

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the matter of

Application by BellSouth Corporation,  
BellSouth Telecommunications, Inc., and  
BellSouth Long Distance, Inc., for  
Provision of In-Region, InterLATA  
Services in South Carolina

CC Docket No. 97-208

**DECLARATION OF CARL SHAPIRO  
ON BEHALF OF SPRINT**

**I. Qualifications and Purpose of Testimony**

**A. Qualifications**

I am Carl Shapiro, the Transamerica Professor of Business Strategy and Professor of Business and Economics at the Haas School of Business and the Department of Economics, University of California at Berkeley. I also am a founder of The Tilden Group, an economic consulting company. My qualifications are described in the Appendix, which also includes a copy of my curriculum vitae.

## **B. Purpose of Testimony**

I have been asked by Sprint to provide an economic and public interest analysis of BellSouth's application to provide in-region long-distance service in South Carolina. This is part of a broader project I am conducting for Sprint to develop a framework for assessing Section 271 applications generally, and to evaluate the conditions of local competition in a number of states where such applications are anticipated.

The overall framework I present here for evaluating Section 271 applications is based generally on my experience in antitrust and regulatory economics, along with my understanding of the provisions of the Telecommunications Act of 1996 (the "Act") and my experience in studying telephone markets for some fifteen years. My evaluation of the current conditions in South Carolina is based largely on the information available in this docket from BellSouth and from other interested parties, and on testimony filed in South Carolina Public Service Commission (SCPSC) Docket No. 97-101-C.

## **II. Summary of Testimony**

My testimony covers two broad areas. First, I offer a general economic framework for evaluating Section 271 applications, including BellSouth's application to provide in-region interLATA services in South Carolina. My hope is that the Federal Communications Commission ("FCC" or the "Commission") will find this framework useful in evaluating this and other Section 271 applications according to the public interest standard in the Act. Second, drawing on BellSouth's application and the filings of other interested parties, I apply my framework to South Carolina. In particular, I evaluate the current state of local exchange interconnection and local exchange competition in South Carolina.

### **A. Economic Framework**

In the general part of my analysis that presents an economic framework for assessing Section 271 applications, I conclude that interconnection agreements must be demonstrated to be working in practice on a commercial scale before checklist compliance

can be regarded as economically meaningful, and in order to meet the public interest standard for approving Section 271 applications under Track A.

While Track B can be appropriate if competitive local exchange carriers (CLECs) truly are not attempting to interconnect, the public interest will not be served if Track B can be used to circumvent the "working in practice on a commercial scale" standard just articulated for Track A. Given the significant harm to local competition that predictably will occur if 271 approval is prematurely granted, the Bell Operating Company (BOC) has a considerable burden under Track B to provide convincing evidence that barriers to interconnection have indeed been eliminated. The fact that American Communications Services Inc. (ACSI), which has no strategic motive to keep BellSouth out of long distance, has identified problems with interconnection with BellSouth, suggests that these barriers remain real.

There is widespread agreement that the public interest will be served if states and the FCC take advantage of the historic opportunity provided by the Act to ensure that local telephone markets are opened up to competition. Since these markets are currently monopolized, economics tells us that introducing competition into them offers potentially large social gains. To open these markets will require ongoing, extensive, and detailed cooperation from incumbent local exchange carriers (ILECs). No monopolist lightly relinquishes its dominant position. Recognizing this, Congress provided a powerful incentive for Bell Operating Company cooperation by providing conditions necessary for BOCs to enter interLATA markets.

It would be a mistake to relinquish the Section 271 lever until local markets are demonstrably open. If Section 271 authorization is granted before we are confident that the required BOC cooperation has indeed been forthcoming and will continue, the strong incentives for BOC cooperation created by the Section 271 process will be lost, and the emergence of local competition will be undermined. This situation would be difficult to rectify, since Section 271 approval would be virtually impossible to reverse. On the other hand, if Section 271 approval is deferred until interconnection has been proven to work, such approval can then be granted quickly once local competition is reliably enabled.

Thus, uncertainty favors erring on the side of caution and withholding approval until meaningful interconnection has been clearly demonstrated.

Premature approval of Section 271 applications is especially dangerous since competitive local exchange carriers are so reliant on BOCs to gain even a foothold in local markets, and since the required cooperation is so multifaceted and complex. Because of these complexities, regulatory oversight will necessarily be highly imperfect, especially until procedures have been ironed out and interconnection has been proven to work in practice. To approve BellSouth's South Carolina Section 271 application before the highly intricate and complex interconnection relationships between BellSouth and CLECs have been demonstrated to work runs the risk of prematurely eliminating the major incentive for BellSouth to cooperate with its would-be rivals.

#### **B. South Carolina Application**

Applying these principles to BellSouth's South Carolina application shows clearly that approval of this application by the Commission under Track A would be unwarranted. The record shows clearly that local exchange competition in South Carolina remains a prospect, not a reality. The Section 271 authorization process should be used to help turn that prospect into reality. Given the *de minimis* state of local competition in South Carolina, in-region long-distance authorization in South Carolina is not in the public interest absent a clear showing that entry barriers into local exchange markets relating to interconnection with BellSouth truly have been eliminated.

