ORIGINAL

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF W. KEITH MILNER

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NOS. 980946-TL, 980947-TL, 980948-TL, 981011-TL, 981012-TL AND 981250-TL

APRIL 9, 1999

Q. PLEASE STATE YOUR NAME, ADDRESS, AND POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC.

A. My name is W. Keith Milner. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375. I am Senior Director - Interconnection Services for BellSouth Telecommunications, Inc. ("BellSouth"). I have served in my present role since February 1996 and have been involved with the management of certain issues related to local interconnection, resale and unbundling.

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.

A. My business career spans over 28 years and includes responsibilities in the areas of network planning, engineering, training, administration and operations.

I have held positions of responsibility with a local exchange telephone company, a long distance company and a research and development laboratory. I have extensive experience in all phases of telecommunications network planning, deployment and operation (including research and development) in both the domestic and international arenas.

I graduated from Fayetteville Technical Institute in Fayetteville, North Carolina in 1970 with an Associate of Applied Science in Business Administration degree. I also graduated from Georgia State University in 1992 with a Master of Business Administration degree.

Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE PUBLIC SERVICE COMMISSION? IF SO, BRIEFLY DESCRIBE THE SUBJECT OF YOUR TESTIMONY.

A. I testified before the state Public Service Commissions in Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi and South Carolina, the Tennessee Regulatory Authority and the Utilities Commission in North Carolina on the issues of technical capabilities of the switching and facilities network regarding the introduction of new service offerings, expanded calling

areas, unbundling and network interconnection.

Q. PLEASE DESCRIBE THE PURPOSE AND ORGANIZATION OF YOUR TESTIMONY BEING FILED TODAY?

A. My testimony is arranged into three main sections. First, I will address issues resulting from BellSouth's Petitions for Waiver and Temporary Waiver from the physical collocation requirements as set forth in the Telecommunications Act of 1996 (Act) and the Federal Communication Commission's (FCC) First Report and Order, FCC Order 96-325 and First Report and Order and Further Notice of Proposed Rulemaking, FCC Order 99-48. Second, I will address issues raised by parties and Commission staff identified in this proceeding (specifically, Issues 1,2,5 and 6) as well as discuss BellSouth's efforts to have building code officials approve BellSouth's requests for permits to build "wire mesh cages" to serve as enclosed physical collocation arrangements. Third, I will provide an overview of the testimony of the other BellSouth witnesses and explain each of their roles in the collocation process.

Issues resulting from BellSouth's Petitions for Waiver and Temporary Waiver from the physical collocation

requirements as set forth in the Telecommunications Act of 1996 (Act) and the Federal Communication Commission's (FCC) First Report and Order, FCC Order 96-325 and First Report and Order and Further Notice of Proposed Rulemaking, FCC Order 99-48.

Q. WHAT IS BELLSOUTH'S BASIC POSITION REGARDING THE ISSUES DISCUSSED BETWEEN BELLSOUTH AND PARTIES OF RECORD IN THIS PROCEEDING REGARDING COLLOCATION?

A. Because the overall purpose of the 1996 Act is to open telecommunications markets to competition, facilities, such as collocation, are available as a result of the obligations imposed upon BellSouth under Sections 251 and 252 and as a result of this Commission's orders in the arbitration proceedings between BellSouth and certain Alternative Local Exchange Carriers (ALECs). BellSouth has worked in good faith to fulfill its obligations. BellSouth has provided 51 physical collocation arrangements and 85 virtual collocation arrangements to ALECs in Florida, all of them in a non-discriminatory fashion by following consistent and well-established policies. Contrary to any assertion by ALECs, BellSouth's treatment of ALECs' collocation requests has been nondiscriminatory and consistent with

all state and federal rules and regulations. BellSouth stands ready to provide all of the items in both its interconnection agreements and collocation agreements with ALECs.

Q. PLEASE SUMMARIZE THE COLLOCATION REQUIREMENTS PLACED ON INCUMBENT LOCAL EXCHANGE CARRIERS ("ILECs") BY THE TELECOMMUNICATIONS ACT OF 1996 ("ACT") AND BY THE FEDERAL COMMUNICATIONS COMMISSION IN ITS FIRST REPORT AND ORDER FCC 96-325, ISSUED AUGUST 8, 1996.

A. Section 251(c)(6) of the Act establishes "The duty to provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the local exchange carrier, except that the carrier may provide for virtual collocation if the local exchange carrier demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations. Paragraphs 555 through 607 of the FCC's First Report and Order 96-325 provide the FCC's discussion of the background, discussion, and conclusions reached regarding collocation.

Q. PLEASE SUMMARIZE THE COLLOCATION REQUIREMENTS THE FCC PLACED ON INCUMBENT LOCAL EXCHANGE CARRIERS ("ILECs") IN ITS RECENT ORDER FCC 99-48 ISSUED MARCH 31, 1999.

A. In its recently issued order, the FCC placed new requirements on incumbent LECs. These new requirements include the following:

1. Permit shared cage collocation.
2. Permit "cageless" collocation as that term is defined in the FCC's recent Order.
3. When space is not available for physical collocation, permit collocation in adjacent Controlled Environment Vaults (CEVs) and similar structures.
4. Permit collocation of all types of equipment required for interconnection or access to unbundled network elements (UNEs).
5. Permit requesting parties to tour central offices after having been informed that space is not available to accommodate requests for physical collocation.
6. Provide lists of central offices within which no space is available for physical collocation.
7. Remove obsolete, unused equipment in order to

accommodate requests for physical collocation.

8. Permit a collocator access to its equipment without the need for a security escort.

9. Permit a collocator direct access to its equipment without the requirement for a physical separation between the collocator's equipment and the equipment of other collocators or the equipment of the ILEC.

