ORIGINAL

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF GEORGE MAINER

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NOS. 980946-TL, 980947-TL, 980948-TL, 981011-TL, 981012-TL AND 981250-TL

APRIL 9, 1999

Q. PLEASE STATE YOUR NAME, COMPANY NAME AND ADDRESS.

A. My name is George Mainer. I am employed by BellSouth Telecommunications, Inc. as Director - Network Operations, South Florida. My business address is Room 356, 600 N.W. 79th Avenue, Miami, Florida 33126 .

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.

A. I graduated from Nova University with a Masters in Business Administration. I began employment with Southern Bell in 1973 as an Installer/Repairman. In 1978, I was promoted to Installation Control Foreman. In 1986, I was promoted to Associate Manager, Network Operations Implementation State Staff. In 1989, I transferred to Systems Administration in the West

Palm Installation Management Center (IMC). In 1992, I was loaned to the re-engineering team with the responsibilities of reviewing process flows in the IMC. In 1994, I was promoted to Manager of the West Palm Work Management Center (WMC). In 1996, I was assigned Manager - Central Office Operations in West Palm Beach. In 1997, I transferred to Atlanta as an Acting Director with the Network Solutions Group. On August 1, 1997, I transferred to Miami as Director, Network Operations. In my current capacity, I have central office responsibility for the Miami-Dade County area.

Q. HAVE YOU TESTIFIED PREVIOUSLY?

A. No. I have not testified previously in any State Public Service Commission proceedings.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address issues related to operations and explain how the placement of central office workstations are determined. I will describe the specific location of workstations

in each of the six central offices in these proceedings.

**ISSUE 2: WHAT FACTORS SHOULD BE CONSIDERED BY THE COMMISSION IN MAKING ITS DETERMINATION ON BELLSOUTH'S PETITIONS FOR WAIVER AND TEMPORARY WAIVER OF THE REQUIREMENT TO PROVIDE PHYSICAL COLLOCATION FOR THE FOLLOWING CENTRAL OFFICES:**

**a) Daytona Beach Port Orange**

**b) Boca Raton Boca Teeca**

**c) Miami Palmetto**

**d) West Palm Beach Gardens**

**e) North Dade Golden Glades**

**f) Lake Mary**

Q. WHAT FACTORS ARE USED BY BELLSOUTH TO DETERMINE THE NUMBER OF WORKSTATIONS THAT ARE PLACED IN A CENTRAL OFFICE?

A. There are many variables that affect the number of workstations placed in a central office. As a result, no definitive guidelines exist, but rather, "rule of thumb" deployment strategies are utilized in determining the placement of workstations. These

variables include, but are not limited to, the number of employees, hours of staff coverage, physical size and makeup of office (multi-floor, widely spread out work areas, etc.), number and size of switch(es), number of network elements, capacity of network elements, office activities (provisioning, growth, upgrades, etc.), special activities (i.e., an office frequently used for "First Office Applications" or field trials) and miscellaneous (i.e., an office used for the concentration of testing or services such as remote access for centers). Each central office's specific monitoring, provisioning and staffing requirements must be considered in the determination of how many workstations should be placed by the Operations Manager.

Q. WHAT IS A WORKSTATION?

A. Workstations can consist of dumb terminals, personal computers (PCs), or specialized terminals that are specific to vendor equipment. Most of these terminals are equipped with specialized function keys, which would not make them interchangeable.

Q. HOW ARE THE NUMBER OF WORKSTATIONS NEEDED IN A CENTRAL OFFICE DETERMINED?

A. The number of workstations placed in a central office is determined by the types of equipment required to fulfill customer demands and the fact that central offices evolve through growth, upgrades, and rearrangements. Each one of these evolutions impact workstation and printer requirements. Therefore, while it is difficult to determine the exact number of workstations and printers for a given office, some bare minimum examples can be given, broken down by a typical floor layout and the disciplines of a central office.

Q. DESCRIBE A TYPICAL FLOOR LAYOUT.

A. Typically, a central office would have one workstation for every two or three technicians. In a one-story, small central office with only a Local switch, BellSouth would have a minimum of two terminals - one for the Electronic Technician and one for the Frame Attendant in that office. As the office grows and another type of switch and/or toll equipment is added, a bare minimum of one terminal

would be required per vendor for that switch and/or toll equipment. Also, there would be one printer associated with each workstation.

