

ORIGINAL

SPRINT
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1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 PHASE II REBUTTAL TESTIMONY

3 OF

4 STEVEN M. MCMAHON

5

6 Q. Please state your name and business address.

7

8 A. My name is Steven M. McMahon. I am employed by
9 Sprint/United Management Company as Senior Manager-
10 Network Costing. My business address is 6360 Sprint
11 Parkway, Overland Park, Kansas 66251.

12

13 Q. Are you the same Steven M. McMahon that presented prior
14 direct, supplemental direct and additional supplemental
15 direct testimony in this case?

16

17 A. Yes, I am.

18

19 Q. What is the purpose of your rebuttal testimony?

20

21 A. The purpose of my testimony is to respond to the direct
22 testimony and exhibits sponsored by BellSouth
23 Telecommunications, Inc., (BST) witnesses Alophonso
24 Varner and Daonne Caldwell with regard to nonrecurring
25 charges (NRCs) that BST has proposed. I will also

1 respond to the direct testimony and exhibits sponsored
2 by GTE witness Linda Casey regarding GTE's NRCs.

3

4 **Q. What is Sprint's overall position with respect to the**
5 **level of NRC prices?**

6

7 **A.** Sprint believes that NRCs should reflect the costs an
8 efficient firm would incur in providing Unbundled
9 Network Elements (UNEs). On the other hand, the
10 examples provided herein will indicate that the NRCs
11 proposed by BST and GTE do not meet this test and are
12 indeed excessive.

13

14 Specific examples to be addressed include the total
15 cumulative NRCs that an ALEC (Alternative Local
16 Exchange Company) would encounter when ordering typical
17 Unbundled Network Elements (UNEs) such as;
18 "installation" of 2-wire xDSL-capable loops, Loop
19 Conditioning or "Loop Modification", 2-wire Enhanced
20 Extended Links (EELs) and High Capacity Loops.

21

22 **Q. What are NRCs and what approach was taken by Sprint**
23 **with respect to the costing methodology?**

24

1 A. NRCs are amounts that are assessed for one-time
2 activities performed by ILECs on behalf of ALECs which
3 involve the processing of orders and the installation
4 of UNES. The development of the NRC cost study
5 consists of four main steps:
6
7 1. Identifying the work activities or tasks performed
8 to complete service order, provisioning,
9 installation, and other related service functions
10 for each unbundled element.
11 2. Identifying the work times (or related contractor
12 "work unit" costs) associated with performing each
13 function above.
14 3. Identifying the labor rates for each work group
15 that completes the activity and multiplying that
16 amount by the work time identified to complete the
17 activity.
18 4. Grouping the costs by appropriate activities to
19 develop total costs by unbundled network element.
20
21 Sprint performed each of these steps with forward-
22 looking, least-cost, TELRIC principles in mind. This
23 includes the assumption of fully automated processes
24 involving service order routing, facility assignment,
25 switch activation and technician dispatch functions.

1

2 **Q. Is there anything unique or different about Sprint's**
3 **forward-looking network design?**

4

5 **A.** No. There is nothing unique about Sprint's forward-
6 looking network design. It is based upon forward-
7 looking, least-cost network design and TELRIC
8 principles as described by Sprint witness Mr.
9 Dickerson. The concepts embodied in the forward-
10 looking network include fiber fed Digital Loop Carriers
11 Systems (DLCs), Serving Area Interfaces (SAIs) to
12 efficiently interconnect feeder and distribution, short
13 copper loops and the elimination of data "interferers".
14 These components, to a large degree, are already in the
15 existing network. These concepts that embody the
16 forward-looking network design facilitate the delivery
17 of data services over the voice network and are common
18 design concepts that are built into all ILEC cost
19 models.

20

21 **Q. Should the Commission anticipate then that the work**
22 **tasks and work times that are the basis for the**
23 **associated non-recurring costs to be similar amongst**
24 **ILECs?**

25

1 A. Yes. The associated work tasks and work times for all
2 ILECs should be very similar.

3

4 **Q. Are there significant NRC differences between Sprint,**
5 **BST and GTE for a basic 2 wire xDSL-capable loop?**

6

7 A. Yes. As scenario 1 indicates per Exhibits SMM-14 and
8 SMM-15, an ALEC wishing to order a 2-wire xDSL-capable
9 loop would pay higher NRCs in BST and GTE territories
10 than it would in Sprint territory. In this scenario,
11 it is assumed that the 2-wire xDSL-capable loop being
12 ordered is under 18,000 feet in length and requires
13 load coil removal. Sprint's NRCs total a little over
14 \$100 while BST's total over \$630 and GTE's approach
15 \$1,900. Surely, there are not really such dramatic
16 differences between ILEC operations and costs that
17 would support such price differences.

