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BELLSOUTH TELECOMMUNICATIONS, INC.
DIRECT TESTIMONY OF W. KEITH MILNER
BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 991838-TP
JANUARY 25, 2000

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 29 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

1 (including research and development) in both the domestic and
2 international arenas.

3

4 I graduated from Fayetteville Technical Institute in Fayetteville, North
5 Carolina in 1970 with an Associate of Applied Science in Business
6 Administration degree. I also graduated from Georgia State University in
7 1992 with a Master of Business Administration degree.

8

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

12

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

19

20 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED
21 TODAY?

22

23 A. In my testimony, I will address Issues Numbers 9 and 16 of the Petition for
24 Arbitration filed by BlueStar Networks, Inc. ("BlueStar") in this docket.

25

1 **Issue 9: Should the interconnection agreement include expedited**
2 **procedures for repairs?**

3

4 Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

5

6 A. BellSouth's position is that the interconnection agreement should not
7 include procedures for expedited repairs, at least not the types of
8 procedures which BellSouth has been led to believe that BlueStar wants.

9

10 Q. WHAT DOES BELLSOUTH BELIEVE BLUESTAR WANTS?

11

12 A. BellSouth's understanding is that BlueStar wants a provision that would
13 allow BlueStar to call BellSouth on a case by case demand basis with
14 requests that BlueStar's customers' trouble reports be processed, for a
15 fee, ahead of BellSouth's or other ALECs' (Alternative Local Exchange
16 Carriers) customers. BellSouth believes such a provision is untenable and
17 would, if subsequently included in other ALECs' agreements, be
18 impossible to administer. BellSouth is willing to consider any reasonable
19 proposal for improved customer service. Finding ways to expedite the
20 repair process is a topic that BellSouth is always willing to discuss with
21 ALECs. However, BellSouth believes the concept of expediting the repair
22 of one ALEC's customer ahead of another ALEC's customer or a
23 BellSouth retail customer, and particularly doing so on a demand basis, is
24 simply not workable.

25

1 Q. WHAT IS BELLSOUTH'S STANDARD REPAIR POLICY?

2

3 A. BellSouth is committed to responding to repair requests on a first come-
4 first served basis for similar services for both BellSouth's retail customers
5 and the ALEC's end-users.

6

7 Q. HOW DOES BELLSOUTH PRIORITIZE REPAIRS FOR DISSIMILAR
8 SERVICES?

9

10 A. BellSouth has established repair interval guidelines for its various
11 services, both retail and wholesale. These guidelines generally reflect the
12 potential scope of the impact upon the customer body as a whole and
13 generally provide shorter intervals for those services that involve the most
14 customers or the most customers' lines. For example, a 2-wire UNE (2-
15 wire analog voice grade loop non-designed (SL1)) has a 24-hour repair
16 interval that is comparable to the 24-hour repair interval for a simple
17 residence or business line. By contrast, an interoffice transport DS1 UNE
18 (which can handle twenty-four (24) simultaneous calls) has a 4-hour
19 repair interval, which is comparable to the 4-hour repair interval for
20 BellSouth's MegaLink service.

21

22 Q. ARE THERE EXCEPTIONS TO THE GENERAL GUIDELINES YOU
23 HAVE JUST DESCRIBED?

24

25 A. Yes. Other factors, such as the use to which the service or UNE is being

1 put, are also considered. For example, a loop serving a fire station
2 receives higher priority than a similar loop serving a grocery store.

3

4 Q. ARE THESE PRIORITY GUIDELINES AND EXCEPTION PROCEDURES
5 THE SAME FOR BOTH BELLSOUTH'S RETAIL CUSTOMERS AND THE
6 ALEC'S END-USERS?

7

8 A. Insofar as is practical, the answer is yes. BellSouth is not able to identify
9 the ALEC's end-user in the same way as a BellSouth retail customer. On
10 UNE loops, BellSouth's records show only the name of the ALEC, not the
11 name or any other end-user information about the ALEC's customer.
12 Without that information, BellSouth simply does not have the capability to
13 administer repair and maintenance priority guidelines for ALECs.

