

ORIGINAL

ATTACHMENT B

**BellSouth Telecommunications, Inc.
FPSC Docket No. 990649-TP
Request for Confidential Classification
Page 1 of 1
8/30/00**

**REQUEST FOR CONFIDENTIAL CLASSIFICATION OF BELLSOUTH
INFORMATION INCLUDED IN THE BLUESTAR/COVAD/RHYTHMS LINKS
DIRECT AND REBUTTAL TESTIMONY OF WITNESSES' TERRY L. MURRAY
AND JOSEPH P. RIOLO FILED JULY 31, 2000 IN FLORIDA DOCKET NO.
990649-TP**

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10944 SEP-58

FPSC-RECORDS/REPORTING

Rebuttal Testimony of Joseph P. Riolo

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END PROPRIETARY ***

18
19 All of the preceding detail comes from BST's Response to Rhythms'
20 Request for Production of Documents 3, Attachment 9.

21 Each of these estimates greatly exaggerates the time required, on
22 average, for a qualified technician to perform the required task. Some of
23 the individual tasks, in the sequence from items 1 through 4 above, such as

Rebuttal Testimony of Joseph P. Riolo

1 item 1, can be accomplished in a minute or less. Considering the entire
2 series of tasks in sequence (including setup time), I estimate that it might
3 take an average of 25 minutes in total.

4 Likewise, the cumulative *** BST PROPRIETARY █████ END
5 PROPRIETARY *** presumed error rate reflected in items 5 and 6 is
6 completely inconsistent with the performance level I would expect. Even
7 being extremely conservative and retaining BST's task times, I
8 recommend allowing BST to include only a maximum of a 5% occurrence
9 for each type of error.

10 Q. Please summarize the findings you have just presented.

11 A. The following table compares the BST reported times by function with the
12 times I believe are appropriate for either a forward-looking cost study of a
13 basic loop, including an xDSL loop, or a realistic study of a designed loop
14 process.

Group / Function	BST Reported Time	Realistic Time Assuming a Forward- Looking Process with No Design	Realistic Time Assuming BST's Engineered/ Designed Loop Process
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1 terminal. This is true over any reasonable projection of average demand
2 for ISDN service. To the extent that ILECs further inflate ISDN costs
3 based on the presumption that they will somehow incur additional central
4 office costs (such as line cards at the central office) to provide
5 ISDN/IDSL-capable loops, that presumption has no basis in fact.

6 **Q. Do BST's loop directives support your statement that the only cost**
7 **differential between ISDN/IDSL and POTS lines is the cost of the**
8 **channel cards when provisioned over fiber/DLC?**

9 **A. Yes. BST "Loop Technology Deployment Directives" [RL: 98-09-**
10 **019BT, December 8, 1998] clearly indicate that ISDN is not so different**
11 **from POTS:**

12 ***** BST PROPRIETARY**

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

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Rebuttal Testimony of Joseph P. Riolo

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END PROPRIETARY ***

8

Q. How should the ILECs calculate recurring charges for ISDN/IDSL

9

loops?

10

A. I agree with Ms. Murray that recurring charges for ISDN/IDSL loops

11

should be set at the recurring charge for basic loops, plus an increment to

12

account for the higher cost of an ISDN card at the RT as compared to a

13

POTS card, weighted by the percentage of fiber feeder in the forward-

14

looking network.

15

Q. Is it necessary for an ISDN-capable loop to be “designed” or

16

engineered?

17

A. No. As I explained above, ISDN can be provided over standard loop

18

facilities. ILECs have provisioned ISDN as a standard, non-designed and

19

non-engineered service for years.

20

VI. ISSUE 3B: THERE IS NO VALID ENGINEERING BASIS FOR A

21

COST STUDY FOR XDSL-CAPABLE LOOPS TO MAKE

Rebuttal Testimony of Joseph P. Riolo

1 services and other broadband services to the substantial majority of SBC
2 end users using currently available DLC technology, will produce that
3 benefit by delivering "annual cost structure improvements ... targeted to
4 reach \$1.5 billion by 2004 ... with network improvements paying for
5 themselves on an NPV basis." [See SBC Investor Briefing No. 211, SBC
6 Announces Sweeping Broadband Initiative, October 18, 1999, at 10,
7 attached as Exhibit _____ (TLM-3) to Ms. Murray's testimony.]