Detailing the specific interconnection items in dispute, and evaluating the extent to which BellSouth's shortcomings have contributed to the disputes, is beyond the scope of my testimony, but the record indicates that important interconnection issues, both technical and economic, remain unresolved. Even with the best of intentions by BellSouth, the fact remains that BellSouth's economic incentives are to protect its monopoly, not to enable local competition. Since the conditions of local competition in South Carolina are so new and untested by actual commercial use, prudence favors deferring in-region long-distance authorization for BellSouth until the Commission can

assert with confidence that local entry through a variety of business strategies has truly been enabled through BellSouth's interconnection provisions.

I appreciate that BellSouth is arguing that it has indeed opened its local markets to competition, and should not be kept out of long-distance markets merely because CLECs are slow to enter. If conditions were truly and reliably in place for local competition to thrive, and independent business decisions of would-be CLECs alone were delaying that competition, Track B approval would indeed serve the public interest. I cannot conclude based on the record that South Carolina today fits this description. As I discuss below, important aspects of interconnection do not yet appear to be reliably in place in South Carolina. BellSouth suggests that the lack of entry into local exchange markets in South Carolina solely reflects a lack of interest in these markets by CLECs.<sup>1</sup> However, it makes little economic sense for Sprint and other CLECs to invest heavily to serve the South Carolina market, knowing that the necessary interconnection is not yet available.

BellSouth further argues that potential local competitors are tailoring their entry efforts to "keep the Bell companies out of long distance," and it encourages this Commission to "break the logjam by authorizing interLATA competition under Track B." (BellSouth Brief at p. iii) Given the problems experienced by Sprint and others interconnecting with BellSouth in other BellSouth states, I do not see how BellSouth can credibly claim that such strategic concerns alone are driving entry decisions in South Carolina. Furthermore, the experiences of non-IXC CLECs, such as ACSI, are quite informative in this regard, as they have no economic incentive to keep BellSouth out of the long distance market.

I am also concerned that granting BellSouth's request at this time would not only remove much of the pressure on BellSouth to truly cooperate and open up its local exchange markets, but would further send a signal to other BOCs that they can gain in-

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<sup>1</sup> Brief in Support of Application by BellSouth for Provision of In-Region InterLATA Services in South Carolina, Before the Federal Communications Commission, September 30, 1997, ("BellSouth Brief") page 14-15.

region long-distance authority without truly opening up their local markets to competition. This would be contrary to the public interest.

### **III. Economic Objectives in Section 271 Applications: General Principles**

There are three major economic and policy objectives that must be balanced in evaluating BOC Section 271 applications to offer in-region long-distance service. Ultimately, determining whether in-region interLATA authorization for BellSouth would be consistent with the public interest, convenience, and necessity turns on the impact of authorization in these three areas. These factors are: (1) expansion of consumer choice in local markets; (2) increasing competition in interLATA markets; and (3) leveling the playing field as markets merge.

#### **A. Opening Local Exchange Markets to Competition**

My testimony focuses on the first factor, namely the impact on local exchange competition in South Carolina of approving or denying BellSouth's application. The 1996 Telecommunications Act provides an historic chance to open up local exchange markets, which are the most significant remaining bottleneck monopolies in the telecommunications sector. If our experience in long-distance markets is any guide, the introduction of competition into local exchange markets will generate substantial consumer benefits in the form of new services and lower prices, once a variety of thorny interconnection issues are worked out.

Introducing competition into local exchange services will require the cooperation of the ILECs. This cooperation is unlikely to be voluntary; no monopolist, regulated or not, is keen to relinquish its dominant position. Furthermore, direct regulation of BellSouth's conduct in and of itself is a highly imperfect means of ensuring viable local competition — there is too much scope for BellSouth to get around the spirit if not the letter of the interconnection rules, and to impose its own interpretation of its interconnection duties. This danger is greatest before the many aspects of interconnection are tested in practice and understood by competitive local exchange carriers and regulators alike.

So long as Section 271 authorization remains pending, BellSouth has incentives to fix posthaste problems with CLECs; once Section 271 authorization is granted, BellSouth will have fewer incentives to quickly resolve disputes over the myriad details of interconnection, although CLECs will remain heavily dependent upon BellSouth. This highly asymmetric situation would not be conducive to resolving the many interconnection issues that are vital to making local exchange competition a reality.

The implication of this analysis is that the path to genuine local competition will be far smoother if BellSouth, and the other BOCs, are given incentives to partially offset their natural economic incentives to protect their monopoly positions and to cooperate in making local competition truly possible. By insisting, as a condition for entry into in-region interexchange service, that BellSouth demonstrate that it has truly put in place the conditions necessary for local competition to flourish, the Section 271 process can be used to induce cooperation. This *quid pro quo* is central to the development of local exchange competition.

