BELLSOUTH

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September 15, 2000

VIA HAND DELIVERY

David Waddell, Executive Secretary
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37238

Re: *All Telephone Companies Tariff Filings Regarding Reclassification Of Pay Telephone Service As Required By Federal Communications Commission (FCC) Docket 96-128*
Docket No. 97-00409

Dear Mr. Waddell:

Enclosed are the original and thirteen copies of BellSouth's Direct Testimony in this matter. Testimony is being provided by

Thomas F. Lohman
D. Daonne Caldwell
Sandy E. Sanders

The attachments to Ms. Caldwell's testimony are considered proprietary and are being filed under separate cover subject to the terms of the Protective Order.

Copies of the enclosed are being provided to counsel of record for all parties.

Very truly yours,

Guy M. Hicks

GMH:ch
Enclosure

228798

POSTED 9-18-00

CERTIFICATE OF SERVICE

I hereby certify that on September 15, 2000, a copy of the foregoing document was served on the parties of record, as follows:

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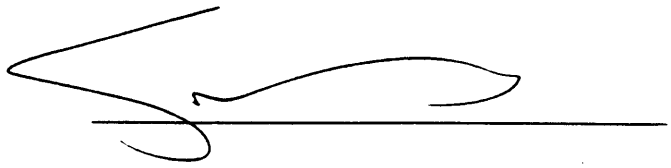

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF D. DAONNE CALDWELL

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 97-00409

SEPTEMBER 15, 2000

Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.

A. My name is D. Daonne Caldwell. My business address is 675 W. Peachtree St., N.E., Atlanta, Georgia. I am a Director in the Finance Department of BellSouth Telecommunications, Inc. (hereinafter referred to as "BellSouth"). My area of responsibility relates to the development of economic costs.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I attended the University of Mississippi, graduating with a Master of Science Degree in mathematics. I have attended numerous Bell Communications Research, Inc. ("Bellcore") courses and outside seminars relating to service cost studies and economic principles.

My initial employment was with South Central Bell in 1976 in the Tupelo, Mississippi, Engineering Department where I was responsible for Outside Plant Planning. In 1983, I transferred to BellSouth Services, Inc. in Birmingham, Alabama, and was responsible for the Centralized Results System Database. I

moved to the Pricing and Economics Department in 1984 where I developed methodology for service cost studies until 1986 when I accepted a rotational assignment with Bellcore. While at Bellcore, I was responsible for development and instruction of the Service Cost Studies Curriculum including courses, such as, "Concepts of Service Cost Studies", "Network Service Costs", "Nonrecurring Costs", and "Cost Studies for New Technologies". In 1990, I returned to BellSouth and was appointed to a position in the cost organization, now part of the Finance Department, with the responsibility of managing the development of cost studies for transport facilities, both loop and interoffice. My current responsibilities encompass cost methodology development and the overall coordination of cost study and interrogatory response filings. Additionally, I participate in cost-related dockets as an expert witness on cost issues.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present and support BellSouth's cost studies for payphone services. In doing so, I describe the cost methodology used in the cost studies for payphone offerings in Tennessee. Specifically, I will address the cost studies for the following:

- Public Telephone Access Service (PTAS)
- SmartLine® Service

Attached to this testimony, as Exhibit DDC-1, is the complete cost study both on CD-ROM and in paper format, which includes a summary of the study results,

models, input files, output files, descriptions, and documentation.

Q. WHY WERE THE COST STUDIES PERFORMED?

A. As part of the procedural schedule published in this docket, the TRA ordered that cost studies be filed for payphone services. These studies "shall clearly describe and identify the cost methodology, cost model inputs, and all other supporting information necessary to develop a clear understanding of how the proposed rates were calculated." (Page 9, Order Dated July 21, 2000) Thus, BellSouth is submitting cost studies for PTAS and SmartLine Service® that identify the costs of providing these services. BellSouth witness, Mr. Sandy Sanders, discusses the rates associated with these services.

Q. WHAT TYPES OF COSTS ARE INCLUDED IN BELLSOUTH'S STUDIES?

A. The cost studies include the development of both recurring and nonrecurring costs. Recurring costs include both capital and non-capital costs. Capital costs consist of depreciation, cost of money, and income tax. Non-capital recurring costs are operating expenses and consist of plant-specific expenses, such as maintenance, ad valorem taxes and gross receipts taxes.

Nonrecurring costs include one-time costs related to the provisioning of the services. Examples of nonrecurring activities include; performing translations in the switch; establishing the line class codes associated with central office blocking

and screening; and the direct staff support for payphone services. The nonrecurring costs are expressed as monthly equivalent costs and are included in the total monthly costs.

Q. WHAT COST METHODOLOGY IS USED IN THE COST STUDIES?

A. The cost studies reflect Total Service Long Run Incremental Cost (TSLRIC) methodology. TSLRIC is a long run incremental cost methodology that includes both volume sensitive and volume insensitive costs. This is the same methodology BellSouth has utilized in developing the cost support for tariff filings in Tennessee for many years.

Q. PLEASE EXPLAIN TSLRIC METHODOLOGY IN MORE DETAIL.

A. TSLRIC uses incremental costing techniques to identify the direct costs associated with providing the services under study. Incremental costs are based on cost causation and include all of the costs directly caused by expanding production, or alternatively, costs that would be saved if the production levels were reduced. The production unit could be an entire service, or a unit of a service. Costs may be volume sensitive and/or volume insensitive. The long run aspect of incremental cost development ensures that the time period studied is sufficient to capture all forward-looking costs affected by the business decision.

Q. WHAT ARE SHARED COSTS?

A. Shared costs are the portion of incremental cost shared by two or more services offered by a firm, but not by all services offered by the firm. Shared costs are unaffected by a change in demand (volume) of any one service or the deletion or addition of a service.

Q. WHAT ARE COMMON COSTS?

A. Common costs are costs that are incurred for the benefit of a firm as a whole, but not for the benefit of any individual product or family of products. Such costs do not change with changes in the firm's product mix or volume of output. Common costs are often referred to as overheads, and include, for example, executive, accounting and legal costs.

Q. HOW ARE SHARED AND COMMON COSTS REFLECTED IN THE PTAS AND SMARTLINE® SERVICE COST STUDIES?

A. Common costs are never included in costs produced for pricing decisions. Also, a strict TSLRIC study excludes shared costs. BellSouth generally adheres to the cost principles outlined in the TSLRIC methodology, i.e., BellSouth's TSLRIC studies only include volume sensitive and volume insensitive direct costs. Exhibit DDC-2 illustrates the relationship between TSLRIC costs, shared costs, and common costs for a simple three-product firm. Note that the shared costs are only involved with Products A and B, but not C. Common costs, however, are shared among all the products of the hypothetical firm, i.e., to all three products.

In BellSouth's payphone studies the cost of direct staff support is "shared" between PTAS and SmartLine® Service. The cost of direct staff support is calculated for both offerings and then attributed to PTAS and SmartLine® Service based on the total demand for payphone services.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF PTAS AND SMARTLINE® SERVICE.

A. Both services are comprised of an exchange line, i.e., a connection from the payphone location to a central office, provided by BellSouth at the request of the payphone provider for telecommunications use by the general public at accessible locations. The main functional difference between the two services is determination of where the intelligence lies. PTAS lines rely on the payphone set to deliver the call-handling intelligence required in processing the payphone call. For SmartLine® Service lines, the call-handling intelligence resides in the central office. Exhibit DDC-3 illustrates the components of both offerings.

Q. WHAT NETWORK COMPONENTS ARE INCLUDED IN PTAS?

A. PTAS includes the local loop, the non-traffic sensitive ("NTS") line termination in the switch, central office blocking and screening, and local usage. The local loop is the facility that extends from the main distributing frame ("MDF") in the BellSouth central office to the customer's premises. This facility includes all the outside plant components required for transmission, such as copper cable, fiber cable, electronic equipment, poles, conduit, etc., as well as all cable up to and

including the connection at the customer's premises.

The NTS line termination is the facility used to connect the local loop to a BellSouth end office switch. The facility includes the connection on the Main Distribution Frame ("MDF"), the jumper to the switch, and the non-traffic sensitive termination in the switch, e.g., the line card in Nortel's DMS-100 switch.

Central office blocking and screening is a feature in the switch. The costs are both recurring and nonrecurring. The recurring costs are the incremental costs over and above a POTS call for using the switch processor. The nonrecurring costs are the labor costs for performing the translations in the switch.

The local usage costs include the traffic sensitive switching cost of the end office for both intra-office and inter-office calls within the local calling area of that end office. Additionally, local tandem switching, interoffice transport, and signaling costs are included. The costs are developed on a minute of use basis. These results are converted to a payphone flat-rate monthly cost by utilizing payphone specific call lengths and the typical number of payphone calls in a month.

Q. WHAT COMPONENTS ARE INCLUDED IN THE SMARTLINE® SERVICE?

A. The basic components are the same as for PTAS; i.e. a loop, an NTS termination, central office blocking and screening, and local usage. The cost differences result from the following:

- SmartLine® Service includes signaling supervision in the end office switch. Thus, a different, more expensive, line card is required in the switch.

- The SmartLine® Service loop requires a special plug-in if the transmission signal is carried on a digital loop carrier system that adds additional costs.

- SmartLine® Service versus PTAS demand. This difference in demand impacts the development of the monthly equivalent cost of the blocking and screening.

Q. ARE THERE OTHER COSTS ASSOCIATED WITH PTAS AND SMARTLINE® SERVICE THAT HAVE BEEN CONSIDERED IN THE STUDY?

A. Yes as I mentioned previously the cost of direct staff support is also calculated. PTAS and SmartLine® Service are jointly supported by personnel who provide product management, pricing, sales support, and cost development. The expense associated with this product team is shared between PTAS and SmartLine® Service. To convert this regional cost to a monthly equivalent cost, it is divided by the sum of the regional demand for PTAS and SmartLine® Service. Thus, the monthly cost is the same for PTAS and SmartLine® Service.

Q. PLEASE DESCRIBE THE PROCESS BELLSOUTH USED TO DETERMINE THE INVESTMENTS ASSOCIATED WITH EACH OF THE

NETWORK COMPONENTS.

A. BellSouth used a statistically valid sample of single line residence and business loops as a basis for determining the investments associated with the payphone loops. The sampled loop design has been recast to reflect a forward-looking network architecture. For example, for loops over 12,000 feet, the feeder portion of the loop is assumed to be served on fiber facilities. The recast sample information was entered into BellSouth's Loop Model, a BellSouth-developed model which stores the specific characteristics of an average loop in Tennessee, as well as a weighted vendor price table for the loop components.

One of the cost drivers for loops is loop length. The average payphone loop length was determined by a sample of payphone loops in Tennessee. However, since the sample used in BellSouth's Loop Model was drawn from residential and business lines, a weighting between these two types of loops had to be developed that reflected the average length of a payphone loop. Exhibit DDC-4 displays these percentages and the supporting calculation.

To develop the investments associated with central office terminations ("NTS"), usage, and switch features (i.e., blocking and screening), BellSouth used the Simplified Switching Tool© ("SST"). This model replaces Telcordia's Switching Cost Information System / Intelligent Network ("SCIS/IN") and BellSouth's Switched Network Calculator© ("SNC") models used previously by BellSouth.

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The SST is comprised of two separate Microsoft Excel workbooks, the SST-Usage ("SST-U") and the SST-Ports ("SST-P"). In general, the SST-U covers the usage elements and features investment calculations. SST-P replaces the individual Excel workbooks that BellSouth previously employed for developing the material prices associate with central office terminations.

Q. HOW DID BELLSOUTH CONVERT THESE INVESTMENTS TO COST?

A. These investments must be installed, capital costs for these investments must be paid, and the investment must be maintained. In order to determine the engineering and installation charges associated with these investments and to convert them from installed investments to monthly costs, BellSouth utilized the TELRIC Calculator©. The TELRIC Calculator is a BellSouth-developed model that performs the following investment-related calculations:

1) Augments the material price to determine capitalized engineering and installation.

2) Accounts for inflation trends.

3) Develops costs for supporting structures and equipment, e.g., land, buildings, poles, conduit, and power.

4) Develops and applies annual cost factors based on cost of capital and depreciation parameters entered by the user.

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Q. DOES THE TELRIC CALCULATOR PERFORM ANY OTHER CALCULATIONS?

