature during the 2001 legislative session.

OTHER DEVELOPMENTS THIS BIENNIUM

Details essential for local competition were worked out in a number of niche market and technical areas, all subject to regulatory parameters. For example, the FCC mandated the implementation and deployment of advanced emergency capabilities of enhanced 911 systems that are generally available to wireline customers (*see* Appendix C). Revisions to rules were necessary to implement legislation pertaining to competition in the payphone industry, which was deregulated by the FCC in 1996 (*see* Appendix D). Activities concerning area codes, number pooling, and N11 prefixes have necessarily continued as the competition environment develops (*see* Appendix E).

Additionally, the Commission took steps to ensure service quality. On April 12, 2000, the Commission adopted P.U.C. SUBST. R. § 2 6.54 relating to *Service Objectives and Performance Benchmarks*. The new rules, effective August 1, 2000, provide for enhancing the current standard for data transmission capability over public switched voice circuits, when connected through an industry standard modem or a facsimile device, to 14.4 Kbps by the end of 2002. The rules provide for enhancing the performance level for certain benchmark measures, including directory assistance, business office, and operator services. Further, installation intervals for service orders have been updated and standards have increased for trouble reports. The enhancements are necessary to ensure that all telecommunications subscribers in Texas receive safe, reliable, and quality service.

In a recent rulemaking, the Commission further opened the local exchange market to competition by requiring building owners to allow competitive providers access to the building to install the equipment necessary to allow tenants to select their preferred telecommunications provider. As a result of this decision, each tenant could have a

different telephone service provider, rather than having one telephone service provider serve an entire building.

The building access rule encourages independent negotiations between the requesting provider and the property owner, and establishes procedures for resolution by the Commission in the event that an agreement cannot be reached. The rule also addresses situations in which the property owner may deny the requesting carrier access to the building for safety concerns or space constraints. The rule was developed in response to informal complaints that some providers had a difficult time accessing tenants in order to promote tenant choice.[39]

How well is this elaborate framework for competition in the provision of local exchange service working? While many of the details of the framework were determined after the point at which the most recent detailed data are available, the next chapter discusses a variety of indicators of the competitive landscape in Texas.

[39] In 1995, the Legislature enacted PURA §§54.259, 54.260, and 54.261 as part of a comprehensive package of legislation to open Texas' telecommunications market to competition. The thrust of these particular PURA sections is to promote competition in the telecommunications market by allowing a tenant under a real estate lease to choose the provider of its telecommunications services. As the competitive marketplace has developed, the need for specific rules to implement these sections has become evident. Prior to 1995, tenants in commercial buildings generally had no choice or limited choice of telecommunications utility, but the 1995 amendments to PURA changed this scheme by providing that tenants be served by the telecommunications utility of their choice. Since that time, the commission has received several informal complaints that certain telecommunications utilities have had a difficult time accessing tenants. Accordingly, the commission initiated this rulemaking proceeding to delineate the terms of access of the telecommunications utility to the property owner's property to serve a requesting tenant.

CHAPTER 3: COMPETITION IN THE LATE 1990S

The time was ripe for market forces to assert themselves in the Texas local telephone service market in the late 1990s. As discussed in Chapters 1 and 2, the Texas Legislature, Congress, and the Commission successfully laid the groundwork for competitive access to local exchange service in Texas over the last several years. This chapter examines how CLECs responded to this new opportunity.

As of December 31, 2000, a total of 432 carriers had been granted COAs or SPCOAs from the Commission. A company that obtains either of these certificates is considered a competitive local exchange company (CLEC). Qualifying for and obtaining either certificate is the minimum action that every CLEC must take to be allowed to provide local exchange service in Texas. While 311 of the carriers currently certificated to provide competitive local exchange service in Texas obtained their certificates by December 31, 1999, the period for which the Commission requested operations data for this report, many of these CLECs did not yet have customers. Many other CLECs were small with limited financial resources, so a simple review of the number of CLECs in Texas does not give a complete picture of the competitive choices available to customers in various geographic regions of the state.

This chapter presents snapshots of the statewide market penetration of CLECs in the late 1990s and discusses the factors involved in competitive local exchange service across the various regions of Texas. A data collection instrument was designed to capture the different means of entering the service territories of ILECs: reselling telephone services, leasing UNEs, or building new plant and equipment. The Commission's ability to collect data for this report from telecommunications providers in the emerging competitive market was limited due to increasing concern among providers about the confidentiality of competitively sensitive information.[40] To obtain information from providers for this report, the Commission allowed for aggregation of data among providers and across regional areas, which limits the extent to which analysis can be achieved. Appendix H discusses the data collection instrument and the information it requested from ILECs and CLECs.

In order to capture the spread of competition across the various areas of Texas, the Commission developed a data collection instrument that would capture the

[40] A recent Attorney General letter ruling and other judicial decisions and legislative changes have heightened the reluctance on the part of private companies to provide confidential information to public agencies. The fact that the Commission received data replies from only 128 of the 311 companies certificated to provide service during the period in question is attributable in significant part to the concerns about the confidentiality of data. These concerns, and the Commission's interest, are discussed in Legislative Recommendation No. 2 in Chapter 7 of this report.

differences in the market penetration of CLECs between urban and rural areas of Texas and highlight any differences within Rural Texas.[41] Because Texas is a very diverse state, CLECs will not be entering all markets with the same vigor. The data show that CLECs focused on the Large Metro and Suburban areas of Texas in 1998 and 1999.

Availability of Local Service Competitors

There are a number of perspectives from which to evaluate the availability of competitive providers for local exchange service. Each vantage point has its limits, but together they offer a comprehensive view.

TEXAS: MORE COMPETITORS THAN OTHER STATES

At the end of 1999, Texas tied with only New York to lead the nation in number of providers, according to the FCC report, *Local Telephone Competition in the New Millennium.*[42] The FCC based its analysis on information reported by ILECs and CLECs (only those carriers serving at least 10,000 lines in a state were required to report). The state-by-state comparison is shown in Table 1. Texas and New York had at least 21 CLECs providing service, while most states reported fewer than ten CLECs.

[41] Commission staff designed the categories of data requested to show the level and growth of competition in 69 areas of Texas distinguished by level of population and geographic location. A socioeconomic profile of the various regions of Texas used for the analysis of the data in this report can be found in Appendix I.

[42] *Local Telephone Competition in the New Millennium,* Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, August 2000.

Table 1 – Number of Reporting Local Exchange Carriers: Year-End 1999

State	ILECs	CLECs	Total
Alabama	9	4	13
Alaska	4	2	6
Arizona	2	8	10
Arkansas	5	1	6
California	9	17	26
Colorado	4	7	11
Connecticut	2	5	7
Delaware	1	1	2
District of Columbia	1	5	6
Florida	8	17	25
Georgia	15	13	28
Hawaii	1	2	3
Idaho	3	0	3
Illinois	6	13	19
Indiana	7	7	14
Iowa	6	3	9
Kansas	5	2	7
Kentucky	12	4	16
Louisiana	5	6	11
Maine	5	2	7
Maryland	1	4	5
Massachusetts	1	9	10
Michigan	6	5	11
Minnesota	17	10	27
Mississippi	4	4	8
Missouri	6	5	11
Montana	7	2	9
Nebraska	6	1	7
Nevada	5	3	8
New Hampshire	5	2	7
New Jersey	3	8	11
New Mexico	3	2	5
New York	9	21	30
North Carolina	14	8	22
North Dakota	7	2	9
Ohio	9	10	19
Oklahoma	9	2	11
Oregon	8	6	14
Pennsylvania	11	13	24
Puerto Rico	1	0	1
Rhode Island	1	1	2
South Carolina	14	1	15
South Dakota	6	2	8
Tennessee	14	7	21
TEXAS	**15**	**21**	**36**
Utah	3	2	5
Vermont	4	1	5
Virginia	7	7	14
Washington	9	9	18
West Virginia	2	1	3
Wisconsin	10	8	18
Wyoming	2	1	3
Nationwide – Total without duplication**	168	81	249

* Each report represents all of a company's operations in a given state. Carriers with both ILEC and CLEC operations in the same state provide separate reports.

**Not column totals; numbers represent total number of carriers nationwide (some operate in more than one state).

NUMBERS OF COMPETITORS BY CITY

The HB 1777 Data Collection Instrument

The Commission has available a new source of data that is precise in comparing the actual number of choices for similar service a customer has in a given locale. These data are that which must be reported by cities on a quarterly basis in order to comply with HB 1777 (relating to a uniform method for compensating municipalities for obtaining right-of-way access).[43] This data set reveals which providers are providing service in a given Texas municipality in the following service category groupings:

- **Residential Services**: analog and/or digital residential switched access lines, including point-to-point private lines, whether residential or non-residential, only to the extent such lines provide burglar alarm or other similar security services.
- **Business Services**: analog and digital non-residential switched access lines.
- **Point-to-point (Data) Services**: all other point-to-point private lines, whether residential or non-residential, that are not otherwise included within the residential service category.

For the purposes of complying with HB 1777, a telecommunications provider must report the number of lines it provides in each of the three categories above in each city it serves. The basis for counting the number of choices customers have in a given city for purposes of creating the maps in Figures 1-3 was to count the number of providers reporting the above data in that city. In other words, a provider reporting that it provides some services in the residential services category to at least some lines in a town is assumed to be one of the total number of providers operating in that town. The data reported from 1,222 cities supply the data points that are used to make each map.

[43] LOC. GOV'T. CODE ANN. §§ 283.001-283.058 (Vernon 1999 and Supp. 2000).

Geographic Distribution of Providers, by Type of Service

Residential Services

In Figure 1, which maps CLECs that offer residential services, note that all small circles, or "zeroes," indicate town locations where there is no choice available for an alternative provider of residential services. The open triangles indicate towns where there is a small range of choices available. The gray shaded areas indicate towns where the number of providers is sufficient to offer a chance of competitive choice. The black circles indicate towns where there is an abundant choice of providers for residential services. As the map indicates, competition has clustered in population centers and in East Texas.

Business Services

An examination of the corresponding data for business in Figure 2 shows that the competition clusters in similar areas, but the providers are not as numerous.

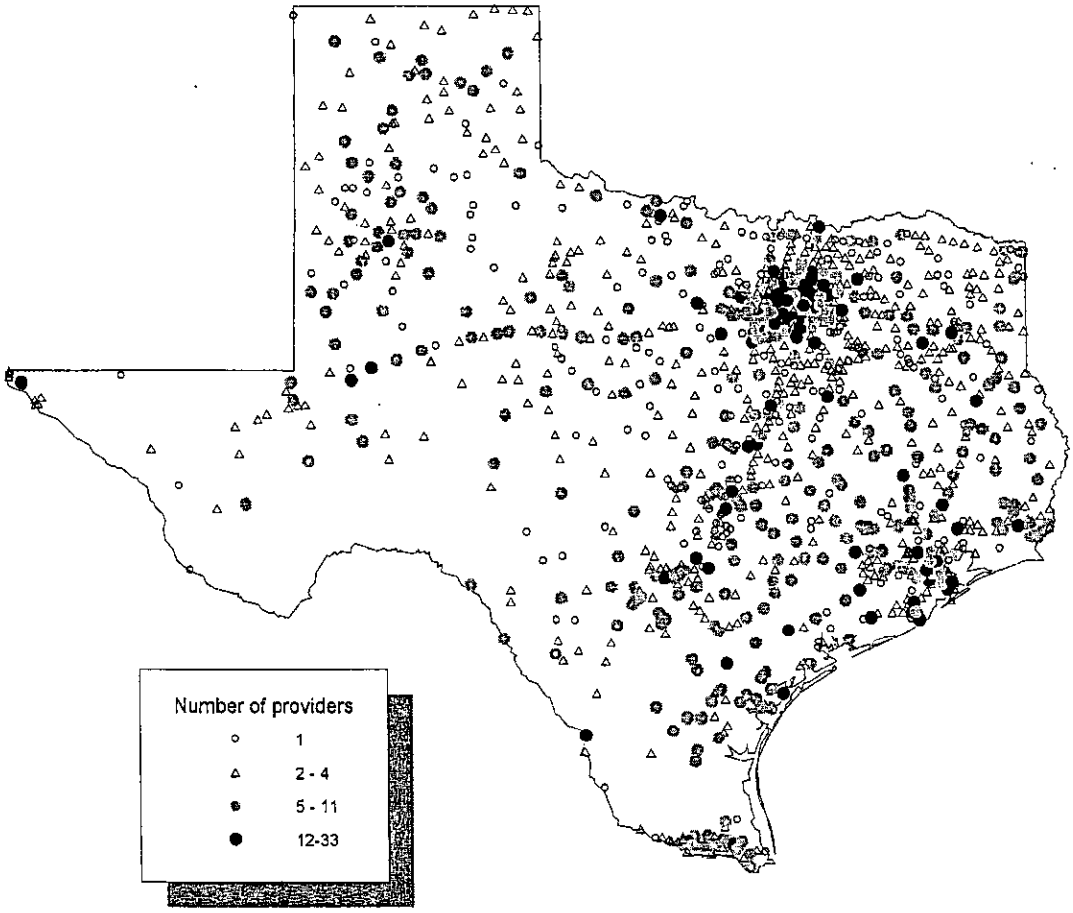
Point-to-Point Services

Data services, though not a big part of the telecommunications market in the past, will be increasingly important to telecommunications providers and customers. According to a study by J. P. Morgan Securities, data services nationwide will grow from $31.4 million in 1999 to a projected $90.9 million in 2005.[44] The demand for data services likely will be centered in high-density, higher income areas of Texas, where many CLECs have focused their efforts in the past two years, as shown in Figure 3.

The results of the HB 1777 data collection instrument show that customers have a good selection of data services providers in Houston, Dallas, Austin, San Antonio and, to a lesser extent, East Texas.

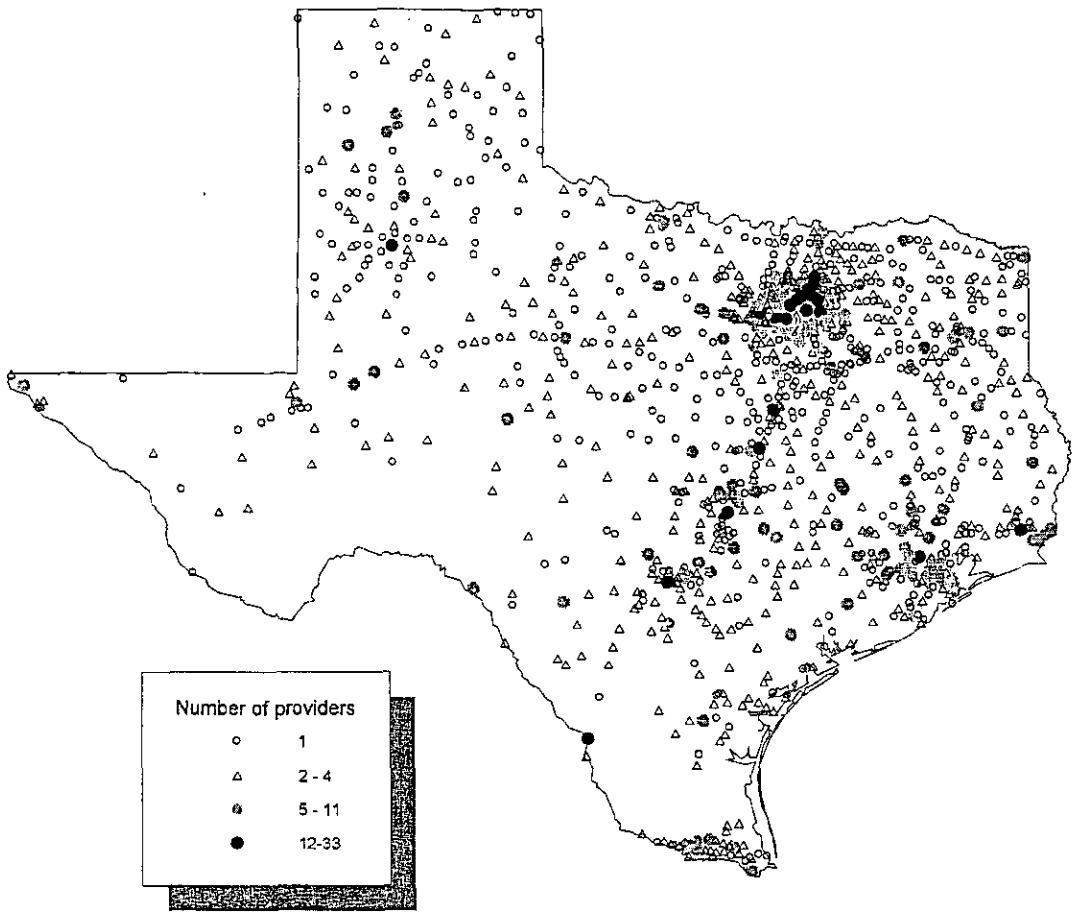
[44] J. P. Morgan Securities, *Industry Analysis: Telecom Services*, at 4 (Sept. 8, 2000).