18

19 As scenario 1 on exhibit SMM-14 demonstrates, the total
20 nonrecurring charges that would be paid to BST for a 2-
21 wire xDSL-capable loop is \$632.84. This is \$531.30
22 (523%) more than what an ALEC would pay to Sprint.
23 Referring to the same scenario 1 on exhibit SMM-15, one
24 can see that the total of nonrecurring charges that
25 would be paid to GTE for a 2-wire xDSL-capable loop is

1 \$1,892.17. This is \$1,790.63 (1763%) more than what an
2 ALEC would pay to Sprint.

3

4 **Q. What are the main reasons for this significant price**
5 **difference?**

6

7 A. With regards to BST, the main reasons are due to three
8 of the four components that make-up this scenario; 1)
9 Loop Pre-Qualification, 2) Service Order, 3) Loop
10 Conditioning or "Loop Modification" and 4) 2-wire xDSL
11 Loop Installation. Sprint concurs with BST's charges
12 for only one of these components, the Service Order
13 NRC. The other three components to this scenario each
14 have different reasons (with a common underlying theme)
15 for contributing to the overall difference of \$531.30.
16 The differences for each of these three components will
17 be addressed below (with an intermingling of GTE
18 comparisons while addressing certain UNE NRC
19 components).

20

21 With regards to GTE, there are two main reasons for
22 this significant difference; 1) load coil removal
23 charges; and 2) the installation charges for the 2w
24 xDSL-capable loop itself.

25

1 GTE's load coil removal charge of \$1,448.22 is
2 comprised of \$797.92 for "field work" and \$650.31 for
3 engineering. GTE's \$650.31 engineering cost allocation
4 is in stark contrast to Sprint's engineering cost
5 allocation of \$28.03. Sprint's engineering allocation
6 covers the 45 minutes required to perform this task,
7 whereas the GTE cost model allocates close to 11 hours
8 for the same task. Per note 1 at the bottom of GTE's
9 "AENG" NRC cost study exhibit, (Page A4-54) GTE's
10 engineering work times were "obtained from interviews
11 and discussions with engineering personnel." Sprint's
12 45 minute allocation for engineering was based upon a
13 time and motion study performed in our Gardner, Kansas
14 Engineering Center.

15
16 GTE's other main cost component to this load coil
17 removal NRC is the \$797.92 allocated to "field work".
18 This cost is applied to all GTE load coil removal jobs
19 regardless of how many load coil locations need to be
20 worked and regardless of the OSP environment
21 encountered. Sprint's "field work" charges are based
22 upon the actual quantity, location and costs
23 encountered to remove load coils. For instance, if an
24 all-aerial loop in GTE territory requires load coil
25 removal, the \$800 "field work" cost is charged as

1 portion of the total NRC. For load coil removal of the
2 same all-aerial loop in Sprint territory, the "field
3 work" portion of the NRC would be \$6.96 per location.
4 Obviously, GTE's "field work" cost appears to be
5 inflated, similar to the inflated engineering component
6 discussed above.

7

8 GTE's load coil removal cost model is based upon a
9 series of questionable outside plant assumptions and
10 inflated work time estimates. For instance, GTE
11 assumes load coil removal work activities would always
12 take place at locations 21kf and 27kf from the central
13 office (C.O.). For aerial/buried plant, at 27kf from
14 the C.O., GTE allocates 2.7 hours for technicians to
15 receive their work assignment and travel to the job
16 site. Another 1.8 hours are allocated for work sites
17 at 21kf. This doubling up on travel time is
18 questionable and excessive.

19

20 Inexplicably, 5.3 hours for travel are allocated if the
21 cable plant type is underground at 27 kf from the C.O.
22 Certainly, it doesn't take GTE technicians twice as
23 long to travel the same distance because the OSP
24 facilities are underground versus aerial/buried.
25 Again, travel time is inflated (4.02 hours) and double

1 counted for underground locations at 21 kf from the
2 C.O.

3
4 It should be noted that load coil removal would not be
5 required for xDSL-capable loops that are shorter than
6 18,000 feet in length. Should load coils be found to
7 exist on such loops, ILECs are allowed to recover costs
8 for removal. However, the work that would need to be
9 performed would be at load points #1 and #2 which would
10 be at distances 3kf and 9 kf from the central office
11 not 21 kf and 27 kf from the central office. None-the-
12 less, if one were to drive an average of 35 mph, it
13 would take less than 2 minutes to travel between load
14 points which average around 6,000 feet (1.1 miles)
15 apart. Sprint's cost model allocates a more realistic
16 and reasonable single, total travel time of 18 minutes
17 per loop conditioning job.

