30p

HOPPING GREEN SAMS & SMITH

PROFESSIONAL ASSOCIATION

ATTORNEYS AND COUNSELORS

123 SOUTH CALHOUN STREET

POST OFFICE BOX 6526

TALLAHASSEE, FLORIDA 32314

(850) 222-7500

FAX (850) 224-8551

FAX (850) 425-3415

Writer's Direct Dial No.
(850) 425-2313

JAMES S. ALVES
BRIAN H. BIBEAU
RICHARD S. BRIGHTMAN
KEVIN B. COVINGTON
PETER C. CUNNINGHAM
RALPH A. DEMEO
RANDOLPH M. GIDDINGS
WILLIAM H. GREEN
WADE L. HOPPING
GARY K. HUNTER, JR.
JONATHAN T. JOHNSON
ROBERT A. MANNING
FRANK E. MATTHEWS
RICHARD D. MELSON
ANGELA R. MORRISON
GABRIEL E. NIETO
ERIC T. OLSEN

GARY V. PERKO
MICHAEL P. PETROVICH
DAVID L. POWELL
WILLIAM D. PRESTON
CAROLYN S. RAEPPLE
DOUGLAS S. ROBERTS
GARY P. SAMS
TIMOTHY G. SCHOENWALDER
ROBERT P. SMITH
DAN R. STENGLE
CHERYL G. STUART
W. STEVE SYKES
T. KENT WETHERELL, II

OF COUNSEL
ELIZABETH C. BOWMAN

October 29, 1999

ORIGINAL

RECEIVED-FPSC
99 OCT 29 PM 4:37
RECORDS AND REPORTING

BY HAND DELIVERY

Blanca Bayó
Director, Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

Re: Docket No. 981834-TP and No. 960786-TL

Dear Ms. Bayó:

Enclosed for filing on behalf of Rhythms Links Inc. are the original and fifteen copies of its comments on the Draft Master Test Plan. Also, enclosed is a diskette for your convenience.

By copy of this letter, this document has been furnished to the parties on the attached service list.

Very truly yours,

Richard D. Melson

RDM/mee
cc: Attached Service List

AFA Hervegg
APP 8
CAF
CMU
CTR
EAG
LEG 2
MAS 3
OPC
PAI
SEC 1
WAW
OTH Hong

RECEIVED & FILED
FPSC-BUREAU OF RECORDS

Done 11/02/99

DOCUMENT NUMBER-DATE
13311 OCT 29 99
FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

Consideration of BellSouth Telecommunications, Inc.'s Entry into InterLATA Services pursuant to Section 271 of the Federal Telecommunications Act of 1996	**Docket No. 960786-TL**
Petition of Competitive Carriers for Commission Action to Support Local Competition in BellSouth Telecommunications, Inc.'s Service Territory	**Docket No. 981834-TP**

COMMENTS OF RHYTHMS LINKS INC. ON KPMG'S DRAFT MASTER TEST PLAN FOR THE BELLSOUTH TELECOMMUNICATIONS INC. OSS EVALUATION PROJECT

Date: October 29, 1999

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

Consideration of BellSouth Telecommunications, Inc.'s Entry into InterLATA Services pursuant to Section 271 of the Federal Telecommunications Act of 1996	**Docket No. 960786-TL**
Petition of Competitive Carriers for Commission Action to Support Local Competition in BellSouth Telecommunications, Inc.'s Service Territory	**Docket No. 981834-TP** **Filed: October 29, 1999**

COMMENTS OF RHYTHMS LINKS INC. ON KPMG'S DRAFT MASTER TEST PLAN FOR THE BELLSOUTH TELECOMMUNICATIONS INC. OSS EVALUATION PROJECT

Rhythms Links Inc. f/k/a ACI Corp. ("Rhythms") files these comments in response to the request of the Florida Public Service Commission ("Commission") for comments on the Master Test Plan prepared by KPMG, L.L.P. ("KPMG") for the BellSouth Telecommunications, Inc. ("BellSouth") OSS Evaluation Project. Rhythms urges the Commission and KPMG to incorporate into the OSS Evaluation Project testing processes specifically designed to ensure BellSouth's ability to provision collocation and unbundled network elements to ALECs in a reasonable and nondiscriminatory manner necessary for ALECs to provide advanced services to Florida consumers.

Rhythms' Core Business

Rhythms offers high-speed data transmission services to customers by utilizing Digital Subscriber Line ("DSL") technologies. DSL technologies enable a carrier, such as Rhythms, to use existing phone lines to deliver high-speed data and Internet access services. Because xDSL relies on existing phone lines, xDSL-based services can be delivered to virtually all customers' homes and businesses more quickly and at less cost than other data services. Rhythms' services can be used for telecommuting, dedicated access to the Internet, and access to Intranet-type networking solutions. Rhythms' provision of xDSL services competes directly with BellSouth's loop-based advanced services.

Rhythms' most prominent competitive advantage over the BellSouth advanced service offerings is Rhythms' ability to provision a variety of xDSL-based services according to the specific needs of each customer. These different types of xDSL include Asymmetric Digital Subscriber Line ("ADSL"), Rate adaptive Asymmetric Digital Subscriber Line ("RADSL"), High bit rate Digital Subscriber Line ("HDSL"), Symmetric Digital Subscriber Line ("SDSL") and ISDN Digital Subscriber Line ("IDSL"). A description of the various types of xDSL services provided by Rhythms is attached at Exhibit I. The various types of xDSL allow Rhythms to provide service to customers at locations further from the central office and at speeds faster than other data services.

Rhythms' Dependency on BellSouth

In order to provide those services, Rhythms depends on BellSouth for three primary components. First, Rhythms must collocate and maintain equipment at BellSouth premises, including BellSouth central offices. Second, Rhythms must lease "clean" copper loops, unfettered by any intervening devices, such as load coils. Third, Rhythms requires the timely

provisioning of unbundled transport facilities from BellSouth. Rhythms must obtain these components in a timely and cost-effective manner to meet customer needs.