8 **Q. Do the Florida ILECs intend to provide their own broadband services
9 and unbundled loops over fiber/DLC systems?**

10 **A. Yes.** Sprint witness Mr. McMahon, for example, notes at page 17 of his
11 direct testimony, when discussing xDSL, that "[i]n the near future, this
12 technology will also be available via NGDLCs in Sprint's local networks."
13 BST admits that it is currently testing DLC systems for this purpose and
14 that they will be available in the near future. [BST's Response to
15 Rhythms' Interrogatories 78-81.] BST's "Loop Technology Deployment
16 Directives" [RL: 98-09-019BT, December 8, 1998] provide a great deal of
17 evidence that BST has in fact steadily been moving in this direction since
18 at least 1998, if not longer. Indeed, in its loop directives, BellSouth stated:

19 *****BEGIN BST PROPRIETARY** [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

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Rebuttal Testimony of Joseph P. Riolo

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21 [REDACTED] **END PROPRIETARY***** Any other
22 determination will inevitably harm the competitive market for xDSL
23 services.

1 Q. Are any of the ILECs providing conditioning as part of their federally
2 tariffed DSL offerings without charging their customers for such
3 conditioning?

4 A. Yes. BellSouth performs conditioning as part of its offering and appears
5 not to charge for the conditioning.

6 *** BEGIN BST PROPRIETARY [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 END PROPRIETARY*** [Outside Plant Engineering Methods and

22 Procedures for BellSouth® ADSL Service, 915-800-019PR, at 7, Sept. 30,

Rebuttal Testimony of Joseph P. Riolo

1 A. Yes. According to discovery responses, BST is currently using CSA and
2 has been since 1982:

3 New outside plant loop facilities placed today are
4 based primarily on digital loop carrier platforms and
5 associated fiber and/or copper distribution facilities using
6 Fiber/Carrier Serving Area (FSA/CSA) design concepts to
7 provide both voice grade and digital services.

8 [BST's Response to Rhythms' Interrogatory 62.] BST has also stated that:

9 Since the introduction of CSA design in 1982,
10 BellSouth (formerly Southern Bell/South Central Bell) has
11 used CSA design guidelines for new cable facilities where
12 digital loop carrier is used for feeder facilities, although
13 BellSouth does not employ these guidelines in every
14 instance.

15 [BST's Response to Rhythms Interrogatory 67.]

16 BST has also assumed CSA design in its recurring unbundled loop
17 cost study. [See BST, Milner Direct at 23, and BST's Response to
18 Rhythms First Set of Interrogatory No. 84.]

19 Q. Other than adopting the CSA guidelines 18 years ago, has BST given
20 any indication of its plans to modernize its network in such a way as
21 to eliminate load coils?

22 A. Yes. As I discussed in Section VI. above, *** BEGIN BST

23 PROPRIETARY [REDACTED]

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[REDACTED]

[REDACTED] **END PROPRIETARY *****

Such systems are free of load coils.

Q. What type of outside plant design does GTE use?

A. According to discovery responses, GTEFL has used its Electronic Serving Area (“ESA”) and Customer Access Facilities (“CAF”) guidelines in the design of outside plant for approximately 10 years. (I do not know what GTE used before that time.) [GTE’s Response to Rhythms’ Interrogatory 44.]

Q. What load coil guidelines are dictated under GTE’s guidelines?

A. GTE’s guidelines appear to be *** **GTE PROPRIETARY** similar to CSA guidelines. Specifically, GTE’s guidelines restrict the usage of load coils and bridged tap in a similar manner in all but the most rural applications. [See, e.g., GTE cost study at Tab 30 34-35.] GTE’s guidelines are largely market-based but call for migration to substantially CSA-like design that GTE refers to as an “Electronic Serving Area” or “ESA” in even “Moderately Competitive Markets.” [See, e.g., GTE cost study at Tab 30 47-51.] In areas that are more than “Moderately Competitive,” GTE’s guidelines call for even stricter/more xDSL-friendly designs. Therefore, assuming that competition exists and is increasing in GTE’s Florida service areas, CSA-based cost analysis might be conservative for GTE. **END PROPRIETARY ***** Moreover, GTE’s

1 transitions the network towards present-day engineering standards. (The
2 ILECs should have been unbridging their pairs since the introduction of
3 the Serving Area Concept in 1972.)