A. Yes. To ensure consistency and exercise control, the labor rates reside in the TELRIC Calculator. Thus, the TELRIC Calculator also performs the calculation of nonrecurring costs. The model multiplies the labor hours (by work group) by the appropriate labor rate.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The cost studies filed in this proceeding determine the long run incremental costs specific to Tennessee for providing PTAS and SmartLine® Service.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

TENNESSEE DOCKET NO. 97-00409

BELLSOUTH PAY TELEPHONE STUDIES

CALDWELL EXHIBIT DDC-1

REDACTED

Tennessee Pay Telephone Studies

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Simplified Switching Tool -
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SECTION 1
EXECUTIVE SUMMARY

STATEMENT OF PURPOSE

BellSouth Telecommunications, Inc. (BellSouth) has conducted new cost studies as ordered by the Tennessee Regulatory Authority (TRA) in their Order dated July 21, 2000 in Docket 97-00409. Included in this filing are Total Service Long Run Incremental Cost (TSLRIC) Studies which develop the cost for providing retail services; Access Line Service for Customer Provided Public Telephones (PTAS) and BellSouth® SMARTLine ® Service for Public Telephone Access. The TSLRIC costs presented in this docket reflect a 2000-2002 study period.

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PAGE IV REDACTED

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SECTION 2
STUDY METHODOLOGY

TOTAL SERVICE LONG RUN INCREMENTAL COST (TSLRIC)

BellSouth follows TSLRIC methodology in developing costs for retail service offerings. The basic guidelines that form the foundation for a TSLRIC study are:

1) The studies should reflect a long-run perspective. Long run implies a period long enough that all costs are variable. In other words, this principle assumes all costs are avoidable in the long run.

2) Cost causation is a key concept in incremental costing. Thus, only those costs that are directly caused by the particular item being studied are considered. This principle mandates the identification of costs directly attributable to providing a service.

3) The increment being studied should be the entire quantity of service.

4) Any function necessary to produce a service must have an associated cost. In essence, no sunk costs should be included.

5) Common overheads are not part of a long run incremental cost study.

6) The technology used should reflect the least cost, most efficient technology.

7) Costs should be forward-looking.

There are two generic types of costs that have been studied: recurring and nonrecurring.

RECURRING COSTS

The monthly costs resulting from capital investments deployed to provision network elements are called recurring costs. Recurring costs include capital and operating costs. Capital costs include depreciation, cost of money and income tax. Operating costs include the expenses for maintenance, ad valorem and other taxes and represent ongoing costs associated with upkeep of the initial capital investment. Gross receipts tax (which includes municipal license taxes and PSC fees) is added.

The generic steps for developing recurring cost can be summarized as shown below. The unique technical characteristics and physical makeup of each service cost element must be taken into consideration.

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SECTION 2
STUDY METHODOLOGY

Step 1: Determine the forward looking network designs (architectures) which will be used in deployment of the network element.

Step 2: Determine current material prices for the items of plant used in each design. Material prices are obtained from BellSouth contracts with various vendors.

Step 3: Apply material Telephone Plant Indexes (TPIs) as appropriate to determine the base year material prices. Material TPIs estimate the changes in material prices over time.

Step 4: Adjust the material prices for utilization to account for spare capacity using a reasonable projection of actual total usage.

Step 5: Weight the material prices, as appropriate, to determine the average material price for a typical element by USOA-FRC, i.e., plant account.

Step 6: Apply material inflation factors, referred to as levelization factors, to the material prices to convert the utilized base year material prices to material prices representative of a three year planning period.

Step 7: Apply inplant loadings to the levelized material prices to convert the material prices to an installed investment, which includes the cost of material, engineering labor and installation labor.

Step 8: Apply support loadings to the investments to determine investments for support equipment and power, land, buildings, poles and conduit as appropriate.

Step 9: Convert the investments by FRC to annual costs by applying account specific annual cost factors to the various investments. The annual cost factors calculate the capital costs (depreciation, cost of money, and income tax) and operating expenses (plant specific expense, ad valorem taxes, and other taxes). Add the annual costs for the various FRCs. Next divide by 12 to determine the direct monthly cost.

Step 10: Apply the gross receipts tax factor.

NONRECURRING COSTS

Nonrecurring costs are one-time expenses associated with provisioning a service. Subject matter experts identify the amount of time required to perform the task and also determine the probability that the activity will occur. Provisioning costs are

developed by multiplying the work time for each work function by the direct labor rate for the work group performing the function.

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SECTION 3
DESCRIPTION OF MODELS & PRICE CALCULATORS

1. TELRIC Calculator

The TELRIC Calculator, a model developed by BellSouth, produces long run incremental cost studies. The model was designed to accept variable inputs that are applied according to a user-controlled matrix. The TELRIC Calculator was used to produce the TSLRIC studies included in this filing.

The TELRIC Calculator consists of three Microsoft Excel templates. The templates consist of twenty-one sheets each, eight for receiving input data and thirteen for calculations. All templates perform calculations in exactly the same manner and differ only in the number of decimal places displayed. It should be noted that no rounding is done in any of the sheets.

The TELRIC Calculator User Interface takes information from the default data sources or from the user-modified sources and inputs them into the appropriate template depending on the cost element selected. Investments are entered by Field Reporting Code (FRC), Sub Field Reporting Code (Sub-FRC), and cost element number into the sheet called "Investments". The sub-FRC is used by the TELRIC Calculator to determine the appropriate application of factors and loadings, which are applied based on a matrix contained in "Factor Matrix". Factors and loadings are placed by FRC on the sheet labeled "Factors". Recurring and nonrecurring work times are placed by function and Job Function Code (JFC) or Payband into the sheets labeled "Recurring Labor" and "Nonrecurring Labor", respectively. Other recurring and nonrecurring expenses are entered by description into the sheet called "Additives". Lastly, direct labor rates are placed by JFC or Payband into the sheet called "Labor Rates".

The inputs then flow automatically through the "calculator" portions of the template. These sheets are labeled TELRIC Recurring Summary, INVEST-VS, INVEST-VI, LBPC-VS, LBPC-VI, FRCTELRIC-VS, FRCTELRIC-VI, RECEXP, TELRIC NRC Summary A, NR-NR, TELRIC NRC Summary B, NR-1A, and NR-IS. The function and detail of these sheets are outlined in the following narrative.

TELRIC Calculator Recurring Worksheets

Investment Development (Excluding Land, Building, Pole, & Conduit)
Investment development begins in the worksheets INVEST-VS and INVEST-VI, where volume sensitive and volume insensitive investments by FRC and sub-FRC flow from the input sheets. The inflation factors, inplant loadings and supporting equipment and/or power loadings are applied, if applicable. As stated previously, the application of these factors/loadings is driven by a matrix

contained within the template. If the factor/loading is not applicable to the FRC and sub-FRC, the investment is multiplied by the default value of one. All calculations are detailed above each cell. These investments flow to the Land, Building, Pole, & Conduit Development sheet and to the Recurring Cost Development sheet.

Land, Building, Pole, & Conduit Investment Development
Investments from the Investment Development sheets flow into the sheets LBPC-VS and LBPC-VI. These worksheets apply land, building, pole, and conduit loadings to the investments. Land, building, pole, and conduit investments carried from the Investment Development sheets are multiplied by a factor of one. If one or all of these factors do not apply to an FRC, excluding land, building, pole, and conduit FRCs, the factor defaults to zero. The results are then summed and totaled at the top of the sheet and flow to the next sheet. All calculations are detailed above each cell.

Recurring Cost Development
The investments from the Investment Development and the Land, Building, Pole, and Conduit Investment Development sheets are summed to the FRC level and flow into the sheets called FRCTELRIC-VS and FRCTELRIC-VI. These sheets apply depreciation, cost of money (COM), income tax, plant specific, and ad valorem tax factors to the investments. If a factor does not apply, the default is zero. These results are then summed to produce direct cost. All calculations are detailed above each cell. The user has the option of designating the type of cost produced, e.g. whether the final cost is billed on a monthly basis or on a per minute of use (MOU) basis. Thus, if the input investments are annual investments, the resulting cost outputs are divided by twelve to produce monthly costs. The results then flow to the summary sheet. The common cost factor is applied on the summary sheet to produce economic cost.

Recurring Labor Expense Development
Recurring labor work times flow to the worksheet called RECEXP. The times are associated with a work function and a JFC or Payband. The associated direct labor rates determined by the JFC or Payband, are applied to the work times to produce the direct expenses. These expenses flow to the summary sheet. All calculations are detailed above each cell.

Recurring Cost Development
Recurring direct costs from sheets FRCTELRIC-VS and FRCTELRIC-VI, recurring direct expenses from sheet RECEXP, and other expenses from the input sheet "Additives" flow to the sheet called TELRIC Recurring Summary. All costs and expenses are summed to a total cost. This cost is then multiplied by

Gross Receipts Tax and Common Cost factors to obtain the volume sensitive and volume insensitive recurring costs. These two costs are summed to produce economic costs. For TSLRIC studies, the Shared and Common Costs factors are set at 1.0.

All, some, or none of the previously described recurring cost development sheets will be included with a cost element, depending on their applicability.

TELRIC Calculator Nonrecurring Worksheets

Nonrecurring Cost Development

Installation and disconnect work times by work function and JFC or Payband flow from the input sheet "Nonrecurring Labor" to the three nonrecurring cost development sheets called NR-NR, NR-1A, and NR-IS. The three sheets exist to accommodate different types of nonrecurring charge structures. The sheet NR-NR develops cost for a single nonrecurring charge, the sheet NR-1A develops cost for charges which are first and additional, and the sheet NR-IS develops cost for charges which are initial and subsequent. Only one of these three sheets is populated with actual work times for a cost element; the other sheets receive work time values of zero. The cost development methodology is the same for all three sheets.

The TELRIC Calculator User Interface calculates the disconnect factor and places this factor into the "Factors" input sheet which causes it to flow to the three nonrecurring cost development sheets. Disconnect factors are used to develop the present value of a labor cost that will take place in the future. The interface develops this factor by first locating the factor associated with the study midpoint date in the working database. The end-point date is then determined by adding the cost element life, in months, to the midpoint date. The factor associated with this date is then divided by the midpoint factor. If there is no cost element life indicated (i.e., value equals zero), the disconnect factor is one. If the disconnect cost is to be collected at the time of disconnect, a future value is calculated. Disconnect cost is not converted to a present value.

To develop the direct cost, the appropriate direct labor rate for the JFC or Payband is applied to the installation and disconnect work times for each function to produce the install cost and the disconnect cost. The costs then flow to the appropriate summary sheet. All calculations are detailed above each cell.

Nonrecurring Cost Development

Nonrecurring direct costs from sheets NR-NR, NR-1A, NR-IS, and other expenses from the input sheet "Additives" flow to the sheets called "TELRIC NRC Summary A" and "TELRIC NRC Summary B". The first sheet summarizes a single nonrecurring cost; the second sheet summarizes first and additional costs or initial and subsequent costs. Costs and expenses are summed to a total cost. This cost is then multiplied by Gross Receipts Tax and Common Cost factors to produce the nonrecurring TSLRIC costs.

Depending on the structure of the nonrecurring cost, only two of the cost development sheets will be included with a cost element. The sheets NR-NR and TELRIC NRC Summary A will be included with the single cost structure. The sheets NR-1A and TELRIC NRC Summary B will be included with the first and additional cost structure. The sheets NR-IS and TELRIC NRC Summary B will be included with the initial and subsequent cost structure. The previously described nonrecurring cost development sheets will not be included with a cost element for which nonrecurring costs are not applicable.

Appendix B contains loading instructions and User Guide for the TELRIC Calculator.

2. Capital Cost Calculator

The Capital Cost Calculator is a Visual Basic model designed by BellSouth. It was developed to provide a process that is open, understandable and easily verifiable. The calculator output determines annual capital cost factors by FRC. The calculator produces depreciation, cost of money and income tax factors which are applied to investments to calculate the capital costs.

The Capital Cost Calculator provides the user with the ability to use and modify a set of input variables. The input variables are debt ratio, cost of money, debt interest rate, corporate income tax rate, net salvage ratio and economic life of assets. The calculator is designed with on-screen instructions and options which allow the user to view or modify the input section and view or print the calculations. Calculations are automatic when input variables are modified. Explanatory notes are included in each column heading and footnotes are included at the bottom of the calculations.