10. Permit collocators to place as little as a single rack of equipment in its collocation arrangement.

11. Permit any other collocation arrangement that has been made available by another ILEC unless the ILEC rebuts before the State commission the presumption that such an arrangement is technically infeasible.

BellSouth is analyzing the FCC's recent Order but knows that the Order will have some impact on this proceeding. The following paragraphs discuss instances where BellSouth's policies are consistent with the requirements of the FCC's recent Order, as well as outline areas of the FCC's Order with which BellSouth is concerned.

Q. DOES BELLSOUTH OFFER SHARING OF COLLOCATION CAGES BETWEEN TWO OR MORE CARRIERS?

A. Yes. Even before the FCC issued its recent Order, BellSouth's policy was to allow the sharing of collocation arrangements between two or more carriers in those cases where space is unavailable for physical collocation. The FCC's Order would apparently go beyond BellSouth's offer and require sharing of collocation "cages" without the precondition of a space exhaust situation.

Q. WHAT IS MEANT BY THE TERM "CAGELESS" COLLOCATION?

A. The FCC's recent Order does not specifically define "cageless" collocation. In paragraph 42, however, it may be implied that what the FCC refers to as "cageless" collocation is met by the requirement that "incumbent LECs must allow competitors to collocate in any unused space in the incumbent LEC's premises, without requiring the construction of a room, cage, or similar structure, and without requiring the creation of a separate entrance to the competitor's collocation space." While there is no industry accepted definition of this term, heretofore BellSouth has used the term "cageless" collocation to mean a physical collocation arrangement that is not separated by walls or other structures from the physical collocation arrangements

of other collocators, but is separated by a wall or similar structure from BellSouth's equipment within the BellSouth central office. BellSouth also uses the term "unenclosed physical collocation arrangement" to describe this same arrangement.

Q. DOES BELLSOUTH PROVIDE CAGELESS COLLOCATION AND, IF SO, WHAT TYPES OF CAGELESS COLLOCATION DOES BELLSOUTH PROVIDE?

A. Yes. Consistent with BellSouth's use of the term "cageless" collocation, where local building code permits the placement of unenclosed arrangements, these unenclosed arrangements will be located in the area designated for physical collocation within the BellSouth premises. A collocator may designate a specific amount of unenclosed space, provided that such designation is adequate to accommodate the requested equipment installation per industry standards. Alternatively, if a square footage amount is not designated, floor space will be assigned to accommodate for wiring and maintenance aisle space based on the shadow print of the equipment and racking plus a factor of 2.5 times the shadow print. This factor equates to one-half of the width for industry standard forward and

rear wiring aisle space required for an equipment bay. There is no minimum square footage requirement for unenclosed collocation space, which allows the collocator to request only the amount of space required for its equipment.

Q. DOES BELLSOUTH BELIEVE THERE ARE MINIMUM SIZE REQUIREMENTS FOR ENCLOSED ("CAGED") COLLOCATION ARRANGEMENTS?

A. Yes. The applicable building codes and safety codes establish the effective minimum square footage that must be provided in enclosed collocation arrangements in addition to the floor space "footprint" of the collocated equipment itself. BellSouth's policy heretofore has been that enclosed physical collocation arrangements must be at least 100 square feet. This policy was based on the belief that a physical collocation arrangement of 100 square feet would result in conformance with applicable building codes and safety codes. The FCC apparently believes that enclosed physical collocation arrangements of less than 100 square feet may still result in conformance with applicable building codes and safety codes.

Based on requests for physical collocation received to date, BellSouth has identified certain locations where the code officials have insisted on fire-rated walls separating individual arrangements. For example, fire-rated walls are required in most South Florida LATA offices requested to date and most Southeast Florida LATA offices requested to date. BellSouth has proactively worked with local code officials throughout its region to overcome building code restrictions regarding the construction of physical collocation space.

Q. DO YOU BELIEVE THAT THE FCC'S RULES IN ITS RECENT ORDER CREATE A POTENTIAL CONFLICT WITH STATE OR LOCAL BUILDING CODE ORDINANCES?

A. Yes. I do not expect all code officials to be completely familiar with the FCC's requirements pertaining to physical collocation. In the day-to-day permit request and approval process, BellSouth cannot commence certain construction work within its central offices without first acquiring the necessary permits. While code officials at the state and local levels are implementing the FCC's rules, I am concerned that delays may be experienced as BellSouth requests

necessary permits. While I am not a lawyer, I am aware that the doctrine of preemption may ultimately result in the FCC's rules taking precedence over any conflicting state or local ordinances; however, I believe it will take some time for any resulting conflicts to be resolved. Further, the FCC cannot expect BellSouth to knowingly violate applicable building and safety codes and code officials cannot expect BellSouth to knowingly violate applicable FCC rules.

Q. HAS BELLSOUTH ENCOUNTERED PROBLEMS IN PROVIDING COLLOCATION SPACE DUE TO BUILDING CODE REQUIREMENTS?

A. Yes. A major problem in providing space has been the interpretation by code officials of collocation space as "multi-tenant" occupancy. Because of this interpretation, BellSouth has been required to provide fire-rated walls between collocators, even those requesting unenclosed space. Additionally, the fire-rated wall requirement does not allow BellSouth to provide wire cage enclosures.

Q. WHAT ACTIONS HAS BELLSOUTH TAKEN TO ALLEVIATE THE PROBLEMS CAUSED BY THE MULTI-TENANCY INTERPRETATION

THAT REQUIRES FIRE-RATED WALL CONSTRUCTION?

