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July 9, 2002

VIA HAND DELIVERY

Hon. Sara Kyle, Chairman
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37238

Re: *Petition of Cinergy Communications Company for Arbitration of an Interconnection Agreement with BellSouth Telecommunications, Inc. pursuant to the Telecommunications Act of 1996*
Docket No. 01-00987

Dear Chairman Kyle:

Enclosed are the original and fourteen copies of the following Rebuttal Testimony on behalf of BellSouth:

Cynthia Cox
Thomas G. Williams
W. Keith Milner

Copies of the enclosed are being provided to counsel of record.

Very truly yours,

Guy M. Hicks

GMH:ch

453929

BELLSOUTH TELECOMMUNICATIONS, INC.

REBUTTAL TESTIMONY OF W. KEITH MILNER

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 01-00987

JULY 9, 2002

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

A. My name is W. Keith Milner. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375. I am Assistant Vice President - Interconnection Operations for BellSouth. I have served in my present role since February 1996.

Q. ARE YOU THE SAME W. KEITH MILNER WHO EARLIER FILED DIRECT TESTIMONY IN THIS DOCKET?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I respond to portions of the direct testimony of Cinergy's witnesses, Messrs. Cinelli, Rouleau, and Heck, regarding packet switching.

Q. ON PAGE 7 OF HIS TESTIMONY, MR. CINELLI STATES THAT THIS

AUTHORITY SHOULD ORDER BELLSOUTH TO DELIVER A PACKET SWITCHING UNE "BECAUSE IT IS TECHNICALLY FEASIBLE AND WOULD NOT REQUIRE ANY CHANGES OR DELAYS." MR. HECK, ON PAGE 13 OF HIS TESTIMONY, STATES THAT BECAUSE BELLSOUTH CURRENTLY PROVIDES ADSL, THERE ARE NO TECHNICAL LIMITATIONS THAT WOULD PREVENT THE IMMEDIATE IMPLEMENTATION OF UNBUNDLED PACKET AS SOON AS THE AUTHORITY ORDERS IT. ARE THESE ACCURATE STATEMENTS?

A. No. As I discussed in my direct testimony, the FCC's rules do not require BellSouth to provide its packet switching network on an unbundled basis except in one limited situation. Such a situation does not at present exist in Tennessee. Further, the statements of Messrs. Cinelli and Heck are somewhat inaccurate and misleading. They grossly oversimplify what would be involved in the effort to unbundle BellSouth's packet switched network. Let me explain.

BellSouth's packet switched network was designed and established based on the assumption that only BellSouth would use it. For BellSouth to take an existing solution with the hundreds of related sub-systems, designed for BellSouth's own use, and convert this into a system capable of providing that same solution to outside parties, would be an extensive undertaking in both time and money. BellSouth developed its wholesale ADSL service solely for use by BellSouth voice customers. Consequently, when BellSouth developed the

provisioning flows, methods, procedures and the like, the assumption was made that all customers of ADSL solutions would be BellSouth voice customers. If BellSouth were required to provide this solution to CLECs' end users, the provisioning systems (and also the ordering, billing, repair, and maintenance, etc. systems) would have to be revamped. Accordingly, very extensive, expensive, and time consuming "re-writes" would be needed to all the systems and sub-systems.

The more important issue however, is that BellSouth does not have any inherent advantage in building and operating a packet switching network over its competitors. Thus, in my opinion, the FCC rightly concluded that, except for the very limited circumstance mentioned earlier, BellSouth has no obligation to unbundle its packet switching network for Cinergy and other CLECs.

Q. MR. ROULEAU, ON PAGE 12 OF HIS TESTIMONY, LISTS THE SYSTEM CAPABILITIES CINERGY REQUESTS TO PROVIDE END-TO-END PACKET SWITCHING SERVICE TO ITS CUSTOMER. BEFORE WE GET INTO CINERGY'S ACCESS TO THESE CAPABILITIES, PLEASE COMMENT ON CINERGY'S REQUEST.

A. Mr. Rouleau suggests that the ideal unbundled packet switching element would function like BellSouth's ADSL product, which BellSouth markets to Internet Service Providers ("ISPs"), and would

combine the Network Interface Device ("NID"), the high-frequency portion of the loop, the splitter, the Digital Subscriber Line Access Multiplexer ("DSLAM") port, and LATA-wide ATM transport to provide end-to-end packet service to its customer.

Q. DOES CINERGY CURRENTLY HAVE ACCESS TO EACH OF THE CAPABILITIES MR. ROULEAU DESCRIBES SUCH THAT IT CAN PROVIDE DSL SERVICE TO ITS CUSTOMERS?

A. Yes. As I discussed in my direct testimony in this proceeding, all of the elements that Cinergy needs to provide its DSL service are already available to Cinergy either as UNEs or as elements that Cinergy can and should provide for itself. Cinergy is in no way foreclosed from providing its DSL service because BellSouth does not provide unbundled DSLAMs and unbundled packet switching.

Q. ON PAGES 26-28 OF MR. HECK'S TESTIMONY, HE SUGGESTS THAT THERE ARE NO VIABLE OPTIONS, INCLUDING SELF-PROVISIONING DSLAMs, THAT EXIST TO PROVIDE HIGH-SPEED DATA SERVICES AND OTHER ADVANCED VOICE SERVICES. DOES BELLSOUTH OFFER UNEs THAT WOULD ENABLE CLECS TO PROVIDE HIGH-SPEED DATA SERVICE TO CONSUMERS WHO ARE SERVED BY DIGITAL LOOP CARRIER ("DLC") LOOPS WHERE THE CLEC IS THE VOICE PROVIDER?

A. Yes. In my direct testimony, I discussed the unbundled elements Cinergy may acquire from BellSouth in order to create and market DSL services. Collocation of DSLAMs in BellSouth's central offices allows a CLEC such as Cinergy to provide its data services to those customers served entirely by copper loops (that is, customers who are not served by DLC). For those customers who are served by DLC, there are at least two ways CLECs can provide high-speed data service to those customers where the CLEC is the voice provider. One option would be for the CLEC to perform an electronic Loop Make-Up and locate an available copper loop from the demarcation point (end user's NID) all the way to the CLEC's collocation space in the central office. Then, the CLEC would "reserve" the copper loop and issue an order for that copper loop and the customer's service would be moved from the DLC to the copper loop.

Another option for CLECs would be to do what BellSouth does for itself. The CLEC could collocate its DSLAM at the BellSouth Remote Terminal ("RT") site. To transport the data from the end user to the RT site, the CLEC could either purchase the existing copper sub-loop from the demarcation point between the network and the end user and the RT or purchase an additional copper sub-loop, both of which BellSouth offers as UNEs. To transport the data from the RT site to the CLEC's collocation arrangement at the central office, the CLEC could purchase unbundled sub-loop feeder. Various forms of unbundled sub-loop feeder are available such as DS-1, DS-3, and OC-

3. Therefore, once the CLEC collocates its DSLAM at the RT site, all of the capabilities needed to provide voice and data service to serve an end user that is served by BellSouth DLC facilities are available to the CLEC.

Q. IS CINERGY IMPAIRED IN ITS ABILITY TO PROVIDE DSL SERVICE TO END USERS SERVED BY DLC?

A. No. Cinergy has the same options available to it as BellSouth has for itself, as I previously explained. All of the necessary components are available through collocation and UNE offerings that allow Cinergy to serve end users, regardless of the facilities serving the end user.

Q. ARE CLECs IMPAIRED IN THEIR ABILITY TO COLLOCATE THEIR EQUIPMENT WITHIN BELLSOUTH'S RTs?

A. No. If sufficient space exists within a DLC RT, BellSouth will allow a CLEC to collocate its DSLAM in the RT, regardless of whether BellSouth has installed its own DSLAM at that RT. If sufficient space does not exist within the DLC and BellSouth has installed its own DSLAM at the DLC RT location, then BellSouth will make good-faith efforts to augment the space at that DLC RT, such that the CLEC can install its own DLSAM at that DLC RT. In the very unlikely event that BellSouth could not accommodate collocation at the particular RT where BellSouth has a DSLAM, BellSouth will unbundle the BellSouth

packet switched network at that RT in accordance with the FCC's requirements. If sufficient space does not exist within the DLC RT and BellSouth has not installed its own DSLAM at that DLC RT location, then BellSouth will file a collocation waiver request with this Authority for that DLC RT site.

Q. MR. ROULEAU, ON PAGE 11 OF HIS TESTIMONY, OPINES THAT RT COLLOCATION TO INSTALL DSL EQUIPMENT IS LOGISTICALLY AND FINANCIALLY IMPRACTICAL FOR CINERGY. PLEASE COMMENT.

A. Cinergy and BellSouth face the same business risks relative to deployment of infrastructure necessary to facilitate providing DSL services to customers. The technology became available to both parties at the same time, and at that time, BellSouth had no incumbent advantage – the playing field was, and remains, level. However, BellSouth made a conscious business decision, and took on the corresponding risk, to offer DSL service to its customers, and BellSouth began deploying the necessary equipment. Cinergy, for whatever its reasons, did not. Now, Cinergy comes to this Authority indicating its desire to enter the DSL arena and requesting that the rules be changed to afford Cinergy all of the benefits, with little or none of the investment and related risks. When BellSouth provides its own ADSL service where DLC is deployed, BellSouth must locate DSLAM equipment at the DLC RT location to access the copper sub-loop to the end user. A CLEC desiring to provide its DSL service

where DLC is deployed must likewise collocate its DSLAM equipment at the DLC RT location. This will allow the CLEC to provide the high speed data service in the same manner as does BellSouth. Cinergy thus faces the same risks as does BellSouth. Essentially, Cinergy is asking this Authority to order BellSouth to provide Cinergy with all of the potential benefits of using a DSLAM at an RT without Cinergy's making any of the related capital expenditures or accepting the related risks that BellSouth faces.

Q. DO YOU AGREE WITH CINERGY'S CONTENTION THAT IF THE AUTHORITY DOES NOT REQUIRE UNBUNDLING OF BELLSOUTH'S DSLAM AND PACKET SWITCHING, THERE ARE NO OTHER ALTERNATIVES AVAILABLE TO CINERGY TO PROVIDE DSL SERVICE TO CUSTOMERS?

A. No. In addition to the RT collocation solution I previously mentioned, another alternative for Cinergy would be to enter into a Line Splitting agreement with another CLEC. Alternatively, Cinergy could pursue the use of an available copper loop such that service is provided from Cinergy's DSLAM collocated in BellSouth's central office.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

AFFIDAVIT

STATE OF: Georgia
COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared W. Keith Milner –Assistant Vice President – Interconnection, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 01-00987 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 8 pages and 0 exhibit(s).

W. Keith Milner

Sworn to and subscribed
before me on Dec 2, 2002

NOTARY PUBLIC

MICHEALE F. BIXLER
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2005

CERTIFICATE OF SERVICE

I hereby certify that on July 9, 2002, a copy of the foregoing document was served on the parties of record, via the method indicated:

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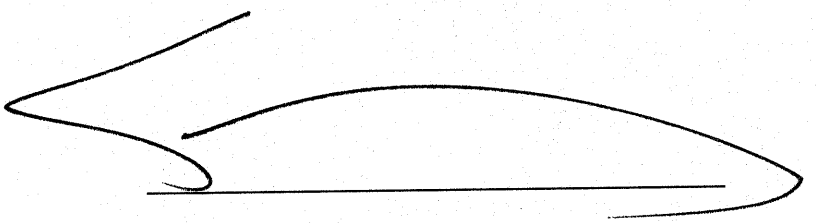

BELLSOUTH TELECOMMUNICATIONS, INC.

REBUTTAL TESTIMONY OF THOMAS G. WILLIAMS

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 01-00987

JULY 9, 2002

Q. PLEASE STATE YOUR NAME.

A. My name is Thomas G. Williams

Q. ARE YOU THE SAME THOMAS G. WILLIAMS THAT PROVIDED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I am responding to and rebutting certain claims by Cinergy witnesses Rouleau and Heck.