There is some specific evidence confirming the importance of this incentive structure. It is my understanding that local competition is no further advanced in local service areas served by Southern New England Telecommunications Corporation (SNET) and by GTE than in the BOC service areas generally.<sup>2</sup> Yet BellSouth would have us believe that 271 relief will speed local exchange competition in South Carolina. (BellSouth Brief at p. 102-103) The experiences of SNET and GTE provide scant evidence to support such a view.

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<sup>2</sup> There is admittedly inconclusive evidence that unbundled network elements (UNEs) are considerably more expensive in GTE's and SNET's service areas. The average loop price in GTE's service areas, at \$18.92, is the highest average loop price among the major LECs and, on average, is almost 40% higher than the FCC proxy rates in those regions. SNET's loop price is over 20% higher than the FCC proxy rate for Connecticut. See "The Status of Agreements Between the Major LECs and CLECs - Update," by Kristin Burns and Anna-Maria Kovacs, Janney Montgomery Scott (JMS), May 23, 1997.

## **B. Impact on Competition in Long-Distance Markets**

Long-distance entry by BellSouth is not just a reward for providing meaningful interconnection with local rivals; it has direct implications for long-distance markets. If BellSouth can be prevented from misusing its bottleneck local monopoly to disadvantage its long-distance rivals, then permitting BellSouth to enter the long-distance market will render that market more competitive. One reason to insist that local competition has truly been enabled before granting Section 271 authorization is to reduce the dangers of such misuse.

In any overall balancing of impacts on local and long-distance markets, it is important to remember that the U.S. long-distance marketplace is currently far more competitive than are local exchange markets served by BellSouth. On this basis, the incremental benefits of entry into long distance are very likely to be smaller than the corresponding benefits from entry into the local exchange. This is especially so given that local access serves as an input into the provision of long-distance service; the benefits from increased competition and possible technological innovations in local exchange services can be expected to flow through, in part, to long-distance markets.

Three considerations may limit any benefits to consumers in long-distance markets from BellSouth's entry into those markets. First, there is some danger that BellSouth will use its bottleneck local monopoly to reduce competition in long distance. Second, the benefits from adding another competitor to the long-distance market are muted in comparison with adding a competitor to the monopolized local market. Third, to the extent that BellSouth will be a reseller of long-distance services rather than a facilities-based competitor, its impact on long-distance markets is less pronounced.

I have reviewed the testimony put forward by Mr. Raimondi of WEFA regarding the predicted benefits to South Carolina consumers of granting BellSouth's application. As with any forecasting model, the results are no better than the assumptions going into the model. Mr. Raimondi simply *assumes* that long-distance service prices fall 25% below the baseline forecast by 2001 due to BellSouth's entry into long-distance markets, that BellSouth's entry will cause productivity gains and quality improvements of 2% per year,

and that it would increase the labor force participation rate by 0.5% over the next ten years. Obviously, these types of changes would be beneficial to consumers and the State of South Carolina generally. The key question that the SCPSC, and the FCC, will have to address is whether *immediate* approval is better than waiting until BellSouth has done more to enable local exchange competition. Even assuming that the Commission concludes that BellSouth's entry into long distance markets will generate some benefits, those benefits must be balanced against the potential for harm from a reduction in competition in local exchange (and access) markets. Mr. Raimondi's analysis is at best incomplete in failing to address this key tradeoff.

In fact, I suspect that Mr. Raimondi's own model could easily be used to strengthen my conclusions: if BellSouth is not compelled to truly open its local exchange markets to competition, the South Carolina economy could suffer substantial harm, relative to forcing open those markets. Furthermore, mistaken approval of a Section 271 application by BellSouth could delay local competition for years to come, while denial of an otherwise proper application that lacks sufficient documentation to prove local exchange markets are open to competition will delay the benefits Mr. Raimondi anticipates by only a matter of months, until another application can be filed and approved. Mr. Raimondi stated before the SCPSC that the WEFA study does not attempt to evaluate whether benefits to the long distance market will be foregone entirely or simply delayed if BellSouth does not enter the interLATA market immediately. However, he does acknowledge that, while there is a "time value of money", if BellSouth enters three months later than the WEFA study assumes, "then the benefits will be put off for that three month period." (Raimondi, App. C, Vol. 5, at p. 71)

### **C. Bundling Parity**

There appears to be industry consensus that many consumers will value the ability to purchase a wide range of services - such as local, long distance, and wireless - from a

single vendor.<sup>3</sup> There seems little doubt that many industry participants are planning to market bundles of services. I anticipate that the marketing of bundles of telecommunications services to high-volume users will be especially intense.

As we look ahead to widespread competition and converging markets, firms that are unable to offer key pieces of attractive bundles will be at a competitive disadvantage. Therefore, parity in the ability to bundle services will be important to full competition in the future.

