BELLSOUTH

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April 8, 1998

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

EX PARTE

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Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, D.C. 20554

Re: CC Docket No. 97-208, CC Docket No. 97-231, CC Docket No. 97-121, CC Docket No. 97-137, CC Docket No. 96-98, and RM-9101

Dear Ms. Salas:

This is to inform you that Sid Boren, Allan Price, Jim Llewellyn, Bill Stacy, Bob Blau, and the undersigned, all of BellSouth Corporation, met with Commission staff on April 7, 1998. The following Common Carrier Bureau staff members attended some or all of this meeting: Carol Mattey; Michael Pryor; Melissa Newman; Jordan Goldstein; Jake Jennings; David Kirschner; Susan Launer; and Joe Welch. Also present at the meeting was Michael Riordan, the Commission's Chief Economist.

During the meeting the participants discussed issues related to BellSouth's compliance with checklist items 2 and 9 set forth in Section 271(c)(2)(B) of the Communications Act of 1934, as amended. Attachment 1 is the document that served as the basis for our discussion of checklist item 2. The staff also requested a copy of a report prepared by Ernst and Young discussing the performance of BellSouth's OSS. We are attaching a copy of the requested report as Attachment 2 to this letter.

Because the Commission is considering one or more of the issues discussed at the meeting in each of the proceedings identified above, we are filing notice of this ex parte meeting in each of those proceedings.

As required by Section 1.1206 of the Commission's rules, we are filing with the Commission two copies of this notice in each of the proceedings identified above. Please associate this notification with each of those proceedings.

Sincerely,

Kathleen B. Levitz
Vice-President
Federal Regulatory Affairs

Attachments

cc:	Jordan Goldstein	Jake E. Jennings	David Kirschner
	Susan Launer	Carol Mattey	Melissa Newman
	Michael Pryor	Michael Riordan	Joe Welch

ATTACHMENT 1

BELLSOUTH
MAJOR CLEC OSS ENHANCEMENTS
2H97- MARCH 1998

2H97

- Core UNEs (loop, port, INP, loop+INP) flow-through (mechanized ordering and service order generation) - 10/97 (Release 1.0)
- Credit histories - CSR - LENS - 10/97
- Completed ECTA development - 11/97
- Updated CGI-LENS specification - 12/97
- EC-Lite - machine-to-machine pre-ordering - 12/30/97

1Q98

- Single "C" order - 1/98 simple (CRIS and LESOG), 3/98 complex (CRIS)
- 100 # telephone number reservation limit/CO removed - 1/98
- Expanded USOCs list available on line - 1/98
- Sent CLECs extensive edits package, including SOER edits - 1/98
- Change Management procedures draft - with CLECs - 1/98
- Ernst & Young certification of OS functionality - 12/97, and volume testing - 2/98
- Single address validation in LENS inquiry mode - 2/98
- Telephone number reservation extended to 30 days - 2/98

3/16/98 - Release 2.0

- Electronic rejects of order errors
- TCIF 7.0 compliance
- Supplemental orders in LENS

ATTACHMENT 2

Statement of BellSouth Operating Support Systems Performance and Operational Readiness

As of February 11, 1998
with Report of Independent Accountants

ERNST & YOUNG LLP

Statement of
BellSouth Operating Support Systems
Performance and Operational Readiness

As of February 11, 1998

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Report of Independent Accountants

BellSouth Telecommunications Inc.

We have examined the accompanying Statement of BellSouth Operating Support Systems Performance and Operational Readiness and Appendix A Detailed Assertions as of February 11, 1998. This statement and Appendix A are the responsibility of management. Our responsibility is to express an opinion on this Statement of BellSouth Operating Support Systems Performance and Operational Readiness and Appendix A Detailed Assertions based on our examination. Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included such procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

In our opinion, the Statement of BellSouth Operating Support Systems Performance and Operational Readiness and Appendix A Detailed Assertions referred to above, as of February 11, 1998, fairly present, in all material respects the performance of BellSouth's operating support systems.

Our examination was conducted for the purpose of forming an opinion on the assertions in the Statement of BellSouth Operating Support Systems Performance and Operational Readiness found in Appendix A. Information regarding "Overview of Operating Support Systems", "Overview of Operating Support Systems Applications" and "Overview of Volume Testing" is appended as Other Information to this report for informational purposes only. We express no opinion on the Other Information section appended to this report.

Ernst + Young LLP

February 11, 1998

Ernst & Young LLP is a member of Ernst & Young International, Ltd.