Q. MR. HECK, ON PAGE 8 OF HIS TESTIMONY, DISCUSSES HOW BELLSOUTH WILL ONLY PROVISION ADSL OVER BELLSOUTH VOICE LINES. WOULD YOU EXPLAIN WHY BELLSOUTH REQUIRES ITS VOICE SERVICE ON A LINE FOR IT TO PROVIDE DSL SERVICE OVER THE LINE?

A. Yes. BellSouth's ADSL offering was designed and established based on the assumption that it would be provisioned on a BellSouth voice line. BellSouth may use the High Frequency Portion of the Loop ("HFPL") when it provides the voice service. Cinergy argues that it should not be denied the data capability of a loop when Cinergy provides local service using UNE-P. If Cinergy purchases a UNE-P, it has access to the entire loop, including the high frequency portion of the loop, and may provide data services to the customer.

When BellSouth is not providing the voice service (i.e. when Cinergy is providing the voice service over UNE-P), BellSouth has no right to access the HFPL or to allow anyone other than the owner of the loop such access. Currently BellSouth does not have any means to determine if any one of the 273 CLECs in the BellSouth region, or more specifically, the over 80 CLECs operating in Tennessee, has granted authorization for BellSouth, or another CLEC, to access the HFPL for any given loop. Given the extremely large quantity of potentially effected loops, it would be an extensive undertaking for BellSouth to develop such a system.

Q. IF CINERGY WINS A VOICE CUSTOMER FROM BELLSOUTH USING A UNE-P, CAN THAT END-USER RECEIVE xDSL VIA A LINE SPLITTING ARRANGEMENT?

A. Yes. Line Splitting is when a CLEC provides voice service over a UNE loop and UNE port, and allows a data LEC to provide data service over the HFPL. A UNE-P is a combined loop and port. The loop and port are combined in BellSouth's network. The UNE-P does not require any additional elements nor does UNE-P require collocation. When a CLEC wins a voice customer from BellSouth and migrates the voice service to UNE-P, no wiring changes are required. BellSouth voice service, resold BellSouth voice service and CLEC service via UNE-P are identical.

However, when a CLEC using a UNE-P enters into a line splitting arrangement with another carrier, the architecture is no longer the same. The loop that had been serving the customer is no longer combined with the port. Instead, central office work is performed to cross-connect the loop to a splitter that the CLEC owns or that is provided by BellSouth. The splitter separates the frequency used to provide the voice service from the frequency used to provide the data services. From there, another cross-connection is used to carry the voice signal to the port on the switch, while the data signal is carried on the CLEC's data network. Thus, the loop and port are no longer combined but, rather, separated by two collocation cross-connections and a splitter.

Q. MR. ROULEAU, ON PAGE 12 OF HIS TESTIMONY, STATES HIS BELIEF THAT RT COLLOCATION IS IMPRACTICAL, AND STATES THAT BELLSOUTH ITSELF AVERAGES ONLY 27 xDSL CUSTOMERS PER xDSL-EQUIPPED RT. PLEASE COMMENT ON THIS.

A. Certainly. BellSouth works with many data CLECs in its weekly Line Sharing Collaboratives and Line Splitting Collaborative. As a result of input from these data CLECs, BellSouth offers various splitter options. I believe Cinergy would be able to purchase DSLAMs in increments small enough to accommodate its anticipated subscriber level. Additionally, some DSL providers, including BellSouth, place a DSLAM chassis with only a few line cards installed until end-users are accumulated. Additional line cards may be added when needed, thus delaying capital expenditures until required.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

AFFIDAVIT

STATE OF: Alabama
COUNTY OF: Jefferson

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Thomas G. Williams –Product Manager- Line Sharing, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 01-00987 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 4 pages and 0 exhibit(s).

Thomas G. Williams

Sworn to and subscribed
before me on July 2, 2002

NOTARY PUBLIC

MICHEALE F. BIXLER
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2005

CERTIFICATE OF SERVICE

I hereby certify that on July 9, 2002, a copy of the foregoing document was served on the parties of record, via the method indicated:

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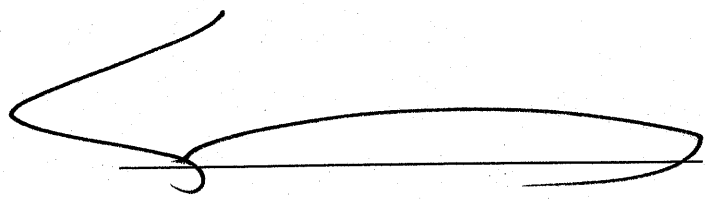

BELLSOUTH TELECOMMUNICATIONS, INC.

REBUTTAL TESTIMONY OF CYNTHIA K. COX

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 01-00987

JULY 9, 2002

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

A. My name is Cynthia K. Cox. I am employed by BellSouth as Senior Director for State Regulatory for the nine-state BellSouth region. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q. ARE YOU THE SAME CYNTHIA COX WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the testimony filed by Cinergy's witnesses in this proceeding: Mr. Pat Heck, Mr. Al Cinelli, and Mr. Mark Rouleau.

Q. MR. HECK STATES (AT p. 12) THAT "THE TENNESSEE REGULATORY AUTHORITY SHOULD GRANT CCC ACCESS TO ALL HIGH-SPEED PACKET SWITCHING TRANSPORT SERVICES DEPLOYED BY BELLSOUTH PRIMARILY BECAUSE BELLSOUTH IS OUR PRINCIPAL COMPETITOR." PLEASE RESPOND.

A. Mr. Heck's rationale is inconsistent with both the Telecommunications Act of 1996 ("Act") and sound public policy. First, the Act established requirements for incumbent local exchange companies ("ILECs") to provide unbundled network elements ("UNEs") that competitive local exchange carriers ("CLECs") would need but would not otherwise have available to provide local telecommunications services. In implementing the Act, the FCC identified the specific UNEs that would enable competitors to enter the market quickly and effectively, given the perceived "head start" by ILECs. This was viewed as necessary to foster competition for the provision of basic telecommunications voice service. The FCC concluded that the Act did not require unbundling of advanced services or new technologies, as all competitors were on equal footing with respect to deploying these types of technologies.

Apparently, Cinergy wants assurance of success before it undertakes investment. Mr. Rouleau states, "We can afford

investments of this type only after we have a sizable existing customer base being served by a particular CO." (pp. 10-11.) However, the Act does not guarantee CLECs' success. Rather, it guarantees a meaningful opportunity to compete, which includes the availability of UNEs from the ILECs. To say that the Authority must go beyond the requirements for UNEs as defined by the FCC in its UNE Remand Order[1] simply because BellSouth is Cinergy's principal competitor is completely counter to our public policy which fosters competition, not guarantees success to a competitor. Such rationale suggests that a successful competitor should be forced to share the rewards of its risks and investments with its competitors. This is counter to the incentives a competitive market is designed to provide, and such a result will only serve to stifle innovation, not bring innovation to customers.

Q. IN AN ATTEMPT TO FURTHER JUSTIFY THE REQUEST FOR UNBUNDLED PACKET SWITCHING, MR. ROULEAU STATES ON PAGE 13 OF HIS TESTIMONY THAT UNBUNDLED PACKET SWITCHING WILL BE AN ESSENTIAL COMPANION TO CINERGY'S UNE-P RESALE SERVICES IN AREAS WHERE A CINERGY COLLOCATION AND SUPPORTING PROTECTED

[1] *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking,* CC Docket No. 96-98, Released November 5, 1999 (*UNE Remand Order).*

NETWORK ARE NOT YET IN PLACE. IS THIS AN APPROPRIATE REQUEST?

A. Absolutely not. This statement by Mr. Rouleau gets to the heart of Cinergy's request of the Authority to order BellSouth to unbundle its packet switched network. In response to the question "Under what circumstances would use of unbundled packet switching (UBPS) be appropriate?" Cinergy says that, "UBPS will be an essential companion to CCC's UNE-P resale services in areas where a CCC collocation and supporting protected network are not yet in place." (emphasis added).

Basically, what Cinergy stated is that BellSouth should be ordered to unbundle its packet switched network, in direct contradiction of FCC rulings, simply because Cinergy has not yet deployed the appropriate facilities. Cinergy's argument is that BellSouth should be required to unbundle packet switching, not because Cinergy is impaired or unable to obtain the appropriate equipment, but merely because it desires to obtain customers located in areas where it hasn't deployed the investment. This statement reveals Cinergy's desire not to assume any risk or make any investment. Cinergy's position is not only contrary to the FCC's goal of encouraging facilities-based investment, but, in fact, totally circumvents the basic principles of the FCC. In its simplest form, Cinergy is demanding that BellSouth unbundle its switched

packet network solely because it is easier for Cinergy and more rapidly available.

Q. MR. HECK STATES (p. 3), THAT "ACCESS TO BELLSOUTH'S HIGH-SPEED PACKET SWITCHING SERVICES, IN ACCORDANCE WITH APPLICABLE LAW, IS ESSENTIAL FOR CCC TO OFFER BUNDLED AND ADVANCED TELECOMMUNICATION SERVICES ON A UBIQUITOUS BASIS IN THE STATE OF TENNESSEE." DO YOU AGREE?

A. No. The FCC has made clear in its UNE Remand Order and in its Line Sharing Reconsideration Order ("Line Splitting Order")[2] that ILECs such as BellSouth are not required to provide packet switching on an unbundled basis, except in one limited exception that is not at issue here. Packet switching services are available through BellSouth's tariff and from other providers, as the FCC has noted.[3]

Q. MR. CINELLI ALLEGES (p. 6) THAT IF THE AUTHORITY DOES NOT UNBUNDLE PACKET SWITCHING, BELLSOUTH WILL REMONOPOLIZE THE MARKET FOR LOCAL TELEPHONE

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[2] *Third Report and Order on Reconsideration* in CC Docket No. 98-147 and *Fourth Report and Order on Reconsideration* in CC Docket No. 96-98, Order No. FCC 01-26 (Released January 19, 2001) (*Line Sharing Reconsideration Order or Line Splitting Order).*

[3] *UNE Remand Order, ¶¶306-307.*

SERVICE, AND THERE WILL BE NO INCENTIVE FOR BELLSOUTH TO INVEST IN ITS INFRASTRUCTURE. DO YOU AGREE?

A. No, I strongly disagree. BellSouth has an incentive to invest in its infrastructure where it has an opportunity to receive some benefits from that investment. This is true whether BellSouth is the only provider or one of many. The fact is that BellSouth will be disincented to invest in new technology and advanced services if its competitors are allowed to reap the benefits and rewards of Bellsouth's investments without taking any of the risk, which is exactly what Cinergy is requesting.

Further, the local telecommunications market is hardly in danger of becoming remonopolized. There are 3 million access lines in Tennessee, with at least 80 CLECs providing approximately 377,000 – 419,000 access lines as of February 2002.[4] This represents an increase of approximately 76,000 lines, or over 22%, since May 2001.[5] During that same period, BellSouth's access lines in Tennessee have increased less than 1%. (More recent data show that BellSouth's Tennessee access lines have decreased.) To suggest that BellSouth's policy (of refusing to provide ADSL transport where BellSouth is not the voice

[4] *See* Method One and Method Two estimates of CLEC lines as of February 2002, filed April 26, 2002 with Direct Testimony of John Ruscilli in Docket No. 97-00309 (BellSouth's Tennessee 271 case). (Includes only CLECs with 10 lines or more.)

[5] *See* Method One and Method Two estimates of CLEC lines as of May 2001, filed July 30, 2001 with Direct Testimony of John Ruscilli in Docket No. 97-00309. (Includes only CLECs with 10 lines or more.)

provider) is a "CLEC killer" (Heck, p. 8) and will lead to the remonopolization of voice services in Tennessee is an allegation that is refuted by the facts.