Operations Support Systems ("OSS") are the foundation for BellSouth's effective and efficient provisioning of these components of its network. Rhythms must be able to order unbundled loops, and other unbundled network elements, needed to provision its service to its customers, through real-time, electronic access, whether unrestricted or mediated, to BellSouth's OSS for pre-ordering, ordering and provisioning, maintenance and repair, and billing capabilities.[1] Rhythms will focus its comments on the testing of the OSS requirements for pre-ordering, ordering and provisioning of unbundled xDSL-capable loops.

Summary of Rhythm's Recommendations for OSS Testing

First, Rhythms recommends that KPMG examine the information and processes available for advanced services providers in the pre-ordering phase of OSS. Prior to ordering loops, Rhythms requires access to specific loop makeup information in order to service its customers competitively. Rhythms must be able to discern the capability of a loop for the provisioning of its xDSL services in the same manner and timeframe that BellSouth uses for provisioning of its own loop-based services, including all advanced services. The pre-ordering information necessary for Rhythms and BellSouth to determine the suitability of a loop differs only because the services Rhythms and BellSouth plan to provide over the loops differs. KPMG's testing of BellSouth's OSS, therefore, must reflect an emphasis on the access to loop make-up information available to competitors during pre-ordering.

Second, Rhythms urges KPMG to ensure that the OSS testing reviews the manual processes where currently the electronic processes do not exist or are limited in capability. To

[1] There are five OSS functionalities: pre-ordering, ordering, provisioning, billing and repair and maintenance.

meet customer needs in provisioning of xDSL services and to offer those services at commercial volumes, Rhythms simply cannot rely on inefficient manual procedures. To appropriately scale its business, Rhythms needs electronic access to the OSS functionalities for loop makeup information, as well as for ordering xDSL-capable loops. Nevertheless, until electronic interfaces with BellSouth's OSS are available, OSS testing must sufficiently test the manual processes for pre-ordering, ordering, provisioning, maintenance and repair and billing which the advanced services carriers must utilize.

Third, Rhythms urges KPMG to test the ability of BellSouth's OSS to process the ordering and provisioning of unbundled network elements for DSL services. The testing must verify the processes for ordering and provisioning of all types of DSL services at commercially meaningful volumes. Further, OSS testing must ensure the ability of BellSouth's OSS processes to accommodate increasing order volumes for unbundled xDSL-capable loops.

Finally, Rhythms urges KPMG to test the ability of BellSouth's OSS to process the ordering and provisioning of collocation facilities. Because collocating at BellSouth's premises is essential for all carriers, OSS testing should address the efficiency and timeliness of processing orders and provisioning all types of collocation, including caged, cageless, shared and adjacent collocation. Further, BellSouth's OSS must ensure for scalability to process orders for collocation.

In general, KPMG must construct a test that ensures the functionality, capacity, and scalability of BellSouth's OSS to pre-order, order, provision UNEs and collocation to data competitors, such as Rhythms, which allows for a competitive marketplace.

I. THE MASTER TEST PLAN MUST TEST THE PRE-ORDERING CAPABILITY OF BELLSOUTH'S OSS TO PROVIDE ACCESS TO THE INFORMATION NECESSARY FOR COMPETITORS TO QUALIFY THEIR SERVICES PRIOR TO ORDERING.

In order for Rhythms to provide its DSL services in competition with BellSouth's wholesale DSL services, BellSouth's OSS must furnish Rhythms with sufficient access to all necessary loop make-up data *prior to ordering*.[2] Many of the problems that Rhythms experiences with delayed or rejected loop orders could be eliminated if Rhythms were able to verify that a particular loop facility would transmit a particular DSL technology to a particular customer's premises. Therefore, KPMG should fashion OSS testing for pre-ordering that fully examines the processes, both manual and electronic, that are involved in ordering xDSL-capable loops.

Rhythms requires real-time, electronic access to basic loop make-up information. Data competitors must be able to obtain this information during the pre-ordering phase to determine which services to provision and how to provision such services to a particular end user when that end user first contacts the competitor. In particular, competitors must be able to obtain the necessary loop make-up information for all loops that are capable of providing service to a particular end-user. Only with the loop make-up information can Rhythms make an informed decision as to which loops to lease and what services to be provided on those loops to end-users. By failing to provide competitors with the real-time, electronic access to such loop make-up information, BellSouth inhibits competitors from making these determinations in an efficient manner.

---

[2] "The OSS element includes access to all loop qualification information contained in any of the incumbent LEC's databases or other records needed for the provision of advanced services." News Release, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, Summary (Sept. 15, 1999) ("*UNE Remand OrderSummary*").

Data competitors, such as Rhythms, simply must have real-time, electronic access to BellSouth's loop databases to obtain loop makeup information. Such real-time, electronic access to BellSouth's loop databases allows Rhythms rapid and efficient access to pre-ordering information about the technical make-up of a potential customer's loop, and to on-line ordering and maintenance systems. Rhythms will need specific information and data about BellSouth's outside plant during the pre-ordering process to make effective business decisions in order to provision the best possible service to its customers. BellSouth cannot be permitted to make unilateral determinations of the characteristics to consider for qualifying loop facilities for competitors' provisioning of services.

A. The test should include the pre-ordering processes for each of the DSL technologies available.

The type of xDSL technology provided by Rhythms to a particular customer depends on the characteristics of particular loops. *See* Exhibit I. Each technology has specific loop parameters under which it can optimally transmit a digital signal. For this reason, Rhythms offers multiple types of DSL services to residential and business consumers throughout the United States. As technologies evolve, DSL technical parameters will also change, thereby continually expanding the capabilities of xDSL technologies.

Loop make-up information is essential for Rhythms to determine the appropriate xDSL technology to provide to a particular customer. Based on the loop make-up information, Rhythms will use a different technology to provide service to an end user with a very long loop, or a loop served by DLC, than one with a short, clean loop. In addition, to allow Rhythms to make service guarantees to its customers regarding speed and reliability of digital transmission, Rhythms must know the loop makeup information. Rhythms must have this information to make its own business decision about the choice of appropriate DSL-based

service for the particular loop, as opposed to being forced to settle for BellSouth's determinations of which DSL service Rhythms should deploy.

