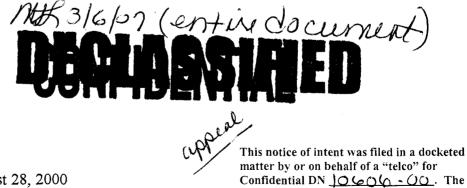BEFORE THE FLORIDA PUBLIC
SERVICE COMMISSION
DOCKET NO. 990649-TP

SUPPLEMENTAL REBUTTAL TESTIMONY OF
TERRY L. MURRAY
ON BEHALF OF
BLUESTAR NETWORKS INC.,
COVAD COMMUNICATIONS COMPANY AND
RHYTHMS LINKS INC.

PROPRIETARY VERSION

MtK 3/6/07 (entire document)

~~CONFIDENTIAL~~ DECLASSIFIED

DATED: August 28, 2000

appeal

This notice of intent was filed in a docketed
matter by or on behalf of a "telco" for
Confidential DN 10606 - 00. The
confidential material is in locked storage
pending staff advice on handling.

TABLE OF CONTENTS

1   **I.   INTRODUCTION AND SUMMARY**

2   **Q.   Please state your name, title and business address.**

3   A.   My name is Terry L. Murray. I am President of the consulting firm Murray &

4   Cratty, LLC. My business address is 227 Palm Drive, Piedmont, California

5   94610.

6   **Q.   Have you previously filed testimony in this proceeding?**

7   A.   Yes. I filed testimony on both June 1, 2000, and July 31, 2000, in the current

8   phase of this proceeding. Exhibit _____ (TLM-1) attached to my June 1st

9   direct testimony describes my qualifications and relevant experience.

10   **Q.   What is the purpose of your supplemental rebuttal testimony?**

11   A.   BlueStar Networks, Inc. ("BlueStar"), DIECA Communications, Inc. d/b/a

12   Covad Communications Company ("Covad") and Rhythms Links Inc.

13   ("Rhythms") have asked me to review and respond to the revised direct

14   testimony and cost study presentations made by BellSouth

15   Telecommunications, Inc. ("BST") on August 16 and 18, 2000. My review

16   has focused on any issue raised in BST's revised testimony and cost studies

17   that would have a unique or disproportionate effect on providers of broadband

18   services that use digital subscriber line technology (commonly referred to as

19   DSL-based services).

1   **A.**   **BST's Revisions Have Not Brought Its Studies into Line with**

2   **Forward-Looking Economic Principles.**

3   **Q.**   **Please summarize the conclusions you present in your testimony.**

4   A.   After reviewing BST's revised cost studies, I conclude that BST's studies are

5   still far from complying with forward-looking economic principles. Virtually

6   all of the criticisms that I presented in my July 31st testimony continue to

7   apply. Indeed, BST's revised studies contain additional sources of concern.

8   BST's revised cost study and supporting testimony makes one

9   significant improvement. It begins to recognize that BST must provide

10   competitors with mechanized access to loop makeup information at a cost far

11   below the cost for manual provision of this information. BST refuses,

12   however, to carry that assumption through to its logical conclusion. BST

13   continues to assume that it must make inappropriate, irrelevant distinctions

14   among DSL-capable loops. Instead, it should simply provide the data that

15   allow competitors to know the characteristics of the loops that are available

16   and to determine the suitability of any given loop.

17   In addition, BST's nonrecurring studies still contain the assumption of

18   significant manual order intervention. After a competitor has selected a DSL-

19   capable loop, BST wants to charge over $200 for a special series of manual

20   installation activities, even though the selected loop has physical costs

21   identical to a voice loop. The study also violates forward-looking principles

22   by insisting on charging for loop "conditioning" even though BST's own

1   design standards used to develop the cost for the recurring loop charges do not

2   permit the installation of the load coils and excessive bridged taps that would

3   necessitate loop "conditioning." Worse yet, BST is attempting to levy a

4   "conditioning" additive charge on every DSL-capable loop under 18,000 feet

5   that would over-recover its already inflated "conditioning" costs, thereby

6   causing competitors to subsidize BST's retail xDSL offerings.

7   **B.   Nothing in BST's Revised Filing Fundamentally Changes My**

8   **Earlier Recommendations to This Commission.**

9   **Q.   Has your review of BST's revised cost studies caused you to change any**

10   **of the recommendations that you made to this Commission in your July**

11   **31ˢᵗ testimony?**

12   A.   No. If anything, BST's revised filing has shown that my criticisms of BST's

13   original filing, and those of Mr. Riolo, were well founded. For example,

14   BST's study revisions have begun to acknowledge that the FCC has required

15   BST to provide nondiscriminatory access to its loop makeup information.

16   BST's attempts to correct its double counting of manual loop qualification

17   costs validates my claim that BST's original nonrecurring cost analyses were

18   in error. In addition, BST's revised estimates of the cost to provide

19   mechanized access to loop makeup data have borne out my earlier contention

20   that BST's original estimates of computer investment were excessive.

21   The basic tenets I presented in my earlier testimony still hold. BST's

22   recurring and nonrecurring charges must be based on forward-looking,

1   efficient costs that reflect a consistent network design. The prices that BST

2   has proposed in this revised filing do not conform to that principle. Instead,

3   BST's revisions to consider mechanized access to loop makeup information

4   constitute an admission that its studies as originally presented were so short-

5   term that they had become outdated in the few months since BST's original

6   filing. That admission, in turn, confirms that BST's basic approach to

7   nonrecurring cost modeling is not forward-looking.

8   Furthermore, BST's revisions seem to be riddled with errors and

9   unsupported assumptions. Therefore, I urge the Commission to adopt the

10   recommendations that Mr. Riolo and I presented in our July 31st testimonies.

11   **II.   BST'S REVISED RECURRING COST STUDIES SUFFER FROM THE**

12   **SAME DEFECTS AS ITS ORIGINAL FILING.**

13   **Q.   Do the criticisms you made of BST's original recurring cost study**

14   **continue to apply to its revised recurring cost studies?**

15   A.   Yes. Nothing that BST has presented in its revised cost studies ameliorates

16   any of the concerns I presented in my July 31st testimony regarding BST's

17   recurring cost analysis. BST has wrongly continued to use several networks

18   to estimate recurring costs for different elements, rather than a single

19   consistent network design. In addition, the revised studies continue to

20   estimate ISDN costs incorrectly and to rely on flawed "in-plant factors" that

21   overstate the costs of installing loop plant.

