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RECEIVED

January 22, 1999

JAN 25 1999

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Anthony Dale
Legal Branch
Accounting Safeguards Division
FCC
2000 L Street, N.W., Room 200D
Washington, D.C. 20554

Dear Mr. Dale:

RE: IN THE MATTER OF 1998 BIENNIAL REGULATORY REVIEW –
PETITION FOR SECTION 11 BIENNIAL REVIEW FILED BY SBC
COMMUNICATIONS, INC., SOUTHWESTERN BELL TELEPHONE
COMPANY, PACIFIC BELL AND NEVADA BELL, CC DOCKET
NO. 98-177, REPLY COMMENTS OF SBC COMMUNICATIONS INC.

Per the Comment Filing Procedures in the Notice of Proposed Rulemaking for
CC Docket No. 98-177, adopted on September 23, 1998 and released on November 24,
1998, enclosed are Reply Comments of SBC Communications Inc. on diskette for the
above-referenced pleading. These comments are being filed on January 25, 1999.

Sincerely,

Barbara R. Hunt

Enclosure

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

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In the Matter of)
)
1998 Biennial Regulatory Review --)
Petition for Section 11 Biennial Review)
filed by SBC Communications, Inc.,)
Southwestern Bell Telephone Company,)
Pacific Bell, and Nevada Bell)

CC Docket No. 98-177

REPLY COMMENTS OF SBC COMMUNICATIONS INC.

SBC COMMUNICATIONS INC.

ROBERT M. LYNCH
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January 25, 1999

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SUMMARY

- SBC's paging and wireless LNP recommendation should be summarily approved because no party opposed it.
- SBC's proposal to eliminate the Commission's Rules regarding the authorized rate of return should also be accepted because the arguments raised by AT&T and MCI are baseless. The authorized rate of return has no ongoing role to play in the low-end adjustment mechanism and if a rate is needed for any other purpose, such as the application of the pole attachment rules, the current interstate rate can be used.
- SBC's proposal that the requirement for working capital studies be eliminated should be accepted because no party raised any valid objection to that proposal.
- SBC's proposal to eliminate the tariff requirement for special access services, direct trunked transport, operator services, directory assistance and interexchange services because those services are competitive should be accepted because such action will increase price competition for the benefit of customers.
- SBC's proposal to simplify the cost allocation and affiliate transaction rules should be accepted because it significantly reduces the regulatory burden on carriers without having any material impact on the Commission's ability to protect ratepayers of price cap ILECs.
- The Commission should use SBC's Petition and the USTA Petition for Biennial Review to do the attic to basement review of its Rules that was intended by Congress.

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

In the Matter of)
)
1998 Biennial Regulatory Review --)
Petition for Section 11 Biennial Review) CC Docket No. 98-177
filed by SBC Communications, Inc.,)
Southwestern Bell Telephone Company,)
Pacific Bell, and Nevada Bell)

REPLY COMMENTS OF SBC COMMUNICATIONS, INC.

COMES NOW SBC Communications, Inc. ("SBC") to file this, its Reply Comments on its Petition for Section 11 Biennial Review. SBC would specifically point out that the Comments to which it is replying are comments offered by competitors for competitive reasons; it should not be surprising that competitors would want to see the LECs remain shackled by outdated regulatory rules that should have been eliminated as competition entered the telecommunications marketplace. SBC is filing Reply Comments only as to those issues raised by others in their Comments. Since no party filed comments opposing SBC's paging and wireless Local Number Portability ("LNP") recommendation, that recommendation should be summarily approved.

I. **Rate of Return**

AT&T and MCI claim that the Commission's Rules regarding the authorized rate of return are still needed.¹ These commenters, however, provide no reasonable basis to retain these rules as applied to price cap ILECs.

Both MCI and AT&T assert that the authorized rate of return plays a "role" or an "important role" in the low-end adjustment mechanism of price cap regulation. It is notable that neither party explains what this role may be. As SBC has recently noted in CC Docket No. 98-166, the authorized rate of return has no ongoing role to play in the low-end adjustment mechanism, and the mechanism should not be tied specifically to the authorized rate of return. The low-end adjustment is tied to the original incentives and risks that the price cap plan created. To reset the low-end adjustment in light of any proposed change to the authorized rate of return would upset the balance that exists today in the price cap plan.

AT&T claims that the authorized rate of return is needed to assist in monitoring of price cap regulation performance. Nevertheless, price cap performance needs no rate of return calculation in order to monitor the performance of the plan. Had such a reason existed, it would have been listed in the Commission's recent Notice initiating a prescription proceeding for the authorized rate of return. Instead, the Notice states:

To ensure that their rates for interstate access are just and reasonable, the Commission prescribes an authorized rate of return for the approximately 1300 incumbent local exchange carriers

¹ AT&T P-2, ¶2; P-3, ¶1; MCI P-3, ¶1.

(ILECs) that are subject to rate-of-return rather than price cap regulation.²

Thus, on its face, the Notice excludes the price cap carriers from its scope. The Notice does not say, "and the Commission prescribes an authorized rate of return to monitor the performance of the ILECs subject to price cap regulation." AT&T claims that monitoring price cap performance is an example of how the rate of return is needed to "define costs" for price cap carriers, but does not explain this point.

AT&T also argues that the rate of return is relevant to the calculation of end user common line charges, service cost studies associated with exogenous changes, new service rates, and rates above cap. Nevertheless it does not explain why the authorized rate of return is necessary for these purposes, and specifically does not address why some other measure could not be used, assuming a rate is needed at all. As stated above, the recent Notice does not tie the proceeding to any of these purposes.

MCI alleges that the Pole Attachment rules are impacted by the authorized rate of return. It is true that Pole Attachment rates include a return component. Today's rate utilizes the intrastate authorized rate of return. However, there is no reason why the current interstate rate could not be used until the FCC revisits the

² Prescribing the Authorized Unitary Rate of Return for Interstate Services of Local Exchange Carriers, CC Docket No. 98-166, Notice Initiating A Prescription Proceeding And Notice Of Proposed Rulemaking, (FCC 98-222) (rel. October 5, 1998). (Notice), at ¶1 (emphasis added).

outdated Pole Attachment rate formula because the impact of the use of either formula is very minimal.

II. Working Capital

AT&T states that the Commission has found the working capital studies to be important in the review of the annual access filings of Class A carriers.³ While this very small element is indeed in the interstate rate base, SBC is not aware of any inordinate reliance on the working capital studies aside from that reference. As noted in the original SBC petition, this item is very small, and in fact it constitutes less than 0.2% of the interstate rate base. When updates are done to this study the working capital balance varies an insignificant amount compared to the overall rate base. Given its small impact on the rate base⁴ and the fact that the large carriers have rates based on price cap plans, there is no possible significance apparent that would cause SBC or any other large LEC under such a plan to do a study which requires one year of effort and \$350,000 in time and effort to complete.

AT&T asserts that LECs can make use of the simplified formula in lieu of the normal procedure.⁵ The effort to complete the simplified formula, however, is little different than the work required to complete the normal procedure. The

³ AT&T P-4.

⁴ For example, in the case of Southwestern Bell Telephone's interstate rate of return, a 10% change in the working capital balance created by an updated study in a given year would impact the interstate rate of return reported on the 492 report by 0.01 % (the reported return for SWBT in 1997 was 10.32%). Most study updates would represent at most, a minor change to the return.

⁵ AT&T P-4.

simplified procedure still requires determination of average lead lag flows for revenues and expenses (which is essentially what the normal procedure requires.) The huge investment in time is created by the exhaustive review of all the various cash flows in order to arrive at these average leads and lags.

It is also noteworthy that in past proceedings, AT&T has supported the use of the Balance Sheet method. In Docket No. 19129 (Phase II), AT&T advocated its balance sheet analysis as the basis for calculating its working capital requirements.⁶ Thus, AT&T's current comments must be weighed against its past statements.

MCI claims that SBC over estimates these costs.⁷ MCI fails to understand the detailed process involved in this study. The last updated study in SBC required approximately a year to complete with several people utilized in the process. Cash flow analysis and data had to be generated and aggregated from all parts of the company, and completed on a state by state basis. If anything, the estimate is understated.

MCI does support the option of entering a zero amount for the working capital allowance⁸, but MCI does not support the freezing of the amount. While SBC has proposed the zero amount alternative, the freezing of the balance is a reasonable alternative. Again, the changes in a study are de minimis and have

⁶ American Telephone and Telegraph Company, The Associated Bell System Companies Charges for Interstate Telephone Service, AT&T Transmittal Nos. 10989, 11027, 11657, Docket No. 19129 (Phase II), 64 F.C.C. 2d 1 (1977), ¶186.

⁷ MCI P-4.