B. The testing of pre-ordering should also examine the ability of competitors to receive the information necessary to provide the type of telecommunications service which they intend to provide.

Certain characteristics of a loop facility can hinder or completely prohibit Rhythms' ability to provide its DSL services to its customers. *See* Exhibit II. Since BellSouth has its engineers determine the suitability of loops for their intended advanced service prior to ordering, parity requires at least that Rhythms be able to access the information about the possible characteristics of a particular loop to establish its suitability for certain DSL services prior to ordering. KPMG should test BellSouth's OSS to ensure that the processes allow Rhythms, and other data competitors, to receive access to the type of information necessary to determine whether a loop is capable of providing advanced services.

Loop make-up information should identify the equipment and technical characteristics associated with the loop. That information should include the following: (i) the loop length with bridged taps, (ii) the loop length without bridged taps, (iii) the length and location of bridged taps, (iv) the loop wire gauge and gauge changes, (v) the presence and location of load coils, (vi) the presence and location of repeaters, (vii) the presence and type of fiber digital loop carrier ("DLC") systems and digital access main lines ("DAMLs"), and (viii) the alternative loops serving or capable of serving particular end-user locations.[3] Rhythms, therefore, should be able to determine the length and wire gauge of the loop, as well as the existence of some types of interfering devices, as they directly affect the flavor of DSL service

[3] The FCC also recognized these types of loop makeup information to be used for qualification of loops capable of provisioning DSL service, whether electronic or manual. *Application of Ameritech Corp. and SBC Communications Inc. for Consent to Transfer Control of Corporations Holding Commission Licenses*

Rhythms can provide over the loop. Moreover, certain other devices on a loop can completely prohibit the loops' capability for transmitting the DSL signal. By obtaining such information during pre-ordering, Rhythms can determine the type of DSL service able to be provisioned to a customer, while the customer is on the line.

The information on the length and wire gauge of the loop, as well as the existence and location of load coils, bridged taps, repeaters, and DLC, resides in BellSouth's systems and databases. To ensure that Rhythms' loop orders are not arbitrarily rejected on the alleged grounds that no facilities are available for xDSL-capable loops, it is critical for Rhythms to obtain efficient access to accurate of loop makeup information during preordering. Rhythms' access to such information as part of the pre-ordering process would result in benefits to customers, including fewer unnecessary service delays due to resubmitting orders and more accurate information on the variety of DSL offerings.

BellSouth maintains specific ordering processes for its loop-based services. For example, when a customer wants to utilize BellSouth's HDSL T-1 services, the customer submits a request to BellSouth. BellSouth performs an internal service inquiry on the suitability of the loop for the HDSL T-1 service. BellSouth's engineers then evaluate the characteristics of the loop facility necessary to transmit BellSouth's HDSL T-1 service, and qualify the loop for the customer. Once the provider submits an order for the "qualified" loop, the order is input and completes the remaining processes on flow-through.

Rhythms must also have the opportunity to qualify its loops for its services prior to ordering in parity with BellSouth's loop-based service. To the extent that this information is currently available only through manual processes, the Master Test Plan must test those

---

and Lines, CC Docket No. 98-141, Memorandum Opinion and Order, FCC 99-279, Appendix C, Conditions ¶ 20.c.

manual processes to ensure that the processes retrieve pre-ordering information for the competitors in a manner which will allow competitors access to the information necessary for the provisioning of their particular services. In Rhythms' case, the testing should determine the availability if information regarding the length and wire gauge of the loop, as well as the existence and location of load coils, bridged taps, repeaters, and DLC. Most importantly, the testing should validate the accuracy of any existing interfaces and the documentation provided in pre-ordering.

For these reasons, Rhythms urges KPMG to include testing processes for requesting loop makeup information specific for the competitors' services during pre-ordering. *See* Master Test Plan, Service Quality Measures, Appendix D. *See also* Master Test Plan, Appendix A, Stand-alone Preorder; Table VI-1, POP Processes. Specifically, Rhythms would add the following metrics to the Service Quality Measures, Appendix D:

- Percentage of Mechanized Loop Makeup Information Queries for which Loop Makeup Information is available
- Percentage of No Facilities Responses to Loop Requests
- Percentage of Loops included in the Mechanized Database

II. KPMG MUST REVIEW THE MANUAL PROCESSES OF BELLSOUTH'S OSS FOR PRE-ORDERING, ORDERING, PROVISIONING, REPAIR AND MAINTENANCE, AND BILLING TO THE EXTENT THAT EACH CURRENTLY HAS NO OR LIMITED ELECTRONIC PROCESSES.

Due to BellSouth's inability to process ALEC orders for unbundled loops capable of providing DSL transmissions, Rhythms must currently order UNEs through a manual fax-based ordering process. This manual process requires: (i) Rhythms must manually fill out an order form, which includes customer name, address, and loop makeup data; (ii) Rhythms must fax the order to BellSouth; (iii) BellSouth manually reviews the order; (iv) BellSouth must manually notify Rhythms that there is a problem with the order; essentially at that point the

order is rejected; and (v) Rhythms then must manually fix the order, send it back and start the whole treadmill process again. Once the order contains all of the correct information, BellSouth must manually enter all of the information into its own system to provision the loop. Thus, even if Rhythms has taken all of the proper steps, the requirement that BellSouth manually enter every DSL loop order can also lead to a high rate of reject orders due to the inherent inefficiency with manual data entry and by creating several points of failure.

Therefore the Master Test Plan must test BellSouth's ability to process the orders manually submitted by competitors in a timely manner. BellSouth must demonstrate in this testing its ability to process orders placed by data competitors for advances services at commercial volumes in the same intervals and with the same success rates as any other unbundled loop order and as BellSouth's tariffed offerings.

KPMG should attempt to test the manual processes in order to ensure they are efficient and scalable, otherwise manual ordering processes are a major competitive and business limitation that DSL carriers face in Florida today. DSL carriers, such as Rhythms, cannot effectively compete with BellSouth's loop-based service offerings, unless BellSouth's manual systems are scalable for processing high volumes of UNE orders. BellSouth, however, claims that it can *only* manually process orders for xDSL-capable loops.