BellSouth likewise has no monopoly in the advanced services market. In fact, cable modem, not DSL, is the prevalent technology in this market. The BellSouth voice customers in Tennessee who also have cable modem broadband service will not likely switch to BellSouth's ADSL service. Currently, a small fraction of BellSouth's 2.6 million access lines in Tennessee are equipped for DSL.[6] Quite frankly, there are far more potential customers for Cinergy that do not have BellSouth's DSL than that do have it.

In terms of total lines installed, cable modem is far ahead of other competing technologies, including xDSL, and is the leader of broadband deployment and market penetration. Statistics published in the FCC's report, *High-Speed Services for Internet Access: Subscribership as of June 30, 2001(Table 5),* show that cable represents 54% of total high-speed lines nationally, DSL represents 28%, and other categories represent 18%. The same report shows that for Tennessee, there were seven ADSL providers and five cable providers as of June 30, 2001 (Table 6). Tennessee ADSL lines at June 30, 2001 were 22,902, compared

[6] See BellSouth's proprietary response to Cinergy's First Data Requests, Item No. 1, for the number of DSL ports provisioned in Tennessee.

February, 2002. The same report shows that 66.4% of TV Households have cable modem available, with 6.8% subscribing to cable modem at December 2001. In addition to BellSouth, Tennessee citizens can choose from other providers.

As the above evidence demonstrates, BellSouth does not have a monopoly for voice or advanced services; in fact, BellSouth does not serve the advanced services market in Tennessee ubiquitously.

Q. MR. HECK (AT pp. 24-25) DESCRIBES THE TEST FOR DETERMINING IMPAIRMENT. DO YOU AGREE THAT HE REFERENCES THE APPLICABLE FCC RULES?

A. Yes. Mr. Heck quotes the FCC Rules at 51.317(b)(1)-(3) outlining the impairment tests which must be met by a CLEC before an ILEC could be required to unbundle additional network elements as UNEs. Except for omission of item (v) on page 28,[8] he has correctly quoted the FCC's rules. What BellSouth disagrees with is the conclusion that Cinergy meets the impairment tests.

Q. ON pp. 25-26, MR. HECK CONCLUDES THAT CINERGY IS IMPAIRED BECAUSE WITHOUT UNBUNDLED PACKET

[8] 51.317(b)(3)(v) states, "Whether unbundling of a network element is administratively practical to apply."

SWITCHING, CINERGY CANNOT COST EFFECTIVELY PROVIDE ITS IP CENTREX SERVICE TO SMALL BUSINESS AND RESIDENTIAL CUSTOMERS IN TENNESSEE. PLEASE RESPOND.

A. First, Cinergy is not impaired because it has alternatives other than BellSouth's unbundled packet switching. As described in my direct testimony and in the direct testimony of Mr. Keith Milner, Cinergy has the following alternatives available to it: (1) BellSouth offers UNEs to Cinergy that allow Cinergy to transport its data signals from its self-provisioned packet switches to the CO or remote terminal and from the CO or remote terminal to the customer's premises, (2) Cinergy can purchase packet switching facilities from another entity or partner with another entity or entities to provide the facilities, (3) Cinergy can purchase BellSouth's tariffed packet switching service, (4) Cinergy can collocate its DSLAM equipment at a BellSouth central office or at a remote terminal where BellSouth has deployed a DSLAM, or (5) Cinergy can provide BellSouth ADSL service over a resold line. The issue for Cinergy is that it wants a cheaper alternative.

Q. WHAT ALTERNATIVES DOES CINERGY SAY IT HAS CONSIDERED?

A. Mr. Heck (at pp. 27-31) says that Cinergy has considered the following options: (1) installing DSLAMs across BellSouth's

Cinergy can provide BellSouth ADSL service over a resold line. The issue for Cinergy is that it wants a cheaper alternative.

Q. WHAT ALTERNATIVES DOES CINERGY SAY IT HAS CONSIDERED?

A. Mr. Heck (at pp. 27-31) says that Cinergy has considered the following options: (1) installing DSLAMs across BellSouth's Central Offices and Remote Terminals, (2) partnering with a Data LEC ("DLEC"), (3) using BellSouth's UNE DS1 service, and (4) using BellSouth's wholesale DSL product combined with BellSouth's resale local exchange service. He concludes that "None of these options enable CCC to provide high-speed data services and other advanced services ubiquitously in the state of Tennessee."

Q. DO YOU AGREE WITH MR. HECK'S CONCLUSION?

A. No. First, his argument admittedly is about money – the prices Cinergy must pay to provide DSL service. Moreover, he even claims that Cinergy "is impaired in providing traditional POTS services to its customers." (p. 26). Second, the ability of Cinergy to provide high-speed data services ubiquitously is not the issue. BellSouth does not provide those services ubiquitously. In fact, in the UNE Remand Order, the FCC

recognized the nascent nature of the advanced services market. All participants were facing the same investment decisions for deploying this new technology. Since that time, BellSouth has weighed the risks and rewards and has strategically deployed these new advanced services where there is perceived demand for such services. Certainly, BellSouth is not guaranteed a return on its investment. BellSouth has faced, and continues to face, the same type of investment decisions that Cinergy faces. Now, because BellSouth did step out and take the investment risk, Cinergy wishes the Authority to allow it to also reap the rewards.

Q. WHY DOES MR. HECK SAY THAT CINERGY'S AVAILABLE OPTIONS ARE NOT VIABLE?

A. First, he says that self-provisioning of DSLAMs is "simply not economically viable." He says (at p. 27) that "[i]nstalling DSLAMs in Central Offices and Remote Terminals without a customer base to support them is a business plan that is certain to fail." Similarly, Mr. Cinelli states (at p. 6), "Building facilities before we have a customer base to support them is cost prohibitive and foolish." Mr. Heck says it would take 24 months to achieve positive operational cash flow (after recovering Cinergy's initial investment – p. 15). Interestingly, his arguments actually make BellSouth's point. Cinergy's arguments regarding the risk and investment necessary to deploy DSL facilities are

applicable for BellSouth, as well. Investing in the facilities prior to having a customer base is precisely what BellSouth did. In the burgeoning advanced services market, BellSouth elected to undertake the cost and risk of aggressive deployment. CLECs had the same deployment opportunities available to them. The only prohibitions they faced were risk aversion or lack of capital. The fact that Cinergy elected not to spend the money or to undertake the risk of investment is not a valid reason to allow it to avail itself risk-free of BellSouth's investment.

Furthermore, BellSouth deployed the investment gradually rather than all in one year. BellSouth first deployed ADSL in Tennessee in March 1999, a little over three years ago. In fact, if BellSouth had not undertaken the investment, the very service Cinergy says should be unbundled would not even exist. Now that BellSouth has taken the risk, Cinergy wants to reap the benefits by demanding access to BellSouth's investment.

When BellSouth, as well as most CLECs I suspect, develops a business plan and commences deployment and sales efforts of DSL services, the efforts are targeted to those areas where the provider expects a large percentage of end-users to subscribe. As experience is gained and resources are built up, additional areas are targeted. BellSouth selectively placed DSLAMs in Central Offices ("CO") for several months before the first RT

based DSLAM was placed. BellSouth waited until it had accumulated end-users served by a given RT before it deployed the RT infrastructure. Accordingly, Cinergy's claim that it would have to incur the prohibitive cost of placing its own DSLAMs in every one of BellSouth's COs and RTs in Tennessee is an exaggeration, and would not be part of any carrier's business plan. Cinergy may be best served by being patient and prudent with its deployment, as BellSouth has been.

Mr. Heck claims that self-provisioning of DSLAMs is not viable because BellSouth, as the incumbent, has an advantage in the market. He states, "If there is equal footing in selling ADSL one would expect that the total number of ADSL loops sold by each of the providers would be similar to the number sold by BellSouth through their FastAccess service." (p. 28.) I disagree. The fact that BellSouth FastAccess® ADSL circuits in Tennessee outnumber ADSL circuits provisioned by BellSouth to other NSPs is not indicative of an advantage in the market. In fact, when the entire broadband market is included, BellSouth does not have the majority of the subscribers; cable modem providers have the majority of subscribers. Further, as the FCC recognized, all parties started with an equal footing in the deployment of advanced services.

Furthermore, just because a customer first subscribes to DSL services with BellSouth does not mean that Cinergy or another CLEC could not take that customer away by offering another service or by reselling BellSouth's service. In fact, the FCC's requirements for line sharing and line splitting exist for this very reason – to facilitate both competitive advanced services and voice services.

Q. TO SUPPORT ITS CONTENTION THAT IT IS NOT PRUDENT TO BUILD FACILITIES, CINERGY CITES THE FAILURES OF SEVERAL DLECS (ROULEAU, p. 11; HECK, p. 27). IS THIS AN ACCURATE REPRESENTATION?

A. No. Cinergy would have the Authority believe that all four mentioned DLECs are no longer in business and "lost" their investment. While Bluestar, Rhythms and Northpoint are no longer operating, Covad has come out of bankruptcy and is doing well. As a matter of fact, on June 19, 2002, Covad introduced a DSL consumer broadband service with a special offer of $21.95 per month for the subscriber's first four months and $39.95 per month thereafter, compared to BellSouth's standard monthly rate of $49.95. The service is available throughout Covad's national network, including Tennessee. In addition, someone felt the investments of the other three companies were of value as BlueStar was purchased by Covad, Rhythms assets were

purchased by WorldCom, and Northpoint's assets were purchased by AT&T. This is evidence of a restructuring of the market, not the demise of the market.

Q. WHY DOES MR. HECK SAY THAT PARTNERING WITH A DLEC IS NOT A VIABLE OPTION?

A. He states (at p. 29) that there are no DLECs or combinations of DLECs with which Cinergy could partner in order to provide ubiquitous access in Tennessee. As a practical matter, even if Cinergy "partnered" with BellSouth, Cinergy would not provide ubiquitous DSL service in Tennessee because BellSouth does not do so. Cinergy certainly could partner with a DLEC where available, and use other alternatives to provide service in other areas.

Q. WHAT REASONS DO MR. HECK (p. 30) AND MR. ROULEAU (p. 10) GIVE FOR REJECTING THE OPTION OF USING UNE DS1 TO PROVIDE HIGH-SPEED DATA SERVICES?

A. First, I would like to point out that Mr. Rouleau admits, on lines 2-3, that Cinergy is "competitive" for business customers with five or more local lines. In making this statement, Mr. Rouleau concedes that currently available BellSouth offerings and rates are sufficient for Cinergy to be competitive in Tennessee, at least

for business customers with five or more lines. Second, almost no residential customer, and very likely no business customer could justify purchasing a DS1 from anyone, including BellSouth, Cinergy, or any other CLEC, if they only had four or fewer lines.

Q. WHY DOES CINERGY NOT CONSIDER BELLSOUTH'S WHOLESALE ADSL TRANSPORT SERVICE A VIABLE OPTION?

A. Cinergy states that use of BellSouth's wholesale ADSL transport is not a viable solution for residential and small businesses because the lines would have to be converted to resale, and the amount of gross profit on resale is inadequate to cover Cinergy's operational expenses. (Heck, p. 15-16, 31 and PLH-2.) First, cost difference alone does not indicate impairment. Second, PLH-2 shows only resale of a service comparable to BellSouth's Complete Choice for residence;[9] it does not include DSL internet access. When the revenue and cost for DSL internet access is added, the result is a 16.1% gross margin on a recurring basis, and 13.1% for the first 24 months. *See* Exhibit CKC-2 attached.

Q. MR. ROULEAU, ON PAGES 10-11 OF HIS TESTIMONY, IMPLIES THAT CINERGY ONLY HAS ONE OPTION AVAILABLE TO SERVE ITS RESIDENTIAL AND SMALL BUSINESS CUSTOMERS – CO

[9] Even Mr. Heck's schedule as presented is in error, because he included the $30.00 customer acquisition cost twice. Correcting for this results in a gross margin for the 24 months of 4.2%, not .4%.

COLLOCATION, AND USES THIS AS HIS BASIS FOR REQUESTING THE AUTHORITY TO ORDER UNBUNDLED PACKET SWITCHING. IS THIS STATEMENT CORRECT?

