Legal Department

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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	11031-96
Calhoun	11034-96
Milner	11035-96
Pecoraro	11036-96
Reid	11037-96
Scheye	11038-96
Varner	11039-96

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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 (pw)

1   **BELLSOUTH TELECOMMUNICATIONS, INC.**

2   **DIRECT TESTIMONY OF D. DAONNE CALDWELL**

3   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

4   **DOCKET NO. 961150-TP**

5   **OCTOBER 15, 1996**

6

7   Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.

8

9   A. My name is D. Daonne Caldwell. My business address is 675 W. Peachtree St.,

10   N.E., Atlanta, Georgia. I am a manager in the Finance Department of BellSouth

11   Telecommunications, Inc. (hereinafter referred to as "BellSouth" or "the

12   Company"). My area of responsibility relates to economic service costs.

13

14   Q. PLEASE GIVE A BRIEF DESCRIPTION OF YOUR EDUCATIONAL

15   BACKGROUND AND WORK EXPERIENCE.

16

17   A. I attended the University of Mississippi, graduating with a Master of Science

18   Degree in mathematics. I have attended numerous Bell Communications

19   Research, Inc. (BellCore) courses and outside seminars relating to service cost

20   studies and economic principles.

21

22   My initial employment was with South Central Bell in 1976 in the Tupelo,

23   Mississippi, Engineering Department where I was responsible for Outside Plant

24   Planning. In 1983, I transferred to BellSouth Services, Inc. in Birmingham,

25   Alabama, and was responsible for the Centralized Results System Database. I

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FPSC-RECORDS/REPORTING

1 moved to the Pricing and Economics Department in 1984 where I developed

2 methodology for service cost studies until 1986 when I accepted a rotational

3 assignment with Bell Communications Research, Inc. While at BellCore, I was

4 responsible for development and instruction of the Service Cost Studies

5 Curriculum including courses such as "Concepts of Service Cost Studies",

6 "Network Service Costs", "Nonrecurring Costs", and "Cost Studies for New

7 Technologies". In 1990, I returned to BellSouth and was appointed to a position

8 in the cost organization, which is now a part of the Finance Department, with the

9 responsibility of managing the development of cost studies for transport facilities,

10 both loop and interoffice.

11

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

13

14 A. The purpose of my testimony is to describe (1) the unbundled network elements

15 that BellSouth will provide to Alternate Local Exchange Companies (ALECs) in

16 Florida , (2) the cost methodology used in the Total Element Long Run

17 Incremental Cost (TELRIC) studies for the development of both recurring and

18 nonrecurring costs, and (3) the development of the directly attributable shared and

19 common and common cost allocation factors used in BellSouth's TELRIC

20 studies. BellSouth performed TELRIC studies for the following elements:

21

22   • Unbundled 2-Wire Analog, 4-Wire Analog, and 2-Wire ISDN
    Digital Loops

23   • Unbundled 4-wire DS1 Digital Loops
   • Unbundled Ports

24   • Unbundled Loop Channelization Systems and Central Office
    Channel Interfaces (located in the BellSouth central office

25   buildings)

1   • Special Access Voice Grade Service Interoffice Channel Voice - Unbundled Exchange Access

2   • Operator Services
           • Operator Call Processing Access Service

3   • Inward Operator Services Access Service
           • Emergency Call Trace

4   • Directory Assistance
           • Directory Assistance Access Service

5   • Directory Assistance Database Service

6   • Direct Access to Directory Assistance Service
           • Directory Assistance Call Completion Access Service

7   • Directory Transport
           • Number Services Intercept Access Service

8   • Common Channel Signaling/Signaling System 7 Transport Service

9   • Database Services
           • 800 Access Ten Digit Screening Service

10   • Line Information Access Service
      • Unbundled Local Usage

11

12 The TELRIC studies are based on the methodology proposed in the Federal

13 Communications Commission's (FCC's) First Report and Order in CC Docket

14 96-98 (FCC Order) released August 8, 1996. The TELRIC Unbundled Loop

15 Study - 2-Wire Analog, 4-Wire Analog, and 2-Wire ISDN Digital Loops, was

16 filed with this Commission on October 4, 1996 in Docket No. 960833-TP.

17

18 **DESCRIPTION OF UNBUNDLED NETWORK ELEMENTS**

19

20 Q. HAS BELLSOUTH COMPLETED TELRIC STUDIES FOR THE

21 UNBUNDLED NETWORK ELEMENTS LISTED ABOVE?

22

23 A. Yes, cost studies are being filed with this testimony for those network elements as

24 Exhibits DDC-8 through DDC-25.

25

1   Q. WHAT NETWORK COMPONENTS ARE INCLUDED IN EACH OF THE

2   FOUR TYPES OF UNBUNDLED LOOPS (2-WIRE ANALOG VOICE

3   GRADE, 4-WIRE ANALOG VOICE GRADE, 2-WIRE ISDN DIGITAL

4   GRADE, AND 4-WIRE DS1 DIGITAL GRADE)?

5

6   A. The unbundled loop is the facility used to connect a ALEC's customer premises

7   with the BellSouth central office. The voice grade and ISDN unbundled loops

8   begin at a connection on the Main Distributing Frame in the BellSouth central

9   office and the DS1 unbundled loop begins at a connection on a DSX-1 cross

10   connect panel in the BellSouth central office. At the ALEC's customer premises,

11   the loop includes the cabling up to and including the network interface. All

12   outside plant components of the network utilized between the central office and

13   the ALEC's customer premises are included. The network components include

14   copper cables, poles, conduit, fiber optic cables, and multiplexing equipment.

15   Exhibit DDC-1 to my testimony depicts the basic architecture for each of the four

16   unbundled loops.

17

18 Q. WHAT TECHNOLOGIES ARE INCLUDED IN THE UNBUNDLED LOOP

19   COST STUDIES?

20

21 A. The technologies differ depending on the type of loop being provisioned. The

22   voice grade and ISDN unbundled loop studies analyze two technologies: copper

23   and digital loop carrier on fiber. Copper and digital loop carrier on fiber represent

24   forward looking technologies and the most efficient method of deploying voice

25

-4-

1   grade (2-wire and 4-wire) and 2-wire ISDN unbundled loops now and in the

2   future.

3

4   The unbundled DS1 digital grade loop study analyzes five network designs

5   (architectures) that will be used on a forward looking basis to deploy DS1 loops.

6   The five designs can be categorized into two basic technologies: copper and

7   Synchronous Optical Network (SONET) fiber rings.

8

9   Q. WHAT NETWORK COMPONENTS ARE INCLUDED IN EACH OF THE

10   THREE TYPES OF UNBUNDLED PORTS -- 2-WIRE ANALOG LINE PORT

11   (RESIDENCE, BUSINESS, AND PBX), 2-WIRE ISDN DIGITAL LINE PORT,

12   COIN LINE PORT, 2-WIRE ANALOG DID TRUNK PORT, 4-WIRE DS1

13   DIGITAL DID TRUNK PORT, AND 4-WIRE ISDN DS1 DIGITAL TRUNK

14   PORT?

15

16   A. The unbundled port is the facility used to connect a ALEC's loop to a BellSouth

17   end office switch. The facility includes the connection on the Main Distributing

18   Frame, the jumper to the switch, and the non-traffic sensitive termination in the

19   switch. BellSouth uses the Switching Cost Information System (SCIS), a

20   BellCore cost model, to develop the vendor engineered, furnished, and installed

21   (EF&I) investment associated with these items of plant. The SCIS model outputs

22   reflect vendor design criteria, BellSouth engineering rules, and customer usage

23   characteristics. Exhibit DDC-2 illustrates the basic architecture of the unbundled

24   ports. The unbundled port study has been restructured to exclude the local usage

25   which is now a separate cost study.

1

2 Q. WHAT NETWORK COMPONENTS ARE INCLUDED IN THE UNBUNDLED

3   LOOP CHANNELIZATION SYSTEM AND THE CENTRAL OFFICE

4   CHANNEL INTERFACE?

5

6 A. The unbundled loop channelization system and central office channel interface is

7   an arrangement offered to the ALEC for the purpose of channelizing multiple

8   digital loop carrier 1.544 Mbps channels on a non-concentrated or concentrated

9   basis up to a maximum of 96 voice grade channels per system. These 1.544 Mbps

10   channels are available for connection to unbundled voice grade loops. The system

11   includes the DSX-1 cross connect panel terminations for the DS1s and the digital

12   loop carrier system hardwired equipment and common plug-ins. The central

13   office channel interface includes the working voice grade plug-in. Exhibit DDC-3

14   depicts the items of plant included in these elements.

15

16 Q. WHAT NETWORK COMPONENTS ARE INCLUDED IN THE UNBUNDLED

17   SPECIAL ACCESS VOICE GRADE SERVICE INTEROFFICE CHANNEL

18   VOICE - UNBUNDLED EXCHANGE ACCESS?

19

20 A. The unbundled voice grade interoffice channel is an arrangement offered to

21   ALECs for the purpose of providing a dedicated voice grade transmission path

22   between two or more switching offices and a serving wire center of BellSouth.

23   This is for connecting an unbundled exchange access loop to another central

24   office that is not the central office of the end user. The arrangement includes a

25   facility termination and a per mile element. The facility termination includes

1   transmission equipment at both end offices of the circuit as well as the circuit

2   equipment in the intermediate central offices through which the circuit passes.

3   The per mile element includes aerial, buried, and underground fiber cable as well

4   as the associated pole and conduit support investment.

5

6   Q. HOW WILL BELLSOUTH PROVIDE UNBUNDLED OPERATOR SERVICES

7   AND DIRECTORY ASSISTANCE?

8

9   A. BellSouth will provide unbundled operator functions using the Company's

10   existing Operator Services. Operator call processing services includes operator

11   provided and fully automated call handling. Operator provided call handling

12   includes 0+ and 0- calls. Fully automated call handling includes automated

13   calling card, automated bill-to-third, and automated collect calls. Additionally,

14   operator services includes inward operator services (busy line verification and

15   emergency interrupt) and emergency call trace.

16

17   BellSouth will provide unbundled Directory Assistance using the Company's

18   existing Number Services. Number Services includes Directory Assistance

19   Access Service, Directory Assistance Database Service, Direct Access to

20   Directory Assistance Service, Directory Assistance Call Completion, and

21   Directory Transport. Additionally, Number Services includes Number Services

22   Intercept Access Service.

23

24   Q. HOW WILL BELLSOUTH PROVIDE UNBUNDLED COMMON CHANNEL

25   SIGNALING?

1

2 A. BellSouth will provide unbundled Common Channel Signaling using its Common

3 Channel Signaling/System Signaling 7 (CCS7) Signaling Transport Service. This

4 service provides access to the Common Channel Signaling network and transport

5 of signaling messages used for call set-up and database query/response. The

6 primary components of the network are Signal Transfer Points (STPs) and

7 Signaling Links. The STPs are packet switches which route signaling messages

8 through the network. The Signaling Links connect end and tandem office

9 switches to the STPs, and the STPs to Service Control Points (SCPs). The SCPs

10 are databases used for specific services such as Line Identification Database

11 (LIDB) service.

12

13 CCS7 Signaling Transport Service includes the following cost elements:

14   - CCS7 Signaling Connection per 56 kbps Facility, per Month and

15   Nonrecurring

16   - CCS7 Signaling Termination per STP Port, per Month

17   - CCS7 Signaling Usage, per Call Set-up Message and Per

18   Transactions

19   Capabilities Application Part (TCAP) Message

20   - CCS7 Signaling Usage Surrogate, per 56 kbps, per Month

21

22 Q. HOW WILL BELLSOUTH PROVIDE UNBUNDLED DATABASE

23 SERVICES?

24

25

1   A. BellSouth will provide unbundled database services using the Company's

2   existing Database Services offerings. Database Services utilize the CCS7

3   platform. Unbundled Database Services include the following:

4   - 800/POTS Number Delivery per Call

5   - 800/POTS Number Delivery with Optional Complex Features

6   - LIDB Common Transport per Query

7   - LIDB Validation per Query

8   - Originating Point Code Establishment Change

9

10   Q. PLEASE DESCRIBE UNBUNDLED LOCAL USAGE.

11

12   A. Unbundled local usage provides ALECs with the ability to access the local

13   switched network.. The cost elements include End Office Switching, Tandem

14   Switching, and Common Transport between the switches. This is a new

15   standalone study previously included as a part of the unbundled port study.

16

17   **COST METHODOLOGY**

18

19   Q. WHAT IS THE PURPOSE OF TELRIC METHODOLOGY?

20

21   A. The purpose of the TELRIC methodology established by the FCC Order is to set

22   the rates for interconnection and unbundled network elements. The basis for a

23   TELRIC study is a forward looking long run economic cost methodology.

24   However, TELRIC methodology anticipates pricing of elements in a wholesale

25   network company. Many costs regarded as common or shared costs in a retail

1   company are included as directly attributable in a TELRIC study. The FCC

2   pricing methodology also specifies that, over and above TELRIC, the additional

3   portion of forward looking common costs that cannot be directly attributed to any

4   particular network element will be allocated among the cost elements to produce

5   the "forward looking economic cost", as defined in Appendix B, Section 51.505

6   of the FCC Order.

7

8 Q. WHAT TYPES OF COSTS ARE INCLUDED IN THE COST STUDIES?

9

10 A. Both recurring costs and nonrecurring costs are included in the cost studies.

11

12 **RECURRING COSTS**

13

14 Q. WHAT ARE RECURRING COSTS?

15

16 A. Recurring costs are generally associated with the investments required to provide

17   an item of plant. They include both capital and non-capital costs. Capital costs

18   consist of depreciation, cost of money and income tax. Non-capital recurring

19   costs are operating expenses and consist of maintenance, ad valorem taxes and

20   gross receipts taxes.

21

22 Q. WHAT IS THE GENERIC STUDY PROCESS FOR DEVELOPING

23   RECURRING TOTAL ELEMENT LONG RUN INCREMENTAL COSTS?

24

25

1 A. The generic steps for developing recurring total element long run incremental

2   costs are listed below. The unique technical characteristics and physical make-up

3   of the element are taken into consideration.

4   Step 1: Determine the forward looking network designs (architectures) which

5   will be used to deploy the network element.

6   Step 2: Determine material prices and/or investments for the items of plant

7   used in each design. Material prices are obtained from BellSouth contracts with

8   various vendors.