Statement of BellSouth Operating Support Systems Performance and Operational Readiness

In conjunction with its offering of resale services and unbundled network elements, BellSouth Telecommunications (BST) has implemented a series of processes, known as Operating Support Systems (OSS) to enable Competing Local Exchange Carriers (CLECs) to resell BST network services and unbundled network elements.

BST's CLEC OSS provide the functionality required by the Federal Communications Commission (FCC). The FCC's OSS requirements are described in First Report and Order, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, 11 F.C.C.R. 15499 (1996), vacated in part, Iowa Utils. Bd. v. FCC, 120 F.3d 753 (CA 8 July 18, 1997), modified on reh., Slip Opinion (October 14, 1997) and are described in Appendix A.

The performance of BST's Operating Support Systems is described in Appendix A Detailed Assertions. As of February 11, 1998, BST's OSS performed as described in Appendix A.

In Appendix A, BST's criteria for Operational Readiness for its Operating Support Systems is defined as:

- The required functionality is in place and is operating, and
- The Local Exchange Ordering and Pre-ordering Gateway system has performed in a test environment at order volumes that exceed expected demand.

BST also describes in Appendix A its demand estimates and the process used to volume test its systems. On January 15, 1998 BST performed volume tests of the Local Exchange Ordering and Pre-ordering Gateway system that demonstrated that BST's OSS were Operationally Ready as defined above.

W. R. McNair
Vice President
Customer Services

Richard L. Harder
Vice President and Chief
Information Officer

Appendix A Detailed Assertions

I. Pre-ordering

FCC Requirement

Pre-ordering includes the exchange of information between telecommunications carriers about current or proposed customer products and services or unbundled network elements or some combination thereof. FCC Interconnection Rules at Section 51.5.

- **Local Exchange Navigation System (LENS) and Electronic Commerce LITE (EC-LITE):**
  - Provide interactive access to pre-ordering information and are available to support CLECs choosing to enter the BST region.
  - Allow CLECs to enter a pre-ordering transaction interactively.
  - Allow CLECs to confirm that their customers' street addresses are consistent with BST address databases.
  - Enable CLECs to select and reserve a telephone number (or directory number).
  - Provide on-line selection of special telephone numbers, such as contiguous numbers, vanity numbers and easy numbers, without manual intervention of BST service representatives.
  - Provide information for use in negotiating customer due date commitments for non-designed (that is, telephone number based) service installations requiring a premise visit.
  - Provide Customer Service Record (CSR) information. Larger account information is provided to CLECs by BST's Local Carrier Service Center (LCSC).
  - Verify that switch features which have been requested by their customer or which CLECs wish to offer to their customers are available in a switch.
- Human interaction with LENS is provided via a browser. Computer-to-Computer interaction with LENS is available through BST's Common Gateway Interface (CGI) to CLECs who develop applications using CGI specifications. EC-LITE supports another computer-to-computer interface.

Appendix A Detailed Assertions
(Continued)

- BST provides CLECs with LENS training, LENS system user guides, LENS-CGI technical specifications and other information for the pre-ordering functions.

Appendix A Detailed Assertions
(Continued)

II. Ordering

FCC Requirement:

Ordering includes the exchange of information between telecommunications carriers about current or proposed customer products and services or unbundled network elements or some combination thereof. FCC Interconnection Rules at Section 51.5.

- CLECs can use Electronic Data Interchange (EDI) for all simple and certain complex resale orders and certain unbundled network elements (UNEs).

- CLECs can transmit service requests to BST in a Ordering and Billing Forum (OBF) standard format.

- BST's OSS support several EDI connectivity options: dedicated point-to-point connections; dial up connections; and Value-Added Network (VAN) connections.

- The EDI interface provides CLECs the ability to enter orders for 34 resale services and some UNEs. No manual intervention is needed on BST's side of the interface for 30 of these services or UNEs. Firm order confirmation and completion notices related to these services are system generated without manual intervention. Four complex services are orderable via the EDI interface: PBX trunks, SynchroNet® service, ISDN-Basic-Rate service, and Hunting.

- CLECs can order UNEs via EDI, although it is important to note that many UNEs are infrastructure elements, such as trunking, that are ordered via the Exchange Access Control & Tracking system (EXACT).

- LENS provides CLECs the ability to directly enter orders into the BST system.

- The LENS ordering interface provides a subset of the order types and activity types provided by the EDI interface.

- The Local Exchange Ordering (LEO) system performs completeness and validity edit checks and will pass the edited service request to BST's Local Exchange Service Order Generator (LESOG) for mechanized order generation or to a LCSC work list for further handling by a BST service representative.