When KPMG tests the manual processes for efficiency and scalability, the tests should reveal and fail any portion of the BellSouth manual ordering process which increases the possibility of delay or error. In order to determine efficiency and scalability, the test should include quantitative review of the manual processes. To the extent that any portion of the ordering process is or becomes mechanized, the testing must also include an examination of the effectiveness of the flow-through. Regardless, the OSS testing must ultimately observe

the impact of processing manual orders, in comparison with the electronic processing of orders.

Rhythms, therefore, suggests that KPMG adds quantitative measurements to the Service Quality Measures for specific manual processes for preordering as follows:

- Average Response Time for Manual Loop Makeup Information/ Engineering Record Requests
- Average Days Delayed for Manual Loop Makeup Information/ Engineering Record Requests
- Average Response Time for Provisioning of Missing Information

III. KPMG MUST EXAMINE THE ABILITY OF BELLSOUTH'S OSS TO ADEQUATELY PROCESS THE ORDERING AND PROVISIONING OF UNBUNDLED NETWORK ELEMENTS FOR DSL SERVICES.

In testing the processes for ordering UNEs, KPMG must be careful to recognize the inherent complexities in ordering UNEs for DSL services. Thus, Rhythms urges KPMG to include numerous testing scenarios for ordering all DSL types in significant volumes.[4] This approach will enable a comprehensive evaluation of the functionality of the OSS, as well as the capacity and scalability of the system. Second, Rhythms recommends that KPMG test the processes specific for provisioning loops capable of DSL transmission.

A. The testing of OSS must include adequate ordering and provisioning scenarios for loops, which Rhythms will order from BellSouth to transmit all types of DSL.

OSS testing should address the ordering and provisioning of unbundled loops to be used for DSL services. Specifically, the tests should determine the timeliness and accuracy of ordering and provisioning new lines to DSL providers, whether those lines must be migrated

---

[4] "The third-party test [of OSS] would test significant volumes of xDSL orders (*i.e.*, xDSL capable loops)." Letter to Nancy E. Lubamersky, Executive Director of Regulatory Planning, US West, from Lawrence E. Strickling, Chief, Common Carrier Bureau, Federal Communications Commission (Sept. 27, 1999). *See* Exhibit III.

from existing services or are newly-installed. Also, Rhythms should be able to provide its DSL services to a current BellSouth voice customer on a new loop or the same loop used for BellSouth's voice grade services. The time taken to order and provision loops from existing lines to the customer's premises should be the same when used for DSL services, as it is when the line is used for any other service. Likewise, BellSouth should not take any longer to process orders and provide loops needing to be installed for the use of DSL services, than necessary for the use of any other type of service.

KPMG should also be prepared to test instances where Rhythms DSL services would be provided on the same loop as the BellSouth voice grade services, or line-sharing. Line-sharing allows data competitors to provision their high-bandwidth services on the same loops as voice-grade service, which are low-bandwidth services. The Federal Communications Commission is currently considering line-sharing as a UNE.[5] Therefore, Rhythms suggests that submitting an order for service on the same loop as BellSouth's current voice-grade service be conditionally added to the testing scenarios for ordering. *See* Master Test Plan, Appendix A, UNEs.

The most accurate testing results will come from testing numerous scenarios of ordering and provisioning loops to be used for DSL services. The functionality of BellSouth's OSS can only be determined by processing many orders for loops capable of providing DSL services. Because Rhythms' DSL services differ from BellSouth's DSL offering, Rhythms plans to order various loop products from BellSouth, including the ADSL and the ISDN

---

[5] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 97-147.

See also In the Matter of a Commission Initiated Investigation into the Practices of Incumbent Local Exchange Companies Regarding Shared Line Access, Minnesota P.S.C.Docket No. P-999/CI-99-678, Order Requiring Technical Trials, Good Faith Resolution of Operational Issues and a Resulting Report (issued Oct. 8, 1999). The Minnesota Public Service Commission recognized that ILECs must provide line-sharing to competitors as an unbundled network element pursuant to the Telecommunications Act of 1996.

products. The testing scenarios must include orders for each loop product specifically used for xDSL services. The tests must also review the ability of the system to expand capacity and monitor capability.

B. The testing should assess the ability of the provisioning processes for the loop services needed by Rhythms and other carriers.

An efficient provisioning system must be flexible. For instance, Rhythms should be able to order loops according to any technical specifications, so long as those specifications are compliant with national, industry-wide standards. As part of that flexibility, Rhythms should be able to request the specific type of de-conditioning required for a particular loop.[6] In addition, an efficient provisioning system must provide reasonable, accurate intervals for delivery of loops. Finally, another critical element of efficient provisioning is a pre-testing process through which Rhythms may verify that the loop being delivered actually works.

1. The Master Test Plan must test de-conditioning of loops as a provisioning processes.

BellSouth de-conditions loops for competitor by removing all of the electronic devices BellSouth previously placed on the loop to provide a past service. Testing the utility of the loop de-conditioning requested is important for at least two reasons. First, Rhythms will be at a competitive disadvantage if not allowed to determine for itself how a loop should be provisioned. Rhythms would accept the loop as provisioned with no further guarantees from BellSouth, if given the loop make-up information provided by BellSouth Rhythms could rely on the ability of the loop to provide service. Second, Rhythms should be given the ability to specify the necessary de-conditioning for loops to ensure that it obtains the same level of service that BellSouth provides to itself, its affiliates or any third party.

---

[6] De-conditioning is the removal of those electronic devices, *supra* Section I.B. and Exhibit II, which inhibit Rhythms ability to provide DSL service over the loops provisioned by BellSouth.

BellSouth has the opportunity to survey the total outside plant inventory for its wholesale services to network service providers. Thus BellSouth could find spare or alternative loop facilities that may not need conditioning (*e.g.*, load coils removed, acknowledge the presence of bridged taps) or to locate an alternative copper loop instead of the initial loop that may include a segment of Digital Loop Carrier. For example, if a customer has two loops currently provisioned, one on fiber and one on copper, BellSouth can rearrange the loops to provide DSL over the copper loop. To the extent that Rhythms does not have this capability, Rhythms should receive its de-conditioned loops in the same timeframe as BellSouth provisions its loop-based services. KPMG, therefore, should test the ability of competitors to utilize the provisioned loops after de-conditioning.