14

15 Q. DOES THIS SYSTEM OF PRIORITY INTERVALS APPROPRIATELY
16 ACCOMMODATE EMERGENCY SITUATIONS?

17

18 A. Yes. For example, in emergency restoration situations such as the total
19 outage of a hospital, BellSouth will respond when notified by an ALEC in
20 the same manner as if the hospital were served directly by BellSouth.
21 Similarly, when notified that an ALEC's residence end-user needs quicker
22 than normal restoration because of health reasons, BellSouth will respond
23 in the same fashion as if the end user were BellSouth's retail customer.
24 BellSouth does not charge for expediting repairs in such situations.

25

1 Both the general repair guidelines and the emergency restoration
2 procedures are set forth in the model Operational Understanding Between
3 BellSouth Maintenance Centers and CLEC Maintenance Centers, which is
4 available from BellSouth's ALEC Account Teams. The guide reflects the
5 interval guidelines that ALECs may use in discussing repair expectations
6 with their end-users.

7
8 Q. WHAT ISSUES DOES BELLSOUTH BELIEVE WOULD BE RAISED BY
9 AN EXPEDITING PROCESS FOR REPAIR ORDERS?

10
11 A. I wish to preface my answer by stating that BellSouth prioritizes all repair
12 orders with the objective of meeting or improving upon the standard,
13 published repair intervals. As I understand BlueStar's position, BlueStar
14 wants a provision in its interconnection agreement with BellSouth that
15 would assign a higher priority to the repairs to service to BlueStar's
16 customers, but only in the particular instances in which BlueStar elects, for
17 whatever reason, to demand the expedited service. To administer such a
18 provision would require establishing an administrative process to receive
19 and process particular repair requests, and would require the development
20 of a means of tracking additional costs on individual requests or of
21 developing "standard" expedite rates. Also, BellSouth would be
22 concerned about the potential issue of perceived discrimination of one
23 ALEC in favor of another ALEC.

24
25 Q. WHAT EXTRA COSTS DOES BELLSOUTH ANTICIPATE WOULD BE

1 INVOLVED IN AN EXPEDITED REPAIR PROCESS?

2

3 A. In addition to the initial administrative requirements mentioned above, the
4 most obvious example of extra costs would be the probable call out of
5 additional personnel on an overtime basis. BellSouth sizes its repair
6 forces to meet expected workloads required to meet standard intervals. If
7 something additional is required, then additional personnel must be called
8 upon. Should expediting come into widespread use, then additional
9 permanent employees would have to be added, the number of which
10 would be problematic given the unknown nature of the possible number of
11 calls. This would give rise to the issue of recovery of the additional cost of
12 the extra employees.

13

14 Q. HOW WOULD A DISCRIMINATION ISSUE ARISE WERE AN
15 EXPEDITING PLAN INCLUDED IN INTERCONNECTION
16 AGREEMENTS?

17

18 A. It is not difficult to imagine a situation in which two or more ALECs
19 simultaneously request expedited repair. If all available resources have
20 been consumed except for enough to handle one request, a difficult
21 decision would be required. It is possible that BellSouth could assess all
22 the expedited requests according to its standard priority process or use
23 some other standard to determine which request will be handled on an
24 expedited basis. Nonetheless, the ALEC whose order is not expedited
25 could possibly feel discriminated against.

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Issue 16: What is the appropriate method for BlueStar to gain access to BellSouth's riser cables, allowing BlueStar to provision its digital subscriber line access multiplexer (DSLAM)?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth should negotiate with BlueStar to reach agreement on rates, terms, and conditions for such access. For example, BellSouth has provided ALECs with the sub-loop element loop distribution, which includes the equivalents of riser cable and network terminating wire. This manner of access retains network reliability, integrity, and security for both BellSouth's network and the ALEC's network. BellSouth believes that BlueStar should not be allowed to use its DSLAM as the demarcation point in buildings nor be allowed to cross-connect directly to BellSouth's riser cable or network terminating wire (NTW) for the reasons I will discuss in this testimony.