A. No. As I have shown earlier, and as Mr. Milner explains further, Cinergy has many options available to it. First, there are two types of collocation available - Central Office ("CO") based collocation and Remote Terminal ("RT") based collocation. Second, Cinergy could purchase BellSouth's tariffed packet switching service. Third, Cinergy could enter into a Line Splitting arrangement with another CLEC/DLEC. Fourth, Cinergy could purchase UNEs to transport data signals from its self-provisioned packet switches to the RT and from the RT to the customer premises. Fifth, Cinergy could provide BellSouth ADSL service over a resold line.

On pp. 28-29, Mr. Heck states, "the FCC has already determined that the collocation required to provide packet switching constitutes an impairment," citing ¶309 of the UNE Remand Order. However, he stops too soon. The sentence in the FCC's order that immediately follows the quote on p. 32 of his testimony is, "[a]s discussed in more detail below, that conclusion is not dispositive of whether unbundling is appropriate at this time under section 251(d)(2)." The FCC decided in the UNE Remand Order <u>not</u> to require unbundled packet switching,

except where all of the four factors set forth in FCC Rule 51.319(c)(5) are satisfied.

Q. ON PAGE 10 OF MR. HECK'S DIRECT TESTIMONY HE STATES THAT BECAUSE IT IS NOT POSSIBLE TO HAVE RESOLD LINES AND UNE-P IN THE SAME HUNT GROUP, "THIS REDUCES CCC'S PROFIT MARGIN TO THE POINT THAT THE CUSTOMER IS NO LONGER PROFITABLE". WOULD YOU COMMENT ON THIS?

A. Yes. Cinergy can overcome this "problem" quite easily. It can have its UNE-P lines in a hunt group for incoming calls. An additional line would not be part of the hunt group, but rather would be a resold voice line that could be used for BellSouth ADSL service and voice service.

Q. CINERGY SUGGESTS THAT IT MAY BE FORCED TO DISCONTINUE FUTURE INVESTMENT IN TENNESSEE IF THE AUTHORITY DOES NOT GRANT ITS REQUEST. DO CINERGY'S RESOURCES REALLY APPEAR TO BE THAT LIMITED?

A. No. Mr. Rouleau states on pp. 13-14, "This impairment [unbundled packet switching] prevents CCC from developing the customer concentrations it needs to justify additional facilities-based investment in Tennessee. Continuation of this serious

impairment will cause CCC to invest more in Indiana, where it has substantial network assets and a more appealing interconnection agreement." (*See also,* Mr. Heck, p. 18.) On the other hand, Mr. Cinelli explains (at p. 3) that 32.5% of Cinergy is owned by Cinergy Corporation, an electric utility company with its principal offices in Cincinnati Ohio.[10] Further, Cinergy's local telecommunication services use the network capacity and facilities of KDL, a sister company of Cinergy, extensively in Tennessee. On page 4, Mr. Cinelli boasts of a debt-to-operating income ratio of 1.36:1. This strong financial picture painted by Cinergy is inconsistent with its assertions that BellSouth must provide all of the investment at TELRIC prices in order for Cinergy to offer high-speed data services to its customers. Finally, Mr. Cinelli (p. 7) boasts of Cinergy's IP Centrex services as being "so powerful that it will render analog telephony obsolete." Such a strong financial picture, combined with such a promising product, would seem to warrant Cinergy's making the necessary investment to make that product available.

Q. MR. HECK, ON PAGE 8 OF HIS TESTIMONY, STATES THAT BELLSOUTH WILL NOT PROVISION ADSL TRANSPORT SERVICE OVER LINES PROVISIONED UNDER UNE-P. PLEASE COMMENT ON THIS.

[10] As stated on Cinergy Corporation's website, www.Cinergy.com, "Cinergy is a registered holding company under the Public Utility Holding Company Act of 1935. Cinergy's 2000 net revenues were $8.4 billion, with a total enterprise value of $9 billion and assets of $12 billion."

A. Certainly. When BellSouth provides its tariffed DSL, it also provides the voice service. If a CLEC purchases UNE-P using a loop on which BellSouth is providing DSL, that CLEC is entitled to the entire spectrum on the loop, so BellSouth removes or discontinues the DSL. BellSouth does not, however, "discontinue the provision of Line Splitting." BellSouth will allow Line Splitting in this situation.

Line Splitting occurs when a voice CLEC provides voice service and a data LEC provides the DSL. When this happens, BellSouth has a service, known as Line Splitting, that it makes available to CLECs to accommodate the sharing of the spectrum between the voice and data provider. As part of this service, BellSouth will provide collocation cross-connections, and if requested, a splitter. BellSouth is merely a facilitator between the two CLECs. (*See* the rebuttal testimony of Mr. Williams for additional information.)

Q. DO YOU AGREE THAT BELLSOUTH HAS USED ITS ADSL TRANSPORT SERVICE IN ANTICOMPETITIVE WAYS, AS MR. HECK ASSERTS (at p.14)?

A. No. Contrary to Cinergy's assertions, BellSouth's position regarding DSL over UNE-P is not anticompetitive, but rather represents an appropriate competitive response for the advanced

services market. The FCC has agreed. Most recently, in ¶157 of its order approving BellSouth's 271 Application for Georgia and Louisiana,[11] the FCC said:

> Commenters allege that BellSouth will not offer its DSL service over a competitive LEC's UNE-P voice service on that same line. We reject these claims because, *under our rules, the incumbent LEC has no obligation to provide DSL service over the competitive LEC's leased facilities.* Furthermore, a UNE-P carrier has the right to engage in line splitting on its loop. As a result, a UNE-P carrier can compete with BellSouth's combined voice and data offering on the same loop by providing the customer with line splitting voice and data service over the UNE-P loop in the same manner. Accordingly, *we cannot agree with commenters that BellSouth's policy is discriminatory.* (Emphasis added.)

Q. HOW DO OTHER DEVELOPMENTS IN THE BROADBAND INDUSTRY HELP REFUTE CINERGY'S CLAIM THAT BELLSOUTH'S ACTIVITIES ARE ANTI-COMPETITIVE?

A. A race is underway in the broadband market, in which the number of cable modem subscribers was nearly twice that of DSL subscribers as of June 2001. In running this race, cable modem providers and other advanced services providers are relatively unfettered by regulation. At its March 14, 2002 Open

[11] *In the Matter of Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc for Provision of In-Region, InterLATA Services in Georgia and Louisiana,* CC Docket No. 02-35, Released May 15, 2002 *("GA/LA Order").*

Meeting, the FCC declared cable modem service an interstate "information service" and said Internet access delivered over cable is not subject to common carrier regulation that requires unbundling. Incumbent local exchange companies like BellSouth, in contrast, face numerous regulatory constraints, such as remote terminal collocation, unbundling of packet switching in certain circumstances, line sharing and line splitting. BellSouth has made its investment decisions knowing these requirements. However, BellSouth also operates in an environment of regulatory uncertainty. CLECs continue to urge the Authority to require the unbundling of packet switching or to create the broadband equivalent of UNE-P. This occurs despite the undisputed facts that: (1) voice competition continues to grow, (2) BellSouth is not the dominant provider of advanced services, and (3) previous evaluation and findings by the FCC are consistent with BellSouth's position in this case.

FCC Chairman Michael K. Powell, in a speech to the National Summit on Broadband Deployment, October 25, 2001, stated:

> I believe strongly that broadband should exist in a minimally regulated space. Substantial investment is required to build these networks and we should limit regulatory costs and uncertainty. We should vigilantly guard against regulatory creep of existing models into broadband, in order to encourage investment. . . . Innovation is critical and can be stifled by constricting regulations.

The FCC issued a Notice of Proposed Rulemaking recently in a docket entitled: *Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services et al.*, CC Docket No. 01-337. In Commissioner Powell's statement regarding that docket, released on December 12, 2001, he emphasized the importance of broadband deployment, and stated that the docket "is intended to develop further one more avenue of thinking about how regulation can serve to help (or hinder) broadband deployment." Of note, the FCC will "ask whether potentially robust competition among multiple types of broadband service providers suggests that we should avoid subjecting incumbents to the same regulatory burdens that we impose on these carriers with respect to their provision of local telephone service."

Stand-alone broadband is costly and risky. In assessing the viability of providing DSL over UNE-P, BellSouth determined that the additional operational costs associated with implementation along with the reduced profitability of stand-alone DSL, made the opportunity extremely unattractive. What is so incongruous about this issue now is that Cinergy is asking the Authority to force BellSouth to provide a highly competitive service in circumstances that BellSouth views as not in its best interests. In effect, BellSouth would become the advanced services

provider of last resort. Such a concept is completely inconsistent with a competitive market.

Q. MR. CINELLI STATES THAT CINERGY WANTS BELLSOUTH TO PROVIDE PACKET SWITCHING IN THE SAME MANNER AS BELLSOUTH PROVIDES WHOLESALE DSL SERVICE, BUT AT TELRIC PRICES. (p. 7.) PLEASE COMMENT.

A. BellSouth provides its interstate tariffed wholesale DSL transport service over resold lines, but not over UNE-P, for the reasons explained in BellSouth's direct testimony. Now, Cinergy is asking for this interstate tariffed service to be provided at TELRIC prices and in cases where BellSouth does not wish to provide the service. BellSouth is not required to offer its interstate tariffed DSL service at TELRIC prices because this service is not a UNE. Further, BellSouth is not required to offer its interstate tariffed DSL service at a resale discount, as confirmed by the FCC in its *GA/LA Order* (¶275) as follows:

> BellSouth offers a tariffed DSL telecommunications transport service to ISPs, which we conclude is a wholesale offering as articulated by the Commission in the AOL Bulk Services Order. Because that offering is not a telecommunications service sold at retail, BellSouth is not required to offer it at a resale discount pursuant to section 251(c)(4).

Q. ON PAGE 16 OF HIS TESTIMONY, MR. HECK PROPOSES A $25.00 MONTHLY PRICE FOR UNBUNDLED ADSL SERVICE. WOULD YOU CARE TO COMMENT ON THIS?

A. Mr. Heck's proposed price is unjustified. In coming up with a "surrogate rate for UNE DSL," Mr. Heck uses a $25.00 rate, compared to $33.00 for BellSouth's wholesale ADSL service. The $25.00 rate represents not just a Tennessee resale discount of 16%, but a 24% reduction! As explained below, the resale discount is not applicable; an even greater discount is certainly not applicable

The resale discount applies to retail services that are provided to end-users. BellSouth's Wholesale ADSL service is a wholesale offering; therefore, the resale discount does not apply. BellSouth's wholesale ADSL (Residential Class DSL service) is marketed to network service providers (NSPs) for them to incorporate as an input into the service that those companies offer to residential and small business end-users. Although BellSouth markets Residential Class DSL to ISPs, any NSP, including a corporation or governmental entity, can purchase Residential Class DSL from the BellSouth tariff as long as it meets the requirements of the tariff, which include the purchase of a minimum of 51 virtual circuits, and the purchase of, or access to, a BellSouth ATM port for purposes of terminating the

DSL service. However, only a very small percentage of the provisioned circuits have been purchased by an entity other than an ISP, CLEC or IXC. Therefore, since BellSouth does not market its wholesale ADSL service to end-users, the wholesale discount does not apply. As previously quoted, this was confirmed by the FCC in its *GA/LA Order* (¶275).

Q. WHAT OTHER COMMENTS DO YOU HAVE REGARDING MR. HECK'S MARGIN ANALYSES IN THE ATTACHMENTS TO HIS TESTIMONY?

A. Mr. Heck provides in PLH-1 a schedule showing his calculation of Cinergy's costs and margin in offering a product competitive with BellSouth's residential Complete Choice. As discussed in his testimony at p. 15, he states that, with a 4.3% margin, "it becomes clear that CCC cannot even justify selling the high-end voice services in zone 3." Perhaps Cinergy would not choose to service customers in zone 3; however, he fails to mention that his analysis shows a 30.7% margin for zone 1 and a 19.3% margin for zone 2. Further, to the extent that Cinergy's Sales, General and Administrative costs are fixed costs, as Cinergy adds customers, those costs as a percent of revenue would decrease, making the net profit margin higher. Finally, the FCC increased the ceiling for the Subscriber Line Charge from $5.00 to $6.00

per line, effective July 1, 2002,[12] which would also increase the gross margin.