A. At BellSouth's request, Telcordia Technologies (formerly known as Bell Communications Research or Bellcore) wrote a letter to the Southern Building Code Congress International (SBCCI). In the letter, Telcordia asked for support of BellSouth's position that the spaces should be treated as areas of "like" equipment, and that they should not require fire-rated walls. The response from the SBCCI supported BellSouth's position. However, the reply also cautioned that the code official is the final authority on these issues. A copy of the letter from Telcordia to the SBCCI, and also the response from the SBCCI are attached as exhibit WKM-1.

Since receiving the favorable letter from the SBCCI, BellSouth and its architects have visited the code authorities in numerous municipalities requesting approval to construct wire cage enclosures instead of fire-rated walls. After discussing the contents of the SBCCI correspondence to the various authorities, tentative verbal approval to utilize the wire cage construction was granted by the majority of the jurisdictions. Discussions have been held with both

the Fire Marshall and the Building Code Department at Dade County and the Building Code Department at Broward County. Both jurisdictions have given tentative verbal approval. The Fire Marshall and the Building Code Department in the City of Sunrise also gave tentative verbal approval. The City of Plantation, both the Fire Marshall and the Building Code Official, advised that they will be requiring fire-rated separation between all collocations, including those requesting non-enclosed space. The issue has been discussed with the Boca Raton officials, but they have not yet indicated their intentions.

Once several code official approvals were granted, BellSouth developed a wire cage specification utilizing welded wire panels. This material provides grounding capabilities that are far superior to chain link fence material.

Q. WHAT ARE SOME OF THE ANTICIPATED PROBLEMS THAT BELLSOUTH ANTICIPATES IN RECEIVING PERMITS FOR THE WIRE CAGE ENCLOSURES?

A. One obvious problem is that some code authorities may continue to require fire-rated separations. As

mentioned previously, the officials at the City of Plantation advised, after BellSouth's discussion of the support by the SBCCI and other area code officials, that the City of Plantation will require fire-rated separation between all collocators, including those requesting unenclosed space. An additional concern is that the fire code officials under the NFPA 101 life safety code may continue to require fire-rated ingress/egress to and from the collocation space. Such rated ingress/egress was required in the Cypress central office and the Fort Lauderdale Main Relief central office. At the Cypress central office, a rated corridor had to be constructed through the equipment room. This construction was difficult because it had to be constructed beneath the cable racking. The corridor had to be constructed in such a way that BellSouth's technicians and the collocator's technicians, could have future safe access to the cables. In the Fort Lauderdale Main Relief central office, a new rated corridor was constructed through the equipment room to the side of the building. At the side of the building, a new door was cut through the concrete panels of the exterior wall. Because the doorway was above grade, a ramp had to be constructed for egress from the building. Additionally, NFPA 101

requires rated separation between different occupancies, such as between equipment occupancies and administrative office space.

Q. WHERE HAS BELLSOUTH OBTAINED BUILDING PERMITS FOR WIRE CAGE ENCLOSURES?

A. A building permit that includes wire cage construction was obtained for the construction at BellSouth's Coral Ridge central office (in South Florida) on March 17, 1999. Additionally, permits covering cage construction were granted for the Jacksonville-Clay central office on March 17, 1999, and for the Orlando-Colonial central office on March 23, 1999.

Q. WHAT IS THE STATUS OF BELLSOUTH'S EFFORTS REGARDING APPROVALS OF THE WIRE CAGE ENCLOSURE?

A. BellSouth has directed that their architects request approval of wire cage enclosures for all new physical collocation requests. In instances where the code officials do not approve future requests for wire cage enclosures, the architect has been directed to arrange a meeting with BellSouth and the code authority to discuss the SBCCI letter, and other jurisdictions that

have approved the wire cage. It is believed that successes in some jurisdictions will help gain approvals from other code authorities.

Q. WHAT IS A "CEV"?

A. The term "CEV" stands for Controlled Environment Vault. It is a separate, stand-alone structure containing equipment to regulate the "environment" within it such as air temperature. The CEV, in some cases, is buried with an entryway at ground level for ingress and egress. In this context, the CEV is used to house telecommunications equipment outside a central office building. It is called a vault because it is often constructed of steel reinforced, poured concrete wall, floor, and ceiling members.

Q. WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN ADJACENT CEVs AND SIMILAR STRUCTURES IN CASES WHERE SPACE IS NOT AVAILABLE FOR PHYSICAL COLLOCATION?

A. BellSouth's policy heretofore has been to not allow collocators to construct or otherwise procure CEVs and similar structures on BellSouth's property. The FCC's rules would apparently require BellSouth to accommodate

such a request to the extent technically feasible.

Q. IS IT YOUR OPINION THAT THE FCC'S RECENT RULES PERMITTING THE PLACEMENT OF ADJACENT CEVs OR SIMILAR STRUCTURES HAS CHANGED THE FCC'S DEFINITION OF THE TERM "PREMISES"?

A. No. First of all, the Telecommunications Act of 1996 does not provide a definition for the term "premises", nor is the term discussed in the legislative history. In the FCC's Order 96-325, the FCC defined the term "premises" as follows:

> "We therefore interpret the term 'premises' broadly to include LEC central offices, serving wire centers and tandem offices, as well as all buildings or similar structures owned or leased by the incumbent LEC that house LEC network facilities. We also treat as incumbent LEC premises any structures that house LEC network facilities on public rights-of-way, such as vaults containing loop concentrators or similar structures." [Paragraph 573]

Further, I believe that if the FCC intended to broaden its definition further, it could have done so in its

recent Order. It did not do so, instead the FCC would permit "the new entrant to construct or otherwise procure such an adjacent structure, subject only to reasonable safety and maintenance requirements."