Q. WHAT IS RISER CABLE?

A. In multi-story buildings, riser cable is that part of BellSouth's loop facilities extending from the building's cable entrance (often in the basement or on the first floor) and rising to each floor served by that cable. However, there is also a second piece of cable called Network Terminating Wire ("NTW") that connects with the riser cable and terminates at the end-

1 user's Network Interface Device ("NID"). The collective and more
2 accurate term for what is being discussed here is Intrabuilding Network
3 Cable ("INC"). INC refers not only to multi-story situations but campus
4 situations where cabling must be run from a central point to each of
5 multiple one-story buildings on the property. Thus INC, which includes
6 riser cable, is a part of that sub-loop element referred to as loop
7 distribution and is located on the network side of the demarcation point
8 between BellSouth's loop facilities and the inside wire at an end user
9 customer's premises.

10

11 Q. PLEASE DESCRIBE THE NETWORK INTERFACE DEVICE (NID)

12

13 A. Simply stated, the NID provides a demarcation point between BellSouth's
14 facilities (that is, the loop) and the customer's facilities (that is, the inside
15 wire). Thus, the NID provides a way to connect the loop to the inside wire
16 and provides a place to test and determine whether a given trouble
17 condition is the result of problems with the inside wire or problems in the
18 service provider's network.

19

20 Q. WHAT IS NETWORK TERMINATING WIRE (NTW)?

21

22 A. NTW is another part of the BellSouth loop facilities referred to as the sub-
23 loop element loop distribution. In multi-story buildings, network
24 terminating wire is connected to the riser cable and "fans out" the cable
25 pairs to individual customer suites or rooms on a given floor within that

1 building. In this sense, network terminating wire is the "last" part of the
2 loop on the network side of the demarcation point between the loop and
3 the inside wire.

4
5 To summarize, entrance cables are connected to riser cables which
6 extend the cable pair to each floor of the building served by a given
7 entrance cable. The riser cable pairs are in turn connected to network
8 terminating wire that is in turn connected to the NID. Thus, the NID
9 establishes the demarcation point between BellSouth's network and the
10 inside wire at the end user customer's premises with both network
11 terminating wire and riser cable being located on BellSouth's side of the
12 demarcation point and, thus, comprising part of BellSouth's network.

13
14 Q. IS EITHER NETWORK TERMINATING WIRE OR RISER CABLE (THAT
15 IS INC) CLASSIFIED AS INSIDE WIRE?

16
17 A. No. Per Orders in FCC Docket 79-105, wiring which is on the customer's
18 side of the network demarcation point is classified as inside wire. Since
19 neither network terminating wire nor riser cable is located on the
20 customer's side of the network demarcation point, it is not, by the FCC's
21 definition, "inside wire." BellSouth does not in any way restrict the use of
22 "inside wire", that is, wiring on the customer's side of the demarcation
23 point.

24
25 Q. WHAT ARE SUB-LOOP ELEMENTS?

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A. Sub-loop elements are the piece parts that make up the entire loop that extends from the BellSouth central office to the demarcation point between BellSouth's network and the inside wire at the end user customer's premises. Neither sub-loop elements, nor the piece parts referred to as network terminating wire and riser cable (collectively, INC) are classified as inside wire. Rather, since these are all on the network side of the demarcation point, they are all parts of BellSouth's loop facilities.

However, network terminating wire and/or riser cable might be thought of as "sub-sub-loop element unbundling" in that network terminating wire and riser cable are piece parts of the sub-loop element Loop Distribution.

Q. WHICH PARTY INSTALLS AND MAINTAINS INC?

A. In the situation we are discussing here, that is, in cases where the property owner has not elected to have a single demarcation point for all tenants in a building in accordance with the FCC's Part 68 rules (that is, has not established the demarcation at the Minimum Point Of Entry or MPOE), BellSouth has installed, operated, and maintained INC solely for use in providing service to its customers (both its end user customers and ALECs to whom BellSouth provides sub-loop elements on an unbundled basis). BellSouth includes INC in its mechanized inventory databases for assignment and use for new service or for repair purposes as needed.

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Q. DOES BELLSOUTH PROVIDE RISER CABLE OR NETWORK TERMINATING WIRE TO OTHER ALECs PURSUANT TO INTERCONNECTION AGREEMENTS OR OTHER SUCH AGREEMENTS?