2. KPMG must also evaluate BellSouth's testing of loops before turnover as a provisioning processes.

Moreover, pre-turnover loop testing is a critical piece of provisioning because it allows an ALEC to verify that a loop will perform as specified. Verifying continuity and line balance requires testing. Continuity testing assures that a line is operating properly all the way to the customer's premises. Line balance testing verifies that the electrical current running over both wires in the pair equally. The testing process takes place prior to BellSouth turning the loop over to Rhythms and prior to closing the order-provisioning process to billing, in order to minimize customer disruption and delay. These details are essential prior to commercial launch and must be performed in an efficient and mechanized manner.

Finally, whereas Rhythms requires distinct services from BellSouth, the operation of the OSS should reflect the ability to process the specific loop orders and provision those loops. To the extent that competitors' input is feasible, the Phase II Test Manager should use such input via interview or case studies to analyze the business processes and ordering and

provisioning processes for loops capable of transmitting DSL service. Testing the effectiveness of the comprehensive training program for ordering and provisioning loops specific for DSL service would eliminate errors involved in those processes. The availability and effectiveness of the procedures and training for filling loop requests are essential for BellSouth to provision appropriate loops for Rhythms to provide its DSL services to its customers.

For these reasons, Rhythms requests that KPMG add measurements to the provisioning portion of the Service Quality Measures, Appendix D, as follows:

- Percentage of Missed Installation Appointments for UNE Loops with DSL Capability
- Percentage of Loops Tested for Continuity Prior to Turnover
- Percentage of De-conditioned Loops Capable of Providing the Service for which Loop was De-conditioned

IV. THE MASTER TEST PLAN MUST TEST BELLSOUTH'S OSS FOR EFFICIENCY IN ORDERING AND PROVISIONING COLLOCATION FOR DSL SERVICES.

The testing results should reflect efficient procedure for ordering and provisioning collocation. The ability to collocate at the BellSouth premises is imperative for Rhythms to complete its DSL network in order to service its customers. As OSS includes ordering and provisioning of collocation, the OSS mechanism should be tested for accuracy and efficiency. Specifically, KPMG should test the processes on the basis of specific quantitative standards for missed collocation due dates, the number of days a collocation turnover is delayed, and the percentage of processed orders for competitors. The testing must also address the efficiency and timeliness of the processes for ordering and obtaining all types of collocation at the BellSouth premises, including caged, cageless, shared and adjacent collocation arrangements.

Conclusion

Through these comments, Rhythms hopes that the Commission and KPMG realize the importance of considering DSL issues to the fullest extent (taking into consideration all scenarios and upcoming orders) during testing. Rhythms requests that KPMG adds the specific measurements, as detailed above, to the Service Quality Measures, as well as a comprehensive testing of BellSouth's OSS to ensure reasonable and nondiscriminatory collocation and access to unbundled xDSL-capable loops.

Respectfully submitted this 29th day of October, 1999.

HOPPING GREEN SAMS & SMITH, P.A.

By: _____

Richard D. Melson
P.O. Box 6526
Tallahassee, FL 32314
850.222.7500
850.224.8551 FAX
<melsonr@hgss.com>

Kristin Smith
Jeremy Marcus
BLUMENFELD & COHEN
1625 Massachusetts Avenue
Suite 300
Washington, D.C. 20036
202.955.6300
202.955.6460 FAX
<kristin@technologylaw.com>
<jeremy@technologylaw.com>

EXHIBIT I

ADSL was originally developed to support the delivery of entertainment video, or "video dial tone," services over existing copper loops. Such video services require much higher bandwidth in the "downstream" direction (toward the customer premises) than they do in the "upstream" direction (toward the central office), because the video signals being transmitted to the customer's premises require a large amount of bandwidth, and the upstream signal was assumed to be a voice or non-video data signal requiring much less bandwidth. Thus, the need for bandwidth was deemed to be asymmetrical; that is, a high-bandwidth signal in the downstream direction and a lower bandwidth signal in the upstream direction. Even though most (if not all) ILECs have not deployed video dial tone services based on ADSL, this asymmetrical DSL technology has found a new use: Internet access. Internet access tends to display asymmetrical traffic patterns similar to video dial tone services. Most of the traffic flows toward the end user, as graphics-intensive web pages and data files are downloaded. The upstream traffic consists of a few keystrokes and occasional uploads of e-mail and data files. ADSL is designed to achieve a downstream transmission rate of 1.5 Mbps for loops of up to 18,000 feet in length, and a downstream transmission rate of 7 Mbps for loops of up to 6,000 feet in length, assuming 2-wire loops of 24-gauge copper. The downstream and upstream data signals are transmitted using separate frequencies, and both data streams use frequencies above the frequencies used to transmit voice signals.

RADSL is a type of ADSL. As is the case with other types of ADSL, the downstream and upstream data transmission rates of RADSL are asymmetrical (though it is also possible to configure RADSL for symmetrical data transmission rates). RADSL is more flexible than other types of ADSL because it is rate adaptive; that is, the DSL equipment automatically

adjusts the transmission speed to the optimal level achievable on each loop. RADSL can therefore transmit data at a wide range of transmission speeds, depending on the length and condition of the loop being used. RADSL is designed to achieve a downstream transmission rate of 1.5 Mbps for loops of up to 18,000 feet in length, and a downstream transmission rate of 7 Mbps for loops of up to 9,000 feet in length, assuming 2-wire loops of 24-gauge copper. The downstream and upstream data signals are transmitted using separate frequencies, and both data streams use frequencies above the frequencies used to transmit voice signals.

SDSL was developed to support symmetrical data transmission rates of up to 1.5 Mbps in each direction. There are several types of SDSL, using a variety of line coding approaches, and supporting variable data transmission rates. SDSL is designed to achieve symmetrical transmission rates of up to 1.5 Mbps for loops that exceed 20,000 feet in length (for one type of SDSL), assuming 2-wire loops of 24-gauge copper. The downstream and upstream data signals are transmitted using the same frequencies. The data signals use a frequency bandwidth that includes the frequencies used to transmit voice signals. As a result, SDSL-equipped loops cannot be used for simultaneous analog POTS service.

