Heartley

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF ALFRED HEARTLEY

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 01-00362

June 21, 2001

Q. PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR BUSINESS ADDRESS.

A. My name is Alfred Heartley. I am employed by BellSouth as General Manager, Network Process Improvement. I am responsible for process improvements related to installation and repair activities for designed and nondesigned services provided to Competitive Local Exchange Carriers ("CLECs") and BellSouth retail customers.

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

A. I graduated from N.C. State University in 1971 earning a BS degree in Applied Mathematics. I have over 30 years experience in the telecommunications industry working for BellSouth. I have held numerous management positions in BellSouth, including positions involving engineering, construction, installation, maintenance, central office operations, and data processing.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to describe to the Tennessee Public Service Commission ("Commission") how the personnel involved in performing the actual provisioning, maintenance and repair for CLEC orders in Tennessee do their jobs in the same manner as employees in the other states in BellSouth's region. In addition, my testimony explains the reasons for performance variations among states.

Q. HAS THE FCC DEFINED "SAME" FOR PURPOSES OF REGIONALITY?

A. Yes. In its decision on Kansas and Oklahoma, the FCC stated that "same" means that "competing carriers in [multiple states] share the use of a single OSS: a common set of processes, business rules, interfaces, systems and, in many instances, even personnel." Where a BOC has discernibly separate OSS, the BOC must demonstrate "that its OSS reasonably can be expected to behave the same way" in the different states. *SWBT-KA/OK Order*, 111. Evidence that provisioning and maintenance and repair functions will behave the same way in different states includes evidence that common centers coordinate field work activities in multiple states; field personnel access the same systems and use the same procedures in multiple states; and there is a common organizational structure across multiple states. *SWBT-KA/OK Order*, 113.

Q. GENERALLY DESCRIBE THE NETWORK OPERATIONS IN BELLSOUTH'S REGION.

A. The provisioning, maintenance and repair of CLEC orders are provided by BellSouth using the same processes, procedures, personnel and systems utilized for BellSouth's retail customers. This is true for BellSouth's nine-state region as a whole. As set out in greater detail below:

- Provisioning, maintenance and repair for CLEC orders in Tennessee are provided on a nondiscriminatory basis with BellSouth's retail orders throughout BellSouth's region;
- The processes, procedures and systems used in Tennessee for the provisioning, maintenance and repair of CLEC and BellSouth retail orders are the same as those used throughout BellSouth's nine-state region; and
- The management of BellSouth's provisioning, maintenance and repair activities is centralized and conducted on a nine-state basis, ensuring that the integrity of BellSouth's processes is maintained across state lines.

In all relevant respects, BellSouth's provisioning, maintenance and repair of CLEC orders are the same throughout BellSouth's region. Because BellSouth has done the work to ensure that CLEC orders are handled in the same time and manner that its retail orders are handled and because the processes, procedures and systems for that handling are identical for all nine BellSouth states, the Commission can be sure that the quality of BellSouth's wholesale performance will be duplicated throughout the region.

Q. ARE THERE ANY DIFFERENCES IN BELLSOUTH'S NETWORK OPERATIONS AMONG THE STATES?

A. As I will show later in my testimony, although BellSouth's organizational structure for provisioning, maintenance and repair is centralized, differences in performance can and do exist. However, as the evidence presented in my testimony demonstrates, these differences result from a host of variables and state-specific considerations, unrelated in any way to the "sameness" of BellSouth's network operations among the nine-states.

Q. PLEASE DESCRIBE BELLSOUTH'S NETWORK ORGANIZATIONAL STRUCTURE.

A. BellSouth provides service to both retail and wholesale customers through its Network Services organization. This department is responsible for performing the actual provisioning, maintenance, and repair of customer services within the nine BellSouth states. The organizational chart that details the management of BellSouth's Network Services organization is attached as Exhibit AH-1.

Network Services is a single team of employees that reports to one corporate officer, the President of BellSouth Network Services, who in turn reports to the CEO of BellSouth. The network employees that handle provisioning, maintenance and repair of CLEC and BellSouth orders and/or troubles report to the same officer, namely the Executive Vice President – Network Operations. These groups are arranged along geographical lines, based on span of control and service level demands. These network employees also are organized into common work functions. These work functions are independent of the type of customer – retail, access, or wholesale. The main work functions into which these

employees are organized are central office operations, engineering and construction, and installation and maintenance. For example, there are seven regionally based Vice Presidents overseeing the Installation and Maintenance, Central Office Operation, and Engineering and Construction for BellSouth's nine-states. Within these work functions, employees specialize in particular sub-processes in order to provide the most effective use of BellSouth resources. Specifically, there are groups that handle Plain Old Telephone Service ("POTS") services and other groups that handle Special Services offerings.[1]