A. Yes. Other telecommunications service providers, including both ALECs and Shared Tenant Service Providers, recognize BellSouth's ownership of riser cable and network terminating wire. BellSouth has reached agreement on the use of its riser cable and network terminating wire with several such companies. Regarding access to riser cable, BellSouth will negotiate with the requesting ALEC to reach agreement on rates, terms, and conditions for such access. BellSouth has provided ALECs with the sub-loop element loop distribution, which includes the equivalents of riser cable and network terminating wire.

BellSouth's proposed manner of access retains network reliability, integrity, and security for both BellSouth's network and the ALEC's network.

Q. WHAT ARE THE FEDERAL COMMUNICATIONS COMMISSION'S ("FCC") REQUIREMENTS ON NETWORK SECURITY.

A. In its First Report and Order (CC Docket No. 96-98, released August 8, 1996) at paragraph 198, the FCC included the following statement:

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“Specific, significant, and demonstrable network reliability concerns associated with providing interconnection or access at particular point, however, will be regarded as relevant evidence that interconnection or access at that point is technically infeasible.”

The FCC elaborated further on this point at paragraph 203 of that same order, by stating:

“We also conclude, however, that legitimate threats to network reliability and security must be considered in evaluating the technical feasibility of interconnection or access to incumbent LEC networks. Negative network reliability effects are necessarily contrary to a finding of technical feasibility. *Each carrier must be able to retain responsibility for the management, control, and performance of its own network.*” (Emphasis added.)

Thus, the FCC’s First Report and Order provides clear guidance to find that allowing an ALEC direct access to BellSouth’s riser cable or network terminating wire is not technically feasible.

In fact, one important aspect of the FCC’s definition of “technical feasibility” is the recognition that methods of interconnection or access that adversely affect network reliability are “relevant evidence that interconnection or access at that particular point is technically infeasible.”

1 (First Report and Order, ¶¶ 198, 203) Thus, BlueStar's proposal must be
2 examined in light of its adverse effect on network reliability and security.

3
4 Q. WHEN YOU EXAMINE BLUESTAR'S PROPOSAL IN LIGHT OF ITS
5 ADVERSE EFFECT ON NETWORK RELIABILITY AND SECURITY,
6 WHAT IMPACT COULD IT HAVE ON END USER CUSTOMERS?
7

8 A. Closer examination of BlueStar's proposal immediately reveals that
9 BlueStar's technicians could, intentionally or unintentionally, disrupt the
10 service provided by BellSouth to its end user customers or the end user
11 customers of ALECs using unbundled sub-loop elements acquired from
12 BellSouth. The FCC requires that "each carrier must be able to retain
13 responsibility for the management, control, and performance of its own
14 network." (First Report and Order, ¶ 203) BlueStar's proposal strikes at
15 the heart of this provision and, if allowed, would render BellSouth
16 incapable of managing and controlling its network in the provision of
17 service to its end user customers. Clearly, the adoption of BlueStar's
18 proposal could place BellSouth in jeopardy of violating the FCC's rules.
19

20 Q. IS BLUESTAR'S DSLAM AN APPROPRIATE POINT OF
21 INTERCONNECTION?
22

23 A. No. Points of interconnection, wherever they are located, establish where
24 one service provider's network ends (and thus its responsibilities for
25 provisioning, maintenance, and repair) and where another service

1 provider's network begins. BellSouth believes some mutually accessible
2 device such as a connector block is a far more appropriate point of
3 interconnection than a DSLAM. I do not believe BlueStar would want
4 BellSouth doing testing and related work on BlueStar's DSLAM equipment
5 to determine whose network needed repair. Such would be the case,
6 however, if BlueStar's DSLAM equipment also served as the point of
7 interconnection between BellSouth's network and BlueStar's network.
8

9 Q. HAS THE MATTER OF APPROPRIATE ACCESS TO NETWORK
10 TERMINATING WIRE BEEN CONSIDERED BY THIS COMMISSION?
11

12 A. Yes. The issues raised here are virtually identical to those considered in
13 the Petition for Arbitration by MediaOne for Arbitration, Docket No.
14 990149-TP.
15