1   **Q.**   **Has BST modified its proposed DSL-capable loop elements?**

2   A.   Yes. As I discuss in more detail below, in its revised cost study, BST has

3   developed two options for provisioning each type of DSL-capable loop (other

4   than ISDN/IDSL-capable loops): one that includes manual loop makeup and

5   one that does not. Furthermore, it appears from BST's revised descriptions of

6   loop makeup that BST intends to provide a competitor with information to

7   make a determination for itself whether the facility is qualified for a service

8   [*see* BST revised cost study, at Section 6, page 67], rather than BST

9   performing loop qualification for the competitor.

10   **Q.**   **How do these modifications affect BST's recurring cost studies for DSL-**

11   **capable loops?**

12   A.   At first glance, it may not appear that these modifications should affect BST's

13   recurring cost studies for DSL-capable loops at all, since the changes were

14   made specifically to nonrecurring cost elements. However, further scrutiny

15   reveals that BST should have revised its recurring cost elements for DSL-

16   capable loops in concert with these modifications.

17   BST has proposed several types of DSL-capable loops in this

18   proceeding (ADSL, HDSL, Unbundled Copper Loop – Short, and Unbundled

19   Copper Loop – Long, not including ISDN). Mr. Riolo and I have both

20   testified that the distinctions among DSL-capable loops that BST proposes are

21   inappropriate. The distinction among DSL-capable loops is surely an artifact

22   of BST's former assumption that it would need to "qualify" a loop, *i.e.*,

23   determine that the loop meets certain technical specifications. When BST

1   makes loop makeup data available directly to competitors, as indicated in the

2   revised cost studies, competitors will make their own judgments regarding

3   which loop to choose and what services they can provide over it. Thus, the

4   BST-imposed distinctions among loop types become irrelevant.

5   BST should instead offer a single type of two-wire DSL-capable loop

6   (as well as a single four-wire DSL-capable loop). The prices for the two

7   DSL-capable loops (two-wire and four-wire) should be based on the

8   Commission-adopted prices for a comparable voice grade loop.

9 **Q.** **In its revised cost study filing, BST has proposed an additional loop**

10   **element, the "Universal Digital Channel." Do you have any comments**

11   **on this element?**

12 **A.** It is difficult to comment on the new "Universal Digital Channel" ("UDC")

13   because BST has provided no description of this element at all. Ms. Caldwell

14   has indicated that:

15   The costs for the UDC are identical to an ISDN loop, but the

16   methods and procedures ("M&Ps") associated with the

17   provisioning process are different. Thus, BellSouth needed an

18   additional element to reflect these different M&Ps.

19   [Caldwell Revised Direct, at 4.]

20   BST has provided no further indication of how the M&Ps for the two

21   elements might differ, nor information on any way in which a UDC differs

22   from an ISDN loop. However, I understand that UDC may be used to provide

23   IDSL services.

1 **Q.** **How should recurring costs be set for the UDC element?**

2 A. Because it appears that there are no cost differences between the ISDN and

3 UDC elements, as Ms. Caldwell indicates, my July 31st critique [at 32-40] of

4 BST's proposed ISDN rates would apply equally to UDCs. In particular,

5 UDC recurring rates should be the same as the recurring rates for Service

6 Level 1 ("SL-1") analog loops, plus an increment to account for the higher

7 cost of an ISDN card as compared to a plain old telephone service ("POTS")

8 card. [*See* also Riolo Direct and Rebuttal at 53 and 62-63.] The increment

9 should reflect the cost of the card, weighted by the percentage of loops that

10 BST would provision over fiber feeder in its forward-looking network.

11 Furthermore, Mr. Riolo explains in his concurrently filed testimony that, just

12 as with ISDN loops, it is not necessary to "design" UDCs. In fact, Mr. James

13 R. McCracken, one of BST's subject matter experts for the Special Services

14 Installation & Maintenance ("SSI&M") work group, admitted that BST does

15 not "design" ISDN loops in Georgia, for example. [Deposition of James R.

16 McCracken, July 28, 2000, Tr. at 31.]

17 **Q.** **Is BST's proposed recurring charge for UDCs (and ISDN-capable loops)**

18 **reasonable?**

19 A. No. BST has proposed a recurring rate of $30.01 per month, which is almost

20 $12 per month, or 66%, more than its proposed rate for an SL-1 loop. This

21 excessive increment over analog prices is driven by BST's inappropriate

22 assumptions regarding the demand for ISDN services. As I explained in my

23 July 31st testimony [at 37-39], BST based its estimate of ISDN costs (and thus

1   UDC costs) on its *current retail* ISDN customers and locations. This

2   approach generates nonsensical results, with widely skewed prices. (In some

3   wire centers, BST's proposed UDC/ISDN prices are significantly lower than

4   its voice-grade prices and in others, UDC/ISDN prices are several times

5   higher than those for the basic SL-1 loop.) Competitors are free to buy any

6   loop as an ISDN-capable loop. Thus, BST should have modeled the cost of

7   ISDN-capable loops based on the characteristics of all loops.

8   In contrast, I estimated that the ISDN/UDC adder would be ***BST

9   PROPRIETARY $1.25 END PROPRIETARY*** per month based on the

10   incremental investment needed for ISDN cards on loops over fiber feeder.

11   [*See* Murray Direct and Rebuttal at 39-40.] BST's proposed increment is

12   more than nine times as high.

13   Even if the Commission were to accept BST's incorrect contention

14   that UDCs and ISDN-capable loops need to be "designed," the correct price

15   would be ***BST PROPRIETARY $3.56 END PROPRIETARY*** per

16   month over the SL-1 price. This is the average incremental cost for the ISDN

17   line card plus the $2.31 per month recurring cost that BST calculated for the

18   incremental effort to design loops. BST's proposed increment is more than

19   three times as high.