Q. WHAT ARE THE DISCIPLINES OF A CENTRAL OFFICE?

A. The disciplines of a central office include: Switch, Toll, Operating Systems, a Plug-In Receipt area, and a Frame area. The Digital Cross Connect (DCC) is a subset of the Toll area. These areas are where the bulk of the work is performed in a central office. The Switch discipline contains the equipment that processes calls and interfaces with toll and the local loop. There are different types of switches, including but not limited to, a Local switch which serves the surrounding community, a Tandem switch which interfaces with Local switches to transfer calls to another switch or out of the area, a Remote switch which is served from one central office but is physically located in another office, a Signal Transfer Point (STP) switch which provides signaling to Local switches in the area, and an Operator Services switch which specializes in Operator services traffic.

Q. PLEASE DESCRIBE HOW THE LOCATION OF WORKSTATIONS AND PRINTERS IS DETERMINED BY BELLSOUTH.

A. In a central office, workstations and printers are synonymous. In almost all cases, a workstation has a dedicated printer associated with it. Depending on what type of workstations they are connected to, these printers are used for recording real-time data, issuing designs on circuits, printing work loads, staffing and labor reports, daily customer index reports, trouble tickets, provisioning data, etc.

As I stated earlier, workstations can consist of dumb terminals, personal computers, or specialized terminals that are specific to vendor equipment. Most of these terminals are equipped with specialized function keys, which would not make them interchangeable. Some examples of specialized workstations are those assigned to switches, digital cross connect systems, Work Force Administration/Dispatch In (WFA/DI - which is an operating system used to perform provisioning and maintenance of cable pair facilities and switch facilities), and documentation (CD-ROM based access). Within a switch there are also specialized

workstations, like recent change terminals and terminals used for switch maintenance and provisioning.

Q. WHAT ARE THE MINIMUM REQUIREMENTS FOR SWITCH DISCIPLINE?

A. The minimum requirements for switch discipline are four to six workstations per switch, broken down as follows:

- 1 Recent change terminal located in the Frame area (used for provisioning switch features and performing maintenance)
- 1 Recent change terminal located in the Switch area (used for provisioning switch features and performing maintenance)
- 1 Recent change terminal located in the Toll area (used for provisioning switch features and performing maintenance)
- 2 Main workstations located in the Switch area (used for performing maintenance, growth provisioning, and routines)
- 1 Main workstation located in the Toll area (used for performing maintenance)

Again, depending on the variables of the central office, this number can vary. In large metropolitan area switches, quite frequently, more than one activity is being performed on the switch at the same time by multiple technicians.

Q. WHAT ARE THE MINIMUM REQUIREMENTS FOR TOLL DISCIPLINE?

A. The minimum requirements for Toll discipline are as follows:

1 Workstation located in the central part of the Toll area (used for provisioning and performing maintenance activities associated with toll switch)

1 Workstation for each Digital Cross Connect System (used for placing digital cross connects for provisioning and maintenance)

1 Laptop workstation for mobile use throughout the Toll area (used for provisioning and maintenance of various toll services)

Q. WHAT ARE THE MINIMUM REQUIREMENTS FOR BELLSOUTH'S OPERATING SYSTEMS, SUCH AS COSMOS (Computer System

for Main Frame Operations Support Systems) AND WFA/DI (Work Force Administration/Dispatch In)?

A. The minimum requirements for BellSouth's operating systems COSMOS and WFA/DI are:

1 WFA/DI terminal for every two employees (used to load work to employees, send and receive tickets, and access various databases)

2 COSMOS terminals in the frame area, one at each end (used for provisioning and performing maintenance work involving cable and pair assignments to switch and toll equipment on the frame)

1 COSMOS terminal in the Toll area (used for provisioning and performing maintenance work involving cable and pair assignments to switch and toll equipment on the frame.)

1 COSMOS terminal in the Switch area (used for the same as the one above.)

These numbers can vary due to the level of activity, the location of all the disciplines, and the number of employees.

Q. WHAT IS THE MINIMUM REQUIREMENT FOR THE PLUG-IN RECEIPT AREA?

A. The minimum requirement for the Plug-In Receipt area is:

1 Workstation (used for plug-in inventory)

Q. WHAT VARIABLES EXIST IN THE NORTH DADE GOLDEN GLADES CENTRAL OFFICE?

A. The North Dade Golden Glades central office has a total of nine Network Technicians and one Network Manager. These are all full-time employees dedicated solely to this location. This is a two-story building. The North Dade Golden Glades central office has five switches: one Local, two Tandems, one Operator Services, and one Signal Transfer Point (STP). These switches are spread over two floors, which requires workstation access to all switches on both floors. Due to its tandem offices and central location (on the Dade/Broward county line), the North Dade Golden Glades central office contains numerous fiber optic terminals for BellSouth and customer-owned rings, as well as two digital cross connect

systems. A third digital cross connect system is currently being installed. Due to its growth, this office has switch vendor technicians working full-time throughout most of the year performing equipment installations.