16 Q. WHAT DID MEDIAONE WANT IN THAT DOCKET?
17

18 A. MediaOne wanted direct access to BellSouth's terminals at which
19 BellSouth terminates its network terminating wire for multiple dwelling
20 units.
21

22 Q. WHAT WAS BELLSOUTH'S PROPOSAL AS PRESENTED IN THE
23 MEDIAONE DOCKET?
24

25 A. I proposed the following in my direct testimony:

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“BellSouth offers a reasonable method of access to the NTW in BellSouth’s garden terminal. Using BellSouth’s proposed method, the ALEC installs its own terminal in proximity to the BellSouth garden terminal. BellSouth installs an access terminal that contains a cross-connect panel on which BellSouth will extend the ALEC requested NTW pairs from the garden terminal. The ALEC will then extend a tie cable from their terminal and connect to the pairs they have requested. The ALEC would then install its own Network Interface Device (“NID”) within the end-user apartment and connect the ALEC requested pair(s) to this NID. This manner of access retains network reliability, integrity, and security for both BellSouth’s network and the ALEC’s network.”

Q. WHAT WAS THE COMMISSION'S RULING IN THE MEDIAONE DOCKET?

A. In its Order No. PSC-99-2009-FOF-TP issued October 14, 1999, the Commission stated the following:

“Based on the evidence presented at the hearing, we believe that it is in the best interests of the parties that the physical interconnection of MediaOne’s network be achieved as

1 proposed by BellSouth. We find from the record that at least
2 one other ALEC in Florida and an unknown number of
3 ALECs in other states have been able to provide service
4 based on BellSouth's NTW proposal.”

5
6 Q. IS THE USE OF NETWORK TERMINATING WIRE IN MULTIPLE
7 DWELLING UNITS SIMILAR TO THE USE OF RISER CABLE
8 AND NETWORK TERMINATING WIRE IN MULTI-STORY
9 BUILDINGS?

10
11 A. Yes. In my view, the serving principles and technology are
12 essentially the same.

13
14 Q. HAVE YOU PREPARED AN EXHIBIT WHICH ILLUSTRATE'S
15 BELL SOUTH'S PROPOSAL IN THIS DOCKET?

16
17 A. Yes. Exhibit WKM-1 contains four (4) pages that I hope aid in
18 understanding this issue. Page 1, which shows the typical access to
19 unbundled NTW in a "garden" apartment, will be familiar to the
20 Commission as it is the same information included in Exhibit WKM-1 in the
21 MediaOne Arbitration. While the issue I am discussing here is the proper
22 methods of access to BellSouth's riser cable, the conceptual issue is the
23 same. The apartments on page 1 could as easily be separate floors in a
24 multi-story building. The point to be made with regard to BlueStar's
25 proposal is that the Commission has approved the concept of the access

1 terminal that is cross-connected by tie cable pairs with the terminals of
2 both BellSouth and the ALEC thus allowing an ALEC access while
3 preserving network reliability and security. Page 2 shows a typical serving
4 arrangement in multi-story buildings for which BellSouth is the sole
5 provider of telephone service. Page 3 shows BellSouth's proposed form
6 of access for BlueStar and any other ALEC. It utilizes an access terminal
7 that is cross-connected by tie cable with the terminals of both BellSouth
8 and BlueStar. Page 4 shows BellSouth's understanding of BlueStar's
9 proposed form of access. It shows that both BellSouth and BlueStar's
10 loop facilities would be terminated in the same terminal, thereby giving
11 BlueStar direct access to all the riser cable pairs including those used by
12 BellSouth's end user customers and other ALECs' end user customers in
13 cases where the ALEC provides service in part via unbundled sub-loop
14 elements acquired from BellSouth.

15
16 Q. IS THE METHODOLOGY QUOTED ABOVE APPROPRIATE FOR
17 PROVIDING BLUESTAR ACCESS TO BELLSOUTH'S RISER CABLE
18 WHILE ALSO ALLOWING BLUESTAR TO PROVISION ITS DSLAM?

19
20 A. Yes. BlueStar would provision its DSLAM on its side of the access
21 terminal thereby removing the DSLAM as a matter of concern to
22 BellSouth.