⁸ Id.

no perceptible impact on the interstate reported return and are especially irrelevant for price cap carriers. Given the past work at arriving at a given working capital balance, it would appear that merely freezing the balance would be a proper option.

MCI criticizes the balance sheet method⁹ as the timing of the measurement of the liabilities is under control of the LECs. Apparently, MCI implies that the LECs would expend time and energy trying to control their cash flows and hence their working capital balance in an effort to change the interstate rate base. As noted above, such changes would make virtually no difference within the price cap plan and secondly the working capital balance itself is de minimis as a part of the rate base.

Additionally, current liabilities and current assets do not fluctuate radically from month to month. Even if that were a fear, quarterly averaging techniques could be utilized. The balance sheet method can arrive at a reasonable determination of working capital without investing a year to study the cash flows in intricate detail. The benefit of the balance sheet technique is that account balances can be identified and summed directly off the balance sheet.

MCI also criticizes the 45-day method as MCI alleges that coin revenue is collected instantaneously. MCI fails to point out that public coin revenue is now deregulated and consequently not included within the lead/lag study. Even if still regulated, coins remain in the box for a period of time before they can be collected and deposited. Only upon collection and deposit is the cash flow benefit finally obtained.

⁹ MCI P-5, ¶2

III. Detariffing Services Subject to Competition

None of the competitors that oppose the detariffing of the services for which SBC sought that treatment have provided any evidence to counter the fact that those specific services are competitive. AT&T cites the recent "Local Competition" study by the Common Carrier Bureau for the alleged fact that "the ILECs' share of the local exchange and exchange markets was 97%. However, SBC is not asking for the elimination of tariff regulation for all local exchange and exchange services. SBC's proposal is very specific to those particular services where competitors are not dependent upon resale of the ILEC's services and where competition is well established. Those services are, for the most part, not services that would normally be purchased by residential or even small business customers, but, rather, reflect the established pattern for competitive carriers that target high-volume business customers and interexchange carriers almost exclusively because these customers generate a disproportionately high share of revenues. Special Access was one of the first services to become fully competitive and, today, the tariffing requirement is probably the biggest impediment to full price competition on that service.

The tariffing requirement and the structure of the tariff prevents ILECs from responding competitively with the flexibility required to win any of the high cap lines where the costs are lowest, but almost assures that the ILECs will have to serve the demand where the costs are highest. ILECs face a huge battle in offering off-tariff prices to respond to specific customer or market area needs. Though SBC's high capacity services' tariffs allow for zone-deaveraged pricing, tariff rates remain much too aggregated to accommodate specific customers'

pricing requests. Competitors hold the huge advantage of tailoring responses to RFPs to meet specific price points implicitly required by specific customers. ILEC tariffing requirements preclude such flexibility for ILECs. In cases where SBC has attempted off-tariff pricing to meet individual requests, SBC has met an onslaught of intervention by "Tariff-free" competitors, causing the Commission to disallow those pricing offers. Competitors can also examine the ILEC's tariff to see exactly what the ILEC rate will be for the service in question and then set their bid just below that rate. If they were not able to ascertain in advance precisely how much the ILEC would have to charge, their bid might be lower, but since they know in advance what the ILEC bid will be, there is no real ILEC/IXC or CLEC price competition on the lowest cost Special Access lines. There is at least the tacit agreement among the biggest carriers that the best practice is to just discount off the ILECs prices and reap the "umbrella" profits available under the shelter provided by the ILEC tariffs. Customers, then, are being deprived of the full benefits of the competitive marketplace on the very services that offer the most competitive choices as to provider because the ILEC tariff prices are being used as an umbrella to maintain a pricing scheme that is based upon discounting off the ILEC tariff rate.¹⁰ The competitive carriers make their money on the low cost Special Access lines, while passing up the high cost jobs entirely.

¹⁰ The courts have long recognized the anticompetitive potential of price lists. See *United States v. Container Corp of America*, 393 U. S. 333 (1969). Here, only the ILEC's price list is public, so that "price list" or tariff rate is used as the target price in much the same manner as the sharing of unpublished pricing information was used for price maintenance in the *Container Corp.* case.

Existing tariff requirements on ILECs for special access and high capacity services contribute in no small measure to the precipitous market share loss in several of SBC's major markets. As SBC cited in its petition, SBC has lost upwards of 50% of its market share for high capacity services in markets such as Dallas, Houston, Los Angeles and San Francisco.¹¹ SBC's call for detariffing affected high cap services is not a whining response to losing the business. SBC welcomes competing with other efficient providers. SBC objects to being hamstrung with tariffing requirements that its competitors for high cap services do not face. SBC's tariffing requirements release sensitive pricing information to competitors, creating the potential for a less efficient provider winning the business simply because that provider knew how low to price to "win the bid." Uneconomic, inefficient competition has the pseudo benefit of increasing the number of market participants, thereby depressing the incumbent's market share. However, if these new entrants are not more efficient than the incumbent (i.e., possess a lower cost structure), there is no assurance that the least-cost provider will win the business. Industry costs may remain unchanged or increase and consumers do not benefit if tariffing requirements on ILECs create an uneconomic and artificial advantage for competitors. The point of SBC's petition for detariffing competitive services is not to stem the flow of competitive losses. It is to ensure that any shifts in market share go to the least-cost, most-efficient provider.

¹¹ SBC has attached the more recent Qualities Strategy Study to this Reply as Attachment A, in lieu of providing the now outdated study referenced in its Petition for Biennial Review.

Detariffing Special Access would probably not change the number of customers who are going to alternative carriers for their high capacity lines; it might, however, make a change in which lines go to the alternative carriers. No longer would the competitors be able to predict with certainty the amount that would be quoted by the ILEC, so they would have to make their bid based on their own cost estimates. On low cost jobs, they might lose some bids until they realize that they would no longer be able to reap umbrella profits attributable only to lack of ILEC flexibility in pricing. But they also might be able to win some of the higher cost lines because the ILECs bid on those jobs would include reasonable profit. Thus, the true benefit of detariffing would be that customers would be able to fully realize the benefits of true price competition in those areas that are already most competitive in terms of carrier choice. Competition must be allowed to displace regulation in the marketplace, if consumers are to be able to enjoy the full benefits of price competition.

IV. The Commission Should Simplify the Cost Allocation and Affiliate Transaction Rules.

The Commission, as well as some commenters, correctly observe that some of SBC's proposals regarding cost allocation procedures became the subject of proceedings initiated after SBC's Section 11 Petition was filed.¹² In particular, the Accounting Biennial Review NPRM¹³ encompassed some of the proposals SBC had made in its Section 11 Petition, although the Commission

¹² NPRM, ¶¶1, 11; AT&T P 6-7; MCI P-9.

¹³ 1998 Biennial Regulatory Review – Review of Accounting and Cost Allocations Requirements, CC Docket No. 98-81, Notice of Proposed Rulemaking, FCC 98-108, released June 18, 1998 ("Accounting Biennial Review NPRM").

proposed to limit relief from the more burdensome accounting rules to the mid-sized ILECs.¹⁴ SBC urges the Commission to adopt all of SBC's proposals in CC Docket No. 98-81. However, the current NPRM is requesting comment on SBC's proposals to the extent not included in the previous proceedings, such as the Accounting Biennial Review NPRM. Accordingly, and pursuant to the NPRM's instructions to "avoid submitting redundant comments in this docket"¹⁵, SBC incorporates by reference its Comments and Reply Comments filed in CC Docket No. 98-81 regarding simplification of the cost allocation and affiliate transaction rules.¹⁶

SBC's previous comments address most, if not all, of the concerns raised by the long distance company commenters in this proceeding. For example, AT&T contends that "SBC's proposals would undermine the fundamental purpose of the CAM requirements because they would deny the Commission the ability to detect and deter cross-subsidization of the ILECs' non-regulated services."¹⁷ In the case of price cap ILECs, nothing could be further from the truth. As explained in SBC's previous comments, SBC's proposals would not compromise the Commission's ability to guard against cross-subsidization,

¹⁴ Id. ¶¶4-5, 9-11.

¹⁵ NPRM, ¶11.

¹⁶ Comments of Southwestern Bell Telephone Company, Pacific Bell and Nevada Bell, CC Docket No. 98-81, filed July 17, 1998 ("SBC LECs' Docket 98-81 Comments"); Reply Comments of Southwestern Bell Telephone Company, Pacific Bell and Nevada Bell, CC Docket No. 98-81, filed August 3, 1998("SBC LECs' Docket 98-81 Reply Comments").