Q. BASED ON THE DEFINED VARIABLES NOTED ABOVE, PLEASE DESCRIBE THE LOCATION OF WORKSTATIONS AND PRINTERS IN THE NORTH DADE GOLDEN GLADES CENTRAL OFFICE.

A. The North Dade Golden Glades central office has the following workstations and printers located as follows:

| | | |
|---|---|---|
| 1st Floor, Switch Area: | 1 | WFA/DI Terminal |
| | 2 | Workstations used for documentation and STP access |
| | 3 | Terminals used for STP access |
| | 1 | Portable Terminal used for switch growth and maintenance activity |
| | 4 | Main terminals used to access four DMS switches |

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| | | | across the 1st and 2nd floors, with each terminal dedicated to a specific switch |
| | | 1 | Main terminal used as a duplicative terminal to access the 04 Tandem DMS switch. |
| | | 4 | Printers dedicated to specific terminals |
| | | | |
| | 2nd Floor, Switch Area: | 1 | WFA/DI Terminal |
| | | 2 | Portable terminals used for switch growth and maintenance activities |
| | | 1 | Recent Change terminal |
| | | 4 | Main terminals for maintenance and provisioning of four switches located on the 1st and 2nd floors of the office, with each terminal dedicated to a specific switch |

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|---|---|---|
| | 3 | Main terminals used as duplicative terminals to access the four DMS switches located on the 1st and 2nd floors |
| | 2 | Main terminals used for STP access |
| | 6 | Printers dedicated to specific terminals |
| | | |
| 1st Floor, Toll Area: | 2 | WFA/DI terminals |
| | 6 | Main terminals for access to four switches, located on the 1st and 2nd floors, with each terminal dedicated to a specific switch |
| | 2 | Terminals with access to COSMOS |
| | 4 | Printers dedicated to specific terminals |
| | 1 | Workstation for access to Network Elements and documentation |

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| 1st Floor, Plug-In Area: | 1 | WFA/DI terminal |
| | 1 | Workstation for access to the plug-in inventory |
| | 2 | Printers |
| 1st Floor, Frame Area: | 1 | WFA/DI terminal |
| | 1 | COSMOS Terminal |
| | 1 | Recent Change Terminal |
| | 2 | Printers |
| 1st Floor, DCC area: | 3 | Terminals |
| | 3 | Printers dedicated to specific terminals |

Q. WHAT VARIABLES EXIST IN THE MIAMI PALMETTO CENTRAL OFFICE?

A. The Miami Palmetto central office has a total of twelve (12) Network Technicians and one (1) Network Manager. These are full-time employees dedicated solely to this location. This is a one-story building. This office consists of one Local switch and one Remote switch. The Remote switch is served out of the Airport central office (across the street from the Miami International Airport). The Miami

Palmetto central office has five digital cross connect systems, with a sixth being currently installed. This office serves primarily business customers (90%) and has an abundance of special circuits served over digital loop carrier systems. It has been experiencing significant digital loop carrier growth. Due to this growth, the Miami Palmetto central office has a specialized digital loop carrier area. This office also serves as a testing hub to other offices for our centers. This necessitates an extraordinary amount of testing assistance from the digital cross connect system areas.

Q. BASED ON THE DEFINED VARIABLES NOTED ABOVE, PLEASE DESCRIBE THE LOCATION OF WORKSTATIONS AND PRINTERS IN THE MIAMI PALMETTO CENTRAL OFFICE.

A. The Miami Palmetto central office has the following workstations and printers located as follows:

| | | |
|---|---|---|
| Local Switch Area: | 1 | WFA/DI Terminal |
| | 1 | Recent Change terminal |
| | 1 | MLT (Mechanized Loop Testing) terminal |

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| | 1 | Switch workstation for access and documentation |
| | 2 | Switch terminals |
| | 6 | Printers dedicated to specific terminals |
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| Remote Switch Area: | 1 | Terminal to access remote switch |
| | 1 | Printer |
| | | |
| Dig. Loop Carrier Area: | 1 | Recent Change terminal |
| | 1 | Terminal used for switch access on digital carrier systems, carrier status and administration |
| | 1 | Terminal used for digital loop carrier and trunk provisioning |
| | 3 | Printers dedicated to terminals |
| | | |
| Main Toll Area: | 2 | WFA/DI terminals |
| | 1 | COSMOS terminal |
| | 1 | Workstation used for Network Element access |