18
19 Next, GTE allots two hours to set-up safety cones and
20 men working signs for a function that takes about five
21 minutes in reality. For underground locations, another
22 four-plus hours are allotted to remove the manhole
23 cover and purge any stagnant gas that may, or may not
24 exist. Then, over four more hours are allocated to
25 pump manholes - whether water is present or not. All

1 other line items comprising this GTE NRC are similarly
2 overly inflated or improperly allocated.

3

4 **Q. Why is BST's Loop Qualification NRC of \$189.37 nearly 7**
5 **times more than Sprint's?**

6

7 A. The variance (BST's charge is 572% greater) comes
8 primarily from engineering research time. BST claims
9 that it takes 165 minutes to review the plans, while
10 Sprint performs this function in only 35 minutes. That
11 is a 2 hour and 10 minute discrepancy between the two
12 companies. Sprint utilizes an efficient, least-cost
13 electronic database to research Outside Plant records,
14 and while BST's documentation was not clear whether or
15 not their records are mechanized, the time estimate of
16 135 minutes to develop a loop make-up tends to suggest
17 that BST is still using paper records. It should be
18 noted that Sprint's 35 minutes for OSP engineering also
19 includes researching electrical parameter and disturber
20 information, while BST's 135 minutes does not.

21

22 **Q. Why is BST's "Loop Modification" NRC \$120.98 while**
23 **Sprint's is \$1.44?**

24

1 A. The difference is due to four main reasons. First,
2 Sprint assumes that a minimum of 25 pairs, or an entire
3 binder group, would be conditioned for load coil
4 removal at the same time. BST only assumes 10 pairs at
5 a time. However, performing this work on only 10 pairs
6 at a time is inconsistent with the notion that BST has
7 greater densities, larger cable sizes and the
8 economical need to perform such activities on an even
9 greater number of pairs at one time than Sprint. One
10 would expect that BST would perform this function on a
11 minimum of 50 or 100 pairs at a time.

12

13 **Q. Are load coils required to provide quality voice-grade**
14 **service?**

15

16 A. Generally, load coils are not required for any loops
17 that are shorter than 18kf. However, they are required
18 to provide standard voice-grade service to customers
19 locations beyond 18kf. Therefore, Sprint's position is
20 that load coils ought to be removed in bulk from all
21 loops that are shorter than 18kf (i.e. at a minimum of
22 25 pairs at a time) and left in-place on loops longer
23 than 18kf. This enables Sprint to efficiently minimize
24 costs associated with load coil removal.

25

1 **Q. Are there reasons why BellSouth should, in reality, be**
2 **removing load coils at every opportunity presented?**

3
4 A. If for no other reason than to support its own sizable
5 marketing roll-out of its own retail DSL service
6 offering, it is unlikely that BST engineering and
7 operations are implementing loop conditioning for only
8 10 pairs at a time. BST's own website noted that plant
9 investments were being made to significantly increase
10 the number of telephone lines that meet the technical
11 specifications. It seems intuitive that in order to
12 meet their own marketing initiatives that the telephone
13 plant would be conditioned in a more efficient manner,
14 such as conditioning entire 50 and/or 100 pair binder
15 groups at a time.

16
17 **Q. For the 10 loops at time that the BST model assumes,**
18 **are an appropriate number allocated to ALECs?**

19
20 A. Absolutely not. BST makes adjustments that allocate
21 costs for 6 of every 10 loops conditioned to ALECs.
22 BST's Unbundled Loop Modification Recovery Cost Study
23 input file states *"Of the 10 lines being conditioned on*
24 *a field visit; 2 will be recovered through (other) UNE*
25 *applications, 4 from BST; and 4 leftover."* The "4

1 leftover" are used in the XDSL loop calculations and
2 two others will be charged to ALECs when they order the
3 other two UNEs that require conditioning. The BST
4 study assumes that ALECs will be experiencing total
5 penetration of 60% in BST territory within the near
6 future. This level of assumed ALEC market penetration
7 is questionable at best.

8
9 A more proper methodology would be to determine the
10 loop modification costs on a unit (cable pair) basis.
11 Then, whoever uses the "modified" cable pair would bear
12 the cost of conditioning. This approach works fairly
13 across all market share penetrations ranging from 0% to
14 100%.

