

Legal Department

NANCY B. WHITE
General Attorney

BellSouth Telecommunications, Inc.
150 South Monroe Street
Room 400
Tallahassee, Florida 32301
(404)335-0710

October 15, 1996

Mrs. Blanca S. Bayo
Director, Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399

RE: Docket No. 961150-TP

Dear Mrs. Bayo:

Enclosed are an original and fifteen copies of BellSouth Telecommunications, Inc.'s Direct Testimony of Vic Atherton, Daonne Caldwell, Gloria Calhoun, Keith Milner, Tony Pecoraro, Walter Reid, Robert Scheye, and Al Varner. Please file these documents in the captioned docket.

A copy of this letter is enclosed. Please mark it to indicate that the original was filed and return the copy to me. Copies have been served on the parties shown on the attached Certificate of Service.

Sincerely,

Nancy B. White
Nancy B. White (AW)

Enclosures

cc: All Parties of Record
A. M. Lombardo
R. G. Beatty
W. J. Ellenberg

Atherton	11030-96	✓
Caldwell	11031-94	✓
Calhoun	11034-96	✓
Milner	11035-96	✓
Pecoraro	11036-96	✓
Reid	11037-94	✓
Scheye	11038-96	✓
Varner	11039-96	✓

- ACK _____
- AFA _____
- APP _____
- CAF _____
- CMU _____
- CTR _____
- EAG _____
- LEG 2
- LIN 5
- OPC _____
- RCH _____
- SEC 1
- WAS _____
- OTH _____

CERTIFICATE OF SERVICE

Docket No. 961150-TP

I HEREBY CERTIFY that a copy of the foregoing has been furnished by Federal Express this 15th day of October, 1996 to:

Benjamin W. Fincher
Sprint
3100 Cumberland Circle
#802
Atlanta, GA 30339

Monica Barone
Florida Public Service
Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

Nancy B. White (M)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BELLSOUTH TELECOMMUNICATIONS, INC.
DIRECT TESTIMONY OF KEITH MILNER
BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 961150-TP
October 15, 1996

Q. Please state your name, address and position with BellSouth Telecommunications, Inc. ("BellSouth" or "The Company").

A. My name is W. Keith Milner. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375. I am a Director - Strategic Management for BellSouth Telecommunications, Inc. I have served in this role since February, 1996 and have been involved with the management of certain issues related to local interconnection and unbundling.

Q. Please summarize your background and experience.

A. My business career spans over 26 years and includes responsibilities in the areas of network planning, engineering, training, administration and operations. I have held positions of significant 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

- ACK _____
- AFA _____
- APP _____
- CAF _____
- CMU _____
- CTR _____
- EAG _____
- LEG _____
- LIN _____
- OPC _____
- RCH _____
- SEC _____
- WAS _____
- OTH _____

RECEIVED & FILED
[Signature]
EPSC-BUREAU OF RECORDS

DOCUMENT NUMBER-DATE
11035 OCT 15 96
FPSC-RECORDS/REPORTING

1 operation (including research and development) in both the domestic
2 and 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 have a Master of Business Administration
7 Degree from Georgia State University in Atlanta, Georgia (1992).

8

9 Q. Have you testified previously before any state public service
10 commission; and if so, briefly describe the subject of your testimony.

11

12 A. I testified before the state Public Service Commission in Georgia, the
13 Utilities Commission in North Carolina, and before this Commission on
14 the issue of technical capabilities of the switching and facilities network
15 regarding the introduction of new service offerings, expanded calling
16 areas, etc.

17

18 Q. What is the purpose of your testimony in this proceeding?

19

20 A. The purpose of my testimony is to discuss the technical feasibility of
21 unbundling certain network elements as requested by Sprint. The
22 following discussion is based on my understanding of Sprint's request
23 set forth in Sprint's Petition For Arbitration in this proceeding as well as
24 direct testimony filed by Sprint in this proceeding.