Appendix A Detailed Assertions
(Continued)

II. Ordering (Continued)

- To perform the pre-ordering activity for complex services known as "service inquiry," a system designer on the appropriate account team fills out a paper form and then provides that form to the project manager for further manual activities. This is done for both retail and resale orders for complex services (for example, SmartRing® service).

- BST provides CLECs with training, system user guides, and other information for the function of ordering; technical specifications for EDI order formatting and transmittal; and the business rules and edits used in LEO, LESOG, and SOCS to validate order accuracy.

Appendix A Detailed Assertions
(Continued)

III. Provisioning

FCC Requirement:

Provisioning involves the exchange of information between telecommunication carriers where one executes a request for a set of products and services or unbundled network elements or combination thereof from the other with attendant acknowledgments and status reports. FCC Interconnection Rules at Section 51.5.

- BellSouth service representatives in the LCSC process rejected orders requiring manual handling.

- If the service representative is not able to process the service request because of invalid, incomplete or inaccurate information, requests for clarification are faxed to the CLECs.

Appendix A Detailed Assertions
(Continued)

IV. Maintenance and Repair

FCC Requirement:

Maintenance and repair involve the exchange of information between telecommunication carriers where one initiates a request for maintenance or repair of existing products and services or unbundled network elements or combination thereof from the other with attendant acknowledgments and status reports. FCC Interconnection Rules at Section 51.5.

- BST offers CLECs access to a maintenance and repair system that is substantially the same as the system that BST uses to handle local exchange trouble reports. This interface is known as the Trouble Analysis Facilitation Interface (TAFI).

- BST provides two ways for CLECs to connect to TAFI: Dedicated Local Area Network (LAN- to-LAN) connections, and Dial-up connections.

- TAFI enables certain trouble reports to be cleared remotely by the repair attendant handling the initial customer contact with the customer still on the line.

- TAFI retrieves appropriate data from legacy systems and executes testing to analyze a given trouble situation and provides a recommended resolution path.

- TAFI provides automated trouble receipt, screening, and problem resolution.

- The interface specifications are available to CLECs who wish to develop and use the Work Force Administration-Control (WFA-C) electronic interface capability or the Electronic Communications Trouble Administration (ECTA) interface.

- BST provides CLECs with training, system user guides and information for the function of maintenance and repair.

Appendix A Detailed Assertions
(Continued)

V. Billing

FCC Requirement

Billing involves the provision of appropriate usage data by one telecommunications carrier to another to facilitate customer billing with attendant acknowledgments and status reports. FCC Interconnection Rules at Section 51.5.

- BST provides bills to CLECs from either the Customer Record Information System (CRIS) or the Carrier Access Billing System (CABS) depending on the service provided. Generally, services ordered from the General Subscriber Services Tariff (GSST) or the Private Line Services Tariff (PLT) are billed through CRIS. Resold services, white page listings, and some unbundled network elements such as ports, non-designed loop, etc. are examples of CRIS billed services. Services ordered from the Access Services Tariff (AST) are billed through CABS.

- These bills are provided in paper, on computer diskette, or on computer magnetic tape, depending on the type of billing information desired by the CLEC.

- BST has agreed with some CLECs to provide a CABS formatted bill for services that normally would be billed through CRIS.

- BST has developed an Other Local Exchange Carriers Daily Usage File (ODUF) to deliver usage sensitive data in a manner that facilitates the CLECs end user billing. ODUF information is available for resold lines, interim number portability accounts and some unbundled ports. A number of CLECs have implemented the ODUF interface.

- BST has developed an Access Daily Usage File (ADUF) to deliver billable access usage for certain UNEs.

Appendix A Detailed Assertions
(Continued)

VI. Operational Readiness

BST determines that the OSS are operationally ready when:

- *The required functionality is in place and is operating, and*
- *The Local Exchange Ordering and Pre-ordering Gateway system has performed in a test environment at order volumes that exceed expected demand.*

Forecast of Projected Volumes

BST estimated future volumes based on straight line projections of past volumes. Projected orders were calculated by reviewing order statistics from the Service Order Control System (SOCS) for the months of September, October, and November, 1997. The trend during that time period showed a 20% per month increase in volume. December order volume is forecasted at a 20% increase over November, and January is another increase of 20% etc. Based on the 20% volume average growth trend, management determined that the relevant planning point for volume test capacity was November, 1998 which has an estimated volume of approximately 10,500 orders per day. Since orders received through LENS and EDI require different processing, it was necessary to estimate the LENS/EDI mix of orders. The test plan was developed with an 80% EDI and 20% LENS mix because it was anticipated that large CLECs would be entering their orders via EDI.