Figure 1 – Residential Service Providers



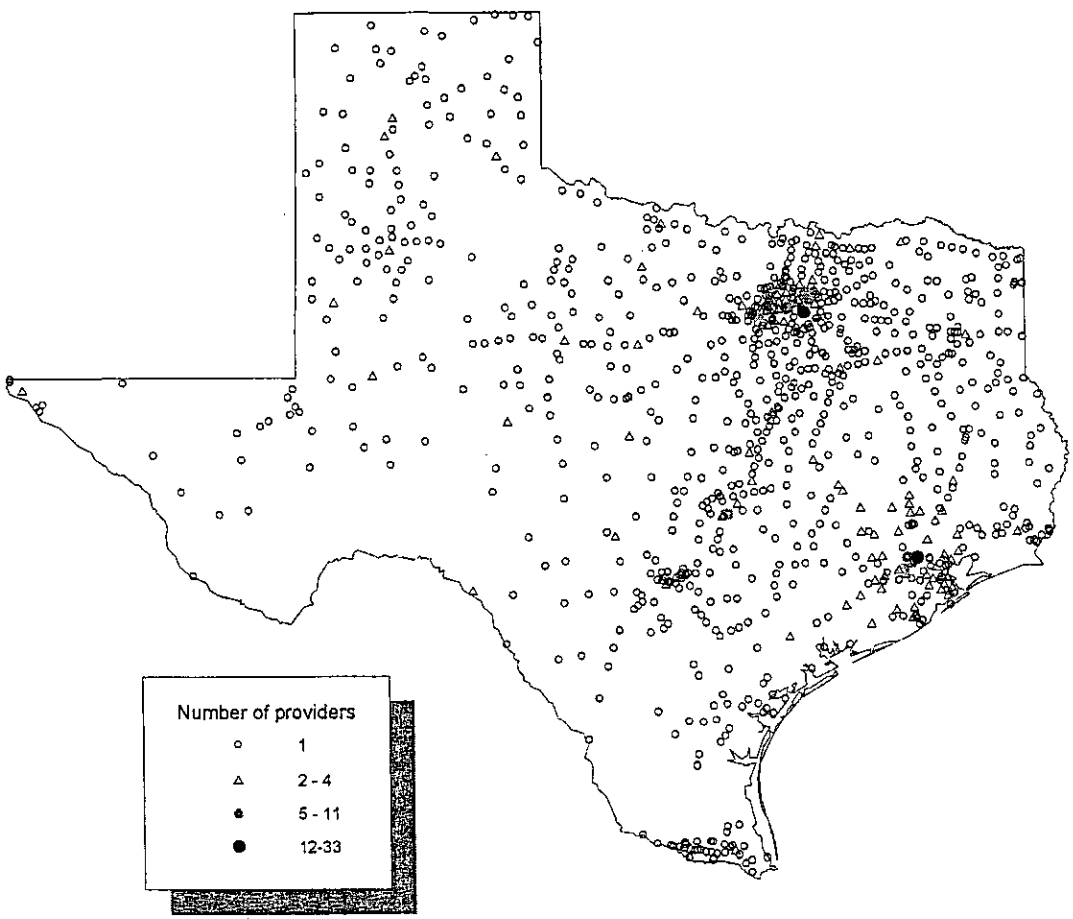
Source: Public Utility Commission HB 1777 Data Collection Instrument

Figure 2 – Business Service Providers



Source: Public Utility Commission HB 1777 Data Collection Instrument

Figure 3 – Data Service Providers



Source: Public Utility Commission HB 1777 Data Collection Instrument

Analysis of the Histogram Data

The histogram data that supported the above figures is shown in the table below and reveals a few more insights.

Table 2 – Number of Providers for Texas Towns

Number of providers in a given town	Number of Texas towns with that many providers, by type of service		
	Residential Services	Business Services	Data Services
1	257	554	843
2	229	273	77
3	178	133	27
4	143	65	3
5	92	43	3
6	58	30	0
7	53	23	3
8	42	8	0
9	30	12	1
10	32	11	0
11	25	7	0
12	18	9	1
13	14	4	1
14	12	1	0
15-19	29	5	0
20 or more	10	5	0

Source: Public Utility Commission of Texas HB 1777 Data Collection Instrument

This data set shows that residents in a good number of cities have a very sizeable number of choices of CLECs. Data show that ten cities have twenty or more CLECs serving residential customers, and residential customers in 130 towns and cities have ten to nineteen CLECs from which to choose. In contrast, residential customers in 257 towns[45] have no CLECs, and another 407 towns have only one or two CLECs from which to choose.

The trend of limited choice in providers for more specialized services can be seen in the point-to-point data. Ninety percent of all municipalities surveyed do not have competition in data services. Residents in 263 cities have no certificated providers of data services.[46] Residents in 843 towns (69 percent of all municipalities surveyed) only have one choice of provider for such services, while residents in 104 towns have a choice of two or three providers for these services.

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[45] This table is based on the same 1222 data points that were the basis for the maps. However, an additional 209 cities reported data to the Commission that did not have the necessary census codes to be included in the map, and therefore are not included in the map data set. Most of them had only ILEC service available and no choice of CLECs for any of the service types.

[46] There may be providers offering point to point data services that are not required to report to the Commission because the reporting requirement is made only of certificated providers, and it is not technically necessary to obtain a certificate from the Commission in order to provision point-to-point services.

CLECs IN TEXAS BY METRO SIZE AND GEOGRAPHIC REGION

Another measure of geographic availability may be seen in the responses of the CLECs that responded to the data request for this report. Table 3 shows the number of competitive local carriers that are providing service to customers in each of the geographic areas.

Factors of population growth, economic growth, and population density appear to be important in the decisions of CLECs to invest in or resell voice telephony facilities in a given area of Texas, as a sizeable number of competitors are available to Texas residents in counties with populations over 100,000. The Large Metropolitan areas, which comprise nearly half of the Texas population and have high population densities, have by far the heaviest concentrations of CLECs. The Suburban and Small and Medium Metro counties have about the same numbers of choices in providers as each other, even though the former group has twice the population.

Even in the smallest Rural counties, the responses show that at least one competitive provider is available to at least one county in that Council of Government. Many Rural areas have two, three, or more CLECs in addition to an ILEC. Some of these Rural competitors, however, may be aimed at customers with poor credit histories and are not vying for the average local customer's business.

Table 3 – CLECs in Texas by Size and Region

Regional Group	Population Category	Number of CLECs (1999)
Large Metro (Group 1)	Over 600,000	40
Suburban (Group 2)	Near Metros	22
Small and Medium Metro (Group3)	Other Over 100,000	23
Alamo Area Council of Governments	20,001-100,000	10
Ark-Tex Council of Governments	20,001-100,000	7
Brazos Valley Council of Governments	20,001-100,000	8
Capital Area Planning Council	20,001-100,000	7
Central Texas Council of Governments	20,001-100,000	8
Coastal Bend Council of Governments	20,001-100,000	6
Deep East Texas Council of Governments	20,001-100,000	7
East Texas Council of Governments	20,001-100,000	7
Golden Crescent Regional Planning Commission	20,001-100,000	7
Heart of Texas Council of Governments	20,001-100,000	6
Houston-Galveston Area Council	20,001-100,000	10
Middle Rio Grande Development Council	20,001-100,000	7
North Central Texas Council of Governments	20,001-100,000	10
Panhandle Regional Planning Commission	20,001-100,000	6
Permian Basin Regional Planning Commission	20,001-100,000	5
South Plains Association of Governments	20,001-100,000	6
South Texas Development Council	20,001-100,000	4
Texoma Council of Governments	20,001-100,000	7
West Central Texas Council of Governments	20,001-100,000	5
Alamo Area Council of Governments	5,001-20,000	6
Ark-Tex Council of Governments	5,001-20,000	4
Brazos Valley Council of Governments	5,001-20,000	5
Capital Area Planning Council	5,001-20,000	5
Central Texas Council of Governments	5,001-20,000	6
Coastal Bend Council of Governments	5,001-20,000	7
Concho Valley Council of Governments	5,001-20,000	4
Deep East Texas Council of Governments	5,001-20,000	7
East Texas Council of Governments	5,001-20,000	6
Golden Crescent Regional Planning Commission	5,001-20,000	7
Heart of Texas Council of Governments	5,001-20,000	8
Houston-Galveston Area Council	5,001-20,000	8
Middle Rio Grande Development Council	5,001-20,000	4
North Central Texas Council of Governments	5,001-20,000	6
North Texas Regional Planning Commission	5,001-20,000	7
Panhandle Regional Planning Commission	5,001-20,000	7
Permian Basin Regional Planning Commission	5,001-20,000	7
Rio Grande Council of Governments	5,001-20,000	3
South Plains Association of Governments	5,001-20,000	6
South Texas Development Council	5,001-20,000	5
West Central Texas Council of Governments	5,001-20,000	8
Ark-Tex Council of Governments	1-5,000	3
Central Texas Council of Governments	1-5,000	4
Coastal Bend Council of Governments	1-5,000	3
Concho Valley Council of Governments	1-5,000	7
Middle Rio Grande Development Council	1-5,000	6
North Texas Regional Planning Commission	1-5,000	6
Panhandle Regional Planning Commission	1-5,000	9
Permian Basin Regional Planning Commission	1-5,000	5
Rio Grande Council of Governments	1-5,000	4
South Plains Association of Governments	1-5,000	5
South Texas Development Council	1-5,000	2
West Central Texas Council of Governments	1-5,000	6

Source: Public Utility Commission Data Request 2000 Responses

NUMBERING CODE INDICATORS OF COMPETITORS

One measure of competitive availability can be found in the numbering prefixes (NXX codes) acquired by competitive carriers. Numbering codes are used to route and rate the switched telephone traffic within the nationwide network and ensure that a call is delivered to the telephone switch serving the customer being called. According to FCC data, Texas had 80 local service competitors holding numbering codes in mid-2000, up from 32 local service competitors in mid-1999. Those codes were geographically dispersed within Texas LATAs, as shown in Table 4.

Table 4 – Local Service Competitors by LATA

LATA	4th Qtr 1997	4th Qtr 1998	2nd Qtr 1999	3rd Qtr 2000
Abilene	0	1	1	6
Amarillo	2	4	4	10
Austin	9	13	13	29
Beaumont	0	1	2	8
Brownsville	0	1	1	7
Corpus Christi	2	4	5	8
Dallas	14	25	24	48
El Paso	1	3	3	5
Hearne	0	1	1	4
Houston	13	19	19	43
Longview	1	2	3	9
Lubbock	0	3	4	8
Midland	0	1	1	4
San Angelo	0	1	1	3
San Antonio	8	11	11	28
Waco	1	3	3	8
Wichita Falls	0	1	1	6

Sources: *Local Competition: August 1999*, Federal Communications Commission, Industry Analysis Division, Common Carrier Bureau; Analysis of Local Exchange Routing Guide.

The largest four metro areas in Texas have been the favorite destinations of CLECs. Dallas and Houston had between 40 and 50 CLECs in their markets, and Austin and San Antonio had about almost 30 CLECs in their markets. El Paso, despite being a Large Metro area, had only five CLECs in its market, fewer than cities such as Beaumont, Longview, or Waco, which have a fraction of El Paso's population. Lower *per capita* income and mediocre business prospects might be responsible for this lack of interest in El Paso. The data indicate that a large number of CLECs burst onto the scene in 1998 and again in the first half of 2000.

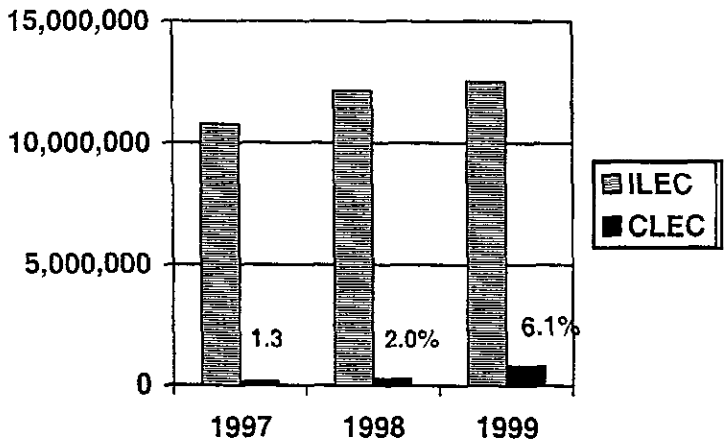
Market Penetration by Competitive Providers

Fifty-nine ILECs responded to the Commission's data request. Out of the 311 CLECs certificated to provide service in Texas during at least some part of the 1998-1999 calendar period, 128 responded to the Commission's data request. Of the CLECs responding, 36 indicated that they were not providing any local exchange services during the period in question. The data in this analysis therefore represent the reporting of 92 CLECs providing local exchange services in Texas at year-end 1999. Not all of these carriers provided services in 1998.[47]

CLEC Access Lines and Revenues

Texas has seen the beginnings of competition in local exchange service, shown by the growth in the number of lines and the revenues for CLECs. Starting from a very low level, CLECs have been increasing market share in Texas in the past three years. Market share of CLECs for access lines rose from 1.3 percent in 1997 to 6.1 percent in 1999, and in revenues the market share for CLECs rose from 1.6 percent to 9.0 percent.

Figure 4 – Number of Lines Provided by ILECs and CLECs



[47] It should be noted that while the CLEC data are good for illustrative purposes in this report, they do not appear to be precise. In some instances, it is clear that the CLECs provided incomplete or incorrect information in their geographic reporting. Secondly, the method of aggregating the data may lead to an invalid conclusion concerning competition throughout the entire aggregated region, and any analysis must recognize that telephone exchanges were merged into counties, and counties into larger groupings, based on size and region. As for the number of CLECs reporting, however, the data set does achieve critical mass. While 183 of the 311 CLECs certificated for at least part of the data period did not report, 65 of those do not have interconnection agreements and can therefore be assumed to not have sizeable operations, if any. Forty-two more of those did not get their interconnection agreement until after June 1999, and can therefore be assumed to not have had sizeable operations before the end of the data period. That leaves 76 CLECs failing to report that potentially had operations in the data period, based on their certification and interconnection agreement dates, while 92 CLECs with operations in the data period did report. Within the data set of 128 CLECs that did respond, 43 CLECs had both their certificates and interconnection agreements in order by end of 3rd quarter 1998, while a total of 76 CLECs had these items in order by 3rd quarter 1999.

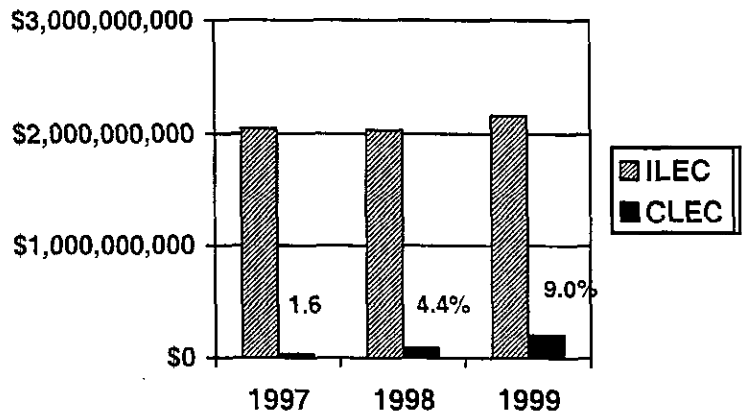
Table 5 – Comparison of ILEC and CLEC Lines and Revenues

	1997	1998	1999
ILEC Access Lines	10,767,173	12,135,113	12,532,003
CLEC Access Lines	146,185	248,166	810,259
Total Access Lines	10,913,358	12,383,279	13,305,884
CLEC Percentage of Lines	1.3%	2.0%	6.1%
ILEC Local Revenues	$2,044,664,321	$2,160,771,998	$2,287,287,649
CLEC Local Revenues	32,735,793	99,364,239	227,326,666
Total Local Revenues	$2,077,400,114	$2,260,136,236	$2,514,614,315
CLEC Percentage of Revenues	1.6%	4.4%	9.0%

Source: 1999 Scope of Competition Report; Data Request 2000 Responses

Similarly, the CLEC share of revenues has more than doubled in 97-98, and doubled again by year-end 1999, as shown in Figure 5.