20   **III.   BST'S REVISED NONRECURRING CHARGES ARE NOT**

21   **FORWARD-LOOKING.** **DECLASSIFIED**

22   **Q.   Can the Commission rely on BST's revised nonrecurring studies?**

1   A.   No. It seems that BST's quality control on this filing was limited. The filing

2   appears to be riddled with errors, several of which I discuss below, and

3   unsupported assumptions. For example, BST has increased its dispatch

4   percentage for connecting analog Service Level 1 ("SL-1") loops from 20% to

5   38%, but has neither provided any supporting documentation for the change,

6   nor even bothered to explain the basis for the change at all. This one entirely

7   unjustified change is responsible for an increase in the SL-1 analog

8   nonrecurring charge of 37%.

9   **Q.**   **Do the criticisms you made of BST's original nonrecurring cost study**

10   **continue to apply to its revised nonrecurring cost studies?**

11   A.   Yes, for the most part. BST's revisions to the nonrecurring charges for DSL-

12   capable loops to remove loop qualification charges begins to address one of

13   the concerns I presented in my July 31st testimony. However, BST's proposed

14   nonrecurring charges for those elements remain unreasonably high, well

15   above forward-looking economic costs. The balance of my criticisms

16   regarding BST's nonrecurring cost studies continue to apply. Indeed, BST's

17   revised studies contain additional sources of concern.

18   **Q.**   **Please summarize your criticisms of BST's nonrecurring cost studies.**

19   A.   The Commission should reject BST's revised nonrecurring cost analysis for

20   several reasons, including the following:

21   •   BST's nonrecurring studies still generally fail to reflect a network that

22   is consistent with its recurring cost analysis.

1   •   BST's studies continue to improperly include fieldwork and other

2   activities that BST should have reflected, and probably did already

3   include, in its recurring cost study.

4   •   BST's studies incorrectly presume that the company will manually

5   perform a number of basic order processing activities. In particular,

6   BST's assumed "fallout" rates are unsupported and unaccountably

7   high. This was already true in its original studies; BST's revised

8   studies have increased the excessive manual processing assumed in its

9   original studies.

10   **Q.**   **What changes has BST made to its nonrecurring studies in its August**

11   **16th filing?**

12   A.   BST has changed virtually every nonrecurring charge it is proposing.

13   Nonrecurring charges for loop elements, in particular for elements related to

14   DSL-capable loops, have been changed substantially. Two sets of

15   modifications appear to drive the cost changes of concern to BlueStar, Covad

16   and Rhythms. First, BST has modified its provisioning process for DSL-

17   capable loops. Second, BST has modified some of the assumptions and task

18   times underlying the nonrecurring costs for loop elements. I will address

19   several of the affected nonrecurring charges below.

20   **Q.**   **Has BST provided any explanation or justification for the changes in**

21   **assumptions and task times underlying the nonrecurring costs for loop**

22   **elements?**

1   A.   Very little. For example, Ms. Caldwell states that

2   during the revisions to the xDSL nonrecurring costs, BellSouth

3   reviewed all of the nonrecurring inputs for all types of loops to

4   ensure consistency of work time estimates and the correctness

5   of the underlying assumptions. Several inputs were modified

6   as part of this process.

7   [Caldwell Revised Direct, at 3.]

8   This appears to be the sole explanation that BST provides for changes

9   in task times that affect each of its nonrecurring charges for loop elements.

10   Ms. Caldwell does not even indicate whether BST's review was limited to an

11   effort to "ensure consistency" among the nonrecurring costs reported in this

12   filing, or to maintain consistency with some other outside data. Certainly BST

13   has provided nothing to indicate the basis for resolving conflicts. BST did not

14   even make any effort to identify the specific changes in its study. Worse yet,

15   BST substantially redesigned the format of its studies so that it is extremely

16   tedious to search for those changes.

17   **A.   The Commission Should Reject BST's Proposed Nonrecurring**

18   **Charges for DSL-Capable Loops.**

19   **Q.   How has BST changed its provisioning process for DSL-capable loops?**

20   A.   As I discussed in my July 31st testimony [at 56-58], BST's original cost study

21   inappropriately bundled manual loop qualification costs into the costs to

22   provision each type of DSL-capable loop (other than ISDN). In its revised

1   cost study, BST has developed two options for provisioning DSL-capable

2   loops: one that includes manual loop makeup research and one that does not.

3   BST has classified these elements as "with loop makeup" and "without loop

4   makeup."

5   **Q.   Why has BST made this change?**

6   A.   BST witness Caldwell cites the FCC's requirement for nondiscriminatory

7   access to its loop makeup information, which the FCC propounded in its *Third*

8   *Report and Order and Fourth Further Notice of Proposed Rulemaking* in CC

9   Docket 96-98 (hereafter "*UNE Remand Order*"), adopted September 15, 1999

10   (roughly half a year before BST had to file its original study). [*See* Caldwell

11   Revised Direct at 2-3.]

12   **Q.   Does the addition of a DSL-capable loop provisioning option that**

13   **excludes manual loop makeup eliminate the concerns that you addressed**

14   **in your earlier testimony?**

15   A.   Only in part. Again, I must stress that nonrecurring provisioning charges for

16   DSL-capable loops should not differ from nonrecurring provisioning changes

17   for a basic analog loop. As Mr. Riolo explained in his July 31st testimony [at

18   8-12], no engineering difference exists between analog loops and those loops

19   used to provide DSL services. The removal of the duplicative and

20   unnecessary loop qualification charges is certainly a step in the right direction.

21   Unfortunately, BST has not managed to remove loop makeup costs

22   completely from its "without loop makeup" elements. Nor has BST done

1   anything to eliminate the many other sources of inflated costs in its proposed

2   nonrecurring charges for DSL-capable loops, which Mr. Riolo and I addressed

3   in our July 31st testimonies. For example, BST's proposed nonrecurring

4   charge for an ADSL loop "without loop makeup" is still almost two and a half

5   times its proposed charge for a voice-grade loop.

6   Moreover, while this change helps bring the "without loop makeup"

7   path of BST's new bifurcated nonrecurring charges for DSL-capable loops a

8   step closer to forward-looking cost, it does just the opposite to the "with loop

9   makeup" elements. Indeed, the new "with loop makeup" nonrecurring

10   charges are well over $300, a level that is certain to discourage competition.

11   Therefore, to the extent that the Commission contemplates allowing BST to

12   implement its proposed rate structure, it is doubly important that the

13   Commission evaluate each line in BST's analysis and give full weight to each

14   issue that parties have raised in this proceeding.