Q. MR. ROULEAU (p. 8) AND MR. HECK (p. 19) DISCUSS THE INDIANA COMMISSION'S DECISION TO ORDER DSL OVER UNE OR UNE-P. WHAT IMPACT SHOULD THAT DECISION HAVE IN THE CURRENT CASE?

A. The Authority should reach its decision based on the FCC rules and facts in this case. On January 28, 2002, the Indiana PUC ordered in the AT&T Arbitration (Cause No. 40571-INT-03) that Ameritech must continue to provide the Ameritech DSL service to a customer that elects AT&T as its voice provider (regardless of whether the voice service is provided via UNE-P or resale) for the term of the CLEC's interconnection agreement. However, the Indiana PUC did not order Ameritech to unbundle packet switching as a UNE or to unbundle the DSLAM, except in the circumstances outlined in FCC Rule 51.319(c)(5). Further, SBC/Ameritech has filed an appeal of the Indiana order on these issues at the U. S. District Court.

Q. HAVE OTHER STATE COMMISSIONS IN BELLSOUTH'S REGION ADDRESSED THE UNBUNDLING OF PACKET SWITCHING?

[12] FCC Order No. 02-161 in CC Docket No. 96-262, released June 5, 2002.

A. Yes. This issue has been addressed in various arbitration cases and generic dockets. In every case, the state commissions have decided that BellSouth shall only be required to unbundle its packet switching capabilities under the limited circumstances identified in FCC Rule 51.319(c)(5). None of the state commissions in BellSouth's nine-state region have required BellSouth to unbundle packet switching.

Recently, the issue of unbundling packet switching was addressed in the Florida Supra Arbitration, Docket No. 001305-TP and in the Florida Digital Networks (FDN) Arbitration, Docket No. 010098-TP. In the Supra arbitration, the FPSC'S decision on March 5, 2002, approving the staff recommendation in Supra, addressed Issue 39 by concluding that Supra has not adequately addressed the "impair" standard of FCC Rule 51.317(b)(1).

In its order dated June 5, 2002, the FPSC also ruled in the FDN Arbitration that BellSouth is not required to unbundle packet switching, stating (pp. 16-17):

> We share the concern that, in the nascent xDSL market, unbundling could have a detrimental impact on facilities-based investment and innovation. ...We have serious concerns that requiring BellSouth to unbundle its DSLAMs in remote terminals would have a chilling effect on broadband deployment. Furthermore, we do not believe that FDN has demonstrated that it would be impaired without access to a broadband UNE, because it does have the ability to collocate DSLAMs. While FDN has raised the expense of such collocation as a concern, the record reflects that the costs to install a DSLAM at a remote

terminal are similar for both BellSouth and FDN. As such, FDN has not demonstrated that it is ay more burdensome for FDN to collocate DSLAMs in BellSouth's remote terminals than it is for BellSouth. Since the record does not reflect that FDN faces a greater burden than does BellSouth, we do not find that FDN is impaired in this regard. For these reasons, we find it is not appropriate at this time to require BellSouth to create a broadband UNE.

The same options available to Supra and FDN in Florida are available to Cinergy in Tennessee.

Q. ON PAGE 31, MR. HECK STATES, "THE ADSL PACKET SWITCHING SOLUTION IS NO DIFFERENT FOR A SMALL BUSINESS THAN A DS1 IS FOR A LARGE BUSINESS FROM A JURISDICTIONAL POINT OF VIEW." DO YOU AGREE?

A. No. The FCC has established a list of UNEs that includes loop and transport elements, both of which may be provisioned as a DS1. However, packet switching (regardless of whether used for small or large business) is not on that list of required UNEs, unless the specific conditions of Rule 51.319(c)(5) are met. The ADSL packet switching solution Cinergy is requesting would require BellSouth to provide its interstate tariffed packet switching service as a UNE. It is BellSouth's position that Cinergy has not met the requisite tests for impairment; therefore, the Authority should conclude that BellSouth should not be required to provide unbundled packet switching.

Q. MR. CINELLI, AT pp. 7-8, PAINTS A PICTURE OF WHAT CINERGY CAN LOOK LIKE FIVE YEARS FROM NOW. PLEASE COMMENT.

A. Mr. Cinelli describes the wonderful advanced telecommunications services that it hopes to offer in Tennessee over the next five years, if the Authority will grant its request to require the unbundling of BellSouth's packet switching network BellSouth has a vision, too: healthy competition between ILECs, CLECs and cable modem providers in providing high speed data services to the citizens of Tennessee. However, BellSouth's vision is one in which each party has incentive to invest in facilities, each party makes its own investment necessary to offer those services, and each party will receive the commensurate rewards for such investment. What Cinergy requests is for BellSouth to undertake the risk and finance the facilities, yet Cinergy share in the rewards. Therefore, the unbundling requirements that Cinergy requests will provide a disincentive to BellSouth's investment, and to other carriers' investment, and would go counter to Mr. Cinelli's vision.

Q DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Tennessee Docket No. 01-00987

Rebuttal Exhibit CKC-1

High-Speed Services for Internet Access: Subscribership as of June 30, 2001

Industry Analysis Division
Common Carrier Bureau
February 2002

This report is available for reference in the FCC's Information Center at 445 12th Street, S.W., Courtyard Level. Copies may be purchased by calling Qualex International, Portals II, 445 12th Street S.W., Room CY-B402, Washington, D.C. 20554, telephone 202-863-2893, facsimile 202-863-2898, or via e-mail qualexint@aol.com. The report can also be downloaded from the **FCC-State Link** Internet site at www.fcc.gov/ccb/stats.

High-Speed Services for Internet Access: Subscribership as of June 30, 2001

Congress directed the Commission and the states, in section 706 of the Telecommunications Act of 1996, to encourage deployment of advanced telecommunications capability in the United States on a reasonable and timely basis.[1] To assist in its evaluation of such deployment, the Commission instituted a formal data collection program to gather standardized information about subscribership to high-speed services, including advanced services, from wireline telephone companies, cable providers, terrestrial wireless providers, satellite providers, and any other facilities-based providers of advanced telecommunications capability.[2]

We summarize here information from the fourth data collection, thereby presenting a snapshot of subscribership as of June 30, 2001.[3] Subscribership to high-speed services for Internet access increased by 36% during the first half of the year 2001, to a total of 9.6 million lines in service. The presence of high-speed service subscribers was reported in fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands, and in 78% of the zip codes in the United States.

Before presenting the most recent information in some detail, a brief description of the Commission's data collection program is in order to enable the reader to better understand how the nationwide information presented here may compare to similar information derived from other sources. First, a facilities-based provider of high-speed service lines (or wireless channels) in a given state reports to the Commission basic information about its service offerings and customers if the provider has at least 250

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[1] *See* §706, Pub.L. 104-104, Title VII, Feb. 8, 1996, 110 Stat. 153, reproduced in the notes under 47 U.S.C. §157. We define services as "high-speed" that provide the subscriber with transmissions at a speed in excess of 200 kilobits per second (kbps) in at least one direction. "Advanced services," which provide the subscriber with transmission speeds in excess of 200 kbps in each direction, are a subset of high-speed services.

[2] *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Report and Order, 15 FCC Rcd 7717 (2000) (*Data Gathering Order*). During this data gathering program, qualifying providers file FCC Form 477 each year on March 1 (reporting data for the preceding December 31) and September 1 (reporting data for June 30 of the same year). An updated FCC Form 477, and Instructions for that particular form, for each specific round of the data collection may be downloaded from the FCC Forms website at <www.fcc.gov/formpage.html>. The formal program followed several attempts by the Common Carrier Bureau to collect information on a voluntary basis. *See Local Competition and Broadband Reporting*, CC Docket No. 99-301, Notice of Proposed Rulemaking, 14 FCC Rcd 18106 (1999).

[3] Results from the first data collection, in which providers reported numbers of subscribers to high-speed services at the end of 1999, were presented in the Commission's second report to Congress on advanced telecommunications capability. *See Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, CC Docket No. 98-146, Second Report (rel. Aug. 21, 2000), available at <www.fcc.gov/broadband>. (In the report, the Commission's data collection program is referred to as the "Broadband Survey.") Results from the second and third data collections appear in reports titled *High-Speed Services for Internet Access*, available at <www.fcc.gov/ccb/stats>.

such lines in service in that state. While providers not meeting the reporting threshold may provide information on a voluntary basis, as some have done, it is likely that not all such providers have reported data.[4] In particular, we do not know how comprehensively small providers, many of which serve rural areas with relatively small populations, are represented in the data summarized here. Second, lines (or wireless channels) that do not meet the Commission's definition of "high-speed" (i.e., delivering transmissions to the subscriber at a speed in excess of 200 kbps in at least one direction) are not reported. Some asymmetric digital subscriber line (ADSL) services and Integrated Services Digital Network (ISDN) services provided by telephone companies and some services that connect subscribers to the Internet over cable systems do not meet this criterion, but may nevertheless meet the needs of the subscribers who select them.

We expect providers to report data more accurately as they gain experience with the program. We also expect that there may be some need for further clarification and adjustment of the reporting system.[5] Nevertheless, based on the information now available, the following broad conclusions emerge:

- Subscribership to high-speed services increased by 36% during the first half of the year 2001, to a total of 9.6 million lines (or wireless channels) in service. The rate of growth during the last half of the year 2000 was 62%.[6] See Table 1.

- Considering services according to the technology deployed in the "last few feet" to the subscriber's premises, high-speed lines in service over coaxial cable systems (cable modem service) remained the most numerous, increasing 45% during the first half of the year 2001, to 5.2 million lines. High-speed ADSL lines in service increased 36%, to 2.7 million lines.[7]

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[4] We received 76 state-specific voluntary submissions (made by 38 holding companies) in the first FCC Form 477 filing, 81 voluntary submissions (made by 35 holding companies) in the second filing, 64 voluntary submissions (made by 41 holding companies) in the third filing, and 64 voluntary submissions (made by 41 holding companies) in the fourth filing. High-speed lines reported in voluntary submissions in the fourth filing represent less than 0.1% of total high-speed lines reported.

[5] The Commission has requested comments on whether various modifications should be made to this data collection. *See Local Competition and Broadband Reporting*, CC Docket No. 99-301, Second Notice of Proposed Rulemaking, 16 FCC Rcd 2072 (rel. Jan. 19, 2001).

[6] The National Bureau of Economic Research dates the current U.S. recession from March, 2001. Starting about a year earlier, facilities-based providers of high-speed services -- particularly non-incumbent providers -- found it increasingly difficult to raise capital.

[7] Providers are instructed to report a high-speed subscriber in the (mutually exclusive) technology category that characterizes the last few feet of distribution plant to the subscriber's premises, e.g., coaxial cable in the case of the hybrid fiber-coax (HFC) architecture of upgraded cable systems. As noted above, ADSL services that do not deliver over 200 kbps in at least one direction are not included in the data reported here. Symmetric DSL services at speeds exceeding 200 kbps are included in the "other wireline" category because they are typically used to provide data services that are functionally equivalent to a T1 and other data services that wireline telephone companies have offered to business customers for some time.

- Reported high-speed connections to end-user customers by means of satellite or fixed wireless technologies increased at the fastest rate, 73%, during the first half of the year 2001, to 0.2 million. Reported fiber optic connections to end-user customer premises increased by 21%, to 0.5 million.[8]

- Subscribership to the subset of high-speed services that the Commission defines as advanced services (i.e., delivering to subscribers transmission speeds in excess of 200 kbps in each direction) increased by 38% during the first half of the year 2001, to a total of 5.9 million lines (or wireless channels) in service. Advanced services lines provided by means of ADSL technology increased by 48%, and advanced services lines provided over coaxial cable systems increased by 52%. See Table 2.