Q. PLEASE DESCRIBE THE CENTRAL OFFICE OPERATIONS GROUP.

A. Central Office Operations includes installation, maintenance, and repair of BellSouth switching and transport facilities and networks, as well as installation, maintenance, and repair of customer services supported by switching and transport equipment and networks. Within this group, the functions are further divided into line operations functions and centralized control functions. The line operations functions include the technicians and managers that complete wiring connections and set options in the central offices required to provide customer services and maintain BellSouth's switching and transport equipment. The centralized control functions include: (1) network monitoring done by the Network Reliability Center; and (2) dispatching of trouble reports and work orders done by the Work Management Center ("WMC"). The Network Reliability Center is region-wide. The central office centralized control functions performed in the WMC for Tennessee are identical to those used in the WMC for

[1] Special Services offerings are services that require specific transmission parameters over and above those required for simple voice grade service ("POTS").

performing such functions throughout the region. To take advantage of expertise developed at the local working level while maintaining consistency throughout the nine-states, managers meet periodically with the Staff to discuss issues related to the central office organization and agree on common methods and procedures.

Q. PLEASE DESCRIBE THE ENGINEERING AND CONSTRUCTION GROUP.

A. Engineering and Construction includes planning, development, and construction of the BellSouth infrastructure and distribution network. Within the Engineering and Construction Group, work functions are further divided into line operations functions and centralized control functions. The line operations functions include the technicians and managers that engineer and directly install and maintain BellSouth's distribution network. The centralized control functions include monitoring of work orders and workload. For Tennessee, Engineering & Construction centralized control functions are performed by a group of centers identical to those utilized for performing such functions throughout the region. To ensure consistency throughout the nine-states, managers meet periodically to discuss issues related to engineering and construction.

Q. PLEASE DESCRIBE THE INSTALLATION AND MAINTENANCE GROUP.

A. Installation and Maintenance ("I&M") includes the installation, repair, and maintenance of customer and company services. I&M functions are divided into POTS and Special Services and further divided into line functions and centralized control functions. The I&M line functions include the technicians and managers

that directly install and maintain customer and company services. I&M line functions are organized geographically; I&M line operations employees work within a specific geographic area, like a portion of a city or county. I&M centralized control functions include workload monitoring and tracking and dispatching of customer trouble reports and service orders. I&M centralized control functions cover a broader geographical area that incorporates multiple line organizations. For Tennessee, I&M centralized control functions are performed by a group of centers identical to those utilized for performing centralized control functions throughout the region. These include the Address/Facility Inventory Group ("AFIG") located in Nashville that performs the assignment functions and maintain records for copper cable and fiber facilities for Tennessee. POTS service orders and trouble tickets are tracked and dispatched from the WMC located in Knoxville that performs the work management functions for Tennessee. The AFIG and WMC centers are managed within a single Director level organization similar to corresponding centers in other states and also operate with Operational Support Systems, methods and procedures identical to the AFIG and WMC centers in other states.

Similar centers exist for Special Services. There is a Circuit Provisioning Group ("CPG") located in Nashville that designs and maintains records of facilities used for special services. The functions of the CPG are divided into low speed (less than DS1) and high capacity (DS1 and greater). The CPG designs low speed circuits and high capacity circuits. The CPG in Tennessee reports to a Director level in Tennessee, just as the CPG in Georgia reports to a Director level in Georgia. Those Directors then report to the Network Vice President for their

respective state. All Network Vice Presidents report to the same Executive Vice President. A single Customer Wholesale Interconnection Services ("CWINS") Center tracks and dispatches all CLEC Special Service orders and Special Service trouble tickets for all nine BellSouth states.

Q. HOW ARE POLICIES FOR THE NETWORK GROUPS DEVELOPED?

A. For each of the functional groups described above, BellSouth's Network Services organization has a vice president responsible for developing the policies, methods, and procedures used by the Network department throughout BellSouth's nine states. These functional groups play a key role in ensuring that network processes and procedures are developed in accordance with all industry, regulatory, and contractual requirements, and are documented properly. These subgroups of Network Services also ensure that appropriate training is developed based on these standard methods and procedures and delivered to the Network department in the same format and content across all nine BellSouth states.