23
24 Q. DOES BELLSOUTH'S PROPOSAL ADEQUATELY ADDRESS
25 NETWORK RELIABILITY AND SECURITY CONCERNS?

1

2 A. Yes. The access terminal provides a technically feasible method of
3 separating BellSouth's network and BlueStar's network in a manner which
4 permits each company complete control of and responsibility for the
5 maintenance and repair of its facilities.

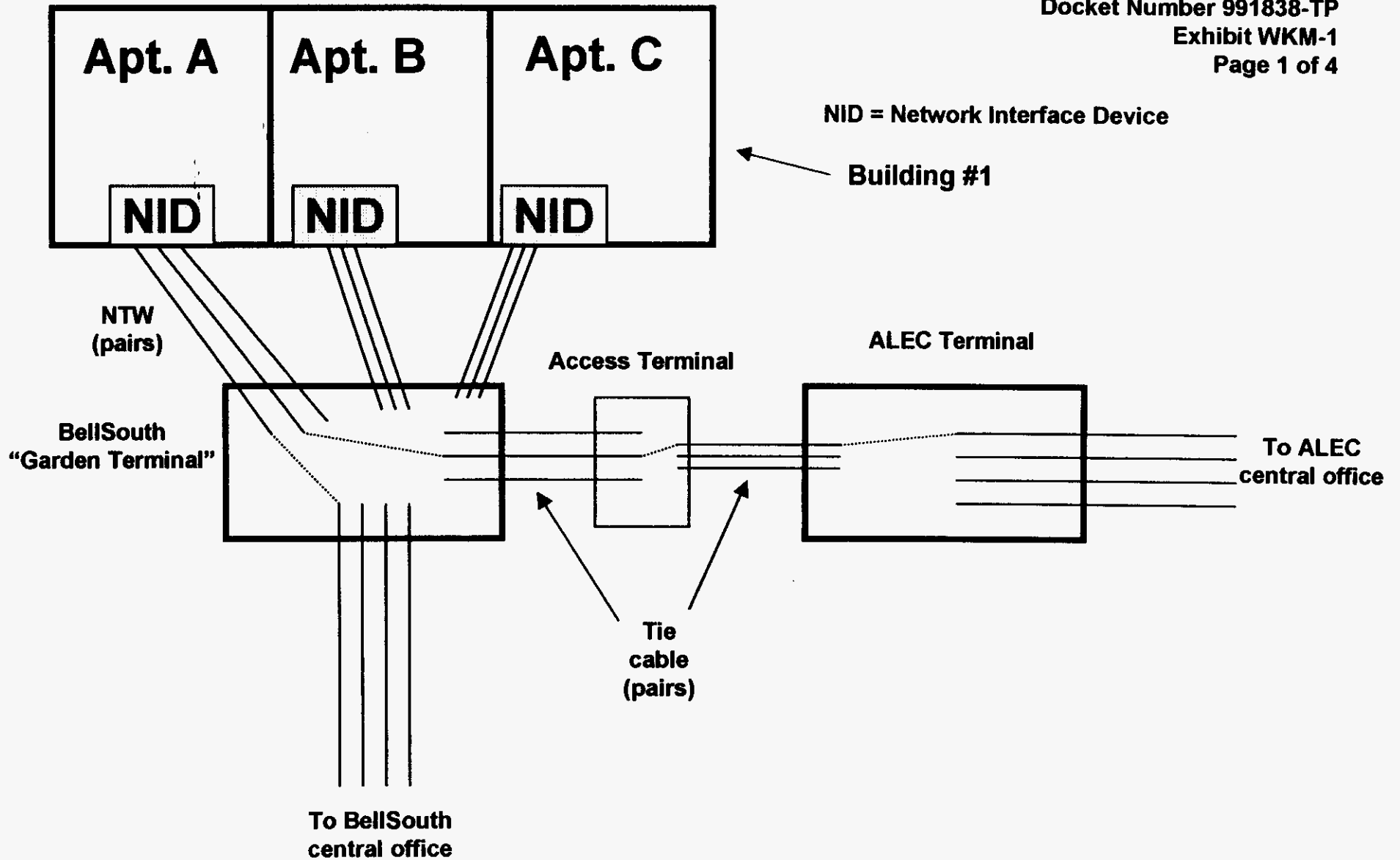
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7 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