4 Third, transmission of voice-grade service on these working
5 circuits is improved because the insertion loss, caused by the bridged tap,
6 is removed.

7 Fourth, the unbridged working circuits provide a base of
8 preconditioned pairs that could be utilized for future services that are
9 incompatible with excessive bridged tap; the ILECs could provision loops
10 for those services via a line and station transfer to one of the unbridged
11 working circuits in lieu of opening cable splices to unbridge an individual
12 pair at the time of the future service request. The ILECs should provide
13 these line and station transfers at no cost, should the ILECs decide not to
14 unbridge spare pairs. Indeed, as I showed above, *** BEGIN BST

15 PROPRIETARY [REDACTED]

16 [REDACTED] END

17 PROPRIETARY *** [See ADSL Deployment Directives at 7.]

18 Fifth, the unbridged working services now have less exposure to
19 maintenance problems, which will result in reduced customer trouble
20 reports.

21 Sixth, "conditioning" working service precludes the need to re-
22 enter a working splice on numerous occasions to "condition" one pair at a
23 time, which potentially causes customer outages.

1 in some cases, lead to substantial overstatement of the costs that BST would
2 actually incur to install plant.

3 **Q. How can the use of “in-plant” loading factors lead to substantial**
4 **overstatement of the costs that BST would actually incur to install plant?**

5 A. Two examples from BST’s recurring cost studies illustrate this point. First,
6 consider the cost to install a line card or channel unit in a remote terminal.
7 Although the electronics on the line cards for various types of service (*e.g.*,
8 ISDN vs. POTS) differ, the labor time required to “plug-in” the different types
9 of cards should be essentially the same. That is not the result that BST obtains
10 using its “in-plant” factor approach. Instead, the “in-plant” factor
11 methodology implicitly assumes that it costs BST *** **BST PROPRIETARY**
12 **██████████ END PROPRIETARY** *** as much to install an ISDN line card
13 as it costs to install a POTS line card, simply because BST assumes the same
14 relationship between the investment cost of the two card types.

15 Second, consider the costs to install various sizes of copper cable.
16 Cable installation costs exhibit what economists call “economies of scale”
17 because the cost to install larger cables does not differ substantially from the
18 cost of installing smaller cables. In other words, on a per-pair basis, installing
19 a 3,000-pair copper cable is much less expensive than installing a 25-pair
20 cable. Again, that is not the result that BST obtains using its “in-plant” factor
21 approach. Instead, BST assumes that the cost to install cables will increase in
22 direct proportion to the increased investment in those cables. The installation
23 cost for a 3,000-pair copper cable in BST’s model therefore is more than ***

1 **Q. Is Sprint's proposed ISDN adder reasonable?**

2 A. No. Sprint's proposed monthly recurring charge additive of \$14.60 is
3 excessive. This is especially apparent when compared to Sprint's proposed
4 two-wire analog prices: Sprint's proposed ISDN adder represents an increase
5 of almost 58% over the statewide average of Sprint's proposed monthly
6 analog loop prices. Because the adder is not deaveraged, it represents an even
7 higher percentage of loop prices in high-density areas. For example, for loops
8 within "Band 1," Sprint's proposed price for ISDN-capable loops is more than
9 double its proposed price for analog loops.

10 As I have explained, Sprint has incorrectly inflated central office and
11 remote terminal costs for digital loops; this appears to account for about ***
12 **SPRINT PROPRIETARY \$10.37 or 71% END PROPRIETARY ***** of
13 Sprint's proposed ISDN adder. In addition, Sprint has assumed an
14 unreasonably high cost for an ISDN line card as compared to a POTS line
15 card. *** **BST, GTE AND SPRINT PROPRIETARY** [REDACTED]
16 [REDACTED]
17 Sprint's card costs should not differ significantly from those of the other
18 incumbents operating in the state. [REDACTED]

19 [REDACTED]
20 [REDACTED] Using this estimate and correcting for Sprint's other
21 errors, I calculate that fiber-fed ISDN-capable loops would require an
22 additional *** **SPRINT PROPRIETARY \$78.40 END PROPRIETARY**
23 *** in investment per loop. This translates to an increase in loop prices of

1 DLC-RT Channel Unit Cards – Allocated based on number of
2 services provided by card. If a card provides for four services
3 by only two are working on the card, then 50% of the
4 investment is assigned to each service.