TENNESSEE DOCKET NO.97-00409
SECTION 3
DESCRIPTION OF MODELS & PRICE CALCULATORS

ILLUSTRATIVE CAPITAL COST CALCULATIONS:

The following is an illustrative calculation of capital costs, the inputs, and resulting capital cost factors:

CAPITAL COST ILLUSTRATIVE CALCULATION - UNDERGROUND CABLE METALLIC 5C

Inputs:

r = Debt Ratio = .40
i_d = Debt Interest Rate = .0650
t = Composite Income Taxes = .3857
Economic Life = 12 Years

i = Composite Cost of Money = .1125
n = Periods = 12
Net Salvage = -.08

1) Calculate Annuity of a Present Amount (A/P):

$$A/P = \frac{i(1+i)^n}{(1+i)^n - 1}$$

$$A/P = \frac{.1125(1+.1125)^{12}}{(1+.1125)^{12} - 1}$$

A/P = .1558662) Calculate Present Worth of Net Salvage (S_{pw}):

$$S_{pw} = \frac{\text{Net Salvage}}{(1+i)^n}$$

$$S_{pw} = \frac{-.08}{(1+.1125)^{12}}$$

$$S_{pw} = -.022258$$

3) Calculate PHI factor:

$$\Phi = \frac{t}{1-t} \times \left(1 - \frac{r(i_d)}{i}\right)$$

$$\Phi = \frac{.3857}{1 - .3857} \times \left(1 - \frac{.40(.0650)}{.1125}\right)$$

Φ = .482762

4) Calculate Depreciation Expense Factor:

Depreciation Expense Factor = (1 - Net Salvage)/Economic Life

Depreciation Expense Factor = (1 - (-.08))/12

Depreciation Expense Factor = .090000

5) Calculate Cost of Money Factor:

Cost of Money Factor=Annuity of a Present Amount X (1- S_{pw}) - Depreciation Exp Factor

Cost of Money Factor = .155866 X (1 - (-.022258)) - .090000

Cost of Money Factor = .069335

6) Calculate Income Tax Factor:

Income Tax Factor = Cost of Money Factor X PHI Factor

Income Tax Factor = .069335 X .482762

Income Tax Factor = .033472

7) Summary of Capital Cost Factors:

Depreciation Expense Factor	.090000
Cost of Money Factor	.069335
Income Tax Factor	.033472
Total Capital Cost Factors	.192807

3. Loop Model

TENNESSEE DOCKET NO.97-00409
SECTION 3
DESCRIPTION OF MODELS & PRICE CALCULATORS

The 1997 Loop Model (Version 1.1) produces the material for an average loop by field reporting code based on a sampling of loop characteristics in the state of Tennessee. The Loop Model is used to produce average material for service-specific loop elements.

Using BellSouth Outside Plant Engineering Records, a circuit layout is determined for each loop in the sample. The layout or makeup includes each item of plant from the central office to the customer premises. The type of information included is cable type (aerial, buried, underground, copper, fiber, etc.), cable size, cable gauge, cable length, bridge tap or end section (if applicable), cross connect box/terminal size, feeder or distribution, etc. Bridge tap or end section is any cable length that is not in the resistive path between the customer location and the central office. End section is the cable length beyond the location where a cable pair is served and the location where a cable pair ends. Next, each loop makeup is placed in a database for processing.

Each sample is analyzed to determine the appropriate forward-looking design for that loop including the most cost-effective forward-looking technology. Loops 12 kilofeet (KFT) and greater are redesigned to be served with Digital Loop Carrier (DLC) and fiber feeder. Loops less than 12 KFT in length are redesigned to be served on either 26 gauge or a combination of 26 and 24 gauge copper cable. Distribution plant is redesigned to a combination of 26 and 24 gauge copper cable, and bridge tap is designed to a maximum of 2,500 feet with a single bridge tap limited to 2,000 feet. Each loop is assigned a design number based on its redesigned feeder characteristics.

The redesigned loop makeups are stored in an Access Database file that is converted to a Microsoft Excel file. This file is used as a base point for the aggregate characteristics described below. Individual loop data maintained in the Access databases is used to develop information required on a per loop basis.

The Loop Model performs the following steps to develop the material price for an average loop:

1) Aggregates characteristics of the sampled loops by design, material size, field reporting code (FRC), class of service (COS), and Feeder (F) or Distribution (D) and sums all the units (feet or occurrences).
2) Applies utilization and DS0 equivalents to material prices (vendor prices averaged by type and size of cable) to derive the circuit-level material price. Units from Step 1 are multiplied by the circuit-level material price to gather total material for the aggregated data.

3) Electronic equipment (if applicable) material is added based on design number and number of loops with each design.
4) All material by FRC and COS is summed and divided by the number of loops in the sample to derive an average material for each field reporting code by class of service.
5) The average material by FRC is then weighted by residence and business percentages.
6) Material for the main distributing frame, drop wire/NID, and test points (if applicable) is added by FRC.
7) Results from Steps 5 and 6 are input to the TELRIC Calculator.

Loop Model Components
Each of the following components may be used in deriving the average material price:

Utilization
DS0 equivalents
Material price
Drop / NID
Design
Number of loops
Residence/Business Weighting

Utilization
Utilization of cable segments and associated material is based on the following percentages as of the end-of-year 1999:

Copper Feeder	62.2%
Copper Distribution	49.1%
Fiber Feeder	74.0%

DS0 Equivalents
In the loop studies, DS0 refers to one voice grade circuit. One copper cable pair is equivalent to one voice grade circuit as shown in the equivalency table below:

	# DS0 Equivalents
Copper Circuit (2-Wire, 1 Pair)	1
Fiber Circuit (PTAS)	193
Fiber Circuit (SMARTLine)	135

In the case of fiber, there are two types of utilization that must be considered:

1) Fiber strands within a single sheath, and the
1) Utilization of voice grade circuits within the individual fiber.

The utilization of voice grade circuits within the individual fiber is determined based on the utilization of the electronics on the fiber.

Material Price (Copper, Cross Connect Box)

Material prices and ordering quantities for all types of cable and cross connect boxes were received from Supply Chain Management (SCM) in a spreadsheet format. The information (including Product Identification [PID], description, contract, supplier, price per unit, FRC, size, gauge) was based on the information in the PIDs database as of June 15, 1999. The quantities ordered were based on a database match by PID from the material and purchase order recording system called CAPRI for the period between January and December of 1998.

This data was assembled for items with quantities ordered and sorted by FRC and size. The material price for items within a given category were averaged and given a unique PID (i.e., all 100 pair aerial 24 gauge cable is ALL100A24). Each unique PID becomes an entry on the material tables known as 1999 Material Table and 1999 Crossbox/Terminal Material Table.

Drop Wire/NID

Residence and Business single-line loops can be connected to the premises inside wire by placement of a drop wire with termination on a network interface device (NID). Drop wire, also referred to as service wire, can be either aerial or buried. The typical NID serving a 2-wire loop is equipped with one protector and one interface. The NID housing is capable of serving up to six pairs.

Telco labor (which includes an average travel time to the customer's premises) applies to the installation of the NID and installation and termination of the drop regardless of type.

The average aerial or buried drop/NID investment reflects the occurrence of the loop terminating with drop as well as the placement of either an aerial or buried drop. Because multiple pair drops are placed, the investment also represents an

adjustment for the average number of lines served per residence or business customer.

Designs

Each loop is categorized based on its feeder characteristics and assigned a design number. The design descriptions are:

Design 1 - All copper feeder
Design 2 - All copper feeder to a building terminal
Design 3 - All fiber feeder
Design 7 - All fiber feeder to a building terminal

The material for Digital Loop Carrier (DLC) and Multiplexers (MUX) is developed for each loop design and central office or remote terminal location. Electronics investments apply to DLC (fiber) loops. A description of the Loop Multiplexer Price Calculator and the DLC Price Calculator is found in this section.

Residence / Business Weighting

A residence and business weighting is developed based on the relationship of estimated coin loop lengths to the residence/business loop lengths found in the loop sample.

Residence	32.90%
Business	67.10%

Loop Survey

The loop survey took place in stages beginning April of 1995 with Step 1 and ending in November of 1995 with Step 6 below. Explanations of each step follow:

1) Determine sample size through statistical reference -

Sample Size		**Universe 4/95**
Residence	199 loops	1,365,254 lines
Business	199 loops	382,489 lines

2) Identify universe using Customer Record Information System (CRIS) through appropriate USOCs by class of service - The universe includes residence and business lines. The universe of business lines consists of voice grade business access lines (small and large).

3) Randomly select Circuit IDs from universe (CRIS) based on sample size - The CRIS database is ordered by telephone number and was provided prior to the sampling process in that manner. Samples were pulled based on relevant USOC (residence and business) considering every nth working loop with a random start.

4) Match Circuit ID with the Loop Maintenance Operations System (LMOS) data (add wire center, cable and pair and serving address) - Prior to accessing field records, additional information such as wire center, cross connect box and terminal address had to be added to the circuit ID information. The LMOS database was used to populate the information.

5) Access field records and manually populate loop makeup form - Loop design drawings were made for each loop in the sample.

6) Load loop makeup data into database - The drawings were entered into a database that became the loop makeup database contained in the loop model. The loop makeup includes class of service, size, gauge, cable length, cross connect box/terminal size, field reporting code, and description. The loop makeup data was again verified by employees knowledgeable in telephone plant engineering and sent back to the Network Planning Organization for verification prior to input into the database.

7) Verification of data -

Prior to input:
Verify that all surveys are received and accounted for
Check for duplicate surveys (paper and mechanized)
Check for and request missing surveys
Develop log for recording survey data (date, data entered, error report)

During Input to Access Model (built in checks):
Automatic calculation of loop miles checked with hand-calculated mileage
If mileage is off, review each input and cable segment length
Only valid sizes, gauges, descriptions, and field reporting codes are allowed

After Input to Access Model:
Record loop surveys input (date and data entered)
Send questions/errors back to field

Correct questions/errors
Review Access loop makeup tables for item class and description quality

Loop Model Investment Checks and Balances:
Mechanized loops are checked for correct cable size and description
Access database inputs are combined into one large Paradox database
Unfamiliar cable sizes and descriptions are reviewed and edited
Duplicate or odd data is reviewed and checked against original inputs

Illustrative Loop Model Example:

1) Characteristics of the samples are aggregated for all units by loop design, material size, field-reporting code, class of service, feeder or distribution.

2) Utilization and DS0 equivalents are applied to material price to derive the circuit-level material information. Units are multiplied by the results of Step 2 to gather total material for each of the characteristics.

Illustrative Example:

Copper Feeder – Business - FRC 22C

1200 pair aerial-copper cable	
Material per sheath foot	$4.48
Copper Feeder Utilization	70%
# Of DS0 equivalents	1200 x 70% = 840
Conversion from sheath to circuit	$4.48 / 840 = $.005333
# Of cable feet	600
Total circuit-level material	600 x $.005333 = $3.20

Fiber - Business - FRC 822C

36 strand fiber cable-	
Material per sheath foot	$1.12
Fiber Utilization	74%
# Of DS0 equivalents	36 x 74% x 170 = 4529
Conversion from sheath to circuit	$1.12 / 4529 = $.0002473
# Of cable feet	4564
Total circuit-level material	4564 x $.0002473 = $1.13

3) The total material is divided by the number of loops in the sample to derive an average material for each field reporting code.

Total Material -All Business Feeder FRC 12C	= $181.79
# Of Loops	=293
Unweighted Avg.-Business Feeder FRC12C	= $181.79 / 293 = $0.62

4) The unweighted average material by FRC is then weighted by residence and business percentages and added together. This information becomes input to the TELRIC Calculator.

Illustrative Example:

Unweighted Material Bus.	FRC12C	=	$0.62
Unweighted Material Res.	FRC12C	=	$0.66
Business Weighting		=	20.00%
Residence Weighting		=	80.00%
Weighted Avg. Business	FRC 12C	=	$0.12
Weighted Avg. Residence	FRC 12C	=	$0.53
Weighted 12C Material		=	$0.65

4. Loop Multiplexer Price Calculator

The Loop Multiplexer Price Calculator is used to identify the material prices associated with loop multiplexing equipment required to provide unbundled loops. This model calculates materials for SONET Multiplexers deployed in the Outside Plant Loop based on a SONET ring architecture consisting of a 4 node ring (one central office and 3 remote terminal nodes). It includes the hardwire and common plug-ins, as well as the low speed multiplexer and protection cards.

The material prices are obtained from the SONET Price Calculator.

The multiplexer equipment prices are expressed on a per DS1 level and then divided by the number of channels it provides to develop the per circuit material price. This price is then adjusted for utilization. The prices by vendor are weighted by probability of occurrence. The Loop Multiplexer Price Calculator provides data to the unbundled loop cost studies.