25

1 Specifically, I will address three issues for which no agreement
2 between BellSouth and Sprint has been reached. The first issue
3 concerns the selective routing of calls, in the resale environment, from
4 Sprint customers who dial 0-, 411 or 611, for example, to Sprint
5 operator or repair service platforms instead of BellSouth's operator or
6 repair service platforms. The second issue concerns access to
7 structures such as poles, ducts, conduits and rights of way. The third
8 issue concerns BellSouth's providing to Sprint certain engineering
9 records for poles, conduits, ducts and rights of way.

10

11 ***Local Switching With Selective Routing***

12

13 Q. Please define the Network Element Local Switching.

14

15 A. Local Switching is the Network Element that provides the functionality
16 required to connect the appropriate originating lines or trunks to a
17 desired terminating line or trunk. The functionality includes all of the
18 features, functions, and capabilities that the switch is capable of
19 providing for the given class of service, including but not limited to:

20

21 • Line signaling and signaling software

22

23 • Digit reception

24

25 • Dialed number translations

- 1 • **Call screening**
- 2
- 3 • **Routing**
- 4
- 5 • **Recording**
- 6
- 7 • **Call supervision**
- 8
- 9 • **Dial tone**
- 10
- 11 • **Switching**
- 12
- 13 • **Telephone number provisioning**
- 14
- 15 • **Announcements**
- 16 • **Carrier pre-subscription (for example, long distance company**
- 17 **intraLATA toll)**
- 18
- 19 • **Testing**

20 **It provides access to capabilities such as calling features and**
21 **capabilities, Centrex and Automatic Call Distributor (ACD). It also**
22 **provides access to interoffice transport, signaling (ISDN User Part or**
23 **ISUP) and Transaction Capabilities Application Part (TCAP), and**
24 **platforms such as adjuncts, Public Safety Systems (911), BellSouth**
25

1 operator services, BellSouth directory services, BellSouth repair service
2 and Advanced Intelligent Network (AIN) services.

3

4 Q. Will BellSouth provide unbundled switching as defined above?

5

6 A. Yes, however there is a difference between what BellSouth will provide
7 as unbundled local switching and Sprint's request for unbundled local
8 switching. What Sprint defines as "local switching" is more
9 appropriately referred to as "local switching with selective routing".

10

11 Sprint requested that the Commission order BellSouth to provide
12 selective routing arrangements that will enable an end-user (for which
13 Sprint acquires service from BellSouth and resells that same service) to
14 reach an Sprint operator or repair service platform just as a BellSouth
15 customer can reach a BellSouth operator service or repair service
16 platform today (i.e., through dialing 0, 411 or 611).

17

18 Q. What is your understanding of the FCC's conclusions regarding the
19 technical feasibility of unbundling this Local Switching?

20

21 A. The FCC concluded that Local Switching, including the selective
22 routing functionality, (or "customized routing" as referred to in the
23 Order) is technically feasible in some circumstances. The FCC's Order
24 states "We recognize that the ability of an incumbent LEC to provide
25 customized routing to a requesting carrier will depend on the capability

1 of the particular switch in question. Thus, our requirement that
2 incumbent LECs provide customized routing as part of the functionality
3 of the local switching element applies, by definition, only to those
4 switches that are capable of performing customized routing." FCC
5 Order 96-98 at Paragraph 418. It is important to note that the FCC's
6 criteria for technical feasibility refers to the capabilities of an individual
7 switch rather than the more general expression of the capabilities of a
8 given switch type. Specifically, the FCC apparently concluded that
9 customized routing is technically feasible because "many" switches are
10 capable of providing such customized routing. The FCC recognized,
11 however, that there are differences in the capabilities of the various
12 switches to accommodate customized routing. BellSouth believes that
13 it was on the basis of these differing capabilities that the FCC limited its
14 requirement to provide customized routing to those switches that are
15 capable of providing such customized routing. This analysis forms the
16 basis for my opinion that the FCC did not intend as narrow a definition
17 of technical feasibility as Sprint would have us believe. The 1AESS
18 can provide some customized routing -- it just exhausts that capability
19 more quickly.