¹⁷ AT&T P-7.

especially in view of the protection provided by price cap regulation, which assigns to the cost allocation requirements a much less reduced role in the regulation of price cap ILECs. Rather than undermining the functions of the CAM, SBC's proposals make the CAM process simpler and easier to administer, which will in turn facilitate monitoring and enforcement by the Commission. For example, just as going to Class B accounts in the CAM will not reduce the effectiveness of the CAM cost allocation procedures, SBC's proposal to calculate the General Allocator on an annual, rather than a monthly, basis will not have any material impact on the Commission's ability to protect ratepayers of price cap ILECs. However, this proposal, combined with SBC's other simplification proposals, would greatly reduce the burden of detailed CAM procedures.

Instead of summarily concluding that simplification means less effective safeguards, as commenters such as MCI and AT&T do, the Commission should review SBC's proposals using the criteria described in paragraph 4 of the NPRM, which are in many ways similar to the analytical framework suggested by SBC in its Section 11 Petition. In considering the question "Is the original or present purpose of the regulation still valid?"¹⁸, the Commission should keep in mind that detailed accounting and cost allocation rules were adopted in the context of rate base, rate-of-return regulation, and the Commission itself has recognized that price cap regulation reduces the importance of cost allocation in achieving the

¹⁸ NPRM, ¶4.

Commission's regulatory purposes.¹⁹ Even to the extent that cost allocation rules serve a minor residual purpose under price cap regulation, the Commission's analytical framework requires it to consider "Do the burdens it creates outweigh its advantages?"²⁰ SBC submits that its proposals to simplify the accounting and cost allocation rules should be adopted in order that the burdens are not so disproportionate compared to the small advantages the Commission might reasonably expect of them under price cap regulation.

As its primary argument against SBC's proposed CAM changes, AT&T quotes the Commission's conclusions regarding the need for Part 64 rules in the December 1996 Accounting Safeguard Order.²¹ However, those conclusions are already stale and are no excuse to avoid a biennial review two years later. Significantly, the December 1996 Accounting Safeguards Order relied heavily on the fact that the then existing price cap plan included a sharing mechanism.²² However, in May 1997, the Commission eliminated the sharing option.²³ Thus,

¹⁹ See, e.g., Price Cap Performance Review of Local Exchange Carriers, CC Docket No. 94-1, 12 FCC Rcd ¶152 (1997) ("1997 Price Cap Order") ("Elimination of sharing reduces our reliance on, and thus the importance of, jurisdictionally separated embedded costs.")

²⁰ NPRM, ¶4.

²¹ AT&T P 7-8 (quoting Accounting Safeguards under the Telecommunications Act of 1996, Report and Order, 11 FCC Rcd 17539 (1996) ("Accounting Safeguard Order").

²² Id. ¶ 271 ("Incumbent local exchange carriers may select among three productivity factor choices, two of which impose sharing obligations Consequently, our current system of interstate price cap regulation does not eliminate the need for cost allocation rules."(emphasis added)).

²³ 1997 Price Cap Order, ¶¶ 148-155.

AT&T's reliance on the earlier reasoning of the Accounting Safeguards Order is outdated and the Commission needs to reconsider its analysis in light of the elimination of sharing, other subsequent regulatory and marketplace developments and the Section 11 biennial review mandate.²⁴

AT&T and other commenters also oppose any simplification of the affiliate transaction rules. AT&T's main rationale is that the "current affiliate transaction rules are the product of more than a decade of experience with the rules adopted in the Joint Cost Order."²⁵ While AT&T later inconsistently states that "affiliate transaction rules are of very recent vintage and the Commission is only beginning to develop experience with them,"²⁶ the long-standing existence of most of the components of the affiliate transaction rules is no reason to avoid applying the Section 11 analytical framework to determine whether all of the detailed procedures of the affiliate transaction rules are truly necessary for the Commission to achieve its regulatory purposes. SBC submits that they are not and that the Commission should simplify the affiliate transaction rules in the

²⁴ MCI uses a similarly outdated argument when it objects to SBC's Part 64 simplification proposals on the grounds that SBC had an opportunity to make certain of these recommendations in a mid-1996 rulemaking proceeding concerning allocation of video programming costs. MCI P-9 (citing Allocation of Costs Associated with Local Exchange Carrier Provision of Video Programming Services, 11 FCC Rcd 17211 (1996)) The circumstances have changed significantly since the comment cycle in that proceeding and, certainly, SBC's failure to present these proposals over two years ago in an outdated proceeding would not be a proper basis to avoid biennial review of detailed and burdensome cost allocation rules under the Section 11 analytical framework.

²⁵ AT&T P-8.

²⁶ Id., P-9.

manner recommended in SBC's previous comments as well as in the Arthur Andersen Whitepaper and its November 10, 1998 Supplement.²⁷

The Commission should reject outdated and misplaced objections such as those of MCI and AT&T and evaluate with an open mind the extremely burdensome nature of the detailed CAM and affiliate transaction requirements. Using the proper analytical framework and up-to-date reasoning, the Commission should clearly conclude that it can do its job efficiently and effectively without imposing as heavy a burden on the price cap ILECs, if it adopts SBC's and Arthur Andersen's previous recommendations.

V. Conclusion

In conclusion, SBC would urge the Commission to use the SBC Petition for Biennial Review and the USTA Petition for Biennial Review as the vehicle for the "attic to basement" type of review that was intended by Congress. As USTA pointed out in its Comments, "it is clear that Congress intended the Commission to review all of its rules every two years and eliminate those which are not consistent with the pro-competitive deregulatory telecommunications policy framework."²⁸ While the Commission has done a partial review of its rules in a number of dockets, there has been no top to bottom complete review. In some instances, as a result of that piecemeal approach to review, rule changes under

²⁷ Arthur Andersen LLP, "Accounting Simplification in the Telecommunications Industry," filed July 15, 1998 P 38-47; Arthur Andersen LLP, "Supplement to July 15, 1998 Position Paper," filed November 10, 1998 P-18.

²⁸ Comments of the United States Telephone Association, P-2, CC Docket No. 98-177, January 11, 1999.

consideration are outside the scope of notice issued for the proceeding in which the rules are being proposed.

The Commission should take the opportunity to use both of these Petitions as the vehicle to correct the problem raised in Commissioner Furtchgott-Roth's Report on Implementation of Section 11 by applying the framework of the statute to all of the Commission's rules.

Respectfully Submitted,

SBC COMMUNICATIONS INC.

By: Barbara R. Hunt
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January 25, 1999

Certificate of Service

I, Mary Ann Morris, hereby certify that the foregoing "Reply Comments of SBC Communications, Inc." in CC Docket No. 98-177 has been served on January 25, 1999 to the Parties of Record.



Mary Ann Morris

January 25, 1999

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SBC
HIGH CAPACITY
MARKET STUDY
SECOND QUARTER, 1998

November 25, 1998

 **QUALITY STRATEGIES.**

WASHINGTON, D.C.

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METHODOLOGY 44

DESCRIPTION OF THE STUDY

OBJECTIVES

The primary objective of this report is to provide SBC with a high-level overview of its High Capacity Market (DS1 and above) and to analyze the state of competition for high capacity telecommunications services for the following metropolitan statistical areas (MSAs).

- Little Rock, AR
- Los Angeles, CA
(including Orange
County and Riverside)
- Sacramento, CA
- San Diego, CA
- San Francisco, CA
- San Jose, CA
- St Louis, MO
- Reno, NV
- Oklahoma City, OK
- Austin, TX
- Dallas/Ft Worth, TX
- El Paso, TX
- Houston, TX
- San Antonio, TX

The report is structured to meet this objective by providing:

- A description of the High Capacity Market and market segments
- Market share for SBC and its competitors in the MSAs
- A description of the High Capacity competitive landscape in the MSAs

This report describes and defines the High Capacity Market and identifies the types of circuits included in the share estimates. The competitive analysis identifies and describes facilities based competitors in the High Capacity Market and market trends.

THE HIGH CAPACITY MARKET

QUALITY STRATEGIES defines the High Capacity Market as the universe of DS-1 and above circuits used either for end user customer's traffic (Provider) or for carrier transport (Transport).

- End users utilize high capacity circuits to connect two business locations in the same LATA (point-to-point) or to connect to a carrier's point-of-presence (POP) (special access).
- Carriers utilize high capacity transport circuits to provide links between POPs, central offices, and tandems.

The High Capacity Market will be viewed based on who PROVIDES the underlying facilities. For purposes of this project we will identify Overall High Capacity market share for facilities-based providers. The Overall High Capacity market consists of the Provider Market Segment and the Transport Market Segment.