- As of June 30, 2001, there were 7.8 million residential and small business subscribers to high-speed services. By contrast, there were approximately 5.2 million such subscribers six months earlier, and about 3.2 million a year earlier. See Table 3.

- Of the 7.8 million high-speed lines in service to residential and small business subscribers at the end of June 2001, we estimate that 4.3 million lines also met the Commission's definition of advanced services. See Table 4.

- Among entities that reported facilities-based ADSL high-speed lines in service as of June 30, 2001, about 93% of such lines were reported by incumbent local exchange carriers (ILECs). See Table 5.

- Providers of high-speed services over coaxial cable systems report serving subscribers in 49 states and the District of Columbia. Providers of high-speed ADSL services report serving subscribers in 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands, as do providers who use wireline technologies other than ADSL, or who use optical carrier (i.e., fiber), satellite, or fixed wireless technologies in the last few feet to the subscriber's premises.[9] See Table 6.

- The Commission's data collection program uniquely gathers from providers information about the number of high-speed lines in service in individual states, in total and by technology deployed in the last few feet to the subscriber's premises. Relatively large numbers of total high-speed lines in service are associated with the more populous states. The most populous state, California, has the largest reported number of high-speed lines. The second, third, and fourth largest numbers of high-speed lines are reported for New York, Florida, and Texas, which are the third, fourth, and second most populous states, respectively. See Table 7.

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[8] Inconsistencies in reporting data in these technology categories over the course of the first three data collections make comparison of growth rates problematic.

[9] Information about providers of high-speed services other than ADSL and cable modem is reported in a single category, for the individual states, to honor requests for nondisclosure of information that reporting entities assert is competitively sensitive. In the *Data Gathering Order*, the Commission stated it would publish high-speed data only once it has been aggregated in a manner that does not reveal individual company data. *See Data Gathering Order*, 15 FCC Rcd 7760.

- Reporting entities estimate the percentage of their high-speed lines in service that connect to residential and small business end-user customers (as opposed to connecting to medium and large business, institutional, or government end-user customers).[10] These percentages allow us to derive approximate numbers of residential and small-business high-speed lines in service by state. See Table 8.

- The Commission's data collection program also requires service providers to identify each zip code in which the provider has at least one high-speed subscriber. As of June 30, 2001, subscribers to high-speed services were reported in 78% of the nation's zip codes. Multiple providers reported having subscribers in 58% of the nation's zip codes.[11] See Table 9.

- Our analysis indicates that 97% of the country's population lives in the 78% of zip codes where a provider reports having at least one high-speed service subscriber.[12] Moreover, numerous competing providers report serving high-speed subscribers in the major population centers of the country. See the map that follows Table 9.

- States vary widely with respect to the percentage of zip codes in the state in which no high-speed lines are reported to be in service. See Table 10.

- High population density has a positive correlation with reports that high-speed subscribers are present, and low population density has a negative correlation. For example, as of June 30, 2001, high-speed subscribers are reported to be present in 97% of the most densely populated zip codes and in 49% of zip codes with the lowest population densities.[13] However, the comparable figure for the least dense zip codes was 39% six months earlier. See Table 11.

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[10] End-user customers use the high-speed services for their own purposes and do not resell them to other entities. For purposes of the FCC Form 477 data collection, Internet Service Providers (ISPs) are not end-user customers. Reporting entities are directed to consider a line as being provided to an end-user customer in the "residential and small business" category if that customer orders high-speed service of a type (e.g., speeds in the downstream (from the Internet to the end user) and upstream (from the end user to the Internet) directions) that is normally associated with residential customers.

[11] Lists of zip codes with number of service providers as reported in the FCC Form 477 filings are made available at <www.fcc.gov/ccb/stats> in a format that honors requests for nondisclosure of information the reporting entities assert is competitively sensitive.

[12] Historical zip code data have been revised following staff review of reporting methodologies with a number of reporting entities. Some inconsistencies of reporting methodology among reporting periods and among reporting entities remain.

[13] For this comparison, we consider the most densely populated zip codes to be those with more than 268 persons per square mile (the top three deciles), and the least densely populated zip codes to be those with fewer than 25 persons per square mile (the bottom three deciles).

- High median family income also has a positive correlation with reports that high-speed subscribers are present. In the top one-tenth of zip codes ranked by median family income, high-speed subscribers are reported in 96% of zip codes. By contrast, high-speed subscribers are reported in 59% of zip codes with the lowest median family income, compared to 55% six months earlier. See Table 12.

As other information from the Commission's data collection program (FCC Form 477) becomes available, it will be included in future reports on the deployment of advanced telecommunications capability and in publications such as this one.

We invite users of this information to provide suggestions for improved data collection and analysis by:

- Using the attached customer response form,
- E-mailing comments to eburton@fcc.gov,
- Calling the Industry Analysis Division at (202) 418-0940, or
- Participating in any formal proceedings undertaken by the Commission to solicit comments for improvement of FCC Form 477.

Table 1
High-Speed Lines 1/
(Over 200 kbps in at Least One Direction)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	369,792	951,583	1,977,101	2,693,834	108 %	36 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	35	7
Coaxial Cable	1,411,977	2,284,491	3,582,874	5,184,141	57	45
Fiber	312,204	307,151	376,203	455,593	22	21
Satellite or Fixed Wireless	50,404	65,615	112,405	194,707	71	73
Total Lines	2,754,286	4,367,434	7,069,874	9,616,341	62 %	36 %

Table 2
Advanced Services Lines 1/
(Over 200 kbps in Both Directions)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	185,950	326,816	675,366	998,883	107 %	48 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	35	7
Coaxial Cable	877,465	1,469,130	2,193,609	3,329,976	49	52
Fiber	307,315	301,143	376,197	455,549	25	21
Satellite or Fixed Wireless	7,816	3,649	26,906	73,476	NM	173
Total Lines	1,988,455	2,859,332	4,293,369	5,945,950	50 %	38 %

NM - Not meaningful due to inconsistencies in reported data.

1/ Some previously published data have been revised.

2/ The mutually exclusive types of technology are, respectively: Asymmetric digital subscriber line (ADSL) technologies, which provide speeds in one direction greater than speeds in the other direction; wireline technologies "other" than ADSL, including traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality; coaxial cable, including the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems; optical fiber to the subscriber's premises (e.g., Fiber-to-the-Home, or FTTH); and satellite and (terrestrial) fixed wireless systems, which use radio spectrum to communicate with a radio transmitter at the subscriber's premises.

Table 3
Residential and Small Business High-Speed Lines 1/
(Over 200 kbps in at Least One Direction)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	291,757	772,272	1,594,879	2,490,740	107 %	56 %
Other Wireline	46,856	111,490	176,520	138,307	NM	NM
Coaxial Cable	1,402,394	2,215,259	3,294,546	4,998,540	49	52
Fiber	1,023	325	1,994	2,623	NM	NM
Satellite or Fixed Wireless	50,189	64,320	102,432	182,165	59	78
Total Lines	1,792,219	3,163,666	5,170,371	7,812,375	63 %	51 %

Table 4
Residential and Small Business Advanced Services Lines
(Over 200 kbps in Both Directions)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	116,994	195,324	393,246	916,364	101 %	133 %
Other Wireline	46,856	111,490	176,520	138,307	NM	NM
Coaxial Cable	872,024	1,401,434	2,177,328	3,146,953	55	45
Fiber	138	325	1,992	2,617	NM	NM
Satellite or Fixed Wireless	7,682	2,916	17,043	60,988	NM	NM
Total Lines	1,043,694	1,711,488	2,766,130	4,265,229	62 %	54 %

Note: Residential and small business advanced services lines are estimated based on data from FCC Form 477.

NM - Not meaningful due to inconsistencies in reported data.

1/ Some previously published have been revised.

2/ The mutually exclusive types of technology are, respectively: Asymmetric digital subscriber line (ADSL) technologies, which provide speeds in one direction greater than speeds in the other direction; wireline technologies "other" than ADSL, including traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality; coaxial cable, including the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems; optical fiber to the subscriber's premises (e.g., Fiber-to-the-Home, or FTTH); and satellite and (terrestrial) fixed wireless systems, which use radio spectrum to communicate with a radio transmitter at the subscriber's premises.

Table 5
High-Speed Lines by Type of Provider
as of June 30, 2001
(Over 200 kbps in at Least One Direction)

Types of Technology 1/	Lines				Percent of Lines		
	RBOC 2/	Other ILEC	Non-ILEC 3/	Total	RBOC	Other ILEC	Non-ILEC
ADSL	2,328,147	175,876	189,811	2,693,834	86.4 %	6.5 %	7.0 %
Other Wireline	706,944	108,738	272,384	1,088,066	65.0	10.0	25.0
Coaxial Cable	*	*	5,105,547	5,184,141	*	*	98.5
Other	*	*	597,983	650,300	*	*	92.0
Total Lines	3,095,699	354,917	6,165,725	9,616,341	32.2 %	3.7 %	64.1 %

* Data withheld to maintain firm confidentiality.

1/ The mutually exclusive types of technology are, respectively: Asymmetric digital subscriber line (ADSL) technologies, which provide speeds in one direction greater than speeds in the other direction; wireline technologies "other" than ADSL, including traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality; coaxial cable, including the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems; optical fiber to the subscriber's premises (e.g., Fiber-to-the-Home, or FTTH); and satellite and (terrestrial) fixed wireless systems, which use radio spectrum to communicate with a radio transmitter at the subscriber's premises.

2/ RBOC lines include all high-speed lines reported by BellSouth, Qwest, SBC, and Verizon.

3/ Non-ILEC lines include lines provided by carriers affiliated with non-RBOC ILECs.

Table 6
Providers of High-Speed Lines by Technology
as of June 30, 2001 1/
(Over 200 kbps in at Least One Direction)

	ADSL	Coaxial Cable	Other 2/	Total (Unduplicated)
Alabama	*	8	10	16
Alaska	*	0	6	7
Arizona	5	*	9	11
Arkansas	*	*	4	7
California	12	8	22	28
Colorado	8	*	11	14
Connecticut	5	5	10	13
Delaware	*	*	*	5
District of Columbia	5	*	11	11
Florida	9	10	19	27
Georgia	11	7	18	24
Hawaii	*	*	*	*
Idaho	*	*	4	7
Illinois	10	5	17	23
Indiana	6	6	10	17
Iowa	6	6	9	15
Kansas	*	6	10	14
Kentucky	7	*	7	14
Louisiana	4	4	8	12
Maine	4	*	6	8
Maryland	4	5	13	17
Massachusetts	5	5	13	16
Michigan	8	5	13	20
Minnesota	8	8	15	22
Mississippi	*	*	4	8
Missouri	6	5	12	17
Montana	5	*	*	7
Nebraska	4	5	7	11
Nevada	*	*	10	11
New Hampshire	4	*	8	9
New Jersey	6	*	14	16
New Mexico	4	*	8	10
New York	12	5	20	26
North Carolina	9	7	13	21
North Dakota	*	*	*	5
Ohio	11	8	15	23
Oklahoma	4	*	10	14
Oregon	6	*	9	11
Pennsylvania	11	5	22	25
Puerto Rico	*	0	*	*
Rhode Island	*	*	4	4
South Carolina	6	7	10	15
South Dakota	4	*	*	7
Tennessee	7	5	9	16
Texas	19	7	22	33
Utah	5	*	10	11
Vermont	*	*	*	6
Virgin Islands	*	0	*	*
Virginia	8	5	19	23
Washington	9	*	12	17
West Virginia	*	*	5	6
Wisconsin	9	*	11	16
Wyoming	*	*	*	*
Nationwide (Unduplicated) Jun 2001	86	47	98	160
Nationwide (Unduplicated) Dec 2000	68	39	87	136
Nationwide (Unduplicated) Jun 2000	47	36	75	116
Nationwide (Unduplicated) Dec 1999	28	43	65	105

* Data withheld to maintain firm confidentiality. In this table, an asterisk also indicates 1-3 providers reporting.