9   Step 3: Apply in-plant factors and telephone plant indices as appropriate to

10   determine base year investments. In-plant factors are applied to material prices in

11   order to convert the material price to an installed investment which includes the

12   cost of material, engineering labor and installation labor. Telephone plant indices

13   estimate the changes in material price and/or installed investment over time.

14   Step 4: Adjust the investments for utilization to account for spare capacity

15   using a reasonable projection of actual total usage.

16   Step 5: Apply investment inflation factors to the investments to convert the

17   utilized base year investments to investments representative of a three year

18   planning period.

19   Step 6: Apply loading factors to the investments to determine investments for

20   miscellaneous common equipment and power, land, buildings, poles and conduit

21   as appropriate.

22   Step 7: Weight the investments, as appropriate, to determine an average

23   investment for a typical element by plant account.

24   Step 8: Convert the investments by plant account to annual costs by applying

25   account specific TELRIC annual cost factors to the various investments. The

1   TELRIC annual cost factors include an 11.25% cost of money, as well as directly

2   assigned and directly attributable cost components. Add the annual costs for the

3   various accounts and then divide by 12 to determine a monthly cost. Then

4   multiply the monthly cost by the gross receipts tax factor to determine the total

5   monthly cost for the element including gross receipts tax. Upon completion of

6   Step 8, the result is TELRIC.

7   Step 9: Add the allocated portion of common costs of the firm to the

8   unbundled network element, based on the FCC Order TELRIC "pricing

9   methodology". Upon completion of Step 9, the result is TELRIC price, or

10   economic cost as defined by the FCC Order.

11

12   Exhibit DDC-4 provides a flowchart depicting the steps used to develop recurring

13   TELRIC and the allocation of common costs.

14

15 Q. IS THE GENERIC RECURRING COST STUDY PROCESS USED FOR ALL

16   ELEMENTS STUDIED?

17

18 A. Yes. However, the unique characteristics of each element must be considered.

19

20 Q. HOW ARE RECURRING COSTS FOR UNBUNDLED PORTS

21   CALCULATED?

22

23 A. For the unbundled ports, SCIS models the switch characteristics and identifies the

24   direct incremental investments associated with providing the unbundled ports.

25   SCIS adjusts the investments for equipment used for administrative purposes.

1   The SCIS output investment is basically processed as outlined in steps 3 and 5

2   through 8 in Exhibit DDC-4 to determine the monthly cost per port.

3

4   Q. WHAT DIFFERENCES ARE THERE IN THE RECURRING COST STUDY

5   PROCESS FOR OPERATOR SERVICES AND DIRECTORY ASSISTANCE?

6

7   A. The cost study process follows the same generic steps for investment related

8   recurring costs as previously discussed. In addition to these investment related

9   costs, non-investment related costs such as software expenses and lease payments

10   for maintenance and administrative vendor services, as well as operator labor

11   costs. These costs are levelized over the period of 1997 through 1999. The

12   levelized software expenses are amortized over five years to develop an

13   equivalent annual cost. The labor cost is calculated on a cost per unit basis by

14   using the average work time for a specific call type and multiplying by the

15   appropriate labor rate.

16

17 Q. HOW ARE THE RECURRING COSTS FOR UNBUNDLED LOCAL USAGE

18   CALCULATED?

19

20   The Network Cost Analysis Tool (NCAT), a BellCore cost model, is used to

21   calculate the cost associated with the first and additional minute of usage per local

22   call. The NCAT model is very complex, as is the public switched network.

23   Thousands of data inputs from numerous company sources are used to populate

24   the database files of NCAT. For example, the inputs include end office switching

25   investments, interoffice investments, and local service point-to-point usage data.

1   A demand change or stimulation factor is used to determine incremental messages

2   and minutes for local usage associated with the unbundled port. NCAT calculates

3   the incremental costs associated with the various network components impacted

4   by the incremental (or change in) demand. The processing of an ISDN call

5   consumes switch resources incremental to a Plain Old Telephone Service (POTS)

6   call. Therefore, additional switch costs are identified using SCIS and are added to

7   the NCAT results for the ISDN unbundled ports.

8

9   **NONRECURRING COSTS**

10

11   Q. WHAT ARE NONRECURRING COSTS?

12

13   A. Nonrecurring costs include the one time expenses for the labor intensive

14   provisioning effort required to provide a particular element. Additionally, some

15   Right-to-Use fees associated with the switch are one-time expenses and are,

16   therefore, nonrecurring costs.

17

18   Q. IS BELLSOUTH FILING NONRECURRING COSTS IN THE STUDIES

19   ATTACHED AS EXHIBITS DDC8 - DDC25?

20

21   A. No. The ALECs have raised concerns over the degree of nonrecurring activities,

22   such as testing and engineering, associated with unbundled network elements. As

23   a result, nonrecurring cost study provisioning inputs, as well as other nonrecurring

24   inputs, are currently being reviewed and new nonrecurring cost studies will be

25   provided as soon as completed. The nonrecurring costs in the Unbundled Loop

1   study filed with this Commission on August 12, 1996 should be disregarded.

2

3 Q. WHAT IS GENERALLY INCLUDED IN THE NONRECURRING COSTS FOR

4   EACH UNBUNDLED ELEMENT?

5

6 A. Nonrecurring costs for the unbundled network elements are the one time costs

7   associated with provisioning, installing, and disconnecting the unbundled loops.

8   These costs include four major categories of activity: service order processing,

9   engineering, connect and test, and technician travel time. Examples of the work

10   activities in each of these categories are as follows:

11

12   • Service order processing -
                Prepare and issue service order

13   • Engineering -
                Assign cable and pair; Design circuit; Order plug-in

14   • Connect and Test -
                Install circuit; Test circuit

15   • Technician Travel Time -
                Travel to the ALEC's customer premises

16

17 Q. WHAT IS THE GENERIC PROCESS FOR DEVELOPING NONRECURRING

18   TOTAL ELEMENT LONG RUN INCREMENTAL COSTS?

19

20 A. The generic process for developing the nonrecurring total element long run

21   incremental costs is as follows:

22

23   Step 1: Determine the cost elements to be developed.

24   Step 2: Define the work functions.

25   Step 3: Establish work flows.

-15-

1   **Step 4:** Determine work times for each work function.

2   **Step 5:** Develop TELRIC labor costs for each work function (TELRIC labor

3   rate x work time).

4   **Step 6:** Accumulate work function costs to determine the total nonrecurring

5   costs for each cost element. Upon completion of this step, the result is

6   the nonrecurring TELRIC.

7   **Step 7:** Multiply the total nonrecurring costs by the common cost allocation

8   factor to determine the TELRIC plus common cost allocation. Upon

9   completion of Step 7, the result is nonrecurring TELRIC price, or

10   economic cost as defined by the FCC Order.

11

12   Exhibit DDC-5 provides a flowchart depicting these steps.

13

14

15   Q. HOW ARE RTU COSTS ASSOCIATED WITH THE UNBUNDLED PORT

16   CALCULATED?

17

18   A. The RTU cost is calculated by first determining the RTU expense from vendor

19   contracts. A RTU fee is a licensing fee that is paid to the vendor for using the

20   switch software and are vendor and switch type specific. Therefore, the

21   individual fees are melded based on the percent deployment of network access

22   lines per switch type. Then gross receipts tax is added to the melded number to

23   determine a RTU cost per port installed. The RTU nonrecurring cost is then also

24   expressed as a recurring equivalent cost by amortizing the expense over the life of

25   the switch.

1

DEVELOPMENT OF THE DIRECTLY ATTRIBUTABLE SHARED AND COMMON AND COMMON COST ALLOCATION FACTORS AND TELRIC LABOR RATES

5

6　Q. HOW ARE THE DIRECTLY ATTRIBUTABLE SHARED AND COMMON

7　　COST COMPONENTS OF THE TELRIC ANNUAL COST FACTORS

8　　CALCULATED?

9

10　A. First, a detailed analysis of the forward looking directly assigned costs associated

11　　with unbundled network elements is performed. The remaining costs of doing

12　　business are then analyzed to determine those shared and common costs that are

13　　directly attributable to network elements and those costs that are not directly

14　　attributable.

15

16　　Next, the directly attributable shared and common costs are projected forward and

17　　segregated by the functional areas to which they are related. The functional areas

18　　are wholesale operations, retail operations, and combined wholesale and retail

19　　operations. Attribution factors based on the specific wholesale functional area,

20　　such as central office equipment (COE) investment, COE salary and wages, etc.

21　　are then developed and applied to the respective costs. These attributed costs are

22　　accumulated by related network investment category, such as pair gain equipment,

23　　buried cable, etc., and attributed shared and common cost factors are developed.

24　　These attributed shared and common cost factors are then included, along with

25　　direct cost factors, as components of the TELRIC annual cost factors by

1   investment category. All directly attributed costs related to retail operations are

2   excluded. Exhibit DDC-6 provides a more detailed description of the

3   methodology used to identify directly attributed shared and common costs, as well

4   as common costs to be allocated via a common cost allocation factor.

5

6   Q. HOW IS THE COMMON COST ALLOCATION FACTOR USED AND

7   DEVELOPED?

8

9   A. The common cost allocation factor is applied to TELRIC to produce the "forward

10   looking economic cost", as defined by the FCC Order, Appendix B, Section

11   51.505. The common cost allocation factor is calculated by summing all

12   wholesale costs that cannot be reasonably attributed to specific elements, services

13   or functions and dividing by the sum of the directly assignable and directly

14   attributable wholesale costs. Exhibit DDC-7 provides a diagram of the procedures

15   used to develop the common cost allocation factor. The following steps contain a

16   reference corresponding to groupings of costs as shown on Exhibit DDC-7:

17

18   Step 1 -- Identify costs directly assignable and attributable to specific wholesale

19   elements or functions. The directly assignable and attributable costs for each

20   plant account are divided by the levelized investment in each plant account to

21   determine the TELRIC annual cost factor. (A)

22   Step 2 -- Identify costs directly assignable and attributable to wholesale

23   operations, but not to specific elements or functions. (B)

24   Step 3 -- Identify the costs common to both wholesale and retail operations. (C)

25   Step 4 -- Allocate to wholesale operations an appropriate share of those costs

-18-

1   common to both wholesale and retail based on the ratio of the wholesale costs

2   relative to the sum of the wholesale costs and retail costs. (D)

3   Step 5 -- Sum the common wholesale costs and the allocated portion of

4   wholesale/retail common costs, yielding total wholesale operations common costs

5   not directly assignable or attributable to specific elements or functions. (E)

6   Step 6 -- Divide wholesale common costs by directly assigned and attributed

7   wholesale costs to develop a wholesale common cost allocation factor. (F)

8   Step 7 -- The TELRIC annual cost factors are multiplied by the appropriate

9   investments to develop the TELRIC for each unbundled network element.

10   Step 8 -- The TELRIC for each unbundled network element is multiplied by the

11   common cost allocation factor to yield the forward looking economic cost, as

12   defined by the FCC.

13

14 Q. HOW ARE TELRIC LABOR RATES CALCULATED?

15

16 A. Salary and wages, as used in the determination of TELRIC annual cost factors, are

17   accumulated on a basis consistent with specific force groups. Shared costs

18   attributable to salaries and wages are then accumulated on a basis consistent with

19   the development of the respective force group's labor rate. A factor is then

20   developed for each force group by dividing the attributed shared costs (human

21   resources, office equipment, motor vehicles, land and building space, etc.) by the

22   related salaries and wages. This factor is then applied to the salary and wage

23   portion of the incremental labor rate for each force group, and the result is added

24   to the incremental labor rate to determine the TELRIC labor rate.

25

1 Q. **ARE YOU PROVIDING COST SUPPORT FOR THE 2-WIRE**

2 **ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL), THE 2-WIRE**

3 **HIGH-BIT-RATE DIGITAL SUBSCRIBER LINE (HDSL) AND THE 4-WIRE**

4 **HDSL UNBUNDLED LOOPS?**

5

6 A. Not at this time. The technical specifications for these types of high speed data

7 transmission systems are not finalized. When those specifications are determined,

8 TELRIC studies will be developed. Current expectations are for the TELRIC

9 results for these loops to be greater than TELRIC for 2-Wire and 4-Wire analog

10 voice grade loops.

11

12 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

13

14 A. The FCC Order released on August 8, 1996, proposed a methodology for setting

15 the rates for interconnection and unbundled network elements. Based on the FCC

16 methodology, BellSouth has produced TELRIC studies for the following

17 unbundled network elements:

18

19 • Unbundled 2-Wire Analog, 4-Wire Analog, and 2-Wire ISDN
    Digital Loops
20 • Unbundled 4-wire DS1 Digital Loops
    • Unbundled Ports
21 • Unbundled Loop Channelization Systems and Central Office
    Channel Interfaces (located in the BellSouth central office
22 buildings)
    • Special Access Voice Grade Service Interoffice Channel Voice -
23 Unbundled Exchange Access
    • Operator Services
24   • Operator Call Processing Access Service
25   • Inward Operator Services Access Service

1
- Emergency Call Trace
- Directory Assistance
    - Directory Assistance Access Service
2
    - Directory Assistance Database Service
3
    - Direct Access to Directory Assistance Service
    - Directory Assistance Call Completion Access Service
4
    - Directory Transport
    - Number Services Intercept Access Service
5
- Common Channel Signaling/Signaling System 7 Transport Service
6
- Database Services
    - 800 Access Ten Digit Screening Service
7
    - Line Information Access Service
- Unbundled Local Usage
8

9

10   These TELRIC studies determine the total element long run incremental costs and

11   the forward looking economic cost, including an appropriate allocation of

12   common costs for providing these unbundled elements, as defined by the FCC

13   Order.

14

15   Q. DOES THIS CONCLUDE YOUR TESTIMONY?

16

17   A. Yes.

18

19

20

21

22

23

24

25

ILLUSTRATIVE EXAMPLE

Unbundled Voice Grade and 2-Wire ISDN Loop Components for Loops with Loop Length < 12 KFT.