15   **Q.   Why do you say that BST has not managed to remove loop makeup costs**

16   **completely from its "without loop makeup" elements?**

17   A.   In the "without loop makeup" elements, BST has included time for such tasks

18   as "OSPE Investigation," "Pull LMU," and "LFACS input of LMU" for some

19   percentage of the time. These items appear to insert loop makeup tasks into

20   the supposedly "without loop makeup" cost results. [BST revised cost study,

21   Fl-xdsl.xls.]

1 Q. **Have you found any other errors in BST's nonrecurring cost studies for**

2 **DSL-capable loops?**

3 A. Yes. BST's proposed "Disconnect Only" charges inexplicably differ between

4 the "with loop makeup" and "without loop makeup" elements. Upon further

5 investigation, I discovered that BST has inappropriately included nearly an

6 hour for work on "Service Inquiry" activities in the "Disconnect Only"

7 charges. For example, BST has included 18 minutes for the task: "Upon

8 completion of job, informs CLEC site is ready for provisioning." I cannot

9 imagine how it could be correct to include this task, which clearly relates to

10 provisioning a loop rather than to disconnecting a line that has been in service,

11 in a disconnect charge. (Indeed, I contend that it is inappropriate to include

12 any such manual work even in the connect charge.) [*See* BST revised cost

13 study, Fl-xdsl.xls.]

14 In addition, BST has included time in the "Disconnect Only" charge

15 for tasks such as "Assigns loop facility," "Design circuit and generates DLR

16 and WORD document for CLEC and Field," and "CO Field wire circuit at

17 collocation site." Such tasks clearly do not belong in a disconnect study.

18 That BST's study still includes tasks that are obviously irrelevant,

19 even to a non-engineer, is an indication that the overall quality of BST's

20 analysis is low. The Commission should reject all of BST's proposed

21 "Disconnect Only" rate elements and adopt the more reasonable proposal that

22 Mr. Riolo presented in his July 31st testimony [at 37].

23 Q. **What nonrecurring charges should apply for DSL-capable loops?**

1 A. The Commission should reject BST's proposed nonrecurring charges for

2   DSL-capable loops entirely. Nonrecurring charges for DSL-capable loops

3   should not differ significantly from the charges for voice-grade loops.

4   Because BST's proposed charges for voice-grade loops are themselves

5   inflated, as I explain below, the Commission should correct BST's

6   nonrecurring charges for installing all loop types to reflect the tasks and task

7   times identified in Mr. Riolo's July 31st testimony [at 36-42].

8 **B. BST's Revised Nonrecurring Costs for Voice-Grade Loops Fail to**

9   **Reflect Forward-Looking Economic Principles or Efficient**

10   **Engineering Practices.**

11 **Q. Does BST's revised nonrecurring cost study for voice-grade loops**

12   **comply with forward-looking economic cost principles?**

13 A. No. BST's original nonrecurring cost estimate for voice-grade loops was

14   already well above efficient, forward-looking costs. BST's revised filing

15   advocates a nonrecurring charge for voice-grade loops that is even higher and

16   thus further from complying with forward-looking economic cost principles.

17 **Q. What revisions has BST made to its nonrecurring study for SL-1 voice-**

18   **grade loops?**

19 A. BST's proposed nonrecurring charge for SL-1 voice-grade loops increased to

20     $83.20, almost 37% above its original proposal. The primary cause seems to

21   be a change in BST's assumption regarding the percentage of time an outside

1   plant dispatch would be necessary. In addition, BST has added several new

2   tasks to attempt to account for the provision of services over fiber-fed loops,

3   as well as further increasing its already overstated fallout rate assumptions, all

4   without a hint of explanation.

5 **Q.** **How have BST's assumptions regarding the percentage of time an**

6   **outside plant dispatch would be necessary to install voice-grade loops**

7   **changed?**

8 A.   BST has unaccountably increased its assumed dispatch rate for SL-1 loops

9   from 20% to 38%, which is an increase of 90% in the assumed number of

10   dispatches.

11 **Q.** **Should the Commission accept BST's revised dispatch rate?**

12 A.   No. The Commission should reject BST's increased dispatch rate assumption

13   because it is entirely unsupported and unreasonably high. More important, it

14   is inappropriate to include *any* such fieldwork in the nonrecurring costs.

15 **Q.** **Why is it inappropriate to include these fieldwork costs in a forward-**

16   **looking nonrecurring cost study?**

17 A.   As I explained in my earlier testimony [at 55-56], BST's *recurring* cost study

18   should have reflected the fieldwork to connect a loop (and probably did).

19   Thus, competitors are already paying recurring charges for a fully *connected*

20   loop, and should not have to pay to dispatch a technician to the field to

21   connect that loop. A forward-looking recurring cost analysis includes all of

22   the investment and expense necessary to establish a complete connection from

1   its central office main frame to the end user. It would be inappropriate to

2   establish an nonrecurring charge that also includes fieldwork costs for

3   installing the loop.

4 **Q.** **Even if it were appropriate to include fieldwork in the loop nonrecurring**

5   **charge, would BST's assumption of a 38% dispatch rate to install a SL-1**

6   **voice-grade loop be acceptable?**

7 **A.** No. Even if the Commission were to accept the idea that some fieldwork

8   costs should be included in the nonrecurring charge, it should reject BST's

9   assumed dispatch rate. Mr. Riolo explains in his testimony that BST's

10   dispatch assumption is unreasonably high.

11 **Q.** **Has BST provided any justification for its increase in dispatch rate**

12   **assumptions for voice-grade loops?**

13 **A.** None whatsoever. Ms. Caldwell's testimony merely notes that the voice-

14   grade loop nonrecurring costs "increased mainly as a result of an increase in

15   the dispatch rate," [Caldwell Revised Direct, at 6] with no word of

16   justification. (BST has also increased its assumed dispatch rate for SL-2 loops

17   from 20% to 100% with no explanation or justification.) Nor can I find

18   anything in BST's revised cost study documentation concerning this change.

19   Because BST contends that it has provided parties with "all work papers, cost

20   models, and supporting documentation" as required by the Stipulation of

21   Certain Issues and Schedule of Events (filed December 7, 1999, in this

1   docket), I can only assume that BST has no documentation or support for

2   these changes.