Q. DO ADJACENT CEVs OR SIMILAR STRUCTURES FIT THE FCC'S DEFINITION OF THE TERM "PREMISES"?

A. No. The FCC's definition of adjacent CEVs and similar structures is inconsistent with its own definition of "premises" and the Act's requirement for collocation within BellSouth's premises. This is because the resulting structure, whether constructed by the collocator or otherwise procured, would not be owned by BellSouth and thus would not fit the definition of being any one of the types of structures named in the FCC's definition; specifically, "LEC central offices, serving wire centers and tandem offices, as well as all buildings or similar structures owned or leased by the incumbent LEC that house LEC network facilities." Further, the resultant structure constructed or otherwise procured by the collocator (that is, the adjacent CEV or similar structure) would not fit the FCC's definition because it would not house BellSouth's "network facilities." To summarize, the FCC's

requirement for adjacent CEVs and similar structures is inconsistent with the requirements of the Act that BellSouth provide collocation at its premises because adjacent CEVs and similar structures are not BellSouth's premises and the equipment housed within the adjacent CEV or similar structure is not part of BellSouth's network facilities.

Q. HAVE OTHER PARTIES SOUGHT TO FURTHER BROADEN THE FCC's DEFINITION OF THE TERM "PREMISES"?

A. Apparently so. Some parties have suggested that buildings that house BellSouth's administrative or other support personnel and which are on parcels of land adjacent to or near BellSouth's central offices should likewise be considered "premises" under the FCC's definition. Since these buildings do not house network facilities (that is, switches or transmission equipment, for example), they are not subject to requirements for collocation.

Q. THE FCC'S RULES REQUIRE THAT INCUMBENT LECs ALLOW ALL EQUIPMENT USED FOR INTERCONNECTION OR ACCESS TO UNEs TO BE COLLOCATED. WHAT TYPE OF EQUIPMENT DOES THE FCC'S RECENT ORDER SPECIFICALLY REQUIRE?

A. Paragraph 28 of the FCC's March 31, 1999 Order requires the collocation of Digital Subscriber Line Access Multiplexers (DSLAMs), routers, Asynchronous Transfer Mode (ATM) multiplexers, and Remote Switching Modules. BellSouth had heretofore allowed collocation of all of these equipment types plus "stand-alone" switching equipment. Given that the FCC's Order in paragraph 30 does not require collocation of equipment used solely to provide enhanced services, BellSouth believes it is already in compliance with the FCC's requirements.

Q. DOES BELLSOUTH ACCOMMODATE TOURS OF CENTRAL OFFICES IN WHICH A REQUESTING PARTY HAS BEEN DENIED SPACE FOR PHYSICAL COLLOCATION?

A. Yes. As this Commission is aware, BellSouth has hosted a number of tours for parties who requested physical collocation in a given BellSouth central office but were denied due to space exhaustion. The FCC's recent rules would apparently require BellSouth to conduct such a tour within ten (10) days of the denial of space.

Q. WHAT IS BELLSOUTH'S POLICY REGARDING PRODUCTION OF LISTS OF CENTRAL OFFICES WITHIN WHICH SPACE IS NOT

AVAILABLE FOR PHYSICAL COLLOCATION?

A. BellSouth evaluates its ability to provide physical collocation and assesses the local building code requirements and/or restrictions on a per request basis. BellSouth has over 1,600 central offices in its nine-state region. Because BellSouth has not processed requests for collocation in every municipality within its region, BellSouth cannot predict with certainty where the local code officials will allow unenclosed physical collocation space. Further, BellSouth believes such a list would be difficult to maintain accurately given the constantly changing situation in each of BellSouth's central offices. BellSouth is investigating means by which it can keep ALECs informed of the availability of space within BellSouth's central offices.

Q. WHAT IS BELLSOUTH'S POLICY REGARDING THE REMOVAL OF OBSOLETE, UNUSED EQUIPMENT IN ORDER TO ACCOMMODATE REQUESTS FOR PHYSICAL COLLOCATION?

A. First of all, BellSouth believes the FCC intended to use the terms "obsolete" and "unused" together to avoid disagreements regarding an incumbent LEC's obligations

to modernize its network to replace older vintage but still functional equipment. Otherwise, a collocator might demand that the incumbent replace an analog switching system with a newer, physically smaller, digital switch in order to free up space for physical collocation. I do not believe this is what the FCC intended, nor would such a requirement make economic sense. Thus, BellSouth believes its policy heretofore is compliant with the FCC's rules in Order 99-48.

Q. PLEASE ADDRESS THE FCC'S PRESUMPTION THAT ANY COLLOCATION ARRANGEMENT OFFERED BY ANY OTHER ILEC IS TECHNICALLY FEASIBLE?

A. BellSouth is troubled by the breadth of this presumption as well as the uncertainty inherent in such a requirement.

Q. THE FCC'S RECENT RULES REQUIRE PHYSICAL COLLOCATION OF AS LITTLE AS ONE BAY OF EQUIPMENT IF SPACE IS AVAILABLE. DOES THIS REQUIREMENT IMPOSE UPON BELLSOUTH THE DUTY TO ALLOW COMMINGLING OF A COLLOCATOR'S EQUIPMENT WITH BELLSOUTH'S EQUIPMENT OR ANOTHER ALEC's EQUIPMENT?

A. No. For network reliability and safety reasons, BellSouth does not permit physical collocation of equipment that is commingled with its own equipment. By use of the term "commingling" I mean that a single bay (which is the framework used to mount equipment) would be used to accommodate the equipment of BellSouth and the equipment of one or more collocators on different shelves within that bay. BellSouth is permitted to impose reasonable security measures in association with its physical collocation offering. Carriers that do not wish to utilize physical collocation arrangements may elect to utilize virtual collocation arrangements as the carrier's first choice. Virtual collocation allows the "commingling" of equipment that some carriers apparently want; however in such an arrangement, BellSouth (rather than the collocator) performs any required equipment maintenance. Thus, network security and reliability are not degraded while still allowing the benefits of commingling of equipment.