Illustrative Example of a Loop Multiplexer Price Calculation: Central Office and Remote Terminal

Multiplexer Material	
Hardwire and Common Material (per DS1)	$ 250.00
DS1 Card (per DS1)	$ 200.00
Fiber Terminal (per DS1)	$ 2.50
Pigtails (per DS1)	$ .50
Fiber Jumpers (per DS1)	$ 1.00
	+ _____
Total Material per system (per DS1)	$ 454.00
System probability of occurrence	x .50
Weighted Material per system (per DS1)	$ 227.00
Number of Voice Grade Units (per DS1)	/ 24
Weighted per Circuit Material	$ 9.46
Utilization Factor	/ .53
Weighted-Utilized per Circuit Material	$17.85

5. Digital Loop Carrier Price Calculator

The Digital Loop Carrier Price Calculator develops material prices for the digital loop carrier systems associated with loops. The utilization factors in this model are projected actual fills. The channel unit plug-in is not utilized because breakage is calculated on deferrable plug-ins, assuming there is on average one-half plug-in spare in a channel bank.

In the Digital Loop Carrier Price Calculator, the material price of a system is divided by the number of channels it provides to develop the per circuit material price. The results are multiplied by the probability of occurrence resulting in a weighted per circuit material price. A utilization factor is applied to the result to produce a weighted-utilized material price per circuit.

The Digital Loop Carrier Price Calculator provides data to the Unbundled Loop cost studies.

Illustrative Example of a Digital Loop Carrier Price Calculation: Central Office and Remote Terminal

Hardwire, Commons, DSX-1 Panel Material		$10,000.00
Number of Channels	/	224
Per Circuit Material	$	44.64
Probability of Occurrence	x	.40
Weighted per circuit Material	$	17.86
Utilization Factor	/	.53
Weighted-Utilized per Circuit Material	$	33.70

6. Simplified Switching Tool

The Simplified Switching Tool (SST) is a new investment model designed to compute switching investments. SST will largely replace the Telcordia Switching Cost Information System/Intelligent Network (SCIS/IN) program, the BellSouth Switched Network Calculator (SNC) model, and several locally developed Excel workbooks with one integrated tool.

This tool accepts both wire center and state average data from the SCIS Model Office, using Excel Visual Basic logic to produce a database output. Additional investment data comes from fundamental studies for: interoffice facilities, SS7, Main Distributing Frame (MDF), and feature hardware. The material cost and labor outputs from SST are input to the TELRIC Calculator, which computes recurring and nonrecurring TSLRIC costs.

The SST model has two primary Excel modules. SST-Usage (SST-U) computes investments for Switched Usage, Common Transport, and Features. SST-Ports (SST-P) computes investments for switch port UNEs.

Appendix D contains the SST User Guides, SST Methodology, and Data Dictionary. The User Guides explain how to run both modules of SST, SST-U and SST-P. The SST Methodology document outlines the purpose of the model, the scope of the model, the underlying philosophy, the basic assumptions, and the fundamental computations. Additionally, this document contains a description of the elements supported by the SST model. The Data Dictionary describes the primary inputs into SST, their source, and their vintage.

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SECTION 4
COST STUDIES

INTRODUCTION

This section contains descriptions of the services and an overview of the study process for each service studied by BellSouth.

The studies included in this filing are all based on a three-year study period (2000-2002). All long run costs associated with providing the services are identified and included in the cost studies. The forward-looking cost of money is 11.25%. All factors and loadings reflect a 2000 to 2002 study period.

The following page contains a listing of the direct cost components included in this filing package. A designated number represents each component and is referenced throughout the studies. The reference number is required for processing by the TELRIC Calculator and has no other meaningful purpose. Also provided is the file name of the Microsoft Excel spreadsheet in which inputs and workpapers for each component can be found.

Following this listing is a narrative which describes the services. After the narrative are the TELRIC Calculator outputs. Following the TELRIC Calculator outputs are Microsoft Excel spreadsheets containing the inputs and associated work papers.

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SECTION 4
COST STUDIES

		Filename
A.0	**UNBUNDLED LOCAL LOOP**	
A.1	**2-WIRE ANALOG VOICE GRADE LOOP**	
A.1.9	2-Wire Analog Voice Grade Loop - SMARTLine	T2wcoin.xls
A.1.10	2-Wire Analog Voice Grade Loop - PTAS	T2wcoin.xls
C.0	**UNBUNDLED SWITCHING AND LOCAL INTERCONNECTION**	
C.1	**LOCAL SWITCHING**	
C.1.1	End Office Switching Function, Per MOU	TN_SST_U.xls
C.1.2	End Office Interoffice Trunk Port - Shared, Per MOU	TN_SST_U.xls
C.2	**TANDEM SWITCHING**	
C.2.1	Tandem Switching Function Per MOU	TN_SST_U.xls
C.2.2	Tandem Interoffice Trunk Port - Shared, Per MOU	TN_SST_U.xls
D.0	**UNBUNDLED TRANSPORT AND LOCAL INTERCONNECTION**	
D.1	**COMMON TRANSPORT**	
D.1.1	Common Transport - Per Mile, Per MOU	TN_SST_U.xls
D.1.2	Common Transport - Facilities Termination Per MOU	TN_SST_U.xls
S.0	**SERVICE COST STUDIES**	
S.1	**COIN LINES**	
S.1.1	PTAS NTS Line Termination	tnptas.xls
S.1.2	PTAS Central Office Blocking and Screening	tnptas.xls
S.1.3	Product support	TN_PTAS.xls
S.1.4.1	End Office Switching Function, per Month	See Note 1
S.1.4.2	End Office Trunk Port Shared, per Month	See Note 1
S.1.5.1	Tandem Switching Function, per Month	See Note 1
S.1.5.2	Tandem Trunk Port Shared, per Month	See Note 1
S.1.6.1	Common Transport, per Mile, per Month	See Note 1
S.1.6.2	Common Transport, Facilities Termination, per Month	See Note 1
S.1.7	SMARTLine® NTS Line Termination	tnsmart.xls
S.1.8	SMARTLine® Central Office Blocking and Screening	tnsmart.xls

Note 1: These items represent the equivalent monthly costs for items C.1.1, C.1.2, C.2.1, C.2.2, D.1.1 and D.2.2. Worksheet is included in Appendix A.

SERVICE DESCRIPTION

PTAS SERVICE

PTAS includes the local loop, the non-traffic sensitive (NTS) line termination in the switch, central office blocking and screening and local usage. The local loop is the facility that extends from the BellSouth central office to the customer's premises. The facility includes all the outside plant components required for transmission, such as copper cable, fiber cable, electronic equipment, poles, conduit, etc., as well as all cable up to and including the connection at the customer's premises, the network interface device (NID). The loop results reflect coin characteristics. Additionally the loop costs are based upon forward-looking technologies and the most efficient method of provisioning a local loop in Tennessee.

The NTS line termination is the facility used to connect the local loop to a BellSouth end office switch. The facility includes the connection on the MDF, the jumper to the switch, and the non-traffic sensitive termination, for example the line card in the DMS100, in the switch. BellSouth uses the Switching Cost Information System (SCIS), a Telcordia cost model, to develop the vendor engineered, furnished, and installed (EF&I) investment associated with these items of plant. The SCIS model outputs reflect vendor design criteria, BellSouth discount levels, and office-level usage characteristics.

Central office blocking and screening is a feature in the switch required for PTAS. Blocking and screening costs are both recurring and nonrecurring. The recurring costs are the incremental costs over and above a Plain Old Telephone Service (POTS) call for using the switch processor. The nonrecurring costs are the labor costs for performing the translations in the switch and the Right-to-Use (RTU) fees paid to vendors.

The local usage costs include the traffic sensitive switching cost of the end office for both intraoffice and interoffice calls within the local calling area of that end office. Additionally, local tandem switching, interoffice transport, and signaling costs are included. These costs reflect an average per minute of use of the network. These results are converted to a payphone flat-rate monthly cost by utilizing payphone specific call lengths and the typical number of payphone calls in a month.

SMARTLine® SERVICE

The basic components for SMARTLine® Service include a loop, an NTS termination, central office blocking and screening and local usage. The cost differences between PTAS and SMARTLine® Service result from the following:

- SMARTLine® Service includes signaling supervision in the end-office switch. A different, more expensive, line card is required in the switch.
- The SMARTLine® Service loop requires a special plug-in that adds additional costs if the signal is carried on a digital loop carrier system.
- SMARTLine® Service demand differs from PTAS demand. This difference in demand impacts the monthly equivalent cost of the blocking and screening since demand is used to convert the office-level nonrecurring costs to a per line cost.

PAYPHONE PRODUCT LINE COSTS

As mentioned previously, BellSouth follows the TSLRIC methodology when conducting costs studies. Thus, only direct costs are considered. However, there are costs that are direct to the product line under study (payphone service), but that are shared between PTAS and SMARTLine® Service. These product line costs are a result of activities performed by the product, sales, pricing, cost and marketing managers. Additionally, BellSouth sponsors annual conferences and produces a publication for payphone customers. These costs would not be incurred by BellSouth if PTAS and SMARTLine® Service were eliminated.

PAGES 24-253 REDACTED

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APPENDIX A

MONTHLY COST CONVERSION WORKSHEET

APPENDIX A PAGE 2 REDACTED

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APPENDIX B

APPLICATION REQUIREMENTS AND LOADING INSTRUCTIONS

For this filing the following requirements apply to the BellSouth Cost Calculator and supporting applications. Please refer to the BellSouth Telecommunications Loop Model User Guide for BSTLM application requirements and loading instructions.

Operating system platforms:
Windows 95
Windows 98
Windows NT 4.0

Hardware:
Your computer should be adequately configured to run Windows 95/98/NT 4.0. Performance will vary depending on the processor and random access memory (RAM) installed in your computer. Below are the minimum hardware requirements:

CPU:	Pentium 166 MHz (Due to the size of this filing, a Pentium 450MHz is recommended.)
RAM:	64 MB recommended
Disk:	Temporary installation files (approximately 35 MB) Applications (approximately 40 MB if all components installed) Scenario requirements will vary but due to the size of this filing, it is recommended that 1 GB be available.
Printer:	If you would like to print reports, your computer must be connected to a printer.

Software:

Microsoft Excel 97 or higher

Installing The BellSouth Cost Calculator

1. Verify that you have the required amount of disk space available as detailed in the Application Requirements above.

2. Place the BellSouth Cost Calculator CD-ROM into the CD-ROM drive on your PC. Open Windows Explorer and locate the **setup.exe** file on the CD-ROM drive. Double-click **setup.exe**. The BellSouth Cost Calculator will automatically load. A User Guide will be included in the load but a copy is also included in this appendix.

BellSouth TELRIC Calculator

Version 1.3

Operating Instructions

Starting the BellSouth TELRIC Calculator

Windows 3.11

Open the Program Group entitled "BellSouth TELRIC Suite v1.3".
Double-click the BellSouth TELRIC Calculator icon.

Windows 95 and Windows NT 4.0

Click the Start Button.
Move the mouse to highlight Programs.
A list of programs and folders will pop-up.
Locate the folder entitled "BellSouth TELRIC Suite v1.3".
Move the mouse to highlight the BellSouth TELRIC Calculator icon and release the mouse button.

Opening Screen

Menu Options

File

Open TELRIC Calculator - Selecting this option will display the Cost Element Selection Screen, the interface for computing TELRIC for the unbundled cost elements. This may also be accomplished by clicking the BellSouth logo.

Exit TELRIC Calculator - Choose this option to exit the TELRIC Calculator.

Models

Loop Model - Selecting this option will launch the BellSouth Loop Model.

Switched Network Calculator - Selecting this option will launch the BellSouth Switched Network Calculator.

Capital Cost Calculator - Selecting this option will launch the BellSouth Capital Cost Calculator.

Shared and Common Cost - Selecting this option will launch the BellSouth Shared and Common Cost Application.

Help

Contents - Displays help table of contents.

Search - Displays list of help topics that can be searched.

About - Displays a dialog box containing version information.

Cost Element Selection Screen

The Cost Element Selection Screen is the focal point for creating and running TELRIC scenarios. When you open the Calculator for the first time, the BellSouth default factors and investments are loaded into the TELRIC WORKING database.
You may create multiple scenarios by modifying the factors and investments stored
in the WORKING database and saving them for future retrieval.

Cost Element Selection List

The Cost Element Selection List is similar to Windows File Manager or Explorer. When the screen is first displayed, a list of folders are displayed along with their description. These folders represent cost element groupings. Clicking on a folder will expand the list so that you can see all elements or folders that are grouped under it. The selected item will be highlighted. Clicking the same folder again will close the folder. Cost elements are denoted by a page icon.