BellSouth
Central Office

Underground Splicing Chamber

UG

SAI

B

FEEDER

DISTRIBUTION

A

Serving Terminal

Drop Wire

NI

ALEC's
Customer Premises
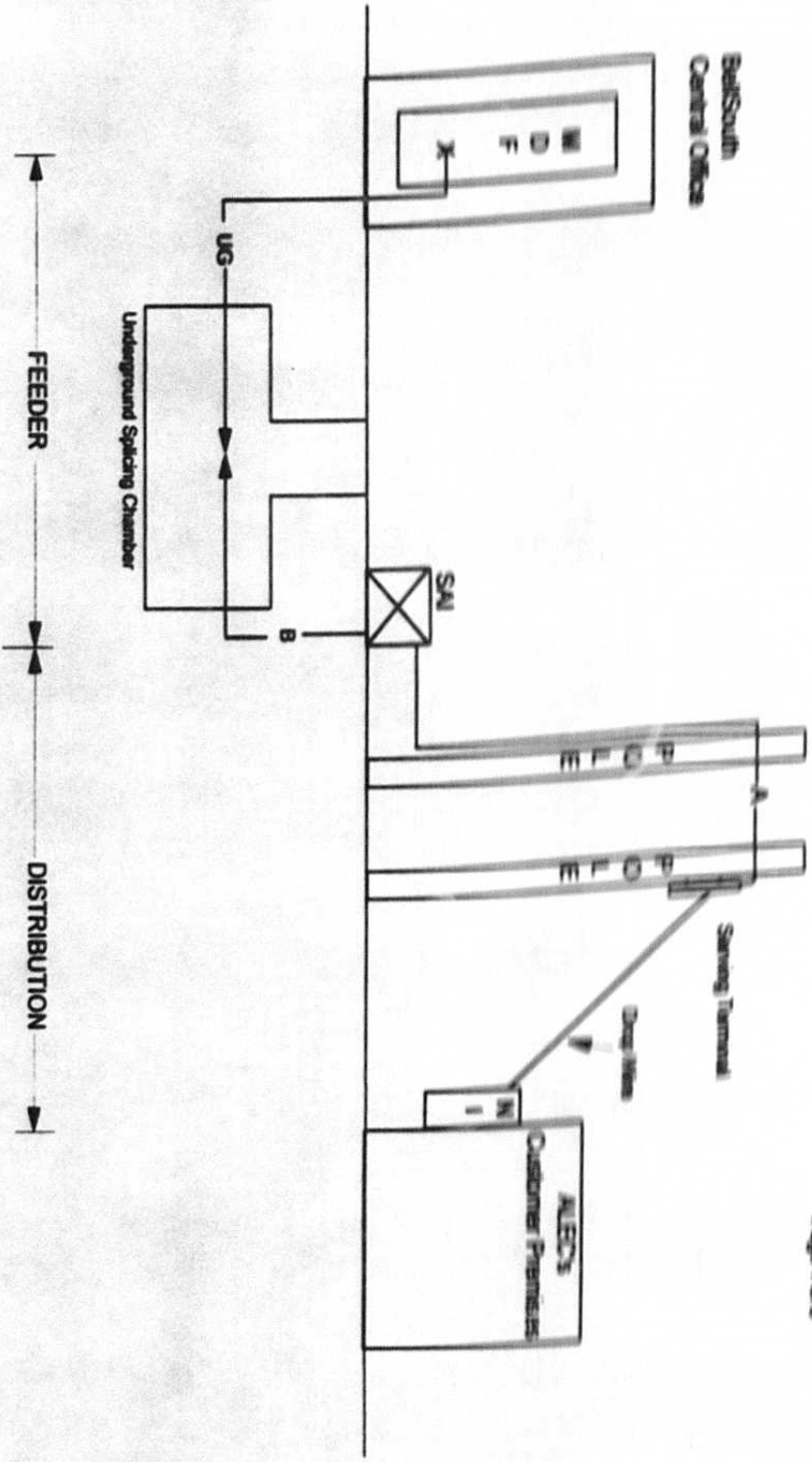
MDF	Main Distributing Frame
UG	Underground Cable
B	Buried Cable
SAI	Serving Area Interface
A	Aerial Cable
NI	Network Interface

NOTE:
2-Wire Voice Grade Uses 1 Copper Pair
4-Wire Voice Grade Uses 2 Copper Pairs
2-Wire ISDN Uses 1 Copper Pair

ILLUSTRATIVE EXAMPLE

Unbundled Voice Grade and 2-Wire ISDN Loop Components for Loops with Loop Length > 12 KFT.

Legend
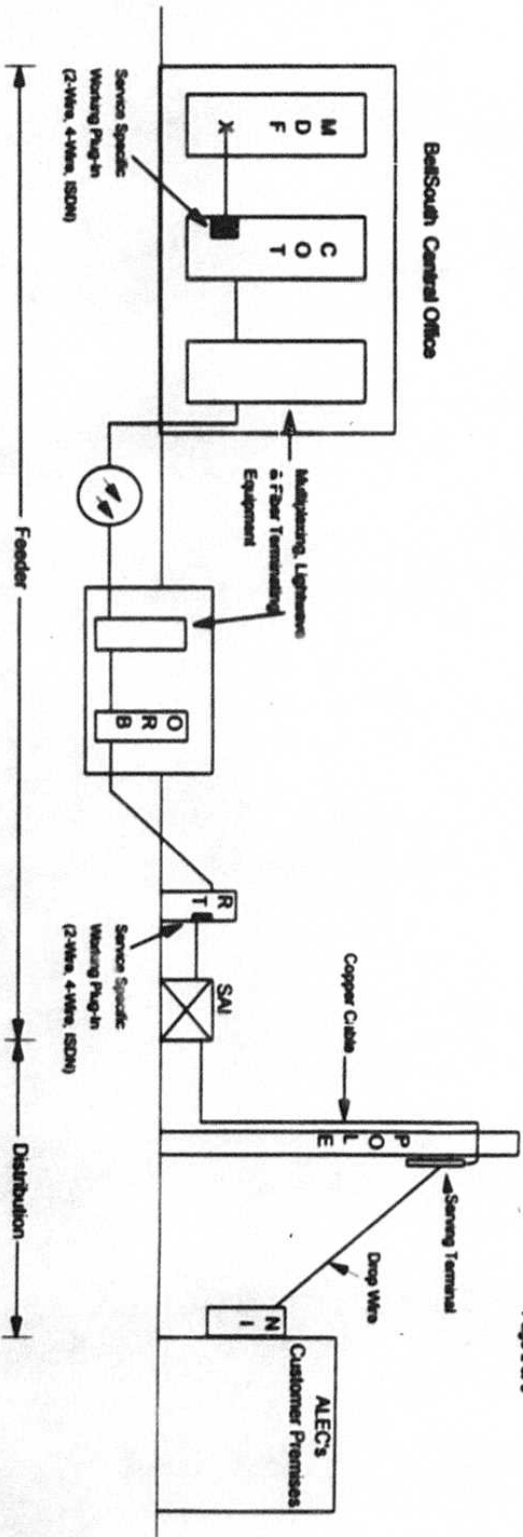
MDF	Main Distributing Frame
COT	Digital Loop Carrier Central Office Terminal
RT	Digital Loop Carrier Remote Terminal
	Fiber Optic Cable
ORB	Office Repeater Bay
SAI	Serving Area Interface

BellSouth Central Office

MDF

COT

Service Specific
Working Plug-in
(2-Wire, 4-Wire, ISDN)

Multiplexing, Lightwave
& Fiber Terminating
Equipment

Feeder

ORB

RT

SAI

Service Specific
Working Plug-in
(2-Wire, 4-Wire, ISDN)

Copper Cable

Distribution

POLE

Serving Terminal

Drop Wire

NI

ALEC's Customer Premises

Copper Design:

DSX-1 — ORB — MDF

BELLSOUTH CENTRAL OFFICE

ALL COPPER

Repeater

NI

ALEC'S CUSTOMER PREMISES

Building Entrance Cable

SONET Ring Design:

DSX-1 — SONET ADM — FIBER TERMINAL

Data Communication Link

BELLSOUTH CENTRAL OFFICE

FIBER TERMINAL — SONET ADM Common Plug-Ins (DS1 working interface) — DSX-1 — NI

Building Entrance Cable

FIBER TERMINAL — SONET ADM Common Plug-Ins

ALEC'S CUSTOMER PREMISES
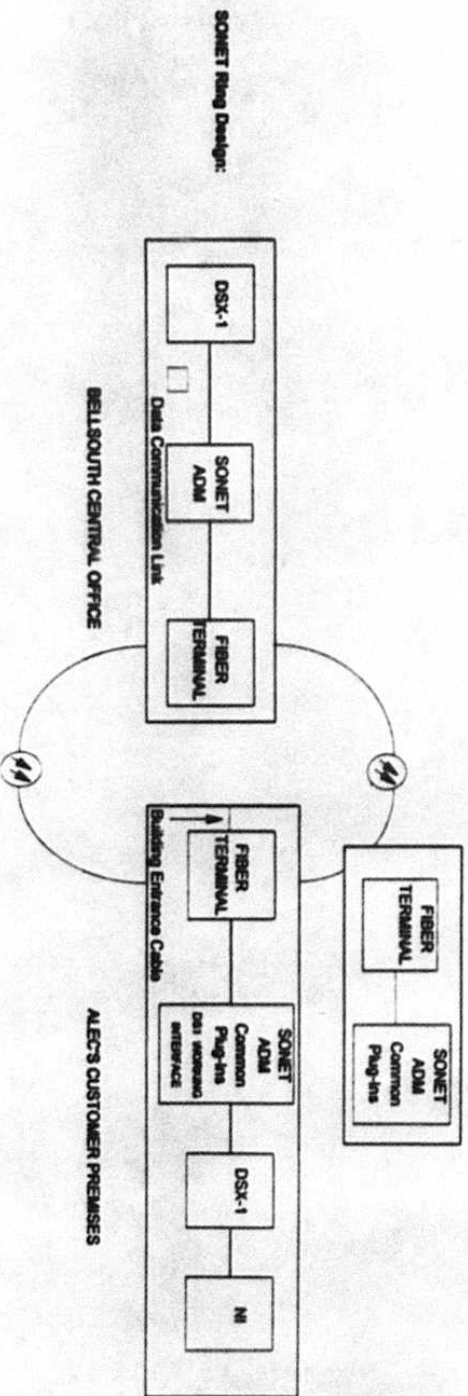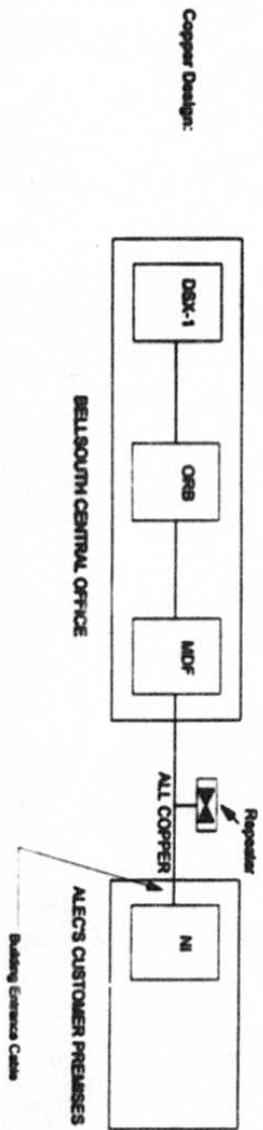
DSX-1	DS1 Digital Cross Connect Panel
ORB	Office Repeater Bay
MDF	Main Distributing Frame
NI	Network Interface
ADM	Add Drop Multiplexer
SONET	Synchronous Optical Network

Unbundled 2-Wire Analog, 2-Wire ISDN Digital, and Coin Line Ports

BellSouth Central Office

Switch

MDF

Local Usage.....

Line Termination

Connector/Protector
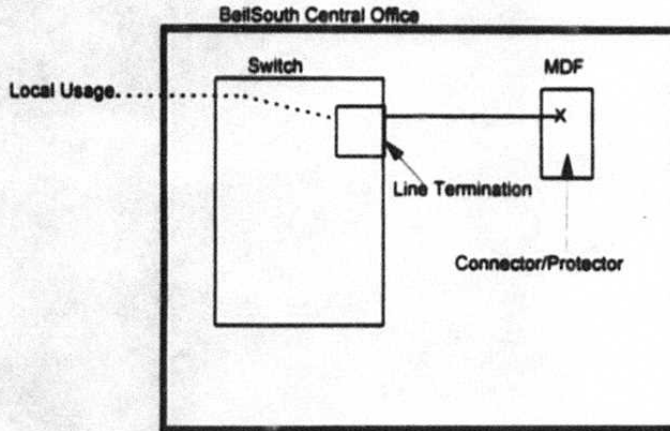
MDF   Main Distributing Frame

NOTE: Line Termination is Service Specific
2-Wire Analog Line Termination is Voice Grade
2-Wire ISDN Digital Line Termination is a Basic Rate Interface (2B+D)

Unbundled 4-Wire ISDN DS1 Digital Trunk Port

BellSouth Central Office

Switch

DSX-1

Local Usage.....