15
16 **Q. What is the second main reason that BST's "Loop**
17 **Modification" NRC \$120.98 while Sprint's is \$1.44?**

18
19 **A.** The second major reason is because Sprint's cost model
20 is based upon actual prices that Sprint pays to
21 splicing contractors to perform the related work
22 activities in the State of Florida while the BST model
23 relies on work time estimates to generate costs.
24 Sprint is paying contractors to perform these same work

1 activities at a much lesser cost than what BST claims
2 it costs to utilize its own workforces.

3

4 **Q. Can you provide an "apples-to-apples" example of a**
5 **specific work activity that validates this notion?**

6

7 A. Yes. A specific example is seen with load coil removal.
8 To perform this activity, there are three main
9 functions, 1) Set-up, 2) Open and Close Splice
10 Enclosure and 3) Deload cable pairs. While there are
11 cost differences involving the first two functions as
12 well, this example focuses on the third function only;
13 the actual "deloading" of the cable pairs.

14

15 Sprint pays contractors an average of \$3.06 per cable
16 pair for this activity in underground plant and an
17 average of \$1.61 per cable pair when in aerial or
18 buried plant. The BST cost model allots 1.5 hours for
19 the same work in all three OSP environments. Assuming
20 BST's average "Cable Splicer" labor rate is \$44.06 per
21 hour, one can see why there is a huge difference.
22 Sprint pays contractors an average of \$16.10 to deload
23 10 cable pairs in aerial and buried plant while the BST
24 cost model allocates something closer to \$66.09. This

1 difference is less dramatic when working in underground
2 plant (\$30.60 vs. \$66.09), but is still significant.

3

4 **Q. When you discuss "removing" a load coil or "unloading"**
5 **a pair, what work is actually involved?**

6

7 **A. Generally, the load coil is not actually removed, it is**
8 **just disconnected from the cable pair. This involves**
9 **snipping off the 4 wires that connect the coil to the**
10 **cable pair and then reconnecting the two ends of the**
11 **cable pair. In larger cables, this generally requires**
12 **removing a connector that splices twenty-five pairs at**
13 **a time, pulling out the load coil wires and replacing**
14 **the connector. The actual work time involved in making**
15 **the connections is no more than a minute or two, but**
16 **set-up time can be significant, particularly when**
17 **working in manholes. This is why Sprint prefers to**
18 **unload a minimum of 25 pairs at one time, instead of**
19 **unloading only 10. It is far more efficient.**

20

21 **Q. Can you provide another "apples-to-apples" example of a**
22 **specific work activity that validates the notion that**
23 **BST has utilized inflated work times in their NRC cost**
24 **model?**

25

1 A. Yes. Another example involves bridged tap removal.
2 Again, we will ignore, for the moment, the cost
3 differences that involve set-up time and opening and
4 closing the splice enclosure, and focus on the specific
5 work function of removing bridged tap. BST allots 45
6 minutes for their technicians to remove bridged tap.
7 This equates to roughly \$4.50 per pair as the BST model
8 assumes 10 are removed at the same time. For this same
9 work function, Sprint pays contractors an average of 45
10 cents in underground plant and 39 cents in aerial and
11 buried plant.

12

13 **Q. What work is actually involved in "removing" bridged**
14 **tap?**

15

16 A. As with load coils, no plant is actually removed. The
17 two wires of the cable pair are simply cut off and
18 capped. In splices in larger cables, this may require
19 removing a connector that splices twenty-five pairs at
20 a time, pulling out the bridged pair and replacing the
21 connector.

22

23 **Q. What about BST's assumptions regarding the locations**
24 **for removing bridged tap?**

25

1 A. BST has assumed that 3 bridged taps would always need
2 to be removed and assumed that 33% of bridged tap would
3 need to be removed in manholes. However, most bridged
4 taps occur in distribution plant where there is
5 primarily aerial and buried cable and very little
6 underground cable. Cable pairs are very rarely bridged
7 in the feeder plant where most underground cable
8 occurs, precisely to avoid the high the cost of re-
9 entering those manhole splices.

10

11 The fact is that virtually all bridged tap removal
12 could be done in aerial or buried cable, at far less
13 cost. In the few instances in which cable pairs are
14 bridged in a manhole splice, it is very likely that the
15 pair could be trimmed at the point at which it leaves
16 the conduit system and becomes aerial or buried for
17 distribution. This would be far less costly than
18 opening a splice in a manhole.

19

20 Furthermore, cutting off the pair at the serving
21 terminal at the same time that the xDSL service is
22 installed would bring many loops into compliance at
23 very little incremental cost. Cutting off the pair at
24 the serving terminal is a common practice. That is,
25 the technician could remove the bridge tap while doing

1 the connection of the xDSL loop to the customer's drop.
2 This would eliminate a separate trip, separate set-up
3 time and separate tear-down time. The only additional
4 time would be the few minutes that it would take to cut
5 the wires or remove them from the connector.