3 **Q.   Has BST correctly accounted for the provision of loops over Digital**

4   **Loop Carrier/fiber-feeder in its nonrecurring cost study revisions?**

5 A.   No. Apparently recognizing the fact that it had failed to consider the

6   provision of unbundled loops over fiber feeder in its original study, BST has

7   added three new work steps into its analysis that are concerned with obtaining

8   and placing plug-ins in the Digital Loop Carrier ("DLC") system. Again, the

9   inclusion of these work steps in nonrecurring costs is fundamentally improper,

10   because the placement of the necessary electronics is already part of the BST

11   recurring cost calculation. Moreover, BST's notion that it should add costs

12   for DLC plug-in cards but not reflect the provisioning savings obtainable from

13   current generation DLC systems, such as remote configuration of loops which

14   reduces the requirement for dispatch — the opposite of BST's other change —

15   is further proof that the BST analysis is not forward-looking.

16 **Q.   Have you found any other problems with BST's estimate of its**

17   **nonrecurring costs for voice-grade loops?**

18 A.   Yes. Some of the new study inputs simply do not make sense absent further

19   explanation. For example, in the new "Network Plug-In Administration"

20   tasks that it shows on the "Inputs_Engineering" sheet of its "FL-2W"

21   spreadsheet, BST includes the tasks "Planner orders plug-in when not in

22   stock" and "Clerical functions in connection with handling of plug-in order."

1   Because the time for clerical functions is explicitly tied to handling plug-in

2   orders, it would seem that the occurrence of that task should match the

3   occurrence of the time that the Planners place such orders. That is

4   inexplicably not the case in the new BST study. In fact, it almost appears as if

5   the occurrence calculation is set as if the tasks are mutually exclusive. Given

6   the limited information that BST has provided, it is not possible even to

7   understand what relationship is supposed to exist between these tasks or how

8   either is triggered.

9   In addition, BST's estimates of the "Disconnect Only" charges for

10   voice-grade loops suffer from some of the same problems as its estimate of

11   the "Disconnect Only" charges for DSL-capable loops. Specifically, the

12   "Disconnect Only" charge includes tasks that clearly do not belong in a

13   disconnect study. [*See* BST revised cost study, FL-2W.xls.]

14   **Q.   How did the fallout rate assumptions change in BST's new analysis?**

15   A.   Without support, BST has increased the fallout rate assigned to the Address

16   and Facility Inventory Group ("AFIG") from 5% to 30%. [BST revised cost

17   study, FL-2W.xls.] As I showed in my July 31st testimony [at 58-60], BST's

18   fallout rate assumption across all tasks was already over 50%. With this

19   additional increase, BST's study now assumes that three out of four orders

20   will have some sort of fallout. This low level of efficiency is entirely

21   unacceptable in a forward-looking cost study. Furthermore, BST's own

22   outside plant engineering expert, Mr. Michael K. Zitzmann, has agreed that

1   "most of the time the SL-1 requests flow-through without manual

2   intervention." [Deposition of Michael K. Zitzmann, July 20, 2000, Tr. at 39.]

3   Q. **What should the Commission adopt as the forward-looking nonrecurring**

4   **charge for voice-grade loops?**

5   A. The Commission cannot rely on BST's nonrecurring cost study because it

6   contains numerous errors and unsupported assumptions. The Commission

7   should adopt the nonrecurring charges presented in Mr. Riolo's July 31st

8   testimony [at 36-37].

9   **C.   BST's Proposed Nonrecurring Costs for UDCs and ISDN-**

10   **Capable Loops Do Not Reflect Forward-Looking Economic**

11   **Principles or Efficient Practices**

12 Q. **Does BST's proposed nonrecurring cost study for the UDC and ISDN**

13   **elements comply with forward-looking economic cost principles?**

14 A. No. At $238.33, BST's proposed nonrecurring charge for UDC/ISDN-

15   capable loops is almost three times its already inflated nonrecurring charge for

16   voice-grade loops. BST's original nonrecurring cost estimate for ISDN-

17   capable loops was already well above efficient, forward-looking costs, as Mr.

18   Riolo discussed in his July 31st testimony [at 37-42]. BST's revised filing

19   advocates a nonrecurring charge for UDCs and ISDN-capable loops that is

20   even higher and thus further from complying with forward-looking economic

21   cost principles.

1 **Q.** **Does BST's proposed UDC/ISDN nonrecurring cost study suffer from**

2 **some of the same problems as you identified in BST's revised study for**

3 **voice-grade loops?**

4 A. Yes. For example, BST has added the same inappropriate work steps

5 concerned with obtaining and placing plug-ins in the DLC system that I

6 discussed for voice-grade loops, while still failing to reflect the provisioning

7 savings obtainable from current generation DLC systems, such as remote

8 configuration of loops. In addition, those new study inputs have the same

9 perplexing occurrence factors that I discussed above. [*See* BST revised cost

10 study, FL_DIG.xls.]

11 **Q.** **What fallout rate assumptions did BST assume in its revised ISDN**

12 **analysis?**

13 A. BST has assumed a fallout rate of 67% for the Service Advocacy Center

14 ("SAC") work group. This assumption, along with reported fallout rates of

15 30% for the AFIG and 15% for the Circuit Provisioning Group ("CPG") and

16 the other fallout assumptions that are buried within BST's calculations, means

17 that *virtually every order* will experience process breakdowns somewhere in

18 the provisioning process. Such high failure rates are plainly out of line for an

19 efficient, forward-looking process. Once again, BST has provided no support

20 or justification of these fallout rates. For example, Mr. Zitzmann, BST's

21 subject matter expert for the SAC, did not even know what the fallout rate

22 assumption was for ISDN. [*See* Deposition of Michael K. Zitzmann, July 20,

23 2000, Tr. at 42.] The Commission should order BST to remove those costs

1   from its nonrecurring cost analysis if the Commission makes any use of those

2   (fundamentally incorrect) studies.

3 Q. **What should the Commission adopt as the forward-looking nonrecurring**

4   **charge for UDCs and ISDN-capable loops?**

5 A.   The Commission should adopt nonrecurring charges for UDCs and ISDN-

6   capable loops based on the efficient engineering practices that Mr. Riolo

7   presented in his July 31st testimony [at 37-42].