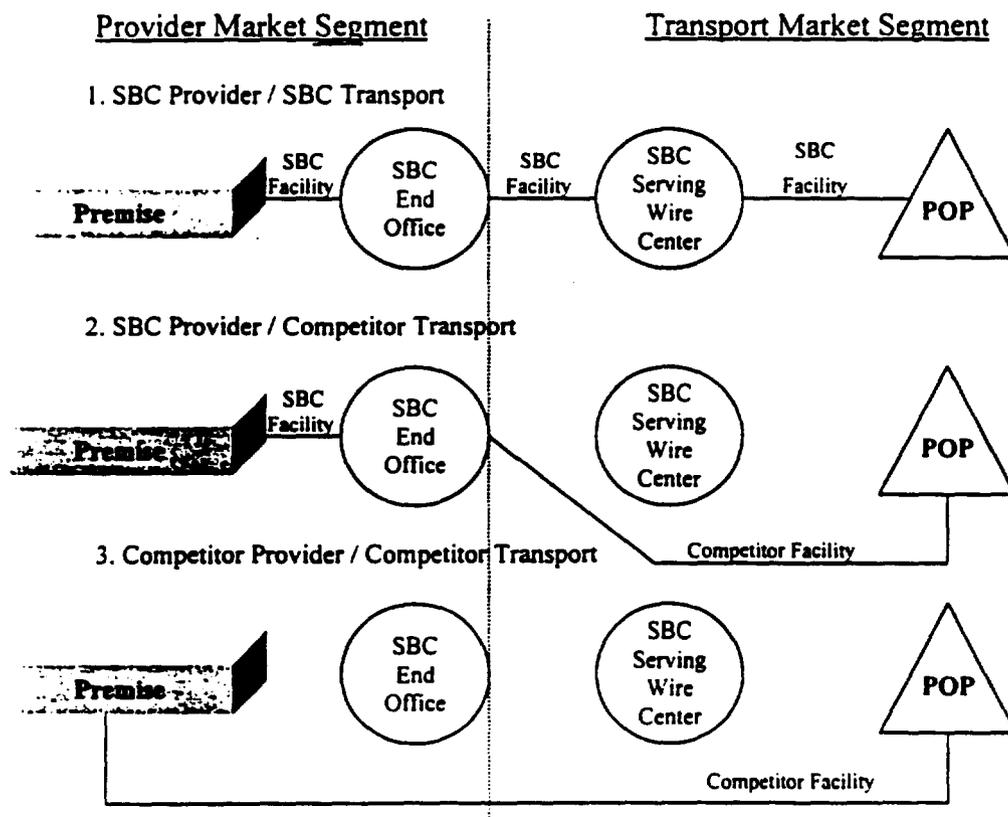
THE FACILITY BASED HIGH CAPACITY MARKET

The Overall High Capacity Market combines the Provider and Transport Market Segments and shows overall market share for companies who provide DS1 and above services over their own facilities. This analysis does not include self-provisioning by carriers for transport.

- **Provider Market Segment:** Provider circuits are DS-1 and DS-3 circuits provisioned by a facilities-based local telecommunications provider (either SBC or a competitor, over their own facilities). These circuits are ultimately purchased by end-users to transmit voice and data traffic between end user locations or from the end user's premise to a POP or competitor's switching center.
- **Transport Market Segment:** Transport circuits are DS1 and above circuits provided by SBC or a competitor over their own facilities and purchased by carriers to transmit voice and data traffic from one POP to another or to transmit voice and data traffic from a POP to a Central Office or tandems (for distribution). Transport circuits are purchased by one communications company from another communications company.

The following diagram depicts the various components of the Overall High Capacity Market, which is the combination of the Provider and Transport Market segments.

Overall High Capacity Market



COMPETITORS

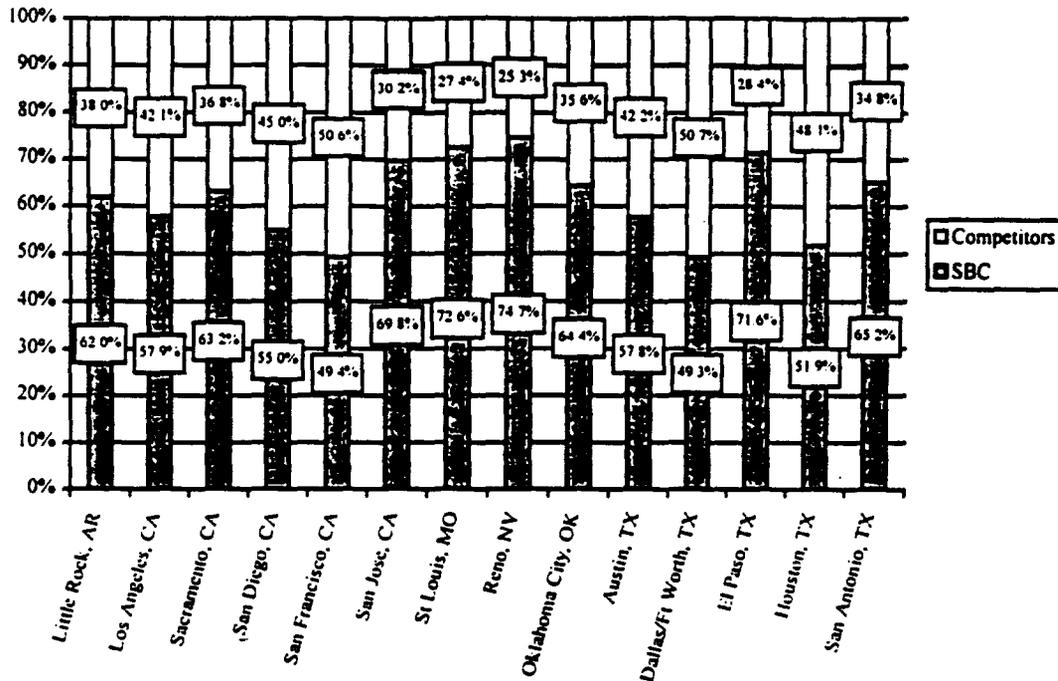
Prior to the mid-1990's SBC largely had the High Capacity Market to itself. Since 1994, many competitors have established high capacity networks in SBC's territory. Many of these competitors are seasoned, well-financed telecommunications companies.

Some of the competitors that operate their own networks and compete with SBC for Provider and Transport market share are:

- Cox Fibernet
- e.spire
- Electric Lightwave (ELI)
- GST
- ICG
- Intermedia (ICI)
- MCI
- Nextlink
- Teleport
Communications Group
(TCG)
- Time Warner
- WorldCom (includes
MFS and Brooks, which
were acquired by
WorldCom prior to
2Q98)

Each of the aforementioned competitors has invested resources to build optical fiber networks in SBC's territory that compete directly with SBC. Competitors cater to interexchange carriers and large business customers in particular vertical segments (particularly financial services, health care, and information transfer) commonly characterized as high-usage segments, in dense metropolitan areas. This has allowed competitors to focus on small geographic areas when constructing fiber networks (particularly central business districts and business-intensive suburbs).

OVERALL HIGH CAPACITY MARKET SHARE RESULTS



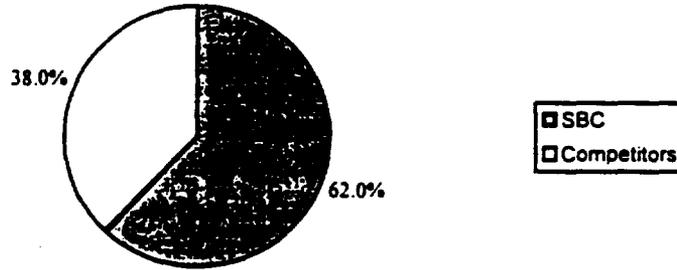
Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Little Rock	62.0%	38.0%
LA-Orange-Riverside	57.9%	42.1%
Sacramento	63.2%	36.8%
San Diego	55.0%	45.0%
San Francisco	49.4%	50.6%
San Jose	69.8%	30.2%
St. Louis	72.6%	27.4%
Reno	74.7%	25.3%
Oklahoma City	64.4%	35.6%
Austin	57.8%	42.2%
Dallas/Fort Worth	49.3%	50.7%
El Paso	71.6%	28.4%
Houston	51.9%	48.1%
San Antonio	65.2%	34.8%

LITTLE ROCK - COMPETITIVE LANDSCAPE

Overview

The Little Rock-North Little Rock MSA has a population of approximately 480,000 people. Its most significant industries have traditionally been agricultural products, bauxite mining, and lumber. While this is true, Little Rock is the center of government activity as the capitol of Arkansas, accounting for approximately 19.3% of the total employment in the area. It also is the headquarters for the state's financial industry – banks, investment firms, and insurance companies -- accounting for approximately 49.6% of the state's employment in these areas and 8.1% of the area's total employment. The Little Rock area is expected to continue to grow steadily in the near future. Competitors include WorldCom, Alltel, e.spire and Hyperion.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Little Rock	62.0%	38.0%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
Little Rock	WorldCom	Fiber	30	Unavailable
	Alltel	Fiber	Unavailable	6
	e.spire	Fiber & Microwave	90	40
	Hyperion	Fiber	120	21

WorldCom

WorldCom, which recently completed its acquisition of MCI continues to provide HICAP services over its 30-mile network in Little Rock.