6

7 **Q. Are there significant differences between GTE's and**
8 **Sprint's methodology for determining the costs for**
9 **removing bridged tap?**

10

11 A. Yes. GTE has determined costs for removing bridged tap
12 on an individual basis and on a "multiple occurrence"
13 basis. Their costs are based on a weighting of a state
14 wide average of aerial, buried and underground cable
15 types. The flaw with that assumption is that it
16 includes equal weighting of both feeder and
17 distribution cable types. The GTE model allocates
18 higher costs involving manhole work in feeder plant
19 that doesn't occur. Many of the same inflated work
20 time estimates that were outlined in the above
21 discussion of load coil removal are similarly found in
22 GTE's bridged tap removal costs. Additionally, GTE
23 assumes there are always two and one-half bridged tap
24 locations to visit to perform work when multiple
25 occurrences are present on one cable pair. In reality,

1 most bridged tap occurs in the distribution plant and
2 can be removed at the customer's serving terminal with
3 a single site visit.

4

5 **Q. Are GTE's bridged tap cost study assumptions and work**
6 **time estimates a realistic premise to base costs for**
7 **bridged tap removal?**

8

9 A. No. Sprint's position is that bridged tap removal
10 costs should be based upon the actual work required on
11 a per loop ordered basis. Cost models that are built
12 on the foundation of unsubstantiated assumptions,
13 estimated occurrence rates and inflated work time
14 estimates, such as GTE's, should be thoroughly
15 scrutinized and rejected. Sprint has developed costs
16 based upon actual prices paid to contractors in the
17 state of Florida to perform the related work
18 activities. Sprint's cost model reflects the actual
19 costs of removing bridged tap depending on the actual
20 type of cable plant and actual number of bridged taps
21 that are required to be removed on a per loop basis.

22

23 **Q. Does this difference in costing methodology lead to a**
24 **big difference in nonrecurring charges?**

25

1 A. Yes. For example, if bridged tap were to be removed
2 from two different aerial cable locations on the same
3 cable pair, GTE would charge \$1,274.26 while Sprint
4 would charge \$55.10. Certainly, the actual costs to
5 perform this same function can not be so drastically
6 different between companies. Again, Sprint's costs are
7 based upon actual prices paid to contractors in the
8 state of Florida to perform these work activities.
9 GTE's costs are based upon inflated work time estimates
10 and faulty cost model assumptions.

11

12 Q. Can you provide any examples of GTE's inflated work
13 times estimates?

14

15 A. Yes. For example, GTE assumes 102.11 minutes to
16 receive the work assignment and travel to the job
17 site(s) for "multiple occurrence" bridge taps that are
18 at aerial/buried locations. For some inexplicable
19 reason, GTE doubles the already inflated travel time to
20 204.22 minutes when the bridged tap might be at
21 underground locations. Sprint more realistically
22 allocates 18 minutes total travel per loop to be
23 conditioned, no matter what type of outside plant
24 environment is encountered or how many different

1 locations need to be visited while working on the same
2 loop.

3

4 **Q. What is the third reason that BST's "Loop Modification"**
5 **NRC is \$120.98 while Sprint's is \$1.44?**

6

7 A. The third, main reason is because Sprint's costs are
8 based upon realistic underground, buried and aerial
9 plant mix factors. Sprint researched its Outside Plant
10 records in the State of Florida to determine the
11 frequency that work would need to be performed in each
12 of these environments at the first two load points.
13 Sprint found that the first load point is within
14 underground plant 59.2% of the time. The second load
15 point was found to be in underground plant 51.6% of the
16 time. These percentages do not support BST's 90%
17 underground assumption, but they do support Sprint's
18 forward-looking network design concepts that build more
19 economical OSP facilities (aerial and buried) as
20 distance increases from the central office.

21

22 **Q. How does plant mix impact NRC costs?**

23

24 A. The costs associated with accessing cable pairs is
25 significantly higher when technicians need to obtain

1 such access in underground outside plant facilities
2 (manholes). For instance, it is more time-consuming to
3 enter a manhole to perform loop conditioning activities
4 than it is to perform the same procedures within aerial
5 or buried OSP facilities. This is largely due to the
6 fact that manhole work must be performed by a minimum
7 of 2 technicians for safety reasons. Additionally,
8 such underground facilities must be ventilated to be
9 purged of potentially dangerous gases and often need to
10 be pumped out for water. Alternatively, these
11 activities are not required when working in aerial
12 and/or buried OSP facilities and usually only one
13 technician is required. Even with a buried OSP
14 environment, the locations requiring cable pair access
15 are usually brought up out of the ground into a
16 pedestal for easy access. Sprint's costing methodology
17 more accurately accounts for these labor costs
18 differences.