Primary Rate
Termination
(23B+D)
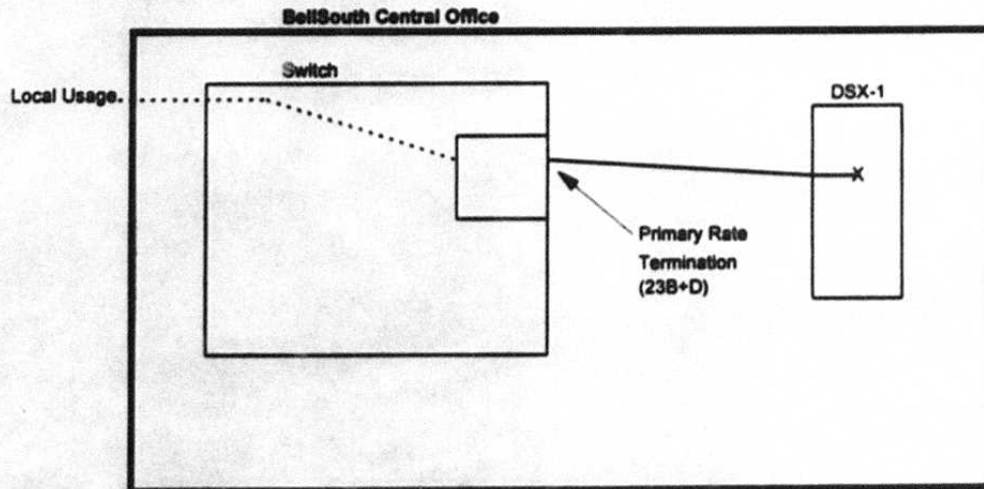
DSX-1   DS1 Digital Cross Connect Panel

Unbundled 2-Wire Analog DID Trunk Port

BellSouth Central Office

Switch

1/24 DS1 Trunk
Termination

2-Wire DPO Plug-In

DSX-1

DS1   DS1   D
4

TRUNK GROUP
(Includes Processor
Real Time & Translations)

2 Terminations

1/24 of Common Plug-Ins
& Hardwired Equipment
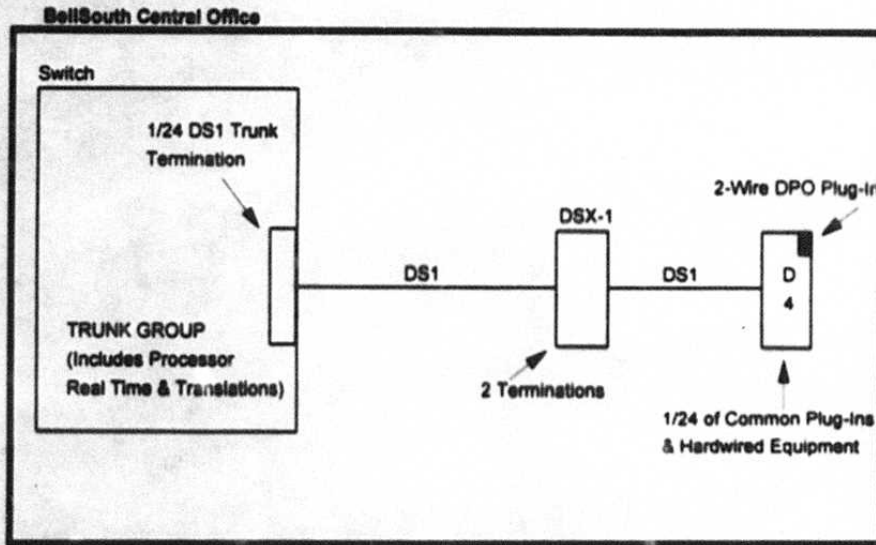
DSX-1   DS1 Digital Cross Connect Panel
D4   Channel Bank
DPO   Dial Pulse Originating

Unbundled 4-Wire DS1 Digital DID Trunk Port

BellSouth Central Office

Switch

DS1 Trunk
Termination

DSX-1

X

TRUNK GROUP
(Includes Processor
Real Time & Translations)
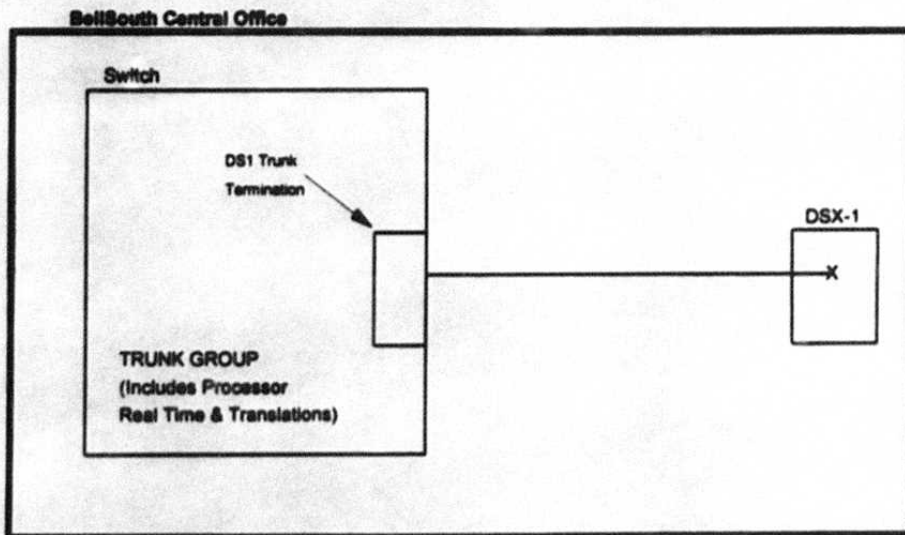
DSX-1   DS1 Digital Cross Connect Panel

UNBUNDLED LOOP CHANNELIZATION SYSTEM AND
CENTRAL OFFICE CHANNEL INTERFACE

BELLSOUTH CENTRAL OFFICE

DSX-1

Digital Loop
Carrier System
(Hardwired Equipment
And
Common Plug-Ins)

DS

DS

2 DS1 Connections

Central Office Channel Interface
Working Voice Grade Plug-In
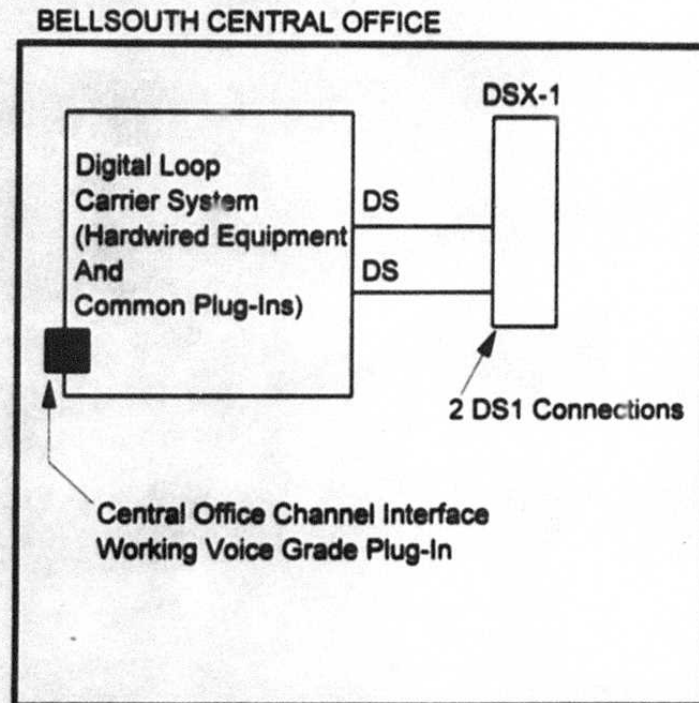
DSX-1 DS1 Digital Cross Connect Panel

PROCEDURES FOR DEVELOPING RECURRING
TOTAL ELEMENT LONG RUN INCREMENTAL COSTS/
PRICE (ECONOMIC COST)

Step 1 | Determine Forward Looking Network Designs (Architectures)

Step 2 | Determine Material Prices For Items Of Plant Identified in Each Design

Step 3 | Apply In-Plant Factors and TPIs

Step 4 | Adjust Investments For Utilization Using A Reasonable Projection of Actual Fill

Step 5 | Apply Investment Inflation Factors

Step 6 | Calculate Investment for MCE&P, Poles, Conduit, Land and Buildings by Applying Loading Factors

Step 7 | Calculate Average Investment For A Typical Element

Step 8 | Convert Investment to Monthly Cost by Applying TELRIC ACFs and Dividing by 12 and Then Applying the Gross Receipts Tax Factor

(TELRIC)

Step 9 | Add Allocated Portion of Remaining Common Costs *

(TELRIC PRICE (ECONOMIC COST))

TELRIC	Total Element Long Run Incremental Cost
TPIs	Telephone Plant Indices
MCE&P	Miscellaneous Common Equipment and Power
ACFs	Annual Cost Factors Including Directly Assigned & Attributable Shared and Common Costs
*	Per FCC Order TELRIC "Pricing Methodology"

GENERAL FLOW DIAGRAM FOR DEVELOPING
NONRECURRING TOTAL ELEMENT LONG RUN INCREMENTAL COSTS

Step 1 — Determine the Cost Elements

Step 2 — Define Work Functions

Step 3 — Establish Work Flows

Step 4 — Determine Work Times for Each Work Function

Step 5 — Develop TELRIC Labor Costs for Each Work Function
(TELRIC Labor Rate x Work Time)

Step 6 — Accumulate Work Function Costs to Determine the
Total Nonrecurring Costs for Each Cost Element

(TELRIC)

Step 7 — Multiply the Total Nonrecurring Costs by the Common Cost
Allocation Factor to Determine TELRIC plus Common Cost
Allocation

(TELRIC PRICE (ECONOMIC COST))

Note: TELRIC Labor Rate includes Directly Attributable Shared and Common Costs.

TELRIC METHODOLOGY FOR DETERMINING
FORWARD LOOKING DIRECTLY ATTRIBUTABLE
SHARED AND COMMON COST
AND ALLOCATED COMMON COST FACTORS

The starting point for the development of directly attributable shared and common costs is BellSouth's regional regulated 1995 expenses and regulated mid year 1995 investment. This data is obtained from BellSouth's financial system which applies the methods and procedures as described in the Cost Allocation Manual (CAM) underlying the 1995 ARMIS filing. The CAM defines cost pools and the attribution bases for those cost pools. Standard levelized inflation factors are applied to both investments and expenses to project the forward looking investments and expenses to the study period. The levelized inflation factors incorporate Telephone Plant Indices (TPIs), weighting by budget data for the relevant years, and present worthing at 11.25%.

Direct costs of providing telecommunications services fall into four major categories: Central Office Land and Building Space (CO L&B), Central Office Equipment (COE), Information Origination/Termination (IOT) Equipment, and Cable and Wire Facilities (C&W). Direct capital costs (cost of money @11.25%, income taxes, depreciation expense) and ad valorem taxes were calculated by applying the direct annual cost factors (ACFs) to inflated investment. Inflated and levelized plant specific expenses were then added to the direct capital costs and ad valorem taxes to determine total direct cost.

The forward looking costs of doing business not included in the direct cost (i.e., support assets, non-plant specific expenses, customer operations costs, and corporate operation expenses such as general purpose computers, information management, engineering, etc.) were then segregated into cost pools consistent with those utilized in the CAM.

These cost pools are causally attributed by either 1) the facilities investments or 2) the salaries and wages of the employees to which they relate, in accordance with the CAM, with a few exceptions. These exceptions include Aircraft, Legal, Specialized Motor Vehicles and other relatively insignificant cost pools which are treated as unattributable common although the CAM treats these cost pools as indirectly attributable.

Certain cost pools are directly assigned to retail operations such as end user billing and collections. Other cost pools are categorized as unattributable common wholesale or unattributable common wholesale and retail. The only cost pool that goes directly to common wholesale is carrier services related customer services (Account 6623).

As an example of primary attribution, the General Purpose Computers Central Office Equipment Cost Pool is attributed based on the distribution of central office investment by category, e.g. 257C, 377C, 357C, etc. The General Purpose Computer Plant Non-Specific Cost Pool is attributed based on the related salaries and wages included in Plant Non-Specific Expense such as Engineering Expense and Plant Administrative Expense.

A secondary attribution of cost is performed for costs that are attributable to General Purpose Computers and Plant Non-Specific Expenses (Engineering Expense, Plant Administration Expense, Network Administration Expense and Provisioning Expense). This secondary attribution is performed in a similar manner to the initial attribution described above.

After the primary and secondary attributions have been made, the attributable shared costs associated with network investment for a particular account are divided by the levelized investment in that account to determine the directly attributable shared and common cost factor. The remaining attributable costs (such as Human Resources attributable to Motor Vehicle Maintenance) associated with cost categories other than

network investment, wholesale functions (e.g. operator services), or retail functions are then added to the unattributable common cost category. This precludes a continuing iterative attribution.

The common cost allocation factor is determined by dividing the total wholesale common costs by the directly assigned and attributed wholesale costs. This factor, when multiplied times TELRIC yields forward looking economic cost, as defined by the FCC Order.

(NOTE: All attributable shared costs related to retail operations are excluded from all unbundled cost factors.)

COMMON COST FACTOR DEVELOPMENT

WHOLESALE
Directly assigned and attributed costs
assigned to elements and functions
$12,796,012,783 A

WHOLESALE
Directly assigned and attributed
COMMON COSTS
$65,909,335 B

RETAIL
Directly assigned and attributed
COMMON COSTS
$2,182,856,050 G

Costs common to both **WHOLESALE** and **RETAIL** operations
$1,126,823,131 C

WHOLESALE
Allocated portion of common costs
$963,331,675
$((A+B)/(A+B+G))*C$ D

RETAIL
Allocated portion of common costs
$163,491,456
$(G/(A+B+G))*C$ H

WHOLESALE
Total Common costs
$1,029,241,010
$B+D$ E

RETAIL
Total Common costs
$2,346,347,506
$G+H$ I

WHOLESALE
Common Cost Ratio
8.04%
E/A F

FLORIDA

800 ACCESS
TEN DIGIT SCREENING
SERVICE

TELRIC
COST STUDY
DOCUMENTATION

SECTIONS A THRU 6

SECTION A

SECTION A

FLORIDA

800 ACCESS TEN DIGIT SCREENING SERVICE

PROPRIETARY RATIONALE

The 800 Access Ten Digit Screening Service Cost Study is not proprietary.

SECTION 1

SECTION 1

FLORIDA

800 ACCESS TEN DIGIT SCREENING SERVICE

INTRODUCTION AND OVERVIEW

This Total Element Long Run Incremental Cost (TELRIC) study is being provided to support 800 Access Ten Digit Screening Service. The costs presented in this study are based on the TELRIC methodology established by the FCC's First Report and Order in CC Docket 96-98 (FCC Order) released August 8, 1996.

The 800 Access Ten Digit Screening Service cost study is a regional study which develops the per call costs. Two call types for the delivery of an 800/POTS number are available. These are (1) the delivery of the number and carrier identification and (2) delivery of the number with Optional Complex Features such as time-of-day routing.

The 800 number records are contained in the Service Control Points (SCPs) - the database. This database resides on six computers - three in the Ensley Central Office in Birmingham and three in the Woodland Hills Central Office in Atlanta. A complete set of records is maintained in each computer. These are updated from the Service Management System (SMS) database in Kansas City.

When an 800 number is dialed, the call is held at the originating office. A query is formulated and routed through a Local and Regional Signal Transfer Point (LSTP, RSTP) to an SCP. An STP is a packet switch used by the Common Channel Signaling (CCS) network to route these messages. Each LATA contains, at a minimum, a pair of LSTPs . One of the RSTPs is in the Ensley Office, and its mate is in the Woodland Hills Office. The SCP responds to the query with the appropriate carrier, providing the end office with sufficient information to route the call.