1/ Some previously published data have been revised.

2/ Other includes wireline technologies other than asymmetric digital subscriber line (ADSL), optical fiber to the subscriber's premises, satellite, and (terrestrial) fixed wireless systems.

Table 7
High-Speed Lines by Technology 1/
(Over 200 kbps in at Least One Direction)

	Dec 1999	Jun 2000	Dec 2000	Jun 2001				Percentage Change	
	Total	Total	Total	ADSL	Coaxial Cable	Other 2/	Total	Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
Alabama	19,796	32,756	63,334	*	47,325	*	86,234	93 %	36 %
Alaska	*	*	934	*	0	*	20,906	NA	2138
Arizona	58,825	111,678	153,500	39,828	*	*	158,122	37	3
Arkansas	8,155	15,539	28,968	*	*	5,154	40,803	86	41
California	547,179	910,006	1,386,625	735,677	609,174	360,963	1,705,814	52	23
Colorado	36,726	64,033	104,534	52,617	*	*	147,220	63	41
Connecticut	36,488	63,772	111,792	30,142	106,019	12,896	149,057	75	33
Delaware	1,558	3,660	7,492	*	*	*	12,771	105	70
District of Columbia	13,288	16,926	27,757	16,313	*	*	39,101	64	41
Florida	190,700	244,678	460,795	170,702	372,190	108,275	651,167	88	41
Georgia	75,870	130,292	203,855	106,649	109,922	86,027	302,598	56	48
Hawaii	*	*	*	*	*	*	*	NA	NA
Idaho	*	8,070	15,908	*	*	2,441	20,233	97	27
Illinois	77,672	166,933	242,239	89,080	144,872	116,289	350,241	45	45
Indiana	20,059	49,702	60,494	2,375	56,441	21,548	80,364	22	33
Iowa	19,258	49,159	58,199	9,532	59,253	3,798	72,583	18	25
Kansas	26,179	42,679	68,743	*	74,337	*	101,734	61	48
Kentucky	23,570	24,237	32,731	20,256	*	*	39,297	35	20
Louisiana	28,133	43,294	74,950	37,444	64,219	20,022	121,685	73	62
Maine	19,878	17,864	26,266	6,877	*	*	38,149	47	45
Maryland	52,749	71,005	124,465	51,051	97,466	32,504	181,021	75	45
Massachusetts	114,116	185,365	289,447	82,699	243,670	30,887	357,256	56	23
Michigan	81,223	135,318	198,230	41,428	301,842	52,313	395,583	46	100
Minnesota	38,268	65,272	117,283	51,640	80,259	16,113	148,012	80	26
Mississippi	*	6,514	12,305	*	*	7,551	21,517	89	75
Missouri	23,347	46,903	100,403	53,250	51,733	18,932	123,915	114	23
Montana	*	*	7,378	2,842	*	*	10,446	NA	42
Nebraska	36,748	44,188	54,085	9,293	37,168	8,727	55,188	22	2
Nevada	23,514	40,582	59,879	*	*	16,691	78,535	48	31
New Hampshire	22,807	33,045	42,364	5,651	*	*	55,658	28	31
New Jersey	101,832	144,203	285,311	102,430	*	*	428,514	98	50
New Mexico	*	2,929	28,497	7,578	*	*	20,482	873	-28
New York	186,504	342,743	603,487	197,135	564,423	131,474	893,032	76	48
North Carolina	57,881	81,998	136,703	41,332	115,949	48,335	205,616	67	50
North Dakota	*	2,437	4,227	*	*	*	6,277	73	48
Ohio	160,792	156,980	230,525	87,567	213,606	57,792	358,965	47	56
Oklahoma	96,730	163,703	95,138	31,321	*	*	92,947	NM	NM
Oregon	27,062	44,186	76,839	25,877	*	*	93,242	74	21
Pennsylvania	71,926	79,892	176,670	89,595	131,119	42,522	263,236	121	49
Puerto Rico	*	*	*	*	0	*	*	NA	NA
Rhode Island	*	20,628	30,919	*	*	1,908	49,215	50	59
South Carolina	25,229	32,824	63,914	9,704	68,487	18,648	96,839	95	52
South Dakota	*	3,516	2,839	1,652	*	*	5,448	-19	92
Tennessee	66,307	87,317	122,391	22,902	96,119	33,489	152,510	40	25
Texas	152,518	276,087	522,538	197,668	328,900	120,271	646,839	89	24
Utah	11,635	19,612	35,970	23,476	*	*	55,103	83	53
Vermont	*	1,551	7,773	*	*	*	16,230	401	109
Virgin Islands	0	*	*	*	0	*	*	NA	NA
Virginia	51,305	72,436	139,915	39,114	131,553	42,141	212,808	93	52
Washington	71,930	118,723	195,628	64,812	*	*	227,066	65	16
West Virginia	*	1,835	6,498	*	*	2,062	16,697	254	157
Wisconsin	18,599	34,262	76,257	17,800	*	*	127,755	123	68
Wyoming	*	*	*	*	*	*	*	NA	NA
Nationwide Reported Total	2,754,286	4,367,434	7,069,874	2,693,834	5,184,141	1,738,366	9,616,341	62 %	36 %

NA - Not Available.

NM - Not meaningful due to inconsistencies in reported data.

* Data withheld to maintain firm confidentiality.

1/ Some previously published data have been revised.

2/ Other includes wireline technologies other than asymmetric digital subscriber line (ADSL), optical fiber to the subscriber's premises, satellite, and (terrestrial) fixed wireless systems.

Table 8
High-Speed Lines by Type of User
as of June 30, 2001
(Over 200 kbps in at Least One Direction)

	Residential and Small Business	Other 1/	Total
Alabama	70,308	15,926	86,234
Alaska	15,288	5,618	20,906
Arizona	141,450	16,672	158,122
Arkansas	37,616	3,187	40,803
California	1,332,462	373,352	1,705,814
Colorado	128,198	19,022	147,220
Connecticut	138,552	10,505	149,057
Delaware	10,736	2,035	12,771
District of Columbia	22,243	16,858	39,101
Florida	547,207	103,960	651,167
Georgia	221,220	81,378	302,598
Hawaii	*	*	*
Idaho	17,616	2,617	20,233
Illinois	256,197	94,044	350,241
Indiana	62,335	18,029	80,364
Iowa	69,232	3,351	72,583
Kansas	96,393	5,341	101,734
Kentucky	23,557	15,740	39,297
Louisiana	102,516	19,169	121,685
Maine	32,898	5,251	38,149
Maryland	149,593	31,429	181,021
Massachusetts	312,711	44,545	357,256
Michigan	350,073	45,510	395,583
Minnesota	132,244	15,768	148,012
Mississippi	15,008	6,509	21,517
Missouri	108,458	15,457	123,915
Montana	9,528	918	10,446
Nebraska	49,912	5,276	55,188
Nevada	62,451	16,084	78,535
New Hampshire	49,992	5,666	55,658
New Jersey	369,508	59,006	428,514
New Mexico	17,513	2,969	20,482
New York	738,924	154,108	893,032
North Carolina	163,507	42,109	205,616
North Dakota	5,645	632	6,277
Ohio	299,240	59,725	358,965
Oklahoma	81,584	11,363	92,947
Oregon	82,919	10,323	93,242
Pennsylvania	216,551	46,685	263,236
Puerto Rico	*	*	*
Rhode Island	46,622	2,593	49,215
South Carolina	78,183	18,656	96,839
South Dakota	4,479	969	5,448
Tennessee	119,464	33,046	152,510
Texas	387,910	258,929	646,839
Utah	47,256	7,847	55,103
Vermont	15,021	1,209	16,230
Virgin Islands	*	*	*
Virginia	178,648	34,160	212,808
Washington	204,137	22,929	227,066
West Virginia	15,223	1,474	16,697
Wisconsin	105,574	22,181	127,755
Wyoming	*	*	*
Nationwide Reported Total	7,812,375	1,803,966	9,616,341

* Data witheld to maintain firm confidentiality.

1/ Other includes medium and large business, institutional, and government customers.

Table 9
Percentage of Zip Codes with High-Speed Lines in Service 1/

Number of Providers	December 1999	June 2000	December 2000	June 2001
Zero	40.3 %	33.0 %	26.8 %	22.2 %
One	26.0	25.9	22.7	20.3
Two	15.5	17.8	18.4	16.7
Three	8.2	9.2	10.9	13.2
Four	4.3	4.9	6.1	8.2
Five	2.7	3.4	4.0	4.9
Six	1.7	2.5	3.0	3.6
Seven	0.8	1.7	2.3	2.8
Eight	0.3	0.8	2.0	2.2
Nine	0.2	0.4	1.6	1.9
Ten or More	0.0	0.4	2.4	3.9

1/ Some previously published data have been revised.

High-Speed Providers by Zip Code

(As of June 30, 2001)

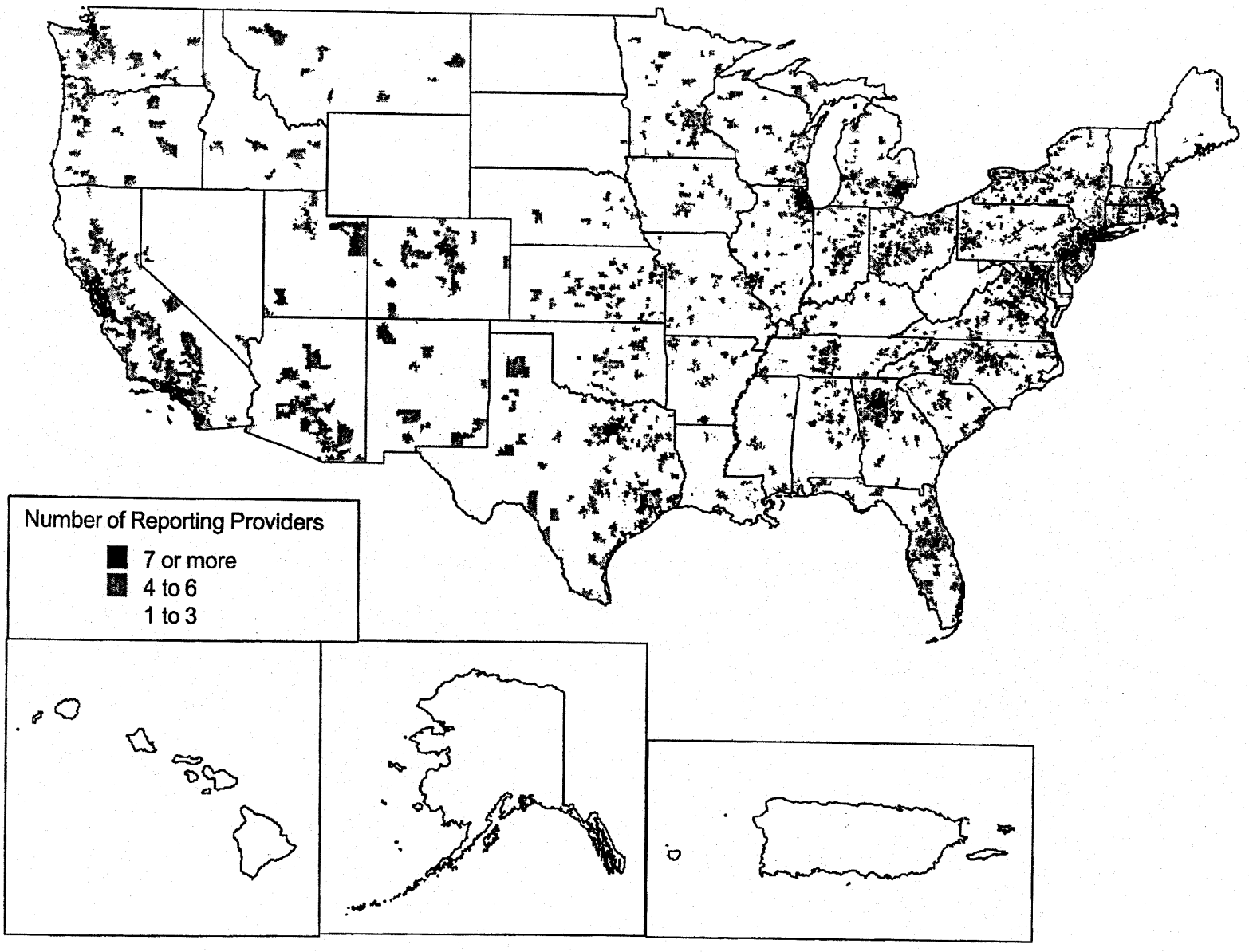

Table 10
Percentage of Zip Codes with High-Speed Lines in Service
as of June 30, 2001
(Over 200 kbps in at Least One Direction)