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| | | | and documentation |
| Plug-In Receipt Area: | | 1 | Workstation for access to plug-in inventory |
| | | 1 | Printer |
| Frame Area: | | 2 | WFA/DI terminals |
| | | 2 | Recent Change Terminals |
| | | 1 | Terminal for access to remote switch |
| | | 2 | COSMOS terminals |
| | | 5 | Printers dedicated to specific terminals |
| DCC Areas: | | 5 | Terminals used for access to five digital cross connect systems |
| | | 1 | Terminal for switch access |
| | | 1 | Workstation for Network Element access |
| | | 6 | Printers dedicated to specific terminals |

Q. WHAT VARIABLES EXIST IN THE WEST PALM BEACH GARDENS CENTRAL OFFICE?

A. The West Palm Beach Gardens Central Office has eight (8) Network Technicians and one (1) Network Manager. These are full-time employees dedicated solely to this location. This central office is a one-story building and has nine (9) different switches: one DMS100 Local switch, one DMS200 Tandem switch for toll service, one DMS200 TOPS switch for the state, one STP (Signal Transfer Point), one Lucent Star Server SCP (Service Control Point), and four Lucent Advantage SCPs. BellSouth has planned two (2) additional SCP switches. All of these switches reside in the same building and each has an array of peripheral terminals and printers. The West Palm Beach Gardens central office has numerous fiber optic BellSouth terminals and several customer owned rings, as well as, two (2) Digital Cross Connect Systems under growth at this time. Due to this growth, there is constant vendor presence with technicians working full-time.

Q. BASED ON THE DEFINED VARIABLES NOTED ABOVE, PLEASE DESCRIBE THE LOCATION OF WORKSTATIONS AND PRINTERS IN THE WEST PALM BEACH GARDENS CENTRAL OFFICE.

A. The West Palm Beach Gardens central office has the following workstations and printers located as follows:

| | | |
|---|---|---|
| Switch Area: | 3 | Workstations used for Operator services |
| | 3 | Workstations used for the STP switch |
| | 10 | Workstations used for the five (5) SCP switches |
| | 3 | Workstations used for the Local switch |
| | 3 | Workstations used for the Toll switch |
| | 1 | WFA/DI terminal |
| | 20 | Printers |
| Toll Area: | 1 | WFA/DI workstation |
| | 1 | Workstation for the DISC and Litespan systems. |

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|---|---|---|
| | 3 | Laptop PCs used for provisioning and testing |
| | 1 | COSMOS workstation |
| | 3 | Printers |
| Frame Area: | 1 | WFA/DI workstation |
| | 2 | COSMOS workstations |
| Plug-In Area: | 1 | Workstation used for plug-in inventory |
| | 1 | Printer |
| DCC Area: | 3 | Workstations |

Q. WHAT VARIABLES EXIST IN THE BOCA RATON BOCA TEECA CENTRAL OFFICE?

A. The Boca Raton Boca Teeca central office has a total of six (6) Network Technicians and one (1) Network Manager. These are all full-time employees dedicated solely to this location. This is a two-story building. The first floor consists of one Local switch and two Remote switches. The Remote switches are hosted by the Boca Raton Main switch. The Boca Raton Boca Teeca central office has two digital cross connect systems. This office serves primarily

business customers and contains numerous fiber optic terminals and BellSouth customer owned rings. Due to the demands for growth, the office has switch and transport vendor technicians working throughout most of the year performing equipment installations. The second floor is utilized by an engineering group.

Q. BASED ON THE DEFINED VARIABLES NOTED ABOVE, PLEASE DESCRIBE THE LOCATION OF WORKSTATIONS AND PRINTERS IN THE BOCA RATON BOCA TEECA CENTRAL OFFICE.