At this time the TELRIC Calculator will only allow you to select one item in the list. That item may be a folder of elements or an individual element. The item that you select will affect other functions on the screen. For instance, if you select the A.0 folder, all elements under A.0 will be processed when you click run. Also, your selection will affect what elements are displayed when you choose to view or edit Investments. If you select the topmost folder, all elements will be displayed or run.

Factors and Investments Option

The Factors and Investments option button at the bottom left corner of the screen controls the factors and investments that will be displayed and/or run. If BellSouth Defaults is selected, the BellSouth default factors and investments will be displayed or run. If Current Scenario is selected, the factors and investments stored in the WORKING database are used. In this manner, you may choose to use the BellSouth default values for a run without opening a new scenario and wiping out the modifications you have made to the WORKING factors and investments.

Factors Button

Clicking this button will display the **View/Edit Factors** screen where you may make changes to factors. Refer to the section entitled **View/Edit Factors** for instructions on using this screen.

Investments Button

Clicking this button will display the **View/Edit Investments** screen where you may make changes to investments. Refer to the section entitled **View/Edit Investments** for instructions on using this screen.

View Output Button

Clicking this button will display the **View Output** screen where you may view the output Excel worksheet files that are created by the Calculator runs. Refer to the section entitled **View Output** for instructions on using this screen.

Run Button

Clicking this button will start the process that will calculate TELRIC for the selected cost elements. If you run less than 20 elements, the average run time per element is two minutes. If you run 20 elements or more, the average run time per element is reduced to roughly one half the time depending on the elements that are run.

Status Bar

At the bottom of the screen is a status bar. The status bar provides information about the currently running process. In addition, if you position your mouse over objects on the screen, the status bar will indicate the object's function.

Cost Element Selection Screen (cont.)

Menu Options

File

New - Resets the WORKING database to the BellSouth defaults.

Open - Displays a screen which allows you to open saved or exported scenarios.

Refer to the sections entitled **Opening a Scenario** and **Importing a Scenario** for instructions.

Save - Saves the current WORKING database for later retrieval.

Refer to the section entitled **Saving a Scenario** for instructions.

Export - Creates a copy of a scenario that can be transported to another PC. Refer to the section entitled **Exporting a Scenario** for instructions.

Run - Runs the currently loaded scenario.

View Output - Displays the output screen where you may view run output.

Close Current Screen - Closes the Cost Element Selection screen and returns

you to the opening screen

Exit TELRIC Calculator - Choose this option to exit the TELRIC Calculator.

State

All BellSouth states are listed but not all are available depending on the user.

The unavailable states are grayed out and cannot be selected. The currently

selected state is indicated by a check mark.

Options

Collapse List - Closes all the cost element folders in the selection list.

Summary

Last Run - Displays a summary report that includes the elements processed in the last run that was executed.

All Elements - Current Scenario - Displays a summary report that includes all elements in the currently loaded scenario.

All Elements - BellSouth Base Case - Displays a summary report that includes all elements processed with the BellSouth default factors and investments.

Help

Contents - Displays help table of contents.

Search - Displays list of help topics that can be searched.

About - Displays a dialog box containing version information.

View / Edit Factors Screen

To display the **View / Edit Factors Screen**, click the **Factors** button on the Cost Element Selection Screen. If the Factors and Investments option button the Cost Element Selection Screen is set to BellSouth Defaults, the BellSouth Default factors will be displayed. The defaults can not be modified. If the Factors and Investments option button is set to Current Scenario, the factors currently stored in the WORKING database will be displayed.

The factors are arranged into the following categories displayed on tabbed file folders:

Inplant Factors
Loadings
Miscellaneous
Annual Cost Factors (excluding Cost of Capital factors which have their own tab)
Cost of Capital
Disconnect Factors
Global Factors

You may switch between the factor categories by clicking on the tabs.

Current Record

As you move around in the factor tables by clicking with the mouse or using the arrow keys, the description for the currently selected record will be displayed at the top of the tab.

Modifying Factors

You may modify the factors by clicking on the cell that you want to modify, typing the changes, and pressing <ENTER> or moving to another row. If you type into a cell, without pressing <ENTER> or moving to another row and then click another tab, your updates will be lost.

Reset to BellSouth Defaults

On each tab there is a **Reset to BellSouth Defaults** button. Clicking this button will cause all factors on that tab to be reset to the BellSouth default values.

If you wish to reset all factors, not just the ones on the current tab, select the **Defaults | Reset ALL factors to BellSouth defaults** menu option.

View / Edit Factors Screen (cont.)

Capital Cost Calculator

The factors on the Cost of Capital tab were developed in the **BellSouth Capital Cost Calculator**. You may open the Capital Cost Calculator to change the development of these factors by clicking the **Capital Cost Calculator** button.

Once you make the desired changes, please exit the Capital Cost Calculator. To apply the changes that you made in the Capital Cost Calculator to the TELRIC Calculator WORKING database, click the **Load Values From Calculator** button.

Since the Shared Cost Factor, Common Factor, and TELRIC Labor Rates are dependent on the output from the Capital Cost Calculator, they will be updated at this time. This may take several minutes.

Shared and Common Cost Application

The Shared and Common Cost factors are developed in the Shared and Common Cost Application. In addition, the TELRIC Labor Rates are dependent on the output of the Shared and Common Cost Application. On the Annual Cost Factors and Global tabs there is a **Open Shared and Common** button. Clicking this button will cause the Shared and Common Cost Application to be opened so that you may make changes. To apply the changes that you made in the Shared and Common Cost Application to the TELRIC WORKING database, click the **Load Shared and Common** button.

View / Edit Investments Screen

To display the **View / Edit Investments Screen**, click the **Investments** button on the Cost Element Selection Screen. If the Factors and Investments option button the Cost Element Selection Screen is set to BellSouth Defaults, the BellSouth Default investments will be displayed. The defaults can not be modified. If the Factors and Investments option button is set to Current Scenario, the investments currently stored in the WORKING database will be displayed.

The investments are arranged into the following categories displayed on tabbed file folders:

Investments (Volume-Sensitive and Non-Volume Sensitive)
Recurring Additives
Non-Recurring Additives
Recurring Labor (Hours)
Non-Recurring Labor (Hours)
Labor Rates

You may switch between the investment categories by clicking on the tabs.

Current Record

As you move around in the investment tables by clicking with the mouse or using the arrow keys, the description for the currently selected record will be displayed at the top of the tab.

Modifying Investments

You may modify the investments by clicking on the cell that you want to modify, typing the changes, and pressing <ENTER> or moving to another row. If you type into a cell, without pressing <ENTER> or moving to another row and then click another tab, your updates will be lost.

View / Edit Investments Screen (cont.)

Reset to BellSouth Defaults

On each tab there is a **Reset to BellSouth Defaults** button. When you click this button you will be given three options:

Selected record only - Only the currently selected record will be reset.
Displayed elements only - All elements displayed on the tab will be reset.
All elements - All elements in this investment category will be reset.

If you wish to reset all investment categories, not just the ones on the current tab, select the **Defaults | Reset ALL investment types to BellSouth defaults** menu option.

Open Source

As you navigate the investment tables, the name of the development source for the selected row will be displayed. If you would like to view and/or modify the investment development, you may open the source by clicking the **Open Source** button. Depending on the element, the source may be the BellSouth Loop Model, the BellSouth Switched Network Calculator, or an Excel worksheet.

Reload Values From Source

At this time, updating the source does not automatically update the WORKING database. To apply any changes that you made, click the **Reload Values From Source** button.
A list of all elements in the source will be displayed. All elements that are listed will be updated. If you do not wish to continue, click the **Cancel** button, otherwise click the **OK** button.

Depending on the source and the number of elements that are being reset, the amount of time required to perform the reset will vary. The status bar will keep you informed about what the Calculator is doing during this process.

Resetting Investment Worksheet To BellSouth Defaults

When you first open an Excel Investment Worksheet, the default worksheet is copied into the BLSTLRIC\TELRIC\INVSTMTS\USER*state* directory. The Calculator will continue to read the investment worksheet from this directory until you choose to delete it. To delete all the user copies of the investment worksheets, select the **Defaults | Reset Investments Worksheets to BellSouth defaults** menu option. All of the copies of investment worksheets will be deleted and any subsequent open of an investment worksheet will cause a fresh copy to be loaded.

Non-Recurring Labor Element Life and Disconnect Factors

The Non-Recurring Labor Element Life is element specific. On the Non-Recurring Labor tab you may have multiple Job Function entries for an element and the Life is specifed for each element. Because the Life is element specific, when you change the Life for one row, all rows for that element will be updated.

Because the Life plays a role in calculating the Disconnect factor for an element, any Life changes will cause the Disconnect factor for that element to be recalculated. In the event the Life specified is beyond the available range (ie. date is too far in the future), you will be presented with several options:

Reset Life To Its Original Value
The Life will be restored to its value before you made the change.

Accept Default Disconnect Factor of 1
The Disconnect Factor will be set to 1

Calculate Disconnect As Indicated Below
The Disconnect Factor will be recalculated based on the End-Point factor for the last month in the disconnect table. The calculation will be displayed so that you may preview what the factor will be.

View Output Screen

To display the output files created by the Calculator, click the **View Output** button on the Cost Element Selection Screen. The Output Screen will be displayed, listing the available output files.

List Options

By default, the outputs from the most recent run will be listed. To display all available output files that you have created, click the **All available user outputs** button. To display the default BellSouth output files, click the **Default BellSouth outputs** button.

Selecting Files

To select a file, click on its entry in the list. The entry will be highlighted. For the Print and Delete options, but not the View option, you may select more than one file. To select multiple files hold down the Ctrl key when you click. To select a block of files, click the starting file, hold down the Shift key, and click the ending file. The entire range will be highlighted.

View File

You may view only one output file at a time. To view the selected file, click the **View File** button. Excel will be started and the file will be displayed. **Warning: Using Excel in this fashion requires significant resources. To reduce the risk of depleting Windows resources, please close down Excel after you have finished viewing the file.**

Print File(s)

To print one or more files you have selected, click the **Print File(s)** button. Before printing the files you may wish to change the setup of your printer. You may do so by selecting **Print Setup** from the File menu. After you click the **Print Files(s)** button, the selected files will be printed. **Warning: Unless you have a large amount of RAM, spooling a large number of files may fill up your spool and cause system problems. Therefore, exercise caution when printing multiple files at one time**.

Delete File(s)

You may delete the selected files by clicking the **Delete File(s)** button.

Saving a Scenario

Once you have made changes to factors and/or investments, you may want to save these changes so that you may recall them for future use. Please note that only the current condition of the WORKING database is saved. This includes the factors, investments, and summary reports. **Due to the size of the output worksheet files, they will not be saved with the scenario. If you would like to save the output files, you may copy them from the BLSTLRIC\TELRIC\OUTPUT\USER*state* directory (where *state* is the state that you are running).**

To save the current contents of the WORKING database to a scenario file, select the
File | Save menu option on the Cost Element Selection screen. The Save Scenario screen will be displayed.

The Calculator will automatically generate a name for the scenario. You may enter a **Title** (up to 50 characters) and a **Narrative** describing the scenario in more detail. While the **Title** is required, the **Narrative** is optional.

To save the scenario, click the save button.

To close the Save Scenario screen without saving the scenario, click the **Cancel** button.

Opening A Saved Scenario

To open a saved scenario, select the **File | Open** menu option on the Cost Elements Selection screen. The Scenarios screen will be displayed.

At the top of the screen is a table of saved scenarios if you have any. The columns in the table are:

State - The state for which the scenario was created.
Number - A sequential number assigned by the Calculator.
Date / Time - The date and time that the scenario was saved.
Title - Up to 50 character title for the scenario. This title will be displayed on the Cost Element Selection screen when you open the scenario.

At the bottom of the screen is an input area labeled **Narrative**. This box contains any narrative that was entered when the scenario was saved.

Selecting a Scenario

You may select a scenario by clicking the corresponding row in the table. The record selection marker will move to that scenario. After a scenario is selected, there are several operations that you may perform:

Update Title and Narrative

To update the Title and Narrative fields, click on the field and type in your changes.
In order for these fields to be updated, you must press <ENTER> or move up or down to another record (like Excel).

Open

When the **Open** button is clicked, the saved scenario will be copied to the WORKING database and the Scenario title on the Cost Element Selection Screen will be changed to the title of the scenario.

Opening A Saved Scenario (cont.)

Delete

To delete the selected scenario, click the **Delete** button. You will be asked to confirm the deletion.

Help

Click the **Help** button to display help for the current screen.