Other things being equal, the public interest militates against giving one firm or a group of firms a significant head start in offering bundled services, especially if those firms can rapidly gain market share by marketing the bundled services. The recent experiences of SNET and GTE demonstrate that entry into interLATA markets by ILECs can be achieved swiftly. In contrast, significant competition in local exchange markets remains unproven, in South Carolina and elsewhere. This view is supported in the testimony of Alfred Kahn and Timothy Tardiff, who state that "...whereas the rules for entry by competitors into the local exchange market are still in the process of being hammered out, the arrangements for fair access by the long distance carriers to the facilities of the BOCs have been in place *for upwards of a decade.*"<sup>4</sup>

My public interest analysis is consistent with the public interest objective of promoting bundling parity. If the Commission concludes that BellSouth can rapidly and reliably enter in-region long-distance markets once authorized to do so, and if the Commission concludes that there is far greater uncertainty about the ability of CLECs to effectively offer local service, at least until a myriad of details involving interconnection are resolved, the goal of a "level playing field" as markets converge mandates denying in-region authorization until local competition has truly been enabled, and then promptly

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<sup>3</sup> See BellSouth Brief at 80-82, and the Affidavit of Richard J. Gilbert.

<sup>4</sup> Affidavit of Alfred E. Kahn and Timothy J. Tardiff, Application of SBC Communications Inc. for Provision of In-Region InterLATA Services in Oklahoma, Before the Federal Communications Commission, CC Docket No. 97-121, p. 27 (emphasis in original).

granting such authorization (assuming the other conditions of the Act are also met by the application).

Full bundling parity will only be achieved once access charge reform is completed. So long as access charges remain above incremental costs, BellSouth will have an artificial cost advantage over other interexchange carriers in serving incremental interexchange business. In seeking business that adds to total long-distance calling, BellSouth will account for the true incremental cost of providing access for an additional minute of long-distance calling. In contrast, all other carriers seeking that same business must include in their costs the higher access charges they owe to BellSouth when they provide an additional long-distance minute. This logic is not altered by structural separation and imputation requirements.

#### **D. Uncertainty Favors Delay**

In balancing the three economic objectives I described earlier, it is important to remember that uncertainty favors deferring Section 271 authority until we can be confident that local competition has truly been enabled.

Once approval has been granted, it will be nearly impossible to rescind as a practical matter. On the other hand, if approval is denied, the BOC can put in another application as soon as conditions have changed to warrant approval knowing it will receive a response within 90 days. The Commission should *not* regard its decision in response to Section 271 applications such as BellSouth's current application in South Carolina as a once-and-for-all choice of whether to authorize BellSouth to provide in-region long-distance services. Rather, the Commission should ask whether the public interest is better served by delaying approval until additional conditions are met.

#### **IV. Local Exchange Competition: General Principles**

I turn now to apply the economic and public interest framework described above to BellSouth's South Carolina application, focusing largely on my first factor - the goal of opening local exchange markets to competition.

The key question in my analysis is this: Has BellSouth taken the necessary steps to enable genuine local exchange competition to flourish? If not, approval of BellSouth's application will predictably and adversely affect progress towards true local exchange competition, both in South Carolina and elsewhere, contrary to the public interest.

In assessing current and prospective local exchange competition, two distinctions are crucial. First, one must distinguish *actual* competition from *potential* competition. Second, one must distinguish CLECs based on their entry strategies and based on their assets: facilities-based competition is qualitatively different from competition based on leased elements, which in turn differs from pure resale competition. Applying this tripartite division is complicated by the fact that given CLECs can and will adopt different approaches in providing services to local exchange customers, both across geographic regions and across time.

#### **A. Actual vs. Potential Competition**

By far the strongest proof of the feasibility of local exchange competition is the actual presence of significant facilities-based local competitors, *i.e.*, actual competition over independent facilities. The more widespread is local competition, the more it takes place over facilities outside the control of the ILEC, and the greater the number of actual CLECs, the more confident we can be that conditions are truly conducive to entry and expansion by CLECs.

Actual competition can in principle be measured through market shares, capacity levels, and the like. Having said this, I am keenly aware that the Act does not require any minimum market share for CLECs before in-region authorization can be granted. Indeed, to do so would mute the Bell Company's incentives to compete aggressively to retain market share in the face of new entry.

In the light of this fact, and given the severely limited state of actual local competition in South Carolina today, my analysis necessarily focuses on the prospects for genuine local competition in the near future. In significant part, this involves an assessment of the remaining entry barriers into local exchange markets in South Carolina,

and the extent to which BellSouth can affect the height of the remaining barriers. In economic terms, I ask whether the barriers to entry into local markets in South Carolina, or at least those barriers associated with interconnection with BellSouth, have truly been substantially eliminated. Based on the available record, I cannot conclude that these barriers have indeed been eliminated.

#### **B. The Importance of Facilities-Based Competition**

Whether looking at actual or potential competition in local exchange markets, facilities-based competition is especially important. CLECs with their own facilities have made substantial sunk investments to serve the market, and are thus committed to an ongoing market presence. Facilities-based competition also is superior to resale competition because it represents far greater competitor independence of the ILEC. Ultimately, for regulation to wither away and give way to competition will require the presence of strong, facilities-based competitors to BellSouth. Investments in alternative local loop facilities would be especially significant, as these facilities represent a lasting commitment to the local market. Congress expected these investments would be made, and repeatedly gave the example of cable facilities.

Facilities-based competitors also represent alternative sources of access services. Resellers do not serve this function. Widespread competition in the provision of access will help ensure that interexchange markets remain competitive after BOC entry.