Figure 5 – Comparison of ILEC and CLEC Local Revenues



Displayed in Table 6 are the number of residential and business lines provided by CLECs, categorized by geography and county size. In terms of lines in 1999, CLECs captured 8.2 percent of the Large Metro market, 11.4 percent of the Suburban market, and 5.3 percent of the market in Medium and Small Metro areas. This table clearly reveals the emergence of local exchange competition, first in the Large Metropolitan areas in 1998, followed by the beginnings of competition in counties with under 100,000 population.

Table 6 – CLEC Lines

County Size	1998		1999	
	CLEC Lines	% of Total State Market	CLEC Lines	% of Total State Market
Large Metro (Group 1)	179,921	3.0	530,393	8.2
Suburban (Group 2)	27,136	3.1	115,644	11.4
Small/Medium Metro (Group 3)	25,491	1.4	102,685	5.3
Rural; 20,001 – 100,000	10,015	0.3	36,359	1.2
Rural; 5,001 – 20,000	3,712	0.5	14,864	1.9
Rural; 1 – 5,000	1,891	1.5	10,314	7.6
Total CLEC	248,166	2.0	810,259	6.1

Source: Public Utility Commission of Texas Data Request 2000 Responses

While the four largest ILECs in Texas – SWBT, Verizon, Sprint/Centel and Sprint/United – have signed significant numbers of interconnection agreements with competitive carriers under the FTA, the remaining ILECs have entered into relatively few agreements. The agreements involving the smaller ILECs, which would be predominately in Rural areas, are strictly resale agreements, usually with no wholesale discounts. The limited number and extent of these agreements results from two factors: (1) relatively little interest on the part of other carriers to compete in less urbanized areas, and (2) the partial exemption of rural telephone companies from the interconnection requirements of FTA § 251(c).

Table 7 displays the revenues from residential and business customers by ILECs and CLECs, categorized by geography and county size. (For a breakdown of each of the 69 areas listed in the data collection instrument, see Appendix J.) CLECs appeared to be providing higher-value local service in the Large Metro and Suburban areas of Texas than in the state as a whole. In terms of revenues in 1999, CLECs captured 11.7 percent of the Large Metro market, 15.4 percent of the Suburban market, and 5 percent of the market in Medium and Small Metro areas. CLEC revenues comprise less than 4 percent of all revenues by local exchanges in Rural areas.

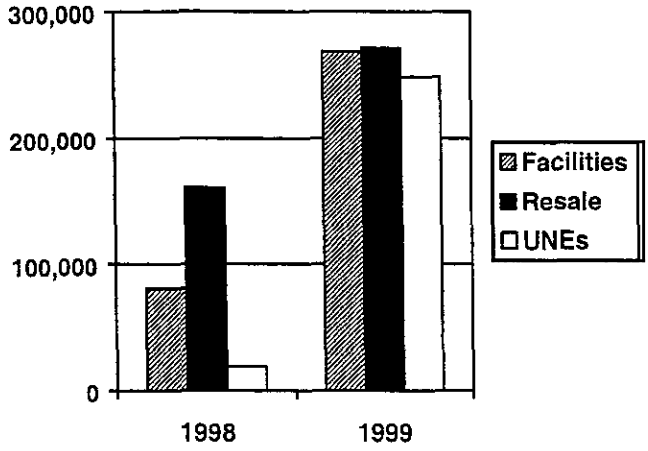
Table 7 – CLEC Revenues

County Size	1998		1999	
	CLEC Revenue	% of Total State Market	CLEC Revenue	% of Total State Market
Large Metro (Group 1)	56,098,286	4.7	156,742,378	11.7
Suburban (Group 2)	13,636,940	8.9	27,280,185	15.4
Small/Med. Metro (Gr. 3)	10,539,058	3.3	17,779,206	5.0
Rural; 20,001 – 100,000	17,925,710	3.8	22,833,530	4.4
Rural; 5,001 – 20,000	1,106,643	1.1	2,332,361	2.2
Rural; 1 – 5,000	57,602	0.4	359,007	2.4
Total CLEC	99,364,239	4.4	227,326,666	9.0

Source: Public Utility Commission Data Request 2000 Responses

The FTA envisioned the entry of local exchange competitors through three avenues: facility-based, resale, and the purchase of unbundled network elements (UNEs). Figure 6 shows the manner in which CLECs provided service in Texas in 1998 and 1999. In 1999, CLECs appeared to use each of the three methods of entry in equal proportions.

Figure 6 – CLEC Method of Service Provision (Number of Loops)



COMPETITIVE ENTRY INTO TEXAS MARKETS

While CLECs have increased market share statewide, the data showed that CLECs were more successful in gaining market share in Large Metropolitan areas than in small metro or Rural areas. The comparison of the business and residential markets below indicates that CLECs penetrated business markets faster than residential markets in 1998 and 1999.

Business/Residential Comparisons

CLECs have been much more aggressive in gaining market share in local service for businesses than for residential customers. CLECs have twice the number of business lines than residential lines, as shown in Figure 7. While CLECs showed strong growth rates in both markets, by 1999 CLECs had ten percent of the lines that served business customers compared to only three percent of lines that served residential customers, as can be seen in Table 8 and Table 9. CLECs had a six percent market share of residential revenues, indicating that their revenues per residential line were much higher than that of ILECs, as shown in Table 10 and Table 11.

Figure 7 – Comparison of Residential and Business Telephony Services in Texas by Local Access Lines

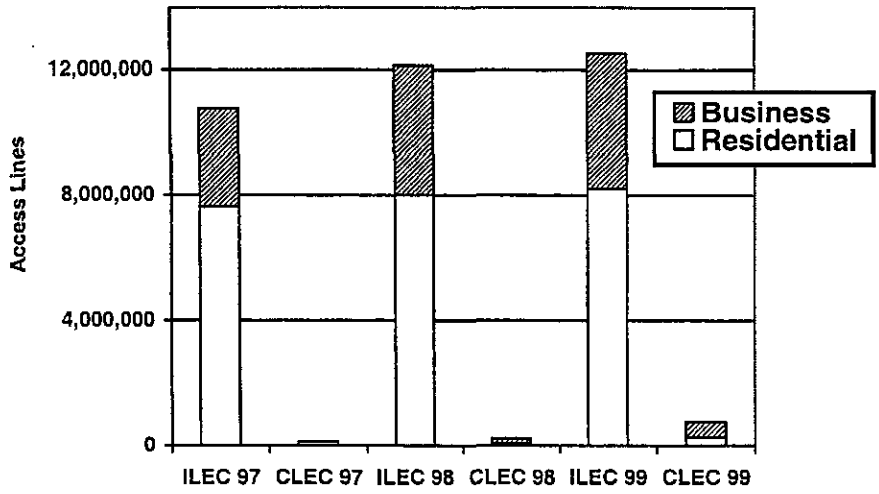


Table 8 – Residential Lines

	1997		1998		1999	
	Lines	%	Lines	%	Lines	%
ILEC	7,619,269	98.4	8,009,450	99.0	8,216,074	96.7
CLEC	122,450	1.6	79,114	1.0	280,826	3.3
Total	7,741,719		8,088,564		8,496,900	

Source: Public Utility Commission Data Request 2000 Responses

Table 9 – Business Lines

	1997		1998		1999	
	Lines	%	Lines	%	Lines	%
ILEC	3,147,904	99.3	4,125,663	96.1	4,315,929	89.7
CLEC	23,735	0.7	169,052	3.9	493,055	10.3
Total	3,171,639		4,294,715		4,808,984	

Source: Public Utility Commission Data Request 2000 Responses

Figure 8 – Comparison of Residential and Business Telephony Services in Texas by Revenues

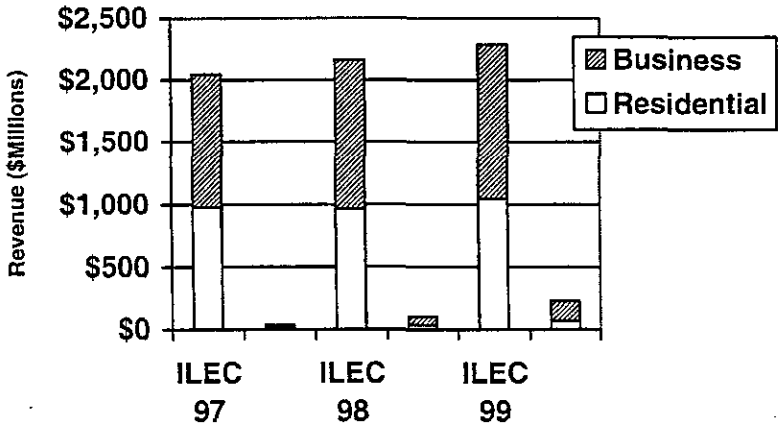


Table 10 – Residential Revenues

	1997		1998		1999	
	Revenue	%	Revenue	%	Revenue	%
ILEC	976,178,035	98.5	962,972,235	96.6	1,048,862,155	93.9
CLEC	14,375,823	1.5	34,019,358	3.4	67,632,535	6.1
Total	990,553,858		996,991,593		1,116,494,691	

Source: Public Utility Commission Data Request 2000 Responses

Table 11 – Business Revenues

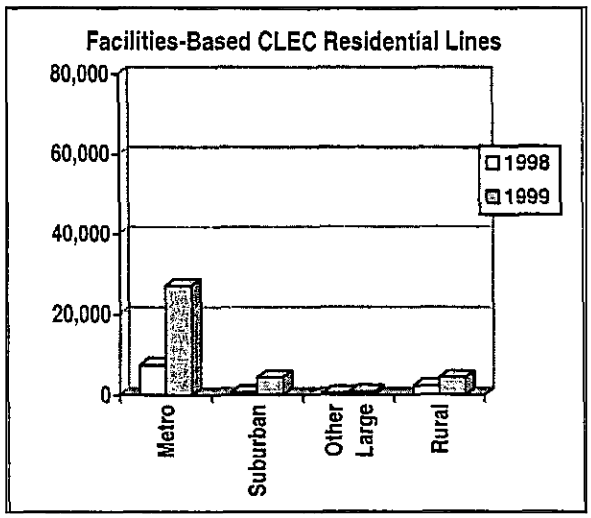
	1997		1998		1999	
	Revenue	%	Revenue	%	Revenue	%
ILEC	1,068,486,286	98.3	1,197,799,762	94.8	1,238,425,494	88.6
CLEC	18,359,970	1.7	65,344,881	5.2	159,694,131	11.4
Total	1,086,846,256		1,263,144,643		1,398,119,624	

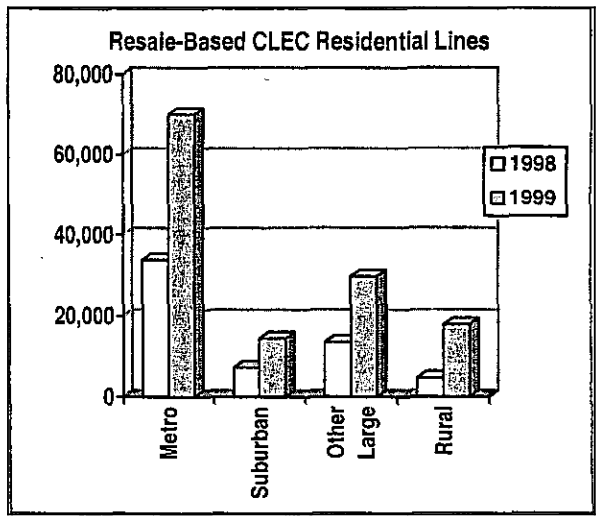
Source: Public Utility Commission Data Request 2000 Responses

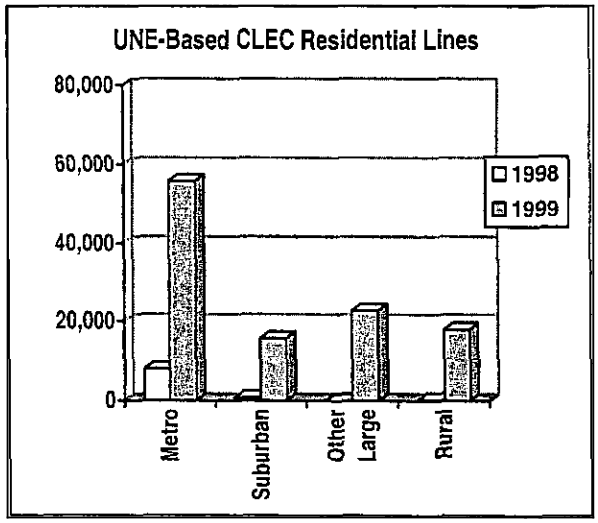
Facilities-based CLEC lines were almost exclusively in Large Metro areas. Eighty percent of all facilities-based CLEC lines in Texas served business customers in Large Metro areas, with another 10 percent serving Large Metro residential customers. Resale and UNEs were both popular outside Large Metro areas and with residential customers. See the charts and tables in Figure 9 and Figure 10.

The mix of business and residential customers varies significantly by population of a region. In Large Metro and Suburban areas, CLECs had 70 percent of their lines serving business customers and 30 percent of their lines serving residential customers. Medium and Small Metro areas of Texas saw a roughly 50-50 mix between business and residential lines. In Rural areas, CLECs served only 40,148 customers, with 30 percent of these being business customers and 70 percent being residential customers.

Figure 9 – CLEC Residential Lines by Provision Type and Region



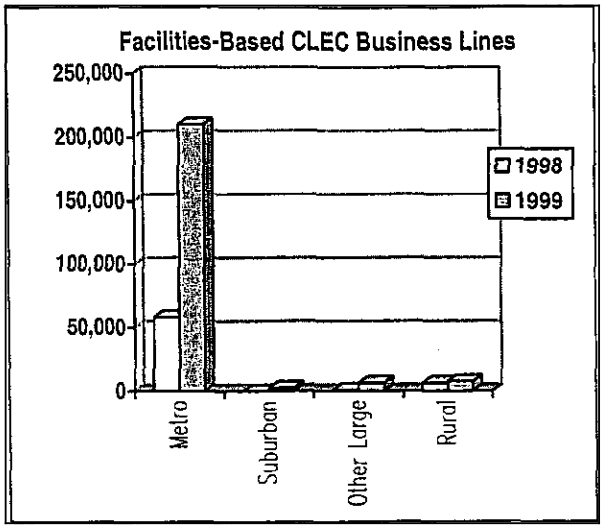


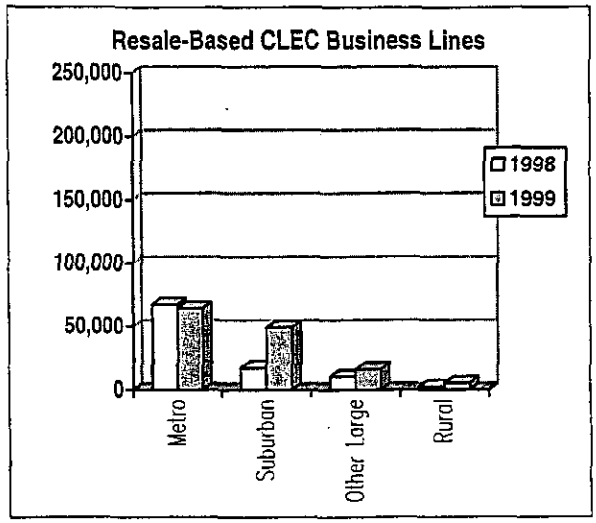


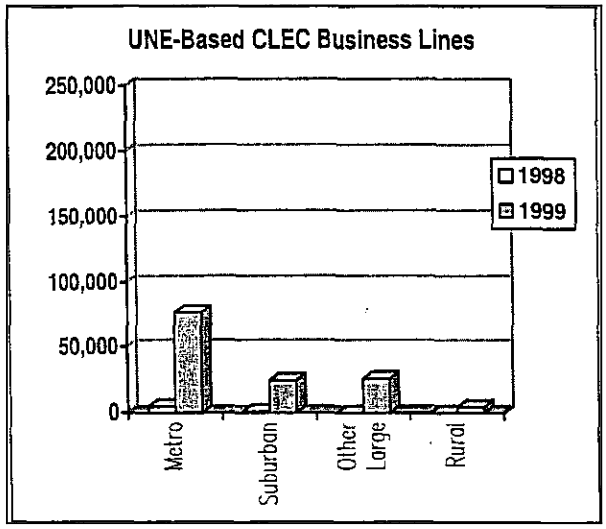
	Facilities		Resale		UNEs		Total	
	1998	1999	1998	1999	1998	1999	1998	1999
Residential – Lines								
Large Metro (Group 1)	7,509	27,052	33,822	70,101	8,067	55,737	49,398	152,890
Suburban (Group 2)	658	4,309	7,240	14,549	713	15,837	8,611	34,695
Small and Medium Metro (Group3)	480	750	13,604	29,758	6	22,585	14,090	53,093
Rural	2,216	4,267	4,600	17,899	199	17,982	7,015	40,148
Total	10,863	36,378	59,266	132,307	8,985	112,141	79,114	280,826

Source: Public Utility Commission Data Request 2000 Responses

Figure 10 – CLEC Business Lines by Provision Type and Region







	Facilities		Resale		UNEs		Total	
	1998	1999	1998	1999	1998	1999	1998	1999
Business - Lines								
Large Metro (Group 1)	58,303	209,837	67,427	64,324	4,793	76,290	130,523	350,451
Suburban (Group 2)	32	2,537	17,560	49,306	933	24,797	18,525	76,640
Small and Medium Metro (Group3)	1,020	6,252	10,377	16,239	4	26,351	11,401	48,842
Rural	6,108	7,403	2,281	5,155	214	4,564	8,603	17,122
Total	65,463	226,029	97,645	135,024	5,944	132,002	169,052	493,055

Source: Public Utility Commission Data Request 2000 Responses

Retail Prices and Cross Subsidies

In 1998 and 1999, the business sector attracted telecommunications competition at a far greater rate than the residential sector. Entrants, seeking the larger revenue streams, flocked into high subscriber-density areas rather than into low-density areas. This phenomenon, described by incumbents as "cream-skimming," is hardly surprising given the economics and the status of current telecommunications regulation.