Cancel

Click the **Cancel** button to close the Scenarios screen without opening a scenario.

Exporting a Scenario

Once you have created a scenario, you may wish to transport that scenario to someone else's PC. The **File | Export** menu option on the **Cost Element Selection Screen** allows you to copy the currently loaded scenario or a saved scenario to a file that may be imported on another PC. For instructions on importing a scenario, refer to the section entitled **Importing A Scenario**.

When you select the **File | Export** menu option a popup menu is displayed allowing you to indicate whether you want to export the currently loaded scenario or a saved scenario.

Current Scenario

If you select **Current Scenario**, you will be prompted for an output file name. A file extension is not required because the file will be created with a default extension of **.exp**.
If the specified file already exists you will be asked to confirm the overwrite of the existing file. You may choose to continue with the overwrite or cancel the export.

Saved Scenario

If you select Saved Scenario, the BellSouth TELRIC Calculator - Scenarios screen will be displayed. All scenarios that you have saved will be listed in a table. To select a scenario to be exported, click its entry in the table and then click the **Export** button. As in the Current Scenario procedure, you will be prompted to enter a file name.

Once you have created a scenario export file you may transport it to another PC for importing.

Importing a Scenario

To import an exported scenario, select the **File | Open** menu option on the **Cost Element Selection Screen**. When the BellSouth TELRIC Calculator - Scenarios screen is displayed, click the **Open** button. You will be prompted for the exported scenario's file name. Specify the desired file name and click **OK** to continue with the import or **Cancel** to cancel the import. After clicking **OK**, the Import Scenario screen will be displayed.
The TELRIC Calculator will generate a unique name for the scenario and ask you to specify a title and optionally a narrative that describes the new scenario.

Once you have typed a title for the new scenario, click **Import** to continue the import. You may cancel the import by clicking **Cancel**. Once the scenario is imported, it will be listed as an available saved scenario. You may now open it if you choose.

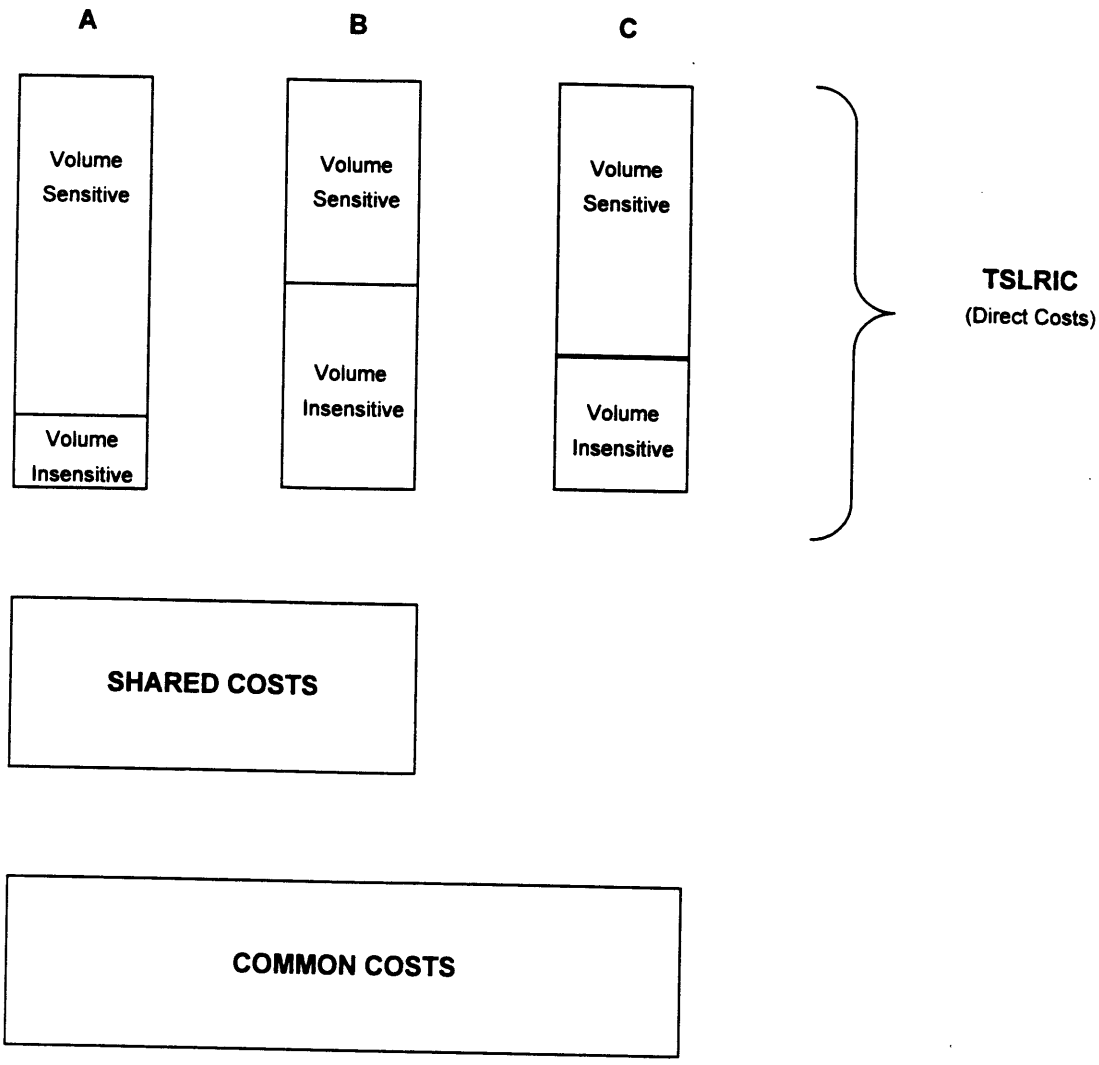
Exiting the TELRIC Calculator

To exit the TELRIC Calculator, select the **File | Exit TELRIC Calculator** menu option.

TENNESSEE DOCKET NO.97-00409
APPENDIX C

Electronic copies of the following SST User Guides are included under Appendix D on the CD furnished in Caldwell Exhibit DDC1.

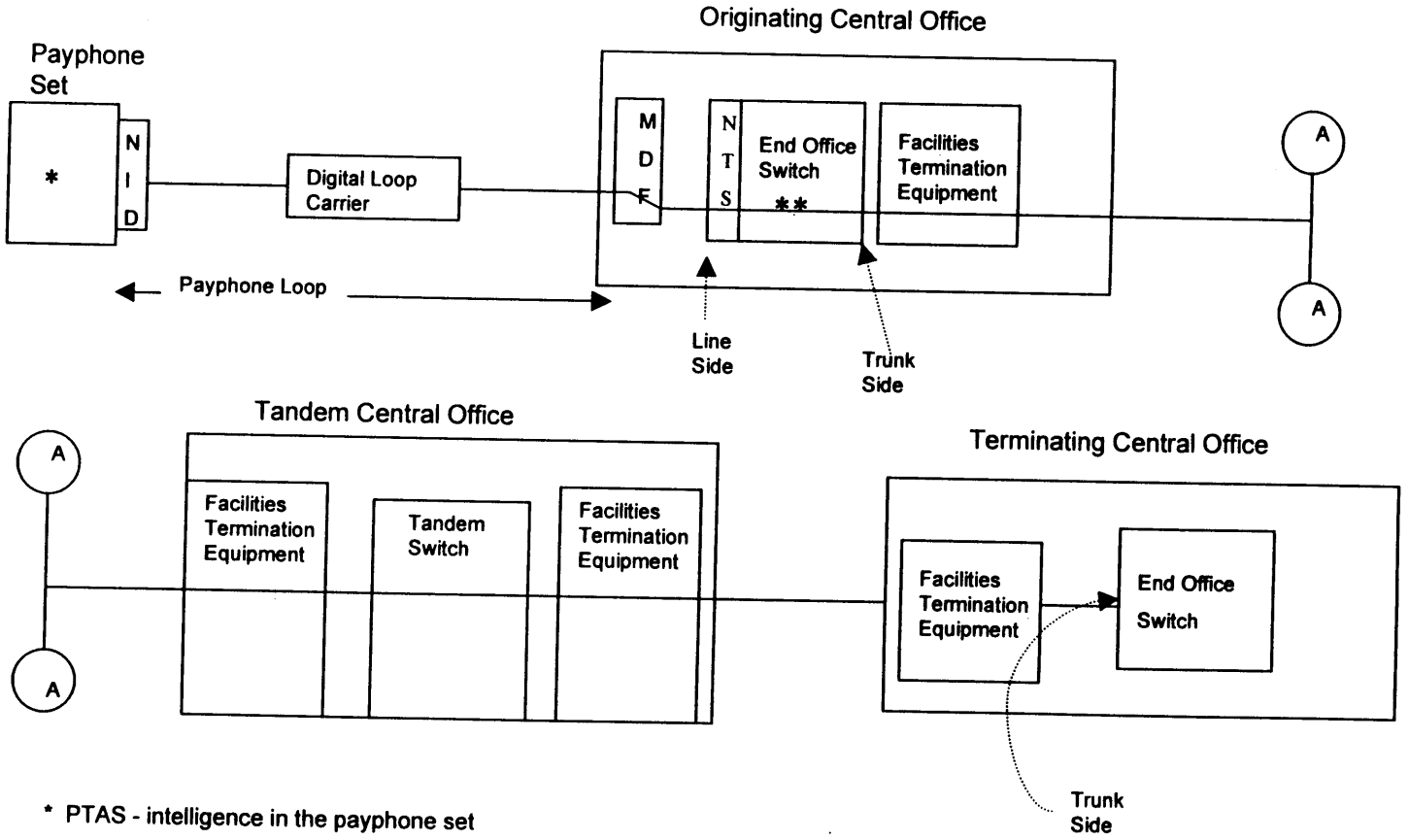
SIMPLIFIED SWITCHING TOOL - USAGE (SST-U)
SIMPLIFIED SWITCHING TOOL - PORT (SST-P)
SST METHODOLOGY
DATA DICTIONARY


A
B
C
Volume Sensitive
Volume Insensitive
Volume Sensitive
Volume Insensitive
Volume Sensitive
Volume Insensitive
TSLRIC
(Direct Costs)
SHARED COSTS
COMMON COSTS

BellSouth Telecommunications, Inc.

Tennessee Regulatory Authority
Docket 97-00409

Exhibit DDC-3



* PTAS - intelligence in the payphone set

** SmartLine® - intelligence in the central office

Payphone Service

	A	B	C	D	E	F
2	**% of Residence / Business Sample Calculated For PTAS and SmartLine Cost Studies**					
3						
4			**Tennessee**			
5						
6		**Average Loop Length**	**% Considered**	**Weighted Loop Length**		
7				(B9*C9)+(B12*C12)		
8						
9	Residence *	22,074	43.00%			
10						
11				16,993		
12	Business *	13,160	57.00%			
13						
14						
15	COCOTS **	17,478				
16	Public/SemiPublic **	16,521				
17	Average COCOTS/S/SP	17,000				
18						
19			100.00%			
20						
21						
22						
23		* Based on verified 1995 Loop Sample (data submitted in UNE filings)				
24		** Based on unverified data from 1995 Loop Sample by Class of Service				

AFFIDAVIT

STATE OF: Georgia
COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared D. Daonne Caldwell – Director –Finance, BellSouth Telecommunications, Inc., who, being by me first duly sworn deposed and said that:

She is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 97-00409 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 11 pages and 4 exhibit(s).

D. Daonne Caldwell

D. Daonne Caldwell

Sworn to and subscribed
before me on 9/15/00

Suzy A. Sherwood
NOTARY PUBLIC

SUZY A. SHERWOOD
NOTARY PUBLIC
FAYETTE COUNTY, GEORGIA
MY COMMISSION EXPIRES
APR
28
2003

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF SANDY E. SANDERS

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 97-00409

SEPTEMBER 15, 2000

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Sandy E. Sanders and my business address is 675 W. Peachtree Street, N.E., Atlanta, Georgia.

Q. BY WHOM ARE YOU EMPLOYED?

A. I am employed by BellSouth Telecommunications, Inc. (hereinafter referred to as "BellSouth" or "the Company") as a Manager - Federal Regulatory.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND COMPANY EXPERIENCE.

A. I graduated from Campbell University in 1969 with a Bachelor of Arts degree in Social Science. I was initially employed by the Company in the North Carolina Operator Services Organization. Following a military leave of two years, I held various assignments in the Company's Traffic Facilities, Corporate Planning, Rates and Tariffs, Regulatory, Pricing

and Interconnection Services Departments. In my current position, I am responsible for state and federal payphone issues.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS SUCH AS THIS?