A long run analysis is performed to ensure that the time period studied is sufficient to capture all forward looking costs affected by the business decision. These costs are developed by using 1996 level TELRIC loadings and annual cost factors to produce TELRIC results. The recurring costs computed in this study are levelized for consistency with the 1997-1999 study period.

SECTION 2

SECTION 2

FLORIDA

800 ACCESS TEN DIGIT SCREENING SERVICE

DESCRIPTION OF STUDY PROCEDURES

This section describes the general principles for the development of Total Element Long Run Incremental Cost (TELRIC) supporting the 800 Access Ten Digit Screening Service.

The purpose of the TELRIC methodology established by the FCC order, is to set the rates for interconnection and unbundled network elements. The basis for a TELRIC study is forward looking long run economic cost methodology. Volume sensitive and volume insensitive costs are identified to develop the direct costs caused by providing the particular network element being studied. TELRIC methodology anticipates pricing of elements in a wholesale network company. Many costs regarded as common or shared would be included as directly attributable in a TELRIC study. The FCC pricing methodology also specifies that, over and above TELRIC, the additional portion of forward looking common costs that cannot be directly attributed to any particular network element will be allocated among the cost elements. TELRIC includes both recurring (capital and operating expenses) and nonrecurring (service provisioning) costs. There are no nonrecurring costs associated with 800 Access Ten Digit Screening Service.

THE DEVELOPMENT OF RECURRING COSTS

The per unit costs to BellSouth Telecommunications, Inc. resulting from the capital investments necessary to provide a service are called recurring costs. Recurring costs represent a forward looking view to technology and deployment and include capital and operating costs. While capital costs include depreciation, cost of money and income tax, operating costs consist of plant specific expenses and ad valorem taxes. These expenses contribute to the ongoing costs to the Company associated with the initial capital investment. Recurring costs may also be noninvestment related, such as expensed labor, feature specific software and contract expenses. Also included in the recurring TELRIC are shared and common costs directly attributable to the network elements. Gross receipts tax is calculated on the TELRIC.

The first step in developing a TELRIC study of recurring costs for 800 Access Ten Digit Screening Service is to determine the forward looking architecture. Prices for the software and equipment are defined. Next, account specific Telephone Plant Indexes are applied, when necessary, to trend investments and noninvestment related expenses to the 1997-1999 base study period. In-plant

factors are applied to material prices to develop installed investments which include engineering and installation labor. Appropriate loadings for land, building and miscellaneous common equipment and power are then applied to the electronic equipment.

Next, 1996 level TELRIC Annual Cost Factors are used to calculate the direct cost of capital, plant specific expenses and taxes. Account specific factors for each Uniform System of Accounts - Field Reporting Code (USOA - FRC) are applied to levelized investments by account code, yielding an annual cost per account code which includes directly attributable shared and common costs. Annual TELRIC by account codes are then summed and divided by the associated demand to arrive at a cost per cost element.

The directly attributable shared and common cost components of the TELRIC annual cost factors are calculated as follows. First, a detailed analysis of the forward looking costs associated with the interconnect or unbundled network element is performed. The remaining costs of doing business are then analyzed to determine whether they are directly attributable shared and common costs that can be reasonably attributed to network elements.

Next, the directly attributable shared and common costs are projected forward and segregated by the appropriate functional areas. The functional areas are wholesale operations, retail services operations, and combined wholesale and retail services operations. Attribution factors based on the specific wholesale functional area, such as central office equipment (COE) investment, COE salary and wages, etc., are then developed and applied to the respective costs. These attributed costs are accumulated by related network investment category, such as pair gain equipment, buried cable, etc., and attributed shared cost factors are developed. These attributed shared cost factors are then included as a component of the TELRIC annual cost factors by investment category. All directly attributed costs related to retail services operations are excluded.

The common cost allocation factor is applied to TELRIC to produce the forward looking economic cost, as defined in the FCC Order, Appendix B, Section 51.505, which includes an appropriate share of common costs. The common cost allocation factor is calculated by summing all wholesale costs that cannot be reasonably attributed to specific elements, services or functions and dividing by the sum of the directly assignable and directly attributable wholesale costs.

The investments and noninvestment related expenses are prorated between the two call types in proportion to their demand.

SECTION 3

SECTION 3

FLORIDA

800 ACCESS TEN DIGIT SCREENING SERVICE

SUMMARY OF RESULTS

This section contains a cost summary for the Total Element Long Run Incremental Cost (TELRIC) per query for 800 Access Ten Digit Screening Service.

	Per Call
800/POTS Number Delivery	
TELRIC	$.0009
Common Cost Allocation Factor	1.0804
Total Cost	$.0010
800/POTS Number Delivery	
with Optional Complex Features	
TELRIC	$.0010
Common Cost Allocation Factor	1.0804
Total Cost	$.0011

SECTION 4

SECTION 4

FLORIDA

800 ACCESS TEN DIGIT SCREENING SERVICE

COST DEVELOPMENT - RECURRING

This section defines the cost development of the recurring TELRIC for 800 Access Ten Digit Screening Service.

Generally, economic cost development is outlined in Section 2. Network architecture is determined, the necessary equipment is identified, material prices are obtained, utilization and loadings factors are applied, and noninvestment related expenses are identified for the study period. Annual cost factors are applied to convert the investment to cost.

The investment required to provide 800 Database Service is comprised of:

    a loading for land investment associated with the Service
    Control Points,

    a loading for building investment associated with the Service
    Control Points,

    the Service Control Points hardware, including a loading for
    company engineering, installation, miscellaneous common
    equipment and power,

    the Port Termination hardware for the signaling links in the
    Regional and Local Signal Transfer Points,

    the additional Access (RSTP to SCP) and Diagonal (LSTP to RSTP) signal links added
    for 800 Database Service

The additional noninvestment related annual costs are comprised of:

    the non-capitalized Signal Transfer Point vendor Right-to-Use fees for the Port
    Termination software,

    the Service Switching Point-800 (SSP-800) software in the end
    offices required to launch queries to the Service Control Point,

Service Control Point vendor lease payments for maintenance and administrative services,

circuit lease expenses for data circuits from the Service Control Points to the Service Management System (SMS) in Kansas City, Missouri,

charges from the Number Administration and Service Center (NASC) which provides the administration and operation of the Service Management System,

Bellcore charges for Service Control Point-800 planning, software maintenance and administration,

Service Control Point software expense to provide recording capabilities for Call Handling and Destination features.

Workpaper 1 summarizes the Total Element Long Run Incremental Costs.

Workpapers 2 and 3 calculate the annual costs associated with the investments, sums these with the noninvestment related costs and develops the volume sensitive and volume insensitive unit costs for 800/POTS number delivery with, and without optional complex features.

Workpapers 4 and 5 summarize the investments and noninvestment related costs for the two call types.

Workpaper 6 prorates the investments and noninvestment related expenses between the two call types based on relative demand.

Workpaper 7 develops the loaded SCP and STP related investments and inflates these to the base study period.

Workpaper 8 develops the investments for the signaling links.

Workpaper 9 inflates the noninvestment related expenses to the base study period and annualizes the one-time expenses.

Workpaper 10 develops the average capacity in calls for the system.

The workpapers follow.

1 800 ACCESS TEN DIGIT SCREENING SERVICE	FLORIDA	
2	WORKPAPER 1	
3 SUMMARY OF COST	PAGE 1 OF 1	
4		
5		
6		
7		
8 RATE ELEMENT	DESCRIPTION	AMOUNT
9		
10 800/POTS Number Delivery	Recurring	
11 Direct Cost	Workpaper 2 Page 1 Ln 52	$0.0008
12 Directly Attributable Shared and Common Cost	Workpaper 2 Page 2 Ln 52	$0.0001
13 TELRIC, per Call	Ln 11 + Ln 12	$0.0009
14		
15 800/POTS Number Delivery w/Optional Complex Features	Recurring	
16 Direct Cost	Workpaper 3 Page 1 Ln 52	$0.0009
17 Directly Attributable Shared and Common Cost	Workpaper 3 Page 2 Ln 52	$0.0001
18 TELRIC, per Call	Ln 16 + Ln 17	$0.0010

FLORIDA
WORKPAPER 2
PAGE 1 OF 2

		SOURCE	AMOUNT
1	800 ACCESS THE BUSY SCHEDULING SERVICE		
2			
3	DIRECT COST		
4			
5	800/8CTS SERVICE DELIVERY		
6			
7		SOURCE	AMOUNT
8	DESCRIPTION - INVESTMENT	Workpaper 4 Ln 12	$20,934.92
9	Land	Workpaper 4 Ln 13	$690,356.79
10	Building	Workpaper 4 Ln 14	$9,740,252.39
11	Digital Switch	Workpaper 4 Ln 15	$39,872.72
12	Circuit	Workpaper 4 Ln 16	$1,484.19
13	Aerial	Workpaper 4 Ln 17	$6,776.64
14	Buried	Workpaper 4 Ln 18	$1,270.52
15	Underground	Workpaper 4 Ln 19	$421.54
16	Poles	Workpaper 4 Ln 20	$1,099.85
17	Conduit		
18			
19	Direct Annual Cost Factor (DACF)		0.1486
20	Land GCC		0.1673
21	Building (10C)		0.2412
22	Digital Switch G770		0.2327
23	Circuit G170		0.1860
24	Aerial G220		0.1747
25	Buried G450		0.1781
26	Underground G520		0.1822
27	Poles (10)		0.1395
28	Conduit (40)		
29			
30	Total Annual Cost	Ln 9 x Ln 20	$6,082.92
31	Land	Ln 10 x Ln 21	$115,743.01
32	Building	Ln 11 x Ln 22	$2,340,148.87
33	Digital Switch	Ln 12 x Ln 23	$9,278.58
34	Circuit	Ln 13 x Ln 24	$513.25
35	Aerial	Ln 14 x Ln 25	$1,184.48
36	Buried	Ln 15 x Ln 26	$226.30
37	Underground	Ln 16 x Ln 27	$81.40
38	Poles	Ln 17 x Ln 28	$147.71
39	Conduit	Sum (Ln 31 - Ln 39)	$2,482,405.75
40	Total Annual Cost		
41			
42	Gross Receipts Tax Factor		1.0153
43			
44	Total Investment Related Costs w/GRT, Volume Sensitive	Ln 40 x Ln 42	$2,520,390.54
45	Noninvestment Related Costs w/GRT, Volume Sensitive	Ln 42 x (Workpaper 4 Ln 29	$130,189.37
46	Noninvestment Related Costs w/GRT, Volume Insensitive	Ln 42 x (Workpaper 4 Ln 39	$3,945,745.61
47			
48	Average, Annual Calls w/o Optional Call Features	Workpaper 10 Ln 17	7,792,986,250
49			
50	Total Volume Sensitive Unit Cost	(Ln 44 + Ln 45)/Ln 48	$0.0003
51	Total Volume Insensitive Unit Cost	Ln 46 / Ln 48	$0.0005
52	Direct Cost per Call	Ln 50 + Ln 51	$0.0008

		FLORIDA
1 800 ACCESS TEN DIGIT SCREENING SERVICE		WORKPAPER 7
2		PAGE 2 OF 2
3 DIRECTLY ATTRIBUTABLE SHARED AND COMMON COST		
4		
5 800/DATA NUMBER DELIVERY		
6		
7		
8 DESCRIPTION - INVESTMENT	SOURCE	AMOUNT
9 Land	Workpaper 4 Ln 12	$40,954.92
10 Building	Workpaper 4 Ln 13	$688,358.79
11 Digital Switch	Workpaper 4 Ln 14	$9,740,252.35
12 Circuit	Workpaper 4 Ln 15	$39,672.72
13 Aerial	Workpaper 4 Ln 16	$1,664.16
14 Buried	Workpaper 4 Ln 17	$6,776.64
15 Underground	Workpaper 4 Ln 18	$1,270.62
16 Poles	Workpaper 4 Ln 19	$421.54
17 Conduit	Workpaper 4 Ln 20	$1,058.85
18		
19 Directly Attributable Shared and Common Annual Cost Factor (DAC)		0.0000
20 Land (0C)		0.0014
21 Building (10C)		0.0334
22 Digital Switch (577C)		0.0572
23 Circuit (557C)		0.0299
24 Aerial (622C)		0.0235
25 Buried (645C)		0.0220
26 Underground (65C)		0.0284
27 Poles (1C)		0.0146
28 Conduit (4C)		
29		
30 Total Annual Cost		$0.00
31 Land	Ln 9 x Ln 20	$965.10
32 Building	Ln 10 x Ln 21	$422,726.95
33 Digital Switch	Ln 11 x Ln 22	$1,465.27
34 Circuit	Ln 12 x Ln 23	$50.68
35 Aerial	Ln 13 x Ln 24	$159.25
36 Buried	Ln 14 x Ln 25	$27.95
37 Underground	Ln 15 x Ln 26	$12.45
38 Poles	Ln 16 x Ln 27	$15.46
39 Conduit	Ln 17 x Ln 28	
40 Total Annual Cost	Sum (Ln 31-Ln 39)	$425,441.09
41		
42 Gross Receipts Tax Factor		1.0153
43		
44 Total Investment Related Costs w/Grr, Volume Sensitive	Ln 40 x Ln 42	$491,950.34
45		
46		
47		
48 Average, Annual Calls w/o Optional Call Features	Workpaper 10 Ln 17	7,782,966,250
49		
50 Total Volume Sensitive Unit Cost	Ln 44/Ln49	$0.0001
51		
52 Directly Attributable Shared and Common Cost per Call	Ln 50	$0.0001