Regulation tends to encourage "cream-skimming" by imposing cross-subsidies. The current retail rate structure contains implicit subsidies designed to achieve universal service. To subsidize basic services, regulators allow the telecommunications industry to assess a high mark-up on vertical services.[48] Business services typically have tariffed retail rates set at a much higher level than their costs to subsidize residential services. Urban customers tend to pay rates that are above cost, while rural customers tend to pay rates that are below cost.[49]

The practice of imposing cross-subsidies is incompatible with the goal of promoting fair competition (*i.e.,* based on real economic costs) via the construction of new facilities by new competitors. Cross subsidies also are inconsistent with fair competition via the purchase of UNEs, especially when the TELRIC-based pricing for UNEs is based on regional differences, rather than by customer class. Specifically, cross-subsidy regulation imposing retail prices inconsistent with the associated UNE rates encourages competitors into UNE-based "cream skimming" for services with overly high retail prices, and unduly discourages competitors from UNE-based provision for services that are under-priced.

In Texas, competitors can, under certain circumstances, take advantage of cross-subsidy regulation to offer service to business customers in high-density areas for a better rate than the ILEC can offer. The sum of TELRIC-based UNE rates for business services in urban areas is often less than the tariffed retail prices charged by the ILEC, which contain implicit subsidies for residential telephone service. Therefore, if a competitor's retailing costs plus the sum of UNE rates owed to the ILEC is below the ILEC's tariffed retail price, the competitor can turn a profit by purchasing a business phone's underlying UNEs, allowing it to offer various optional calling features at a total rate below the ILEC's retail price.[50] This opportunity is reinforced when the targeted customers spend relatively large amounts on long distance and other optional services without causing the competitor to incur substantial additional costs.

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[48] Actually, it is the flat-rated *access* to the telephone network (and hence to all services) via the customer's "local loop" that tends to be subsidized.

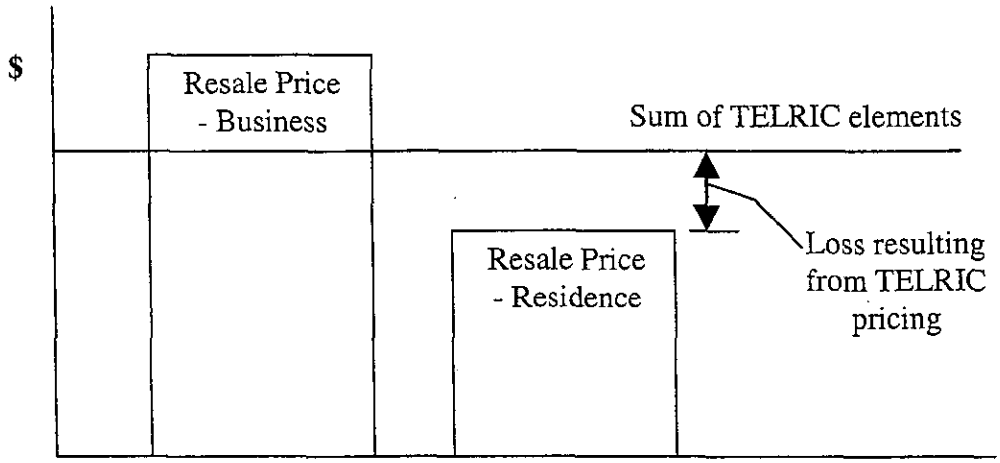
[49] Some of these cross-subsidies were diminished in the Commission's universal-service project (*Compliance Proceeding for Implementation of the Texas High Cost Universal Service Plan*, Project No. 18515), which provided for larger-scale, more systematic subsidies to providers serving customers in high-cost areas by means of a substantially increased Texas Universal Service Fund surcharge assessed on all taxable telecommunications receipts.

[50] David Sibley, Declaration for SWBT in *Interim Process for New Services and Promotional Offerings, and Pricing and Packaging Flexibility Tariffs, Pursuant to PURA Chapters 52, 58, and 59,* Project 20956, (Oct. 21, 1999).

On the other hand, providing services using UNEs to residential customers (at least those who use long-distance sparingly and purchase few if any optional services) may not be profitable for competitors because the revenue the competitors can recover from the retail rate could be below the sum of the UNE rates needed to provide such service. Consequently, competitors are much less likely to provide UNE-based service to such residential customers.[51]

This inconsistency of retail rates and UNE rates for residential and business is illustrated below.[52]

Figure 11 – TELRIC-based UNE Rates vs. Retail Rates



Long Distance Competition

Although Texans enjoyed a wide selection of long distance carriers (also known as interexchange carriers, or IXCs) at the end of 1999,[53] the long distance market continued to be dominated by three carriers: AT&T, WorldCom (which merged with MCI in September 1998), and Sprint. Economists refer to this phenomenon as a "tight oligopoly," meaning that the dominant competitors possess a level of market power that enables them to use significant discretion in setting prices. A market may be considered a "tight oligopoly'" if its four largest firms serve at least 60% of the market. In 1999, the

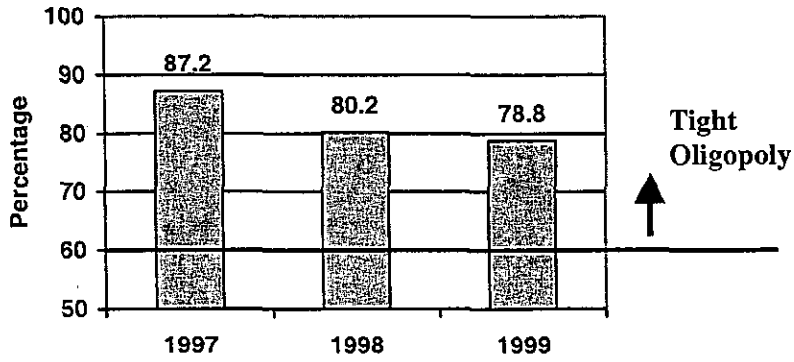
[51] The ability to resell the ILEC's services at a discount offers an additional avenue for competitors to provide service. The availability of universal-service subsidies for providing facilities- or UNE-based service to customers in high-cost areas also provides an incentive for competitors to serve some customers in less urbanized areas.

[52] David Sibley, Declaration for SWBT in *Interim Process for New Services and Promotional Offerings, and Pricing and Packaging Flexibility Tariffs, Pursuant to PURA Chapters 52, 58, and 59,* Project 20956, at 6 (Oct. 21, 1999).

[53] As of September 2000, 1550 long-distance carriers were registered with the Public Utility Commission of Texas. The commission's list of registered long-distance carriers can be found at http//www.puc.state.tx.us/telecomm/directories/ixc.xls.

market share in Texas of the largest three IXCs was 78.8% compared to 80.2% in 1997 and 87.2% in 1995 for the same three firms.[54]

Figure 12 – Long Distance Market Share of AT&T, WorldCom, and Sprint Combined



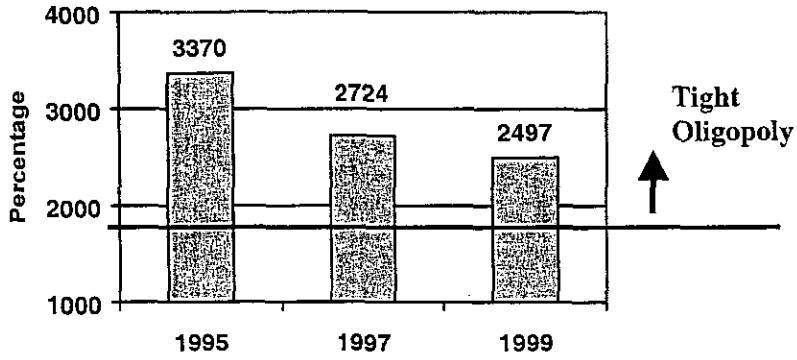
Another widely recognized measure of market power is the Hirschman-Herfindahl index (HHI).[55] This index ranges from a theoretical minimum of just above zero (meaning no firm has a meaningful market share) to a maximum of 10,000 (meaning a complete monopoly exists). An HHI at or above 1,800 indicates that a market is tightly oligopolistic, *i.e.*, highly concentrated. While the HHI was 3,370 in 1995 and 2,724 in 1997, it declined to 2,497 in 1999.[56] The last HHI suggests that the Texas intrastate long distance market was still highly concentrated at the start of 2000, though the market power of the three largest IXCs was continuing to decline.

[54] These market-share percentages are based on originating access minutes of use. The 1995 and 1997 percentages are for AT&T, MCI, Sprint, and Worldcom combined. The 1999 percentage is for AT&T, Worldcom and Sprint; Worldcom purchased MCI in 1998. Market share also may be measured using revenues, presubscribed lines, customers, or some other measure.

[55] The HHI is calculated by summing the squares of each firm's market share expressed as a percentage.

[56] These indices are actually lower-bound estimates, derived by adding the sums of the squares of the shares of the top four long-distance carriers in 1995 and 1997 and the top three in 1999. The 1999 estimate was calculated using only access minutes of use purchased from SWBT, Verizon, and the Sprint ILECs. Staff was not able to obtain data on an IXC-specific basis due to the reluctance of companies to provide company-specific data. The problem of obtaining data to calculate the HHI is discussed in Chapter 7 of this *Report*, under Legislative Recommendation No. 3 (*Clarify and Ensure Commission Authority to Protect proprietary Information*) as one of several examples of companies' refusal to provide information due to concerns about the Commission's ability to protect commercially sensitive information.

Figure 13 – Hirschman-Herfindahl Index (HHI) of Three Largest Long Distance Carriers (AT&T, WorldCom, and Sprint)



A significant change in the long distance arena occurred on July 10, 2000, when SWBT's affiliate SBC Long Distance entered the interLATA long distance market.[57] Unlike other long distance carriers, as of late 2000 SBC Long Distance offered interLATA long-distance service only to SWBT's local exchange telephone customers. Given SBC Long Distance's initial success in attracting long distance customers combined with customer enthusiasm for one-stop shopping, the erosion of the interLATA dominance of AT&T, WorldCom, and Sprint appears to be accelerating. As of December 5, 2000, SBC reported to the Commission that 1.2 million residential customers and more than 300,000 business customers had signed up for its interLATA long distance. The associated access line total represents more than 12% of SWBT's access lines in Texas.

As a result of a restructure of the Texas Universal Service Fund and the implementation of PURA § 58.301, *Switched Access Rate Reduction*, between September 1, 1999, and July 1, 2000, switched access rates charged to IXCs for originating and terminating long distance calls were reduced significantly. The reductions were flowed through to retail customers in the form of lower long distance rates. On average, a standard long distance call that previously was priced at $.15 - $.25 per minute of use was decreased to $.10 to $.20 per minute of use. Generally, long-distance rates charged by large IXCs were reduced by five cents ($.05) per minute of use. These reductions memorialized an important goal of the last legislative session – to make certain that retail customers benefited from significant reductions to access charges paid by IXCs.

Conclusion

CLECs entered Texas in large numbers, particularly in Dallas and Houston, which had over 40 CLECs by mid-2000, and in Austin and San Antonio, which each had nearly 30 CLECs. CLECs gained market share in local telephony, particularly in the Large Metro and Suburban areas of those four cities.

[57] SWBT's entry into the long distance market is discussed in detail in Chapter 2 of this Report.

CLECs had stronger market penetration among business customers than residential customers. CLECs entered Large Metro markets by building infrastructure and entered other regional markets by using a combination of resale of services and purchase of UNEs. Even rural areas of Texas were found to have multiple CLECs, but questions remain as to whether these CLECs serve a small niche market or the broader range of residential customers. Market penetration in rural areas overall was limited but increasing over time.

CHAPTER 4: COMPETITIVE DEVELOPMENTS IN 2000

The data in Chapter 3 show that, in 1998 and 1999, a number of well-financed CLECs appeared poised to provide ILECs with competition for local exchange service in large and Suburban markets in Texas and to slowly but steadily increase market share in Rural areas. In 2000, however, some CLECs fell on hard times, forcing some into bankruptcy, restructuring, and mergers. A number of these CLECs announced plans to reduce their efforts in local voice service in Texas. At the same time, SWBT strengthened its financial position relative to CLECs, gained substantial market share in long distance markets, and raised the prices of various non-competitive telecommunications services.

CLECs

CLECs entered Texas in large numbers in 1998 and 1999. A number of the startups were well financed, and the three largest long-distance carriers had announced their intentions to compete in local voice telephony in Texas. In the past year trends in the stock market and in the telecommunications industry have dramatically changed the dynamics of competition in local service.

FINANCIAL SIZE AND STRENGTH IN THE LATE 1990S

The financial size and strength of CLECs relative to ILECs can influence the quality and intensity of competition in local telephone service in various areas of Texas. While a large number of CLECs have entered the Texas market, if their capitalization is thin or if they are not affiliates or subsidiaries of well-capitalized firms, CLECs may not provide substantial competition to entrenched ILECs, particularly if financing for start-up firms proves difficult.

If a number of CLECs have deep pockets or are affiliates of companies with deep pockets, these firms can fight long and hard for market share if the prospects for solid profits are good. They would be in a position to finance the installation of lines, to purchase long-term contracts for UNEs, to market their services effectively, and to maintain a presence in a local market if the incumbent decided to undercut prices in an attempt to retain market share.

The survey reveals that by the end of 1999, 90 CLECs had entered the Texas market for local exchange service, as shown in Table 12.[58] The vast majority of CLECs

[58] Due to the Commission's limitations on acquiring competitively sensitive information, the number of CLECs actually providing service to paying customers at the end of 1999 is not known, and

were private companies. Of the remaining CLECs, the survey showed comparable numbers of telephone cooperatives and publicly traded firms.[59] These CLECs were competing with fifty-nine ILECs. Telephone cooperatives and small, private companies accounted for more than 80 percent of the ILECs.

Table 12 – Texas ILECs and CLECs by Type of Organization

	ILECs		CLECs	
Type of Entity	Number	Percent of Total	Number	Percent of Total
Public Companies	10	16.9%	10	11.1%
Private Companies	25	42.4%	72	80.0%
Telephone Cooperatives	24	40.7%	8	8.9%
Total	59	100.0%	90	100.0%

Source: Public Utility Commission Data Request 2000 Responses

Table 13 lists the CLECs by size of their capitalization, defined in this case as the value of debt and equity of the CLEC's parent in its most recent financial statement, which in most cases was year-end 1998 or year-end 1999.[60] Financial data on 52 CLECs were not available for this analysis. Most of these 52 CLECs were private companies, many of which do not publish their financial statements. Most of these firms likely were small with limited financial resources. They may have been niche players, gambling on quick, rapid growth, or eventually merging with another CLEC when the market consolidates.

therefore the percentage of those replying to the Commission's data request cannot be known. Several perspectives are available on the response rate to the Commission's data request and are detailed in Appendix H. Because it is nearly impossible for a CLEC to provide services without an interconnection agreement with an ILEC, the Commission believes that a critical mass of competitive providers submitted data, based on the 73 responses that were received from the 150 companies that had interconnection agreements in place by the end of 1999, which was the close of the period for which data were requested.

[59] One of the cooperatives, Denton Electric Cooperative, is an electric, not a telephone, cooperative.

[60] Staff in the Commission's Financial Review section made a determination of which subsidiary of a company was the parent based on financial statements and experience in the industry. Staff did not contact or ask the firm directly for this information, so the Commission does not claim that the identification of the parent companies is exact. Nor did staff make an attempt to determine the market capitalization of the publicly traded companies in this survey. Thus, the figures presented in this analysis should be considered illustrative rather than definitive.