20
21 Q. Are there other switch types that are very limited in their ability to
22 provide customized routing?

23
24
25

17 demand customized routing in a given switch. As BellSouth can
18 demonstrate, such a capability exists only in a very small fraction of the
19 switches in the BellSouth network.

20

21 Q. Why is BellSouth not able to provide the requested unbundled Network
22 Element?

23

24 A. First of all, the selective routing functionality does not exist as a
25 separate switch capability. The ability to selectively route calls to

1 termination points specified by resellers (differing from BellSouth
2 designated points) would be a new capability. BellSouth made
3 inquiries of two switching equipment manufacturers (Lucent
4 Technologies and Nortel) regarding the current capabilities of their
5 flagship switching products. Lucent Technologies responded that "This
6 feature, Alternate Local Exchange Routing Capability or Third PIC, is
7 not currently available on the 5ESS switch." Similarly, Nortel
8 responded that "Currently Nortel's DMS10 and DMS100 Switching
9 Systems do not have the requested capability as outlined in you
10 Request For Feature BSO000403, SFIS #30863."

11
12 Second, BellSouth analyzed the technical feasibility of four alternatives
13 for the capability of providing selective routing of Sprint customers to
14 Sprint operator service platforms. Not one of the four alternatives
15 accommodate the selective routing that Sprint has requested. The
16 following four alternative serving arrangements were analyzed:

- 17
18 • Use of Line Class Codes (LCCs).
19 • Use of switching system translations capabilities to create
20 individual dialing plans.
21 • Use of AIN capabilities to provide selective routing.
22 • Use of other switch-based capabilities to provide selective
23 routing.

24
25

1 The table in Attachment WKM-1 shows the results of BellSouth's
2 analysis of using a capability of the switch referred to Line Class Codes
3 (LCCs) to accommodate selective (customized) routing. The
4 percentages shown are the proportions of installed switches that are
5 not capable of providing the selective routing requested by Sprint with
6 varying quantities of ALECs.

7

8 Q. Do you have an opinion as to how many ALECs would be expected to
9 resell BellSouth local services?

10

11 A. It is difficult to forecast the extent to which companies will take
12 advantage of a new business opportunity. However, I would consider
13 as a model the events that took place when competition came to the
14 domestic long distance market beginning about 1982. The Equal
15 Access Order originally set a requirement for a 3 digit carrier code
16 under the assumption that allowing for 1,000 long distance companies
17 would be enough to last forever. The format of the carrier code was
18 later modified to allow for greater than 1000 long distance companies.

19

20 Within a period of two years the number of facilities based and reseller
21 long distance companies exceeded 500, or an average of 10 per state
22 with higher concentrations in the larger metropolitan areas. I do not
23 think it unreasonable to believe the larger metropolitan areas could
24 have about 50 resellers.

25

1 There is also the likelihood that one or more of the resellers would
2 establish authorized sales agencies which in turn may want unique
3 routing or branding for their subscribers.

4

5 Q. Please summarize BellSouth's conclusions regarding the use of LCCs
6 to accommodate selective routing.

7

8 A. The conclusions that may be drawn from the information in the table in
9 Attachment WKM-2 include the following:

10

11 • Use of LCCs as a method of providing selective routing in the
12 resale environment only 'works' for BellSouth plus one ALEC
13 (that is, Sprint) in 76% of the switches in BellSouth's network in
14 Florida (100% - 24%). Such a limited capability will produce
15 widespread confusion if the Commission orders BellSouth to
16 provide the capability because customers served by certain
17 switches would have their calls routed differently than customers
18 served by other switches.