8

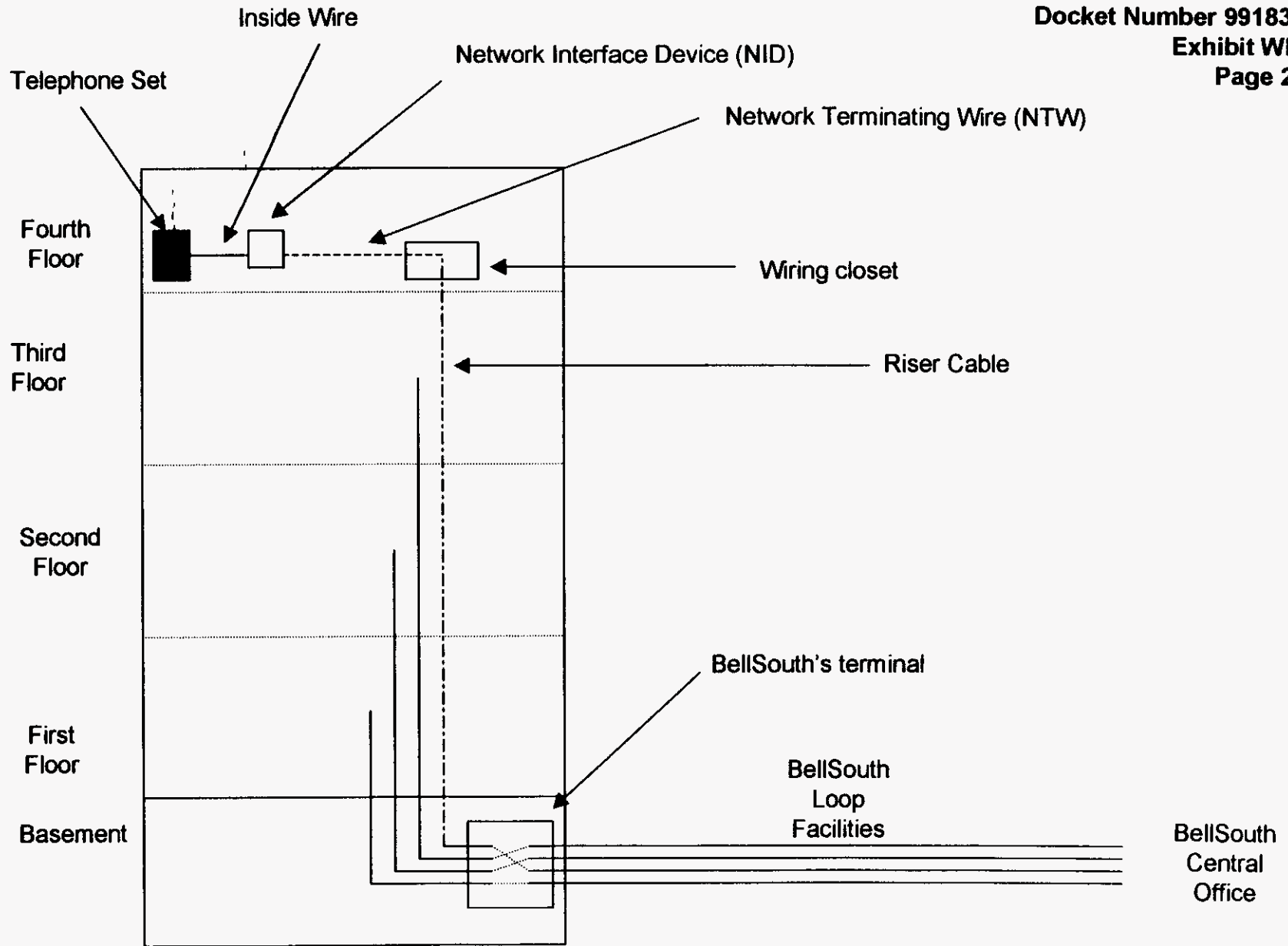
9 A. Yes.