Environment and Test Design

BellSouth Telecommunications (BST), with the assistance of Bellcore, a New Jersey-based research and development firm, worked jointly to develop a test environment designed to emulate the Local Exchange Ordering and Pre-ordering Gateway and develop a plan to test the gateway's capacity over a 20-hour period.

The systems that comprise the gateway include Electronic Data Interchange (EDI), the Local Exchange Navigation System (LENS), Electronic Commerce Lite (EC-LITE), the Local Exchange Ordering Database (LEO), and the Local Exchange Service Order Generator (LESOG.)

BST, with assistance from Bellcore, developed a set of test data and created volume simulators to input orders and pre-order inquiries into the test environment. The test data included a mix of EDI orders, LENS orders, and LENS pre-order inquiry transactions. Order types included switch-as-is orders, switch-with-changes orders, add orders, and disconnect orders.

Appendix A Detailed Assertions
(Continued)

BST produced a volume of EDI orders by holding 20 batches of test orders (400 orders per batch) on the Harbinger Value Added Network. (VAN). The VAN interfaced with the EDI translator (a TSO IMS processor) located at BST's data center in Birmingham. This translator, also used in the production environment, converted orders from an X.12 format to flat-files usable by LEO and converted Firm Order Confirmations (FOCs) and Completion Notices from flat-files back to an X.12 format required for transmission back to the CLECs across the VAN.

Bellcore produced a volume of LENS orders and pre-order inquiry transactions by running scripts (batches of commands) on a series of test computers which used the HyperText Transmission Protocol (HTTP) to access LENS test servers on BST's Intranet using a LAN-to-LAN connection.

BST used a cluster of 4 LENS servers (SUN E5000's) located in Atlanta and Charlotte to process test transactions. One LENS server was configured as a front-end interface while the other three were configured as back-end transaction processors. In the production environment, additional capacity of up to 15 servers is available for LENS processing in the event additional capacity is needed.

Pre-order inquiry transactions queried databases on BST's legacy systems to obtain addresses, telephone numbers, due date availability, feature/service availability, and customer service records. Where feasible, production databases on BST's legacy systems were copied to a test environment on an IBM mainframe in Atlanta. These databases included ATLAS, DSAP, RSAG, SOCS and static tables from COFFI. Production databases too large to copy to the test site were accessed directly by the test transactions. These included P/SIMS, BOCRIS, and dynamic tables in COFFI (see Other Information for detailed descriptions of legacy systems.)

Although EC-LITE is a component of the Local Exchange Ordering and Pre-ordering Gateway, volume testing was not performed using EC-LITE as the volume test was designed prior to implementation of EC-LITE in production.

The mainframe components of the production LEO system were copied to a test environment on the IBM mainframe in Atlanta. The UNIX component of production LEO was copied to an HP T520 UNIX server. The LEO system performed edits of test data prior to transfer to LESOG. LEO interfaced the LENS cluster and the EDI translator to LESOG processors.

Appendix A Detailed Assertions
(Continued)

Two HP T520 UNIX processors were configured in the test environment to serve as the LESOG cluster. One of these servers was also used for the UNIX component of LEO. Orders were transmitted from LEO to the LESOG cluster. LESOG then converted orders into a format usable by BST's internal SOCS. Service order status information and error notices are transmitted from SOCS to LEO.

Since test orders were never intended to be provisioned, a simulated volume of completion notices were processed from SOCS.

LEO and LESOG files captured a count of all orders processed and recorded the beginning and end times of the volume test period.

Test Results

- The volume test was conducted during the 20-hour period that began at approximately 4:00 AM on January 15, 1998.

- The Local Exchange Ordering and Pre-ordering Gateway system processed over 11,000 orders in the 20-hour period.

- 8,000 test orders were processed through EDI. The EDI test data consisted of 20 batches of 400 transactions, each batch consisting of 22% add orders, 25% switch with change orders, 50% switch as is and 3% disconnect orders.

- Over 3,000 test orders were processed through LENS. LENS supported 300 concurrent users during the test. Over 50,000 pre-order inquiry transactions were processed simultaneously with the test orders.

- A simulated volume of completion notices was processed during the test.