Table 13 – Capitalization of CLECs: Debt and Equity Listed in Financial Statements

Size of CLEC	Number	Percent of Total
More than $10 billion	10	11.1%
$1 billion - $10 billion	11	12.2%
$100 million - $1 billion	7	7.8%
Less than $100 million	10	11.1%
Unknown	52	57.8%
Total	90	100.0%

Source: Public Utility Commission Data Request 2000 Responses

In 1999 the Texas market had CLECs with a wide range of capitalizations, some of which are very large electric or telephone utilities. Twenty-one firms, or a quarter of all CLECs, had parent companies with $1 billion or more. Almost 70 percent of all CLECs, however, had less than $100 million in capitalization or did not publish their financial information.

The two largest ILECs listed were SWBT and GTE/Verizon, ILECs subject to customer choice. These two ILECs each had capitalizations of over $10 billion, as shown in Table 14. Almost 90 percent of all ILECs in Texas, however, had capitalizations of less than $100 million. State and federal law and regulations allow small ILECs to forgo the implementation of standard interconnection agreements. This exemption hinders customer choice in many service areas of Rural Texas.

Table 14 – Capitalization of ILECs (Debt and Equity)

Size of ILEC	Number	Percent of Total
More than $10 billion	2	1.7%
$1 billion - $10 billion	1	3.4%
$100 million - $1 billion	3	5.1%
Less than $100 million	50	84.7%
Unknown	3	5.1%
Total	59	100.0%

Source: Public Utility Commission Data Request 2000 Responses

CLECs' Investment in Infrastructure

The flood of financial capital that CLECs had at their disposal in the late 1990s allowed them to be aggressive in investing in new plant and equipment in Texas in 1999, as shown in Table 15 and Table 16. While ILECs had considerable construction expenditures in the late 1990s, many of these expenditures appear to have been offset by depreciation of existing equipment. CLECs, in contrast, increased their construction expenditures in 1999 by more than three times their 1998 expenditures, accounting for

one out of every four dollars of new investment in 1999. As a result, CLECs' share of infrastructure, as measured by net plant investment, doubled in one year to nearly ten percent in 1999.

Table 15 – Net Plant Investment

	1998		1999	
	Net Plant Investment	%	Net Plant Investment	%
ILEC	13,678,746,833	95.0%	13,849,642,077	90.5%
CLEC	713,529,978	5.0%	1,457,917,966	9.5%
Total	14,392,276,810		15,307,560,043	

Source: Public Utility Commission Data Request 2000 Responses

Table 16 – Construction Expenditures

	1998		1999	
	Construction Expenditures	%	Construction Expenditures	%
ILEC	2,396,430,541	90.8%	2,282,189,742	74.0%
CLEC	243,005,792	9.2%	800,765,765	26.0%
Total	2,639,436,333		3,082,955,507	

CLECs also invested in switching offices, as shown in Figure 14. Growth was most rapid in switching offices serving 31,000 or fewer lines. Table 17 shows that CLECs doubled the number of switching offices that served over 300,000 lines from eight in 1998 to sixteen in 1999.

Figure 14 – Comparison of ILEC and CLEC Switching Offices

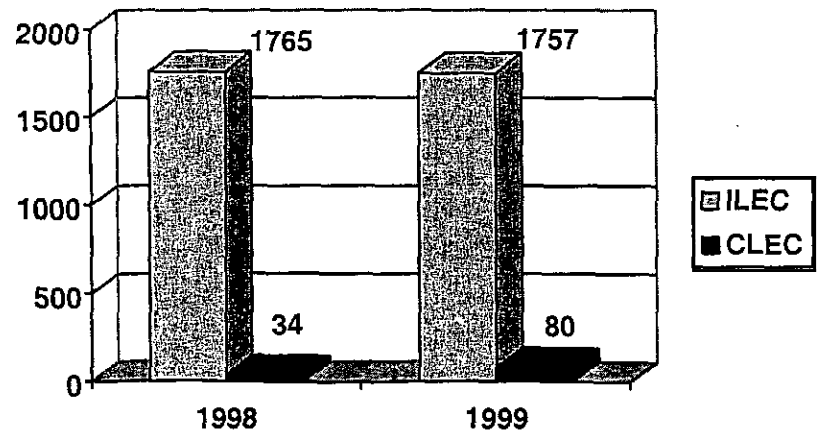


Table 17 – Comparison of Switching Offices by Size of Office

Size of Switching Office	1998		1999	
	ILEC	CLEC	ILEC	CLEC
Fewer than 3,000 Lines	928	17	914	45
3,000 to 31,000 Lines	360	8	363	16
31,000 to 100,000 Lines	100	1	103	1
100,000 to 300,000 Lines	42	0	42	2
Over 300,000 Lines	335	8	335	16
Total Switching Offices	1,765	34	1,757	80

Source: Public Utility Commission Data Request 2000 Responses

FINANCIAL STRUGGLES IN 2000

The capitalization of firms in 1998 and 1999, while consistent with the timeframe of the information in the data collection instrument, no longer presents an accurate picture of the financial condition of many CLECs.

The FTA and the increased market penetration of the Internet stimulated substantial investment in the telecommunications industry in the past two years. Capital spending by telecommunications companies in the United States is projected to exceed $100 billion in 2000, almost three times the level in 1995.[61]

According to analysts in the telecommunications industry, investment in telecommunications lines and equipment has greatly outpaced growth in revenues in 1999 and 2000. The American telecommunications industry had a negative cash flow of $20 billion in the first half of 2000, on top of a negative cash flow of $11 billion in 1999.[62]

The industry turned to capital markets to finance this investment, issuing tens of billions of dollars in stock and bonds. The telecommunications industry became a major source of investment funds. Since year-end 1998, slightly more than 50 percent, or about $10.3 billion of the $20 billion private equity firms poured into minority investments in public companies went to telecommunications firms. In 1998 and 1999, telecommunications companies issued over $50 billion in high-yield bonds.[63]

This sharp increase in investment has led to a boom and bust in share prices of CLECs. Table 18 shows the performance of the NASDAQ Telecommunications Index for the period January 1, 1998 to December 5, 2000. The index rose from 306.1 in December 31, 1997 to a peak of 1,230.1 on March 10, 2000. By early 2000 this rise in the stock market provided CLECs with large capitalizations.

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[61] "One Analyst's Grim Telecommunications View," *New York Times* (October 5, 2000).

[62] *Id.*

[63] "Telecom Sector Has Become a Black Hole for Investors," *Wall Street Journal* (October 13, 2000).

Table 18 – Performance of the NASDAQ Telecommunications Index (January 1, 1998 – December 5, 2000)

Date	NASDAQ Telecommunications Index	Increase from Previous Period	Cumulative Increase from December 31, 1997
December 5, 2000	534.4	-56.6%	74.3%
March 10, 2000	1,230.1	21.1%	301.2%
January 1, 2000	1,015.4	102.7%	231.2%
January 1, 1999	500.9	63.4%	63.4%
January 1, 1998	306.6	NA	NA

Source: National Association of Securities Dealers website, http://www.nasdaq.com, 10/31/00.

According to various reports in the financial press in the fall of 2000, investor sentiment turned sharply negative towards the telecommunications sector when CLECs were unable to convince investors that prevailing and projected profits were large enough to justify the prevailing level of investment and high share prices. In the nine months after its March 2000 peak, the NASDAQ Telecommunications Index fell 57 percent.

In the second half of 2000, CLECs found that access to capital, in the form of bank loans, issuance of debt, or initial public offerings of equity, was much more limited than it had been in the previous 18 months. The spread between telecom high-yield bonds and U.S. Treasuries (the safest debt instrument in the market) rose from 4.72 percent at the beginning of 2000 to 8.26 percent in mid-October, dramatically increasing the cost of raising venture capital for the typical small CLEC.[64]

The fall in the share prices of telecommunications companies strongly impacted some promising CLECs that had entered the Texas market. For example, four CLECs that once had a capitalization listed in Table 13 as $800 million or more in 1998 or 1999 – Covad, ICG, Rhythms, and Teligent - saw their share prices fall more than 95 percent from their 2000 peaks, as shown in Table 19. In contrast, the stock price of the leading ILEC in Texas, Southwestern Bell, was less than 10 percent off its peak in 2000.

[64] *Id.*

Table 19 – Fall in Share or Index Prices of Telecommunications Providers in 2000

Category	Peak Price in 2000	Price on December 5, 2000	Percent Change in Stock Price
NASDAQ Telecommunications Index	1,230.1	534.4	-56.6%
ILEC			
Southwestern Bell	59.0	53.4	-9.5%
Large CLECs which are Long-Distance Carriers			
AT&T	61.0	20.4	-66.6%
Sprint	67.0	23.9	-64.3%
Worldcom	51.9	14.7	-71.7%
Selected Small CLECs			
Allegiance	110.1	17.6	-84.0%
Covad	66.6	1.9	-97.1%
ICG	39.2	0.3	-99.2%
Rhythms	50.0	0.9	-98.2%
Teligent	100.0	3.5	-96.5%

Source: Yahoo! webpage, http://finance.yahoo.com; *Wall Street Journal*, December 5, 2000

Larger CLECs that are long distance carriers also faced a difficult set of problems in 2000. A significant change in the long distance arena occurred on July 10, 2000, when SWBT's affiliate SBC Long Distance entered the interLATA long distance market. Given SBC Long Distance's initial success in attracting long distance customers, combined with customer enthusiasm for one-stop shopping, the erosion of the interLATA dominance of AT&T, WorldCom, and Sprint appears to be accelerating.

By the end of October 2000, stock prices for the three largest long distance carriers fell by two-thirds from their calendar year 2000 highs. These events led long-distance carriers to reconsider their business strategies in the Texas local telephone market.

CLECs Reconsider the Texas Market

Table 20 presents a recent snapshot of the actions that key CLECs have taken with regards to the Texas local voice market. Some of these CLECs were the largest, most capitalized CLECs in the Texas in 1998 and 1999 and were considered the "shining examples" of competitors to Texas ILECs for residential customers in Texas

Table 20 – Changing Business Strategies for CLECs in the Texas Market

CLEC	Action Taken	Date Announced	Source
AT&T	Reduced presence in *residential voice market*, focusing on data services. Restructure/divestiture into *four separate business.*	10/25/00	att.com/press/item/ Seth Schiesel, "AT&T, In Pullback, Will Break Itself Into 4 Businesses," New York Times, 26, Oct. 2000. Floyd Norris, "AT&T Realigns Its Planets," *New York Times*, Oct. 26, 2000.
Sprint	Reduced presence in residential voice market, focusing on data services.	11/3/00	CNET News.com
Worldcom	Reduced presence in *residential voice market*, focusing on data services.	11/1/00	2000 Test.newsbytes.com/news/00 "WorldCom to Reorganize, Focus on Internet, Data," *Dallas Morning News*, Oct. 27, 2000.
Verizon /VSSI	Amend to withdraw local service package. Reduced presence within residential voice market, focusing on data services. Withdrawal of bundled package offerings.	10/20/00	Investor.verizon.com/ news, 30, Oct. 2000 "Verizon 3rd Quarter Profit Flat, in Line With Forecasts," *L.A. Times*, 31, Oct. 2000. Vikas Bajaj, "Verizon to Close Division," *Dallas Morning News*, Oct. 20, 2000.
Excel Communications	Intent to cease local exchange service within the Texas market.	11/20/00	Letter to Commission, Robin Johnson, Assistant General Counsel, Excel Communications.

Source: Public Utility Commission

Provided below are more details on the situations faced by the companies presented in Table 20.

AT&T

In October 2000, AT&T abandoned its ambitious but unprofitable business plan of the last three years in favor of splitting into three different companies: Wireless, Broadband (containing cable), and Business Services, which contains and will eventually spin-off Consumer Services. The Business Services division will own the AT&T name and network, while the other companies will lease the rights. AT&T's plan to deliver bundled local exchange, long distance, broadband internet, and cable television over coaxial cable lines is now defunct.[65]

AT&T is also spinning off Liberty Media, a cable programming company it acquired during its long buildup in preparation for the abandoned integrated cable services plan.[66] Some telecommunications analysts say that AT&T will eventually pull completely out of the local exchange market, which has produced lower revenues than

[65] Seth Schiesel, "For Local Phone Users, Choice Isn't An Option," *The New York Times*, at A1 (November 21, 2000).

[66] Geraldine Fabrikant, "AT&T Plans Spinoff to Cut Cable Holdings," *The New York Times* at C1 (November 16, 2000).

expected.[67] The company has also seen an 11% drop in its long distance earnings in 2000, down from $22 billion.[68] With a $62 billion debt and company stock down from a high of $61/share in 1999 to less than $20/share in November 2000, few financial analysts are predicting a quick recovery.[69]

AT&T plans to move its Consumer Services division into bundling voice and DSL, and recently appointed David Dorman, an executive with a history of taking over troubled companies, as its president. Dorman is expected to focus on maintaining quality in the Business and Consumer Services division.[70] Some analysts have alleged that bundling voice and data will not solve the company's problems, as it will not differentiate AT&T from the many other CLECs offering the same services.[71] However, in the era of deregulation, long distance does not hold the same place for AT&T as it has in the past. The BOCs are entering the market with a strong customer base. As described in Chapter Three, SWBT, in particular, has picked up over a million long distance customers in Texas since July, grabbing a 12% share of the long distance market while ceding very little of the local exchange market.[72]

Verizon

Like AT&T, Verizon is having difficulty in the competitive local exchange and long distance markets. Verizon fared better than some other major telecommunications companies, through better estimation of its profit expectations. However, local and long distance revenues are dropping for the company, which claims that data sales alone are keeping its profits aloft.[73]

Verizon's financial difficulties in the CLEC market have apparently led the company to attempt to pull out of the residential competitive local exchange market in Texas, where it services over 43,000 customers. Verizon's CLEC, VSSI, submitted an Application for Amendment to its COA in November 2000, stating its wish to "discontinue competitive local exchange services to consumers and small business customers in Southwestern Bell and former GTE service areas." The PUC is awaiting further information from Verizon, including any plans for transfer of current customers to similar plans on other local exchange carriers and a justification for retaining its COA.

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[67] Seth Schiesel, "For Local Phone Users, Choice Isn't An Option," *The New York Times*, at A1 (November 21, 2000).

[68] Deborah Solomon, "AT&T Plans Big Asset Sales to Cut Debt," *The Wall Street Journal*, at A3 (November 8, 2000).

[69] Peter Elstrom, "AT&T: Breaking Up Is Still Hard To Do," *Business Week*, at 173-174 (November 6, 2000).

[70] Deborah Solomon, "AT&T Names Telecom Veteran Dorman Head of Business, Consumer-Phone Units," *The Wall Street Journal*, at A3 (November 29, 2000).

[71] Elizabeth Starr Miller, "Consumers at the Core: AT&T to Keep Consumer Side Close to Home," *Telephony*, at 28 (October 30, 2000).

[72] Elizabeth Douglass, "Firms Giving Long-Distance Short Shrift," *The L.A. Times* (November 8, 2000), accessed via Internet, www.latimes.com.

[73] Shawn Young, "Verizon Reports Solid Results Amid Sales Growth," *The Wall Street Journal*, at B10 (October 31, 2000).

MCI WorldCom

Immediately following AT&T's split announcement, WorldCom revealed that it also will spin off its local exchange and long distance services, most of which it acquired when it merged with MCI Communications in 1998, into a separate tracking stock under the MCI name.[74] As with AT&T, some analysts contend that this is the beginning of a shift away from local service.[75] WorldCom's stock is down 75% from its 1999 peak, proportionally more than AT&T's loss.[76]

WorldCom CEO Bernard Ebbers had long presented the company as an upstart intent on taking AT&T's business, but some analysts contend that Ebbers structured his company so similarly to AT&T that he was caught in the same downdraft in long distance revenues.[77] To illustrate the cutthroat nature of the long distance environment, Ebbers described a situation in which, after MCI won a big contract for Kmart's communication business, AT&T CEO C. Michael Armstrong called Kmart and offered them service for $5 million less than WorldCom's bid, regardless of what it was. Ebbers then offered Kmart service for $2 million below AT&T's offer, which would have been, by his admission, less than profitable. AT&T lowered its bid again and won the contract.[78]

WorldCom's push towards data is evidenced in its recent acquisition of Intermedia, a leading data provider, only a few weeks after announcing the MCI spin-off. WorldCom also recently began providing high-speed internet access in Memphis through fixed wireless technology.