8   **D.   BST Continues to Vastly Overstate the Forward-Looking Cost of**

9   **Providing "Conditioned" Loops.**

10 Q. **How has BST revised its "Loop Conditioning" (or "Unbundled Loop**

11   **Modification") elements?**

12 A.   In addition to lowering slightly its proposed nonrecurring charges for each of

13   its former loop "conditioning" elements, BST has proposed two additional

14   "conditioning" elements: "2W/4W Copper Distribution Load Coil/Equipment

15   Removal" (A.17.5) and "2W/4W Copper Distribution Bridged Tap Removal"

16   (A.17.6).

17 Q. **Please explain why BST's revised estimates for loop "conditioning" have**

18   **decreased slightly.**

19 A.   For the most part, BST's tasks and task times for "conditioning" activities

20   remain unchanged from its original cost study filing. However, BST has

21   made some adjustments to the manual "Service Inquiry" activities included in

1   the Unbundled Loop Modification elements. In particular, BST has

2   apparently assumed that it would achieve some efficiencies in these manual

3   tasks when loop modification is ordered at the same time as the loop itself,

4   and when load coil removal is ordered at the same time as bridged tap

5   removal. BST has assumed, for example, that load coil removal and bridged

6   tap removal will be ordered simultaneously one third of the time. In addition,

7   it appears that BST has assumed that loop "conditioning" will be ordered

8   separately from the loop itself 20% of the time. [*See* BST revised cost study,

9   at Section 6, page 36.]

10   Q.   **Do BST's revised "conditioning" charges, with these adjustments to the**

11   **"Service Inquiry" manual activities, represent forward-looking costs?**

12   A.   No. Although BST's acknowledgement of the savings in manual labor that

13   would be achieved for orders that are placed at the same time is a slight

14   improvement over its original proposals, BST's revised rates are far from

15   forward-looking. As I explained at length in my July 31st testimony [at 77-

16   88], nonrecurring "conditioning" charges would not be consistent with

17   forward-looking economic costs at all. However, if the Commission were to

18   decide to allow such charges, they should at the very least be based on

19   efficient practices. Therefore, it is inappropriate to include these manual

20   "Service Inquiry" activities, even at the lower level that BST now proposes.

21   Q.   **Why is it inappropriate to include manual "Service Inquiry" activities in**

22   **the costs for loop "conditioning"?**

1   A.   My original understanding of the manual "Service Inquiry" activities was that

2   they related entirely to the manual loop qualification process that BST

3   inappropriately bundled into the cost to provision DSL-capable loops, as well

4   as the loop qualification and "conditioning" elements. BST has now correctly

5   removed most of the manual "Service Inquiry" activities from provisioning of

6   a DSL-capable loop "without loop makeup." (It follows that, to the extent

7   that these manual activities *are* related to manual loop qualification, they

8   should obviously be removed from the "conditioning" costs as well. It makes

9   no sense for BST to replicate manually a process that the competitor ordering

10   the loop has already accomplished electronically.)

11   What is clear, however, is that the "Service Inquiry" activities that

12   BST has included here represent *manual* ordering processes that are in no way

13   forward-looking. BST's revised cost study indicates that "[t]he ordering

14   procedures for loop conditioning are to be handled *manually* through the

15   Service Inquiry process." [BST revised cost study, at Section 6, page 36,

16   emphasis added.] A forward-looking, long-run cost study should not assume

17   substantial manual order intervention, given the current advanced state of

18   automation in the local exchange network and related Operations Support

19   Systems ("OSS"). In fact, Ms. Nancy Pauline Murphy, BST's subject matter

20   expert for the Local Carrier Service Center ("LSCS"), conceded that BST can

21   accept mechanized orders [Deposition of Nancy Pauline Murphy, July

22   28,2000,Tr. at 26-27], and further admitted that, if orders were automated,

1   they would completely bypass her group [Tr. at 42-43]. These manual tasks

2   have no place in a forward-looking environment.

3   **Q.   Is inclusion of manual "Service Inquiry" activities the only problem with**

4   **BST's proposed "conditioning" charges?**

5   A.   No. BST's revised "conditioning" charges have the same problems that Mr.

6   Riolo and I identified in our July testimonies. Namely, BST inflates its

7   "conditioning" costs by understating the number of loops that should be

8   "conditioned" whenever a technician is dispatched and by overstating the time

9   it would take to accomplish the "conditioning" tasks.

10   In addition, BST includes time such tasks as "OSPC sets up manhole"

11   in its estimate of the costs of removing load coils from an *aerial/buried*

12   application. [BST revised cost study, FL-ULM.xls.]

13   **Q.   Has BST's revised its "Unbundled Loop Modification Additive"?**

14   A.   BST has revised its "Unbundled Loop Modification Additive" downward

15   substantially from $120.98 per loop to $57.99. However, even given this

16   sizeable decline, this proposed charge would still potentially over-compensate

17   even BST's inflated estimate of its "conditioning" costs. The over-recovery

18   of "conditioning" costs through this charge means that competitors would in

19   effect be subsidizing BST's retail xDSL offerings.

20   **Q.   How does the "Additive" charge subsidize BST's retail xDSL offerings?**

21   A.   If BST is allowed to impose this inappropriate nonrecurring charge,

22   competitors will pay to condition loops that BST will use.

1   For example, assume that BST removes load coils from ten pairs at

2   once as a result of an order from a competitor. The competitor pays the load

3   coil removal fee as well as the "Additive" for each pair ordered: $65.40 +

4    $57.99 = $125.39 or 19% of BST's supposed cost to "condition" those ten

5   pairs. Suppose that, as BST itself assumes, the competitor typically orders

6   two pairs. Then the competitor would pay 2 x $125.39 = $250.78 or 38% of

7   BST's supposed cost to "condition" the ten pairs. BST has assumed that it

8   will use four of the remaining pairs and that the final four pairs may or may

9   not be ordered by a competitor at a later date. BST's further assumes that

10   about 40% of DSL-capable loops will need to be conditioned. Thus, three

11   loops are ordered that do not need to be conditioned for every two that do.

12   Given BST's methodology these three loops each pay the "Additive": $57.99

13   x 3 = $173.97 or 27% of BST's supposed cost to "condition" the original ten

14   pairs. (Thus far, for the two "conditioned" loops a competitor ordered, plus

15   the three loops that did not require "conditioning," BST has recovered 64% of

16   its supposed cost, leaving $229.25 of the original cost.)

