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BELLSOUTH TELECOMMUNICATIONS, INC.
REBUTTAL TESTIMONY OF WILEY G. (JERRY) LATHAM
BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 990649-TP
(PHASE II)
AUGUST 21, 2000

Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.

A. My name is Wiley G. (Jerry) Latham. My business address is 3535 Colonnade Parkway, Birmingham, Alabama. I am BellSouth's Product Manager for Unbundled Loops within Interconnection Services – Marketing and have been employed by BellSouth for fifteen years.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to certain statements in the direct testimony of Eric McPeak on behalf of Broadslate Networks, Inc., Cleartel Communications, Inc, Florida Digital Network, and Network Telephone Company; Terry Murray on behalf of BlueStar Networks, Inc., Covad Communications Company, and Rhythms Links, Inc; and Steven McMahon on behalf of Sprint. In the process, I provide additional information about Unbundled Loop Modification (ULM) and additional explanation of the types and use of xDSL and voice grade unbundled loops offered by BellSouth.

1 Q. MR. MCPEAK, MR. MCMAHON, AND MS. MURRAY COMPLAIN
2 ABOUT THE RATES PROPOSED BY BELLSOUTH FOR UNBUNDLED
3 LOOP MODIFICATION (ULM). PLEASE RESPOND.

4

5 A. BellSouth has proposed rates for ULM that are designed to recover the costs
6 that BellSouth will incur when it performs loop conditioning on behalf of a
7 requesting carrier, such as the removal of load coils or bridged tap. BellSouth
8 has proposed three nonrecurring rates for ULM. These include ULM Load
9 Coil/Equipment Removal – Short; ULM Load Coil/Equipment Removal –
10 Long; and ULM -Bridged Tap Removal.

11

12 Q. WHY DO BELLSOUTH'S PROPOSED RATES DISTINGUISH
13 BETWEEN ULM LOAD COIL/EQUIPMENT REMOVAL - SHORT AND
14 ULM LOAD COIL/EQUIPMENT REMOVAL - LONG?

15

16 A. Load coil removal was divided into two categories to differentiate the
17 anticipated work activity for loops less than 18 kft (designated as Short) and
18 loops over 18 kft (designated as Long). With respect to loops over 18 kft,
19 BellSouth will remove load coils and other equipment from only those specific
20 loops ordered by the requesting carrier. By contrast, for loops under 18 kft,
21 BellSouth assumes on average that load coils will be removed from ten pair at
22 one time. In addition, the average number of load coils is dependent upon the
23 length of the particular loop. BellSouth witness Greer addresses the
24 reasonableness of these assumptions in his rebuttal testimony.

25

1 Q. MR. MCPEAK, MR. MCMAHON, AND MS. MURRAY QUESTION
2 BELLSOUTH'S ASSUMPTION THAT IT WILL REMOVE LOAD COILS
3 AND OTHER EQUIPMENT FROM LOOPS LESS THAN 18 KFT FOR
4 TEN PAIR AT ONE TIME ON AVERAGE. HOW DO YOU RESPOND?

5

6 A. Mr. Greer will address the technical aspects of this assumption in his rebuttal
7 testimony. However, the point Mr. McPeak, Mr. McMahan, and Ms. Murray
8 overlook is that BellSouth developed the 10-pair assumption based upon
9 BellSouth's own experiences and practices in administering its network. This
10 same assumption is incorporated into the cost studies for BellSouth's own
11 tariffed Business Class ADSL service, which assume that BellSouth will
12 remove load coils and related equipment from loops less than 18 kft for 10 pair
13 at one time on average. Incorporating the same 10-pair load coil removal
14 assumption in both its ADSL and UNE cost studies ensures consistency.

15

16 Q. WHY IS IT THAT BELLSOUTH'S PROPOSED RATE FOR ULM –
17 BRIDGED TAP REMOVAL DOES NOT DISTINGUISH BETWEEN THE
18 LENGTH OF THE LOOP FROM WHICH BRIDGED TAP IS BEING
19 REMOVED?

20

21 A. Unlike load coil removal, the work involved in removing bridged tap is not
22 dependent on loop length.

23

24

25

1 Q. MS. MURRAY COMPLAINS ABOUT THE APPROACH USED BY
2 BELLSOUTH IN DEVELOPING ITS ULM – ADDITIVE. ARE HER
3 COMPLAINTS VALID?

4
5 A. No. The ULM - Additive rate is used to recover part of the cost of removing
6 load coils on copper loops of less than 18 kft. Since BellSouth removes load
7 coils from such loops for 10 pair at one time on average, and only 1/10 of the
8 cost of load coil removal is reflected in the rate for ULM Load Coil/Equipment
9 Removal - Short, the decision must be made as to how to recover the
10 remaining 90% of the cost for the load coil removal. BellSouth's additive
11 approach is a reasonable method of recovering the remaining 90% of the load
12 coil removal, notwithstanding Ms. Murray's claims to the contrary.