Q. DESCRIBE BELLSOUTH'S TRAINING FOR THE NETWORK OPERATIONS ORGANIZATION.

A. Technical training is developed and delivered by a centralized BellSouth Training organization which operates training facilities in 5 locations scattered throughout the nine-state region. These training locations are staffed with 58 people and are supplemented by contract trainers as needed. Approximately 85% of the training is performed at the training centers with the remaining 15% being "suitcased" to

various locations throughout the nine-state region. This organization also supports computer-based training. In particular, there is WEB-based training that includes guidelines for serving CLEC customers. Technical personnel throughout the nine-states attend training at all of these locations depending on the subject matter and class sizes. Because the training for a particular subject is identical, it is irrelevant which location is selected. Training is divided by subject matter, not by state. There are recommended training curriculum for various technical titles. Several training curriculum are attached as Exhibit AH-2. Network technical personnel typically complete between 45 and 90 days of mandatory training, which may be supplemented with an additional 28 to 80 days of optional training depending on work assignments. In addition, employees receive on-the-job training related to work assignments.

A single Network organization with common methods and procedures has proven to be an advantage to BellSouth and its retail and wholesale customers. In cases of emergency or unusual workload, managers and technicians can be moved either physically (line operations forces) or virtually (centralized control functions) between geographical areas. Sometimes this movement is within a city, or state, or across states. The common training received within a functional area promotes this flexibility.

Q. DESCRIBE THE PROCUREMENT OF TOOLS AND TEST SETS AROUND BELLSOUTH'S REGION.

A. Procurement of tools and test sets used by Network Services is controlled by a centralized group in Supply Chain Services. Thus, each state uses the same tools and test sets. A Network Advisory Board consisting of Supply Chain Services and Network Services personnel are charged with evaluating all tools and test sets. Supply Chain Services maintains a list of approved items and controls the introduction of new items to ensure, among other things, an effective common set of methods and procedures is used in the nine-states. This step is important to ensure that each Network employee is equipped to handle the job as defined by the methods and procedures. This also ensures consistency in work efforts and allows technicians to execute their work functions anywhere within BellSouth's territory.

Q. DESCRIBE THE MEANS BY WHICH BELLSOUTH STAFFS ITS NETWORK OPERATIONS ORGANIZATIONS IN THE NINE-STATE REGION.

A. Selection and placement of key occupational personnel in the Network groups is done using standard screening tests to ensure a common technical knowledge standard. For example, anyone applying for a central office Electronics Technician position is required to pass the following tests: Basic Electricity, Basic Electronics, Computer Fundamentals, and Digital Electronics. Similar tests are used for Construction and I&M personnel. These tests are the same throughout the nine states.

Staffing levels are determined by models that incorporate historical and forecasted information, such as workload and overtime hours. These models allow for a

uniform allocation of staffing resources and form a basis of comparison between Director level organizations regarding the effective management of those resources. They are used to determine the proper allocation of resources between organizations and the overall ability of the Network organization to meet current and future service demands.

Q. DESCRIBE THE DISTRIBUTION OF METHODS AND PROCEDURES IN BELLSOUTH'S NINE-STATE REGION.

A. The distribution of methods and procedures in BellSouth's Network organization is accomplished in a manner that ensures all appropriate work groups have the very latest documentation and avoids miscommunication concerning which is the most recent revision as changes to existing methods and procedures occur. To meet those needs, BellSouth has implemented two primary web-based distribution systems for methods and procedures. The BellSouth Electronic Library Service ("BELS") and the Corporate Document and Interface Access ("CDIA") systems offer web access to the documents relating to Network methods and procedures, as well as vendor related documents. The Network Services Support staffs also have web pages that contain methods and procedures relative to their area of responsibility. All employees have access to the Web site to view or print any documents that they need to perform their functions in accordance with the approved methods and procedures. These documents are prepared on a region-wide basis and are equally available to all employees regardless of the state in which they work. An example of the BELS web page is attached as Exhibit AH-3.

Q. DESCRIBE THE OPERATIONAL SUPPORT SYSTEMS THAT SUPPORT NETWORK OPERATIONS IN BELLSOUTH'S NINE-STATE REGION.

A. BellSouth uses the same operational support systems ("OSS") throughout its nine-state territory. The network organization uses a suite of systems including the following:

WFA/C (Work and Force Administration / Control): Directs and tracks the flow of work items to WFA/DI and WFA/DO. WFA/C facilitates communication between the WFA systems and external systems

WFA/DO (Work and Force Administration / Dispatch Out): Loads, prioritizes, and schedules work assignments of outside POTS and Special Services installation and maintenance technicians, and provides on-line tracking and status of work requests and technicians.

WFA/DI (Work and Force Administration / Dispatch In): Loads, prioritizes, and schedules work assignments of central office technicians, and provides on-line tracking and status of work requests and technicians.

NSDB (Network Services Database): Stores data received from the TIRKS system and SOAC system, distributes data to operations systems such as WFA/C, and receives completions and updates from WFA/C.