	Number of Providers					
	Zero	One - Three	Four	Five	Six	Seven or More
Alabama	20 %	66 %	11 %	3 %	1 %	0 %
Alaska	79	18	3	0	0	0
Arizona	8	37	14	10	12	20
Arkansas	39	54	7	0	0	0
California	7	29	9	7	7	41
Colorado	15	48	10	6	3	18
Connecticut	3	48	11	10	12	16
Delaware	0	72	28	0	0	0
District of Columbia	7	15	4	7	4	63
Florida	2	35	17	13	9	24
Georgia	16	51	10	5	4	13
Hawaii	20	80	0	0	0	0
Idaho	34	56	5	5	0	0
Illinois	18	56	5	3	2	16
Indiana	19	61	8	5	1	6
Iowa	49	45	4	1	0	0
Kansas	35	52	8	4	1	0
Kentucky	40	57	3	0	0	0
Louisiana	21	75	4	0	0	0
Maine	35	61	3	1	0	0
Maryland	12	37	10	4	8	28
Massachusetts	1	31	18	10	11	29
Michigan	10	57	8	5	4	16
Minnesota	35	46	7	4	5	3
Mississippi	28	66	6	1	0	0
Missouri	35	50	4	4	3	4
Montana	48	48	3	0	0	0
Nebraska	44	49	5	2	0	0
Nevada	22	47	17	11	2	2
New Hampshire	8	64	14	8	4	2
New Jersey	1	25	13	10	10	40
New Mexico	34	56	5	3	2	1
New York	8	45	11	8	6	20
North Carolina	11	64	14	5	3	2
North Dakota	72	28	0	0	0	0
Ohio	8	59	15	7	4	6
Oklahoma	29	53	5	5	5	3
Oregon	9	64	11	7	6	3
Pennsylvania	22	50	7	6	3	12
Puerto Rico	0	100	0	0	0	0
Rhode Island	6	43	26	25	0	0
South Carolina	16	67	13	3	1	0
South Dakota	63	37	1	0	0	0
Tennessee	18	62	12	5	2	2
Texas	17	48	8	5	3	19
Utah	25	42	8	6	6	13
Vermont	25	74	1	0	0	0
Virginia	18	51	6	7	3	15
Washington	11	50	11	11	8	9
West Virginia	58	41	0	0	0	0
Wisconsin	16	62	8	5	5	4
Wyoming	47	53	0	0	0	0
Nationwide	22 %	50 %	8 %	5 %	4 %	11 %

Table 11
High-Speed Subscribership
Ranked by Population Density 1/
(Over 200 kbps in at Least One Direction)

Deciles (Blocks of Zip Codes Grouped by Density)	Persons per Square Mile (In Each Decile of Zip Codes)	Percent of Zip Codes in Decile with at Least One High-Speed Subscriber			Percent of Population in Decile that Resides in Zip Codes with High-Speed Service		
		Dec 1999	Dec 2000	Jun 2001	Dec 1999	Dec 2000	Jun 2001
90-100	More Than 3,147	96.1 %	98.2 %	98.1 %	98.9 %	99.9 %	99.9 %
80-90	947-3,147	93.2	97.1	97.1	98.5	99.8	99.8
70-80	268-947	87.5	95.7	95.6	96.2	99.3	99.5
60-70	118-268	77.7	91.5	92.3	91.4	98.1	98.8
50-60	67-118	66.9	85.9	87.5	83.3	95.0	96.8
40-50	41-67	53.7	76.1	80.9	72.3	87.9	93.0
30-40	25-41	40.9	65.0	72.8	60.0	80.0	87.3
20-30	15-25	29.8	50.1	58.9	50.9	69.4	78.4
10-20	6-15	26.7	38.5	51.1	50.2	61.9	74.6
0-10	Fewer Than 6	19.9	27.5	36.8	38.5	49.9	60.7

1/ Some previously published data have been revised.

Table 12
High-Speed Subscribership
Ranked by Household Income 1/
(Over 200 kbps in at Least One Direction)

Deciles (Blocks of Zip Codes Grouped by Median Household Income)	Median Household Income (In Each Decile of Zip Codes)	Percent of Zip Codes in Decile with at Least One High-Speed Subscriber			Percent of Population in Decile that Resides in Zip Codes with High-Speed Service		
		Dec 1999	Dec 2000	Jun 2001	Dec 1999	Dec 2000	Jun 2001
90-100	$53,494 to $291,938	90.8 %	96.1 %	96.4 %	98.4 %	99.8 %	99.8 %
80-90	$43,617 to $53,478	77.1	88.9	90.7	95.8	99.0	99.3
70-80	$38,396 to $43,614	67.0	79.5	83.8	94.3	97.8	98.5
60-70	$34,744 to $38,395	59.9	74.5	80.0	91.5	96.6	97.9
50-60	$32,122 to $34,743	55.3	71.2	77.3	90.0	95.9	97.4
40-50	$29,893 to $32,121	53.7	67.4	73.4	88.9	94.5	96.3
30-40	$27,542 to $29,892	50.4	66.9	73.5	86.1	93.8	95.9
20-30	$24,855 to $27,541	50.1	65.1	69.6	85.7	93.1	95.2
10-20	$21,645 to $24,855	46.3	61.2	67.4	83.0	91.1	93.9
0-10	$0 to $21,644	41.7	54.9	59.1	83.8	91.5	94.1

1/ Some previously published data have been revised.

APPENDIX D

COMMENTERS:	ABBREVIATION:
Adelphia Business Solutions, Inc.	ABS
Alcatel USA, Inc.	Alcatel
Alliance for Public Technology & World Institute on Disability	APT & WID
Association of America's Public Television Stations	APTS
AT&T Corp.	AT&T
BellSouth Corporation	BellSouth
Burnstein, Dave	
Commonwealth of the Northern Mariana Islands	
Global Crossing Ltd.	Global Crossing
Global Photon Systems, Inc.	Global Photon
Hughes Network Systems, Hughes Communications Galaxy, Inc., Hughes Communications, Inc.	Hughes
Intel Corporation	
Intertainer, Inc	
Metromedia Fiber Network Services, Inc.	MFN
National Association of the Deaf	NAD
National Cable & Telecommunications Association, The	NCTA
National Exchange Carrier Association	NECA
National Grange of the Order of Patrons Husbandry	Grange
National Rural Telecommunications Cooperative	NRTC
New Networks Institute	NNI
Organization for the Promotion and Advancement of Small Telecommunications Companies	OPASTCO
City of Plano, Texas	
Progress & Freedom Foundation	PFF
Qwest Communications International, Inc.	Qwest
Ruby Ranch Internet Cooperative Association	Ruby Ranch
SBC Communications, Inc.	SBC
Sprint Corporation	Sprint
StarBand Communications Corporation	
State of Alaska	
Telecommunications for the Death, Inc.	TDI
Texas Coalition of Cities for Utility Issues	TCCFUI
Texas Public Utility Commission	Texas PUC
United States Telecom Association	USTA
Verizon Telephone Companies	Verizon
WorldCom, Inc.	WorldCom

COMMENTERS:	ABBREVIATION:
Alcatel USA, Inc.	Alcatel
Alliance for Public Technology	APT
American Foundation for the Blind	AFB
American ISP Association	AISPA
AT&T Corp.	AT&T
BellSouth Corporation	BellSouth
City of Boulder, Colorado	
City of Carrollton, Texas	
City of Colorado Springs, Colorado	
Competitive Telecommunications Association	CompTel
Corning Incorporated	Corning
Covad Communications Company	Covad
EarthLink, Inc.	EarthLink
Hughes Network Systems, Hughes Communications Galaxy, Inc., Hughes Communications, Inc.	Hughes
National Association of Community Action Agencies	NACAA
National Association of Telecommunications Officers and Advisors and the National League of Cities	NATOA and NLC
National Rural Telecommunications Cooperative	NRTC
National Telephone Cooperative Association	NTCA
Progress & Freedom Foundation	PFF
Qwest Communications International, Inc.	Qwest
SBC Communications, Inc.	SBC
Telecommunications for the Deaf, Inc.	TDI
Telecommunications Industry Association	TIA
Telecommunications Right-of-Way Coalition	TelROW
Texas Coalition of Cities for Utility Issues	TCCFUI
United States Telecom Association	USTA
Velocita Corporation	Velocita
Verizon Telephone Companies	Verizon
WorldCom, Inc.	WorldCom

Tennessee Docket No. 01-00987

Rebuttal Exhibit CKC-2

Exhibit CKC-2

BELLSOUTH'S REVISION OF EXHIBIT PLH-2

Residential Complete Choice Local Service + ADSL Internet Access Service Under Resale

Notes		UNE ZONES 1, 2, and 3			
		Month 1	**Month 2+**	**12 Months**	**24 Months**
	REVENUES				
1	Residential Line/ADSL Internet - All Features	$74.00	$74.00	$888.00	$1,776.00
	ADSL Service Install Fee	$100.00		$100.00	$100.00
2	Subscriber Line Charge	$6.00	$6.00	$72.00	$144.00
	Carrier Access Revenue	$0.90	$0.90	$10.80	$21.60
		$180.90	$80.90	$1,070.80	$2,041.60
	DIRECT COSTS				
	Customer Acquisition spending	$30.00		$30.00	$30.00
	Non-Recurring Fixed Costs:				
	NRC ADSL Circuit Turnup	$110.00		$110.00	$110.00
	NRC Process Fees	$3.50		$3.50	$3.50
	NRC Switch Switch as/is	$1.03		$1.03	$1.03
	Total Non-Recurring	$144.53		$144.53	$144.53
	Monthly Recurring Fixed Charges				
	MRC Complete Choice Resale (16% discount)	$24.36	$24.36	$292.32	$584.64
	MRC BellSouth wholesale ADSL transport	$33.00	$33.00	$396.00	$792.00
2	MRC Subscriber Line Charge Resale	$6.00	$6.00	$72.00	$144.00
	MRC Email & Bandwidth	$4.50	$4.50	$54.00	$108.00
	Total Monthly Recurring	$67.86	$67.86	$814.32	$1,628.64
	Total Direct Costs	$212.39	$67.86	$958.85	$1,773.17
	Gross Margin	-$31.49	$13.04	$111.95	$268.43
	Gross Margin Percent	-17.4%	16.1%	10.5%	13.1%

1 Competitive BellSouth Product retails for $74.00 (Complete Choice $29, FastAccess ADSL Internet $45)

2 Subscriber Line Charge (SLC) Ceiling increased to $6.00 per BellSouth's tariff filing effective July 2, 2002. On resale, BellSouth charges CLECs the same SLC as BellSouth charges other end users.

3 ADUF and ODUF charges are not applicable on resale.

#453080

AFFIDAVIT

STATE OF: Georgia
COUNTY OF: Fulton

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

She is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 01-00987 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 30 pages and 2 exhibit(s).

Cynthia K. Cox

Sworn to and subscribed
before me on July 2, 2002

NOTARY PUBLIC

MICHEALE F. BIXLER
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2005

CERTIFICATE OF SERVICE

I hereby certify that on July 9, 2002, a copy of the foregoing document was served on the parties of record, via the method indicated:

[ ] Hand
[X] Mail
[ ] Facsimile
[ ] Overnight
[ ] Electronic

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