Q. PLEASE ADDRESS THE FCC'S REQUIREMENT IN ITS RECENT ORDER THAT PERMIT COLLOCATORS DIRECT ACCESS TO ITS EQUIPMENT WITHOUT BEING ESCORTED BY BELLSOUTH PERSONNEL AND WITHOUT THE COLLOCATOR'S EQUIPMENT BEING PHYSICALLY

SEPARATED BY A WALL OR OTHER STRUCTURE FROM BELLSOUTH'S EQUIPMENT OR THE EQUIPMENT OF OTHER ALECs.

A. The FCC's Order raises serious concerns that must be addressed in order to retain the level of network reliability and security that currently exists and which end user customers and regulators have come to expect. While I am in no way suggesting that an ALEC would intentionally disrupt service provided by another carrier or would intentionally damage, disable or reconfigure the equipment or facilities of another carrier, I believe that a simple reading of today's newspaper headlines reveals the need for stringent control over the access to and operation of the public telephone network. It would be a relatively easy task for those who sought to commit terroristic acts to first become certificated as an ALEC, then seek minimal collocation arrangements in a number of strategic central offices and later use direct access to such collocation arrangements as the means to gain access that would otherwise have been denied. Although the FCC suggests that the ILEC may install monitoring and access devices such as card readers as means of maintaining network reliability and security, I am concerned regarding the effectiveness of such measures

to repulse criminal acts. Even taking at face value that effective security measures could be put in place, such measures will take time to implement and before the completion of such implementation, the public telephone network, both BellSouth's network and the networks of other service providers, would be at significant risk.

Issues raised by parties and Commission staff identified in this proceeding (specifically, Issues 1,2,5 and 6) and BellSouth's efforts to have building code officials approve BellSouth's requests for permits to build "wire mesh cages" to serve as enclosed physical collocation arrangements.

Issue 1: What obligation does BellSouth have to make space available at these central offices to permit physical collocation pursuant to the Act and applicable state and federal requirements?

Q. WHAT IS BELLSOUTH'S POSITION AS TO ITS OBLIGATION TO MAKE SPACE AVAILABLE FOR PHYSICAL COLLOCATION REQUESTED BY ALECs?

A. BellSouth's contention is that neither the

Telecommunications Act of 1996 ("Act") nor the rules of the Federal Communications Commission (FCC) require BellSouth to make relocations and renovations to accommodate requests for physical collocation arrangements. The Federal Communications Commission 47 CFR Chapter 1 51.321 (e) states "An incumbent LEC shall not be required to provide for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the incumbent LEC's premises if it demonstrates to the state commission that physical collocation is not practical for technical reasons or because of space limitations."

Q. DOES EITHER THE ACT OR THE RULES SET FORTH BY THE FCC REQUIRE BELLSOUTH TO REMOVE ITS WORKING EQUIPMENT OR TO RELINQUISH ADMINISTRATIVE AREAS WITHIN ITS CENTRAL OFFICES IN ORDER TO ACCOMMODATE REQUESTS FOR COLLOCATION SPACE?

A. The Act simply states that space limitations justify a State commission to grant a physical collocation waiver. Neither the Act nor the FCC's rules specify to what purposes BellSouth may use the space within its central offices. Accordingly, the term "use" has its plain language meaning here. In paragraph 579 of the

FCC's First Report and Order in Docket 96-325, the FCC states:

> "We believe that section 251(c)(6) generally requires that incumbent LECs permit the collocation of equipment used for interconnection or access to unbundled network elements. Although the term "necessary", read most strictly, could be interpreted to mean "indispensable," we conclude that for the purposes of section 251(c)(6) "necessary" does not mean "indispensable" but rather "used" or "useful." This interpretation is most likely to promote fair competition consistent with the purposes of the Act."

This same doctrine of fairness should be applied to BellSouth's use of its own space within its central offices. Not only do these central offices house telecommunications equipment (including switching, transmission, power, and ancillary equipment) but also the people, tools, and computers, used to administer, provision, maintain, and repair such telecommunications equipment.

Q. DOES THE ACT DEFINE THE TERM "TELECOMMUNICATIONS

EQUIPMENT"?

A. Yes. Section 3(a)50 states:

> "The term 'telecommunications equipment' means equipment, other than customer premises equipment, used by a carrier to provide telecommunications services, and includes software integral to such equipment (including upgrades)."

The equipment within BellSouth's central offices is not customer premises equipment and thus falls under this definition since individually and collectively it is used to provide telecommunications services. While other parties to this proceeding may argue that some or all of these purposes are not "indispensable" and argue that BellSouth must relocate or dispose of administrative space, employee break rooms and the like, all of these constitute productive use of floor space.

Q. HOW DOES THE FCC DEFINE THE TERM "TECHNICALLY FEASIBLE"?

A. The FCC's 47 CFR 51.5 states "Interconnection access to

unbundled network elements, collocation, and other methods of achieving interconnection or access to unbundled network elements at a point in the network shall be deemed technically feasible absent technical or operational concerns that prevent the fulfillment of a request by a telecommunications carrier for such connection, access, or methods. A determination of technical feasibility does not include consideration of economic, accounting, billing, space or site concerns, except that space and site concerns may be considered in circumstances where there is no possibility of expanding the space available. The fact that an incumbent LEC must modify its facilities or equipment to respond to such a request does not determine whether satisfying such request is technically feasible. An incumbent LEC that claims that it cannot satisfy such request because of adverse network reliability impacts must prove to the state commission by clear and convincing evidence that such interconnection, access, or methods would result in specific and significant adverse network reliability impacts."