HDSL is also a symmetrical DSL configuration. HDSL supports a data transmission rate of 1.5 Mbps in each direction. Unlike other types of DSL, HDSL requires a 4-wire circuit (that is, two 2-wire loops). HDSL can achieve 1.5 Mbps on loops up to 12,000 feet in length, assuming loops of 24-gauge copper. The downstream and upstream data signals are transmitted using the same frequencies. The data signals use a frequency bandwidth that includes the frequencies used to transmit voice signals. As a result, HDSL-equipped loops cannot be used for simultaneous analog POTS service.

IDSL is a symmetrical DSL configuration. IDSL uses the same coding and parameters as ISDN, a digital data technology that has been in use by BellSouth and other ILECs for quite a while. As a result, IDSL can be deployed on copper or copper/fiber loop plant configurations. IDSL supports a data transmission rate of 128 Kbps in each direction, on 2-wire loops of up to 35,000 feet in length, assuming loops of 24-gauge copper. As is the case with SDSL and HDSL, IDSL transmits the downstream and upstream data signals using the same frequencies. The data signals use a frequency bandwidth that includes the frequencies used to transmit voice signals. As a result, IDSL-equipped loops cannot be used for simultaneous analog POTS service.

EXHIBIT II

First, Rhythms needs to know the existence, number and location of load coils. Under outside plant design rules in place since the 1980s, load coils are devices placed on a copper loop at regular intervals if the loop exceeds a certain length, typically 18,000 feet. Telecommunications signals attenuate, or lose strength, due to the resistance of the copper in the loop; the greater the loop length, the more the attenuation and the weaker the signal received at the customer's premises. Also, attenuation is greater at higher frequencies than at lower frequencies, reducing the quality of the voice signal. Load coils modify the electrical characteristics of a copper loop to overcome the attenuation distortion associated with long loops. None of the xDSL technologies discussed above can be deployed on loops equipped with load coils. The load coils are not compatible with the higher transmission frequencies employed by xDSL technologies.

Second, Rhythms must determine the existence, number, length and location of bridged taps. Bridged taps refer to the ILEC practice of configuring the loop plant in such a way that a single wire pair can be used to serve multiple end-user locations (although not simultaneously). This configuration allows an ILEC to deploy fewer copper facilities all the way to the end user premises, and historically was a method to address the uncertainty of the rate of demand growth in a particular area. Bridged taps create additional degradation for xDSL signals. Bridged taps are used to extend the telephone cable to additional homes so that vacant loops will be available to fulfill customer requests. Any portion of the loop that extends to a customer premises other than that of the requesting customer, and thus is not in the direct talking path to the central office, is called a bridged tap. Bridged taps reduce the amount of the signal that reaches the customer premises, and the effect varies, depending on the bridged-tap length and the frequency spectrum of the xDSL. xDSL technology can be

deployed on a loop equipped with bridged taps, so long as bridged taps are not excessive in length. The total cumulative length of bridged taps on a loop must generally be less than 2,500 feet. Short bridged taps of 200-300 feet located near customer premises can also create problems because of a "tuned resonance" effect.

Third, Rhythms must be able to verify the existence, number and location of repeaters. A repeater is used to boost the signal strength to avoid attenuation on long loops. BellSouth's legacy copper loop plant contains different kinds of repeaters for different types of existing services. Repeaters for analog POTS loops are located in the central office, but are only used on very long loops (in fact, such loops will likely be too long to use for any xDSL-based service other than IDSL). Analog POTS repeaters are used to boost the voice signal and the DC voltage of a POTS circuit. Other types of loops, such as loops used to provide T-1 service, may have repeaters located in the outside loop plant (such repeaters, of course, have little if any relevance to the provisioning of 2-wire xDSL-capable loops). Repeaters must be removed before loops can be used for ADSL, RADSL, SDSL, or HDSL.

Fourth, Rhythms needs to determine the existence and type of DLC appears on the loop facility. Digital Loop Carrier systems involve the multiplexing of telecommunications signals and the carriage of that multiplexed signal on a transmission medium. Although ILECs have historically deployed DLC systems on copper, essentially all DLC systems today are deployed on fiber systems. DLC systems serve two purposes. First, they allow the ILEC to use fewer facilities in the feeder portion of the loop plant. Second, with respect to fiber-based DLC systems, they allow longer loops to be provisioned without the use of load coils. At the present time, particularly with respect to fiber-based DLC systems, xDSL technology (except IDSL) is not compatible with DLC system.

EXHIBIT [redacted]

Federal Communications Commission
Washington, D.C. 20554

September 27, 1999

Nancy E. Lubamersky
Executive Director
Regulatory Planning
U S WEST
11 Upper Ardmore Road
Larkspur, CA 94939

Dear Ms. Lubamersky:

During the course of the last several weeks, members of the Common Carrier Bureau's Policy and Program Planning Division ("Division") have met with representatives from U S WEST to discuss third-party testing of operations support systems ("OSS") and the competitive local exchange carriers ("CLECs") access to those systems. The Commission has previously indicated that for a Bell Operating Company ("BOC") to obtain approval under section 271 of the Telecommunications Act of 1996 to provide in-region, interLATA services, it must demonstrate that it provides to CLECs nondiscriminatory access to its OSS and that its systems are operationally ready and capable of handling reasonably foreseeable demand. A number of companies, including yours, have undertaken or are developing independent third party tests of their OSS.

The purpose of the discussions between Division staff and interested parties has been to provide guidance on important elements that a third-party test should include to assist our determination that a BOC is providing nondiscriminatory access to its OSS. These views represent the current thinking of the Common Carrier Bureau and are in no way binding on the Commission. Any final determination concerning whether a BOC is providing nondiscriminatory access to its OSS will be made based upon the record in a section 271 application. It is my hope, however, that the Bureau's views on these issues will be helpful to you and other Bell Operating Companies in formulating successful section 271 applications.