**Typical access to unbundled network terminating wire
in "garden" apartment**



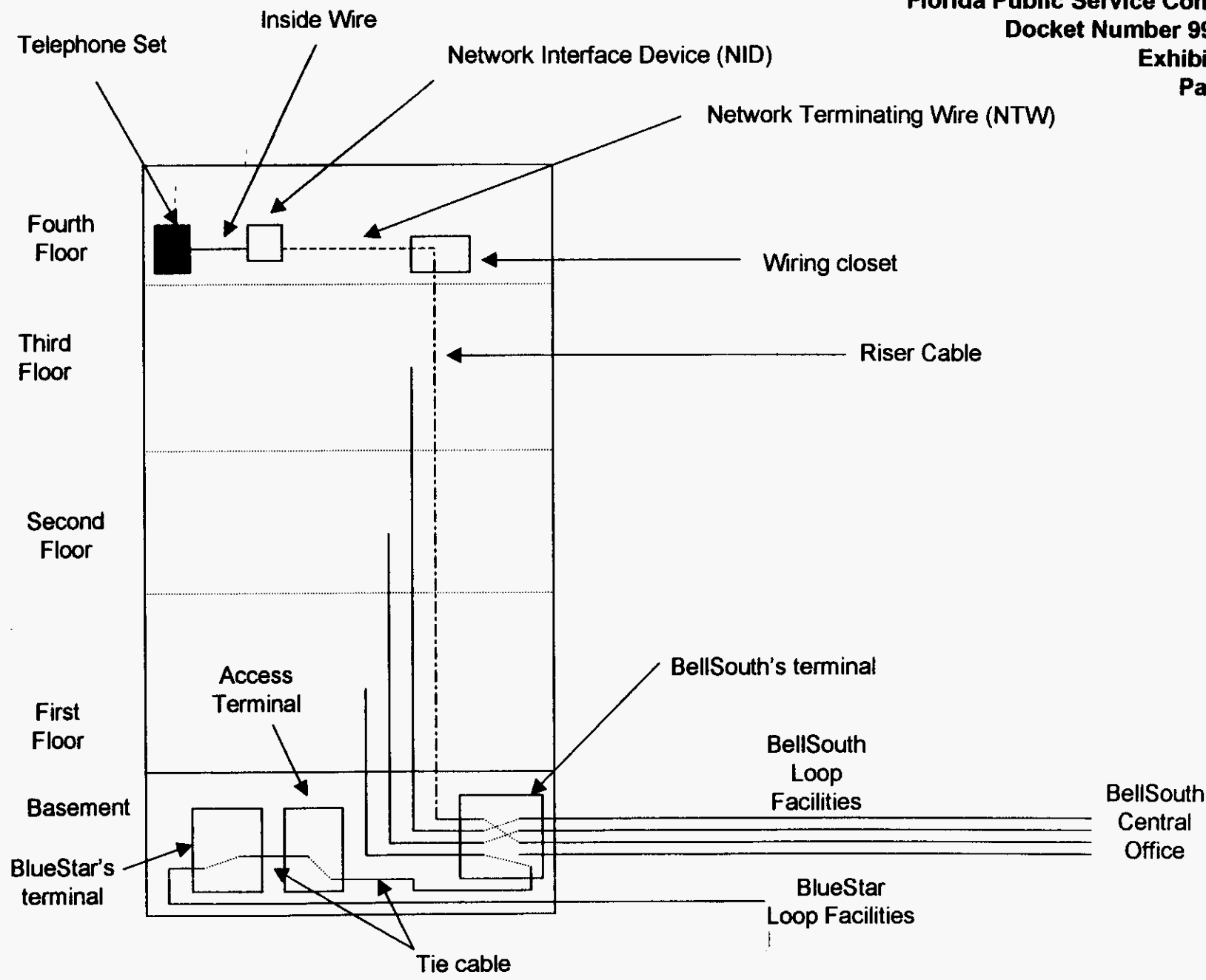
Typical existing serving arrangement

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BellSouth's proposed form of access

BellSouth Telecommunications, Inc.
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BellSouth's understanding of BlueStar's proposed form of access

**BellSouth Telecommunications, Inc.
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