Sprint

Sprint profits have been steady lately, mostly due to packaging long distance with data.[79] Sprint's CLEC offers local exchange service in 21 markets throughout the nation and has announced plans to enter 80 more over the next year, mostly using fixed wireless technology.[80] Sprint is de-emphasizing traditional local exchange, however, except as part of a package.[81]

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[74] Seth Schiesel, "With WorldCom's Breakup Plan, Eerie Similarities to AT&T," *The New York Times*, at C1 (November 2, 2000).

[75] Elizabeth Douglass, "Firms Giving Long-Distance Short Shrift," *The L.A. Times* (November 8, 2000), accessed via Internet, www.latimes.com.

[76] "WorldCom's Bernie Ebbers Scrambles to Raise Cash," *The New York Times*, at C1 (November 11, 2000).

[77] Seth Schiesel, "With WorldCom's Breakup Plan, Eerie Similarities to AT&T," *The New York Times*, at C1 (November 2, 2000).

[78] David Henry and Michelle Kessler, "Competition Grows Fierce," *USA Today* (November 2, 2000), accessed via Internet, www.usatoday.com.

[79] Bruce Meyerson, "Sprint Will Not Spin Off Long-Distance," *Austin American-Statesman*, at G4 (November 4, 2000).

[80] Paul Davidson, "Competition Squeezes Out Traditional Firms," *USA Today* (November 3, 2000), accessed via Internet, www.usatoday.com.

[81] Bruce Meyerson, "Sprint Will Not Spin Off Long-Distance," *Austin American-Statesman*, at G4 (November 4, 2000).

This de-emphasis of local exchange has led the company's CLEC to cease offering residential local exchange service to new customers in Texas, as of November 27, 2000. Existing customers have been grandfathered in their service, but are not allowed to change any features or add lines at the risk of termination of service.

In October, Sprint announced plans to offer its ION (meaning "integrated on-demand") service to residential customers in Houston and Dallas. ION bundles up to four voice lines, 750 minutes of long distance, vertical telephone services, and high-speed internet access. It is unclear whether, in light of Sprint's CLEC's decision to quit offering residential local exchange service, the company will follow through with this announcement. Sprint claims that the service would cost between $120 and $150, and has been available to business customers in Dallas since June.

Excel Communications

Excel Communications is a CLEC focused mostly on long distance, wireless, and internet access, although the company has been offering voice in some areas of Texas. However, like Sprint and Verizon, Excel has just announced its intent to cease local exchange service in Texas, citing the difficulty of breaking into the CLEC market in Texas and concerns about the short-term profitability.

TXU / Fort Bend Communications and Reliant Communications

These two companies had some of the deepest pockets among CLECs, as well as electric industry parents with a strong local presence and name recognition in Dallas and Houston, two markets where CLECs had been building wireline infrastructure. These advantages were not sufficient to challenge SWBT in local service. Reliant Communications has announced that it is abandoning voice service to focus on data services. TXU / Fort Bend Communications has announced that it will limit its presence in the residential voice market to the more upscale and Suburban markets in Texas. By reducing its presence in residential voice markets, the company could focus on providing data services.

ILECs

In the past two years, ILECs have used the pricing flexibility and bundling of services that they gained in SB560 to try to retain customers. SWBT has raised prices on a variety of services that competitors do not provide.

SB 560 and Pricing Flexibility

SB 560 provided ILECs with pricing and packaging flexibility for a variety of nonbasic services to allow customers to buy a bundled product of services from one provider, also known as one-stop shopping. Through one-stop shopping, a customer can often obtain a lower price for a package of bundled services, can eliminate any aggravation associated with having multiple providers, and can consolidate multiple service charges onto one bill for billing ease. Because one-stop shopping has become

popular in recent years, ILECs and their competitors are aggressively bundling services together in various packages that appeal to customers, particularly in urban areas.[82]

ILECs, primarily SWBT and Verizon (GTE/Contel), exercised their pricing flexibility options in various ways, filing approximately 150 pricing flexibility tariffs since September 1999.[83] SWBT, in particular, offered dozens of promotions on vertical services (such as call return, Caller ID, call waiting, and speed calling) and toll services by waiving non-recurring installation charges, providing cash-back offers for customers who retain service for a minimum period, and through other incentives.

These ILECs packaged popular vertical services and toll services together in different ways that allow customers to obtain a bundle of services at a lower overall price. In September of 1999, for example, SWBT reduced prices for some toll packages, business call-management service packages, residential single-line packages, and government contracts for business lines in a range of approximately 5% to 30%. SWBT also exercised its ability to offer customer-specific pricing on many services, including long-distance services, certain high-speed digital private line services, and governmental services. By agreeing to obtain service for a fixed term, usually 1-5 years, business telephone customers benefit from lower rates offered through customer-specific contracts.[84]

Over the same period SWBT also lowered the prices of some individual services, to better compete with offerings from other providers, as shown in Table 21. For example, SWBT reduced the prices for (1) its Personalized Ring and Priority Call services by 13% to 33%; (2) its Plexar I and II offerings (central-office-based PBX-type services) by 1% to 14% in 1999, and various Plexar II ancillary features by 14% to 50% (involving decreases ranging from $.10 to $2.50) in 2000; and (3) its shorter-term digital private-line contracts (month-to-month and 1-3 years) by 6% to 22% on average. Of these, the Plexar and private line offerings are available to business customers only.

On the other hand, SWBT has significantly increased the prices for a number of nonbasic services, often services that are very popular and for which competitive alternatives are very limited. In September of 1999, SWBT raised prices on some of its

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[82] ILECs may offer their customers the following: local exchange telephone service, custom calling features and vertical services, hardware to support custom calling features and vertical services (such as the Caller ID unit that identifies a calling number), long distance service, internet service, voice messaging services and other enhanced services, cellular telephone service, high-speed private line service, digital subscriber line (DSL) service, and other services.

[83] From September 1999 through October 2000, if price increases and decreases, new services, and promotions are included in the mix, the number exceeds 175.

[84] PURA §58.003(a) prohibits some customer-specific contracts until 2003, specifically those applying to a narrow range of services offered by Chapter 58 companies, primarily for the basic local lines of business and residential customers. A Chapter 58 company can offer customer-specific pricing for most of its other services, including many vertical services and toll services. For example, SWBT's tariff currently permits SWBT to enter into customer-specific contracts with residential or business customers for any long distance service it offers. Also, high-speed private lines are routinely offered on a customer-specific contract basis. Generally, business customers are more likely to find the long-term contracts attractive than are residential customers.

more popular business call-management services[85] in a range of approximately 6% to 42%. In November of 1999, SWBT increased the price of a business extra directory listing by 107%, from $1.45 to $3.00.[86] In June of 2000, SWBT increased its monthly rates for residential Caller ID services (caller ID name-or-number and caller ID name-and-number, both of which are very popular in Texas) in a range of 22% to 30%.[87] SWBT also raised the following rates: (1) for per-use three-way calling, from $.75 to $.95, with the $6.00 monthly cap eliminated; (2) for call return, from $.50 to $.95 per use, while eliminating the $4.00 monthly cap; and (3) for residential call blocker and residential auto redial, from $2.00 to $3.00 each per month. In late 2000, SWBT raised its analog private-line rates by an average of 15%. SWBT also recently proposed a large increase to its charge for *not* publishing a directory listing ("unlisted numbers"). Over the past two years, the price of individual vertical services tended to rise, making the package prices more attractive to customers.

Recently, the Commission established its threshold policy concerning packaging services for sale on a wholesale basis. Responding to a complaint filed by AT&T regarding SWBT's essential office package for business customers, the commission determined that an ILEC may not tie the sale of vertical services with the purchase of basic services on a wholesale basis. The Commission determined that such a pricing mechanism is presumptively an unreasonable restriction on resale that is prohibited by PURA and the FTA.[88]

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[85] Examples are three-way calling, anonymous call rejection, auto redial, call waiting, call waiting ID, and call forwarding. (The price for residential call forwarding, newly classified by SB 560 as a basic network service, has not been raised.)

[86] *Informational Filing of Southwestern Bell Telephone Company Pricing Flexibility Associated with Business Extra Listings, Pursuant to PURA § 58.15*, Tariff Control No. 21692 (November 19, 1999).

[87] *Informational Notice of SWBT for Pricing Flexibility Residence and Business Call Management (Vertical) Services; Pursuant to PURA § 58.063 and § 58.152*, Tariff Control No. 22719 (June 27, 2000).

[88] *Complaint of AT&T Communications of the Southwest, Inc. regarding Tariff Control Number 21311, Price Flexibility-Essential Office Packages*, Docket No. 21425, Final Order (December 19, 2000).

Table 21 – SWBT Price Changes Made Under SB 560†

Service	Description	Residential Prices			Business Prices	
		Old	New	Change	Old	New
Three Way Calling	Allows "on hold" & "add on" capability via switch hook	$2.10 for first, and $1.40 per additional of these services	$3.00 for first, and $2.00 per additional of these services	↑	$2.50	$4.00
Call Forwarding	Permits transfer of incoming calls to another phone no.			↑	$3.50	$6.00
Speed Calling 8	Permits speed dialing for up to eight programmed numbers			↓	$2.50	$1.50
Anonymous call rejection	Permits automatic rejection of anonymous incoming calls via Caller ID	$1.00	$1.00	=	$1.00	$2.00
Auto Redial	Rings a called busy number when available	$2.00	$3.00	↑	$3.50	$4.00
Call Waiting	Indicates an incoming call while on the line	$2.80	$2.80	=	$3.25	$5.00
Call Waiting ID	Identifies name and/or number of incoming call while on line	$3.00	$3.00	=	$3.00	$5.00
Caller ID Name or Caller ID Number	Shows Name or Number of Incoming Caller	$4.95	$6.50	↑	$7.50	$8.00
Call Blocker	Blocks incoming calls from designated numbers	$2.00	$3.00	↑	$3.00	$3.50
Speed 30	Permits speed dialing for up to 30 programmed numbers	NA	NA	↓	$3.20	$2.00
Priority Call	Provides distinctive ring on calls from designated numbers	$2.50	$2.00	↓	$3.00	$2.00
Personalized Ring I	Distinctive ring for an additional number on same access line	$4.00	$3.50	↓	$6.00	$5.00
Call Return	Rings most recent calling number by dialing *69	$.50 each, $4.00 cap	$.95 each (no cap)	↑	$.50 each $4.00 cap	$.95 each (no cap)
Three Way Calling, per use	Allows "on hold" and "add on" capabilities via switch hook	$.75	$.95	↑	$.75	$.95
Call Trace, per Activation	Traces last incoming call, via activation before next call received	$8.00	$7.00	↓	$8.00	$7.00
Directory Assistance – Direct Dialed	Provides directory assistance via calling 1-411; call allowances not affected	$.30 per use	$.75 per use on local calls	↑	$.30 per use	$.75 per use on local calls
Directory Assistance Call Completion – Direct	Connects caller to number obtained when dialing directory assistance	$.30 per use	$.05 per use	↓	$.30 per use	$.05 per use

† Old and New compares prices from August1999 through December 2000

Source: SWBT filings

PRICING AND PACKAGING COMPARISONS AMONG PROVIDERS

Basic Service Charges

For a residential customer desiring only basic local service with no additional services (such as call waiting, call forwarding, caller ID, etc.), the minimum rates offered by the leading companies are shown in Table 22 below. Except for SWBT, most telecommunications companies do not package special long distance rates for customers seeking minimum basic service.

All cost figures are subject to fees, taxes, and surcharges, and may vary slightly among areas. Long distance packages are extra unless noted otherwise.

Table 22 – Minimum Rates for Basic Local Residential Service

Company	SW Bell	Sprint (ILEC)	AT&T	MCI
Dial Tone	X	X	X	X
Other	Optional long distance at $0.09/minute	some additional services may be available at no charge		
Cost per Month	$12-$16*	$11-$16.75*	$15	$7.75-$10.50

*Includes Subscriber Line Charge, may include mandatory Extended Area Service and Expanded Local Calling Service
Source: Public Utility Commission, Survey of company offerings as of November 28, 2000

Residential Package Comparison

Some residential customers hope to save money on local service, vertical services, and long distance through packages, which telephone companies are happy to offer to win more customers in the residential market. Table 23 shows some of the service packages offered by major telephone companies. The SWBT plan integrates many vertical services with local exchange service and a long distance plan. Sprint offers two packages, one with a set long distance plan and one that allows access to any of its pre-established long distance plans. AT&T offers a fixed long distance plan with customer choice in the number and type of vertical services. The MCI Worldcom packages offer permutations on local service combined with customer choice in different long distance plans and optional vertical services.

All packages are subject to service limitations and may not be available in all areas. All cost figures are subject to fees, taxes, and surcharges, and may vary slightly among areas.

Table 23 – Comparison of Local and Long Distance Residential Service Packages

Company	SW Bell	Sprint	Sprint	AT&T			MCI	MCI
Package	Phone Solution	Connected Solution	Custom II Solution	Local One Rate Texas			One Company Advantage 200	One Company Advantage 7
Dial Tone	X	X	X	X			X	X
Long Distance Cost per Minute	$0.06	100 minutes included, $0.10 over 100 minutes	Choice of Sprint Long Distance Packages	$0.07			200 minutes included, $0.07 over 200 minutes	$0.07
Vertical Package (Features Below)	The Works	Essentials	Essentials	Choice of Feature Plans: 3	5	10	MCI Premium Packages available, but not mandatory	
• Anonymous Call Rejection	X	X	X				Choice of 5 or 10	
• Auto Redial	X	X	X			X	Choice of 5 or 10	
• Call Block	X							
• Call Forwarding	X	X	X	X*		X	Choice of 5 or 10	
• Call Forwarding – Busy							Choice of 5 or 10	
• Call Forwarding – Busy & No Answer							Choice of 5 or 10	
• Call Forwarding – No Answer							Choice of 5 or 10	
• Call Return	X	X	X			X	Choice of 5 or 10	
• Call Screening				X*	X	X	Choice of 5 or 10	
• Call Waiting	X	X	X	X*	X	X	Choice of 5 or 10	
• Call Waiting ID	X						Choice of 5 or 10	
• Call Waiting ID Plus							Choice of 5 or 10	
• Caller ID	X	X	X	X*	X	X	Choice of 5 or 10	
• Caller ID (no name)							Choice of 5 or 10	
• Distinctive Ring						X	Choice of 5 or 10	
• Non-listed Number				X*				
• Non-published Number				X*				
• Priority Call	X						Choice of 5 or 10	
• Priority Call Forwarding							Choice of 5 or 10	
• Selective Call Forwarding	X					X		
• Speed Dial 8	X					X	Choice of 5 or 10	
• Three Way Calling	X	X	X	X*	X	X	Choice of 5 or 10	
Voice Mail	X							
Inside Wire Maintenance Plan	X							
Other							Airline Miles or Blockbuster Certificates	
Cost per Month	**$39.95 *plus* installation**	**$30**	**$25 *plus long* distance plan costs**	**3 Features: $22.95-$25.95 5 Features: $27.95 10 Features: $32.95**			**No Features: $29.99 5 Features: $40.94 10 Features: $45.94**	**No Features: $19.99 5 Features: $30.94 10 Features: $35.94**

*Choice of Three

Source: Public Utility Commission, Survey of company offerings as of November 28, 2000

Small Business Package Costs Compared to Residential Costs

Given that some of the price drops in the above chart are found among services that business customers may be more likely to use than residential customers, it is also of interest to see how basic service packages for business customers compare to those for residential customers. SWBT appears to be the only major company offering business customers a better price on vertical service packages than the price they offer residential customers for the same services. Table 24 shows how SWBT's BASICS Business Plan offers a package of vertical services to business customers at a better price than it offers to residential customers, who could get the exact same package only by buying each of those services at their respective unbundled rates. SWBT does, however, offer a larger package of vertical services to residential customers at a slightly higher rate that is unavailable to business customers.[89]

Table 24 – A Business/Residential Basic Package Cost Comparison

Company	SW Bell	SW Bell	SW Bell
Package	Business BASICS Plan	Unbundled Residential Services Comparable to the BASICS Business Plan (not a package)	Residential WORKS Package
• Auto Redial	Choice of One	Choice of One	X
• Call Blocker	Choice of One	Choice of One	X
• Call Forwarding	X	X	X
• Call Return	Choice of One	Choice of One	X
• Call Waiting	X	X	X
• Call Waiting ID	X	X	
• Caller ID	X	X	X
• Priority Call			X
• Remote Access to Call Forwarding	X	X	
• Selective Call Forwarding	Choice of One	Choice of One	X
• Speed Calling-8			X
• Three-Way Calling	Choice of One	Choice of One	X
Cost Per Month	$16.95	$18.75-$20.75	$19.95

Source: Public Utility Commission, Survey of company offerings as of November 28, 2000

Internet Access Packages Comparison

Although all of the major telephone companies claim to be moving towards offering bundled voice and data, only SWBT and Sprint are currently offering such packages in Texas. Table 25 examines the differences in these packages. SWBT has organized a number of packages around integrated services, including combining dial tone and long distance with internet access, wireless service, and DIRECTV. None of the other major telephone companies has taken such steps in Texas, although Sprint has announced plans to offer its similar ION service in Dallas and Houston next year. At

[89] All packages are subject to service limitations and may not be available in all areas. All cost figures are above and beyond basic service rates (including dial tone), are subject to fees, taxes, and surcharges, and may vary slightly among areas.

present, Sprint has packaged several long distance plans with internet access, which can be combined with its local service Custom II Solutions plan in a way that is competitive with SWBT's internet access plans.[90]

Table 25 – Comparison of Internet Access Packages for Residential Customers

Company	SW Bell	SW Bell	Sprint	Sprint
Package	DSL Web Solution	Web Solution	7¢ Anytime and Earthlink	1000 Nights and Earthlink
Dial Tone	X	X	Available through Sprint Custom II Solution (not mandatory)	
Long Distance Cost per Minute	$0.06	$0.06	$0.07	1000 minutes included during 7pm – 7am, $0.10 for calls over 1000 minutes and at other times
Vertical Features	Same as SW Bell Phone Solution		Available through Sprint Custom II Solution (not mandatory)	
56k Unlimited Internet Access		X	X	X
DSL	X			
Email Addresses	5-10	11	6	1
Web Site Space	3-6 MB		6 MB	6 MB
Contract	1 year	No	no	no
Other		2nd Phone Line		
Cost per Month	$88.95 plus installation	$65.95 plus installation	$19.95 (with no local service) $44.95 (with Sprint Custom II Solution)	$30 (with no local service) $55 (with Sprint Custom II Solution)

Source: Public Utility Commission, Survey of company offerings as of November 28, 2000

Conclusion

Investors provided CLECs with a large amount of money in the form of equity, debt, and bank loans in the late 1990s to challenge well-heeled ILECs across the country. As a result, as seen in Chapter 3, CLECs gained market share in local telephony in the late 1990s in Texas.