A. Yes. I have testified before the Public Service Commissions in Alabama, Florida, Georgia, Kentucky and South Carolina and before the Public Utilities Commission in North Carolina.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to demonstrate BellSouth's compliance with the Federal Communications Commission's (FCC's) requirement that intrastate tariffed rates for payphone services, specifically Public Telephone Access Service (PTAS) and SmartLine® service, comply with the FCC's "new services" test. The "new services" test is a cost based test that has historically been applicable to FCC "new services" filings. PTAS and SmartLine® service are the two services that are being addressed in this proceeding to determine if they meet the "new services" test. My testimony demonstrates how BellSouth meets the "new services" test requirements.

Q. WHAT IS THE "NEW SERVICES" TEST?

A. The "new services" test is referenced in Part 61.49(f)(2) of the FCC's Code of Federal Regulations. Part 61.49(f)(2) states, in part, that "each tariff filing submitted by a price cap LEC (local exchange carrier) that introduces a new loop-based service including a restructured unbundled basic service element (BSE)...must be accompanied by cost data sufficient to establish that the new loop-based service or unbundled BSE will not recover more than a just and reasonable portion of the carrier's overhead costs". This provision in Part 61.49(f)(2) is what is commonly referred to as the "new services" test.

The "new services" test applies to all FCC tariff filings by local exchange carriers, which introduce a new service or a restructured unbundled basic service element. Section 276 of the Telecommunications Act of 1996 includes certain mandates for payphone services, which were implemented by the FCC in the form of new rules and regulations. On September 20, 1996, the FCC adopted a Report and Order, FCC 96-388, in CC Docket No. 96-128, Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996, implementing Section 276 of the Telecommunications Act of 1996. The full Commission subsequently issued an Order on Reconsideration, FCC 96-439, on November 8, 1996, in that same docket. Two waiver orders issued by the Chief of the Common Carrier Bureau on April 4, 1997, and April 15, 1997, in that docket stated that footnote 492 of the Commission's November 8, 1996 Order on

Reconsideration requires that intrastate tariffed rates for payphone services be in compliance with the "new services" test to further the goals and aims of the Telecommunications Act of 1996. These orders are collectively referred to as the "Payphone Orders".

Q. WHAT ARE PTAS AND SMARTLINE® SERVICE?

A. PTAS and SmartLine® service are business services. PTAS is an exchange line service furnished from a central office switch to a Payphone Service Provider's (PSP's) location where it is attached to a PSP's payphone for use by the general public. PTAS lines are generally used to provide service to PSP "smart payphone sets" which can rate calls, collect coins and diagnose maintenance problems. The majority of PSPs in Tennessee utilize "smart payphone sets" and subscribe to PTAS lines.

SmartLine® service is similar to PTAS except that a SmartLine® service line is generally attached to a PSP's "dumb set" which does not have the capability to rate calls, collect coins or diagnose problems. SmartLine® service lines utilize software facilities in the central office switch to accomplish call rating and coin collection functions which "dumb sets" are unable to handle. Basically, PTAS lines are attached to "smart payphones" while SmartLine® service lines are attached to "dumb payphones". Ms. Caldwell's testimony provides a description of the features and functionalities of both of these services.

Q. HISTORICALLY, HOW HAVE PTAS AND SMARTLINE® SERVICE RATES BEEN ESTABLISHED?

A. Existing rates for PTAS and SmartLine® service were set by the Tennessee Regulatory Authority (TRA), or its predecessor, the Tennessee Public Service Commission (TPSC), and have been in effect for several years. As stated previously, PTAS and SmartLine® service are business services. PTAS was first tariffed in 1985 and SmartLine® service in 1996. Rates for these services have remained virtually the same or have even decreased slightly since their initial implementation.

Q. WHAT IS THE CENTRAL ISSUE IN THIS PROCEEDING ?

A. The purpose of this proceeding is for the TRA to determine if BellSouth's existing rates for PTAS and SmartLine® service meet the pricing requirements of Section 276 of the Act and the FCC's "Payphone Orders." In its *Order on Reconsideration,* the FCC articulated the requirements for payphone features and functions. The FCC made clear that "LECs must file intrastate tariffs for these payphone services and any unbundled features they provide to their own payphone services. The tariffs for these LEC payphone services must be: (1) cost based; (2) consistent with the requirements of Section 276 with regard, for example, to the removal of subsidies from exchange and exchange access services; and (3) nondiscriminatory.

States must apply these requirements and the Computer III guidelines for tariffing such intrastate services." *Order on Recon.*, 11 FCC Rcd at 21308, & 163. Specifically, the issue herein is whether the current rates for PTAS and SmartLine® service meet the FCC's "new services" test.

Q. WHAT PRICING STANDARDS SHOULD THE TRA USE?

A. The FCC determined in its Payphone Orders that pricing standards for Unbundled Network Elements (UNEs) identified in Sections 251 and 252 of the Act are not appropriate when pricing Section 276 payphone services. Section 276 establishes certain requirements designed to promote competition among PSPs, and to promote the widespread deployment of payphone services for the benefit of the general public. Over the past three years the FCC has issued a series of orders implementing the provisions of Section 276. The FCC has clearly stated that costing and pricing standards set forth in Sections 251 and 252 of the Act for UNEs do not apply to payphone lines and services. In FCC 96-388 Order, ¶ 147, the FCC stated:

> We decline to require... that the pricing regime under Sections 251 and 252 apply to all Section 276 payphone services offered by incumbent LECs. Section 276 does not refer to or require the application of Sections 251 and 252 to LEC payphone services. In addition, the elements and services to be offered under

Sections 251 and 252 are not available to entities that are not telecommunications carriers, and many PSPs are not telecommunications carriers. In addition, Section 276 does not refer to or require the application of Sections 251 and 252 to LEC payphones. (emphasis added)

Q. ARE THERE OTHER CONSIDERATIONS AS TO WHY UNE PRICING IS INAPPROPRIATE IN THIS CONTEXT?

A. Yes. PTAS and SmartLine® service are services, not UNEs to which Sections 251 and 252 apply. Therefore, the costing and pricing standards set forth in Sections 251 and 252 of the Act are inappropriate in this proceeding. (See FCC 96-388 Order, ¶ 147). If UNE prices were available to PSPs or any other business customer, competition in the local market would be severely restricted. There would be no incentive for business customers to shop for local service anywhere else except BellSouth in BellSouth's service area. If BellSouth's service were priced at cost, Competitive Local Exchange Companies (CLECs) such as NEXTLINK would be unable to compete for PSP customers. Certainly, this is not the intent of the FCC.

Q. HAS THE FCC PROVIDED ANY GUIDELINES FOR DETERMINING WHETHER RATES MEET THE NEW SERVICES TEST?

A. In establishing the "new services" test, the FCC determined that it was important for the LECs to "have the flexibility to price efficiently and have the incentive to innovate". (Report and Order, CC Docket Nos. 89-79 and 87-313, FCC 91-186 (rel. July 11, 1991) ¶ 38) According to the FCC, the "new services" test "encourages LECs to develop improved versions of existing services and risky new innovative services, (as well as) inhibits predatory pricing". (Second Reconsideration Order, ¶ 3)

In several FCC orders, cited later in my testimony, the FCC stated its intention that in implementing its "new services" test, LECs have flexibility in pricing and that there are no uniform overhead loadings for new services. (See Second Reconsideration Order, CC Docket Nos. 89-79 and 87-313, FCC Rcd 5235 (rel. August 6, 1992) ¶ 3; Memorandum and Order, CC Docket No. 97-140, 12 FCC Rcd 17996, FCC 97-392, (rel. October 29,1997) ¶¶ 12 and 13). Because there are no mandates requiring uniform overhead loadings, the TRA may apply its own best judgment in determining the proper loading factor for all of BellSouth's services, including its payphone services. In this case, the TRA must review BellSouth's PSP rates within these broad guidelines.

Q. DO BELLSOUTH'S TARIFFED RATES FOR PTAS AND SMARTLINE® SERVICE IN TENNESSEE MEET THE REQUIREMENTS OF THE FCC'S "NEW SERVICES" TEST?

A. Yes. BellSouth's rates for PTAS and SmartLine® service are priced at levels that meet the "new services" test. These rates are set forth in

Section A7.4.5 of BellSouth's General Subscriber Service Tariff for PTAS lines and in Section A7.8.2 of the General Subscriber Service Tariff for SmartLine® service.

Q. CAN YOU EXPLAIN HOW BELLSOUTH'S RATES FOR PTAS AND SMARTLINE® SERVICE IN TENNESSEE MEET THE FCC'S "NEW SERVICES" TEST?

A. Yes. BellSouth's cost/price ratios for the PTAS line and SmartLine® service rate levels in Tennessee fall within a range of cost/price ratios that have been accepted by the FCC in interstate filings. Revenue and cost information included in "new services" test filings with the FCC are expressed as cost/price ratios. For example, if a service costs $1 per month to provide to customers and the tariffed rate for the service is $5 per month, the cost to price ratio is $1/$5 or .20. BellSouth's cost/price ratios for PTAS and SmartLine® services are reflected in Exhibit SES-1 attached hereto.

The FCC's "new services" test requires that prices be set at levels that do not recover more than a just and reasonable portion of overhead costs. However, the test does not require that rates for services be priced at a specific percentage above the overhead costs. Certain services may recover more or less of the overhead costs than other services recover. Likewise, certain elements of a service may recover

a higher or lower percentage of overhead costs than a different element of the same service.

Q. DO YOU HAVE EXAMPLES OF COST/PRICE RATIOS THAT HAVE BEEN APPROVED BY THE FCC?

A. Yes. In deciding whether a service meets the "new services" test, the FCC considers cost/price ratios for the services in question. The cost/price ratios of BellSouth's PSP services are within the cost/price ratios previously accepted by the FCC. One example of a cost/price ratio approved by the FCC is reflected in FCC 97-392 Order at ¶ 10, 11, fn.39 where the FCC found that Bell Atlantic's revised ratios for payphone features which are as high as 3.4 times the direct costs are not unreasonable and meet the "new services" test and also found that another rate which exceeded direct costs by 38 percent met the "new services" test. Further, in DA 97-1396 the FCC found that a rate that exceeded direct costs by 100 percent was reasonable and did not raise questions of lawfulness under the "new services" test. (CC Docket No. 97-140, 13 FCC Rcd 4241, DA 97-1396 (rel. July 2, 1997) ¶¶ 5,7)

There is no uniform overhead loading required to meet the "new services" test (FCC 97-392 Order at ¶ 13). As previously shown, it is and has been recognized by the FCC that certain services may recover more or less overhead costs than other services. (FCC 97-392 Order at ¶ 13)

Q. DO YOU HAVE EXAMPLES OF COST/PRICE RATIOS FOR BELLSOUTH SERVICES THAT HAVE BEEN ACCEPTED BY THE FCC?

A. Yes. An example of a cost/price ratio accepted by the FCC for a BellSouth service is a November 24, 1997, filing to introduce a new service option for BellSouth Fastpacket Access Services, which reflects unit cost/unit price ratios for various rate elements from .10 to .33. Another FCC filing on this same day to introduce a new service option for Uncompressed Switched Video Service shows a cost/price ratio of .70. Another example of various FCC-accepted cost/price ratios is evidenced in BellSouth's July 9, 1996, filing to introduce a new optional payment plan for LightGate® service and SMARTRing® service which reflects unit cost/unit price ratios for various rate elements from .02 to .93.

Another example of a cost/price ratio accepted by the FCC for a BellSouth service is a July 6, 1999 filing to expand the availability of SMARTGate service and BellSouth Managed Shared Ring Network to the states of Alabama and North Carolina which reflects cost/price ratios of .67 and .68 respectively for these services.

A filing on May 4, 1999 revising BellSouth Dedicated Ring service for Switched Access to include the state of Louisiana shows a cost/price

ratio of .32. Another example of various FCC-accepted cost/price ratios is evidenced in BellSouth's November 20, 1998 filing to establish SMARTGate switched access rate elements for its SONET based transport services which reflects cost/price ratios of .72 and .20.

Other FCC tariffed rates for "new services" reflect similar variations in overhead levels. These examples of FCC-accepted cost/price ratios show that the cost/price ratios of .40 and .38 for (PTAS) and SmartLine® Service in Tennessee, respectively fall within a range of cost/price ratios that have been accepted by the FCC in interstate filings. My testimony demonstrates that BellSouth's existing rates for PTAS and SmartLine® service meet the requirements of the "new services" test.