FOMS/FUSA (Frame Operations Management System)/(Frame User assignment System Access): Stand-alone component of the SWITCH system which provides central office frame force administration and work packages.

TIRKS (Trunk Inventory Record Keeping System): A number of mechanized conversion, interim, and ongoing inventory and assignment systems for

facility equipment and circuit information used in trunks and Special Services operations.

FACS (Facility Assignments and Control System): An online system which maintains inventories and provides automatic assignment of outside plant and central office facilities. Its modules are LFACS and SOAC.

COSMOS (Computer System Mainframe Operations**):** Operations system designed to inventory and assign central office switching equipment and related facilities.

SWITCH: (Not an acronym) Operations system that provides assignment and record-keeping functions to manage central office equipment, main distribution frames, facilities, and circuits.

LFACS (Loop Facility Assignment and Control System): An on-line system that performs loop plant and central office facility assignments or inventory functions.

SOAC (Service Order Analysis & Control): Transfers service orders into assignment requests which it sends to LFACS for outside plant assignments and/or to COSMOS/SWITCH for central office assignments. Formats the assignment responses from LFACS and COSMOS/SWITCH into assignments and passes them to Service Order Communications System for distribution.

RSAG (Regional Street Address Guide)**:** System used by service centers during order negotiation to provide address validation.

ATLAS (Application for Telephone number Load, Assignment and Selection): System that provides numbers for selection for telephone service.

BellSouth owns RSAG and leases the other systems from outside vendors. Although many upgrades have been implemented over time, these systems have matured with the business and have served as the foundation for a uniform and systematic method of doing business. As new services have developed, such as those provided to CLECs, these systems continue to serve their intended purpose of providing a uniform and systematic method of provisioning those services.

Any changes to the underlying program code on these systems must be negotiated with the vendors. This negotiation is the responsibility of the centralized Network Services Staff and applies region-wide. BellSouth uses a single version of each application, which handles CLEC and BellSouth service orders on a nondiscriminatory basis throughout the nine-states. The managers and technicians in the Network department also use the systems in the same manner, as defined in the training and methods and procedures produced by the centralized Network Services Staff.

Q. PLEASE DESCRIBE THE BELLSOUTH PROVISIONING FLOW IN THE NINE-STATE REGION.

A. BellSouth uses a common provisioning flow for each product across its nine-state territory. This section will address only the provisioning flow, which begins with an order leaving the Service Order Communications System ("SOCS") (whether submitted electronically or manually) and ends when the order is completed. Information on the Pre-order and Order processes that take place before and after provisioning can be found in the testimony of Ron Pate and Ken Ainsworth.

The provisioning processes begin when SOAC, the system used to route orders, receives an order from the service order system, SOCS. SOAC sends assignment requests to LFACS and COSMOS/SWITCH and/or TIRKS. SOAC routes the order to the correct AFIG for processing. The AFIG is responsible for assigning the facilities required to provision the service. The AFIG in Tennessee is identical to, and uses the same systems as, the AFIGs in the other eight states. The AFIG uses LFACS to manage and assign outside plant facilities and COSMOS/SWITCH to manage and assign central office facilities.

The CPG uses the region-wide TIRKS system to design facilities for special services. This design is then passed to the Central Office Operations forces and I & M forces to perform the actual provisioning. The Central Office Operations forces use the work document from TIRKS and the methods and procedures developed by the centralized staff to install the service. The region-wide WFA/DI system is used to track the progress of orders throughout the provisioning process. I&M forces use the work document from TIRKS and the methods and procedures developed by the centralized staff to install the service. The region-wide WFA/DO system is used to track the progress of orders throughout the provisioning process.

A transaction from TIRKS also creates the control steps that are tracked by the CWINS Center. The work steps are tracked in the CWINS Center using WFA/C. Upon completion of the order by the Central Office Operations and I&M forces, WFA/DI and WFA/DO send a completion transaction to WFA/C. The CWINS

Center then works with the CLEC on acceptance testing and order close-out. Once closed, the order is posted to the various systems to complete the process.

The provisioning process described above is essentially the same for retail POTS, resale, and UNE-P services. The primary difference is that retail POTS, resale, and UNE-P services do not require the circuit design functions performed by the CPG. These processes are the same across all nine states, utilize the same systems across all nine states, and are also the same regardless of the type of customer – wholesale, access, or retail.