Other Information

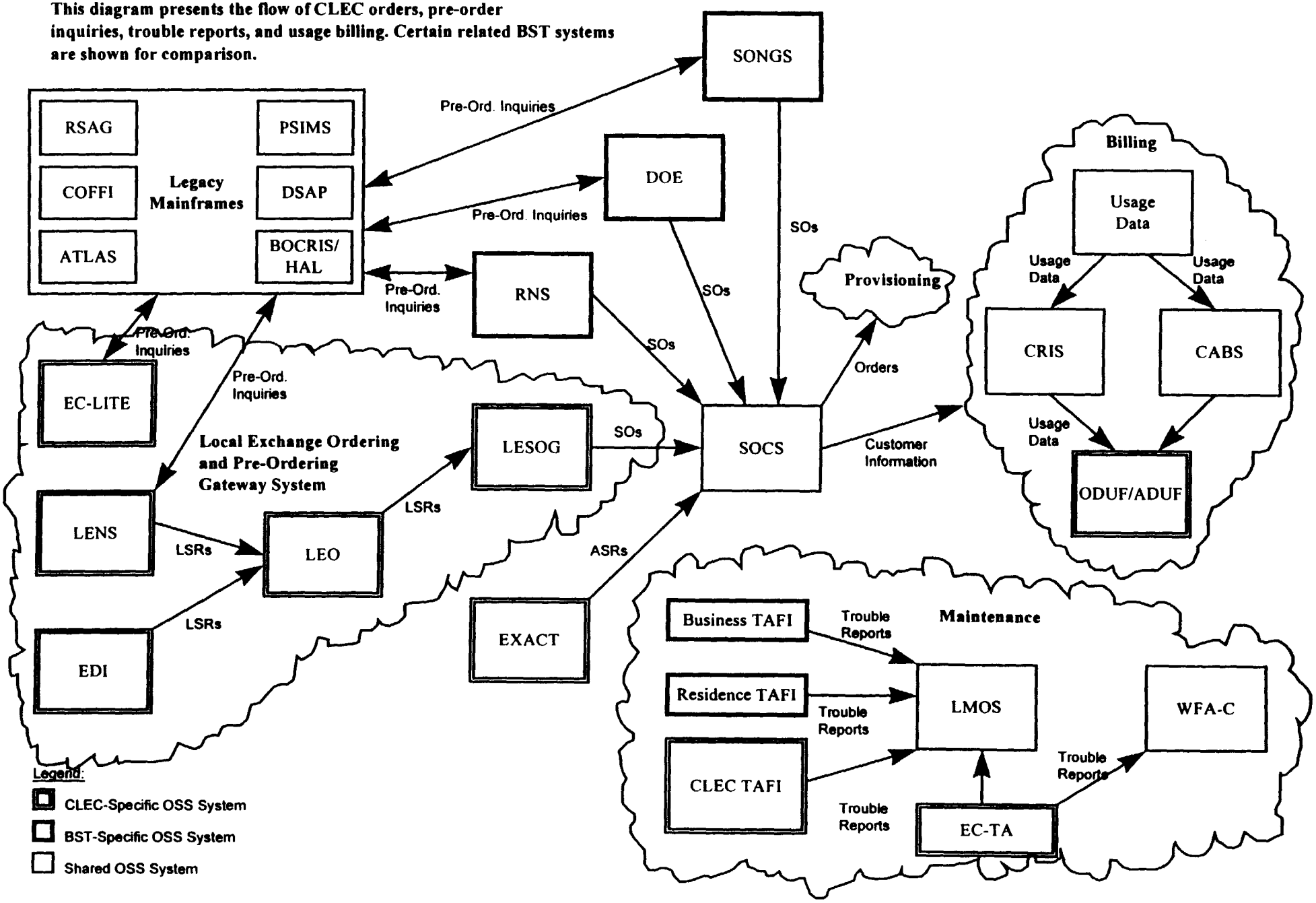
Overview of Operating Support Systems

BST is a regulated telephone company providing communication service throughout the southeastern portion of the United States. The Telecommunications Act of 1996 and the FCC Local Competition Order require BST to resell certain services and UNEs to CLECs. Associated with this resale, BST must provide to CLECs the functions of pre-ordering, ordering, provisioning, maintenance and repair, and billing for network elements and resale services.

BST has created various interfaces to its OSS to provide services to CLECs and comply with the FCC's requirement. The following sections of this document describe the OSS Applications and Volume Testing.

Overview of Operating Support Systems

This diagram presents the flow of CLEC orders, pre-order inquiries, trouble reports, and usage billing. Certain related BST systems are shown for comparison.