Q. WHAT IS THE IMPACT OF EQUIPMENT RELOCATION AND REARRANGEMENT ON NETWORK RELIABILITY AND SECURITY?

A. The potentially negative impact on network reliability and security resulting from equipment relocation or rearrangement must be assessed on a case-by-case basis. However, equipment relocations and rearrangements, by industry practice, have long been approached in a generally conservative manner given the potential for significant service disruption, not only affecting the equipment being relocated or rearranged but also adjacent equipment or equipment that shares common resources with the equipment being relocated or rearranged.

Q. WHAT HAS BELLSOUTH'S GENERAL EXPERIENCE BEEN REGARDING THE IMPLEMENTATION OF ITS PHYSICAL COLLOCATION OFFERING?

A. While the majority of requests have gone smoothly, BellSouth has also encountered real, and frankly, unexpected roadblocks. Among the roadblocks BellSouth has encountered are: permit and inspection delays; building code restrictions; customer errors/ modifications on applications and firm orders which require rework; certified vendor errors and shortages of equipment.

Issue 2: What factors should be considered by the Commission in making its determination on BellSouth's Petitions for Waiver and Temporary Waiver of the requirement to provide physical collocation for the following central offices:

a) Daytona Beach Port Orange

b) Boca Raton Boca Teeca

c) Miami Palmetto

c) West Palm Beach Gardens

d) North Dade Golden Glades

e) Lake Mary

Q. WOULD YOU EXPLAIN WHAT FACTORS ARE CONSIDERED WHEN DETERMINING SPACE ALLOCATION FOR COLLOCATION?

A. To determine space allocation or availability for collocation in any of BellSouth's central offices, several factors have to be assessed. These factors are outlined in the FCC's First Report and Order, paragraph 604, et al. These factors fall into the following categories:

1. Existing building configuration such as the building outline and physical capacity of the

structure.

2. Space usage and forecasted demand.

Other factors that also potentially impact space allocation or availability for collocation include Code and regulatory factors at the national, state, and local level such as the National Fire Protection Act, the Southern Building Code, and local county and municipal codes. Space design practices act as another set of codes specifying space allocation meets the safety needs for employees, vendors, and customer service provided by the building and its occupants.

Details of these factors are further discussed in the testimony of Mr. Jim Bloomer.

Issue 5: Should BellSouth's Petitions for Waiver and Temporary Waiver of the requirement to provide physical collocation in the following central offices be granted:

a) Daytona Beach Port Orange

b) Boca Raton Boca Teeca

c) Miami Palmetto

c) West Palm Beach Gardens

d) North Dade Golden Glades

e) Lake Mary

Q. HAVE YOU READ MR. BLOOMER'S TESTIMONY, AND DO YOU AGREE WITH HIS ASSESSMENT OF SPACE ALLOCATION FOR THE CENTRAL OFFICES MENTIONED ABOVE?

A. I have read Mr. Bloomer's testimony and agree with his assessment that no available space exists in any of the above mentioned central offices for physical collocation. I have also personally visited each of these offices and have taken part in the tours of these six central offices that were attended by representatives of certain ALECs as well as members of the Commission's staff. Based on my review of the application of relevant factors and having taken these tours, I support BellSouth's Petitions for Waiver and Temporary Waiver in these six central offices.

Issue 6: If the Commission determines that a waiver request should be denied, how should BellSouth effectuate FCC Rule 47 CFR § 51.323 (f) (1) in processing requests for physical collocation in those central offices?

Q. WHAT ACTION DOES BELLSOUTH BELIEVE THIS COMMISSION SHOULD TAKE SHOULD THE COMMISSION DETERMINE THAT A WAIVER REQUEST SHOULD BE DENIED?

A. BellSouth believes that, in the event the Commission determines that space is available for physical collocation in a given central office for which BellSouth has filed a waiver, that the Commission should specify the amount of space it has determined is available.

Q. BY WHAT PROCESS WOULD BELLSOUTH THEN OFFER THE SPACE IDENTIFIED BY THE COMMISSION AS AVAILABLE FOR PHYSICAL COLLLOCATION TO REQUESTING CARRIERS?

A. Once the Commission's Order is final and unappealable, BellSouth will allocate that amount of space to requesting carriers on a "first come, first served" basis. Because BellSouth has kept records of the date of each request and the amount of space requested for physical collocation, BellSouth would offer the space to be allocated in the same order and for the same amount of floor space as had been originally requested. By "request" I mean the original application for physical collocation space rather than a "firm order"

for space. Briefly, a telecommunications carrier provides BellSouth an application for a physical collocation arrangement of a given size in a particular BellSouth central office. BellSouth analyzes the application to determine whether space exists such that the request may be accommodated. In cases where sufficient space is not available, the requesting party is so informed.

Q. HOW SHOULD BELLSOUTH TREAT CASES WHERE THE REQUESTING CARRIER DECLINES THE OFFER OF THE AMOUNT OF SPACE IT HAD ORIGINALLY REQUESTED, OR IF THE REQUESTING CARRIER AGREES TO A SMALLER AMOUNT OF SPACE THAN WAS ORIGINALLY REQUESTED?

A. Should a requesting carrier decline the offer of the amount of space it had originally requested, or if the requesting carrier agrees to accept the offer of a smaller amount of space than had been originally been requested, BellSouth will consider that requesting carrier's original request to have been fulfilled. If any of the space found by the Commission to be available for physical collocation remains to be allocated, BellSouth would offer other requesting carriers their originally requested amount of floor

space respectively (on a first come, first served basis) and would continue the process until all floor space had been allocated or until all requesting ALECs had either accepted or declined the offer of space. At the point the amount of space identified by the Commission as available for physical collocation becomes allocated, BellSouth's Waiver Request would be considered as granted obviating or eliminating the need for BellSouth to re-file a physical collocation waiver request in that central office.