19

20 • In the robust, competitive environment that BellSouth expects to
21 operate, most or all companies would demand similar treatment
22 of calls from their resold customers to their own branded
23 operators. Virtually all of BellSouth's switches would be
24 exhausted (82%) in the scenario of BellSouth competing with
25 five (5) or more ALECs in the near future. BellSouth expects to

1 face at least eight (8) or more competitors in major markets in
2 Florida. In the likely 'real world' of BellSouth and eight ALEC
3 competitors, none of BellSouth's switches in Florida (of the types
4 1AESS, 5ESS and DMS-100) could accommodate the selective
5 routing capability. All of these switches would reach exhaustion
6 based on LCC utilization.

7

8 ***Switch Translations Capabilities***

9

10 Q. Please discuss BellSouth's findings regarding the use of switch
11 translations capabilities to accommodate selective routing.

12

13 A. BellSouth's analysis of the use of switch translation capabilities to
14 create individual dialing plans likewise requires the duplication of
15 existing LCCs. Due to this dependence on LCCs to implement the
16 use of switching translation capabilities, the use of translations
17 capabilities is also not technically feasible. BellSouth is aware of no
18 technically feasible means of using switch translations capabilities to
19 create the selective routing capability in a resale environment as
20 requested by Sprint.

21

22 A second translations capability that was examined in terms of its ability
23 to accommodate Sprint's request is the use of certain code conversion
24 tables. The code conversion provides the capability to associate
25 directory assistance, repair service and 911 services to a particular

1 telephone number. The problem with this solution is that the code
2 conversion works on a rate area basis. In other words, all customers in
3 a particular rate area will be routed to the individual destinations for
4 each the above services, as designated in the code conversion form.
5 Code conversion could not be performed on an individual customer
6 basis.

7

8 Q. Are there other technical limitations to using switch translations
9 capabilities to accommodate selective routing?

10

11 A. Yes. Even if the technical limitations described earlier could be
12 overcome, there are other switch resources that would become limiting
13 factors in each switch technology.

14

15 BellSouth analyzed the use of each of these other switch resources
16 and concludes that such use is not technically feasible. The switch
17 resources analyzed include:

18

- 19 • Digit prefixing and deleting
- 20 • Screening Indices
- 21 • Directory assistance trunk group capacity
- 22 • Rate centers

23

24

25 ***Advanced Intelligent Network (AIN) Capabilities***

1

2 Q. Please discuss BellSouth's findings regarding the use of AIN
3 capabilities to accommodate selective routing.

4

5 A. BellSouth does not currently have an AIN capability that will provide the
6 selective routing capability that Sprint has requested. Further study is
7 required to determine if a new AIN capability could provide such a
8 functionality in the BellSouth switches that are AIN equipped (that is,
9 5ESS and DMS-100 offices that are equipped for AIN Release 0.1).
10 BellSouth asserts that the use of existing AIN capabilities to effect the
11 selective routing that Sprint has requested is not technically feasible.

12

13 ***Other Switch Based Capabilities***

14

15 Q. Please discuss BellSouth's findings regarding the use of other switch
16 based capabilities to accommodate selective routing.

17

18 A. The capability to provide a selective routing capability where customer
19 routing patterns can be determined based upon a preferred LEC
20 indicator (rather than using LCCs, switch translations capabilities or
21 AIN capabilities as discussed above) is not available in any end office
22 switch in BellSouth today.

23

24 Bell Communications Research (Bellcore) at present supports a
25 preferred carrier indicator only for calls bound for IntraLATA carriers.

1 interLATA carriers or international carriers. These indicators are
2 discussed in Bellcore's Local Switching Systems Generic
3 Requirements (LSSGR). Development would be needed to create
4 requirements for a similar indicator for LECs. Calls originating from
5 customers could be automatically routed to their preferred local carrier
6 unless the customer specifies a different carrier by dialing a special
7 access code prefix. Again, Bellcore does not at present support a
8 preferred carrier indicator feature for LECs.

9
10 For these reasons, the use of other existing switch based capabilities
11 to effect the selective routing that Sprint has requested is not
12 technically feasible.

13
14 Q. Please summarize BellSouth's opinion of the technical feasibility of
15 customized routing.