13
14 Q. PLEASE EXPLAIN HOW THE RATE FOR ULM – ADDITIVE WAS
15 DEVELOPED.

16
17 A. Because load coils are removed on average 10 pair at one time for loops of
18 less than 18 kft, BellSouth developed the additive by allocating the 10 pair as
19 follows: 20% of the cost is assigned to ULMs, 40% of the cost is assigned to
20 BellSouth, and 40% of the cost is assigned to the following xDSL loops:
21 ADSL-compatible loops, HDSL-compatible loops, and Unbundled Copper
22 Loops – Short (since these are the xDSL loop types of less than 18 kft affected
23 by the 10-pair load coil removal assumption). These assumptions are
24 reasonable and are based on BellSouth's best judgment as to the market
25 penetration that will be achieved by competing carriers offering xDSL services.

1 Mr. McMahon's claim that BellSouth's assumptions are "questionable"
2 because they assume a "total penetration of 60% in BST's territory" is wrong.
3 First, BellSouth does not assume that competing carriers will be using 60% of
4 all xDSL loops. Rather, BellSouth assumes that the 40% of the cost that is not
5 assigned to ULM or to Bellsouth will either be recovered from another
6 requesting carrier or not recovered at all. Second, many carriers competing
7 against BellSouth have developed business plans solely around serving the
8 xDSL market.

9
10 In developing the additive for unloading 10 pair at one time, it is assumed that
11 2 pair will be used by the requesting carrier ordering the ULM Load
12 Coil/Equipment Removal – Short (even though, historically, orders for load
13 coil removal for loops less than 18 kft have been for one loop at a time). Forty
14 percent of the cost for unloading the 10 pair is essentially absorbed by
15 BellSouth. In other words, it is assumed that 4 pair of the 10 unloaded pair
16 will be used by BellSouth, which means that this 40% is ignored in developing
17 the ULM - Additive. The remaining 40% of the total cost of unloading 10 pair
18 is spread across the entire forecast of ADSL-compatible loops, HDSL-
19 compatible loops, and Unbundled Copper Loops – Short. Thus, the remaining
20 40% of the cost of unloading 10 pair is then said to be an "additive cost" for
21 these types of xDSL loops. This additive cost is included in the nonrecurring
22 rate element for ADSL-compatible loops, HDSL-compatible loops, and
23 Unbundled Copper Loops – Short.

24
25

1 Q. MS. MURRAY CONTENDS THAT BELLSOUTH'S ULM – ADDITIVE
2 CREATES THE POTENTIAL FOR BELLSOUTH OVER-RECOVERING
3 ITS LOOP CONDITIONING COSTS. DO YOU AGREE?

4
5 A. No. While I do not disagree with Ms. Murray's mathematical
6 calculations on pages 92 and 93 of her testimony, she is looking at the issue
7 from the wrong perspective. BellSouth developed its ULM - Additive based
8 upon total demand, not on a carrier by carrier basis. If one were to look at
9 total demand, as BellSouth did in developing its ULM – Additive, there is no
10 over-recovery of loop conditioning costs. Indeed, using Ms. Murray's
11 example, if a competitor were to order two of the ten loops conditioned by
12 BellSouth, but no competitor subsequently ordered four of the remaining ten
13 loops, BellSouth would never recover all of the costs of having removed the
14 load coils.

15
16 Q. MS. MURRAY ASSERTS THAT "BELLSOUTH SHOULD OFFER A
17 SINGLE TYPE OF TWO-WIRE DSL-CAPABLE LOOP." DO YOU
18 AGREE?

19
20 A. No. The rates BellSouth has proposed for the loops intended to support xDSL
21 services correspond to the loops BellSouth actually offers to requesting
22 carriers and that requesting carriers can and do purchase from BellSouth.