5 [BST’s Response to AT&T’s Interrogatory 147.]

6 Third, BST assumes that an ISDN-capable loop must be “designed,”
7 including a test point access. Mr. Riolo explains why this needlessly inflates
8 the cost of what is really a very standard offering.

9 **Q. Is BST’s proposed recurring charge for ISDN-capable loops reasonable?**

10 A. No. BST’s flawed approach to estimating ISDN costs leads to unreasonably
11 high recurring charges. BST proposes a statewide average monthly recurring
12 charge for ISDN-capable loops of \$29.80, about 67% more expensive than
13 BST’s proposed charge for analog loops. BST’s assumption that an ISDN-
14 capable loop must be “designed” accounts for \$2.33 of its cost increment for
15 ISDN-capable loops. Based on BST’s own estimate of RT line-card costs and
16 fill, the incremental investment required for ISDN-capable loops versus
17 analog loops would be approximately *** **BST PROPRIETARY** ██████████
18 **END PROPRIETARY** ***. I have been unable to determine the percentage
19 of fiber loops assumed in BST’s recurring cost study. However, if one
20 assumes the current percentage of fiber-fed loops in BST’s network (42.4%
21 according to BST’s Response to Rhythms’ Interrogatory 83), the weighted
22 additional investment needed for ISDN-capable loops as compared to SL-1
23 loops would be *** **BST PROPRIETARY** ██████████ **END PROPRIETARY**

1 ***. This translates to an ISDN adder of about *** **BST PROPRIETARY**
2 **END PROPRIETARY** *** per month. In contrast, BST's loop model
3 (BSTLM©) ludicrously calculates almost *** **BST PROPRIETARY** \$644
4 **END PROPRIETARY** *** in additional digital circuit investment per ISDN-
5 capable loop.

6 **III. THE COMMISSION SHOULD ADOPT NONRECURRING COSTS**
7 **THAT REFLECT FORWARD-LOOKING COST PRINCIPLES AND**
8 **EFFICIENT, PRO-COMPETITIVE PRACTICES.**

9 **A. The Incumbents Must Assume the Same Forward-Looking**
10 **Network Architecture in Their Nonrecurring Cost Studies That**
11 **They Assumed in Their Recurring Cost Studies for Voice-Grade**
12 **Loops; However, None of the Incumbents Has Done So Across-**
13 **The-Board.**

14 **Q. You stated in Section II.A above that each incumbent should have based**
15 **all of its cost studies — both recurring and nonrecurring — on a single,**
16 **consistent, forward-looking network architecture. Why is such**
17 **consistency in network design assumptions important?**

18 **A.** There are at least three reasons that recurring and nonrecurring cost studies for
19 unbundled network elements should reflect a single, consistent, forward-
20 looking network architecture.

1 efficiencies inherent in the forward-looking network design, the new network
2 architecture will eliminate any need (and cost) to “qualify” loops as suitable
3 for DSL-based services because all loops will be “pre-conditioned” to be
4 DSL-capable. In other words, once SBC has fully deployed the technology
5 embodied in Project Pronto, all loops will be “DSL-capable loops.”

6 In fact, BST’s own internal documents of earlier this year show that
7 BST has reached a similar conclusion, *** **BEGIN BST PROPRIETARY**

8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]

15 **END PROPRIETARY ***** [ADSL Planning Directives, RL: 00-01-021BT,
16 February 14, 2000, transmittal letter, BST’s Response to AT&T’s Request for
17 Production of Documents 62 (emphasis added).]

18 **Q. Do the incumbents appear to agree conceptually that recurring and**
19 **nonrecurring cost studies should reflect a single, consistent set of**
20 **technology and network architecture assumptions?**

21 **A.** All three incumbents signed the stipulation in this proceeding, which provides
22 in part that “[t]he recurring and nonrecurring studies should assume the same
23 network design.” [Joint Stipulation, filed December 7, 1999.] Despite its

1 A. No. BST proposes to levy a \$120.98 “Unbundled Loop Modification –
2 Additive” (Element A.17.4) nonrecurring charge for all DSL-capable loops,
3 except UCL-Long loops. The manner in which BST calculates this proposed
4 charge would over-recover even BST’s inflated estimate of “conditioning”
5 costs.