Q. PLEASE DESCRIBE THE BELLSOUTH MAINTENANCE FLOW IN THE NINE-STATE REGION.

A. BellSouth uses a common maintenance flow for each product across its nine-state territory. The UNE and Special services maintenance process begins when the customer contacts the region-wide CWINS Center via telephone or uses the Trouble Analysis Facilitation Interface ("TAFI") to initiate a trouble report. The trouble report flows to the CWINS Center for testing and is registered in WFA/C. The CWINS Center then routes the trouble report to either the Central Office Operations forces via WFA/DI or the I&M forces via WFA/DO based on the results of the test.

The Central Office and I&M forces use training and established methods and procedures that are consistent throughout the nine states to investigate the trouble condition and isolate and correct the problem. The WFA/DI and WFA/DO

systems are used to dispatch and track the trouble report throughout the life of the report. Once the problem is resolved, the trouble report is closed in WFA/DI or WFA/DO and passed to WFA/C. The CWINS Center monitors the status of the trouble report through WFA/C.

The resale and UNE-P maintenance flows are similar to those for UNE and Special Services, except that, for UNE-P and resale, the CWINS Center is the testing and control point for trouble reports and the region-wide Loop Maintenance Operations System (LMOS) is used to register the trouble report. Once the work is completed on a UNE-P or resale trouble report that required an inside dispatch, the completion is recorded in WFA/DI and passed to WFA/C and then passed to LMOS. Once the work is completed on a UNE-P or resale trouble report that required an outside dispatch, the completion is recorded in LMOS.

Q. YOU MENTIONED EARLIER THAT THERE ARE SOME VARIATIONS IN PERFORMANCE IN THE NINE-STATE REGION. PLEASE DESCRIBE THOSE VARIATIONS.

A. Although BellSouth has standardized operations throughout its nine-state region, as discussed above, this does not mean that performance will be, or reasonably could be expected to be, identical. Actual performance is affected by many variables beyond BellSouth's control.

Local and state government requirements and regulations often affect how and when services may be provisioned or repaired. For example, there are local

restrictions governing excavation activities that mandate time frames for requesting and receiving information on location of facilities prior to excavations. Local permitting requirements also vary between states and within states. Such local restrictions have a direct bearing on the time required to provision or repair service, affecting missed appointments as well as average installation interval and delay day measurements.

Similarly, local weather conditions have a direct impact on trouble report rates and the ability to complete outside construction activities. For example, states prone to hurricanes or other storms may experience higher trouble rates. In addition, weather influences general business activity in the community (*i.e.*, shipping, demand for services etc.). Moreover, it is quite possible for different states or even different cities within a state to have different economic conditions. One area may be impacted by a slow down in manufacturing while another is expanding due to growth of a new research park, for example. These economic factors influence the demand for service and therefore impact BellSouth personnel and network facilities.

Other factors that differ by geographic area and which can affect performance include variations in customer preferences as to which services are ordered, variations in physical arrangements at the customer locations, the type of equipment used by customers, and delays caused by customers not being ready.

Different network topology in different areas also can affect the validity of demand forecasts and thereby cause difference in performance results. For

example, the availability of outside plant facilities is highly dependent on timely and accurate forecasts of future demands for service. The construction of such facilities requires not only an accurate forecast of quantities, but also an accurate forecast of geographic location because the placement of cable is specific to street address or in some cases to room or suite locations within large complexes or campus environments. One piece of this problem is that CLECs do not as a common business practice inform BellSouth concerning targeted locations or customers. Therefore, BellSouth often is not aware of the need for facilities until a firm order is in hand which leaves only a few days to complete any required engineering and construction activities.

Other variations can be attributed to different volumes of orders for certain services in certain areas. If a service is widely ordered in an area, technicians generally complete such orders quicker and with fewer problems than another area where the same service is being ordered for the first time.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. BellSouth uses the same methods, procedures, systems, and process flows across all nine BellSouth states. These same processes, systems, and methods are used in all lines of business – retail, access, and wholesale. BellSouth's provisioning, maintenance and repair methods, procedures, systems and process flows are the same throughout BellSouth's region.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

263984

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 Alfred Heartley –General Manager – Network Process Improvement, 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. 01-00362 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 20 pages and 3 exhibit(s).