17   Now, further suppose that at some point the final four pairs do get

18   ordered by competitors. Then the competitor(s) would have to pay the

19   "Additive": 4 x $57.33 = $229.32 or 35% of BST supposed cost to

20   "condition" the original ten pairs. Recall that BST plans to use four of the

21   original ten pairs and therefore has claimed that it will absorb the cost of

22   "conditioning" them. In this scenario, however, competitors have now paid a

23   total of $250.78 + $173.97 + $229.32 = $654.07 or *100%* of BST's costs,

1   leaving *no* costs for BST to absorb. BST pays nothing for its four

2   "conditioned" pairs, because the competitors have paid the entire cost for

3   "conditioning" ten lines including the four that BST presumes it will use for

4   its own retail service, giving BST a "free ride." Furthermore, BST may also

5   collect the "Additive" on other DSL-capable loops that never required

6   "conditioning," which creates further potential for over-recovery.

7   Even if the last four pairs are never ordered, BST still over-recovers its

8   supposed "conditioning" costs. The cost BST claims it will absorb for the

9   four pairs it presumes it will use would be: $4 \times \$65.40 = \$261.60$ or 40% of

10   BST's supposed cost to "condition" the original ten pairs. Thus, BST

11   recovers $\$250.78 + \$173.97 + \$261.60 = \$686.35$ or *105%* of its original $654

12   total cost. Even in this conservative scenario, competitors subsidize BST use

13   of those four loops.

14   Moreover, if BST is incorrect in its assumption that about 40% of

15   DSL-capable loops will require "conditioning," there is even greater potential

16   for over-recovery. Keep in mind that the "Additive" applies only to loops

17   *under* 18,000 feet, which do not need and should not have load coils at all.

18   BST is suggesting that 40% of its loops do not meet engineering standards

19   adopted twenty years ago. If the actual percentage of loops that need to be

20   "conditioned" is much lower than BST's assumption (which it should be if

21   BST has been modernizing its plant) BST's calculation will over-recover costs

22   further. Suppose, for example, that in actual fact only 10% of loops require

23   conditioning. Then for every two pairs that need "conditioning," eighteen

1   pairs do not. In this case, BST would recover from competitors $1294.60

2   ($250.78 + (18 x $57.99)) or almost *twice* its already inflated costs! In

3   addition to which, BST would have paid nothing for the four "conditioned"

4   pairs it will use.

5 **Q.** **Do the nonrecurring charges that BST has proposed for the two**

6   **additional distribution "conditioning" elements comply with forward-**

7   **looking economic principles?**

8 A.   No. BST has inflated the cost for these elements by assuming that distribution

9   "conditioning" jobs would be performed on only one pair at a time. This

10   greatly understates the number of loops that should be "conditioned"

11   whenever a technician is dispatched. Mr. Riolo explains in his concurrently

12   filed testimony that a one-at-a-time approach is extremely inefficient. In fact,

13   BST itself has assumed that most "conditioning" jobs (*i.e.*, bridged tap

14   removal and load coil removal on loops under 18,000 feet) would be

15   undertaken on ten pairs at a time. This strange dichotomy leads to the

16   perplexing situation in which conditioning a *portion* of the loop is far more

17   expensive than conditioning the loop as a whole. In addition, as with the other

18   "conditioning" elements, BST appears to have overstated the time it would

19   take to accomplish the "conditioning" tasks. Mr. Riolo explained this

20   problem in his July 31st testimony [at 81-97]. Mr. Riolo provides more

21   reasonable task time estimates corresponding to BST's new elements in his

22   concurrently filed testimony.

1   **E.**   **BST's Revised Nonrecurring Charges for Access to Loop Makeup**

2   **Information Are More Reasonable, But Still Inflated.**

3   **Q.**   **How has BST revised its "Loop Qualification" elements?**

4   A.   BST has revised its former "Loop Qualification" elements (J.3.1 and J.3.3) in

5   several ways. First, BST has renamed these elements as "Loop Makeup"

6   ("LMU"). Second, BST has clarified that its proposed "Mechanized LMU"

7   element is not related to its Loop Qualification System (also known as

8   "Loopy"), which BST uses to determine whether a customer location qualifies

9   for BellSouth's retail ADSL offering based on BellSouth's technical

10   parameters. Third, the former element "Service Inquiry w/ Loop Makeup"

11   (J.3.3) has been restructured into two elements: "Manual Loop Makeup w/o

12   Facility Reservation Number" (element J.3.3), which does not include the

13   reservation of a loop facility, and "Manual Loop Makeup w/ Facility

14   Reservation Number" (element J.3.4), which does include the reservation of a

15   loop facility. [*See* BST revised cost study, at Section 6, page 67.]

16   **Q.**   **Do you have comments regarding these revisions to the Loop Makeup**

17   **elements?**

18   A.   Yes. First, I believe that BST's clarification regarding mechanized loop

19   makeup is an important one. Both Mr. Riolo and I explained in our July 31st

20   testimonies that it is essential that competitors have access to detailed loop

21   makeup information so that they can make their own *independent* judgment

22   regarding the suitability of a loop. As I have already explained, BST has

1   finally acknowledged that the FCC has required such access and has at least

2   taken some steps to remove the manual loop makeup process from DSL-

3   capable loop provisioning. In its revised description of loop makeup

4   elements, BST explains that it intends loop makeup to provide "sufficient

5   information on the loop make-up of a facility at a particular service location

6   so that the CLEC can make a determination for itself whether the facility is

7   qualified for the service that it wishes to provision over that facility." [BST

8   revised cost study, at Section 6, page 67.] Assuming that BST's definition of

9   "sufficient information" is correct, this is just what competitors require.

10   However, I have an additional concern regarding reservation of loop

11   facilities that is raised by BST's description of its manual loop makeup

12   elements, as well as its description of its new DSL-capable loop provisioning

13   elements.

14   Q. **What concern do you have regarding reservation of loop facilities?**

15   A. Obviously, access to detailed loop makeup information about a particular loop

16   is of little use if a competitor cannot subsequently purchase that precise loop.

17   Nor would it be acceptable for the loop facilities to change after the loop had

18   been provisioned (if, for example, BST were to do a line and station transfer

19   for reasons of its own), because the new facilities might no longer support the

20   services that a competitor had promised its customer. Therefore, it is critical

21   that competitors have the ability to reserve specific loop facilities.