WorldCom installed a Lucent 5ESS switch in Little Rock and began offering local switched services in the first quarter of 1997. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services. The company is collocated with four Southwestern Bell switches in Little Rock, which give it access to 86% of Southwestern Bell's 170,000 customers in Little Rock.

WorldCom has a 100% SONET fiber optic network in the area, with approximately 30 route miles of fiber. Company representatives claim the company has fiber in all of the major multi-tenant buildings downtown. The company's current lone SONET ring in the area runs at OC-12. Company representatives estimate the portion of network capacity that is currently utilized to be 10%.

The network extends from downtown along Capitol St. to the corridor of Bowman and Shackleford roads and loops back to downtown along 13th St. WorldCom/Brooks also has a fiber-optic loop in North Little Rock, serving the customer base to the north of the Arkansas River.

e.spire

e.spire's 100% SONET fiber optic network has been functional since January of 1995. The company has built out its network over the last year, bringing its current number of route miles to 90. They continue to use their Lucent Technologies 5ESS switch and have connected over 40 buildings in the area to the network. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services.

e.spire's downtown network is completed underground, but the expansions will include aerial fiber. Additionally, e.spire has microwave facilities to serve customers far removed from the fiber network. e.spire also has an ATM POP in Little Rock.

Alltel

Alltel Communications has installed a DMS500 switch and a fiber network in Little Rock. At the present time they have only 6 buildings on this network. They offer 24 hour, seven days a week customer service and a range of products including basic business lines, T1, PRI, Internet access, paging, centrex packages and calling plans. They are presently collocated in three central offices.

Hyperion

Hyperion Little Rock installed its Lucent Technologies 5ESS switch in December of 1997. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services.

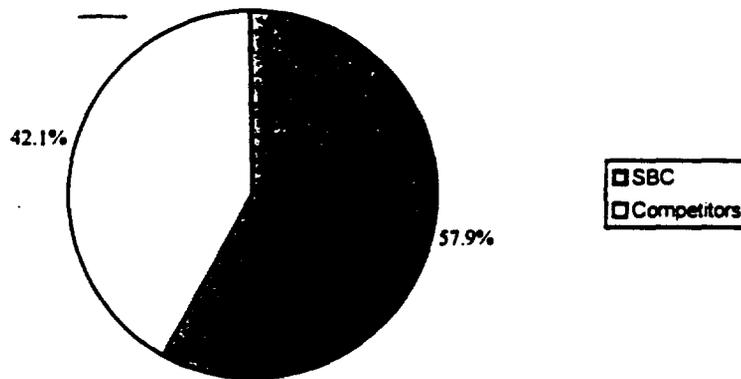
The company has constructed a network, which currently consists of 120 route miles of fiber and is connected to approximately 21 buildings in the area. The network is composed of six SONET rings, one of which runs at OC-12 and 5 of which run at OC-3. Company representatives estimate the portion of network capacity currently utilized to be 20%.

LOS ANGELES - ORANGE CTY. – RIVERSIDE – COMPETITIVE LANDSCAPE

Overview

Los Angeles is the largest metro area in SBC's territory, and the second largest nationwide. The greater Los Angeles metro area, which includes Orange County and Riverside, has a population of over 15 million people, providing vast opportunities for competitors to offer a diversified portfolio of telecommunications services to the business and residential markets. Over the last two years, competitors have found ways of converting SBC customers and securing growth in the local exchange and high capacity markets through investments in local infrastructure and intense marketing efforts.

The competitors have each installed several hundred miles of fiber and connected hundreds of buildings in order to operate networks and serve customers in business-intensive regions in Los Angeles and Orange Counties. The competitor's networks are capable of carrying several thousand conversations simultaneously. These networks are equipped with vast amounts of available capacity, creating an attractive alternative for carriers and large businesses with heavy voice and data requirements. ICG, MCI, WorldCom, and TCG have installed network backbones capable of transmitting voice and data at speeds up to OC-48, although fiber spurs and distribution rings may operate more slowly. The main competitors for High Capacity services in the Los Angeles metro area are WorldCom, TCG, MCI, ICG and NextLink.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
LA-Orange-Riverside	57.9%	42.1%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
LA-Orange-Riverside	WorldCom	Fiber	800	250
	TCG	Fiber	1000	200
	MCI	Fiber	50	50
	ICG Telcom	Fiber	200	300
	NextLink	Fiber	200	150
	GST	Fiber	280+	Unavailable

WorldCom

WorldCom is the largest competitor in the Los Angeles area. WorldCom offers local switched services in Los Angeles, routing calls through an Ericsson switch that has been active since January 1995. The company has over 250 lit buildings connected to an extensive fiber network; the newly merged MCI WorldCom's network has over 800 miles of fiber and extends from Irvine in the south to Sherman Oaks in the north, along the coast through Santa Monica, El Segundo, Long Beach and Costa Mesa, and through Orange, Anaheim and downtown Los Angeles. In addition to fiber in the downtown area WorldCom also gains a DMS500 switch, which has been active since 4Q96, through its merger with MCI. The Nortel switch is capable of routing a diverse portfolio of telephony services. WorldCom monitors its networks from its control center in Oakbrook, IL.

WorldCom bundles its telephony services and provides a single invoice for local, long distance, international service, Internet access, and calling card charges. The company also offers volume discounts, and a customer can increase its "volume commitment level" by purchasing all of its telephony needs through WorldCom.

TCG

TCG has a 5ESS switch in LA that has been active for about three years, routing various types of services throughout the company's extensive network. TCG has a very large network consisting of approximately 1,000 route miles and covering 37 cities in the greater Los Angeles metro area and parts of Southern California. There are 385 route miles in the downtown Los Angeles area alone that serve business customers' varying telephony needs. The remainder of the TCG's fiber network covers parts of Southern California including El Segundo, Santa Monica, Irvine, Long Beach and Pasadena. There are just over 200 buildings lit in the Los Angeles area.

Additionally, TCG runs a Network Operations Center in Staten Island, NY from which it constantly monitors networks and coordinates responses to problems. TCG technicians report the network operations facility allows the company to spot problems before the end-user does and alleviate them before transmission outages occur. Furthermore, TCG customers often report hearing of problems from TCG representatives before it has affected service and been noticeable to them. TCG will work with its customer's long distance carrier to provide a total service solution.

MCI

MCI, recently acquired by WorldCom, has a small fiber network consisting of approximately 50 route miles and a Nortel DMS500 switch. In contrast to the other three major providers, MCI is much less averse to relying on other carriers to help it reach its customers. The company has connected fewer than 50 multi-tenant buildings, and therefore the vast majority of MCI's high capacity customers are located away from its network. The majority of MCI customers in the area receive service via type II connection to the MCI central office (or long distance POP). In this scenario, MCI will lease a T-1 from the incumbent (or another provider) to provide the link. It prefers this arrangement to pure service resale service because it controls part of transmission and eliminates certain cost elements. However, MCI always attempts to serve its most valuable account over its own facilities (frequently dictating which buildings in a central business district are connected to the network).

ICG

ICG has dramatically increased the scope of its fiber presence in the Los Angeles MSA over the past several years by establishing competitive alliances with utility operators across the Golden State. Through these relationships, ICG has added over one hundred route miles to its original fiber backbone since 1996. The company has a total of 200 route miles, which includes a 117-mile ring in Orange County and downtown Los Angeles, and its network stretches from Oxnard in the Northwest to San Bernardino in the Southeast. Additionally, ICG built its network according to SONET ring architecture to allow maximum reliability and redundancy. ICG routes traffic through its 5ESS switch on Grand Avenue that has been active since 1995, allowing the company to offer a diverse telephony package. To reduce the amount it relies on other providers, ICG has connected more than 300 buildings to its Los Angeles area network. This allows the company to provision its own service and manage lines and circuits end to end. Additionally, all metropolitan area networks are monitored constantly from ICG's network control center in Englewood, Colorado.

NextLink

NextLink became a player in the Los Angeles area in 1996 when it purchased Linktel Pacific's network, although the company has only offered local services in the metro area for just over a year. NextLink operates a 200-mile network in the Los Angeles and Orange County area, and unlike other competitors, NextLink focuses its attention on areas outside the city instead of downtown. Its network runs along the coast through El Segundo, Gardena and Long Beach and through Anaheim, Bellflower and Santa Ana. NextLink has installed a DMS500 switch that is capable of handling local, toll, operator and long distance services. The company currently has over 150 buildings on-net.