19

20 **Q. Are BST's load point assumptions reasonable and**
21 **consistent with realistic network designs?**

22

23 A. No. BST makes no acknowledgement of plant mix
24 differences between load points #1 and #2. The fact is
25 that load point #2 will be found to be in aerial and

1 buried plant more often than load point #1. Sprint's
2 Outside Plant record research efforts validate this
3 conclusion.

4
5 Additionally, BST provides no explanation as to why
6 their cost model assumes that 2.1 load point locations
7 would exist. It would be inconsistent with standard
8 OSP Engineering rules for customer end sections to be
9 located within 3,000 feet from a load point.
10 Therefore, load point #3, normally at around 15kf,
11 should not be considered or included in any loop
12 conditioning costing equations for loops under 18kf.

13

14 **Q. Does Sprint spread load coil removal costs across all**
15 **xDSL-capable loops that are shorter than 18,000 feet?**

16

17 **A.** Yes. Since a least-cost, most efficient methodology
18 for conditioning loops shorter than 18kf involves the
19 removal of load coils in bulk, Sprint considers it
20 reasonable and fair to spread the fixed costs of
21 accessing the cable pairs across all the pairs that
22 would be unloaded in a 25 pair binder group. Sprint's
23 methodology adds the incremental labor costs associated
24 with unloading 24 more cable pairs to a single
25 engineering and travel charge and then divides by 25 to

1 determine the cost per pair for the entire binder
2 group. This cost is then spread equally across all
3 xDSL-capable loops that are ordered. This methodology
4 enables a reasonable and fair approach that
5 accommodates varying ALEC market penetration rates.

6

7 **Q. What is the forth major reason that BST's "Loop**
8 **Modification" NRC is \$120.98 while Sprint's is \$1.44?**

9

10 A. The forth major reason for the difference in cost is
11 because BST assumes that 42.79% of DSL loops would
12 require "modification". This assumption is not
13 supported by the results of Sprint's Outside Plant
14 records research. Sprint found that only 3.2% of its
15 loops less than 18,000 feet in length would require the
16 removal of load coils. Again, Sprint's loop
17 conditioning cost model plant mix is based upon actual
18 information per Outside Plant records researched in the
19 State of Florida. One would expect that BST would have
20 even fewer loaded loops than Sprint. Loaded loops are
21 more prevalent in rural territories due to the
22 economics associated with implementing forward-looking
23 fiber-fed DLC network infrastructures in less densely
24 populated areas.

25

1 While BST's cost model takes these different OSP
2 environments into consideration for the loop
3 conditioning NRCs, it simply does not go far enough
4 with the utilization of realistic data to calculate the
5 costs.

6

7 **Q. Are BST's proposed installation charges for a 2-wire**
8 **xDSL-capable UNE loops based upon efficient methods and**
9 **procedures and reasonable work time estimates?**

10

11 A. No. The non-recurring charges proposed by BST assume
12 manual processes and unreasonable work times. Sprint's
13 NRCs were developed with forward-looking, least cost,
14 most efficient network technology concepts in mind.
15 The difference is obvious when comparing the NRCs for a
16 2-wire xDSL-capable loop. BST claims it takes about 7
17 total labor hours to install a 2-wire xDSL-capable
18 loop. Sprint's total labor is less than 1 ½ hours.
19 The only BST work time component that appears
20 reasonable is technician travel. BST assumes 20
21 minutes while Sprint's model allocates 18 minutes. The
22 remaining 5 1/2 hours of labor time difference are due
23 to BST's usage of manual work activities and inflated
24 work times.

25

1 For instance, BST's costs include 2.5 hours for
2 "Service Inquiry" work functions. The descriptions
3 provided include various work group activities such as
4 "screens documents" and "reviews request" and
5 "processes order". Sprint, on the other hand, assumes
6 100% flow-through of automated processes and, therefore,
7 has no comparable manual work activity to this 2.5
8 hours.

9
10 BST's costs also include 3.8755 hours for the actual
11 installation of an xDSL-capable loop while Sprint
12 allocates 1.05 hours (travel not included). The
13 difference appears to be due to the fact that Sprint
14 uses an automated dispatch system where BST allocates
15 time for manual coordination and dispatching of
16 technicians.

17
18 Other work activities comprising BST's 3.8755 hours for
19 "Connect & Turn-up Testing" include the following:
20 "assigns workforces; ensures dispatch; performs manual
21 order coordination; resolves trouble". Time spent on
22 trouble resolution activities should not be included.
23 These maintenance costs are captured in the annual
24 charge factors and are reflected in the monthly loop
25 rates.