Alfred Heartley

Sworn to and subscribed
before me on 6/21/01

NOTARY PUBLIC

MICHEALE F. HOLCOMB
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2001

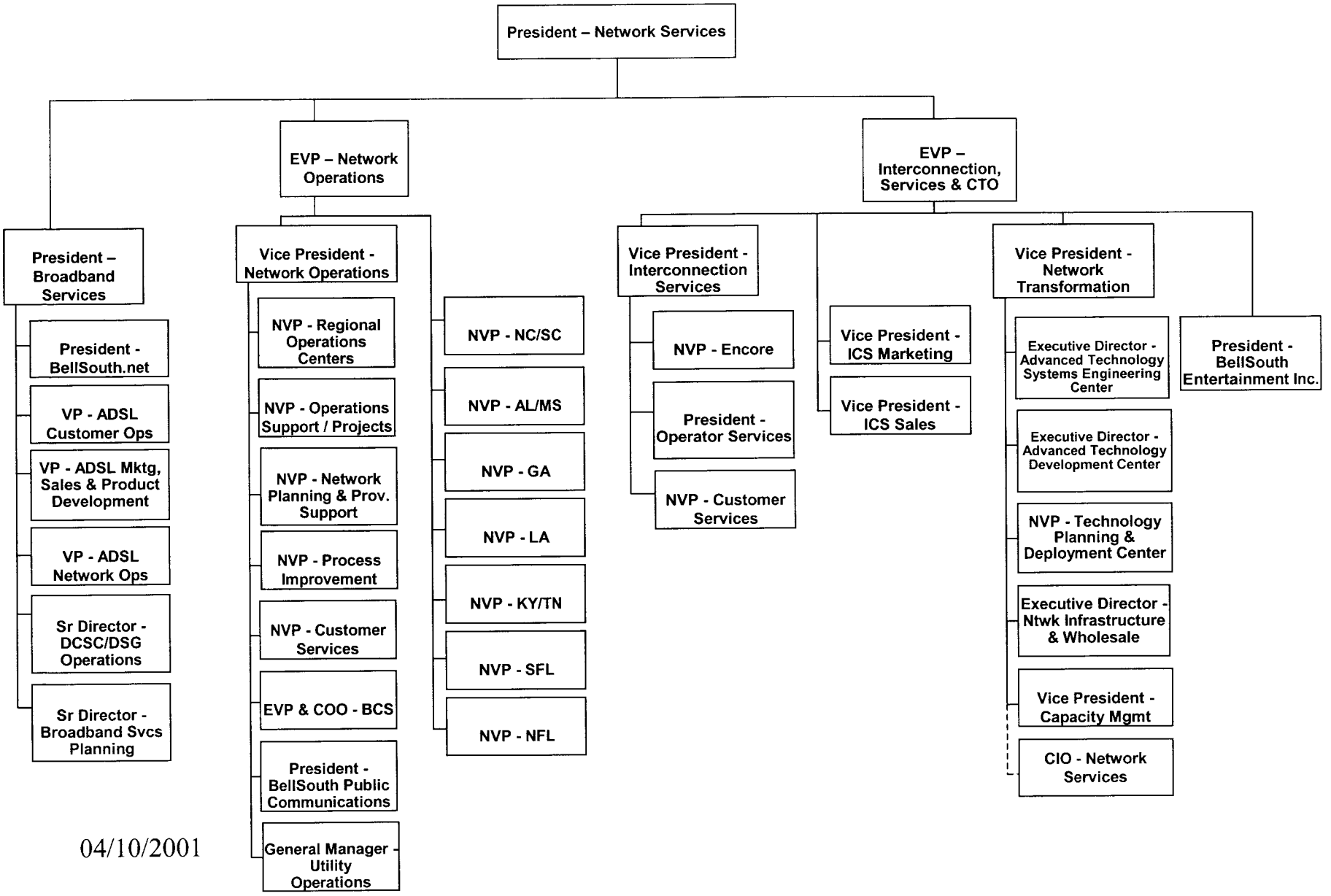
AH -1

EXHIBIT AH-1

Organization Chart

BellSouth Network Services

BELLSOUTH



04/10/2001

EXHIBIT AH-2

Training Curriculum Path Report

Training Curriculum Path Report

Company Code: S4
Job Title Code: S4461000
Print Date: 1/5/01

Curriculum: S4461000 SERVICES TECHNICIAN CPC 00

Course	Title	Days In Class	Days To Comp	Elective	Prereq
SF401	SAFE LADDER HANDLING AND POLE CLIMBING	5.00	60	N	N
ND300A	BASIC INSTALLATION AND MAINTENANCE-Part 1	10.00	60	N	Y
SF601M	DEFENSIVE DRIVING - SMART MOVES (IVI)	0.00	60	N	N
SF008M	FIRST AID - IVI	0.00	60	N	N
SF122	ASBESTOS AWARENESS - VIDEO	0.25	60	N	N
SF250A	WORKPLACE VIOLENCE: PART I(STR. VIOLENCE/STR. CRIME)	0.50	60	N	N
SF250B	WORKPLACE VIOLENCE: PART 2 (CUSTOMER-ON-EMPLOYEE VIOLENCE)	0.50	60	N	N
SF305	HAZARD COMMUNICATION GENERAL AWARENESS TRAINING	0.50	60	N	N
EM789	INTRO TO ENVIRONMENTAL RESPONSIBILITY AT BST (VIDEO)	0.50	60	N	N
EM750	OVERVIEW OF HAZARDOUS MATERIALS/WASTES - VIDEO	0.50	60	N	N
EM761	SPILLS AND RELEASES - VIDEO	0.50	60	N	N
EM791B	MANAGING HAZARDOUS MATERIALS/WASTE AT WORK CTR-VIDEO	0.50	60	N	N
MT105	SIGNATURE SERVICE MEETING ITP THROUGH CUSTOMER SATISFACTION	2.00	60	N	N
SF602V	DEFENSIVE DRIVING - HANDS ON	0.50	60	N	N
SF604V	AERIAL LIFT INSPECTION & OPERATION	0.50	180	Y	N
ND300B	BASIC INSTALLATION & MAINTENANCE-Part 2	15.00	75	N	Y
ND408J	PLAT READING	0.50	180	Y	N
ND408	PLAT READING	0.50	180	Y	N
ND205	FACILITY SPLICING & MNTCE	4.00	180	Y	N
SF105V	TRENCHING AND SHORING SAFETY	0.50	180	Y	N
SF051J	RADIO FREQUENCY (RF) AWARENESS TRAINING COURSE	0.25	180	Y	N
ND524B	NETWORK DIGITAL CONCEPTS	1.50	180	Y	N
NG250J	ESD AND CIRCUIT PACK PROTECTION	0.50	80	Y	N
ND320F	INTRODUCTION TO DLC & DAML FOR THE SERVICES TECHNICIAN	1.50	180	Y	Y
ND320A	ADVANCED INSTL. & MAINT. DIAL-UP DATA	1.50	180	Y	Y
ND320DJ	UNBUNDLED NETWORK ELEMENTS FOR SEVICE TEC	1.00	180	Y	Y
ND611	POTS PROVISIONING ON DISCHS AND ALCATEL NGDLC	1.00	180	Y	Y
ND622	POTS PROVISIONING ON RELTEC DISC*S	0.50	180	Y	Y
ND623	POTS PROVISIONING ON ALCATEL LITESPAN/STARSPAN	0.50	180	Y	Y