22   BST is now offering manual loop makeup with and without loop

23   reservation; BST's DSL-capable loop provisioning options "with loop

1   makeup" also include reservation of loop facilities. However, the DSL-

2   capable loop provisioning options "without loop makeup" do not appear to

3   include loop facility reservation. [*See* BST revised cost study, at Section 6,

4   page 25.] Moreover, BST's description of its mechanized loop makeup option

5   does not mention facility reservation. [*See* BST revised cost study, at Section

6   6, pages 67-68.]

7   Thus, it is not clear that a competitor using mechanized loop makeup

8   would have the option to reserve loop facilities. It may be that BST does

9   contemplate that loop reservation would be accomplished through the

10   mechanized loop makeup process. For example, BST has stated:

11   A loop without a loop make-up is ordered when either a

12   manual or *mechanized loop make-up with reservation* is

13   ordered prior to ordering the loop.

14   [BST revised cost study, at Section 6, page 25, emphasis added] However,

15   that is not clear, and it needs to be. Mechanized access to loop makeup

16   information must also enable the competitor to reserve the selected loop

17   facilities.

18   **Q.** **What charges is BST now proposing for access to loop makeup**

19   **information?**

20   A. BST has proposed the following charges for access to loop makeup

21   information:

22   • a per-use charge of $0.69 for mechanized access to loop makeup

23   information;

1   •   a nonrecurring charge of $132.82 for manual loop makeup without

2   facility reservation; and

3   •   a nonrecurring charge of $138.61 for manual loop qualification with

4   facility reservation.

5   **Q.**   **Is BST's revised per-use charge for mechanized access to loop makeup**

6   **data reasonable?**

7   A.   No. As I explained in my July 31st testimony [at 101-105], the investment that

8   BST seeks to recover through this per-use charge for access to loop makeup

9   information is for an OSS electronic interface. The Florida Commission has

10   already correctly determined that incumbents should bear their own cost of

11   developing and implementing such OSS interfaces, as competitors do. [*See*

12   Order No. PSC-96-1579-FOF-TP, at 87.]

13   Furthermore, although BST's revised estimate of the cost to provide

14   mechanized access to loop makeup represents a sizeable decrease from its

15   original estimate, I believe that BST's proposed charge continues to be

16   inflated. Indeed, BST's revision has served to support my contention that

17   BST's original estimates of the computer investment needed to make

18   mechanized loop makeup possible were quite excessive.

19   **Q.**   **How do BST's revised estimates show that its original estimates of**

20   **computer investment were excessive?**

21   A.   BST's revised proposal of $0.69 per use is 36% below its original proposal of

22        $1.08 per use. This drop results from adjustments to BST's estimate of the

1   computer investment that will be necessary to provide such mechanized

2   access. Inspection of BST's current estimate of computer investment bears

3   out my contention that its earlier estimate was vastly inflated. For example,

4   BST's estimate for midrange computer hardware investment is now only

5   about *10%* of its former estimate. Examples of the adjustments BST has made

6   include:

DECLASSIFIED

7   *** **BST PROPRIETARY**

8   •   *$640 thousand* (rather than *$6.1 million*) investment in "Midrange

9   Computer,"

10   •   *$6 thousand* (rather than *$1.2 million*) investment for "EDS Initial

11   Installation,"

12   •   *$237 thousand* (rather than *$2.2 million*) in right to use fees for "HP &

13   Third Party Server Software,"

14   •   *$1.9 million* (rather than *$3.8 million*) for "Telcordia Application

15   Software" over 2000-2002, and

16   •   *$430 thousand* (rather than *$2.6 million*) for "Hardware Operations &

17   Maintenance over 2000 – 2002."

18   [BST revised cost study, FLLQDB.XLS, Input and WP3 sheets.] **END**

19   **PROPRIETARY ***

20   **Q.   Why does BST's proposed per-use charge continue to be excessive even**

21   **with these adjustments?**

22   A.   BST's revised estimate is certainly more reasonable than its first effort. But,

23   even if one accepted the idea that competitors should be partially responsible

1   for investment in BST's OSS investment, this estimate still seems to be

2   inflated. For example, BST's estimate still includes a *** **BST**

3   **PROPRIETARY** $14.1 million **END PROPRIETARY** *** investment in

4   computer equipment, third party software and right to use fees, and program

5   development fees, and *** **BST PROPRIETARY** $6.7 million **END**

6   **PROPRIETARY** *** in consulting services and third party software support

7   expenses for 2000-2002. [BST revised cost study, FLLQDB.XLS, Input,

8   WP1 and WP3 sheets.] The Commission should reject such apparently

9   unreasonable inputs until BST has supplied substantive support for those

10   inputs and parties have had an opportunity to comment on that support.

11 **Q.** **What is an appropriate price for access to loop makeup information,**

12   **based on the cost of forward-looking, efficient electronic access to that**

13   **information?**

14 A.   As I explained in my July 31st testimony [at 99-100], the best estimate of the

15   efficient, long-run cost for the electronic provision of loop makeup

16   information, which new entrants can in turn use to perform their own loop

17   qualification assessment, is $0. I recommend that the Commission adopt a

18   price of $0 for mechanized loop makeup.

19 **Q.** **BST has proposed charges for manual loop makeup. When should**

20   **manual charges apply?**

21 A.   Although the FCC required direct access to loop makeup information some

22   time ago (September 15, 1999), BST has only recently begun steps to provide

DECLASSIFIED

1   such mechanized access. Moreover, Mr. Riolo explained in his July 31st

2   testimony [at 45-46] that BST should have most, if not all, of the information

3   available electronically. Therefore, if a competitor is prepared to use the BST

4   electronic interface, the mechanized charge should apply — regardless of

5   whether BST must actually provide manual research to obtain the necessary

6   data. Otherwise, BST will no longer have an incentive to make mechanized

7   access available in a timely fashion. A manual loop makeup charge should

8   *only* apply if a competitor *opts* not to develop its own capacity to use an

9   available mechanized system, after BST has made electronic access

10   commercially available.

11   BST's manual loop makeup process continues to include inefficient

12   and unnecessary tasks. Thus, the Commission should adjust the cost of this

13   optional manual loop makeup element to match the price for an efficient

14   process, as presented in my July 31st testimony [at 104].

15   **Q.   Does that conclude your testimony at this time?**

16   A.   Yes, it does.