A. The Boca Raton Boca Teeca central office has the following workstations and printers located as follows:

| | | |
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| Switch Area: | 3 | Workstations used to access the direct access into the switches |
| | 1 | Remote Monitoring terminal |
| | 3 | Printers |
| Toll/Frame Area: | 2 | COSMOS Terminals |
| | 1 | WFA/DI Workstation |
| | 1 | Workstation for |

| | | | |
|---|---|---|---|
| | | | provisioning and maintenance |
| | | 3 | Printers |
| | Toll Area: | 3 | WFA/DI Workstations |
| | | 1 | Workstation used for plug-in inventory |
| | | 2 | DCC workstations |
| | | 6 | Printers |

Q. WHAT VARIABLES EXIST IN THE DAYTONA BEACH PORT ORANGE CENTRAL OFFICE?

A. The Daytona Beach Port Orange central office has a total of five (5) Network Technicians. These are full-time employees that are dedicated to this location, in addition to the Daytona Beach Fentress Remote switch (as necessary). This is a single story building. This office contains one DMS100/200 switch, which provides local, as well as LATA Tandem service requirements. The Daytona Beach Fentress remote switch is hosted by the Daytona Beach Port Orange central office. The Daytona Beach Port Orange central office has two (2) digital cross connect systems. This office serves a mix of residential and

business customers and has an abundance of special circuits served over digital loop carrier systems, as well as copper cable facilities. It has historically experienced significant digital loop carrier growth.

Q. BASED ON THE DEFINED VARIABLES NOTED ABOVE, PLEASE DESCRIBE THE LOCATION OF WORKSTATIONS AND PRINTERS IN THE DAYTONA BEACH PORT ORANGE CENTRAL OFFICE.

A. The Daytona Beach Port Orange central office has the following workstations and printers located as follows:

| | | |
|---|---|---|
| Local Switch Area: | 1 | WFA/DI terminal |
| | 6 | Switch terminals |
| | 4 | Printers |
| Toll Area: | 1 | WFA/DI terminal |
| | 1 | Printer |
| Plug-In Receipt Area: | 1 | Workstation for plug-in inventory |
| | 1 | Printer |
| Frame Area: | 1 | COSMOS Terminal |

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|---|---|---|---|
| | | 1 | Recent Change Terminal |
| | | 2 | Printers |
| | DCC Area: | 2 | Terminals used for access to two digital cross connect systems |
| | | 2 | Printers |

Q. WHAT VARIABLES EXIST IN THE LAKE MARY CENTRAL OFFICE?

A. The Lake Mary central office has a total of two Network Technicians. They are full-time employees and are dedicated solely to this location. The Lake Mary central office is a one-story building. It has one DMS100 switch providing local service. The switch covers a portion of the floor area, with two fixed workstations and one portable workstation used to access the switch. The Lake Mary central office contains numerous fiber optic terminals for BellSouth and customer owned rings, as well as two digital cross connect systems. Due to the growth in the central office, switch vendor technicians work throughout the year performing equipment installations.

Q. BASED ON THE DEFINED VARIABLES NOTED ABOVE, PLEASE DESCRIBE THE LOCATION OF WORKSTATIONS AND PRINTERS IN THE LAKE MARY CENTRAL OFFICE.

A. The Lake Mary central office has the following workstations and printers located as follows:

| | | |
|---|---|---|
| 1st Floor, Switch Area: | 1 | Trunk Test Panel (TTP) terminal |
| | 1 | Maintenance Administration Position (MAP) terminal |
| | 2 | Remote Test Interface terminals |
| | 1 | WFA/DI terminal |
| | 1 | MaxiTold Terminal |
| | 1 | Workstation used for provisioning and maintenance |
| | 1 | PC used for LAN interface |
| | 5 | Printers |
| 1st Floor, Frame Area: | 1 | COSMOS terminal |
| | 1 | Printer |

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|---|---|---|
| 1st Floor, Plug-In Area: | 1 | Remote MAP terminal |
| | 1 | WFA/DI terminal |
| | 1 | Plug-In terminal for inventory |
| | 1 | Printer |
| 1st Floor, Toll Area: | 3 | Terminals for provisioning and maintenance |
| | 2 | Terminals for digital cross connect |
| | 4 | Printers |

Q. BASED ON YOUR ASSESSMENT OF THESE SIX CENTRAL OFFICES, ARE ALL OF THE WORKSTATIONS AND PRINTERS NECESSARY TO PERFORM THE REQUIRED JOB FUNCTIONS? IF SO, PLEASE EXPLAIN.

A. In order to operate at the most efficient level, the answer is yes. One can always make do with less terminals and/or printers, but it places additional strain on efficiency when you have technicians waiting to use a terminal and/or printer in order to work on a problem. This can delay the remedy of customer trouble reports. During switch upgrades, a

terminal is constantly in use for weeks at a time, which means that another terminal would have to be available for use by the technicians.

Having less terminals and printers means that an employee in a particular discipline (toll, frame, or switch) may have to go to another part of the building or floor to perform his/her job functions. This reduces the operational efficiency of the office and could result in unnecessary delays to resolve customer and/or network troubles.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.