16
17 A. BellSouth believes that the FCC did not intend to conclude that
18 customized routing is technically feasible because it can be
19 accommodated only in some switches. Clearly, the test the FCC used
20 in identifying the 1AESS as a switch in which selective routing is not
21 technically feasible relied on an evaluation of the capacity of the switch
22 to accommodate all entrants. Using that test, each switch must be
23 examined individually to assess that switch's capacity. None of the
24 switches in BellSouth's network in Florida that BellSouth studied are

25

1 capable of accommodating customized routing for more than just a few
2 ALECs.

3

4 ***Rights of Way (ROW), Conduits and Pole Attachments***

5

6 Q. Please define Sprint's request.

7

8 A. Sprint has requested access to ROW, conduits, pole attachments and
9 any other pathways.

10

11 Q. Will BellSouth provide the requested unbundled Network Element?

12

13 A. Yes.

14

15 Q. Are there procedural issues on which BellSouth and Sprint have not
16 agreed?

17

18 A. Yes. I will discuss two such issues. The first refers to the amount of
19 space in conduits or on poles that BellSouth should be allowed to
20 reserve for its own uses. The second issue refers to the proprietary
21 nature of certain records of conduits and poles.

22

23 Q. Please discuss BellSouth's position regarding the amount of space in
24 conduits or on poles it should be allowed to reserve.

25

1 A. BellSouth's position is that it is entitled to reserve in advance five year's
2 worth of capacity for itself, including any necessary spare capacity for
3 maintenance. BellSouth has agreed to provide Sprint equal and non-
4 discriminatory access to poles, duct, conduit (excluding maintenance
5 spares), entrance facilities, and ROW under its control which is neither
6 required by BellSouth in its five-year forecast nor required by BellSouth
7 as a maintenance spare. The equal and non-discriminatory access
8 shall be on terms and conditions equal to that provided by BellSouth to
9 itself or to any other party, except that such access shall not include
10 that amount of capacity required by BellSouth's five-year forecast and
11 BellSouth's maintenance spares. Further, terms and conditions of such
12 access shall not include the mandatory conveyance of BellSouth's
13 interest in real property involving third parties.

14

15 Q. Should BellSouth's reserved conduit and pole capacity be reduced to
16 less than five years?

17

18 A. No. BellSouth's planning and construction program is forecast for five
19 years for budgeting, growth forecasting and construction program
20 planning. This allows for orderly construction of required facilities in
21 order to be able to properly respond to customer requests for service.
22 The construction program is reviewed annually and revised
23 appropriately. This planning window reflects long held industry
24 practices that pre-date the 1984 Divestiture. Foregoing BellSouth's five
25 year planning cycle will have adverse effects on BellSouth's ability to

1 provide high quality, reliable service to end user customers in a timely
2 manner.

3

4 Q. Please explain BellSouth's position regarding spare maintenance
5 capacity.

6

7 A. BellSouth does not propose to give access to its maintenance spare at
8 any time. A maintenance spare is simply a place reserved on the pole
9 or in the conduit in which BellSouth can place facilities quickly in
10 response to emergency situations such as cut or destroyed cables.
11 Reserving a maintenance spare is a standard telecommunications
12 industry practice. Extensive delays in service restoration will be
13 experienced if BellSouth's maintenance spare is forfeited. In addition
14 to emergency restoration situations the maintenance spare is also used
15 during the testing of new cables.

16

17 Q. What is your understanding of the FCC's conclusions regarding the
18 issue of the amount of space in conduits or on poles that BellSouth
19 should be allowed to reserve?

20

21 A. In the issue at hand, the FCC apparently concludes that BellSouth may
22 not reserve space in conduits or on poles for its own uses differently
23 than it would allow competitors to reserve space in BellSouth's conduits
24 and on BellSouth's poles.