In 1998 and 1999, a sizeable number of CLECs entered the Texas market, including a number of well-financed long-distance carriers and start-ups. Some of the investment was speculative, however, as 40 percent stated that they had no customers as of December 31, 1999.

In the seven months from March to October 2000, prices of CLECs' bonds and stocks fell sharply, crimping the funding for sizeable CLECs that had planned to compete in the Texas local voice market. At the same time, SWBT's stock rebounded from its low of calendar year 2000.

[90] All packages are subject to service limitations and may not be available in all areas. All cost figures are subject to fees, taxes, and surcharges, and may vary slightly among areas.

CHAPTER 5: ALTERNATIVE MARKET PROVIDERS

Through most of the 20th Century, the prevailing view of telephony was that wireline was the only means to provide voice telephone services. This monopoly provision of telephone service required that state and federal governments maintain continuing oversight of and intervention in the industry. As technological changes and market forces reinforced by regulation-based price distortions changed the cost and benefits of maintaining monopoly service in voice telephony, state and federal governments responded through legal and regulatory changes. The breakup of AT&T in the 1980s unbundled long-distance voice from local voice services. The federal Telecommunications Act of 1996 created the ground rules for entry of CLECs into local voice telephony, whose entry in turn culminated in SWBT's entry into the long distance market.

Technology is again reshaping the competitive landscape of telecommunications. New technologies such as cable, wireless, satellite, and voice over internet protocol (VoIP) likely will create new avenues and providers for customers to receive traditional local and long distance voice services, profoundly changing the market structure from the customers' point of view. Telecommunication providers will sell local and long-distance voice services as part of a bundled product, where pricing, terms and conditions of voice service will no longer be determined independently of other telecommunications services.

New market segments and technologies, such as wireless telephony, the Internet, and local and long-distance data services are diminishing the importance of long distance and local voice on wireline. J.P. Morgan Securities, in a recent analysis of the telecommunications industry, has estimated that both local and long distance wireline voice, which accounted for about 70 percent of 1999 telecommunication revenues in the United States, will account for only 39 percent of revenues in 2005.[91]

The rise of Internet Protocol as the backbone for wireline telecommunications has the potential to replace the dedicated switched circuit that has been the basis of telephony for the past century. J.P Morgan also projected that information transmitted through the Internet Protocol (IP) alone probably will comprise more than 90 percent of the wireline bit stream in 2005, compared with 13 percent in 1998.[92]

The purpose of this chapter is to discuss alternatives to wireline telephony, not with regard to their technological feasibility, but with respect to their potential to

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[91] J.P. Morgan Securities, Equity Research, *Telecom Services, A Fresh Look at the Industry*, at 4, Table 1 (Sept. 8, 2000).

[92] *Id* at 6.

seriously challenge wireline ILECs for market share. While CLECs and ILECs have deployed most of the alternatives discussed below, their availability at a price that would be competitive to the majority of Texans is limited to one exception: mobile telephony.

This report divides these technologies into three categories: current competitors, coming competitors, and potential future competitors. This report draws from the Commission's recent *Advanced Services Report* to discuss these technologies.[93]

Current Competitor

Currently, wireline voice has one competitor that provides local and long-distance voice at a price and quality that is becoming comparable to that of wireline service: mobile telephony.

MOBILE TELEPHONY

In the United States in the twelve months ending December 1999, mobile telephony subscribership increased 24 percent from 69.2 million to 86 million. Eighty-eight percent of the total U.S. population has three or more different operators offering mobile telephone service in the county where they reside. Moreover, 69 percent of the population live in areas with five or more mobile telephone operators offering service.[94]

According to the FCC, nearly one in every three Texans was a mobile telephone subscriber at year-end 1999. In particular, Texas had 0.29 subscribers *per capita*, the same rate as the United States as a whole, as shown in Table 26. Texas also had 0.44 subscribers per end-user wireline, which is comparable to the United States, with 0.42 subscribers per end-user wireline.[95]

The price of mobile telephone service reportedly decreased by 11.3 percent between the end of January 1999 and the end of January 2000. Some reports estimate that the prices fell as much as 20 percent between 1998 and 1999.[96] Further, one analyst claimed that roaming rates per minute have declined. The local average roaming rate per minute fell from $0.75 in the fourth quarter of 1997 to $0.37 in the first quarter of 1999.[97]

At present, concerns about the quality of service of wireless telephony have kept consumers from using wireless telephony as a complete substitute for local wireline service. Fast-growing demand has required companies to invest in large-scale, rapid expansion of their facilities in a short period of time, and the multiple wireless systems in the United States increase the complexity of providing telecommunication service relative to wireless services in Europe.

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[93] Public Utility Commission of Texas, *Report to the 77th Legislature on Advanced Services in Rural and High Cost Areas* (January 2001).

[94] *FCC Releases Fifth Annual Report on State of Wireless Industry,* CC Docket No. 00-289, Report (Rel. August 2000).

[95] Federal Communications Commission, *Local Telephone Competition at the New Millennium*, Tables 4 and 5 (August 2000).

[96] *Id.*

[97] *Id* at 20.

Table 26 – Mobile Telephone Subscribers Reported: Year-End 1999 ** [98]

State	Number of Carriers	Subscribers	Percent of Nation	Population ***	Subscribers per Capita
Alabama	10	1,080,410	1.4 %	4,369,862	0.25
Alaska	5	165,221	0.2	619,500	0.27
Arizona	9	1,125,321	1.4	4,778,332	0.24
Arkansas	5	719,919	0.9	2,551,373	0.28
California	11	8,544,941	10.7	33,145,121	0.26
Colorado	8	1,552,718	1.9	4,056,133	0.38
Connecticut	6	1,077,089	1.4	3,282,031	0.33
Delaware	5	270,848	0.3	753,538	0.36
District of Columbia	5	910,116	1.1	519,000	1.75
Florida	14	5,158,079	6.5	15,111,244	0.34
Georgia	13	2,538,983	3.2	7,788,240	0.33
Hawaii	8	288,425	0.4	1,185,497	0.24
Idaho	4	271,436	0.3	1,251,700	0.22
Illinois	10	3,922,482	4.9	12,128,370	0.32
Indiana	10	1,318,975	1.7	5,942,901	0.22
Iowa	9	774,773	1.0	2,869,413	0.27
Kansas	11	669,472	0.8	2,654,052	0.25
Kentucky	12	911,700	1.1	3,960,825	0.23
Louisiana	9	1,227,106	1.5	4,372,035	0.28
Maine	4	187,003	0.2	1,253,040	0.15
Maryland	7	1,473,494	1.8	5,171,634	0.28
Massachusetts	6	1,892,014	2.4	6,175,169	0.31
Michigan	13	3,512,813	4.4	9,863,775	0.36
Minnesota	13	1,550,411	1.9	4,775,508	0.32
Mississippi	6	673,355	0.8	2,768,619	0.24
Missouri	10	1,855,452	2.3	5,468,338	0.34
Montana	*	*	*	882,779	*
Nebraska	4	576,296	0.7	1,666,028	0.35
Nevada	7	750,335	0.9	1,809,253	0.41
New Hampshire	6	280,508	0.4	1,201,134	0.23
New Jersey	5	2,289,181	2.9	8,143,412	0.28
New Mexico	6	363,827	0.5	1,739,844	0.21
New York	7	4,833,816	6.1	18,196,601	0.27
North Carolina	11	2,536,068	3.2	7,650,789	0.33
North Dakota	*	*	*	633,666	*
Ohio	12	3,237,786	4.1	11,256,654	0.29
Oklahoma	9	826,637	1.0	3,358,044	0.25
Oregon	7	914,848	1.1	3,316,154	0.28
Pennsylvania	12	2,767,474	3.5	11,994,016	0.23
Puerto Rico	*	*	*	3,889,507	*
Rhode Island	6	279,304	0.4	990,819	0.28
South Carolina	7	1,137,232	1.4	3,885,736	0.29
South Dakota	*	*	*	733,133	*
Tennessee	9	1,529,054	1.9	5,483,535	0.28
Texas	**20**	**5,792,453**	**7.3**	**20,044,141**	**0.29**
U.S. Virgin Islands	*	*	*	120,917	*
Utah	8	643,824	0.8	2,129,836	0.30
Vermont	*	*	*	593,740	*
Virginia	12	1,860,262	2.3	6,872,912	0.27
Washington	8	1,873,475	2.4	5,756,361	0.33
West Virginia	7	241,265	0.3	1,806,928	0.13
Wisconsin	9	1,525,818	1.9	5,250,446	0.29
Wyoming	4	127,634	0.2	479,602	0.27
Nationwide	**76**	**79,696,083**	**100.0**	**276,701,237**	**0.29**

* Data withheld to maintain firm confidentiality.
** Carriers with under 10,000 subscribers in a state were not required to report.
*** Population as of July 1999.

[98] *Local Telephone Competition at the New Millennium*, Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division (August 2000).

Coming Competitors

Three alternatives for voice telephony - cable television (broadband), voice over the Internet, and fixed wireless - are currently available in limited areas. While they do not at present pose a strong competitive challenge to wireline telephony based on dedicated switched circuits, they have the potential in the near future to be viable alternatives for telephone customers.

CABLE TELEVISION

Cable TV has been a part of American homes for decades. A number of CLECs, most prominently AT&T, have sought to commercialize the technology that could provide voice telephony over the same connection that provides cable TV. The technology involved uses the cable modem to split voice telephony from the cable signal, so that the customer would use a telephone rather than the television set to make telephone calls.[99]

Voice telephony over cable is part of a larger plan to provide broadband access that will bundle all telecommunication services into one package (voice, TV, and Internet). The customer would receive one monthly bill, also known as "one-stop shopping." Additional services that cable providers would like to sell to customers in the future include video conferencing and video on demand.

Cable is available in many areas of the United States. Cable infrastructure reaches 70% of American households, some 67 million subscribers. The physical presence of cable in an area alone does not ensure broadband or basic Internet cable modem access. Only 40% of homes with cable have been upgraded to allow broadband access.[100] By July of 2000, 2.27 million residential and small business users were accessing the Internet via cable modems.[101] Projections show that over 3.6 million cable modems will be in use by the end of 2000.[102] This is over a 100% rise this year, and projections indicate a steady though slowing increase over the next few years.

Competition in providing cable services will occur in cities and urban areas where high population density will allow many providers to survive for the next few years, until the next generation of services and technology redefines advanced services. The areas that have neither cable nor telephone access are low density rural areas. Most small cities and many rural communities have cable facilities in Texas. Yet these systems still

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[99] This technology is distinct from Voice over Internet Protocol discussed below.

[100] Cable Modem Market Stats & Projections. Cable Datacom News, March 3, 2000. http://www.cabledatacomenws.com/cmic/cmic16.html. *See also* Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, Sixth Annual Report. CC Docket No. 99-230 (Jan. 14, 2000).

[101] "NCTA Reports Fast Growth in Cable Modem, Telephony Rollouts." *Telecommunications Report Daily* (July 26, 2000). http://www.tr.com.

[102] "NCTA Reports Fast Growth in Cable Modem, Telephony Rollouts." *Telecommunications Report Daily* (July 26, 2000). http://www.tr.com.

service only areas where population density is large enough to support building the initial infrastructure.

VOICE OVER INTERNET (VOIP)

Internet Protocol (IP) has revolutionized data communications worldwide. As the speed and reliability of the Internet improve, it is relatively easy to communicate using VOIP. Voice transmission has been digitized on telecommunications carrier networks in some cases since the 1960s, and encoding voice messages over the Internet is a natural progression. There are many varieties of VOIP in use today, from rudimentary connections between two computers to sophisticated corporate interconnections. Today's VOIP status should generally be viewed as an emerging application, used by a growing number of customers with varying degrees of satisfaction.

VOIP relies more on the packet-switched Internet rather than the circuit-switched telephone network, and "lost," retransmitted, or otherwise delayed packets are more disruptive to voice calls than they are to data transmission. As a result, customer satisfaction with VOIP calls varies. However, as technology progresses, VOIP is expected to account for increased traffic. According to an analyst with U.S. Bancorp, VOIP, which accounted for less than 1% of global telecom traffic in 1999, is expected to surge to 17% by 2003 and more than 30% by 2005.[103]

In Texas in the fall of 2000, SBC Communications, Inc., proposed to provide an IP phone system for the city government of Dallas. SBC Communications claimed that voice quality should not be an issue in the city's network because phone traffic will have a priority over data.[104]

FIXED WIRELESS

Fixed wireless is a system that provides high-speed services to customers by attaching to the customer's premises a radio transmitter/receiver (transceiver) that communicates with the provider's central antenna site. By doing so, the central antenna site acts as the gateway into the public switched telephone network or the Internet for the transceivers. Basically, the radio signals serve as a substitute for the copper wire or cable strand that connect customers to the network in traditional, wired technologies.

The market for fixed wireless services is expected to reach about $1 billion by the end of 2002, according to market researcher Gartner Group. Analysts expect the national fixed wireless market to grow significantly in the next three to five years, with projections estimated at 2.0 to 2.6 millions subscribers by 2003.[105]

In geographic areas with limited cable or telephone infrastructure, as in some rural areas of Texas and the rest of the United States, providers can deploy a fixed

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[103] Special Report – The Talking Internet, BusinessWeek Online, May 1, 2000, http://www.businessweek.com/2000/00_18/b3679024.htm.

[104] "SBC Proposes High-Tech Phone System for Dallas," *Dallas Morning News* (October 24,2000).

[105] Peter Jarich and Mendelson, James, *U.S. Wireless Broadband* at 243, 252, and 262; Strategies Group, *High-Speed Internet Report* at 131 (Nov. 8, 2000), http://www.strategisgroup.com/.

wireless network faster and cheaper than a xDSL or cable modem system. While infrastructure costs of wireless networks may be significantly less than those of wireline networks, wireless networks incur substantial costs acquiring spectrum.

In the year 2000 fixed wireless saw an improved competitive position as an alternative to local fixed wireline service in Texas when the Commission designated Western Wireless Corporation as an Eligible Telecommunications Carrier (ETC) and an Eligible Telecommunications Provider (ETP). The Commission action put the company one step closer to offering local service in certain rural areas of Texas.

Potential Future Competitors

The following technologies could have the potential to offer local and long distance service in the future, but currently are not ready for commercial application. If either or both applications become commercially viable in the future, Texas customers would have additional alternative means of delivery of telephone service that could increase the level of competition in voice telephony.

SATELLITE

Traditional satellite networks have been limited to specialized private VSAT networks, low bandwidth services and DTH video, but new broadband satellite systems are offering service comparable to current broadband terrestrial services. Satellite services can include any fixed multimedia service, from Internet access, local telephony, cable, video transmission, private business networks, telemedicine, teleeducation, and video conferencing.