23 These include:

24 (a) ISDN loop – Standard 2-wire Basic Rate ISDN (BRI) circuits that
25 support 2B+D traffic;

- 1 (b) Unbundled Digital Channel – This loop is the same as the 2-wire
2 ISDN loop above, except it is provisioned uniquely to support
3 IDSL service;
- 4 (c) ADSL-compatible loops – 2-wire loop that is provisioned only on
5 copper facilities and meets industry specifications for Revised
6 Resistance Design (RRD). This means non-loaded copper, less
7 than 18 kft, no more than 6 kft of inclusive bridged tap and has
8 1300 ohms or less of resistance.
- 9 (d) HDSL-compatible loops – 2-wire or 4-wire circuits that are only
10 provisioned on copper and meet industry specifications for Carrier
11 Serving Area (CSA) loops. This means non-loaded copper, less
12 than 12 kft, no more than 2.5 kft of bridged tap and has 850 ohms
13 or less of resistance.
- 14 (e) Unbundled Copper Loops (UCL) - Short – 2-wire or 4-wire
15 circuits that are provisioned using industry standard specifications
16 for Resistance Design (RD) loops. This means non-loaded copper,
17 less than 18 kft, no more than 6 kft of exclusive bridged tap and has
18 1300 ohms or less of resistance.
- 19 (f) Unbundled Copper Loops (UCL) - Long – 2-wire or 4-wire circuits
20 that are provisioned using non-loaded copper. They are longer
21 than 18 kft, may have up to 12 kft of exclusive bridged tap and may
22 have up to 2800 ohms of resistance.

23 Each of these product offerings is different, and Ms. Murray’s attempt to have
24 a “one rate fits all” ignores these differences.

25

1 Q. WILL EACH OF THE LOOP TYPES OFFERED BY BELLSOUTH
2 SUPPORT EACH CARRIER'S xDSL OFFERINGS?

3

4 A. Not necessarily, which is one reason BellSouth offers a number of different
5 loop types so that each carrier can decide for itself which particular loop type
6 will support its particular xDSL service. XDSL services are highly dependent
7 upon the equipment used to provide that service. For example, one vendor's
8 DSLAM may operate fine on an 18 kft loop with minimal bridged tap, while
9 another's may not. Therefore, BellSouth cannot guarantee that an xDSL
10 service will work at any particular bit-rate or function at all on every
11 unbundled loop provided by BellSouth. However, BellSouth does guarantee
12 that the xDSL loop described above will meet a pre-defined set of
13 transmission characteristics, which are usually dictated by industry standards.
14 BellSouth publishes a technical reference document (TR73600) that contains
15 a very detailed listing of the loops' characteristics, which allows the
16 requesting carrier to determine for itself how its equipment will operate on
17 any given loop type. Thus, BellSouth is in no way attempting to "dictate
18 what services a competitor may provide over an unbundled loop," as Ms.
19 Murray claims.

20

21 Q. ARE THERE OTHER TYPES OF XDSL LOOPS THAT AN ALEC MAY
22 REQUIRE THAT BELLSOUTH DOES NOT CURRENTLY OFFER?

23

24 A. Not to my knowledge. The types of xDSL loops offered by BellSouth are
25 capable of supporting all current xDSL technologies in use. However, as new

1 xDSL technologies are introduced, BellSouth will work with the industry to
2 determine if additional types of xDSL loops are required.

3

4 Q. MS. MURRAY CLAIMS THAT BELLSOUTH'S DISTINCTION
5 BETWEEN ITS UCL-SHORT LOOP OFFERING AND ITS UCL-LONG
6 LOOP OFFERING IS NOT APPROPRIATE. PLEASE RESPOND.

7

8 A. The ironic point here is that BellSouth's UCL-Short and UCL-Long loop
9 offerings are consistent with requests by at least one of Ms. Murray's clients
10 (as well as requirements of the FCC). BellSouth previously advised Ms.
11 Murray's client that UCLs should be limited to loops of a length within which
12 it is technically feasible to provide xDSL services. However, at least one of
13 Ms. Murray's clients insisted on being able to obtain an unbundled copper loop
14 that was unlimited in length, and BellSouth complied with this request by
15 offering the UCL – Long. Now Ms. Murray criticizes BellSouth for giving her
16 client what it requested. Ms. Murray also says loops longer than 21,000 feet
17 should not be considered for xDSL services, even though at least one of her
18 clients expressly requested a loop that was unlimited in length.

19

20 Q. MS. MURRAY COMPLAINS ABOUT THE DIFFERENCE IN
21 BELLSOUTH'S PROPOSED RATES FOR UCL – SHORT AND NON-
22 DESIGNED SERVICE LEVEL 1 (OR SL1) LOOPS. WHAT IS MEANT
23 BY THE TERM SL1 LOOP AND HOW DOES IT DIFFER FROM OTHER
24 VOICE GRADE LOOPS OFFERED BY BELLSOUTH?

25

1 A. An SL1 loop is a 2-wire voice grade non-designed loop that is intended to
2 support POTS-like voice grade services. It may be provisioned using any
3 technology that will provide voice grade services. This includes copper,
4 Digital Loop Carrier (“DLC”), fiber, etc. In order to reduce the cost for these
5 loops, they are not provisioned with test points and do not come with a Design
6 Layout Record (DLR) or any type of coordinated conversion activity.