1

2 The remaining difference is due to questionable work
3 times allocated by BST for certain other work
4 functions. For instance, BST allocates 0.2833 hours
5 (17 minutes) to "wire circuit at collocation site".
6 Sprint allocates a more reasonable 9 minutes to place
7 and test this jumper on the MDF. All this involves is
8 a technician running a jumper wire from the OSP cable
9 pair terminal block to the collocater's terminal block
10 on the MDF.

11

12 Additionally, the BST cost model allocates a total of
13 1.921 hours for an I&M field technician to hook-up a
14 single 2-wire xDSL-capable loop. This includes "place
15 cross-connect at cross box, check continuity and dial
16 tone, resolves trouble, performs test from NID and
17 completes order." Sprint's work time for the same
18 functions, (less the trouble resolution), equates to 54
19 minutes. BST's cost model allocates more than an hour
20 longer for their technicians to perform these same work
21 functions.

22

23 **Q. Are GTE's proposed installation charges for a 2-wire**
24 **xDSL-capable UNE loops comparable to Sprint's NRC for**
25 **the same?**

1

2 A. No. As one can see referring to scenario 1 per exhibit
3 SMM-15, GTE's installation charges for 2-wire xDSL-
4 capable loops includes \$60.66 for "provisioning" and
5 another \$364.82 for "field work", totaling \$425.48.
6 This is \$356.64 more than Sprint charges for the same
7 work. GTE's cost study has a footnote that states the
8 input for this "field work" was "Obtained from STAR and
9 NOCV systems." Sprint's more realistic costs are based
10 upon the same processes and procedures that are
11 followed to provide a basic 2-wire unbundled loop.
12 This includes a field visit for a technician to make
13 connections at a cross-connect box, the customer's
14 serving terminal and the NID. It also includes time
15 for MDF jumpering and circuit testing.

16

17 **Q. Is BST's proposed disconnect charges for xDSL-capable**
18 **UNE loops reasonable?**

19

20 A. No. In reality, ILECs leave such loops in place as
21 "cut-throughs" and/or "DCOPs" (Dedicated Central Office
22 Plant) in order to avoid the unnecessary costs
23 associated with dispatching a technician to disconnect
24 and reconnect when a new customer orders service for
25 the same location. For most services, including POTs

1 and xDSL-capable loops, the same cable pair(s) can be
2 reused. BST should not be allowed to charge for
3 disconnects, as such, for copper pair-based xDSL
4 services.

5

6 **Q. Are there significant NRC differences between Sprint,**
7 **BST and GTE for a 2-wire Enhanced Extended Link (EEL)?**

8

9 A. Yes. As scenario 2 indicates per exhibit SMM-14 and
10 SMM-15, an ALEC wishing to order a new, 2-wire voice-
11 grade loop with 1/0 multiplexing and DS1 transport
12 would pay much higher NRCs in BST and GTE territories.

13

14 In the case of BST, one would pay \$633.30 compared to
15 Sprint's NRC of \$227.45 for the same service. The
16 total difference in this scenario is \$405.85 (178%).

17

18 In the case of GTE, one would pay \$402.58 compared to
19 Sprint's NRC of \$227.45 for the same service. The
20 total difference in this scenario is \$175.13 (77%).

21

22 **Q. What are the main reasons for this significant**
23 **difference?**

24

1 A. In the case of BST, the main reason for this difference
2 is due to the fact that Sprint simply adds the
3 individual NRCs that make-up this UNE combination
4 together while BST has inflated total work times by an
5 additional 5.2403 hours over what BST allocates for the
6 individual UNEs.

7
8 In the case of GTE, it is a similar reason, (inflated
9 costs) but the details are hidden behind their cost
10 study source inputs (STAR and NOCV systems) that drive
11 the "provisioning" and "field work" labor costs
12 unrealistically upwards.

13
14 Q. For BST, are these additional work times justified?

15
16 A. No. Sprint sees no reason why it should cost more to
17 provision a combination of these network elements when
18 the individual elements could be ordered separately at
19 a lesser total NRC. BST is apparently relying on the
20 concept that it will take extra time to coordinate such
21 orders. Sprint's experience does not support that
22 concept.

23
24 Q. Did you compare the NRCs for any other UNEs?

25

1 A. Yes. High Cap DS3 Loop NRC comparisons are reflected
2 per scenario 3 on exhibits SMM-14 and SMM-15. As can
3 be seen, the BST and GTE NRCs are dramatically higher
4 than Sprint's. Sprint's NRC is \$89.34 while BST's is
5 \$913.22 and GTE's is \$450.11.