GST

GST operates 500+ miles fiber network from Los Angeles to San Francisco, with over 130 route miles of fiber in its Los Angeles network. GST employs a Nortel DMS 500 switch in Los Angeles. The GST Los Angeles network is one of four GST operational networks in California. The majority of the network links the cities of Riverside, Rialto, and San Bernardino.

GST offers a full line of dedicated and switched services to on-net customers in metropolitan Los Angeles. GST began offering local dialtone services during third quarter, 1996. On October 1, 1996 Pacific

Lightwave finalized terms to purchase Call America, a facilities-based long-distance reseller based in Central California with customers in the following areas: Fresno, Salinas, San Luis Obispo, Santa Barbara, and Ventura. Additionally, GST purchased Tri-Star Residential Communications Corp., a shared tenant service provider, in October 1996.

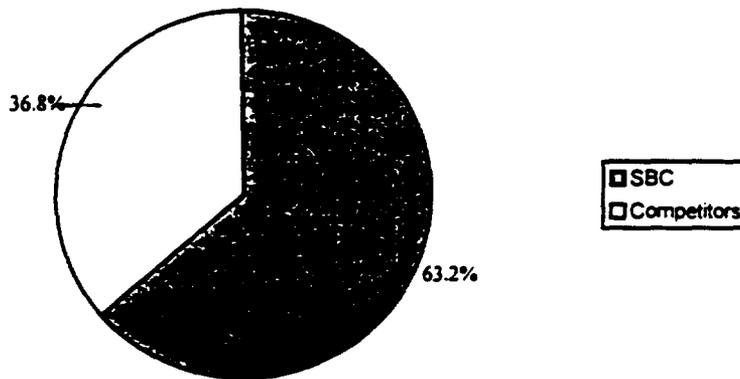
GST operates a 151-mile fiber network that serves the Riverside, San Bernardino, and Rialto areas. This network connects to the following three networks in Los Angeles:

• 44-mile network in Ontario	• 5-mile network in Monterey Park
• 18-mile network in City of Industry	

SACRAMENTO – COMPETITIVE LANDSCAPE

Overview

Sacramento, the capital of California, is located northeast of the San Francisco Bay area. The city has a diversified economy with companies from the aerospace, technology, furniture and pharmaceutical industries. Companies like Intel, Campbell Soup Company, Hewlett-Packard and NEC Electronics operate facilities in the area, and a new business park is being planned to accommodate more businesses. The Mather Field, near Rancho Cordova, is being transformed from a military facility into a business center and its list of current tenants includes McGraw Hill, Sub Sea Systems, the California Department of Forestry, and FEMA. Some companies have already started using the cargo and runway facilities also, such as Airborne Express, UPS, Burlington Air Express and Emery Air Freight. With a fairly sizable demand for high capacity services, competitors own and operate extensive networks in Sacramento, serving the downtown business districts and other outlying business communities. In particular, WorldCom and Electric Lightwave have geographically expansive networks able to carry an array of telephony services. ICG also competes for high-capacity service in the Sacramento area, although it only operates in the downtown business district.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Sacramento	63.2%	36.8%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
Sacramento	WorldCom	Fiber	200	200 +
	Electric Lightwave	Fiber	200	100 +
	ICG Telcom	Fiber	Unavailable	20

WorldCom

With the completion of its merger with Brooks Fiber Properties, WorldCom is now able to offer local and long distance services in the Sacramento area. WorldCom acquired Brook's network, which consists of approximately 200 route miles and two switches. WorldCom has an Ericsson switch designated for long distance services and a Lucent 5ESS that was installed in the first quarter 1996. The 5ESS is capable of carrying a variety of traffic such as local, long distance and data. The fiber runs from West Sacramento through downtown and into Rancho Cordova, Citrus Heights and El Dorado Hills. WorldCom's backbone is configured according to SONET ring architecture, and the company has brought more than 200 buildings on-net. Before WorldCom merged with Brooks, Brooks attempted to connect the majority of its customers directly to its fiber network through large-scale buildout and substantial capital investment.

ELI

Electric Lightwave Inc. (ELI), which has been operating in the Sacramento area since 1994, has a DMS 500 switch capable of routing a diverse portfolio of communications services. The switch can handle local, long distance and data traffic and was installed in February 1997. Currently, ELI's network spans approximately 200 route miles in the Sacramento area and covers Rancho Cordova, Carmichael, El Dorado Hills, and Folsom. The company plans to install an additional 40-mile extension into Roseville in the near future. The network transmits voice and data at speeds up to OC-48 and is constructed according to SONET ring architecture. ELI has more than 100 lit buildings in the Sacramento area. To address network difficulties, ELI has established a network-monitoring center in Bellevue, WA that operates all day, every day. End-users are to report difficulties with service to their account manager or call the 800 technical support line (there is one for end-users and one for carriers).

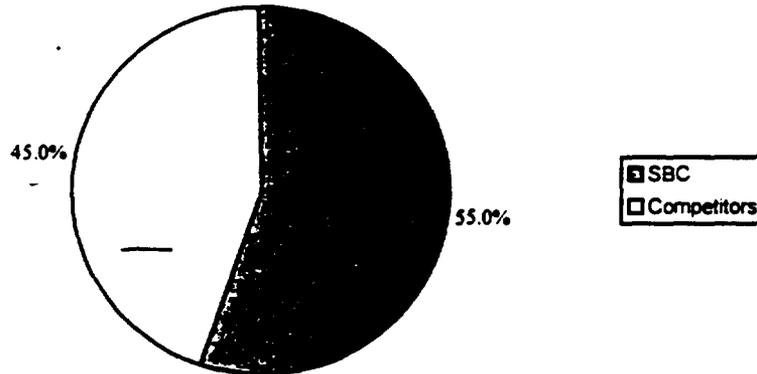
ICG

ICG has a very limited presence in Sacramento, serving just the downtown central business district. The company provides facilities-based, switched service via a Lucent 5ESS switch located at 770 L St in downtown. Additionally, ICG has connected fewer than 20 buildings to its network in the state capital. ICG began offering local switched services in the second quarter of 1997, but had been offering digital dedicated links since 1996. Furthermore, ICG has microwave links connecting its Sacramento and Bay Area networks.

SAN DIEGO – COMPETITIVE LANDSCAPE

Overview

San Diego is the second-largest city in California and the sixth largest metropolitan area in SBC’s territory. San Diego, located in the southwestern part of the state on the San Diego Bay, has been a busy commercial port and a hub for US naval operations. Although the naval training center is scheduled to close, San Diego has a diverse economy with businesses in the following industries: electronics, aerospace, oceanography, agriculture, and medical and scientific research. San Diego is also a hotbed of competition for high capacity services. Time Warner, WorldCom, TCG, MCI and ICG all vie for large business customers. The capacity available on competitor networks is extensive with each competitor operating backbones up to OC-48. Time Warner, WorldCom and ICG each own expansive networks covering downtown San Diego as well as La Jolla, Mission Valley and Del Mar.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
San Diego	55.0%	45.0%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
San Diego	Time Warner	Fiber	180	125+
	WorldCom	Fiber	400	Unavailable
	ICG Telcom	Fiber	150-170	Unavailable
	TCG	Fiber	400	200
	MCI	Fiber	20-30	35+

Time Warner

In San Diego, Time Warner operates a network that totals 180 route miles and stretches from La Jolla in the northwest to the southern suburbs of San Diego. A variety of traffic is routed via a Lucent 5ESS switch that has been active for two years. Time Warner has more than 125 lit buildings and its customers include large corporations such as Sony, Hewlett Packard and Qualcomm. Time Warner is particularly adept at constructing transmission facilities after years of experience in the cable industry (not to mention the investment in construction equipment, rights of way, and franchise fees). Time Warner's network features an OC-48 backbone; however individual distribution rings frequently run at lower optical speeds or at the DS-3 level. Time Warner has built its network according to SONET ring architecture featuring route diversity, counter-rotating-ring configuration, and electronic redundancy. Time Warner rolled out local switched service earlier this year.

WorldCom

WorldCom's fiber backbone boasts transmission speeds up to OC-48 (although several distribution routes run at OC-3 or OC-12). The combined networks of MCI and WorldCom span 400 route miles and runs North along Interstate 5 past La Jolla to Poway and South through La Mesa, Mission Valley and downtown San Diego. WorldCom has two switches in the San Diego metro area. Its Ericsson switch is located on Overland Dr. The company also recently installed a DMS250 located on Complex Dr. that will be upgraded to a DMS500 later this year or early next year. Nortel's DMS250 is a high capacity system designed for interexchange carriers and it handles high-speed voice and data communications for long distance customers. While the modular, scalable system architecture of the DMS250 allows a provider to increase processing and trunk capacity (up to 100,000 trunks), the DMS500 will allow WorldCom to combine local, toll, long distance and data services over the same number of trunks. WorldCom will also have the capability to bundle its service and better serve San Diego's high capacity market.