Competition based on the leasing of network elements is not nearly as significant as true facilities-based competition. A CLEC who is leasing elements from the incumbent local exchange carrier clearly remains heavily reliant on the incumbent carrier. Additionally, the necessary sunk investments, and thus the CLEC's commitment to the market associated with leasing network elements, are far lower than those required of a CLEC building its own loop plant.

Nevertheless, leased elements are preferable to resale in terms of offering competition to the ILEC. First, CLECs who are leasing network elements can offer competition along a number of dimensions that resellers cannot. Second, resale rates are

not based on the underlying costs of the facilities, so resale competition does relatively little to drive retail rates down towards cost.

I would hope that all parties can agree that resale, while offering valuable competition over some aspects of service (such as marketing, billing, or customer service), is inherently limited and less meaningful than the provision of service through the leasing of unbundled network elements. Professors Harris and Teece, in their affidavit on behalf of Ameritech Michigan, appear to agree with this, stating that "for purposes of competitive assessment, self-supplied facilities and leased unbundled network elements...are clearly distinct from resale of services over the incumbent's facilities."<sup>5</sup> Nonetheless, competition through the use of unbundled network elements is not a substitute for facilities-based competition.

For the purposes of competitive assessment, a key issue is whether one firm is dependent upon its *competitors* for key inputs. Clearly, CLECs who are leasing elements from BellSouth remain heavily dependent upon BellSouth to provide service, contractual and regulatory protections notwithstanding. The Justice Department routinely recognizes in merger analysis that firms dependent upon their rivals for key inputs, *e.g.*, through a supply agreement designed to fix an anticompetitive problem associated with an acquisition, typically are not as strong a competitive force as those who are truly independent. Competition from firms who rely upon a rival for a key input, and whose basic ability to offer services is dependent upon contractual rights imposed unwillingly on a direct rival, are generally not "economically equivalent" to fully independent rivals.

#### **V. Current Local Competition in South Carolina is *De Minimis***

As I recognized above, significant actual local competition would be the most convincing demonstration that local markets are indeed open. Such competition clearly

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<sup>5</sup> Joint Affidavit of Robert G. Harris and David J. Teece On Behalf of Ameritech Michigan, in the matter of Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Service in Michigan, Before the Federal Communications Commission, CC Docket No. 97-137, p. 15.

has not yet arrived in South Carolina, and I fear it will be delayed by premature Section 271 approval.

By conventional market share measures, BellSouth maintains a dominant monopoly position in the provision of local exchange service in South Carolina. Although BellSouth does not appear to dispute this statement, it is easy to lose sight of this simple fact. BellSouth's Brief to this Commission in support of its 271 application devotes attention to competitors' installed fiber facilities, but these discussions focus on the potential for these facilities to be used to offer local exchange service. (BellSouth Brief at p. 104)

The three CLECs in South Carolina that BellSouth characterizes as "facilities-based," ACSI, ITC DeltaCom and Time Warner, collectively and individually serve a very limited geographic region within South Carolina. According to BellSouth, ACSI maintains fiber networks in the business centers of four South Carolina cities, and ITC DeltaCom's South Carolina fiber network comprises some portion of its 2100-mile network in the BellSouth region. (Wright Affidavit at p. 7, 10) Time Warner's network serves only Columbia. Although these facilities should not be ignored, they do not comprise a level of sunk investment that establishes the presence of meaningful competitive entry.

## **VI. Assessing Potential Local Competition in South Carolina**

BellSouth's application relies heavily on the proposition that local exchange markets in South Carolina are currently open to competition, irrespective of the minimal actual competition observed. BellSouth states that "The local exchange in South Carolina is open to competitors." (BellSouth Brief at p. iv) However, this proposition seems inconsistent with Sprint's experience to date in other BellSouth states in which BellSouth

reportedly employs the same processes and systems in support of unbundled elements as in South Carolina.<sup>6</sup>

**A. General Principles: Is Competition Enabled?**

One important indicator of imminent competition in local exchange markets is the expenditure of significant non-recoverable (sunk) investments by CLECs. Such investments constitute a vote of confidence that competition is feasible, by those with a direct financial stake in making competition a reality. Having acknowledged the economic importance of sunk investments, I must emphasize that the presence of some sunk investments by some carriers does not itself suffice to demonstrate that local markets have been opened to competition, or that these investments will lead to significant competition, for two reasons.

First, it would be contrary to the public interest for these investments to be stranded or devalued by problems implementing interconnection with BellSouth. Any sunk investments that have been made will remain at risk until it has been proven that the entrants can indeed rely on BellSouth to provide critical inputs in a non-discriminatory manner. Such problems are less likely to arise if BellSouth is permitted to enter long-distance markets only after the required aspects of interconnection have been proven to work in practice on a commercial scale. By deferring Section 271 authorization until BellSouth has demonstrated its cooperation, local competition is enhanced, entrants' investments are partially protected from exclusionary tactics by BellSouth, and further investments by CLECs are encouraged.