6

7 **Q. Why would there be such a significant price difference**
8 **between ILECs?**

9

10 A. Consistent with the previous NRC discussions herein,
11 Sprint based it's NRC cost study on forward-looking,
12 least-cost methods and procedures while BST and GTE
13 have utilized more time consuming manual processes and
14 inflated work times.

15

16 **Q. Does this conclude your rebuttal testimony?**

17

18 A. Yes.

BellSouth / Sprint Non-Recurring Charge ComparisonScenario 1 - xDSL Loop

	<u>Bellsouth</u>	<u>Sprint</u>	<u>Difference</u>	<u>%</u>
Loop Qualification	\$ 189.37	\$ 28.20	\$ 161.17	572%
Service Order - Electronic	\$ 2.77	\$ 3.06	\$ (0.29)	-9%
Loop Conditioning or "Modification"	\$ 120.98	\$ 1.44	\$ 119.54	8301%
2-Wire xDSL Loop	\$ 319.72	\$ 68.84	\$ 250.88	364%
Total Cost	\$ 632.84	\$ 101.54	\$ 531.30	523%

Scenario 2 - EEL - DS0 Loop, 1/0 Muxing and DS-1 Transport

	<u>Bellsouth</u>	<u>Sprint</u>	<u>Difference</u>	<u>%</u>
Service Order - Electronic	\$ 2.77	\$ 3.06	\$ (0.29)	-9%
UNE-P 2-Wire Loop		\$ 72.98	\$ (72.98)	-100%
VG Local Loop for Combination Use Only	\$ 195.63		\$ 195.63	
DS1 Interoffice Facility w/ 1/0 Muxing	\$ 422.64		\$ 422.64	
Feature Activation	\$ 12.26		\$ 12.26	
1/0 Muxing		\$ 71.61	\$ (71.61)	-100%
DS1 Interoffice Transport		\$ 79.80	\$ (79.80)	-100%
Total Cost	\$ 633.30	\$ 227.45	\$ 405.85	178%

Scenario 3 - HI-Cap DS3 Loop

	<u>Bellsouth</u>	<u>Sprint</u>	<u>Difference</u>	<u>%</u>
Service Order - Electronic	\$ 2.77	\$ 3.06	\$ (0.29)	-9%
Hi-Cap Unbundled Local Loop DS3 Facility Termination	\$ 910.45	\$ 86.28	\$ 824.17	955%
Total Cost	\$ 913.22	\$ 89.34	\$ 823.88	922%

GTE / Sprint Non-Recurring Charge Comparison

Scenario 1 - xDSL Loop

	<u>GTE</u>	<u>Sprint</u>	<u>Difference</u>	<u>%</u>
Loop Qualification		\$ 28.20	\$ (28.20)	-100%
Service Order - New	\$ 18.47	\$ 3.06	\$ 15.41	504%
Load Coil Removal	\$ 1,448.22	\$ 1.44	\$ 1,446.78	100471%
2-Wire xDSL Loop - provisioning	\$ 60.66	\$ -	\$ 60.66	
2-Wire xDSL Loop - field work	\$ 364.82	\$ 68.84	\$ 295.98	430%
Total Cost	\$ 1,892.17	\$ 101.54	\$ 1,790.63	1783%

Scenario 2 - EEL - DS0 Loop, 1/0 Muxing and DS-1 Transport

	<u>GTE</u>	<u>Sprint</u>	<u>Difference</u>	<u>%</u>
Service Order - New	\$ 51.39	\$ 3.06	\$ 48.33	1579%
UNE-P 2-Wire Loop		\$ 72.98	\$ (72.98)	-100%
1/0 Muxing		\$ 71.61	\$ (71.61)	-100%
DS1 Interoffice Transport - provisioning	\$ 157.53	\$ -	\$ 157.53	
DS1 Interoffice Transport - field work	\$ 193.66	\$ 79.80	\$ 113.86	143%
Total Cost	\$ 402.58	\$ 227.45	\$ 175.13	77%

Scenario 3 - HI-Cap DS3 Loop

	<u>GTE</u>	<u>Sprint</u>	<u>Difference</u>	<u>%</u>
Service Order - New	\$ 22.85	\$ 3.06	\$ 19.79	647%
Hi-Cap Unbundled Local Loop DS3 - Field Work	\$ 311.04	\$ -	\$ 311.04	
Hi-Cap Unbundled Local Loop DS3 - Provisioning	\$ 116.22	\$ 86.28	\$ 29.94	35%
Total Cost	\$ 450.11	\$ 89.34	\$ 360.77	404%