Q. HOW CAN IT BE DETERMINED WHETHER THE CONTRIBUTION TO SHARED AND COMMON COSTS IN THE PRICES OF PTAS AND SMARTLINE® SERVICE IS "REASONABLE" AS THE "NEW SERVICES" TEST REQUIRES?

A. Noting first that PTAS and SmartLine® service are used to provide competitive payphone services, the reasonable level of contribution included in their prices should be determined by market forces. In competitive markets, prices are the result of the interaction of buyers and sellers. Those prices go up or down as demand or supply conditions change. Since contribution is simply the difference between

the service's cost and the prevailing price, the level of that contribution fluctuates with the level of the price. As competitive market forces determine what the price will be, it automatically determines the level of contribution as well. Being based on the free interaction of buyers and sellers, this level of contribution is reasonable for the purposes of the "new services" test.

Q. IS THE CURRENT COST/PRICE RATIO REASONABLE FOR PTAS AND SMARTLINE® SERVICE?

A. The current rates for PTAS and SmartLine® service are clearly within this reasonable range. When determining what cost/price ratio is reasonable for PTAS, SmartLine® and other business services, the TRA should consider the issue in light of its existing policy on Universal Service. In the past, the TRA has chosen to recover most common costs from business and access services with residence basic local exchange rates priced at or below costs. In light of the increase in local competition, the TRA may choose to abandon this long-standing principle. If it decides to abandon this standard, it should do so in a generic rate rebalancing proceeding for all business and residence services, not just to favor the payphone industry over other business customers.

Q. ARE BELLSOUTH'S RATES FOR PTAS AND SMARTLINE® SERVICE NONDISCRIMINATORY, COST BASED, AND

THEREFORE CONSISTENT WITH THE REQUIREMENTS OF SECTION 276?

A. Yes. While these requirements may appear to be separate issues, a tariff which complies with the "new services" test will necessarily satisfy the other requirements articulated by the FCC. Indeed, the very purpose of the "new services" test is to ensure that a rate is cost based, free of subsidies from other services and nondiscriminatory. The "new services" test requires that a tariff for a service be cost based. The test specifically requires that the rates for a new service be based on the direct costs of the service plus a reasonable allocation of overhead. To say that a tariff can comply with the "new services" test but not be cost based is like saying that an animal is a border collie, but that it is not a dog – the assertion makes no sense.

Q. WHAT ABOUT THE REQUIREMENT THAT THE TARIFF RATE BE NON-DISCRIMINATORY?

A. BellSouth's PTAS and SmartLine® rates are available to all payphone providers, including BellSouth Public Communications, on the same terms and conditions. They are plainly non-discriminatory.

Q. IS THERE COMPETITION IN THE PAYPHONE MARKET IN TENNESSEE?

A. Yes. Evidence shows that there are a large number of PSPs in the state of Tennessee. There is no evidence that PSP rates are limiting competition in that market. As of August 2000, there were 291 PSPs operating in the state of Tennessee.

Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY.

A. In compliance with the provisions of Section 276 of the Telecommunications Act of 1996 and subsequent FCC Payphone Orders for implementing the provisions of the Act, BellSouth's intrastate tariffed rates for PTAS and SmartLine® service in Tennessee fall within FCC accepted cost/price ratios, and thus, meet the FCC's "new services" test for payphone services, features and functions. BellSouth is in compliance with the "new services" test.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

BellSouth Telecommunications, Inc.
Tennessee Regulatory Authority
Docket No. 97-00409
Exhibit SES - 1

Revenue and Cost Summary

	Average Monthly Revenue Per Line	Cost Per Line	Cost/Price Ratio
Public Telephone Access Service	**$35.13**	**$14.20**	**.40**
SmartLine® Service	**$54.07**	**$20.57**	**.38**

AFFIDAVIT

STATE OF: Georgia
COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Sandy E. Sanders - Manager-Federal Regulatory, BellSouth Telecommunications, Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 97-00409 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 15 pages and 1 exhibit(s).

Sandy E. Sanders

Sworn to and subscribed
before me on 9/15/00

NOTARY PUBLIC

SUZY A. SHERWOOD
MY COMMISSION EXPIRES
APR
28
2003
FAYETTE COUNTY, GEORGIA
NOTARY PUBLIC

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF THOMAS F. LOHMAN

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 97-00409

SEPTEMBER 15, 2000

Q. **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Thomas F. Lohman. My business address is 675 West Peachtree Street N. E., Atlanta, Georgia.

Q. **BY WHOM ARE YOU EMPLOYED?**

A. I am employed by BellSouth Telecommunications, Inc. (BellSouth) as a Senior Director-Finance.

Q. **PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.**

A. I received a Bachelor of Science Degree (Accounting and Finance Majors) from Florida State University in 1972. I am a Certified Public Accountant and a current member of the American Institute of Certified Public Accountants. I was employed by BellSouth Finance in Jacksonville, Florida in 1972, and have

held various Finance positions of increasing responsibility since that time. I have been involved with Regulatory Accounting Operations since 1980.

Q. **WHAT ARE YOUR CURRENT RESPONSIBILITIES?**

A. I am responsible for Regulatory accounting issues affecting the BellSouth region. These duties involve oversight responsibilities for providing financial data as required by various state regulatory entities and the Federal Communications Commission.

Q. **HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS SUCH AS THIS?**

A. Yes. I have been involved in regulatory proceedings for many years involving various accounting issues. In addition I have testified in several states concerning BellSouth's elimination of the embedded intrastate subsidy associated with payphone operations.

Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. My testimony provides the Tennessee Regulatory Authority (TRA) with the intrastate subsidy amount associated with BellSouth's payphone operations. My testimony also discusses the BellSouth payphone assets removed from regulated telephone operations.

PAYPHONE SUBSIDY

Q. **WHY MUST THE TRA ADDRESS THE ISSUE OF SUBSIDIES ASSOCIATED WITH BELLSOUTH'S PAYPHONE OPERATIONS?**

A. The Telecommunications Act of 1996 requires BellSouth and other Regional Bell Operating Companies (RBOCs) to assign their payphone operations to unregulated operations. Section 276 of the Act instructed the FCC to "take all actions necessary" to ensure that each RBOC or LEC meets several key provisions related to payphones. One of these provisions states that RBOCs "shall not subsidize its payphone service directly or indirectly from its exchange access operations."

On September 20, 1996, the FCC released its Report and Order in Docket 96-128, In the Matter of Implementation of the Pay Telephone Reclassification

and Compensation provisions of the Telecommunications Act of 1996. The FCC subsequently issued modifications in the Order of Reconsideration released on November 8, 1996. The Orders state "We require, pursuant to the mandate of Section 276(b)(1)(B), incumbent LECs to remove from their intrastate rates any charges that recover the costs of payphones. ...States must determine the intrastate rates elements that must be removed to eliminate any intrastate subsidies.."

Q. **HAVE YOU DETERMINED IF A SUBSIDY EXISTS IN TENNESSEE'S INTRASTATE OPERATIONS?**

A. Yes. I originally determined that a subsidy of $789,000 was embedded in Tennessee's intrastate rates. However, a subsequent review revealed a clerical error in the determination of the SmartLine® access line expense. Another state's embedded cost was erroneously used instead of the Tennessee embedded cost. This error caused the original subsidy amount to be calculated as $789,000 rather than the actual $618,000 it should have been, an overstatement of $171,000. No other errors were found during the review. BellSouth does not propose to revise the

subsidy amount or the tariff filing removing the $789,000 subsidy.

Q. **HOW DID YOU DEVELOP THE SUBSIDY AMOUNT?**

A. I identified the revenues, expenses and investment associated with BellSouth's intrastate payphone operations. I then calculated the achieved rate of return for these operations and determined that it was below an appropriate level. The revenues required to raise this rate of return to an appropriate level is the $789,000 subsidy provided by other intrastate services. Exhibit TFL-1 provides the calculation of this subsidy.

Q. **HAS BELLSOUTH REMOVED THIS SUBSIDY?**

A. Yes. BellSouth Tariff No. TN97-033 filing was made to eliminate the subsidy. The tariff removing the subsidy was effective April 1, 1997.

PAYPHONE ASSETS

Q. **WHY MUST PAYPHONE ASSETS BE SEPARATED FROM REGULATED TELEPHONE OPERATIONS?**

A. The Telecommunications Act of 1996 requires BellSouth and other RBOCs to assign their payphone operations to unregulated operations. Specifically, Section 276 of the Act instructed the FCC to "take all actions necessary" to ensure that an RBOC "not subsidize its payphone service directly or indirectly from its telephone exchange service operations or its exchange access operations."

Furthermore, the FCC in Order Number 96-388 determined that "to best effectuate the 1996 Act's mandate..., incumbent LEC payphones should be treated as deregulated and detariffed CPE."

Q. **HOW DID BELLSOUTH ELECT TO COMPLY WITH THIS ORDER?**

A. On April 1, 1997, BellSouth established BellSouth Public Communications, Inc. (BSPC) as a separate company. Payphone assets were transferred to BSPC at that time removing them from regulated operations. BSPC operates as a wholly owned subsidiary of BellSouth Business Systems Holdings, Inc. (BBS Holdings) which is a wholly owned subsidiary of BellSouth Telecommunications, Inc.

Q. **WHAT WAS THE VALUE OF THE ASSETS TRANSFERRED TO THE DEREGULATED SUBSIDIARY?**

A. The total intrastate net book value of the assets transferred to deregulated operations was $9,838,000 (See Exhibit TFL-2).

Q. **PLEASE SUMMARIZE YOUR TESTIMONY?**

A. BellSouth, in compliance with the Telecommunications Act of 1996 and the FCC orders implementing the payphone portion of the Act, has identified and removed the embedded intrastate subsidy associated with payphone operations. In connection with these requirements, BellSouth has also transferred all payphone assets to a nonregulated subsidiary.

Q. **DOES THIS CONCLUDE YOUR TESTIMONY?**

A. Yes.

BellSouth Telecommunications, Inc.
Exhibit TFL - 1

TENNESSEE

Payphone Subsidy Calculation
Summary of Results

($000)

COL. 1	COL. 2	COL. 3
	1995 Intrastate Financial Data	
Payphone Revenue		
Public Revenue	22,335	
Semi Public Revenue	4,049	
Set Use Fee Revenue	0	
Exclude Operator Services Revenue	(2,085)	
Total Revenue		$24,299
Access Line Expense		6,448
All Other Payphone Expense		
Commission Expense	2,201	
Collection Expense	2,692	
Maintenance Expense	6,248	
Depreciation	2,285	
Other Expense	3,965	
Total Payphone Expense		17,391
Total Expense		23,839
Taxes		53
Net Operating Income		407
Payphone Investment Base		7,902
Return on Investment Base		5.15%
Additional NOI required to achieve 11.25%		482
Gross up to Rev Req		307
Revenue Subsidy at 11.25%		$789

BellSouth Telecommunications, Inc.
Exhibit TFL - 2

TENNESSEE

Payphone Assets Transferred to BellSouth Public Communications, Inc. April 1, 1997

($000)

COL. 1	COL. 2	COL. 3	COL. 4
		Combined	
Account	Description	Net Book Value	Fair Market Value
2111.0000	Land	160	160
2112.0000	Motor Vehicles	340	427
2116.1000	Other Work Equipment	36	32
2121.1000	Building Computers	15	15
2121.9000	Buildings	840	840
2122.9000	Furniture	39	21
2123.1000	Office Support Equip.	23	51
2124.2100	Local Area Network	34	35
2124.2300	Personal Computers	44	41
2351.1100	Public - Coin Sets	9,779	8,792
2351.2100	Public - Coinless Sets	340	421
2351.9100	Booths, Pedestals, Enclos.	332	2,450
2362.9900	Inmate - Nonregulated	10	10
2362.9900	Inmate - Nonregulated	184	184
2362.9900	Inmate - Nonregulated	167	167
	Adjustment Entries *	775	425
	Total	**13,120**	**14,071**
	Intrastate Total	**9,838**	

* Includes true-up entries to properly reflect April and May residual activity.

AFFIDAVIT

STATE OF: Georgia
COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Thomas F. Lohman – Senior Director –Finance, BellSouth Telecommunications, Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 97-00409 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 7 pages and 2 exhibit(s).

Thomas F. Lohman

Sworn to and subscribed
before me on 9/15/00

NOTARY PUBLIC

SUZY A. SHERWOOD
MY COMMISSION EXPIRES
APR
28
2003
FAYETTE COUNTY, GEORGIA
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