Second, not all sunk expenditures to provide local telephone services are specific to those services. Investments in facilities that also jointly provide access services and exchange services, such as those of ACSI, are less meaningful in inferring that entry barriers into local exchange markets have been lowered than investments in fully specific

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<sup>6</sup> See, for example, the Affidavit of Melissa Cloz on behalf of Sprint in this proceeding and the BellSouth Brief at p. 35.

assets. In other words, when evaluating the significance of sunk investments for assessing market participants' beliefs about the feasibility of local exchange competition, it is important to account for the entire range of services provided by those investments. Due to the presence of economies of scope in the provision of access and exchange services, some investments in local facilities may be recoverable through provision of access services, and not reliant on the full range of interconnection necessary to a CLEC. Indeed, much of the investment in downtown fiber networks, in South Carolina and nationally, has been undertaken to provide access services, not exchange services.

In local exchange markets, barriers to growth may be at least as important as barriers to entry. By "barriers to growth," sometimes referred to in the literature as "barriers to mobility," I mean market conditions that impede the ability of market participants to compete effectively and add new customers or services. After all, even if a firm has made some investments in the local exchange market and entered that market, its ability to compete and attract customers may still be limited by BellSouth's conduct, *e.g.*, if BellSouth provides the firm with inferior repair and maintenance services or if BellSouth has limited ability to process new orders or to provide billing information.

Due to the complexity and importance of interconnecting in various ways with the ILEC, it is very difficult to be confident that entry truly has been enabled in South Carolina until interconnection has been shown to work in practice on a commercial scale, encompassing a range of interconnection issues that are meaningful to CLECs with diverse entry strategies. In demonstrating that interconnection in its myriad details really works, an interconnection agreement with a CLEC covering a large geographic area is more convincing and more meaningful than an agreement with a highly localized CLEC.

In order for entry to be feasible, and for CLECs to be willing to make the additional necessary investments to provide genuine competition, potential entrants need to be confident that workable systems are in place on a commercially viable scale. Thus, checklist compliance has to mean more than having something on paper. To be economically meaningful, the details must be worked out in practice and agreements must be fully implemented. There are a great many details that really matter for the commercial

viability of CLECs. For many of the terms of interconnection, the interests of BellSouth and CLECs are directly opposed. All of this implies that it is highly desirable to provide BellSouth with ongoing incentives to cooperate, in the form of withholding the long-distance entry "prize," until such cooperation has been definitely elicited and shown to truly enable entry.

Interconnection arrangements or offers that are ambiguous, inadequate, or incomplete for CLECs' needs will hinder local competition. Absent reliable, working interconnection arrangements, CLECs will be wary of making the substantial sunk investments necessary to participate fully in local markets, and the investments CLECs do make will remain at risk. This is certainly true for facilities investments, which are largely non-recoverable in the event that interconnection problems arise, and thus will depreciate in value if the terms or conditions of interconnection fail to achieve operational parity between CLECs and the ILEC.

Given the competitive pressure in the industry to offer broader bundles of telecommunications services to customers, a lack of significant entry into local exchange markets, *e.g.*, by major interexchange carriers, suggests that the terms and conditions of interconnection are not yet conducive to that entry. ACSI, despite fiber networks already in place, has not yet entered the South Carolina market, lending further support to this conclusion.

## **B. Entry Barriers into Local Exchange Markets in South Carolina**

### *1. Evidence of Sunk Investments*

Investments that are sunk and specific to the provision of local exchange service provide some indication of future competition. How significant are such investments in South Carolina? The record is unclear on this question. Certainly there are some facilities in South Carolina, such as the multi-city networks of ACSI and ITC DeltaCom, that could be used for local exchange services. This is a start, but hardly an indication that widespread or significant competition is imminent. Time Warner's network serves only Columbia, and its intentions to offer local exchange services remain very uncertain. As of

September 1997, Time Warner had neither requested CLEC status in South Carolina nor utilized any of the interconnection services included in its agreement with BellSouth. (Wright Affidavit at p. 15) According to BellSouth, ACSI, for its part, has stated that it plans to use its network solely to provide access services, and is currently relying on resale to provide business local exchange service.<sup>7</sup> (Wright Affidavit at p. 9) ITC DeltaCom's plans are uncertain. (BellSouth Brief at p. 14, 15-16)

## 2. *Risks Associated with Local Entry Generally*

Until CLECs can be confident that they will obtain interconnection on commercially acceptable terms that will allow them to achieve operational parity with BellSouth, entrants surely attribute considerable interconnection risk to any sunk investments they might contemplate. This "risk premium" can serve only to delay or deter entry and the advent of competition. This is especially true for a company like Sprint, with a valuable brand name that could be put at risk if service quality is degraded due to interconnection problems. I would expect Sprint and others to be extremely wary of offering service, and undertaking the concomitant marketing rollout expenses, under their brand names unless and until they can ensure service quality - from the pre-ordering of services to the provisioning of repair - on par with BellSouth. To do otherwise would put their brand names at risk in South Carolina, and potentially place them at a major disadvantage for years to come in selling bundles of services in competition with BellSouth. If Sprint's brand name is tarnished as a result of premature entry into local service, its accumulated goodwill in long-distance could likewise be jeopardized. As noted below, for a number of aspects of interconnection, it is currently impossible for CLECs to ensure that they are receiving competitive and operating parity with BellSouth itself.