Overview of the testimony of the other BellSouth witnesses and explain each of their roles in the collocation process.

Q. PLEASE PROVIDE THE NAMES AND GENERAL RESPONSIBILITIES OF EACH OF THE OTHER BELLSOUTH WITNESSES IN THIS PROCEEDING.

A. The other BellSouth witnesses are as follows:

Mr. Thomas Fortenberry is Manager of Network Forecasting and is responsible for forecasting growth for future years of individual products or groups of products within a Wire Center.

The following individuals serve as Area Managers - Circuit Capacity Management. These individuals supervise the preparation of forecasts and plans for central office power equipment:

- Mr. John MacDonald is Area Manager in the South Florida Capacity Management organization and has responsibilities for managing the Common Systems Capacity Management (CSCM) group, Power Capacity Management (PCM) group, and the Transmission/Video Engineers for South Florida.
- Mr. Robert Fisher is a Power Capacity Manager in the North Florida Capacity Management organization and responsible for the planning and deployment of power equipment and standby engine/alternators for two central offices in this proceeding.

The following individuals serve as Area Managers - Circuit Capacity Management. These individuals supervise the preparation of circuit forecasts and plans (for example, trunk forecasts) used by others to ensure that adequate circuit capacity is available when and where needed.

- Ms. Susan Smith is Area Manager - Circuit Capacity Management in the South Florida Capacity Management District and has the responsibility of

supervising Circuit Capacity Management for Broward and Palm Beach County.

- Mr. Alan Levak is Area Manager - Circuit Capacity Management in the South Florida Capacity Management District and has the responsibility of supervising Circuit Capacity Management for Miami-Dade and Monroe County.
- Mr. Kenneth Krick is Area Manager - Circuit Capacity Management in the North Florida Capacity Management District and has the responsibility of supervising Circuit Capacity Management for the Orlando, Daytona, and Indian River areas.

The following individuals serve as Area Managers - Switch Capacity Management. They are responsible for managing work activities required to plan, design, and provision equipment for switching relief for all types of central office switching systems.

- Mr. Shakur Bolden is Area Manager - Switch Capacity Management Network Operations - North Florida Capacity Management.
- Mr. William Perez is Area Manager - Switch Capacity Management Network Operations - South Florida Capacity Management.
- Mr. Thomas Forness is Area Manager - Switch

Capacity Management Network Operations - South Florida Capacity Management.

Ms. Barbara Cruit is the Director of South Florida Capacity Management and is responsible for the overall Capacity Management process utilized by BellSouth Capacity Managers to determine the equipment requirements for forecasted growth for each of the six central offices at issue in this proceeding.

The following individuals serve as Area Managers - Common Systems Capacity Management. They are responsible for managing work activities required to plan, design, and provision equipment referred to as "common systems". These common systems include all types of equipment and facilities other than switching and transmission equipment.

- Mr. Guy Ream who is a Common Systems Capacity Manager - Network Operations and has responsibility for monitoring and coordinating plans for equipment additions or removals in central offices.
- Mr. Miguel Rodriguez who is a Common Systems Capacity Manager - Network Operations and has responsibility for maintaining building study

plans, for two central offices in this proceeding, that define growth strategy for all classes of central office equipment.

- Mr. Robert Cook who is a Common Systems Capacity Manager and has responsibility for maintaining building study plans, for two one central office in this proceeding, that define growth strategy for all classes of central office equipment.
- Mr. Louis Caban who is a Common Systems Capacity Manager - Network Operations and has responsibility for maintaining building study plans, for one central office in this proceeding, that define growth strategy for all classes of central office equipment.

Mr. George Mainer is Director - Network Operations, South Florida and has responsibility for maintenance and provisioning activities for central offices in the Miami-Dade area.

Mr. Jim Bloomer is Manager - Facility Planning - Property and Services Management and is responsible for assigning company floor space in existing buildings and developing plans for future space allocations.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Bellcore
Bell Communications Research

Ronald Mark, AIA, CFM
Building Standards and Codes, Firesafety

8 Corporate Place, 3C104
Piscataway, NJ 08854

rmark@notes.cc.bellcore.com
Phone 732-699-3752
Fax 732-336-2230

Date: July 6, 1998

Subject: Standard Building Code
Request for Formal Interpretation
704.3 - Tenant fire separation

File: 3860/98-266

To: Mark Chubb
SBCCI
900 Montclair Road
Birmingham, AL 35213

Dear Mark,

I appreciate the time you took several weeks ago when I called for assistance in requesting an interpretation from SBCCI on code requirements for *tenant fire separations* as delineated in Section 704.3 of the 1997 Standard Building Code. Please consider this letter as a request for a Formal Interpretation of Section 704.3 as it applies to colocation of telecommunications equipment in telecommunications facilities.

In order for you to better understand some uncommon telecommunications industry terminology, I have provided definitions of a few terms:

- *Colocation* is defined as the action of a Competitive Local Exchange Carrier (CLEC, or start-up telecommunications service providers as they are referred), locating their equipment in the building of an Incumbent Local Exchange Carrier (ILEC) such as BellSouth, GTE, Southwestern Bell, etc. Colocation is an FCC tariffed practice, and has become routine and widespread across the country in all ILEC companies. The CLEC leases space and building services in the ILEC's building, and installs either their own switch, or transmission equipment that is connected to the incumbent's switch and cabling through separate lease arrangements. Generically, the CLEC's equipment is the same as the ILEC's equipment. Virtually all incumbents require that the CLEC's equipment be NEBS compliant.