3 DIRECT COST

4

5 800/POTS WITH OPTIONAL COMPLEX FEATURES

6

7

8 DESCRIPTION - INVESTMENT	SOURCE	AMOUNT
9 Land	Workpaper 5 Ln 12	$1,049.61
10 Building	Workpaper 5 Ln 13	$17,675.82
11 Digital Switch	Workpaper 5 Ln 14	$249,750.09
12 Circuit	Workpaper 5 Ln 15	$1,032.38
13 Aerial	Workpaper 5 Ln 16	$45.44
14 Buried	Workpaper 5 Ln 17	$173.76
15 Underground	Workpaper 5 Ln 18	$33.86
16 Poles	Workpaper 5 Ln 19	$10.96
17 Conduit	Workpaper 5 Ln 20	$27.15
18		
19 Plant Annual Cost Factor (FRC)		0.1486
20 Land (200)		0.1679
21 Building (10C)		0.2612
22 Digital Switch (577C)		0.2327
23 Circuit (557C)		0.1848
24 Aerial (622C)		0.1747
25 Buried (945C)		0.1761
26 Underground (95C)		0.1922
27 Poles (1C)		0.1595
28 Conduit (4C)		
29		
30 Total Annual Cost		$155.97
31 Land	Ln 9 X Ln 20	$2,967.77
32 Building	Ln 10 X Ln 21	$60,230.71
33 Digital Switch	Ln 11 X Ln 22	$237.91
34 Circuit	Ln 12 X Ln 23	$8.03
35 Aerial	Ln 13 X Ln 24	$30.58
36 Buried	Ln 14 X Ln 25	$5.60
37 Underground	Ln 15 X Ln 26	$2.08
38 Poles	Ln 16 X Ln 27	$3.70
39 Conduit	Ln 17 X Ln 28	$63,651.43
40 Total Annual Cost	Sum (Ln 31-Ln 39)	
41		1.0155
42 Gross Receipts Tax Factor		
43		$64,625.50
44 Total Investment Related Costs w/GRT, Volume Sensitive	Ln 40 X Ln 42	$1,337.68
45 Noninvestment Related Costs w/GRT, Volume Sensitive	Ln 42 X (Workpaper 5 Ln 25)	$118,865.85
46 Noninvestment Related Costs w/GRT, Volume Insensitive	Ln 42 X (Workpaper 5 Ln 35)	
47		198,563,750
48 Average, Annual Calls w/ Optional Call Features	Workpaper 10 Ln 18	
49		$0.0008
50 Total Volume Sensitive Unit Cost	(Ln 44 + Ln45)/Ln48	$0.0006
51 Total Volume Insensitive Unit Cost	Ln 46 / Ln 48	$0.0009
52 Direct Cost per Call	Ln 50 + Ln 51	

	SOURCE	AMOUNT
1. 800 ACCESS TEN DIGIT SCREENING SERVICE		
2.		
3. DIRECTLY ATTRIBUTABLE SHARED AND COMMON COST		
4.		
5. 800/23XX WITH OPTIONAL COMPLEX FEATURES		
6.		
7.		
8. DESCRIPTION - INVESTMENT	SOURCE	AMOUNT
9. Land	Workpaper 5 Ln 12	$1,049.61
10. Building	Workpaper 5 Ln 13	$17,671.82
11. Digital Switch	Workpaper 5 Ln 14	$249,750.06
12. Circuit	Workpaper 5 Ln 15	$1,022.58
13. Aerial	Workpaper 5 Ln 16	$45.44
14. Buried	Workpaper 5 Ln 17	$175.76
15. Underground	Workpaper 5 Ln 18	$32.59
16. Poles	Workpaper 5 Ln 19	$10.96
17. Conduit	Workpaper 5 Ln 20	$27.15
18.		
19. Directly Attributable Shared and Common Annual Cost Factor (FRC)		
20. Land (20C)		0.0000
21. Building (10C)		0.0014
22. Digital Switch (177C)		0.0404
23. Circuit (957C)		0.0372
24. Aerial (922C)		0.0390
25. Buried (942C)		0.0235
26. Underground (95C)		0.0220
27. Poles (10C)		0.0204
28. Conduit (6C)		0.0148
29.		
30. Total Annual Cost		
31. Land	Ln 9 x Ln 20	$0.00
32. Building	Ln 10 x Ln 21	$24.75
33. Digital Switch	Ln 11 x Ln 22	$10,009.15
34. Circuit	Ln 12 x Ln 23	$38.04
35. Aerial	Ln 13 x Ln 24	$1.80
36. Buried	Ln 14 x Ln 25	$4.08
37. Underground	Ln 15 x Ln 26	$0.72
38. Poles	Ln 16 x Ln 27	$0.32
39. Conduit	Ln 17 x Ln 28	$0.40
40. Total Annual Cost	Sum (Ln 31-Ln 39)	$10,903.75
41.		
42. Gross Receipts Tax Factor		1.0153
43.		
44. Total Investment Related Costs w/GRT, Volume Sensitive	Ln 40 x Ln 42	$11,075.65
45.		
46.		
47.		
48. Average, Annual Calls w/ Optional Call Features	Workpaper 10 Ln 16	199,565,750
49.		
50. Total Volume Sensitive Unit Cost	Ln 44/Ln 48	$0.0001
51.		
52. Directly Attributable Shared and Common Cost per Call	Ln 50	$0.0001

	DESCRIPTION	SOURCE	AMOUNT
1	800 ACCESS TEN DIGIT SCREENING SERVICE		FLORIDA WORKPAPER 4
2			PAGE 1 OF 1
3			
4			
5	INVESTMENT AND NONINVESTMENT RELATED COST COMPONENTS		
6			
7	800/POTS NUMBER DELIVERY		
8			
9	DESCRIPTION	SOURCE	AMOUNT
10			
11	INVESTMENT -		
12	Land	Workpaper 6 Col B Ln 9	$40,934.92
13	Building	Workpaper 6 Col B Ln 10	$689,356.79
14	SCP and Ports	Workpaper 6 Col B Ln 11	$9,740,252.85
15	A & D Link Circuits	Workpaper 6 Col B Ln 12	$39,872.72
16	A & D Link Aerial	Workpaper 6 Col B Ln 13	$1,694.16
17	A & D Link Buried	Workpaper 6 Col B Ln 14	$6,776.64
18	A & D Link Underground	Workpaper 6 Col B Ln 15	$1,270.62
19	A & D Link Poles	Workpaper 6 Col B Ln 16	$423.54
20	A & D Link Conduit	Workpaper 6 Col B Ln 17	$1,058.85
21			
22	Total Volume Sensitive	Sum (Ln 12-Ln20)	$10,521,640.59
23			
24	NONINVESTMENT RELATED COSTS -		
25	Port RTU - Volume Sensitive	Workpaper 6 Col B Ln 20	$128,207.79
26			
27	SSP-800 RTU	Workpaper 6 Col B Ln 21	$1,621,313.10
28	SCP Lease	Workpaper 6 Col B Ln 22	$102,643.92
29	Circuits - Leased	Workpaper 6 Col B Ln 23	$143,334.17
30	NASC/SMS	Workpaper 6 Col B Ln 24	$931,301.90
31	BELLCORE/SCP - 800	Workpaper 6 Col B Ln 25	$1,087,692.35
32	SCP Software	Workpaper 6 Col B Ln 26	N/A
33			
34			
35	Total Volume Insensitive	Sum (Ln27-Ln32)	$3,886,285.44

	DESCRIPTION	SOURCE	AMOUNT
1	800 ACCESS TEN DIGIT SCREENING SERVICE		FLORIDA
2			WORKPAPER 5
3			PAGE 1 OF 1
4			
5	INVESTMENT AND NONINVESTMENT RELATED COST COMPONENTS		
6			
7	800/POTS NUMBER DELIVERY WITH OPTIONAL COMPLEX FEATURES		
8			
9	DESCRIPTION	SOURCE	AMOUNT
10			
11	INVESTMENT :		
12	Land	Workpaper 6 Col C Ln 9	$1,040.61
13	Building	Workpaper 6 Col C Ln 10	$17,675.82
14	SCP and Ports	Workpaper 6 Col C Ln 11	$249,750.06
15	A & D Link Circuits	Workpaper 6 Col C Ln 12	$1,022.38
16	A & D Link Aerial	Workpaper 6 Col C Ln 13	$43.44
17	A & D Link Buried	Workpaper 6 Col C Ln 14	$175.76
18	A & D Link Underground	Workpaper 6 Col C Ln 15	$32.58
19	A & D Link Poles	Workpaper 6 Col C Ln 16	$10.86
20	A & D Link Conduit	Workpaper 6 Col C Ln 17	$27.15
21			
22	Total Volume Sensitive	Sum (Ln 12-Ln 20)	$269,785.66
23			
24	NONINVESTMENT RELATED COSTS :		
25	Port RTU - Volume Sensitive	Workpaper 6 Col C Ln 20	$3,287.38
26			
27	SSP-800 RTU	Workpaper 6 Col C Ln 21	$41,572.13
28	SCP Lease	Workpaper 6 Col C Ln 22	$2,631.90
29	Circuits - Leased	Workpaper 6 Col C Ln 23	$5,675.24
30	NASC/SMS	Workpaper 6 Col C Ln 24	$23,879.54
31	BELLCORE/SCP - 800	Workpaper 6 Col C Ln 25	$27,889.55
32	SCP Software	Workpaper 6 Col C Ln 26	$18,428.91
33			
34			
35	Total Volume Insensitive	Sum (Ln 27-Ln 32)	$118,077.27

FLORIDA
WORKPAPER 8
PAGE: 1 OF 1

	NAME	TOTAL (A)	BOOPOTS w/LOC (B = (A + .7%))	BOOPOTS w/LOC (C = (A + .026))
1	1996 ACCESS TO ... SCANNING SERVICE			
2	SUMMARY / ...			
3	... OF EQUIPMENT			
4	AND ... EQUIPMENT SHARED BY ...			
5				
6				
7				
8				$1,089.61
9	Land			
10	Buildings	NW7 Lnd8	$39,000,000.01	$9,740,253.35	$249,750.06
11	SCP Hardware and Ports	NW7 Lnd9+Lnd17+Lnd22+Lnd29	$41,984.53	$40,934.92	$1,022.38
12	Link - Circuit	NW9 Lnd9+Lnd24	$40,865.10	$999,556.79	$45.44
13	Link - Aerial	NW9 Lnd11+Lnd24	$1,737.60	$1,884.16	$175.76
14	Link - Buried	NW9 Lnd12+Lnd25	$5,650.60	$6,776.64	$52.93
15	Link - Underground	NW9 Lnd13+Lnd26	$1,368.20	$1,270.82	$10.66
16	Link - Poles	NW9 Lnd14+Lnd27	$454.40	$421.54	$27.15
17	Link - Conduit	NW9 Lnd15+Lnd28	$1,086.00	$1,008.85	
18		NW9 Lnd16+Lnd21+Lnd30			
19	... / ...	NW9 Lnd9+Lnd10	$131,485.17	$728,207.79	$3,267.38
20	Port RTU	NW9 Lnd11	$1,662,865.23	$1,921,311.10	$41,572.13
21	SSP-600 RTU	NW9 Lnd11	$105,775.82	$102,641.92	$2,631.90
22	SCP Lease	NW9 Lnd16	$147,009.80	$143,334.17	$3,675.24
23	Circuits Leased	NW9 Lnd19	$985,161.44	$981,301.90	$23,879.54
24	MVOPBS	NW9 Lnd20	$1,116,391.16	$1,087,892.55	$27,880.55
25	Submarine80	NW9 Lnd21	N/A	N/A	$18,628.91
26	SCP Software	NW9 Lnd12			

Note: SCP Software and associated only with BOOPOTS delivery with Optional Complex Features

		FLORIDA
1	800 ACCESS TEN DIGIT SCREENING SERVICE	WORKPAPER 7
2		PAGE: 1 OF 1
3	DEVELOPMENT OF INVESTMENTS	
4		
5	DESCRIPTION	SOURCE	AMOUNT
6	SCP Hardware Per Node (1995)		$1,200,990.00
7	RSTP Port Per Port (1995)		$5,990.00
8	LSTP Port Per Port (1995)		$3,958.00
9	Telco E&I Factor		1.1652
10	Miscellaneous Common Equipment and Power Factor		1.0980
11	Land Loading Factor		0.0042
12	Building Loading Factor		0.0706
13	1996/1995 TPI Factor (5770)		0.9710
14	Investment Inflation Factor (5770)		1.0000
15			
16	Total SCP/STP Related Investments		
17	SCP Hardware	(Ln6xLn9xLn10)x6	$9,219,204.69
18	RSTP Ports	(Ln7xLn9xLn10)x128	$917,245.58
19	LSTP Ports	(Ln8xLn9xLn10)x30	$151,914.72
20			
21	Investment Indexed to 1997-1998 Level		
22	SCP/STP Related		
23	SCP Hardware and Ports	(Ln17 + Ln18 + Ln19)xLn13xLn14	$9,990,002.41
24	Land	Ln23 x Ln 11	$41,958.01
25	Building	Ln23 x Ln 12	$705,294.17

		A	B	C	D = (A×B×C)
1	800 ACCESS TEN DIGIT SCREENING SERVICE				FLORIDA WORKPAPER 8
2					PAGE: 1 OF 1
3	TOTAL LINK RELATED INVESTMENTS (1997-1999)				
4					
5		A	B	C	D = (A×B×C)
6	Access Link (RSTP-SCP)	Links	Miles	Unit Investment	Total Investment
7					
8	Termination - Circuit	48	N/A	$134.45	$6,453.60
9	Termination - Land	48	N/A	$0.34	$16.32
10	Termination - Building	48	N/A	$5.58	$267.84
11	Interoffice - Aerial	48	140	$0.08	$537.60
12	Interoffice - Buried	48	140	$0.32	$2,150.40
13	Interoffice - Underground	48	140	$0.06	$403.20
14	Interoffice - Poles	48	140	$0.02	$134.40
15	Interoffice - Conduit	48	140	$0.05	$336.00
16	Interoffice - Circuit	48	140	$1.40	$9,408.00
17	Interoffice - Land	48	140	$0.00	$0.00
18	Interoffice - Building	48	140	$0.06	$403.20
19					
20	Diagonal Link (LSTP-RSTP)				
21	Termination - Circuit	30	N/A	$134.45	$4,033.50
22	Termination - Land	30	N/A	$0.34	$10.20
23	Termination - Building	30	N/A	$5.58	$167.40
24	Interoffice - Aerial	30	500	$0.08	$1,200.00
25	Interoffice - Buried	30	500	$0.32	$4,800.00
26	Interoffice - Underground	30	500	$0.06	$900.00
27	Interoffice - Poles	30	500	$0.02	$300.00
28	Interoffice - Conduit	30	500	$0.05	$750.00
29	Interoffice - Circuit	30	500	$1.40	$21,000.00
30	Interoffice - Land	30	500	$0.00	$0.00
31	Interoffice - Building	30	500	$0.06	$900.00

		A	B	C*	D = AxBxC
1	800 ACCESS TEN DIGIT SCREENING SERVICE				FLORIDA
2					WORKPAPER 9
3	DEVELOPMENT OF NONINVESTMENT				PAGE: 1 OF 1
4	RELATED EXPENSES				
5		A	B	C*	D = AxBxC
6			Annuity	Composite	Equivalent
7	Software	1993 Expense	Factor	Factor	Annual Expense
8					(1997-1999)
9	RSTP RTU	$468,468	0.2723	0.9710	$123,864.49
10	LSTP RTU	$28,860	0.2723	0.9710	$7,630.68
11	SSP-800 RTU	$6,289,200	0.2723	0.9710	$1,662,885.23
12	SCP Software	$69,700	0.2723	0.9710	$18,428.91
13					
14					
15			A	B*	C = AxB
16			1993 Annual	Composite	Annual Expense
17	Other Expenses		Expense	Factor	(1997-1999)
18	SCP Lease		$108,420	0.9710	$105,275.82
19	Circuits Leased		$151,400	0.9710	$147,009.40
20	NASC/SMS		$983,709	0.9710	$955,181.44
21	Bellcore - 800		$1,148,900	0.9710	$1,115,581.90

*Note: Expenses were indexed to 1996 and levelized over 1997-1999 using the 377C TPI Factor (.9710) and Investment Inflation Factor (1.000) of its associated investment.