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<sup>7</sup> However, ACSI indicated that it intends to begin offering facilities-based local service in early 1998. (Testimony of James C. Falvey, Vice President of Regulatory Affairs for American Communications Services, Inc., SCPSC Docket No. 97-101-C Testimony Volume 7 at 355 and 360. "I think early next year you'll see us here.")

### 3. *Unresolved Interconnection Issues in South Carolina*

It is imperative that interconnection issues be resolved before concluding that competition is enabled; when it comes to interconnection, the devil truly is in the details. The myriad aspects of interconnection cannot be left for later, because they are so crucial to CLECs' abilities to compete effectively. Many aspects of interconnection that remain unresolved have significant implications for either CLECs' costs or the quality of their service, and thus for the attractiveness of entry into local markets.

If CLECs were providing services on a commercial scale in a variety of settings in South Carolina, we could be confident that interconnection was working (although the need for ongoing regulation would not soon end). In fact, however, CLECs collectively provide only resold local services to a mere handful of business customers in South Carolina, and the interconnection agreements already negotiated are not deemed by the CLECs to be satisfactorily addressing all the relevant competitive issues.

Under these circumstances, and given the attractiveness of the South Carolina marketplace to a number of carriers, including the larger interexchange carriers seeking to offer bundles of telecommunications services, I believe there should be a presumption that the terms and conditions of interconnection either (a) fail to provide parity between BellSouth and CLECs, or (b) simply have not been available long enough to be reliably tested and used by CLECs. In the former case interconnection is either not yet fully implemented or is discriminatory, and Section 271 approval is inappropriate. In the latter case, especially given the reported problems with interconnection in other BellSouth states, the public interest is still served by waiting until interconnection is confidently enabled before granting BellSouth in-region long-distance authority.

When significant aspects of interconnection remain unresolved, CLECs' abilities to compete remain significantly under the control of the BOC. If further cooperation from the BOC is needed to make actual or potential local exchange competition economically meaningful, approval of the BOC's Section 271 application is premature and will diminish consumer welfare. I must respectfully disagree with the SCPSC in their assertion that approval of BellSouth's 271 application will facilitate rather than undermine BellSouth's

cooperation in making interconnection work in South Carolina. (SCPSC Compliance Order at p. 64-65) The SCPSC's argument is based on a judgment that BellSouth will refrain from delaying or disrupting the interconnection process for fear of having its long-distance authority revoked. Given the complex nature of interconnection arrangements, the inherent difficulty in assigning sole responsibility for specific problems to BellSouth, and the serious practical difficulties associated with revoking BellSouth's long-distance authority, I simply do not believe that this threat will carry much weight in disciplining BellSouth's behavior regarding interconnection.

Nor can the FCC, or the SCPSC, simply compel BellSouth to meet reasonable interconnection terms in the future. Regulation is inevitably highly imperfect, and entrants will be reluctant to rely on future, uncertain regulatory protections when making substantial sunk investments. There is much to be said for "stress testing" interconnection terms and conditions in practice before concluding that an interconnection agreement can work in practice and that interconnection is "fully implemented." Again I differ with the SCPSC, which has taken the position that quality problems with BellSouth's interconnection are irrelevant to checklist compliance. (SCPSC Compliance Order at p. 59-60) Ultimately, since regulation is necessarily imperfect, the public interest is served by augmenting the usual set of regulatory tools by using the 271 process to help induce BellSouth and other BOCs to offer workable, high-quality interconnection.

The experiences of Sprint and other would-be CLECs in other BellSouth states confirm how difficult it is to make interconnection really work in practice. Specific aspects of interconnection remain to be fully implemented in all of BellSouth's service areas, including South Carolina. Some difficulties are inevitable; interconnection is highly complex, and only now are BellSouth and CLECs hammering out the details. But that is precisely the point. There is great value in giving incentives to BellSouth, the incumbent monopolist, to cooperate to resolve these disputes and clarify remaining ambiguities.

Without intending to offer an exhaustive or necessarily representative list of outstanding interconnection issues in BellSouth states, I list a number of them here to illustrate that they are both unresolved and truly critical for CLECs to enter and grow.