Overview of Applications

Local Exchange Ordering and Pre-Ordering Gateway System

LENS

The interactive Local Exchange Navigation System (LENS) provides information needed for pre-order functionality and ordering, as well as the ability to supplement (update) previously placed orders and retrieve local service request (LSR) statuses and error and clarification messages. The types of status that are provided include acknowledgment of receipt of orders, LSR error statuses, confirmation of firm orders, order jeopardy notices, and order completion notifications. All LENS statuses are retrieved interactively via the Web interface.

The LENS system uses the HyperText Transfer Protocol (HTTP) that is widely used on the World Wide Web (WWW) found on the public Internet. All messages sent conform to the HTTP 3.0 standard, and have been tested using both Netscape Navigator 3.x and Microsoft Internet Explorer 3.x browsers. Other browsers may be used, but are not supported by BellSouth.

There are three methods that may be used to connect to the LENS web server:

- direct LAN-to-LAN interconnection via secure firewalls;
- direct dial-up via a secure modem pool; and,
- via the public Internet.

An electronic security identification card (currently the ACE SecurID™) is required to access LENS via the secure dial-up modem pool.

LENS uses Sun E5000 servers as both web servers and business logic servers. Software on the E5000s include Netscape's Enterprise Server, Apple's WebObjects, the Informix relational database, RogueWave software libraries, and IONA's Orbix object request broker. Tivoli, a network monitoring, security, and software distribution tool developed by IBM, is used to monitor the system. The actual LENS software is written in a combination of C++ and Objective C.

Overview of Operating Support Systems Applications
(Continued)

Communication between the web servers (the presentation layer) and the business logic servers (the "back-end" or data layer) is achieved via the CORBA 2.0 standard as implemented by Orbix. The business logic may be loaded and run on one or more servers, each of which houses business rules processing engines. These engines are composed of an Informix database and system software written in C++ with RogueWave libraries and IONA's Orbix product. The engines use an internal BellSouth communications software product, the BellSouth Navigator, to communicate with various operating support systems (OSS) over a TCP/IP network. The presentation servers and the business logic servers share a Fiber Distributed Data Interface (FDDI) ring which is connected to other FDDI rings which serve the communication systems and OSS.

The business logic servers communicate with the OSS to provide the user with the ability to validate addresses, determine switch specific features and service availability, select and reserve telephone numbers, determine due dates, and retrieve customer service record (CSR) information. The servers communicate with the Local Exchange Ordering (LEO) system to place orders, check the status of orders, retrieve confirmation of firm orders, and retrieve notification of order completion. All orders are edited for required fields before they are submitted to LEO.

EC-LITE

In coordination with requesting carriers, BST has developed an additional pre-ordering interface. BST has negotiated an individual interconnection agreement with AT&T that provides for a customized pre-ordering interface known as EC-LITE. Under this agreement, BST has developed a machine-to-machine interface designed to AT&T's specification. EC-LITE became available on December 30, 1997. Testing was completed on January 15, 1998 and the production environment was deployed on January 16, 1998.

EC-LITE is a machine-to-machine interface which allows the CLEC to enter a pre-ordering transaction interactively, through their own OSS via prompts and screen displays. The production environment for EC-LITE exists in BST's Charlotte, North Carolina data center. An additional EC-LITE production facility to meet back up, load balance, and disaster recovery is planned for BST's Birmingham, Alabama data center.

EDI

The EDI Gateway consists of a Harbinger Trusted Link Gateway and a Harbinger Trusted Link Translator running on an MVS mainframe. It supports the transmission of orders, the acknowledgment of receipt of orders, the transmission of order jeopardy notices, the confirmation of firm orders, and notification of the completion of orders.

The gateway is a collection of secure electronic mail boxes. These may be accessed through direct network connection, secure dial-in, or by using a Value Added Network (VAN). BST's VAN of choice for local exchange ordering is Harbinger. The CLEC may use a different VAN of their choice since the VANs are interconnected. BST is connected to the VAN by a dedicated T1 link supporting 56 KB per second transfer rate. Secure dial-in to the system is supported from 4.8 bps to 14.4 bps. Faster modems may be supported by request.

Harbinger delivers any incoming mail every 15 minutes into a "hot mailbox" which activates the translator. The translator strips the mail of the "electronic envelope" and transforms it from the ANSI X12 Version 3040 format into one usable by the application programs. If the message fails to conform to the standard format, the EDI translator rejects it; otherwise, it deposits the translated message into a file that is stored in the LEO database and control system.