1 800 ACCESS TEN DIGIT SCREENING SERVICE		FLORIDA
2		WORKPAPER 10
3		PAGE: 1 OF 1
4		
5 DEVELOPMENT OF DATABASE CAPACITY		.
6		
7 DESCRIPTION	SOURCE	AMOUNT
8		
9 Calls per Second per Node		450
10 Calls per Hour per Node	Ln 9 x 3600	1,620,000
11 Average Busy Hour Capacity Factor		0.25
12 Busy Hour Calls per Node at Average Capacity	Ln 10 x Ln 11	405,000
13 Ratio Average Calendar Day to Busy Hour		9
14 Number of Nodes		6
15 Annual Average Calls	(Ln12xLn13xLn14)365	7,982,550,000
16 Ratio Calls w/o Optional Call Features		0.975
17 Calls w/o Optional Call Features	Ln 15 x Ln 16	7,782,986,250
18 Calls w/ Optional Call Features	Ln15 (1-Ln16)	199,563,750

SECTION 5

SECTION 5

FLORIDA

800 ACCESS TEN DIGIT SCREENING SERVICE

SPECIFIC STUDY ASSUMPTIONS

Cost Study assumptions are as follows:

Software expenses such as Right-To-Use fees are amortized over five years to develop an equivalent annual cost.

Noninvestment related expenses were projected to the 1997-1999 study period using the Telephone Plant Indexes and investment inflation factors of the associated (377C) investment.

SECTION 6

SECTION 6

FLORIDA

800 ACCESS TEN DIGIT SCREENING SERVICE

FACTORS AND LOADINGS

Following are the annual TELRIC factors and miscellaneous loadings used in the 800 Access Ten Digit Screening Service.

Annual TELRIC Factors		(See following Spreadsheet)
Amortization Factor, 5 years at 11.25%		.2723
Land Loading	20C (Regional)	.0042
Building Loading	10C (Regional)	.0706
Gross Receipts Tax Factor (Florida)		1.0153
Telco E & I Factor		1.1652
Miscellaneous Common Equipment and Power Factor	377C (Regional)	1.0980
Investment Inflation Factor		1.0000

FLORIDA

LINE INFORMATION DATABASE ACCESS SERVICE

TELRIC COST STUDY DOCUMENTATION

SECTIONS A THRU 7

| BATES RANGE (REGULATORY USE ONLY) |

Docket: Intervenor: Request No.   QC'd

REGIONAL NEGOTIATION REQUESTOR _____

1. REQUEST DATE:
2. P.O.D. ITEM NO.: _____   INTERROGATORY ITEM NO. _____
   AUDIT REQUEST NO. _____
3. DOCUMENT TITLE: ___Line Information DataBase Access Service___
4. DOCUMENT SUMMARY: _Provides procedures and supporting documentation for the cost_
   development of Line Identification DataBase Service.
   _____
   _____
   _____
   _____

5. DOCUMENT DATE: _

6. DOCUMENT TYPE ___LETTER ___MEMO ___MEDIA ___LITIGATION
   ___CHART/DIAGRAM ___FINANCIAL STATEMENT ___TABLE ___REPORT
   ___HANDWRITTEN NOTES ___COMPUTER/ELECTRONIC MEDIA X COST STUDY
7. NO. OF PAGES: ___

8. PERSON PROVIDING: _____ _____

DOCUMENT (SOURCE)	Last Name	First Name	MI	Dept	Phone #
	Durden	Rick		Finance	(205) 977-0348

9. AUTHOR:

	Last Name	First Name	MI	Dept	Phone #
	King	Lorean		Finance	(205) 977-0355

10. DOC LOCATION (BOX #) _____ (REGULATORY USE ONLY) _____
11. PRODUCTION DATE (FILING DATE) _____ (REGULATORY USE ONLY) ____
12. PRODUCTION HISTORY
    Proprietary: ____ Yes _X_ No   Explanation: _____ See Section A _____

    Relevant or Responsive Information? ____Yes ____No
    Why? _____

    If it would be burdensome to collect documents responsive to this request,
    how many hours would it require? _____
    How many documents? _____ Where are they? _____

REVIEWED & SELECTED____ REVIEWED & NOT SELECTED____ (REGULATORY USE ONLY)

FLORIDA

LINE IDENTIFICATION DATABASE (LIDB) ACCESS SERVICE

COST STUDY DOCUMENTATION

-

CONTENTS

SECTION A

SECTION A

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE

PROPRIETARY RATIONALE

The Line Information DataBase Access cost study is not proprietary.

SECTION 1

SECTION 1

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE

INTRODUCTION AND OVERVIEW

This study develops the per unit Total Element Long Run Incremental Cost (TELRIC) for BellSouth's Line Information DataBase (LIDB). Line Information Database Access Service provides the subscribing Local Exchange service provider the capability to query BellSouth's LIDB for validation of Calling Cards. This service is available to Local Exchange service providers per the same terms and conditions as described in Section 19 of the FCC No. 1 Tariff.

Line Information DataBase (LIDB) Access Service provides the subscribing Local Exchange service providers the capability to query BellSouth's LIDB for billing validation of Calling Card billed-to-third and collect calls. This service is available to Local Exchange service providers per the same terms and conditions as described in Section 19 of the FCC No. 1 Tariff.

The subscribing Local Exchange service providers will be required to interface with BellSouth's LIDB Locations, as described and listed in NECA 4 Tariff. BellSouth's LIDBs are located in Birmingham, Alabama and Atlanta, Georgia.

The service is provided by a mated pair of databases, referred to as Service Control Points (SCPs), serving the nine state BellSouth Region.

The SCPs are accessed through a mated pair of Signal Transfer Points (STPs), which are packet switches used to route signal messages - queries and responses in these instances - through the Common Channel Signaling Network.

Using mated facilities and loading each component at no more than half its physical capacity allows the service to continue unaffected by the failure of one of the components.

Since the LIDB system is Regional, the study has been developed on a Regional basis.

A long run analysis is performed to ensure that the time period studied is sufficient to capture all forward looking costs affected by the business decision. The recurring and nonrecurring costs presented in this study are levelized to be consistent with the 1997 - 1999 study period. These costs are developed by using 1996 level TELRIC loadings, annual cost factors and labor rates designed to produce TELRIC results.

SECTION 2

SECTION 2

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE

DESCRIPTION OF STUDY PROCEDURES

This section describes the general principles for the development of Total Element Long Run Incremental Cost (TELRIC) supporting Line Information DataBase (LIDB) Access Service.

The purpose of the TELRIC methodology established by the FCC order, is to set the rates for interconnection and unbundled network elements. The basis for a TELRIC study is forward looking long run economic cost methodology. Volume sensitive and volume insensitive costs are identified to develop the direct costs caused by providing the particular network element being studied. TELRIC methodology anticipates pricing of elements in a wholesale network company. Many costs regarded as common or shared would be included as directly attributable in a TELRIC study. The FCC pricing methodology also specifies that, over and above TELRIC, the additional portion of forward looking common costs that cannot be directly attributed to any particular network element will be allocated among the cost elements. TELRIC includes both recurring (capital and operating expenses) and nonrecurring (service provisioning) costs.

THE DEVELOPMENT OF RECURRING COSTS

The per unit costs to BellSouth Telecommunications, Inc. resulting from the capital investments necessary to provide a service are called recurring costs. Recurring costs represents a forward looking view of technology and deployment and include capital and operating costs. While capital costs include depreciation, cost of money and income tax, operating costs consist of plant specific expenses and ad valorem taxes. These expenses contribute to the ongoing cost to the Company associated with the initial capital investment. Recurring costs may also be noninvestment related, such as expensed labor feature specific software and contract expenses. Also included in the recurring TELRIC are shared and common costs directly attributable to the network element. Gross receipts tax is calculated on the TELRIC.

The first step in developing a TELRIC study for Line Identification Access Service is to determine the forward looking network architecture. Prices for the equipment and software are defined. Next, account specific Telephone Plant Indexes are applied, when necessary, to trend investments to the base study period. In-plant factors are applied to material prices to develop installed investments which include engineering and installation labor.

Appropriate loadings for land, building and miscellaneous common equipment and power are then applied to the electronic equipment.

Next, 1996 level Annual TELRIC Factors are used to calculate the direct cost of capital, ongoing maintenance and other operating expenses and taxes. These factors (specific factors for Uniform System of Accounts Field Reporting Code) are applied to levelized investments by account code, yielding an annual cost per account code. Both the investment and noninvestment related annual costs are summed and then divided by annual demand to arrive at a unit cost for each component. Annual Total Element Long Run Incremental Costs by account codes are then summed and divided by the associated demand to arrive at a cost per cost element.

The directly attributable shared and common cost components of the TELRIC annual cost factors are calculated as follows. First, a detailed analysis of the forward looking directly assigned costs associated with the interconnect or unbundled network elements is performed. The remaining costs of doing business are then analyzed to determine whether they are directly attributable shared and common costs that can be reasonably attributed to network elements.

Next, the directly attributable shared and common costs are projected forward and segregated by the appropriate functional areas. The functional areas are wholesale operations, retail services operations, and combined wholesale and retail services operations. Attribution factors based on the specific wholesale functional area, such as central office equipment (COE) investment, COE salary and wages, etc., are then developed and applied to the respective costs. These attributed costs are accumulated by related network investment category, such as pair gain equipment, buried cable, etc., and attributed shared cost factors are developed. These attributed shared cost factors are then included as a component of the TELRIC annual cost factors by investment category.

The common cost allocation factor is applied to TELRIC to produce the forward looking economic cost, as defined in the FCC Order, Appendix B, Section 51.505, which includes an appropriate share of common costs. The common cost allocation factor is calculated by summing all wholesale costs that cannot be reasonably attributed to specific elements, services or functions and dividing by the sum of the directly assignable and directly attributable wholesale cost.

THE DEVELOPMENT OF NONRECURRING COSTS

Nonrecurring costs are "one-time" costs incurred as a result of provisioning, installing, and disconnecting the Service. The first step in developing nonrecurring costs is to determine the cost elements related to the study. These cost elements are then described by all of the individual work functions required to provision the cost element. The work functions can be grouped into three categories. These are service request, software translations and database update. The work function times, identified by subject matter experts, are used to describe the flow of work within the various work centers. Installation and provisioning costs are developed by multiplying the

work time for each work function by the TELRIC labor rate for the work group performing the function.

The TELRIC labor rates are calculated as follows. Salary and wages, as used in the determination of TELRIC annual cost factors, are accumulated on a basis consistent with specific force groups. Shared costs attributable to salaries and wages are then accumulated on a basis consistent with the development of the respective force group's labor rate. A factor is then developed for each force group by dividing the attributed shared costs (human resources, office equipment, motor vehicles, land and building space, etc.) by the related salaries and wages. This factor is then applied to the salary and wage portion of the incremental labor rate for each force group, and the result is added to the incremental labor rate to determine the TELRIC labor rate.

Utilizing work functions, work times, and TELRIC labor rates, disconnect costs are calculated in the same manner as the installation costs. Since the labor costs will occur in the future, the current TELRIC labor rates are inflated to that future period in time and then discounted to the present. The discounted disconnect cost is added to the installation cost and gross receipts tax is applied to develop the nonrecurring cost.

The common cost allocation factor is applied to the nonrecurring TELRIC to produce the forward looking economic cost, as defined in the FCC Order, Appendix B, Section 51.505, which includes an appropriate share of common costs.

SECTION 3

SECTION 3

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE

SUMMARY OF RESULTS

This section contains a unit cost summary for the Total Element Long Run Incremental Cost (TELRIC) for Line Information DataBase (LIDB) Access Service.

LIDB Common Transport
    TELRIC $0.00006
    Common Cost Allocation Factor   1.0804
    Total Cost $0.00006

LIDB Validation
    TELRIC $0.00878
    Common Cost Allocation Factor   1.0804
    Total Cost $0.00949

Originating Point Code Establishment
or Change, Nonrecurring
    TELRIC   IN PROGRESS
    Common Cost Allocation Factor
    Total Cost

SECTION 4

SECTION 4

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE

COST DEVELOPMENT - RECURRING

This section defines the recurring cost development for Line Information DataBase (LIDB) Access Service.

Generally, economic cost development is outlined in Section 2. Network architecture is determined, the necessary equipment is identified, material prices are obtained, and utilization and loading factors are applied. Annual cost factors are applied to convert the investment to cost. Labor expense is directly identified.

The cost components included in this study are:

-LIDB Common Transport, the signaling links and ports between the pair of Signal Transfer Points (STPs, Packet Switches) and the Service Control Points (SCPs, the databases).

-LIDB Validation - the SCPs, the LIDB application software, the vendor's system development and administration charges for the SCP and the Database Administration Center (DBAC) that updates and monitors the LIDB, and personnel expense in the Message Investigation Center and the DBAC that is directly associated with the LIDB.

On Workpaper 1 the TELRIC is summarized for LIDB Common Transport and LIDB validation.

The LIDB Common Transport Cost is developed on Workpaper 2 by multiplying unit investments for the port and the link facility components by their quantities and annual cost factors. Similarily, the Right To Use Fees for the ports were multiplied by an amortization factor to develop the equivalent annual cost. The annual costs are summed and divided by the average demand in queries to produce the cost per query.