- Several CLECs have complained that BellSouth's operational support systems (OSS) are simply not adequate. According to public comments by AT&T, the capacity of BellSouth's LENS system is insufficient. MCI has expressed frustration with the inability of CLEC customer service representatives to make changes if mistakes are made in a LENS order; the entire order must be retyped. UNE orders must also be at least partially manually processed. These problems with BellSouth's OSS inhibit CLECs' ability to offer timely, high quality service to their customers. BellSouth's stated intention to double LENS' capacity does not alleviate concerns that such capacity will fail to meet CLECs' needs, and does nothing to address other deficiencies in the system.<sup>8</sup>
- ACSI's firsthand experience as a facilities-based provider in the BellSouth states of Georgia, Alabama and Kentucky indicate that BellSouth's OSS are cumbersome and limiting to CLECs. Only initial ordering of unbundled loops is currently available, with other processes being completed in a mix of fax and manual processes. According to ACSI, these deficiencies in BellSouth's OSS have "the ability to greatly affect ACSI's ability to compete with BellSouth in the local markets....Based on ACSI's experience in Georgia, the current electronic fax/manual processes are extremely cumbersome." ACSI also expresses the concern, discussed above, that BellSouth's electronic interfaces will not handle sufficient volumes to support CLEC growth in local markets. (Falvey at App. C, Vol. 7, p. 341)
- In Georgia, the Public Service Commission stated that "nondiscriminatory access to [OSS] is an integral part of providing access to unbundled network elements, as well as making services available for resale...the record shows that BellSouth has not yet demonstrated that it is able to fulfill these important aspects of the Statement's provisions on a nondiscriminatory basis that places CLECs at parity with BellSouth." As Sprint witness Closz testified before the SCPSC, BellSouth provides the same support systems across its nine state region. (Closz, App. C, Vol. 6, at p. 89-90) It is my understanding that, because BellSouth offers the same OSS

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<sup>8</sup> "With \$500 Million OSS in Hand, BellSouth Gets Ready to Apply for Long Distance," *Communications Today*, September 12, 1997. According to this article, BellSouth concedes that its OSS does not meet the FCC requirement that its interfaces require little or no human intervention. See also Prefiled Direct Testimony of Riley M. Murphy, as adopted by James C. Falvey, Before the South Carolina Public Service Commission, Appendix C, Volume 7, page 341.

across its service area, problems with BellSouth OSS in Georgia are likely to be present in South Carolina as well.

- Sprint has already experienced problems with BellSouth's implementation of its customer activation process in Florida. According to Sprint, BellSouth "regularly misses its commitment to notify [Sprint] within 48 hours of an order's receipt if there is a problem" with the order. The result is that Sprint misses due date commitments to its customers; in several instances BellSouth has failed to cancel disconnect orders and customers have mistakenly been taken out of service. These problems have extensive negative impact on customers and on Sprint's reputation. (*Id.*, at p. 91) Again, because BellSouth uses the same processes with respect to checklist items throughout its 9 states,<sup>9</sup> Sprint's experience in Florida is relevant to this proceeding.
- Sprint is likewise concerned about how electronic interfaces between itself and BellSouth will operate to provide Sprint with reasonable, timely and economical access to customer records and billing data. Such concerns appear legitimate given that Sprint has experienced some difficulties and delays in tests of billing for local service in other BellSouth states. (*Id.*, at p. 30)
- ACSI, which has not yet implemented facilities-based local exchange service in South Carolina, reports numerous problems working with BellSouth in the states where it is currently providing facilities-based service. According to ACSI witness Falvey, testifying before the SCPSC, ACSI has "experienced considerable difficulty in implementing the ACSI Interconnection Agreement in Georgia, Alabama, and Kentucky, as well as other BellSouth states." (Falvey at App. C, Vol. 7, p. 334) ACSI cites repeated difficulty in obtaining unbundled loops on a timely basis, severe service disruptions to customers as a result of BellSouth's inability to cut over unbundled loops, and failure of number portability systems resulting in service outages. The problems obtaining unbundled loops have been severe enough to induce ACSI to file complaints against BellSouth before both the Georgia Public Service Commission and this Commission. (*Id.*, at p. 334)
- ACSI also depicts BellSouth as unwilling to rectify its problems in providing timely loop installations: "The basic problem is that

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<sup>9</sup> BellSouth Brief at 35.

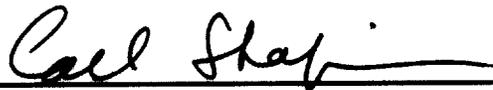
BellSouth still cannot - or will not - install loops for ACSI at the same intervals as they do for their own retail customers. In fact, BellSouth has yet to provide satisfactory statistics as to what those intervals are. ACSI's unbundled loop cutover intervals of over two hours [committed to 30 minutes in the ACSI Interconnection Agreement] are still routine occurrences...In Georgia, ACSI has asked BellSouth to agree to specific installation intervals with prescribed penalties for failure to meet them. BellSouth has refused." (*Id.*, at p. 337 and p. 342)

In listing these outstanding interconnection issues, I have not assumed that every criticism of BellSouth's interconnection arrangements and negotiations is meritorious. My point is simply that interconnection in South Carolina is currently in a tremendous state of flux, and that CLECs remain heavily reliant on BellSouth for key inputs.

These examples are not meant to cover all of Sprint's concerns in South Carolina, and I do not claim familiarity with the details of Sprint's planned local operations in South Carolina or its negotiations with BellSouth. However, they illustrate a variety of important "details" that must be worked out in practice before Sprint can successfully offer local exchange services.

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

Executed on the 17<sup>th</sup> day of October, 1997 in Oakland, California

A handwritten signature in cursive script, reading "Carl Shapiro", written over a horizontal line.

Carl Shapiro