TCG

TCG provides a diverse package of services via a 400-mile network that connects over 200 lit buildings in the San Diego area. TCG entered the local switched market in 3Q96 when it installed a Lucent 5ESS switch in the Sorrento Valley at the Sorrento Towers.

ICG

Although ICG's San Diego network has been operational since 1992, it has only been managed by ICG since the second quarter of 1996 when ICG purchased the facilities from Linkatel Pacific. Currently, the network measures 150-170 route miles and is capable of serving customers in San Diego's central business district and in the suburbs, such as Mission Valley, Chula Vista, Sorrento Valley, La Jolla, and Kearney Mesa. ICG's San Diego network figures prominently into that company's plans for the state, where it now operates networks in the five largest markets. Like in other cities, ICG's backbone operates at OC-48, allowing for excess capacity to serve the area's largest businesses and several interexchange carriers. Furthermore, ICG has partnered with several electric utility providers in the Golden State and has the capacity to expand its local networks very rapidly.

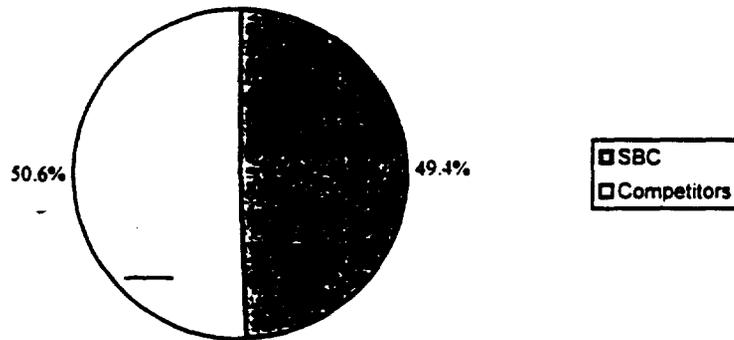
MCI

MCI's San Diego network has been in operation since the middle of 1995 when it began offering facilities-based high capacity services to business customers in the area. Currently, it operates two SONET rings, one in San Diego's central business district and the other in Mission Valley. Together, the rings amount to 20-30 route miles of optical fiber that connects over 35 single and multi-tenant buildings. Like other competitive local exchange carriers in the metro area, MCI operates an OC-48 backbone with virtually limitless capacity to carry local and special access traffic. In San Diego, MCI routes local traffic via a class 5 Siemens EWSD central office switch. Like all of its metropolitan area networks, MCI has built several features into its San Diego facilities to ensure its customers never lose the ability to communicate. Each ring is self-healing with electronic redundancy capable of rerouting traffic in milliseconds. Additionally, MCI has built-in route and central office diversity.

SAN FRANCISCO – COMPETITIVE LANDSCAPE

Overview

San Francisco, SBC's second most competitive metro area, is home to headquarters of several Fortune 500 companies. The greater San Francisco-Oakland-San Jose metropolitan area is the fifth-largest nationwide with more than 6 million people. While this is true, San Francisco alone has a population of just more than 1.5 million people. Job growth stands at 1.5% (from 1996-1997) and San Francisco boasts a strong economy with a diverse business base. Competitors offer diverse portfolios of telephony services and are able to provide local, long distance and data services over SONET-based platforms. In addition, each competitor has an extensive fiber network surrounding the entire bay area. As of 2Q98 the following companies are competing in the San Francisco Bay area: WorldCom, MCI, TCG, GST and ICG.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
San Francisco	49.4%	50.6%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
San Francisco	WorldCom	Fiber	226+	150+
	MCI	Fiber	20	26
	TCG	Fiber	450	Unavailable
	NextLink	Fiber	200	Unavailable
	ICG Telcom	Fiber	Unavailable	Unavailable
	GST	Fiber	130	200

WorldCom

WorldCom has a large presence in the San Francisco Bay Area with 19 miles of fiber in downtown San Francisco and 77 route miles of fiber in Oakland. The spur between the two cities spans the Bay via a Bay Area Rapid Transit (BART) Transbay Tube. Through its merger with MCI, WorldCom will add an additional 20 miles of fiber in downtown San Francisco. WorldCom began offering facilities-based local service to Bay Area customers in July 1996, and the company provides local switched services through a five series Ericsson AXE switch. The network backbone operates at speeds up to OC-48 and is constructed in a self-healing SONET architecture. Currently, the network runs at approximately 30% capacity, according to company representatives. The greater Bay Area network, which consists of an additional 130 route miles, is primarily composed of five different SONET rings operating at OC-48 and over 150 buildings. The Silicon Valley loop services the Cupertino, Santa Clara, San Jose and Sunnyvale communities.

MCI

MCI currently operates a fiber optic network in the San Francisco Bay Area spanning approximately 20 route miles. The company's San Francisco network has been active since 1995. In addition to San Francisco's central business district, MCI operates a small fiber spur servicing business customers in Oakland. Each of MCI's two SONET rings operate at speeds up to OC-48 and have the capacity to be upgraded to OC-192 in the near future. In downtown San Francisco, MCI's network stretches from Clay Street to the north to the China Basin in the south. Additionally, the network extends from Front Street in the east to Van Ness Street in the west. The connection between San Francisco and Oakland is made via the BART (Bay Area Rapid Transit) Transbay tubes connecting the two sides of the bay. Currently, there are over twenty lit buildings in San Francisco and six in Oakland. In the last week of January, MCI began offering local services to business customers in the greater San Francisco area. MCI switches traffic in San Francisco via a class five Siemens switch located downtown.

NextLink

NextLink became a player in the greater San Francisco Bay Area in 1998 when it installed a 200-mile network. Its network serves Fremont, Milpitas, San Jose, Santa Clara, Sunnyvale, Menlo Park, Mountain View and Palo Alto. NextLink has installed a DMS500 switch that is capable of handling local, toll, operator and long distance services.

TCG

TCG received CLEC authority in California in 1996. The company has 450 route miles in the entire Bay Area stretching from downtown San Francisco, east to Oakland, south to San Jose and around the peninsula. The network also extends north to Napa County and Sonoma County. TCG operates a self-healing SONET architecture network consisting of seven SONET rings, and the backbone runs at speed of up to OC-48. TCG is able to offer a full array of dedicated and switched services, routing calls over its Lucent 5ESS switch, which was installed during the fourth quarter 1996.

ICG

ICG currently operates a fiber optic network with an OC-48 ring that serves the entire San Francisco Bay Area. The network was acquired from Bay Area Teleport and has been in operation for almost a decade. Most of ICG's fiber backbone extends through San Francisco, Oakland, and the East Bay. ICG in San Francisco operates a 5ESS switch in downtown San Francisco that has been operational since early 1997. Through its switch, ICG is able to offer a full array of telecommunications services. The company began offering local dialtone services, including Centrex to on-net customers during third quarter 1996. The network was acquired from Bay Area Teleport and has been in operation for almost a decade.

GST

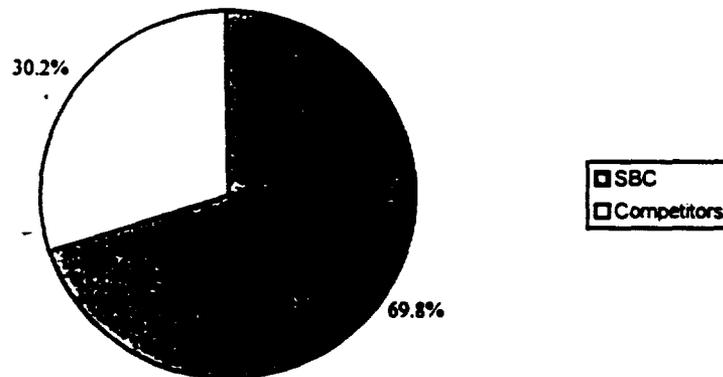
GST has over 130 route mile fiber in the greater San Francisco Bay Area with fiber distribution rings in Oakland, Walnut Creek, San Ramon, Pleasanton and Concord. The GST Bay Area network will also service Berkeley, Fremont, Hayward, Lafayette, Livermore, Vallejo and San Jose. GST is in the process of increasing its fiber presence and buildings in downtown and the East Bay. GST's strategy is to follow the migration patterns of businesses as they move from downtown business districts to expanding suburban areas, such as Walnut Creek. There are over 200 buildings on-net in the greater San Francisco Bay area. GST is currently offering a full range of dedicated and switched service and has a NORTEL DMS 500 switch in San Francisco.