ND320G	MULTI - LINE INSTALLATION	2.00	730	Y	Y
CT111	INTRODUCTION TO FIBER OPTICS	1.00	730	Y	N
NG046J	DIGITAL PRODUCTS AND SERVICE OVERVIEW	1.00	730	Y	N
CA660	WIRELESS OVERVIEW	1.50	730	Y	N

Training Curriculum Path Report

Company Code: S4
Job Title Code: S4915300
Print Date: 1/5/01

Curriculum: S4915300 DIGITAL TECHNICIAN JTC 9153 00

Course	Title	Days In Class	Days To Comp	Elective	Prereq
SS508	PRINCIPLES OF DIGITAL TRANSMISSION SYSTEMS	4.00	0	N	N
SF401	SAFE LADDER HANDLING AND POLE CLIMBING	5.00	0	N	N
ND300A	BASIC INSTALLATION AND MAINTENANCE-Part 1	10.00	0	N	Y
ND300B	BASIC INSTALLATION & MAINTENANCE-Part 2	15.00	0	N	Y
NG250J	ESD AND CIRCUIT PACK PROTECTION	0.50	0	N	N
SS307	SPECIAL SERVICES TECHNICIAN TECHNET TRNG.	1.00	0	N	Y
NG211J	OUTSIDE PLANT AND CENTRAL OFFICE OVERVIEW	0.50	0	N	N
CO001	BASIC NETWORK TELECOMMUNICATIONS	2.00	0	N	N
NG401J	CIRCUIT DESIGN DOCUMENTS	3.00	0	N	N
NG024J	INTRODUCTION TO DATA COMMUNICATIONS NETWORKS	2.00	0	N	N
ND524M	NETWORK DIGITAL CONCEPTS	1.50	0	N	N
NG046J	DIGITAL PRODUCTS AND SERVICE OVERVIEW	1.00	0	N	N
SS726	ANALOG TRANSMISSION AND SIGNALING	5.00	0	N	Y
NG364J	SONET - CBT OVERVIEW	0.50	0	N	N
NG316J	PRINCIPLES OF DIGITAL TECHNOLOGY (*FOR WINDOWS 3.1 ONLY)	2.00	0	N	N
NG083J	FUNDAMENTALS OF FIBER OPTIC TECHNOLOGY	0.50	0		N
JA204	INTEGRATED TESTING SYSTEM	0.00	0		N
CN261J	EMERGING NETWORKS, SERVICES, & TECHNOLOGIES	0.50	0	Y	N
PC501M	USING PERSONAL COMPUTERS-WIN 95/NT	0.00	0	Y	N
MT510M	CHANGE MANAGEMENT	1.00	0	Y	N
MT105	SIGNATURE SERVICE MEETING ITP THROUGH CUSTOMER SATISFACTION	2.00	0	Y	N
EM750	OVERVIEW OF HAZARDOUS MATERIALS/WASTES - VIDEO	0.50	0	N	N
EM761	SPILLS AND RELEASES - VIDEO	0.50	0	N	N
EM789	INTRO TO ENVIRONMENTAL RESPONSIBILITY AT BST (VIDEO)	0.50	0	N	N
EM791B	MANAGING HAZARDOUS MATERIALS/WASTE AT WORK CTR-VIDEO	0.50	0	N	N
SF122	ASBESTOS AWARENESS - VIDEO	0.25	0	N	N
SF250A	WORKPLACE VIOLENCE: PART I(STR. VIOLENCE/STR. CRIME)	0.50	0	N	N
SF250B	WORKPLACE VIOLENCE: PART 2 (CUSTOMER-ON-EMPLOYEE VIOLENCE)	0.50	0	N	N
SF305	HAZARD COMMUNICATION GENERAL AWARENESS TRAINING	0.50	0	N	N
SF601M	DEFENSIVE DRIVING - SMART MOVES (IVI)	0.00	0	N	N
SF602V	DEFENSIVE DRIVING - HANDS ON	0.50	0	N	N