25

1 Q. What is BellSouth's response to the FCC's position?

2

3 A. The FCC's apparent conclusion will lead to one of two outcomes,
4 neither of which is practical or acceptable. In the first outcome, no
5 reservations are made by either BellSouth or competitors, and conduit
6 and pole space are allocated on a first come, first served basis. As a
7 result, BellSouth's ensuring that adequate capacity is available in a
8 timely manner for all requesting companies would become difficult if not
9 impossible. Also in this instance, emergency situations could occur in
10 locations where no spare capacity is available, thus potentially delaying
11 restoration of service.

12

13 In the second outcome, reservations are accepted from any party and
14 for whatever time frame is desired. The 1996 Telecommunications Act
15 does not require BellSouth to reserve space for competitors in facilities
16 for future needs of competitors. However, should BellSouth agree to
17 reserve space for possible future use by Sprint, the result could be that
18 BellSouth incurs needless expenditures for construction (materials and
19 labor) of facilities that may or may not ultimately be used. If the
20 reserving party were not required to pay for both the space used plus
21 the space reserved, inefficient use of the network would be the likely
22 result. Also, it would imply that BellSouth would be required to
23 physically monitor any space that Sprint has reserved to make sure
24 that no other company used that reserved space.

25

1 **Engineering Records**

2

3 Q. Will BellSouth provide the copies of conduit and pole engineering
4 records as requested by Sprint?

5

6 A. No. Rather than agree to Sprint's request that BellSouth routinely
7 provide them copies of all its engineering records (including certain
8 records sometimes referred to as "plats"), BellSouth has agreed to
9 provide Sprint with needed information within twenty days following
10 such a request. BellSouth will allow designated Sprint personnel, or
11 agents acting on their behalf, to examine the engineering records
12 pertaining to such requests that BellSouth determines would be
13 reasonably necessary to complete the job.

14

15 Engineering records contain highly proprietary information. If BellSouth
16 were to provide engineering records to Sprint, BellSouth would be
17 obligated to provide these types of records to all parties upon request.
18 Further, the FCC's Order accords BellSouth reasonable protection of its
19 proprietary information that would be contained in the records sought
20 by Sprint.

21

22 Q. Please summarize your testimony.

23

24 A. BellSouth has demonstrated that there is, using available network
25 resources and capabilities, no technically feasible method of providing

1 the selective routing capability in the "real world" of multiple local
2 exchange companies who would each demand the same capabilities.
3 The issue of selective routing is not limited to Florida but is instead an
4 industry limitation, national in scope. Any technical solution must work
5 in a variety of situations with a variety of service providers and their
6 variety of equipment and their variety of network configurations. It is
7 BellSouth's understanding that AT&T has proposed this same issue to
8 the Industry Carriers Compatibility Forum (ICCF) for resolution.
9 BellSouth agrees with AT&T that a national forum such as the Industry
10 Carriers Compatibility Forum is the vehicle which has the necessary
11 expertise to successfully resolve this complex issue. The Commission
12 should defer this issue to the ICCF for resolution.

13
14 BellSouth will make access to its poles, ducts, conduits and rights of
15 way available to Sprint on nondiscriminatory rates, terms and
16 conditions, consistent with BellSouth's policy to reserve five years of
17 capacity for itself for both its growth and maintenance requirements.
18 The reservation of emergency capacity in these facilities benefits all
19 users of these facilities including end user customers by allowing for
20 timely restoration of service in emergency situations. BellSouth will
21 allow access to the remaining facilities on a first come, first served
22 basis.

23
24 The information contained in the engineering records requested by
25 Sprint contains highly sensitive and proprietary information. Such

1 information has commercial value to BellSouth and access to that
2 information must be strictly controlled. BellSouth has agreed to provide
3 information to Sprint on a timely basis and will allow Sprint personnel
4 access to records or drawings pertaining to the request if BellSouth
5 determines such access is reasonably required to complete the job.

6

7 Q. Does this conclude your testimony?

8

9 A. Yes.

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DMS-100 and DMS- 100/200	30%	83%	100%	100%
TOTAL	24%	49%	82%	100%