During the third quarter of 1996, GST completed the acquisition of the telephone infrastructure at the Mare Island Naval Shipyard in Vallejo. GST has subsequently linked Mare Island to its existing 130 route mile Bay Area network. The former naval shipyard was converted into a commercial office development and GST began providing local dialtone and long-distance services in November 1996.

SAN JOSE – COMPETITIVE LANDSCAPE

Overview

San Jose, located southeast of San Francisco in Santa Clara County, is considered part of the greater Bay Area, which also includes Oakland. The San Francisco-Oakland-San Jose metropolitan area is the fifth largest nationwide, although San Jose alone has a population of just more than 1.5 million people. San Jose, which witnessed job growth of 4.2% from 1996-1997, has experienced an influx of a large number of high-tech companies. Recently, San Jose has become the center of the Silicon Valley as an increasing number of large businesses have moved to the surrounding areas. Two competitors specifically target the San Jose area – WorldCom and TCG – by extending their networks from San Francisco and Oakland to provide high capacity local, long distance and data services.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
San Jose	69.8%	30.2%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
San Jose	WorldCom	Fiber	200	135
	TCG	Fiber	450	unavailable
	NextLink	Fiber	200	unavailable

WorldCom

WorldCom has 200 route miles of fiber stretching from San Jose to San Mateo in the north, and it began offering facilities-based local service to Bay Area customers in July 1996. In San Jose alone, the company operates a 132-mile network, which connects to its Bay area network and consists of two OC-12 SONET rings. Local and toll traffic are routed via a class 5 Ericsson AXE switch located at WorldCom's downtown San Francisco node. Company representatives report that the network is currently running at 15% capacity. Additionally, WorldCom operates a regional metropolitan area exchange (MAE) hub for many Internet Service Providers (ISPs) in San Jose. WorldCom has more than 135 buildings on-net in San Jose and the following neighboring areas: Brisbane, Burlingame, Campbell, Cupertino, Del Ray, Foster City, Los Altos, Menlo Park, Milpitas, Palo Alto, Redwood City, San Bruno, San Carlos, San Mateo, Santa Clara and Sunnyvale.

TCG

TCG owns and operates a 5ESS switch in San Francisco through which it backhauls traffic from San Jose. The switch has been operational since 4Q96. TCG's network extends through downtown San Jose and its surrounding areas, and consists of 450 route miles throughout the entire Bay area. The network is a self-healing SONET architecture consisting of seven SONET rings. The backbone runs at speed of up to OC-48.

NextLink

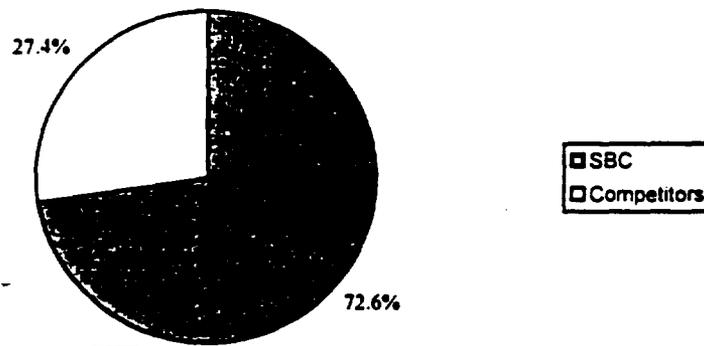
NextLink became a player in the San Jose area when it installed a 200-mile fiber network in 1998 to serve the Bay Area. Its network serves Fremont, Milpitas, San Jose, Santa Clara, Sunnyvale, Menlo Park, Mountain View and Palo Alto. NextLink has installed a DMS500 switch that is capable of handling local, toll, operator and long distance services.

ST. LOUIS – COMPETITIVE LANDSCAPE

Overview

St. Louis is a major river port, rail hub, and financial center. Manufacturing is important to the economy, and St. Louis' highly developed industries include automobiles, aircraft and space technology, metal fabrication, beer, steel-making, chemicals, food processing, and storage and distribution. The population in the city is approximately 350,000 people, with the metropolitan area figure at approximately 2,500,000.

There were three main competitors in the High Capacity market during the second quarter of 1998, TCG, WorldCom and ICI.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
St. Louis	72.6%	27.4%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
St. Louis	TCG	Fiber	300+	100-200
	WorldCom	Fiber	150+	unavailable
	ICI	Fiber	60	unavailable

TCG

TCG has been offering High Capacity services in St. Louis since 1993. TCG was recently acquired by AT&T.

TCG has a Lucent Technologies 5ESS switch, which can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, the switch can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services.

Excluding SBC, TCG operates by far the most extensive network in the greater St. Louis area. It has been in operation for several years and capable of offering local switched services since late in 1996. Currently, TCG's fiber network spans over 300 route miles and connects between 100 and 200 buildings in the city as well as in the suburbs. TCG technical professionals indicate that TCG operates the most robust, reliable network in the greater St. Louis area, with 15 SONET rings running at OC-48. Company representatives estimate the network currently runs at 50% capacity. The backbone is capable of voice and data transmission at speeds up to OC-48, while individual spurs and distribution rings operate more slowly (customer premises generally support DS-3 or OC-3 interfaces). In addition to downtown St. Louis, TCG has installed fiber in Jennings, Overland, Chesterfield, St. Charles, and Creve Coeur. TCG attempts to construct networks that allow it to serve each business-intensive locality in a given metro. This significantly decreases its reliance on the RBOC for resold services or type II connections. At present, nearly 100% of TCG's service is self-provisioned; very little comes through resale. TCG monitors all of its local networks from its network operations center in Staten Island, NY.

WorldCom

WorldCom continues to operate its extensive network in St. Louis. The company acquired Brooks Fiber during the first quarter of 1998, and it recently merged with MCI.

WorldCom became a participant in the St. Louis market in 1995 when it first turned up service along its optical fiber network in the greater metro area. Although the original focus was downtown St. Louis, the network has grown to encompass over 150 route miles spanning the city and the following business-intensive suburbs: Creve Coeur, Westport, St. Charles, and the University of Missouri Research Park. Furthermore, WorldCom has connected over 100 single and multi-tenant buildings to its network via either type I or type II connection. WorldCom began offering local switched services in 1996 following the installation of its class 5 Ericsson AXE C.O. switch in early 1996. The network is monitored constantly at WorldCom's operations center in Oakbrook, IL.

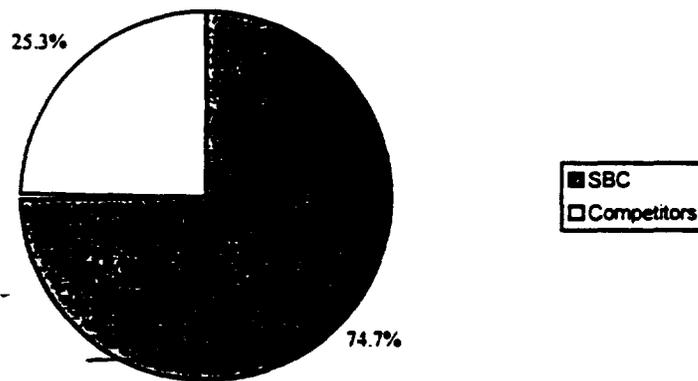
ICI

ICI (Intermedia Communications) has been a player in the St. Louis private line market since the first quarter of 1996 when it turned up service along its fiber network in the city's central business district. Since then, the company has increased the scope of its products and network dramatically. ICI began offering local switched services in July 1997 when it turned up its Nortel DMS-500 central office switch. Since early last year, ICI's network has grown to nearly sixty route miles and connects several single and multi-tenant buildings (the majority of which are downtown). ICI specializes in the construction of very modern networks equipped for large-scale data requirements of today's most communications-intensive buildings. The network backbone is capable of transmitting voice and data at speeds up to OC-48, while the majority of customer premises support standard electrical interfaces. ICI also operates frame and ATM transport facilities in the St. Louis area. ICI's St. Louis network is monitored in Tampa, FL

RENO – COMPETITIVE LANDSCAPE

Overview

Reno is one of the smallest metropolitan areas in SBC's region; it ranks 125th in population nationwide, with approximately 300,000 people. Reno is located in the western part of the state, 110 miles north of Yosemite National Park, and its surrounding towns include Carson City, Sparks and Sun Valley. In addition to the casino industry, Reno is home to several large companies including Comstock Corporation, Itronics and Sierra Pacific Resources. There is some demand for high-capacity services in the metropolitan area and WorldCom is SBC's main competitor.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Reno	74.7%	25.3%

Competitors

WorldCom

Brooks Fiber Properties previously operated WorldCom's Reno network until earlier this year when the two companies merged. WorldCom offers local switched services through its 5ESS switch that has been active for two years. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services. The fiber optic network is 100 route miles and runs throughout the downtown area. WorldCom has 18 buildings on-net.