- *NEBS* (Network Equipment Building Systems) are publicly available generic requirements published and maintained by Bellcore (AT&T has their own version). NEBS sets forth minimal requirements for grounding, ESD, RFI, earthquake, fire protection, and a host of other stringent requirements to assure safe and dependable telecommunications service. NEBS can be likened to a building code or standard for the telecommunications industry. Regarding fire protection requirements, equipment manufacturers such as Lucent or Nortel submit equipment (either separate line cards, full shelves, or complete cabinets) to Bellcore's testing facility in Chester NJ for technical auditing. NEBS has three levels of compliancy, and the fire protection requirements are the same for all three levels.

As interpreted by some local code officials, Section 704.3 of the Standard Code requires my client, BellSouth, to erect 1-hour walls, not only between their equipment and the CLEC's equipment, but between each of the CLECs' spaces. The cost of these partitions and the resulting costs of associated electrical and HVAC alterations are very high in many cases, due to the amount of overhead cabling that must be properly firestopped. These costs are passed on to the competitors who complain that they don't have these restrictions in the other ILEC's facilities. (BellSouth is exclusively under the Standard Code, while all other Regional Bells are predominantly BOCA or ICBO, neither of which has this requirement). In BOCA and ICBO jurisdictions, companies install heavy gauge wire partitions for security.

I understand that the provisions of 704.3 have historically addressed separation issues as they are interpreted, for example, in malls, strip shopping, storage facilities, and several multi-family residential applications.

It is my objective opinion that the requirements of 704.3 would not apply to telecommunications facilities where competitive companies install their equipment in incumbent's buildings, for the following reasons:

- The use and occupancy are identical and there is no fire threat between the equipment
- The CLEC equipment is virtually identical to the ILEC equipment
- The CLEC equipment, like the ILEC equipment, is NEBS compliant
- In BellSouth's case, CLEC personnel are escorted into and out of their space by BellSouth personnel and are not allowed to wander through the building
- Lease agreements and tariffs protect both companies from contingent liability issues
- There has been no fire insult (at least in the Regional Bell Operating Companies) between CLEC and ILEC spaces
- Wire partitions provide full vision between spaces which provides a higher level of safety from a fire protection standpoint

The telecommunications industry enjoys an exemplary fire safety record due primarily to their aggressive and pro-active stance on very early warning fire detection, selective compartmentation, assiduous firestopping practices, and remarkably safe equipment that is NEBS compliant.

Mark, I would appreciate your sharing this request with the staff and providing me with a full interpretation and intent of Section 704.3, as it applies to colocation of telecommunications equipment. Thanks again for your time and interest.

Very truly yours,

Ron Marts

cc Steve Johnson BellSouth
Larry Langhera BellSouth
Glen Neuburger Bellcore

Setting the Standard for America's Model Codes

September 25, 1998

Mr. Ron Marta, AIA, CFM
Building Standards and Codes, Firesafety
Bellcore
3C104
8 Corporate Place
Piscataway, NJ 08854

Dear Ron:

This is in response to your request for an interpretation of the tenant separation requirements of the 1997 *Standard Building Code* as they apply to co-location of competitive local exchange carriers (CLEC) in the network equipment buildings of incumbent local exchange carriers (ILEC) such as BellSouth. The tenant separation requirements are found in 704.3 of the code.

As you correctly note in your request, tenant separation requirements do not appear in the provisions of any of the other nationally-recognized model building codes. The *Standard Building Code* provisions for tenant separation date back to the first edition in 1946, and are intended to protect the property of one occupant from harms arising from the use or occupancy of another portion of the same building occupied by another tenant. Chief among these harms is the threat of fire. The requirement for 1-hour fire resistance rated separation seems to follow from the assumption that tenants will usually be separated by partitions, floor/ceiling assemblies, or by some equivalent construction as a matter of security or privacy or simply to control the amount of usable space let to a tenant under the terms of a given contract. Since these separations may obscure evidence of a hazardous situation and limit the degree of control which may be exercised over such hazards by other occupants or tenants, the code requires these separations to provide a minimum degree of fire resistance.

Of course, many contemporary co-location or cohabitation situations challenge the traditional notion that tenants will already be separated from one another. Many occupancies now let space within their buildings to other companies for purposes similar to or at least complementary to their own use of the premises. Examples abound: cosmetic counters, opticians offices, photo processors, and fast food franchise counters in retail stores are probably the most common examples. The situation you describe with regard to network equipment buildings does not seem altogether different from these new arrangements: The tenants share a common occupancy classification, perform complementary activities, and provide common access to their respective portions of the premises. Perhaps most importantly though, the arrangements you describe, particularly common equipment requirements, escorted access, largely open plan, and a high degree of visibility among adjacent tenants, suggest that continuous surveillance of the equipment and premises is provided. This seems to ensure that no tenant is unwittingly exposed to a threat introduced by another.

In small network equipment buildings (those less than 3,000 sq ft), the exception to 704.3 would require no separation between adjacent tenants. In larger buildings (those over

3,000 sq ft), separation could only be required to subdivide the building into areas less than 3,000 sq ft. However, this does not appear necessary, since the arrangements you describe seem to fulfill the intent of the tenant separation provisions.

This information is provided to assist you in complying with the provisions of the Standard Building Code. This opinion has not been reviewed by the Interpretation Committee, and does not represent the official position of SBCCI or the Southeastern Association of Fire Chiefs, Inc. in this matter. Please remember, the code official remains the final authority for all decisions concerning the application and interpretation of these provisions.

Sincerely,

Mark Chubb, CBO, AIFireE
SBCCI Fire Code Coordinator
Executive Director, Southeastern Association of Fire Chiefs

/mdc