6 **Q. How does BST calculate its proposed “Unbundled Loop Modification –**
7 **Additive”?**

8 A. BST starts with the following assumptions:

9 Typically, BellSouth will unload ten pairs per conditioning
10 request for ULM-Short. It is expected that on average two
11 pairs will be ordered initially by the CLEC, four pairs will be
12 used by BellSouth, and the remaining four pairs will be ordered
13 in the future by the same or different CLEC. The costs of the
14 last four pairs is determined as an Unbundled Loop
15 Modification – Additive (A.17.4). This additive applies to
16 ADSL-capable, HDSL-capable, and UCL-Short loops.

17 [BST cost study filing, Section 6, at 34-35.] BST further assumes that: (1)
18 the average cost to deload each pair is \$70.68; (2) the demand for DSL-
19 capable loops from 2000 to 2002 will be *** **BST PROPRIETARY** [REDACTED]
20 [REDACTED] **END PROPRIETARY** ***
21 will need to be “conditioned.”

22 Based on these assumptions, BST calculates the additive as the cost of
23 deloading one pair (\$70.68) times the number of pairs for which BST does not

1 however, those costs shall be recovered from the carrier who is
2 requesting the customized system.

3 [Order No. PSC-96-1579-FOF-TP, at 87, emphasis added.]

4 **Q. Why is BST’s proposed recurring charge for mechanized access to loop**
5 **makeup information overstated?**

6 A. BST contends that the loop makeup database interfaces will require an
7 enormous *** **BST PROPRIETARY** [REDACTED] **END PROPRIETARY**
8 *** investment in computer equipment, software, and right to use (“RTU”)
9 fees. To this extraordinary investment, BST has added an additional *** **BST**
10 **PROPRIETARY** [REDACTED] **END PROPRIETARY** *** in consulting
11 services and third party software support for 2000-2002. The limited detail
12 that BST has provided supporting its assumptions shows clearly that BST’s
13 investment is excessive. For example, BST proposes to recover a *** **BST**
14 **PROPRIETARY** [REDACTED]
15 [REDACTED]
16 [REDACTED] **END PROPRIETARY**
17 *** [Loop Qualification Database workpapers, file FLLQDB.XLS, Input
18 sheet.] BST has provided no justification for any of the costs included in this
19 “investment.” The high level of BST’s claimed “investments” lends credence
20 to the view that BST is attempting to have competitors subsidize the
21 upgrading of its own legacy systems.

1 **Q. Is the nonrecurring charge BST proposes to charge for manual loop**
2 **qualification reasonable?**

3 A. No. Again, it is important to remember that it is the competitor that must
4 evaluate the loop data to determine if the loop qualifies for any particular
5 retail service. Therefore, the task that BST should have studied is the time
6 required to pull loop information, print it and transmit it to the competitor.
7 The cost for manual loop qualification should include nothing more than a few
8 minutes time for a technician to retrieve the relevant data from LFACS or
9 other relevant databases and get that information to the competitor. As Mr.
10 Riolo establishes in his testimony, a generous average time for such a task
11 would be no more than 30 minutes. Even if one assumes a \$50 labor rate, the
12 total cost would only be about \$25. In contrast, BST has assumed *** **BST**
13 **PROPRIETARY** [REDACTED]
14 [REDACTED]
15 [REDACTED] **END PROPRIETARY ***** for "Service Inquiry
16 with Loop Make-Up." These inefficiencies lead to BST's overstated estimate
17 of \$189.37 for manual loop qualification. This is *** **BST AND SPRINT**
18 **PROPRIETARY** [REDACTED] **END PROPRIETARY ***** Sprint's
19 proposed nonrecurring charge of \$23.99 for manual loop qualification.

20 **Q. Is Sprint's proposed nonrecurring charge for loop qualification**
21 **reasonable?**

22 A. No. Although Sprint's proposed price for manual loop qualification is more
23 reasonable than BST's proposed price for the same process, Sprint has failed