Training Curriculum Path Report

Company Code: S4
Job Title Code: S4911582
Print Date: 1/5/01

Curriculum: S4911582 ET (COET-5ESS) MAINTENANCE-JTC 9115 82

Course	Title	Days In Class	Days To Comp	Elective	Prereq
SW023J	GENERAL DIGITAL &COMPUTER CONCEPTS	0.50	180	N	N
SW303M	5ESS SWITCH MAINTENANCE: SYSTEM FUNDAMENTALS (ES5M01)	3.00	180	N	N
SW304M	5ESS SWITCH MAINTENANCE: AM, CNI HARDWARE MAINTENANCE (ES5M02A)	2.00	180	N	N
SW306M	5ESS SWITCH MAINTENANCE: CM HARDWARE MAINTENANCE (ES5M02B)	2.00	180	N	N
SW307M	5ESS SWITCH MAINTENANCE: SM HARDWARD MAINTENANCE (ES5M02C)	4.00	360	N	N
SW308M	5ESS SWITCH MAINTENANCE: LINE & TRUNK MAINTENANCE (ES5M03)	3.00	360	N	N
SW309M	5ESS SWITCH MAINTENANCE: OFFICE DATABASE MAINTENANCE (ES5M04)	3.00	360	N	N
SW341V	5ESS SWITCH HANDS-ON MAINTENANCE (ES5555)	10.00	360	N	Y
SS231B	UNDERSTANDING SINGLE-LINE ISDN	0.00	540	Y	N
SS231M	UNDERSTANDING SINGLE-LINE ISDN	0.50	540	Y	N
SS231J	UNDERSTANDING SINGLE-LINE ISDN	0.50	540	Y	N
SS232M	ISDN LOOP QUALIFICATION AND EXTENSION:AN OVERVIEW	0.50	540	Y	N
SS232J	ISDN LOOP-QUALIFICATION AND EXTENSION: AN OVERVIEW	0.50	540	Y	N
SS234M	BASIC RATE ISDN INSTALLATION FOR CENTRAL OFFICE	1.00	540	Y	N
SS234J	BASIC RATE ISDN INSTALLATION FOR CENTRAL OFFICE	1.50	540	Y	N
SW312M	5ESS SWITCH MAINTENANCE: SYSTEM ANALYSIS (ES5M05)	2.00	540	Y	N
SW313M	5ESS SWITCH MAINTENANCE: SYSTEM RECOVERY (ES5M06)	1.00	540	Y	N
SW317M	5ESS SYSTEM SURVEILLANCE (ES5M07)	3.00	540	Y	N

EXHIBIT AH-3

Central Library Corporate Documents Collections

Central Library Corporate Documents Collections

BSP's	Directives	Region Letters	Vendor Documents
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Attendance and Punctuality Guide	BRC	BSAPP	CABS
DCSC	Disaster Recovery	EASC	Environmental and Safety Documents
Handbooks	HR Documents	IP	ITNP
NISC	NRC	REGGUIDE	RRC
Technical References	TR's (pdf format)	WMCNF	
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