1. **Performance Measure Evaluation**

A thorough and well-documented independent assessment of the data collection and calculation processes for performance data will considerably facilitate the Commission's review of a section 271 application. An independent review of the performance measurements is crucial in determining the accuracy and validity of performance data. In particular, the staff believes that such an independent review would include the following qualitative and quantitative aspects.

- An evaluation would include an assessment of whether the raw data being collected by the BOC is accurate, which could be tested by observing the raw data collection processes and by comparing the BOC's raw data to independently-collected data.

- The evaluation would assess the processes by which the raw data is filtered and transformed into final, reported results.

- The evaluator would assess whether the BOC's data collection and data processing functions are consistent with the published performance measurement business rules.

- The evaluator would assess the adequacy and functioning of the BOC's internal controls over the data collection processes and the software programs that process the data (such as the controls over personnel access to the databases, and the controls that ensure that the programs and program modifications are properly authorized, documented, tested and approved).

- The evaluation would include an independent quantitative verification of the reported performance data. To accomplish this, the evaluator could be provided with the BOC's raw data and independently process the data, pursuant to the business rules, to ensure that the stated calculations and algorithms have been accurately applied.

We note that a comprehensive evaluation of the BOC's performance measure processes may include elements in addition to those listed above, as determined by the states or by an independent evaluator. Accordingly, we encourage BOCs to make the details of the proposed evaluation available to the Commission, and to the public, as they are developed.

2. Change Management Test

We also believe it critical that there be an independent review of a BOC's change management process and procedures as well as its implementation of these procedures.[1] The change management test should provide information which can be used to evaluate the methods and procedures that the BOC employs to communicate with CLECs regarding OSS system performance and system updates. The independent evaluator should assess the BOC's change management processes and should include, but not be limited to, a review of the BOC's ability to implement at least one significant software release. The following

[1] For purposes of this discussion, we use the phrase "change management process" as referring to the management of changes to OSS interfaces that affect CLECs' production or test environments. Such changes may include: 1) operations changes to existing functionality that impact the CLEC interface(s) upon a BOC's release date for new interface software; 2) technology changes that require CLECs to meet new technical requirements upon a BOC's software release date; 3) additional functionality changes that may be used at the CLEC's option, on or after a BOC's release date for new interface software; and 4) changes that may be mandated by regulatory bodies.

elements would be indicative, but not dispositive, of a satisfactory change management process and should be evaluated by the independent third-party:

- CLEC Participation: CLECs would have a role in the development of, and modifications to, the change management process.

- Release Implementation: Prior to issuing a new software release or upgrade, the BOC would provide a testing environment that mirrors the production environment in order for CLECs to test the documentation for the new release. The testing environment would be stable (*i.e.*, no changes by the BOC), and would be maintained for an adequate time-period, at least 30 days, for the CLECs to test. To ensure CLECs are not forced to cut over to a new release prematurely, a BOC could adopt a "Go/No Go" vote process to decide whether to implement a new release. Pursuant to this process the new release is delayed if a majority, such as two-thirds, of eligible CLECs vote to delay the release. Similarly, a BOC could maintain a pre-existing version, or versions, of the interface (*e.g.*, Electronic Data Interchange) when issuing a new release rather than switching directly from one version to the next.

- Memorialization of Process: The change management process would be clearly memorialized and set forth in one document that can be readily accessed by the CLECs. Any modifications to the change management process would be included with this document.

- Dispute Resolution: There would be a dispute resolution process for change management that is separate and apart from any process that is set forth in interconnection agreements. This would provide CLECs a forum specifically designated to resolve any change management disputes.

3. xDSL Testing

The third-party test would test significant volumes of xDSL orders (*i.e.*, xDSL capable loops).

4. Normal, High, and Stress Volume Testing

- Normal and High Volume Testing: The third-party test would test projected normal and high volumes of pre-order and order transactions that flow-through the BOC's systems.[2] The mix of transactions would replicate expected CLEC

[2] An incumbent LEC's internal ordering system permits its retail service representatives to submit retail customer orders electronically, directly into the ordering system. This is known as "flow-through." Similarly, a competing carrier's orders "flow through" if they are transmitted electronically (i.e., with no manual intervention) through the gateway into the incumbent LEC's ordering systems. Order flow-through applies solely to the OSS ordering function, not the OSS provisioning system. In other words, order flow-through measures only how the competing carrier's order is transmitted to the incumbent's back office ordering system, not how the incumbent ultimately completes that order. Electronically processed service

ordering patterns by including, for instance, error conditions and change orders, and by covering the process end-to-end (*i.e.*, through the receipt of order confirmation notice or electronic error notice). "Normal" volumes would be based on the BOC's reasonable estimate, with input from CLECs, of daily order volumes. "High" volumes would be significantly greater than normal volumes and based on the BOC's reasonable estimate, with input from CLECs, of forecasted demand.

- Capacity or Stress Testing: The third-party stress test would assess scalability of the BOC's OSS systems by testing a mix of transactions similar to those in the normal and high volume testing. These volumes would be significantly greater than the high volume test and be sufficient to identify potential weak points in the systems.

5. **Pseudo-CLEC**

If no CLEC has constructed an interface with whatever OSS system the BOC is relying on to meet the nondiscriminatory obligations set forth in the 1996 Act, the third-party tester should build a pseudo-CLEC. The pseudo-CLEC should build an interface not only to test the quality of the BOC's documentation for such OSS systems but also to ensure that these systems are capable of submitting and receiving valid transactions. The pseudo-CLEC should build the interface(s) using the BOC's documentation and business rules to determine whether any CLEC can build an interface based upon these materials. Third-party testing can be conducted using orders from a combination of existing CLECs and a pseudo-CLEC.

6. **Dissemination of Information**

A third-party test of OSS should include a formal, predictable and public mechanism for the third-party tester to communicate to both the BOC and the CLEC community issues identified by the third-party tester that arise during the course of testing. Staff proposes the following options for reporting problems:

- Report issues as they arise; or
- Issue reports pursuant to a specified time-frame (*i.e.*, weekly or bi-weekly); or
- Issue an interim report in the middle of the test and a final report at the end.