The LIDB Validation cost is developed on Workpaper 3. The vendor's price for the Service Control Points (SCPs, the databases) is adjusted for Company (capitalized) engineering and installation, and power and miscellaneous common equipment. The land and building investments are next calculated. These investments are multiplied by their annual cost factors, summed and divided by the system's average demand to product the cost per query for the SCP hardware, land and building.

The vendor's price for the LIDB application software was multiplied by an annuity factor to develop an equivalent annual cost. This annual cost was summed with the annual personnel expense for the Message Investigation (Calling Card Fraud) Center, the vendor's annual expenses for administration and technical support, and the annual labor expense for BellSouth's database administration. The result was divided by the LIDB annual demand to produce a cost per query.

The following Workpapers detail the cost development.

		STATE: FLORIDA
1. LINE INFORMATION DATABASE ACCESS SERVICE		STATE: FLORIDA
2. SUMMARY OF LIDB COSTS		WORKPAPER 1
3.		PAGE 1 OF 1
4.		7-Oct-96
5.		
6. RATE ELEMENT	DESCRIPTION	AMOUNT
7.		
8. LIDB COMMON TRANSPORT		
9. DIRECT COST	WP2 PG1 LN32	$0.00005
10. DIRECTLY ATTRIBUTED SHARED AND COMMON COST	WP2 PG2 LN32	$0.00001
11. TELRIC PER QUERY	LN9 + LN10	$0.00006
12.		
13.		
14. LIDB VALIDATION		
15. DIRECT COST	WP3 PG1 LN47	$0.00869
16. DIRECTLY ATTRIBUTED SHARED AND COMMON COST	WP3 PG2 LN26	$0.00009
17. TELRIC PER QUERY	LN15 + LN16	$0.00878

	TERMINATION	UNIT INVESTMENT	QUANTITY	DIRECT ANNUAL COST FACTOR	ANNUAL COST
10.	PORT 377C	$5,690.00	32	0.2412	$43,917.70
11.	LAND 20C	$0.34	16	0.1486	$0.81
12.	BUILDING 10C	$5.58	16	0.1679	$14.99
13.	CIRCUIT 357C	$134.45	16	0.2327	$500.58
14.	MILEAGE				
15.	BUILDING 10C	$0.06	2,240	0.1679	$22.57
16.	CIRCUIT 357C	$1.40	2,240	0.2327	$729.75
17.	AERIAL 822C	$0.08	2,240	0.1649	$33.13
18.	BURIED 845C	$0.32	2,240	0.1747	$125.22
19.	UNDERGROUND 85C	$0.08	2,240	0.1781	$31.92
20.	POLES 1C	$0.02	2,240	0.1922	$8.61
21.	CONDUIT 4C	$0.05	2,240	0.1395	$15.62
22.	TOTAL ANNUAL COST				$45,400.90
23.					
24.				AMORTIZATION	EQUIVALENT
25.	RTU	EXPENSE	QUANTITY	FACTOR	ANNUAL COST
26.					
27.	PORT 377C	$ 3,610.00	32	0.2723	$31,456.10
28.					
29.	GROSS RECEIPTS TAX FACTOR				1.0153
30.	AVERAGE, ANNUAL QUERIES (NOTE)				1,419,120,000
31.					
32.	DIRECT COST PER QUERY, VOLUME SENSITIVE	(LN29(LN22+LN27))/LN30			$0.00005

NOTE: This assumes that the mated pair of Databases is
dedicated to LIDB Service.

		UNIT		DASCC ANNUAL	ANNUAL
	TERMINATION	INVESTMENT	QUANTITY	COST FACTOR	COST
1.	LINE INFORMATION DATABASE ACCESS SERVICE				
2.	DEVELOPMENT OF LIDB				
3.	COMMON TRANSPORT COST				
4.	DIRECTLY ATTRIBUTABLE SHARED AND COMMON COST (DASCC)				
5.					
6.					
7.					
8.					
9.					
10.	PORT 377C	$5,690.00	32	0.0434	$7,902.27
11.	LAND 20C	$0.34	16	0.0000	$0.00
12.	BUILDING 10C	$5.58	16	0.0014	$0.12
13.	CIRCUIT 357C	$134.45	16	0.0372	$80.02
14.	MILEAGE				
15.	BUILDING 10C	$0.06	2,240	0.0014	$0.19
16.	CIRCUIT 357C	$1.40	2,240	0.0372	$116.66
17.	AERIAL 822C	$0.08	2,240	0.0299	$5.36
18.	BURIED 845C	$0.32	2,240	0.0235	$16.84
19.	UNDERGROUND 85C	$0.08	2,240	0.0220	$3.94
20.	POLES 1C	$0.02	2,240	0.0294	$1.32
21.	CONDUIT 4C	$0.05	2,240	0.0146	$1.64
22.	TOTAL ANNUAL COST				$8,128.36
23.					
24.					
25.					
26.					
27.					
28.					
29.	GROSS RECEIPTS TAX FACTOR				1.0153
30.	AVERAGE, ANNUAL QUERIES (NOTE)				1,419,120,000
31.	DIRECTLY ATTRIBUTABLE SHARED AND COMMON				
32.	COST PER QUERY, VOLUME SENSITIVE (LN29(LN22))/LN30				$0.00001

NOTE: This assumes that the mated pair of Databases is
dedicated to LIDB Service.

1.	LINE INFORMATION DATABASE ACCESS SERVICE		STATE: FLORIDA
2.	DEVELOPMENT OF LIDB VALIDATON COST		WORKPAPER 3
3.	DIRECT COST		PAGE 1 OF 2
4.			7-Oct-96
5.			
6.	LINE INFORMATION DATABASE - HARDWARE		
7.	HARDWARE INVESTMENT		$2,332,323
8.	COMPANY ENGINEERING & INSTALLATION FACTOR		1.1413
9.	MISC. COMMON EQUIPMENT & POWER FACTOR		1.0980
10.	TOTAL HARDWARE INVESTMENT	LN7xLN8xLN9	$2,922,745
11.	LAND FACTOR		0.0042
12.	BUILDING FACTOR		0.0706
13.	DIRECT ANNUAL COST FACTOR 377C		0.2412
14.	DIRECT ANNUAL COST FACTOR 20C		0.1486
15.	DIRECT ANNUAL COST FACTOR 10C		0.1679
16.	ANNUAL COST HARDWARE	LN10xLN13	$704,966
17.	ANNUAL COST LAND	LN10xLN11xLN14	$1,824
18.	ANNUAL COST BUILDING	LN10xLN12xLN15	$34,645
19.	AVERAGE, ANNUAL QUERIES (NOTE)		1,419,120,000
20.	LIDB COST PER QUERY, VOLUME SENSITIVE	(LN16+LN17+LN18)/LN19	$0.00052
21.			
22.	LINE INFORMATION DATABASE - SOFTWARE		
23.	APPLICATION SOFTWARE		$2,008,000
24.	ANNUITY FACTOR		0.2723
25.	EQUIVALENT ANNUAL COST, VOLUME INSENSITIVE	LN23xLN24	$546,778
26.			
27.			
28.			
29.	MESSAGE INVESTIGATION CENTER		
30.	ANNUAL PERSONNEL EXPENSE, VOLUME INSENSITIVE		$1,453,792
31.			
32.	DATABASE ADMINISTRATION		
33.	ANNUAL ADMINISTRATION/TECHNICAL SUPPORT		$781,112
34.	ANNUAL EXPENSE OPERATIONS		$657,620
35.	TOTAL ANNUAL EXPENSE, DATABASE ADMINISTRATION,		
36.	VOLUME INSENSITIVE	LN33+LN34	$1,438,732
37.	ANNUAL QUERIES - 1996		427,714,139
38.			
39.			
40.			
41.	GROSS RECEIPTS TAX FACTOR		1.0153
42.			
43.	VOLUME SENSITIVE COST PER QUERY	LN20xLN41	$0.00053
44.			
45.	VOLUME INSENSITIVE COST PER QUERY	(LN41)x(LN25+LN30+LN36)/LN37	$0.00816
46.			
47.	DIRECT COST PER QUERY	LN43 + LN45	$0.00869

NOTE: This assumes that the mated pair of Databases is
dedicated to LIDB Service.

			STATE: FLORIDA
1.	LINE INFORMATION DATABASE ACCESS SERVICE		
2.	DEVELOPMENT OF LIDB VALIDATON COST		WORKPAPER 3
3.	DIRECTLY ATTRIBUTABLE SHARED AND COMMON COST (DASCC)		PAGE 2 OF 2
4.			7-Oct-96
5.			
6.	LINE INFORMATION DATABASE - HARDWARE		
7.	HARDWARE INVESTMENT		¯ $2,332.323
8.	COMPANY ENGINEERING & INSTALLATION FACTOR		1.1413
9.	MISC. COMMON EQUIPMENT & POWER FACTOR		1.0980
10.	TOTAL HARDWARE INVESTMENT	LN7xLN8xLN9	$2,922,745
11.	LAND FACTOR		0.0042
12.	BUILDING FACTOR		0.0706
13.	DASCC ANNUAL COST FACTOR 377C		0.0434
14.	DASCC ANNUAL COST FACTOR 20C		0.0000
15.	DASCC ANNUAL COST FACTOR 10C		0.0014
16.	ANNUAL COST HARDWARE	LN10xLN13	$126,847
17.	ANNUAL COST LAND	LN10xLN11xLN14	$0
18.	ANNUAL COST BUILDING	LN10xLN12xLN15	$289
19.	AVERAGE, ANNUAL QUERIES (NOTE)		1,419,120,000
20.	LIDB COST PER QUERY, VOLUME SENSITIVE	(LN16+LN17+LN18)/LN19	$0.00009
21.			
22.			
23.	GROSS RECEIPTS TAX FACTOR		1.0153
24.			
25.	DIRECTLY ATTRIBUTABLE SHARED AND COMMON		
26.	COST PER QUERY	LN20xLN23	$0.00009

NOTE: This assumes that the mated pair of Databases is
          dedicated to LIDB Service.

SECTION 5

SECTION 5

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE .

COST DEVELOPMENT - NONRECURRING

IN PROGRESS

SECTION 6

SECTION 6

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE

SPECIFIC STUDY ASSUMPTIONS

Cost study assumptions are as follows:

Software expenses were projected to the 1997-1999 study period using the Telephone Plant Indexes and Investment Inflation Factors of the associated (377C) investment.

Software expenses such as Right-To-Use fees are amortized over five years to develop an equivalent annual cost.

SECTION 7

SECTION 7

FLORIDA

LINE INFORMATION DATABASE (LIDB) ACCESS SERVICE

FACTORS AND LOADINGS

Following are the incremental annual cost factors, miscellaneous loadings and labor rates used in the Line Information DataBase (LIDB) Access Service.

Amortization Factor (5 Years @ 11.25%)		0.2723
Miscellaneous Common Equipment and Power Factor	377C (Regional)	1.0980
Engineering & Installation Factor	377C (Regional)	1.1413
Gross Receipts Tax Factor (Tennessee)		1.0019

Annual Cost Factors (Attached)

1996 BELLSOUTH TELECOMMUNICATIONS
ACCOUNT AVERAGE ANNUAL COST FACTORS

23-Sep-96

* FOR USE IN SERVICE COST STUDIES ONLY *

	Field Code	Depreciation	ACFC COM	ACFC Inc Tax	Cap Exp	ACFC Plt Specific Exp	ACFC Adval Tax	Directly Attributed Shared and Common	TELRIC
		a	b	c	d	e	f	g	l
		11.25%			(a+b+c)				(d+e+f+g)
LAND - COE	20C	0.0000	0.0947	0.0426	0.1373	0.0000	0.0113	0.0000	0.1486
BUILDINGS - COE	10C, 110C	0.0330	0.0826	0.0369	0.1525	0.0041	0.0113	0.0014	0.1693
DIGITAL ELEC SWITCH	377C, 587C	0.1157	0.0555	0.0254	0.1966	0.0333	0.0113	0.0434	0.2846
OPERATOR SYSTEMS	117C, 417C	0.1157	0.0647	0.0296	0.2100	0.0071	0.0113	0.0500	0.2784
DIGTL CIRC-DDS	157C	0.1608	0.0575	0.0256	0.2439	0.0060	0.0113	0.0394	0.3006
DIGTL CIRC-PAIR GAIN	257C,D257C,F257C	0.1314	0.0564	0.0249	0.2127	0.0082	0.0113	0.0366	0.2688
DIGTL CIRC-OTHER	357C,T357C,F357C,557C	0.1314	0.0564	0.0252	0.2130	0.0084	0.0113	0.0372	0.2699
POLES	1C	0.0721	0.0599	0.0254	0.1574	0.0235	0.0113	0.0294	0.2216
AERIAL CA - METAL	22C, 12C	0.1023	0.0679	0.0254	0.1956	0.0461	0.0113	0.0619	0.3149
AERIAL CA - FIBER	822C, 812C,D22C, F22C,T22C,D12C,F12C,T12C	0.0746	0.0662	0.0281	0.1689	0.0047	0.0113	0.0372	0.2148
UNGROUND CA - METAL	5C	0.1184	0.0681	0.0263	0.2128	0.0172	0.0113	0.0351	0.2764
UNGROUND CA - FIBER	85C,D5C,F5C,T5C	0.0686	0.0655	0.0284	0.1625	0.0043	0.0113	0.0220	0.2001
BURIED CA - METAL	45C	0.0885	0.0678	0.0277	0.1840	0.0391	0.0113	0.0468	0.2612
BURIED CA - FIBER	B45C, D45C, F45C, T45C	0.0613	0.0670	0.0295	0.1578	0.0056	0.0113	0.0235	0.1982
SUBMARINE CA-METAL	6C	0.0937	0.0688	0.0307	0.1932	0.0026	0.0113	0.0206	0.2277
SUBMARINE CA-FIBER	86C,D6C,F6C,T6C	0.0937	0.0688	0.0310	0.1935	0.0026	0.0113	0.0209	0.2283
INTRBLD NTWK-METAL	52C	0.0751	0.0686	0.0291	0.1711	0.0136	0.0113	0.0315	0.2277
INTRBLD NTWK-FIBER	852C,D52C,F52C,T52C	0.0751	0.0669	0.0292	0.1712	0.0041	0.0113	0.0270	0.2136
CONDUIT SYSTEMS	4C	0.0205	0.0727	0.0325	0.1257	0.0025	0.0113	0.0146	0.1541