7

8 By contrast, a Service Level Two (or SL2) loop is a designed loop that is
9 available in 2-wire and 4-wire versions and may be provisioned using any type
10 of loop technology. Unlike an SL1 loop, the SL2 loop comes standard with a
11 test point, DLR and Order Coordination, which is a manual coordinated
12 conversion process that ensures the end user’s dial-tone is not interrupted for
13 more than 15 minutes.

14

15 Q. WHAT IS THE DIFFERENCE BETWEEN SL1 LOOPS, SL2 LOOPS, AND
16 xDSL LOOPS?

17

18 A. SL1 and SL2 loops are designed to support voice grade services. By contrast,
19 xDSL loops such as HDSL-compatible and ADSL-compatible loops and
20 Unbundled Copper Loops are intended to support the transmission of higher
21 frequency signals used in xDSL technologies. In many instances, electronic
22 equipment such as a DLC used to provide SL1 and SL2 service will not pass
23 the higher frequency xDSL signals.

24

25

1 Q. IS IT POSSIBLE FOR A CARRIER TO USE EITHER AN SL1 LOOP OR
2 AN SL2 LOOP TO PROVIDE xDSL SERVICE TO ITS CUSTOMER?

3

4 A. Yes. However, the xDSL service may or may not work, depending upon the
5 type of loop facilities used to provide the SL1 or SL2 loop. If the SL1 or SL2
6 loop is provided using a DLC system, is provided using loaded copper pairs, or
7 if the SL1 or SL2 loop has excessive bridged tap, the xDSL service may not
8 function properly. If, on the other hand, the requesting carrier knows that the
9 SL1 or SL2 loop is provisioned over non-loaded copper plant and the loop is
10 within the distance limitations for the xDSL technology being utilized, or if the
11 carrier utilizes BellSouth's loop makeup process to screen the loop facility at a
12 particular customer address, the carrier may decide to use an SL1 or SL2 loop
13 for its xDSL service. In cases where bridged tap may pose a problem, the
14 requesting carrier may order bridged tap removal as an unbundled network
15 element. In short, SL1 and SL2 loops are available for a requesting carrier as
16 a means to support its xDSL service (although not recommended by
17 BellSouth), but there are very real differences between these offerings –
18 differences that Ms. Murray conveniently ignores.

19

20 Q. PLEASE RESPOND TO MS. MURRAY'S CONTENTION THAT "A LOOP
21 IS A LOOP," A POSITION THAT SHE BASED ON THE FACT THAT
22 SPRINT AND GTE DID NOT PROPOSE A DISTINCTION BETWEEN
23 xDSL-CAPABLE LOOPS AND VOICE-GRADE LOOPS.

24

25

1 A. Ms. Murray's contention is wrong. While I am no expert on what loops either
2 Sprint or GTE offers, the only conclusion I can draw is that Sprint and GTE
3 do not offer the same selection of xDSL-capable loops that BellSouth offers.
4 However, all of BellSouth's xDSL loop offerings are optional. If Ms.
5 Murray's clients desire to utilize BellSouth's SL1 or SL2 offerings to provide
6 their xDSL service, that is their choice. BellSouth's xDSL-capable loops
7 represent simply another service offering from which requesting carriers can
8 choose. If Ms. Murray's clients do not want to use BellSouth's xDSL-capable
9 loops for their DSL services, they don't have to. Again, contrary to Ms.
10 Murray's claims, BellSouth does not, nor does it make any attempt to "dictate
11 what services a competitor may provide over an unbundled loop."

12

13 Q. PLEASE RESPOND TO MS. MURRAY'S CLAIM THAT ALECS WOULD
14 NOT NEED TO REQUEST "CLEAN COPPER LOOPS" IF ILECS HAD
15 "THE FORWARD-LOOKING NETWORK ARCHITECTURE THEY
16 ASSUMED IN THEIR RECURRING COST ANALYSES".

17

18 A. The fact is that xDSL loops (i.e., HDSL-compatible, ADSL-compatible and
19 UCL loops) are copper loops. Given this fact, basing rates for a service upon
20 a fiber technology that cannot even be used to provide that service would be
21 inappropriate. For Ms. Murray to contend that BellSouth should have
22 proposed rates for an xDSL-capable loop as if it were essentially the same as a
23 voice-grade loop is mixing apples and oranges. The xDSL-capable loops that
24 BellSouth offers are loops that meet certain design requirements necessary to

25

1 provide xDSL service. The same cannot be said about either an SL1 or SL2
2 loop.

3

4 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

5

6 A. Yes.

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8 PC DOCs #225382

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