Combinations of these options could provide optimal balance between frequency and detail.

7. **Functionality**

- CLECs would be consulted in developing the test scenarios to reflect their market entry and growth and expansion scenarios in a particular region.

---

orders are more likely to be completed and less prone to human error than orders that require some degree of human intervention.

- Functionality testing would be conducted for pre-ordering, ordering, provisioning, maintenance and repair, and billing transactions. The transaction mix should replicate CLEC ordering patterns and include, for instance, orders that fall out for manual processing, orders that contain errors, and order changes and supplements. Functionality testing also would test these transactions end-to-end (*i.e.*, orders should be actually provisioned), as applicable.

This letter is intended to provide a summary of staff views regarding key elements of a third-party test which could assist our determination that a BOC's OSS is operationally ready and capable of efficiently supporting ever-increasing volumes of transactions. It is not, however, intended to be an exhaustive list of the necessary elements for a successful third-party test. Moreover, it is possible that additional issues will be raised by interested parties in future section 271 dockets. I emphasize that any final determinations regarding whether a BOC is providing nondiscriminatory access to its OSS will be made by the Commission based on the record of the BOC's 271 application for a particular state. To this end, Bureau staff is committed to working with all parties to ensure that the section 271 application process is as orderly and predictable as possible.

For information purposes, a copy of this letter will be placed in CC Docket No. 98-121[3] and CC Docket No. 98-56.[4]

Sincerely,

Lawrence E. Strickling, Chief
Common Carrier Bureau

[3] Application of BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Louisiana, CC Docket No. 98-121, Memorandum Opinion and Order, 13 FCC Rcd 20599 (1998).

[4] Performance Measurements and Reporting Requirements for Operations Support Systems, Interconnection, and Operator Services and Directory Assistance, CC Docket No. 98-56, Notice of Proposed Rulemaking, 13 FCC Rcd 12817 (1998).

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing was furnished to the following parties by U.S. Mail or Hand Delivery (*) this 29th day of October, 1999.

Beth Keating
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Lisa Harvey
Division of Auditing and
Financial Analysis
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Peter M. Dunbar, Esq.
Barbara D. Auger, Esq.
Pennington, Moore, Wilkinson &
Dunbar, P.A.
P.O. Box 10095
Tallahassee, FL 32302

Carolyn Marek
Vice President of Regulatory
Affairs
Southeast Region
Time Warner Communications
233 Bramerton Court
Franklin, Tennessee 37069

Norman H. Horton, Jr.
Floyd Self
Messer, Caparello & Self, P.A.
214 S. Monroe Street
Suite 701
Tallahassee, FL 32301

James C. Falvey, Esq.
E.spire™ Communications, Inc.
133 National Business Parkway
Suite 200
Annapolis Junction, MD 20701

David Dimlich, Legal Counsel
Supra Telecommunications &
Information Systems, Inc.
2620 SW 27th Avenue
Miami, FL 33133

Kimberly Caswell
GTE Florida Incorporated
P.O. Box 110 FLTC0007
Tampa, FL 33601

Charlie Pellegrini/Patrick Wiggins
Wiggins & Villacorta, P.A.
2145 Delta Boulevard Suite 200
Tallahassee, FL 32303

Michael A. Gross
Vice President, Regulatory
Affairs & Regulatory Counsel
FCTA
310 North Monroe Street
Tallahassee, FL 32301

Laura L. Gallagher
Laura L. Gallagher, P.A.
101 E. College Ave.
Suite 302
Tallahassee, FL 32301

James P. Campbell
MediaOne
7800 Belfort Parkway
Suite 250
Jacksonville, FL 32356

Susan S. Masterton
Charles J. Rehwinkel
Sprint Communications Company
Limited Partnership
P.O. Box 2214
MC: FLTLH00107
Tallahassee, Fl 32316-2214

Christopher V. Goodpastor, Esq.
Covad Communications Company
9600 Great Hills Trail
Suite 150W
Austin, TX 78759

Nancy White
c/o Nancy Sims
BellSouth Telecommunications
150 S. Monroe Street, Suite 400
Tallahassee, FL 32301

Vicki Kaufman
McWhirter, Reeves, McGlothlin
Davidson, Rief & Bakas, P.A.
117 S. Gadsden Street
Tallahassee, FL 32301

Andrew O. Isar
Telecommunications Resellers
Association
P.O. Box 2461
Gig Harbor, WA 98335-4461

Marsha E. Rule
Tracy Hatch
AT&T
101 N. Monroe St., Ste. 700
Tallahassee, FL 32301

C. Everett Boyd, Jr.
Ervin, Varn, Jacobs, Odom
& Ervin
P.O. Drawer 1170
Tallahassee, FL 32302

Richard M. Rindler
Swidler & Berlin, Chartered
3000 K Street, N.W., STe. 300
Washington, DC 20007

Sue E. Weiske
Time Warner Communications
3rd Floor North
160 Inverness Drive West
Englewood, CO 80112

Kenneth A. Hoffman
William B. Willingham
Rutledge, Ecenia, Underwood
Purnell & Hoffman
P.O. Box 551
Tallahassee, FL 32302

Paul Kouroupas
TCG - Washington
2 Lafayette Centre, Ste. 400
1133 Twenty First Street, NW
Washington, DC 20036

Susan Huther
MGC Communications, Inc.
3301 North Buffalo Drive
Las Vegas, NV 89129

Jeffrey Wahlen
Ausley Law Firm
P.O. Box 391
Tallahassee, FL 32302

Elise Kiely
Jeffrey Blumenfeld
Blumenfeld & Cohen
1625 Massachusetts Ave. N.W.
Suite 300
Washington, DC 20036

Terry Monroe
CompTel
1900 M Street N.W., Ste. 800
Washington, DC 20036

Scott Sapperstein
Intermedia Communications, Inc.
3625 Queen Palm Drive
Tampa, FL 33619-1309

Donna McNulty
MCI WorldCom, Inc.
325 John Knox Road
The Atrium, Suite 105
Tallahassee, FL 32303

Attorney