Service to whole regions, reaching low subscriber-density areas without costly construction of terrestrial networks, gives satellite technology a promising future. Today, however, most current residential satellite offerings provide information in only one direction, downstream into the home of the user. The user needs a standard dial-up connection to send information upstream. Several satellite providers have announced plans to provide residential service with both downstream and upstream paths via satellite.

ELECTRICITY TRANSMISSION LINES FOR TELECOMMUNICATIONS

In the future, consumers may have access to voice telephony and the Internet using the electric grid. Two companies, Northern Telecom and Norweb Communications, have been developing the means to send vast amounts of data along power lines without distortion from electric current. In the future, every home in the country could have a second telephony wireline connection, increasing competition for telecommunication providers.

The system works by using either fiber-optic or radio links to transmit data from the Internet to local electricity sub-stations. The low-voltage part of the electricity network then becomes a local area network. A small box is installed next to the electricity meter in the home to send and receive data. The box itself is connected by ordinary cable

to personal computers, which will need to be fitted with a special card and software. The new technology eventually could enable the introduction of applications such as electronic commerce, telenetworking, web broadcast media, entertainment, and Internet telephony on a mass-market scale.

Conclusion

Mobile telephony is just the beginning of the technological transformation of the traditional voice telephony market. While Commission data suggest that CLECs have increased their market share in wireline service in Texas from a very low base, CLECs have not dislodged the predominance of ILECs in wireline telephony. Advances in telecommunications, however, offer the chance for a much more powerful form of competition in the future using methods of delivering local telephony without a large, well-financed incumbent to challenge directly for market share.

CHAPTER 6: TELECOMMUNICATIONS IN TEXAS – PAST, PRESENT, AND FUTURE

As in previous years, this Scope of Competition Report has focused on competition in wireline voice services. In most of the past reports, local competition could only be discussed in terms of niche providers, with long distance services being the main arena of competition. With the implementation of PURA 95 and the FTA finally underway, the 1999 Scope Report could finally document a CLEC presence in the local telecommunications market. In the last Scope of Competition Report, in 1999, the evidence could support only what can perhaps be called a "toe-hold" for competition.

Evidence available for this report clearly demonstrates that competitive providers have a visible market share, with dozens of CLECs entering the more lucrative local wireline voice markets in Texas by the end of 1999. Clearly, the potential exists for creating competition in local telephony in the urban areas of Texas, if not the state as a whole.

Though trends of the last several years suggest that Texas is poised for competition in local voice telephony, events in the year 2000 have created a dramatically different backdrop for competition in local voice telephony. The recent slump in the share prices of CLECs and the reorganizations of AT&T, Sprint, and Worldcom announced in the fall of 2000 suggest that CLECs may be heading for a period of consolidation

In the next five years, however, even more sweeping changes in technology and the newly found ability of the former monopolies and CLECs to offer "one stop shopping" for a wide range of telecommunications services will overshadow the fight for market share in wireline telephony. Future reports may focus on these trends far more than on the entry of CLECs into the local wireline service territories of Verizon, SWBT, and Valor.

Past: CLECs Flood into Texas

There exists in Texas a legal and regulatory framework that can facilitate competition to enter local telephony for customers of SWBT, Verizon, and Valor Telecommunications (the ILEC in some of Verizon's former service territories). The Commission opened the door to competition in wireline for SWBT through SWBT's Section 271 proceeding, arbitrations between SWBT and CLECs, and various rulemakings.

In 1998 and 1999, in response to these new opportunities for entry into local voice telephony, CLECs entered the Texas market as rapidly as anywhere else in the United States. A recent FCC study on competition for local voice service found that Texas ties New York for being the states with the largest number of operating CLECs. This result, on its face, supports the notion that the regulatory atmosphere in Texas is friendly for competition.

Such factors as population growth, economic growth, and population density also appear to be important considerations in the decisions of CLECs to invest in or resell voice telephony facilities in a given area of Texas. The Large Metropolitan areas and the Suburban counties, which combined comprise almost 60 percent of Texas' population, have heavy concentrations of CLECs. Data show that the Dallas and Houston metro areas have about twenty or more CLECs serving customers, while San Antonio and Austin have ten or more CLECs serving customers. Many rural areas that allow for customer choice have a choice of two, three, or more CLECs, in addition to an ILEC. Some of these competitors, however, may be aimed at customers with poor credit histories and are not vying for the average local customer's business.

Data for 1999 show while statewide CLECs are using equally all three means of entry that the FTA envisioned – construction of new lines, purchase of UNEs, and resale of telephone service - to gain entry into local telephony, the strategy varies dramatically by size of the market. CLECs built facilities in Dallas, Houston, San Antonio, and Austin to compete with ILECs, particularly for business customers. Outside the Large Metro areas, however, CLECs pursued customers by purchasing UNEs and reselling telephone services.

The market share of local access lines of CLEC in the Suburbs is about 12 percent and in Large Metropolitan areas about eight percent. The eight percent figure probably masks a wide range of market penetration rates that includes a lower penetration rate in El Paso and higher penetration rates in the Dallas and Houston, areas. The latter have large and growing residential and business populations, a high population density, and high *per capita* incomes. Seventy percent of CLECs' customers in the Large Metro areas and Suburbs are businesses.

CLECs in rural areas are showing little or no market share at this point, but that fact may reflect in part the legal and regulatory prohibitions to competition as well as poor economics of doing business in rural areas. (Counties with a population of 20,000 people or fewer have a CLEC penetration rate of less than 2 percent.) Seventy percent of their customers are residential. The entry of some telephone cooperatives into the market, particularly those in or near wealthier parts of West Texas, may indicate that some CLECs might be focusing on rural or small-town areas that allow customer choice. These CLECs may possess expertise that can make them very competitive without drawing competition from companies with deep pockets.

Having CLECs enter new markets is only the first stage of offering customer choice. CLECs must have the power to fight for market share for a sustained period before Texans harvest the fruits of competition. A key factor in developing competition in local telephony over time will be the capitalization of those CLECs.

The good news for the 1998-1999 period was that about a quarter of CLECs had market capitalizations of at least $1 billion, an order of magnitude comparable to the capitalizations of the two largest ILECs, Verizon and SWBT. Areas of Texas served by these well-capitalized CLECs were much better positioned to receive the benefits of competition in local telephony and the benefits of competition for bundled services ("one-stop shopping").

Though almost 100 CLECs responded to the Commission survey, two-thirds of the CLECs were private firms with capitalizations that were unknown or less than $100 million. These CLECs may have limited prospects that may lead to failures and mergers for many of them under the best of market conditions.

Affiliates of eight cooperatives have filed as CLECs, located near areas with high *per capita* incomes. Given that most of them have small capitalizations of $20 million or less, it will be a formidable task for them to become more than regional or niche players. Rural areas where ILECs face their primary competition from these CLECs face uncertain prospects for competition in local telephony in the long term.

Present: ILECs Adapt, CLECs Struggle

ILECs

The ILECs that must allow the greatest customer choice – SWBT and Verizon – responded to new market opportunities in 1998 and 1999. Indirect effects of deregulation and competition in local exchange service in Texas have led to a sale of rural exchanges in Texas in 1999-2000. Verizon and SWBT have contended with the heavy investment in facilities of CLECs in the metropolitan areas of Texas. With competition increasing in some parts of their service territories, these companies had incentives to rethink their holdings and strategic approach to selling telephony in Texas.

Southwestern Bell

SWBT's competitive position in Texas has strengthened considerably in the past year. SB 560 granted SWBT pricing flexibility in vertical services, an important means to lower prices where competition with CLECs exists, and raise prices where competition is limited. For example, in 2000 SWBT significantly increased the prices for a number of nonbasic services, often services that are very popular and for which competitive alternatives are limited.

SB 560 also granted SWBT the ability to competitively bundle its products. An important additional piece in SWBT's "one-stop" shopping strategy was SWBT's receiving a favorable recommendation from the Commission on its Section 271 application, leading to FCC approval for SWBT to offer long distance service in Texas in the second half of 2000. SWBT at present has very limited competition in providing bundled services in Texas.

Verizon

During the last two years Verizon implemented an additional strategy to cope with shareholder or market pressure, including reducing its presence in local voice markets in Texas as a CLEC. Verizon chose to sell some of its rural exchanges in various states to earn a better return on its assets in a changing telecommunications industry. Verizon's sale of a number of rural exchanges to Valor this year was part of this national trend.

A number of ILECs across the country have been seeking changes in the geographical boundaries of their operations to meet competitive challenges elsewhere. According to a recent U.S. General Accounting Office (GAO) survey of state public utility commissions, of the nearly 832,000 access lines that major ILECs have sold from January 1996 through April 2000, an estimated 68 percent were in rural areas.[106] The GAO analyzed 27 pending sales, totaling 901,000 access lines, and found that 872,000, or 97 percent, were in rural areas.

Telephone cooperatives and small private telephone companies in rural parts of Texas might do something similar to the Verizon sale and merge or purchase each other's service territories. These ILECs could then capture economies of scale and use their expertise in handling the multitude of services and would possess sufficient capitalization to invest in lines and equipment to upgrade a system in the targeted service territory. The quality and range of services, therefore, might improve in parts of rural Texas even without direct competition from CLECs, competition that is very unlikely until alternative technologies described in this report become widely available.

CLECs

In the second half of the 1990s, technological breakthroughs and deregulation in the telecommunications industry created new and highly uncertain investment opportunities for investors. By the late 1990s, investors in the telecommunications industry faced investments that had a high risk / high reward profile in an industry that was once considered the realm for retirees searching for a safe, fixed return on assets. Venture capitalists, private investors, and commercial banks flooded the telecommunications industry with investment capital.

As a result, in the late 1990s, the telecommunications industry saw a proliferation of small or poorly capitalized CLECs that were vulnerable to the level of risk investors (mutual fund managers, investment banks, and commercial banks) would tolerate over time. Large long-distance carriers such as AT&T and Worldcom made large-scale investments in new technologies to compete with SWBT for customers that wanted "one-stop" shopping in telecommunications services.

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[106] United States General Accounting Office, *Telecommunications: Issues Related to Local Telephone Service*, Report to the Ranking Minority Member, Committee on Commerce, Science, and Transportation, U.S. Senate, GAO/RCED-00-237 at 5 (August 2000).

The rush into the new world of telephony created a classic bubble in telecommunications stocks.[107] According to a NASDAQ index of telecommunications companies, share prices rose 300 percent from January 1998 to early March 2000. By early 2000 such an increase provided CLECs with large capitalizations, allowing them to challenge ILECs for market share in local exchange service in Texas.

As with other stock market bubbles, this one burst, forcing the industry to endure bankruptcies of some leading CLECs and massive restructuring of others. Increased competition by ILECs in long distance, and the perception by the market that long-distance service using dedicated switched circuits was yesterday's technology, took its toll on the three dominant long distance carriers. Some analysts believe that traditional long-distance business is going away and will be replaced by any-distance calls and data transmissions that also include voice.[108] With the entry or potential entry of ILECs into long-distance telephony, prices and revenues for long-distance providers have fallen, contributing to the fall in the market capitalization of large CLECs.

The fall in the market capitalizations of large CLECs that are long distance carriers has left them in a weaker position to provide competition in local exchanges in Texas. In October and November 2000, these long-distance carriers announced their intentions to reduce their emphasis on residential services in Texas as part of massive restructuring of their business lines.

The sharp fall in share and bond prices in 2000 for CLECs may presage consolidation in the telecommunications sector. A handful of CLECs that each had capitalizations of $1 billion or more in 1999 saw their share prices drop over 95 percent during 2000. Thirty-eight of the CLECs that responded to the data collection instrument stated that they had not started serving customers in Texas at the end of 1999 and may not have sufficient revenue to weather the decline in the financial support needed to challenge an ILEC.

By the end of 2000, SWBT's financial position had strengthened relative to the CLECs. SWBT's entry into the long distance market has weakened the ability of CLECs to challenge SWBT in local voice service. Without investor confidence and funding, in the near term CLECs might pose a weaker challenge to SWBT for local wireline voice telephony or in the "one-stop" shopping market than they did in 1998 and 1999. The Commission has noted that in 2000 SWBT raised its prices on a number of vertical services and was successful in rapidly gaining market share in the long distance market, even though it was offering interLATA long distance to only customers who had SWBT as an ILEC.

In the short term, the largest potential impact of CLECs' financial troubles will be to limit their ability to enter a local market by making long-term investments in plant and equipment. Physical investment in new plant and equipment is the most powerful means to develop competition in local wireline telephony, allowing CLECs to own an increasing

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[107] For a description of how stock market bubbles have inflated and burst over the past three centuries, see Charles Kindleberger, *Manias, Panics, and Crashes*, Wiley Investment Classics, Fourth Edition, 2000.

[108] For a detailed discussion of this point, *see* J.P. Morgan Securities, Equity Research, *Telecom Services*, "A Fresh Look at the Industry" (Sept. 8, 2000).

share of the local exchange infrastructure relative to the ILECs while expanding wireline capacity in a local market overall.

Future: Technology Spawns Competition

While short-term disruptions in the financing of CLECs may slow the advance of competition in wireline telephony, the long-term prospects for competition in telephony look promising. Disruptive new technologies, the rise of the Internet Protocol as an increasing backbone to telecommunications, and deregulation are massively restructuring the telecommunications industry. A result of all these changes is a massive increase in telecommunications services and products that will be available to customers, along with a decreasing emphasis on wireline voice telephony.

Projections that telecommunications industry analysts at J. P. Morgan Securities made in September 2000 can provide a sense of the magnitude of these changes that may occur in the next five years, as shown in Table 27. J.P. Morgan Securities projects that revenues in telecommunications services nationwide will grow from $246 billion in 1999 to $422 billion in 2005. Wireline voice (local and long distance) revenues are expected to decline slightly between 1999 through 2005. As a percentage of total revenues, however, local wireline voice will fall from 33 percent in 1999 to 21 percent in 2005, and long distance wireline voice will fall from 32 percent in 1999 to 16 percent in 2005. In contrast, data services' share of total telecommunications revenues will rise from 12 percent in 1999 to 21 percent in 2005, and the Internet's share of total telecommunications revenues will rise from 4 percent in 1999 to 16 percent in 2005.

Table 27 – Forecast of Revenues in the Telecommunications Industry

	1999		2005E	
Service	$ in Billions	Percent of Total	$ in Billions	Percent of Total
Local Voice	87.8	33.0	92.6	20.8
Long Distance Voice	84.0	31.6	71.1	16.0
Wireless	40.0	15.1	100.1	22.5
Internet	10.5	4.0	69.7	15.7
Data Services	31.4	11.8	90.8	20.5
Other ILEC	11.9	4.5	19.8	4.5
Total	265.5	100.0	444.1	100.0

Source: J. P. Morgan Securities, *Telecom Services Industry Analysis*, September 8, 2000.

One trend influencing the direction of the industry is the rise of the Internet Protocol for delivering voice and data to customers. While Voice over Internet Protocol is not currently a viable alternative for local telephony, the indirect effects of this revolution are profound on telecommunications providers. Industry giants such as AT&T and SWBT are reorganizing business lines and altering their emphasis towards data and Internet services. Many analysts who follow the telecommunications industry believe

that voice telephony likely will become more of a commodity business, no longer sold as a separate service.

Another trend that will affect competitive delivery of voice telephony will be the alternatives to wireline discussed in Chapter 4. Growth in satellite, cable, and wireless services to customers will change the market structure of local telephone service by providing several means to deliver local telephone service. The locations where alternative providers offer these services would affect the level of competition across different areas of Texas. The number of CLECs on wireline in a rural area may not be as important as the opportunity for area customers to have several portals. In areas that currently have numerous CLECs on wireline, the competition will be even fiercer but not fully captured in the data of regulated telecommunications providers.

Competition Outlook

The Commission has implemented the Texas Legislature's framework for deregulating local voice service in Texas. As a result, CLECs have entered the Texas market in the past two years and have provided competition in certain regions of Texas.

The market for business customers in the Large Metro areas of Texas appears to be competitive. Facilities-based competition has provided increased capacity for CLECs to compete with ILECs over the long term. Monopoly power exists, however, in residential and rural markets in Texas. Key CLECs that were expected to challenge SWBT are now limiting their push into residential voice markets in Texas.

The Commission recognizes that differences in personal income and population density among various regions of Texas also affect where CLECs decide to compete for residential customers. At the same time, however, cross-subsidies that have traditionally kept residential rates artificially low have contributed to the lack of competition for residential customers.

The Commission believes that long term re-regulation of residential and rural markets should not be necessary, as new technologies could dislodge the monopolistic position of ILECs in certain areas of Texas in coming years.